

TECHNICAL REPORT

Overview of current EU/EEA and UK deployment and vaccination plans for COVID-19 vaccines

29 October 2020

Key messages

- Deployment and vaccination plans in the EU/EEA and the UK are currently under development and the information presented in this report will continue to evolve in the coming weeks.
- The majority of countries are currently developing recommendations for priority groups to be vaccinated. Five countries have published recommendations for priority groups at national level. Healthcare workers and elderly people (with various age limits across countries) but also with certain comorbidities were mostly considered for prioritisation.
- Evidence including modelling impact of vaccination to be considered for prioritisation is evolving over time and requires continuous updates as more information becomes available about the COVID-19 disease and the newly authorised vaccines characteristics.
- Regarding logistical considerations for the roll out of COVID-19 vaccination plans, many countries responded that they will, as much as possible, make use of existing vaccination structures and delivery services.
- Electronic immunisation registries for monitoring of vaccine uptake in the individual and in the population are available at the national level in seven countries, at the subnational level in two further countries and developments towards such national systems are on-going in six countries.

EC request number 139

Date of request: 20 October 2020

The EC issued a vaccines strategy for COVID-19 in June 2020 and a communication on preparedness for vaccination strategies and vaccines deployment on 15 October 2020. In this framework, the Commission requested ECDC to provide an overview of the national COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA countries and the UK.

Scope of this document

As follow up of the EU vaccination strategy Commission Communications, this document outlines the current development on deployment national vaccines plans, including recommendations for priority groups, evidence considered for prioritisation of target groups, logistical considerations and monitoring systems for safety, effectiveness, vaccine coverage and acceptance to be put in place.

Target audience

The overview is foremost intended for internal use (European Commission, Health Security Committee), but could be made public at a later stage, once information from all the survey participants is available.

Background

The European Commission is currently working to ensure that there will be access to safe and effective COVID-19 vaccines across the EU/EEA Member States encourages a coordinated approach of vaccines deployment plans across these countries.

In its communication of 15 October 2020, the Commission presented the key elements to be taken into consideration by EU/EEA countries for their COVID-19 vaccine deployment and vaccination strategy plans, in order to prepare the European Union/European Economic Area (EU/EEA) and its citizens for when a safe and effective vaccine is available, as well as priority groups to consider for vaccination first [1-4]. Considerations on introduction and prioritisation of COVID-19 vaccination in the EU/EEA member States have also been documented in a recent ECDC publication [5] in addition to a WHO publication on strategic considerations in preparing for deployment of COVID-19 vaccine and vaccination in the WHO European Region [6,7].

Methods

The information provided in this report was collected from the following sources:

Survey

On 20 October 2020, ECDC sent by e-mail to the EU/EEA NITAG collaboration members (27 EU member states, 3 EEA countries and the UK) [8], a brief survey with a set of six questions to gain an understanding of current development of national vaccination plans and deployment of COVID-19 vaccines. Countries were asked to provide information on their vaccine deployment plan (final or in development) and a link to the document if available, information on priority groups for vaccination if selected, evidence to be considered upon selection, logistical considerations and any product specific monitoring information. The questions were open-ended.

EU/EEA NITAG collaboration dialogue meeting

As a follow-up to the survey, ECDC organised a dialogue meeting on the 23 October 2020 with the EU/EEA NITAG collaboration (hereafter named NITAG collaboration) with invited observers from public health, regulatory agencies, ministries, and the Joint Action on Vaccination (JAV) to enable countries to further present details of their vaccination plans. Nominated NITAG collaboration members were invited to present in two slides per country plans for selection of priority groups, overview of how selected groups will be invited to vaccination and where vaccination will occur, how vaccination will be documented for vaccinated individuals, by target group and by vaccine product, and how vaccine uptake, safety, effectiveness and acceptance will be monitored.

Results

Out of the 30 countries that were sent the survey, 19 countries responded (Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Poland, Slovenia, Spain and Sweden).

During the NITAG collaboration webinar, 16 of the countries who responded to the survey, also provided further information about their COVID-19 vaccine deployment plans and in addition, two more countries (Latvia and the UK) presented information about plans in their respective countries. Currently all 21 countries who responded to the survey or presented during the NITAG dialogue meeting have deployment and vaccination plans for COVID-19 vaccines under development. The following countries published recommendations/advice for priority groups: Belgium [9], Czechia [10], France [11], Luxembourg [12], Sweden [13] and the United Kingdom [14]).

Recommendations for priority groups

Countries were asked to provide information on recommendations for priority target groups to be vaccinated in the initial phases of the campaigns when vaccines are in short supply. Nineteen countries answered this question and eight countries provided information on their recommendations (Belgium, Czechia, Estonia, France, Luxembourg, Poland, Slovenia, and Sweden). In addition to the survey results, two countries (Latvia, UK) presented their recommendations on prioritization of target groups in the NITAG collaboration webinar and some more countries added to their survey answers (marked with * in table below).

The majority of countries are currently developing recommendations for priority groups to be vaccinated. A few countries have developed recommendations for targeted vaccination. All countries with existing recommendations prioritize, among others, vaccination of healthcare workers. Other population groups to be prioritized for vaccination include older people (age range differ by country), people at higher risk of severe COVID-19 disease due to comorbidities, residents and staff of long-term care facilities and staff of public health authorities, laboratories and critical infrastructure (e.g. epidemiologists, integrated rescue service workers, energy workers).

Of particular interest are the UK-recommendations based upon significant modelling of impact of different vaccination strategies by several research groups. They have chosen almost entirely an age-based prioritisation strategy starting from the oldest individuals 80+.

Table 1: Summary table on recommendation of for COVID-19 vaccination for priority groups in the EU/EEA and UK

Country	Recommendation for priority groups to be vaccinated in the initial phases of the campaigns when vaccines are in short supply
Austria	Not yet, but currently under development.
Belgium [9]	<ul style="list-style-type: none"> - Healthcare workers - People over 65 years of age - People aged 45-65 years with comorbidities <p>Priority groups have been identified by the NITAG. It is also mentioned in the recommendation that other priorities within the above groups may be considered if a quantity of limited vaccine is available.</p> <p>This recommendation may be modified as new data and information becomes available on the immunogenicity of the type(s) of vaccine(s) that will be available. For example, data on pregnant women and immunocompromised patients as well as the impact of socio-economic and ethnic origin will be closely followed.</p>
Czechia [10]*	<p>Not yet, but currently under development.</p> <ul style="list-style-type: none"> - People with certain chronic diseases (e.g. serious respiratory tract diseases, resistant hypertension, serious cardiac diseases, BMI > 40, hemato-oncological disease, serious liver and kidney disease, serious form of diabetes) - Health care professionals and selected staff of public health authorities (e.g. ICU, selected clinical healthcare workers, general practitioners, emergency medical rescue service, staff

	<p>performing epidemiological investigations, laboratory workers in charge for SARS-CoV-2 samples)</p> <ul style="list-style-type: none"> - Social services (both clients and personnel) - Staff of critical infrastructure (integrated rescue service, energy workers, government, crisis committees) - People 65 years of age and older
Denmark	Not yet, but currently under development.
Estonia *	<ul style="list-style-type: none"> - Healthcare workers - Social care workers - People with certain comorbidities - People 70 years of age and older
Finland	Not yet, but currently under development.
France [11]	<ul style="list-style-type: none"> - Healthcare workers - Social care workers - People 65 years of age and older - People at higher risk of severe disease or death due to underlying conditions <p>A first preliminary recommendation was published in July. The document also describes the different anticipated vaccination scenarios according to different epidemic scenarios, different characteristics of vaccines, and the need of vaccine doses. The recommendation will be updated as soon as the results of modelling that are currently under development will be available.</p>
Germany	Not yet, but currently under development.
Iceland	Not yet, but currently under development.
Ireland	Not yet, but currently under development.
Italy	Not yet, but currently under development.
Latvia*	<p>Not yet, currently under development, however the following will be considered:</p> <ul style="list-style-type: none"> - Risk groups for severe COVID-19 disease - Healthcare workers
Luxembourg [12]	<ul style="list-style-type: none"> - People 65 years of age and older - Healthcare workers - Vulnerable people (according to national definition for COVID-19 vulnerability) <p>These categories are currently under further development.</p>
Malta	Not yet, but currently under development.
Netherlands	Not yet, but currently under development.
Norway	Not yet, but currently under development.
Poland*	<ul style="list-style-type: none"> - Healthcare workers - Social assistance staff in contact with patients at high risk of severe course of disease or death due to COVID-19 <p>NITAG recommendations for priority groups to be vaccinated in the initial phases of the campaign with limited vaccines supply have been finalized and handed over to Ministry of Health in July 2020.</p>
Slovenia*	<ul style="list-style-type: none"> - Healthcare workers (including staff in long-term care facilities) - Other risk groups (especially residents in long-term care facilities and elderly)
Spain	Not yet, but currently under development
Sweden [13]	<ul style="list-style-type: none"> - People over 70 years of age - Risk groups for severe COVID-19 disease - Healthcare workers (including those in elderly care)
United Kingdom [14]*	<ul style="list-style-type: none"> - Older adults' resident in a care home and care home workers - All those 80 years of age and over and health and social care workers - All those 75 years of age and over - All those 70 years of age and over

	<ul style="list-style-type: none"> - All those 65 years of age and over - High-risk adults under 65 years of age - Moderate-risk adults under 65 years of age - All those 60 years of age and over - All those 55 years of age and over - All those 50 years of age and over - Rest of the population (priority to be determined)
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*Oral communication in the NITAG dialogue meeting

Evidence considered for prioritisation of target groups

In regards of evidence that will be or have been considered and by whom in order to prioritise the target groups for vaccination (e.g. role of impact modelling of different vaccination strategies, enhanced epidemiological surveillance, reported vaccine safety and efficacy by age and target group from phase 3 trials), a total of 17 countries answered the survey question. An additional three countries presented information on the topic at the NITAG collaboration dialogue meeting.

In summary of survey answers, over half of the countries mention that they will use mathematical modelling as a tool for prioritisation of target groups. Many countries also highlighted that vaccine information from phase 3 studies will be taken into consideration once available. This includes reported vaccine safety and efficacy by age and target group, characteristics of vaccines as well as availability. Other considerations include epidemiological surveillance data, analysis of country specific data (e.g. on hospitalization and mortality) and information from the literature on groups at higher risk of severe disease and death due to COVID-19. Some countries answered that they will take guidelines from ECDC, WHO and CDC into consideration, and look at other countries' guidelines. Ethical considerations were mentioned by four countries and includes involving ethics committees and using ethical frameworks.

In addition to survey results, some more countries presented their considerations of evidence for prioritisation of target groups or added to their survey answers in the NITAG collaboration dialogue meeting, (marked with * in table below). Results include considerations of guidelines from EU and WHO, vaccine-specific information from clinical trials, and information from existing and enhanced surveillance systems for COVID-19.

Table 2: Summary table on evidence considered for prioritisation of target groups

Country	Evidence will be/have been considered and by whom in order to prioritise the target groups for vaccination
Austria	Evidence to be considered is under discussion in the NITAG. Modelling will be used, and the Bioethics committee involved.
Belgium	Prioritised groups were based on evidence from literature review of risk groups for severe COVID-19, and in-depth analysis of the profile of COVID-19 hospitalised cases (national database of Sciensano, the public health institute, with an approximate coverage of 70% of hospitalised cases).
Czechia	A draft of prioritised target groups will be prepared by NITAG, in consultation with different departments of Ministry of Health, NIPH, scientific and professional societies.
Denmark*	Denmark will consider guidelines from EU and WHO when deciding on prioritisation of target groups.
Estonia	Evidence to be considered include epidemiological surveillance data, clinical data, ECDC recommendations and data from other countries. The final decisions will be made taking into account the results from phase III trials and the recommendations from the local NITAG.
Finland	THL will provide different use case scenarios based on modelling using Finnish data of COVID-19 hospitalized and deceased patients, contact matrix data (Polymod), transmission data and what will be known about the VE of different vaccine candidates.
France	Literature review of severe disease risk factors and of professional exposure as well as French epidemiologic surveillance will be considered. Conclusions will be used to define different

	vaccination strategies that will be tested in a transmission model. Results from clinical trials by age group will also be considered as soon as available.
Germany	Evidence to be considered include systematic reviews on risk factors and data from clinical trials: efficacy, safety. Furthermore, mathematical modelling, epidemiological surveillance, an ethical framework and results from acceptance studies will be considered.
Ireland*	<p>Evidence will be considered by the COVID-19 Immunisation Strategy Group and NIAC/NITAG. This includes international literature considering local epidemiology and current status on disease risk, reference material and guidelines from CDC, PHE and WHO. Recommendations will lie within appropriate ethical framework.</p> <p>The general approach taken by NIAC/NITAG for prioritization is based on equity, justice, disease burden, severity in risk groups, impact on society, availability of vaccines, vaccine-specific information from clinical trials, operational feasibility. Vaccine data (safety, effectiveness) will influence final recommendations.</p>
Italy	An ad hoc expert group will elaborate recommendations taking into account the characteristics of the vaccine and different vaccination strategies.
Luxembourg	<p>Basic information at this stage, and assuming that the vaccine efficacy relies in the prevention of symptomatic infection (and not in the prevention of the transmission).</p> <p>Incorporation of additional information (*such as available national data) will allow for further development (and possible changes in the prioritisation strategy). Luxembourg are currently looking for collaboration to incorporate national epidemiologic surveillance into a modelling tool to inform the national prioritisation strategy.</p>
Malta	Several multi-faceted considerations will be taken. The role of impact modelling of different vaccination strategies and the reported vaccine safety and efficacy by age and target group from phase 3 trials are two important pillars.
Netherlands	The role of impact modelling of different vaccination strategies, enhanced epidemiological surveillance, reported vaccine safety and efficacy by age and target group from phase 3 trials will be used to inform prioritization of target groups.
Norway	Evidence to consider for prioritization of target groups include risk factors for morbidity / mortality, available information/reported vaccine safety and efficacy by age and target group. Mathematical modelling will also be used. Ethics will be considered by an external advisory group.
Poland*	The NITAG recommendation on prioritisation groups for COVID-19 immunization is based on the epidemiological data on risk groups presented in ECDC reports.
Slovenia	<p>Slovenia has two working groups: NITAG + MoH. These will consider available evidence on vaccine safety and efficacy by age, availability (No of doses) of vaccine, characteristics of vaccine (preventing transmission?)</p> <p>Modelling will be used as will an EU vaccination strategy and recommendations of the expert group which has been already established.</p>
Spain	Prioritisation is under development evidence to be considered include epidemiology data as well as efficacy and safety of each vaccine. Mathematical modelling will also be considered.
Sweden	Since no data are available on VE, priority groups are based on clinical/epidemiological evidence on risks for severe COVID-19 disease. Modelling work on possible vaccine impact is under way.
United Kingdom*	Evidence to be considered include existing and enhanced surveillance systems for COVID-19, including serological epidemiology surveillance. National data on data on hospitalization, severity of disease, mortality, risk of infection by occupation, evidence on transmission in the population etc. will be used. Mathematical modelling is ongoing.

* Oral communication in the NITAG dialogue meeting

Logistical considerations

In regards to logistical considerations, countries were asked for information on how vaccines will be delivered (e.g. dedicated vaccination centres, routine GP practices, pharmacists etc), how the identified target groups will be invited to be vaccinated (invitation letter sent etc) and any further details on the organisation of vaccination campaigns that could be helpful to others. Nineteen countries provided information about logistical considerations around vaccine deployment (Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Poland, Slovenia, Spain and Sweden). In addition to the survey results five countries expanded on their survey answers in the NITAG webinar, and Latvia provided some information also about their plans (marked with a * in the table below).

In summary, for those countries that provided information on logistical considerations, more than half said that they are planning to use and build upon existing vaccination delivery services and structures for the roll out of COVID-19 vaccination plans. Some countries said that in the initial phases delivery of vaccines would be through general practitioners and primary health centres and five countries responded that vaccines would be delivered through vaccination centres. The replies from countries indicate that for many the structures currently used for the delivery of seasonal influenza vaccines, in particular, would be leveraged. Some countries mentioned the need for a bigger pool of skilled workforce to administer the vaccines as more doses becomes available and further work is being developed on this.

It is not clear at this stage whether vaccine storage and cold chain requirements for future COVID-19 vaccines would be different than for other routine vaccines. One meeting participant raised the issue that for their country vaccine distribution the use of usual vaccination routes such as through GPs or pharmacies may not be feasible if there are multiple dose vials, large minimal quantities and conservations requirements of some vaccines (such as storage temperatures of -20° to -80°C), and perhaps there may be other solutions for this, such as mass vaccination centres. As more information on the vaccine characteristics become available, vaccine storage, transport and cold chain requirements will need to be carefully assessed in the context of EU/EEA and UK logistical plans for delivery.

Table 3: Summary table on logistical considerations for COVID-19 vaccine deployment in the EU/EEA and UK

Country	Logistical considerations in vaccination deployment plan
Austria	Currently looking into different ways of delivery of the vaccines (i.e. through routine GPs, public vaccination centres, company medical officers, mobile vaccination teams etc.). Pharmacists are not allowed to give vaccinations according to law. Access paths are currently being discussed.
Belgium	A specific Task Force Vaccination has been put in place, with key stakeholders represented, to establish a proposal with regards to these different topics (implementation, delivery, surveillance, communication). This work is still ongoing.
Czechia*	The vaccine will firstly mainly be given through routine GP practices and hospitals. Invitation of identified target groups has not been specified yet. It is probable that vaccinations of health care professionals, staff of the public health authorities and other crisis professions necessary for the functioning of the state (e.g. police, fire brigade, rescue system, etc.) will take place at the workplace. Or through GPs + hospitals and/or vaccination centres.
Denmark	This is to be defined on the basis of what vaccines will be approved. Currently, work is being carried out on a number of different scenarios, including target groups, how the vaccines will be delivered etc. Communication campaigns is a key priority in this work and is currently under development.
Estonia	For the logistical considerations, the vaccines will be delivered to the central vaccine store and distributed to four local vaccine stores and then to the vaccinators. The process of notifying and invitations and communication campaigns are under development.
Finland	Vaccination is the responsibility of the municipalities by law in Finland. They hope to use the existing processes utilized with influenza vaccination as much as possible. In case of the

	BioNTech/Pfizer product, additional ultra-low temperature (ULT) cold chain needs to be provided. They are working on the details right now.
France	The deployment plan for COVID-19 vaccine is still under development and discussed at the Ministry of Health's level. General recommendation on the points to consider in the implementation of the vaccination program will be published soon.
Germany	This is in the mandate of federal states and still under discussions. Most likely, Germany will use vaccination centres in the initial phase.
Iceland	At healthcare centres.
Ireland	The logistical considerations for the vaccines have not been fully determined as yet. It is possible that vaccines may be administered in a number of different settings as the campaign evolves depending on variables including groups targeted for vaccination and vaccine availability.
Italy	For the logistical aspects, Italy is looking to use routine vaccination services. Other possibilities to increase coverage will be evaluated.
Latvia*	Latvia is planning that the vaccines will be given for free. In the following days it is planned that the NITAGs together with the State Agency of Medicines will work on a letter/document to those medical staff who are not experts in vaccinations, and will also inform the public with the help of media on various aspects.
Luxembourg*	For deployment of the vaccine, there will be dedicated vaccination centres, healthcare facilities for HCW, and if feasible (logistics) GP practices. Invitation letters are planned to be sent. Currently looking into an E-appointment system. Vaccine centres and logistics are being developed for deployment across the country. The most difficult part is to get the adequate human resources. The objective is to vaccinate 70% of the resident population in 90 days. There is a need to estimate the needs: material and logistics, IT, human resources, etc.
Malta*	The planning process is still in an early phase. The current prevalent thoughts involve the identification of priority groups and then the individual invitation of persons in these groups to attend for vaccination by appointment. Also plans to use the existing flu distribution plans (but maybe refine this).
Netherlands	The details are not yet known for the logistical considerations, but the plan is to use the existing channels for vaccine delivery.
Norway	The vaccine logistical considerations are under development. They will likely be based on the existing system for influenza vaccination where each municipality will decide on how vaccines are best delivered adjusted to the size and conditions in the municipality. It will also depend on the amount of distributed vaccines.
Poland*	Details on the organization of vaccination campaigns are being determined. In the initial phases of the campaign with limited vaccines supply, vaccines will be distributed routine, similar to influenza vaccinations for healthcare professionals. Aspects of logistics, delivery, storage (focus on conventional cold chain) are being taken into account in the planning.
Slovenia*	Logistical considerations depend on packaging and storage conditions and requirements. First doses will be given in healthcare facilities for HCW and LTCF. Instructions for vaccination will be prepared by a group of experts (public health, immunology, infectious diseases, etc). The defined target groups will be invited to be vaccinated as part of information campaigns and with the help of public media as well as information technology. Experience with the organization of seasonal influenza vaccination will also be considered. The possibility of carrying out citizen-friendly vaccination and ensuring that the vaccination is provided to all priority groups (from health and infrastructure perspective) and citizens who express interest.
Spain	The logistical considerations will depend on the characteristics of the vaccine/s available.
Sweden	Mainly through dedicated vaccination centres and primary health care centres. In principle, the organization for influenza vaccinations will form the basis for the vaccinations against COVID-

	19, as well. The vaccinations will be performed by the county council organizations. New centres might be involved depending on the need. Planning is ongoing right now.
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*Oral communication in the NITAG dialogue meeting

Monitoring systems for safety, effectiveness, vaccine coverage and acceptance

Countries were asked to provide information on how product-specific monitoring systems will be organised to document vaccine coverage, safety, effectiveness and acceptance

Safety, effectiveness, vaccine coverage

Among those countries who provided information on monitoring systems for vaccination coverage, safety, and effectiveness, the following groups may be distinguished:

1. Countries with electronic immunisation registry system currently in place and/or improving their electronic immunisation system in place include: Belgium, Denmark, Iceland, Italy, Finland, Italy, Norway, Slovenia, Sweden will use electronic registries for monitoring purpose of COVID-19 vaccine. In Finland, the immunisation information registry can be linked to health outcome and can also provide data on safety and effectiveness. Belgium and Finland reported that they may be able to report monitoring information by vaccine brand.
2. Countries currently developing or currently considering ad hoc electronic system for COVID-19 include: Austria, Germany, Luxembourg, Malta, Netherlands, Poland, Spain
3. Countries who will use other systems already in place: Czechia (insurance), Germany (insurance), Slovenia
4. Estonia will implement an electronic health card (individual record of vaccination, not for monitoring purpose)
5. Countries who did not give any specific information or who are currently working on it (without any other information disclosed): Ireland, and France.

Safety is usually in the mandate of the National Medicine Agencies but in some countries it is a shared responsibility between public health and regulators (e.g. Norway). A few countries reported on tools that will be used for safety monitoring. An electronic registry is in place in Finland (as described above) and in Norway (which is a different one from the vaccine registry). An expert group will review safety events in Belgium, but the monitoring system was not described. Poland and Italy are strengthening their current existing system for COVID-19 safety monitoring purpose. Netherlands and Spain will use their routine safety monitoring system without further details provided.

Acceptance

Belgium and Luxembourg have undertaken acceptance survey in the general population. Luxembourg is also planning one survey among general practitioners. France and Spain reported that acceptance will be monitored using surveys. No other information was disclaimed on acceptance.

Table 4: Summary table on monitoring systems for safety, effectiveness, vaccine coverage and acceptance

Country	Information on how product-specific monitoring systems will be organised to document vaccine coverage, safety, effectiveness and acceptance
Austria	Use of electronic documentation system: <ul style="list-style-type: none"> - Piloted with influenza-vaccines in some parts of Austria starting in October
Belgium	Monitoring strategy currently under-development: <p>Vaccine coverage</p> <ul style="list-style-type: none"> - Option to calculate brand-specific vaccine coverage by priority group using vaccine registry <p>Vaccine effectiveness:</p> <ul style="list-style-type: none"> - ILI (sentinel general practitioners) and SARI (sentinel hospitals) surveillance adapted to COVID-19, test negative design - ILI surveillance in nursing homes adapted to COVID-19, test negative design - Linking the COVID-19 laboratory test results to the vaccine registry?

	<p>Vaccine safety:</p> <ul style="list-style-type: none"> - Voluntary reporting of adverse events by vaccinees: participation to the ACCESS project (Lareb coordination) for the use of a web application - Reporting of adverse events by health professionals: notification through integrated eForm - Panel of experts for the assessment of adverse events of special interest - Background incidence: For rare events, data from the ACCESS project should be used considering the size of the population to be vaccinated in Belgium. For less rare events, they will investigate the feasibility to estimate national background incidence of certain events - Investigation of breakthrough cases: the methodology is still to be defined.
Czechia	<p>Vaccine specific product monitoring:</p> <ul style="list-style-type: none"> - Not fully specified yet - Standard systems as used for other vaccinations are expected, e.g. <ul style="list-style-type: none"> ➢ GPs documentation = patient personal record (vaccination date, vaccine type and batch) ➢ reporting to the health insurance information systems <p>Safety, effectiveness, acceptance:</p> <ul style="list-style-type: none"> - The State Institute for Drug Control (SÚKL - http://www.sukl.cz/) will oversee everything for COVID-19 vaccines, as with other vaccines and drugs. - The State Institute for Drug Control is a Czech government agency responsible for regulation of the safe production of pharmaceuticals in the country, clinical evaluation of medicines and for monitoring the advertising and marketing of both medicines and medical devices. Its powers stem from the Act on Public Health Insurance.
Denmark*	<p>Vaccine coverage, effectiveness:</p> <ul style="list-style-type: none"> - Electronic immunization registry (DDV). - Linked to other registries to monitor product specific uptake, coverage and effectiveness. <p>Vaccine safety:</p> <p>Similarly, vaccine safety is planned to be monitored by linking suspected adverse reactions and selected adverse event of special interest from the hospital discharge register, with information about vaccination-product and batch numbers from DDV.</p>
Estonia	<p>Vaccination coverage, acceptance and effectiveness are under the health board administration.</p> <p>Safety is under State Agency of Medicines.</p> <p>Vaccination card for electronic proof of vaccination currently under-development with WHO.</p>
Finland	<p>Currently being planned.</p> <p>Nationwide post licensure impact monitoring including coverage, effectiveness and safety:</p> <ul style="list-style-type: none"> - Link between vaccine, outcomes and adverse event possible through national vaccine register, population registry and nationwide personal number - Vaccine register allow the recording of trade name and Lot number - Insurance data on usage of drugs which can be used to amplify understanding on morbidity - Cohort design preferred rather than test negative design for the monitoring of effectiveness - Use of sentinel surveillance not excluded - Preparatory work currently undergoing, including discussion with clinicians on which ICD to code health outcomes
France	<p>Not yet established.</p> <p>Monitoring systems will depend on the deployment plan for COVID-19</p> <p>Acceptance studies are and will be regularly conducted by the National Public Health Agency.</p> <p>France possesses different system information (SI) to monitoring storage, shipping and pharmacovigilance. At that stage, France is working on one SI to aggregate all those systems in order to have an overall view.</p>
Germany	<p>Vaccine coverage:</p>

	<ul style="list-style-type: none"> - A stand-alone central electronic database currently under development - Telephone surveys (subsequent surveys), surveys among hospital staff, and insurance claims data will also be implemented <p>Vaccine effectiveness:</p> <ul style="list-style-type: none"> - Targeted studies (hospital-based case-control study) <p>Vaccine safety:</p> <ul style="list-style-type: none"> - Cohort study (using an app) - Pregnancy register - Routine observed-vs-expected analyses based on country background incidences <p>Vaccine acceptance:</p> <ul style="list-style-type: none"> - Subsequent surveys
Iceland	National Vaccination Registry.
Ireland	Currently under development.
Italy	<p>The electronic platform for registering vaccination activities will be used.</p> <p>Effectiveness and Safety:</p> <ul style="list-style-type: none"> - A specific surveillance system for adverse events and effectiveness under development by the Italian medicine Agency.
Latvia*	<p>No individual record on vaccine status.</p> <p>Number of distributed does available.</p>
Luxembourg	<p>Vaccination registration e-tool (ad hoc system for COVID-19 vaccine) under development:</p> <ul style="list-style-type: none"> - Use by vaccine provider - Send appointment invitation and reminder (E appointment system) - Deliver vaccination certificate - Vaccine registration tool <p>Efficacy:</p> <ul style="list-style-type: none"> - Linkage Vaccination registration e-tool with COVID-19 cases database (efficacy) <p>Separate Existing Pharmacovigilance surveillance system</p> <p>Acceptance:</p> <ul style="list-style-type: none"> - Intention to vaccinate (population survey) undertaken in September - Survey to be repeated to see the trend and tailor campaigns. - Large media campaign on large scale testing, conveying the concept of herd immunity and cocooning
Malta	<p>Implementation of an effective product-specific monitoring system under development.</p> <p>Safety:</p> <ul style="list-style-type: none"> - Mandate of the Maltese national medicine agency
Netherlands	<p>National register currently under discussion.</p> <p>Effectiveness:</p> <ul style="list-style-type: none"> - Through existing platform <p>Safety:</p> <ul style="list-style-type: none"> - National pharmacovigilance centre (safety monitoring agency)
Norway	<p>The Norwegian Institute of Public Health is responsible for establishing a plan for follow-up of vaccine efficacy/effectiveness, safety and vaccination coverage.</p> <p>Surveillance of COVID-19:</p> <ul style="list-style-type: none"> - Norwegian Surveillance System for Communicable Diseases (MSIS) and the laboratory database (MSIS Lab database)

	<p>Norwegian medicine agency electronically (Norwegian injury registration system):</p> <ul style="list-style-type: none"> - Surveillance and monitoring of vaccination - national health registries - Surveillance of COVID-19 vaccination - Norwegian Immunisation Registry, (SYSVAK). - Suspected adverse events after immunisation will be reported by healthcare professionals to BIVAK registry at NIPH - Patient reported adverse events are reported to the Norwegian Medicines Agency <p>Other national health registries:</p> <ul style="list-style-type: none"> - Emergency register for COVID-19 (Beredt-19), Norwegian patient register (NPR) and a possible link with the Norwegian Registry for Primary Health Care (NRPHC) and the Norwegian Cause of Death Registry (DÅR).
Poland*	<p>Details on the documentation system for vaccination are being determined. An electronic system linked to COVID-19 data is being considered. A strengthened surveillance of the vaccine safety system (beyond routine pharmacovigilance) is under development.</p>
Slovenia	<p>Use of Immunisation information registry (eRCO) and national database on confirmed COVID-19 cases.</p> <p>In accordance with the regulations, the distribution and administration of COVID-19 vaccines will be closely monitored, as well as monitoring of possible side effects.</p>
Spain	<p>Vaccine coverage</p> <ul style="list-style-type: none"> - Specific COVID-19 vaccination registry under development. - Data can be used for the monitoring of effectiveness. <p>Safety</p> <ul style="list-style-type: none"> - current pharmacovigilance system in place <p>Acceptance</p> <ul style="list-style-type: none"> - Surveys
Sweden	<p>The national vaccination register will be adapted for registration of all vaccinations against COVID-19. The work is ongoing right now. It includes legal as well as IT adaptations.</p>

* Oral communication in the NITAG dialogue meeting

Conclusions

This report provides some insight on four aspects of the national deployment plans currently under development: recommendations for priority groups, evidence to be considered for prioritisation of target groups, logistical considerations and monitoring systems for safety, effectiveness, vaccine coverage and acceptance. Deployment plans are under further development and the data presented will evolve in the coming weeks. It is also expected that the current interim plans will be updated as more evidence become available.

The majority of countries are currently developing recommendations for priority groups to be vaccinated. Healthcare workers and elderly people (with various age limit across countries) were mostly considered for prioritisation, but also individuals with chronic condition prone to develop more severe COVID-19 disease. In terms of evidence used for considerations for prioritisation of target groups, this is evolving process requires continuous update as more information becomes available. Results from phase 3 studies will obviously be an important factor for determining what target groups should be vaccinated first. Mathematical modelling is an important tool that together with epidemiological surveillance data and review of available literature can aid in considerations.

Regarding logistical considerations for the roll out of COVID-19 vaccination plans, many countries responded that they will, as much as possible, make use of existing vaccination structures and delivery services. Sharing more detailed country plans, on which settings will be used for administration of vaccines for easy access for target populations, and if and how countries are planning for an adequate

amount of skilled workforce available for providing vaccines, would be helpful. Country plans for vaccine storage, transport and cold chain requirements will become clearer as further information about COVID-19 vaccine characteristics become available, such as the potential need for additional ultra-low temperature cold chain and how this will be managed.

Development of electronic immunisation registry systems for COVID-19 vaccine monitoring purpose is ongoing in some countries with currently no existing electronic registry. Further description of these systems is required to understand what type of information can be provided at point of clinical care, at population level and link this electronic system with health outcome databases. In those settings where no electronic system is planned to be deployed, a comprehensive overview of methods to be used for monitoring purpose should be undertaken and guidance provided.

Several activities will be undertaken by ECDC to support EU/EEA countries in their efforts to prepare a vaccination plan and to implement monitoring system to document safety, effectiveness and vaccination coverage/acceptance: a periodical mapping of deployment plan for COVID-19 vaccines; mathematical models on different vaccination strategies for various target groups and vaccines; close collaboration with WHO EURO in order to align principles and actions through the development of the COVID-19 vaccine framework in the European Region; close collaboration with the European Medicine Agency (EMA) for post authorisation surveillance activities; close collaboration with the NITAG collaboration network, of which ECDC acts as secretariat.

Contributing ECDC experts (in alphabetical order)

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Disclaimer

All data published in this report are correct to the best of our knowledge at the time of publication. Maps and figures published do not represent a statement on the part of ECDC or its partners on the legal or border status of the countries and territories shown.

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Annex 1. Survey questions

Please respond by ticking relevant box and respond shortly to the open questions.

I represent the following Member State: _____

1. Is a vaccine deployment plan for COVID-19 vaccines currently under development or already available?
☐ Yes
☐ No
☐ Unknown
2. If yes, would you be able to share the document with ECDC? If in the public domain, please share the link:
3. Have you developed recommendations for priority groups to be vaccinated in the initial phases of the campaigns when vaccines are in short supply?
☐ Yes, please provide further information:
☐ No
☐ Not yet, but currently under development
☐ Unknown
4. What evidence will be/have been considered and by whom in order to prioritise the target groups for vaccination (e.g. role of impact modelling of different vaccination strategies, enhanced epidemiological surveillance, reported vaccine safety and efficacy by age and target group from phase 3 trials ...)?
Please provide further information:
5. Please provide information on how vaccines will be delivered (e.g. dedicated vaccination centres, routine GP practices, pharmacists etc..) , how the identified target groups will be invited to be vaccinated (invitation letter sent, ...). Please provide further details on the organisation of vaccination campaigns that can be helpful to others.
6. Please provide information on how product-specific monitoring systems will be organised to document vaccine coverage, safety, effectiveness and acceptance.

Annex 2. Overview of current EU/EEA and UK deployment and vaccination plans for COVID-19 vaccines

Country	Deployment plan under development?	Recommendations for priority target groups	Evidence to be considered in order to prioritise the target groups for vaccination	Logistical considerations - how vaccines will be delivered and how the identified target groups will be invited	Product-specific monitoring systems will be organised to document vaccine coverage, safety, effectiveness and acceptance
Austria	Yes.	Not yet, but currently under development.	Evidence to be considered is under discussion in the NITAG. Modelling will be used, and the Bioethics committee involved.	Currently looking into different ways of delivery of the vaccines (i.e. through routine GPs, public vaccination centres, company medical officers, mobile vaccination teams etc.). Pharmacists are not allowed to give vaccinations according to law. Access paths are currently being discussed.	Use of electronic documentation system: - Piloted with influenza-vaccines in some parts of Austria starting in October
Belgium	Yes.	<ul style="list-style-type: none"> - Healthcare workers - People over 65 years of age - People aged 45-65 years with comorbidities <p>Priority groups have been identified by the NITAG. It is also mentioned in the recommendation that other priorities within the above groups may be considered if a quantity of limited vaccine is available.</p> <p>This recommendation may be modified as new data and information become available on the</p>	Prioritised groups were based on evidence from literature review of risk groups for severe COVID-19, and in-depth analysis of the profile of COVID-19 hospitalised cases (national database of Sciensano, the public health institute, with an approximate coverage of 70% of hospitalised cases).	<p>A specific Task Force Vaccination has been put in place, with key stakeholders represented, to establish a proposal with regards to these different topics (implementation, delivery, surveillance, communication). This work is still ongoing.</p>	<p>Monitoring strategy currently under-development.</p> <p>Vaccine coverage:</p> <ul style="list-style-type: none"> - Option to calculate brand-specific vaccine coverage by priority group using vaccine registry <p>Vaccine effectiveness:</p> <ul style="list-style-type: none"> - ILI (sentinel GPs) and SARI (sentinel hospitals) surveillance adapted to COVID-19, test negative design - ILI surveillance in nursing homes adapted to COVID-19, test negative design - Linking the COVID-19 laboratory test results to the vaccine registry? <p>Vaccine safety:</p>

		immunogenicity of the type(s) of vaccine(s) that will be available. For example, data on pregnant women and immunocompromised patients as well as the impact of socio-economic and ethnic origin will be closely followed.			<ul style="list-style-type: none"> - Reporting of adverse events by vaccinees: participation to the ACCESS project (Lareb coordination) for the use of a web application - Reporting of adverse events by health professionals: notification through integrated eForm - Panel of experts for the assessment of adverse events of special interest - Background incidence: For rare events, data from the ACCESS project should be used considering the size of the population to be vaccinated in Belgium. For less rare events, we will investigate the feasibility to estimate national background incidence of certain events - Investigation of breakthrough cases: the methodology is still to be defined. 	
Czechia*	Yes.	<p>Not yet, but currently under development:</p> <ul style="list-style-type: none"> - People with certain chronic diseases (e.g. serious respiratory tract diseases, resistant hypertension, serious cardiac diseases, BMI > 40, hematological disease, serious liver and kidney disease, 	A draft of prioritised target groups will be prepared by NITAG, in consultation with different departments of Ministry of Health, NIPH, scientific and professional societies.	<p>The vaccine will firstly mainly be given through routine GP practices and hospitals.</p> <p>Invitation of identified target groups has not been specified yet.</p> <p>It is probable that vaccinations of health care professionals, staff of the public health authorities and other crisis professions necessary for the functioning of the state (e.g. police, fire brigade, rescue</p>	<p>Vaccine specific product monitoring:</p> <ul style="list-style-type: none"> - Not fully specified yet - Standard systems as used for other vaccinations are expected, e.g.: <ul style="list-style-type: none"> ➤ GPs documentation = patient personal record (vaccination date, vaccine type and batch) 	

		<ul style="list-style-type: none"> - serious form of diabetes) - Health care professionals and selected staff of public health authorities (e.g. ICU, selected clinical healthcare workers, general practitioners, emergency medical rescue service, staff performing epidemiological investigations, laboratory workers in charge for SARS-CoV-2 samples) - Social services (both clients and personnel) - Staff of critical infrastructure (integrated rescue service, energy workers, government, crisis committees) - People 65 years of age and older 		<p>system, etc.) will take place at the workplace. Or through GPs + hospitals and/or vaccination centres</p>	<p>➤ reporting to the health insurance information systems</p> <p>Safety, effectiveness, acceptance:</p> <ul style="list-style-type: none"> - The State Institute for Drug Control (SUKL - http://www.sukl.cz/) will oversee everything for covid vaccines, as with other vaccines and drugs. - The State Institute for Drug Control is a Czech government agency responsible for regulation of the safe production of pharmaceuticals in the country, clinical evaluation of medicines and for monitoring the advertising and marketing of both medicines and medical devices. Its powers stem from the Act on Public Health Insurance. 	
Denmark	Yes.	Not yet, but currently under development.	<p>Denmark's vaccine work is coordinated by multiple Danish health agencies who have different tasks in developing the approach, with advice from international agencies such as HSC, ECDC, WHO. The review process is on-going, and we are currently not able to provide a list of all parameters being considered. All the above-mentioned elements are in</p>	<p>This is to be defined on the basis of what vaccines will be approved. Currently, we are working on a number of different scenarios, including target groups, how the vaccines will be delivered etc.</p> <p>Communication campaigns is a key priority in this work and is currently under development.</p>	<p>It is mandatory to register all vaccinations in the electronic immunization registry in Denmark (DDV). This register will be linked to other registries to monitor product specific uptake, coverage and effectiveness. Similarly, vaccine safety is planned to be monitored by linking suspected adverse reactions and selected adverse event of special interest from the hospital discharge register</p>	

			consideration during the development of target groups.		with information about vaccination-product and batch numbers from DDV.
Estonia*	Yes.	<ul style="list-style-type: none"> - Healthcare workers - Social care workers - People with certain comorbidities - People 70 years of age and older 	<p>Evidence to be considered include epidemiological surveillance data, clinical data, ECDC recommendations and data from other countries. The final decisions will be made taking into account the results from phase III trials and the recommendations from the local NITAG.</p>	<p>For the logistical considerations, the vaccines will be delivered to the central vaccine store and distributed to four local vaccine stores. Then to the vaccinators. The process of notifying and invitations and communication campaigns are under development.</p>	<p>Vaccination coverage, acceptance and effectiveness are under the health board administration.</p> <p>Safety is under State Agency of Medicines.</p> <p>Vaccination card for electronic proof of vaccination currently under development with WHO</p> <p>Currently being planned.</p> <p>Nationwide post licensure impact monitoring including coverage, effectiveness and safety:</p> <ul style="list-style-type: none"> - Link between vaccine, outcomes and adverse event possible through national vaccine register, population registry and nation-wide personal number - Vaccine register allow the recording of trade name and Lot number - Insurance data on usage of drugs which can be used to amplify understanding on morbidity - Cohort design preferred rather than test negative design for the monitoring of effectiveness - Use of sentinel surveillance not excluded - Preparatory work currently undergoing including discussion with clinicians
Finland	Yes.	Not yet, but currently under development.	<p>THL will provide different use case scenarios based on modelling using Finnish data of COVID-19 hospitalized and deceased patients, contact matrix data (Polymod), transmission data and what will be known about the VE of different vaccine candidates.</p>	<p>Vaccination is the responsibility of the municipalities by law in Finland. They hope to use the existing processes utilized with influenza vaccination as much as possible. In case of the BioNTech/Pfizer product, additional ultra-low temperature (ULT) cold chain needs to be provided. They are working on the details right now.</p>	

France	Yes.	<ul style="list-style-type: none"> - Healthcare workers - Social care workers - People 65 years of age and older - People at higher risk of severe disease or death due to underlying conditions <p>A first preliminary recommendation was published in July. The document also describes the different anticipated vaccination scenarios according to different epidemic scenarios, different characteristics of vaccines, and the need of vaccine doses. The recommendation will be updated as soon as the results of modelling that are currently under development will be available.</p>	Literature review of severe disease risk factors and of professional exposure as well as French epidemiologic surveillance will be considered. Conclusions will be used to define different vaccination strategies that will be tested in a transmission model. Results from clinical trials by age group will also be considered as soon as available.	The deployment plan for COVID-19 vaccine is still under development and discussed at the Ministry of Health's level. General recommendation on the points to consider in the implementation of the vaccination program will be published soon.	<p>Not yet established.</p> <p>Monitoring systems will depend on the deployment plan for COVID-19 Acceptance studies are and will be regularly conducted by the National Public Health Agency.</p> <p>France possesses different system information (SI) to monitoring storage, shipping and pharmacovigilance. At that stage, France is working on one SI to aggregate all those systems in order to have an overall view.</p>	on which ICD to code health outcomes
Germany	Yes.	<p>Not yet, but currently under development.</p>	Evidence to be considered include systematic reviews on risk factors and data from clinical trials: efficacy, safety. Furthermore, mathematical modelling, epidemiological surveillance, an ethical framework and results from acceptance studies will be considered.	This is in the mandate of federal states and still under discussions. Most likely we will use in the initial phase vaccination centers.	<p>Vaccine uptake:</p> <ul style="list-style-type: none"> - A stand-alone central electronic database currently under development - Telephone surveys (subsequent surveys), surveys among hospital staff, and insurance claims data will also be implemented <p>Vaccine effectiveness:</p> <ul style="list-style-type: none"> - Targeted studies (hospital- based case-control study) 	

					<p>Vaccine safety:</p> <ul style="list-style-type: none"> - Cohort study (using an app) - Pregnancy register - Routine observed-vs-expected analyses based on country background incidences <p>Vaccine acceptance:</p> <ul style="list-style-type: none"> - Subsequent surveys <p>National Vaccination Registry.</p>
Iceland	Yes.		Not yet, but currently under development.	At healthcare centres.	Currently under development
Ireland	Yes.		Not yet, but currently under development.	<p>The logistical considerations for the vaccines have not been fully determined as of yet. It is possible that vaccines may be administered in a number of different settings as the campaign evolves depending on variables including groups targeted for vaccination and vaccine availability.</p> <p>Evidence will be considered by the COVID-19 Immunisation Strategy Group and NIAC/NITAG. This includes international literature considering local epidemiology and current status on disease risk, reference material and guidelines from CDC, PHE and WHO. Recommendations will lie within appropriate ethical framework.</p> <p>The general approach taken by NIAC/NITAG for prioritization is based on equity, justice, disease burden, severity in risk groups, impact on society, availability of vaccines, vaccine-specific information from clinical trials, operational feasibility. Vaccine data (safety, effectiveness) will influence final recommendations.</p>	<p>The electronic platform for registering vaccination activities will be used.</p> <p>Effectiveness and Safety: A specific surveillance system for adverse events and effectiveness under development by the Italian medicine Agency.</p>
Italy	Yes.		Not yet, but currently under development.	<p>For the logistical aspects, Italy is looking to use routine vaccination services. Other possibilities to increase coverage will be evaluated.</p> <p>An ad hoc expert group will elaborate recommendations taking into account the characteristics of the vaccine and different vaccination strategies.</p>	<p>The electronic platform for registering vaccination activities will be used.</p> <p>Effectiveness and Safety: A specific surveillance system for adverse events and effectiveness under development by the Italian medicine Agency.</p>

Latvia*	Yes.	Not yet, currently under development: <ul style="list-style-type: none"> - Risk groups for severe COVID-19 disease - Healthcare workers 		It is planned that the vaccines will be given for free. In the following days it is planned that the NITAGs together with the State Agency of Medicines will work on a letter/document to those medical staff who are not experts in vaccinations, and will also inform the public with the help of media on various aspects.	Vaccination registration e-tool (ad hoc system for COVID-19 vaccine) under development: <ul style="list-style-type: none"> - Use by vaccine provider - Send appointment invitation and reminder (E appointment system) - Deliver vaccination certificate - Vaccine registration tool - Linkage with SARS-CoV-2 positive cases database (→ vaccine efficacy) - Link with COVID-19 cases database (efficacy) <p>Separate existing pharmacovigilance surveillance system.</p> <p>Acceptance:</p> <ul style="list-style-type: none"> - Intention to vaccinate (population survey) - Undertaken in September - Survey to be repeated to see the trend and tailor campaigns. - Large media campaign on large scale testing,
Luxembourg*	Yes.	<ul style="list-style-type: none"> - People 65 years of age and older - Healthcare workers - Vulnerable people (according to national definition for COVID-19 vulnerability) <p>These categories are currently under further development.</p>	Basic information at this stage, and assuming that the vaccine efficacy relies in the prevention of symptomatic infection (and not in the prevention of the transmission). Incorporation of additional information (such as available national data) will allow for further development (and possible changes in the prioritisation strategy). Luxembourg are currently looking for collaboration to incorporate national epidemiologic surveillance into a modelling tool to inform the national prioritisation strategy.	For deployment of the vaccine, there will be dedicated vaccination centres, healthcare facilities for HCW, and if feasible (logistics) GP practices. Invitation letters are planned to be sent. Currently looking into an E-appointment system. Vaccine centres and logistics are being developed for deployment across the country. The most difficult part is to get the adequate human resources. The objective is to vaccinate 70% of the resident population in 90 days. Need to estimate the needs: (material and logistics, IT, human resources, etc)	

Malta*	Yes.	Not yet, but currently under development.	Several multi-faceted considerations will be taken. The role of impact modelling of different vaccination strategies and the reported vaccine safety and efficacy by age and target group from phase 3 trials are two important pillars.	<p>The planning process is still in an early phase. The current prevalent thoughts involve the identification of priority groups and then the individual invitation of persons in these groups to attend for vaccination by appointment.</p> <p>Also plans to use the existing flu distribution plans (but maybe refine this).</p> <p>The details are not yet known for the logistical considerations, but the plan is to use the existing channels for vaccine delivery.</p>	<p>conveying the concept of herd immunity and cocooning.</p> <p>Implementation of an effective product-specific monitoring system under development.</p> <p>Safety:</p> <ul style="list-style-type: none"> - Mandate of the Maltese national medicine agency
Netherlands	Yes.	Not yet, but currently under development.	The role of impact modelling of different vaccination strategies, enhanced epidemiological surveillance, reported vaccine safety and efficacy by age and target group from phase 3 trials will be used to inform prioritization of target groups.	<p>The details are not yet known for the logistical considerations, but the plan is to use the existing channels for vaccine delivery.</p>	<p>National registry currently under discussion.</p> <p>Effectiveness:</p> <ul style="list-style-type: none"> - Through existing platform. <p>Safety:</p> <ul style="list-style-type: none"> - National pharmacovigilance centre (safety monitoring agency)
Norway	Yes.	Not yet, but currently under development.	Evidence to consider for prioritization of target groups include risk factors for morbidity / mortality, available information/reported vaccine safety and efficacy by age and target group. Mathematical modelling will also be used. Ethics will be considered by an external advisory group.	<p>The vaccine logistical considerations are under development. They will likely be based on the existing system for influenza vaccination where each municipality will decide on how vaccines are best delivered adjusted to the size and conditions in the municipality. It will also depend on the amount of distributed vaccines.</p>	<p>The Norwegian Institute of Public Health is responsible for establishing a plan for follow-up of vaccine efficacy/effectiveness, safety and vaccination coverage Surveillance of COVID-19:</p> <ul style="list-style-type: none"> - Norwegian Surveillance System for Communicable Diseases (MSIS) and the laboratory database (MSIS Lab database). <p>Norwegian medicine agency electronically (Norwegian injury registration system):</p>

					<ul style="list-style-type: none"> - Surveillance and monitoring of vaccination - national health registries - Surveillance of COVID-19 vaccination - Norwegian Immunisation Registry, (SYSVAK). - Suspected adverse events after immunisation will be reported by healthcare professionals to BIVAK registry at NIPH - Patient reported adverse events are reported to the Norwegian Medicines Agency <p>Other national health registries:</p> <ul style="list-style-type: none"> - Emergency register for COVID-19 (Beredt-19), Norwegian patient register (NPR) and a possible link with the Norwegian Registry for Primary Health Care (NRPHC) and the Norwegian Cause of Death Registry (DÅR).
Poland*	Yes.	<ul style="list-style-type: none"> - Healthcare worker - Social assistance staff in contact with patients at high risk of severe course of disease or death due to COVID-19 <p>NITAG recommendations for priority groups to be vaccinated in the initial phases of the campaign with limited vaccines supply have been finalized and handed over</p>	The NITAG recommendation on prioritisation groups for COVID-19 immunization is based on the epidemiological data on risk groups presented in ECDC reports.	<p>Details on the organization of vaccination campaigns are being determined. At the beginning, in the initial phases of the campaign with limited vaccines supply, vaccines will be distributed routine, similar to influenza vaccinations for healthcare professionals.</p> <p>Aspects of logistics, delivery, storage (focus on conventional cold chain) are being taken into account in the planning.</p>	<p>Details on the documentation system for vaccination are being determined.</p> <p>An electronic system linked to COVID-19 data is being considered. A strengthened surveillance of the vaccine safety system (beyond routine pharmacovigilance) is under development.</p>

Slovenia*	Yes.	to Ministry of Health in July 2020. - Healthcare workers (including staff in long-term care facilities) - Other risk groups (especially residents in long-term care facilities and elderly)	Slovenia has two working groups: NITAG + MoH. These will consider available evidence on vaccine safety and efficacy by age, availability (No of doses) of vaccine, characteristics of vaccine (preventing transmission?) Modelling will be used as will an EU vaccination strategy and recommendations of the expert group which has been already established.	Logistical considerations depend on packaging and storage conditions and requirements. First doses will be given in health care facilities for HCW and LTCF. Instructions for vaccination will be prepared by a group of experts (public health, immunology, infectious diseases, etc.). The defined target groups will be invited to be vaccinated as part of information campaigns and with the help of public media as well as information technology. Experience with the organization of seasonal influenza vaccination will also be considered. The possibility of carrying out citizen-friendly vaccination and ensuring that the vaccination is provided to all priority groups (from health and infrastructure perspective) and citizens who express interest.	Use of Immunisation information registry (eRICO) and national database on confirmed COVID-19 cases. In accordance with the regulations, the distribution and administration of COVID-19 vaccines will be closely monitored, as well as monitoring of possible side effects.
Spain	Yes.	Not yet, but currently under development.	Prioritisation is under development evidence to be considered include epidemiology data as well as efficacy and safety of each vaccine. Mathematical modelling will also be considered.	The logistical considerations will depend on the characteristics of the vaccine/s available.	Vaccine coverage: - Specific COVID-19 vaccination registry under development. - Data can be used for the monitoring of effectiveness. Safety: - current pharmacovigilance system in place Acceptance: - Surveys

Sweden	Yes.	<ul style="list-style-type: none"> - People over 70 years of age - Risk groups for severe COVID-19 disease - Healthcare workers (including those in elderly care) 	<p>Since no data are available on VE, priority groups are based on clinical/epidemiological evidence on risks for severe COVID-19 disease. Modelling work on possible vaccine impact is under way.</p>	<p>Mainly through dedicated vaccination centres and primary healthcare centers. In principle, the organization for influenza vaccinations will form the basis for the vaccinations against COVID-19, as well. The vaccinations will be performed by the county council organizations. New centers might be involved depending on the need. Planning is ongoing right now.</p>	<p>The national vaccination register will be adapted for registration of all vaccinations against COVID-19. The work is ongoing right now. It includes legal as well as IT adaptations.</p>
UK*	Yes	<ul style="list-style-type: none"> - Older adults' resident in a care home and care home workers - All those 80 years of age and over and health and social care workers - All those 75 years of age and over - All those 70 years of age and over - All those 65 years of age and over - High-risk adults under 65 years of age - Moderate-risk adults under 65 years of age - All those 60 years of age and over - All those 55 years of age and over - All those 50 years of age and over - Rest of the population (priority to be determined) 	<p>Evidence to be considered include existing and enhanced surveillance systems for COVID-19, including serological epidemiology surveillance. National data on data on hospitalization, severity of disease, mortality etc. will be used. Mathematical modelling is ongoing.</p>		

* Oral communication in the NITAG dialogue meeting