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Independent report

Joint Committee on Vaccination and Immunisation: interim advice on priority groups for COVID-19 vaccination

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This publication is available at https://www.gov.uk/government/publications/priority-groups-for-coronavirus-covid-19-vaccination-advice-from-the-jcvi/interim-advice-on-priority-groups-for-covid-19-vaccination

Introduction

This preliminary advice has been developed following a request from the Department of Health and Social Care and Public Health England, to facilitate planning for the deployment of any safe and effective vaccine(s) as soon as licensure is obtained for use in the UK. The underlying principle of this advice is to save lives and protect the NHS. This document forms a preliminary framework for refining future advice for the basis of a national COVID-19 vaccination strategy.

This early interim advice has been developed based on a review of UK epidemiological data on the impact of the COVID-19 pandemic so far. No data are currently available on the efficacy and safety of COVID-19 vaccines in development. This is the start of a longer process, and the advice provided at this stage is preliminary and limited in terms of detail. There are a number of unknown factors about any potential vaccines, and there are still important gaps in our understanding of COVID-19. The committee will be keeping its advice under review and as more information becomes available will update its advice as and when deemed appropriate.

Specifically, this advice will be updated as more information becomes available on:

- vaccine efficacy and/or immunogenicity in different age and risk groups
- the safety of administration in different age and risk groups
- the effect of the vaccine on acquisition of infection and transmission
- the transmission dynamics of the SARS-CoV-2 virus in the UK population, and
- the epidemiological, microbiological, and clinical characteristics of COVID-19

Frontline health and social care workers are at increased personal risk of exposure to infection with COVID-19 and of transmitting that infection to susceptible and vulnerable patients in health and social care settings. The committee considered this group to be the highest priority for vaccination. Vaccination of frontline health and social care workers will also help to maintain resilience in the NHS and for health and social care providers.

The next priority for vaccination is those at increased risk of serious disease and death. Current evidence strongly indicates that the risk of serious disease and death increases with age and is increased in those with a number of underlying health conditions (see background). Therefore, after health and social care workers, the committee advises the prioritisation of vaccination using a mortality risk-based approach.

Vaccine priority groups: interim advice

The committee advises priority vaccination of the following groups:

1. frontline health and social care workers
2. those at increased risk of serious disease and death from COVID-19 infection stratified according to age and risk factors

There is ongoing work within the UK to refine the identification of persons at risk of serious disease and mortality from COVID-19 infection. As well as age and underlying co-morbid conditions, the committee notes that early signals have been identified of other potential risk factors, including deprivation and ethnicity. As more evidence on at-risk groups emerges, this work will inform the review of the composition, and order of priority, of groups for vaccination.

Background

On 7 May 2020, JCVI considered epidemiological, microbiological and clinical information on the impact of COVID-19 in the UK so far, including data on disease incidence, hospitalisation and mortality associated with COVID-19. The advice provided is to support the government in development of a vaccine strategy for the procurement and delivery of a vaccination programme to the population.

Currently available data from the UK indicate that those at greatest risk of severe illness and mortality from COVID-19 includes:

- adults over the age of 50, with the risk increasing with age
- those with underlying co-morbidities including chronic heart disease, chronic kidney disease, chronic pulmonary disease, malignancy, obesity and dementia

Based on expert advice, the government has also defined a shielded population that it considers to be at greatest risk of severe illness, which includes:

- solid organ transplant recipients
- people with specific cancers
- people who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs
- people with severe respiratory conditions including all cystic fibrosis, severe asthma and severe chronic obstructive pulmonary (COPD)
- people with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as severe combined immunodeficiency (SCID), homozygous sickle cell)
- people on immunosuppression therapies sufficient to significantly increase risk of infection
- women who are pregnant with significant heart disease, congenital or acquired

The committee is mindful that work is ongoing to more clearly define those at greatest risk of morbidity and mortality from COVID-19 and so at this stage has not been specific as to what conditions constitute an at-risk group. As more information and granular data become available, this list will be updated to better capture those most at risk of serious disease and death.

Frontline health and social care workers are also at increased personal risk of infection and of transmitting that infection to susceptible patients and vulnerable populations such as the elderly in care homes. Vaccination of these key workers will protect at-risk populations and help maintain resilience in the NHS.

Limitations of the advice

There are still important gaps in our understanding of COVID-19 and about a potential vaccine, which may modify the committee’s advice. The committee will keep these issues under review.

Natural immunity

Available data are insufficient to conclude on whether infection with SARS-CoV-2 generates immunity against re-infection, and the durability of any such immunity.

Transmission dynamics

Data on the transmission dynamics of the virus in the UK population and the contribution of children to transmission are currently limited. When more data become available, the committee will consider whether a transmission-based vaccination strategy (vaccinating those most likely to spread the virus in the population) can

also play a part in controlling the pandemic.

Ethnicity and gender

There are some emerging data, which the committee reviewed, indicating potentially increased risk of serious disease and mortality in certain black and minority ethnic groups. The reasons behind this are complex, are not well understood and are undergoing further investigation. Male gender also appears to be associated with increased mortality from COVID-19.

Geographic variation

Increased population density in urban conurbations may increase the risk of infection. Further data are required.

Vaccines

On a potential vaccine or vaccines some of the unknowns include:

- whether a safe and effective vaccine can be developed against this disease
- when a safe and effective vaccine will become available
- the levels of population immunity when a vaccine becomes available
- what age groups a vaccine will be licensed for (it’s currently assumed that early licensure will be in adults)
- the dosing schedule (one, two or more doses)
- the number of doses that will initially be available, and the number of doses subsequently available
- the time period over which sufficient doses will become available
- the effectiveness of a vaccine across different age groups, especially older age groups and the effect of immunosenescence, and for different risk conditions
- the effectiveness against infection/serious disease/acquisition/transmission
- the duration of protection
- the safety of the vaccine, potential side effects and contraindications