



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# **Rapid review of public health guidance on protective measures for vulnerable groups in the context of COVID-19**

Published 12 June 2020

## Version history

Version	Date	Specific updates
V1.0	23 March 2020	Date of first rapid review
V2.0	24 March 2020	Review updated: <ul style="list-style-type: none"> <li>• Updated guidance from Norway, Scotland, and Switzerland included;</li> <li>• 'Live' table of protective measures in each setting added.</li> </ul>
V3.0	25 March 2020	Review updated to reflect change in guidance for vulnerable groups in: <ul style="list-style-type: none"> <li>• Australia;</li> <li>• New Zealand;</li> <li>• Switzerland.</li> </ul>
V4.0	26 March 2020	Review updated to include new guidance for vulnerable groups in Singapore.
V5.0	02 April 2020	Review updated to include latest guidance for vulnerable groups from Ireland.  Review updated to reflect change in the definition of high risk groups in: <ul style="list-style-type: none"> <li>• Australia</li> <li>• Norway</li> <li>• US</li> </ul>
V6.0	06 April 2020	Review updated to reflect change in the definition of high risk groups in: <ul style="list-style-type: none"> <li>• US</li> <li>• Scotland</li> </ul> Additional measures/support: <ul style="list-style-type: none"> <li>• UK</li> </ul> Change in advice: <ul style="list-style-type: none"> <li>• Norway</li> </ul> Additional information on vulnerable social groups: <ul style="list-style-type: none"> <li>• Canada</li> </ul>
V7.0	09 April 2020	Minor text added: <ul style="list-style-type: none"> <li>• Canada</li> </ul> Review updated to reflect change in the definition of high risk groups in: <ul style="list-style-type: none"> <li>• CDC</li> </ul> Additional country profiles: <ul style="list-style-type: none"> <li>• Sweden</li> <li>• Germany</li> </ul>
V8.0	16 April 2020	Additional detail added: <ul style="list-style-type: none"> <li>• New Zealand</li> </ul> Minor text added: <ul style="list-style-type: none"> <li>• Sweden</li> </ul>

		Minor layout changes: <ul style="list-style-type: none"><li>• Germany</li></ul>
V9.0	20 April 2020	Minor editing in wording used: <ul style="list-style-type: none"><li>• Australia</li><li>• Scotland</li></ul> Reduced list of conditions for higher risk: <ul style="list-style-type: none"><li>• Norway</li></ul> Addition of advice for cohabitating with people at higher risk: <ul style="list-style-type: none"><li>• Norway</li><li>• UK</li></ul>
V10.0	23 April 2020	Minor layout changes: <ul style="list-style-type: none"><li>• Australia</li><li>• Northern Ireland (criteria now listed separately from PHE)</li></ul>
V11.0	27 April 2020	Review updated to reflect change in the definition of high risk groups: <ul style="list-style-type: none"><li>• Sweden</li></ul> Minor additional advice: <ul style="list-style-type: none"><li>• Norway</li><li>• New Zealand</li></ul>
V12.0	30 April 2020	Review updated to include additional detail on conditions of high risk groups: <ul style="list-style-type: none"><li>• Switzerland</li><li>• New Zealand</li></ul>
V13.0	7 May 2020	Review updated to reflect change in the definition of high risk groups: <ul style="list-style-type: none"><li>• UK</li><li>• Sweden</li></ul> Updated Advice: <ul style="list-style-type: none"><li>• New Zealand</li></ul>
V14.0	11 May 2020	Review updated to include additional detail on conditions of high risk groups: <ul style="list-style-type: none"><li>• Germany</li></ul> Additional information provided for: <ul style="list-style-type: none"><li>• Finland</li><li>• Germany</li></ul>
V15.0	14 May 2020	Review updated to include additional detail on conditions of high risk groups: <ul style="list-style-type: none"><li>• Scotland</li><li>• UK</li></ul> Updated Advice: <ul style="list-style-type: none"><li>• New Zealand</li></ul> Additional advice: <ul style="list-style-type: none"><li>• Switzerland</li></ul>
V16.0	18 May 2020	Review updated to include additional detail on conditions of high risk groups:

		<ul style="list-style-type: none"><li>• New Zealand</li></ul> Updated advice: <ul style="list-style-type: none"><li>• Ireland</li></ul>
V17.0	21 May 2020	Review updated to include additional detail on conditions of high risk groups: <ul style="list-style-type: none"><li>• New Zealand</li><li>• Northern Ireland</li></ul> Updated advice: <ul style="list-style-type: none"><li>• Finland</li></ul>
V18.0	25 May 2020	Review updated to reflect change in the definition of high risk groups: <ul style="list-style-type: none"><li>• Norway</li><li>• Switzerland</li></ul> Updated advice: <ul style="list-style-type: none"><li>• Norway</li><li>• Scotland</li></ul>
V19.0	2 June 2020	Review updated to additionally include: <ul style="list-style-type: none"><li>• Wales</li></ul> Updated advice: <ul style="list-style-type: none"><li>• England</li><li>• Singapore</li></ul>
V20.0	8 June 2020	Review updated to reflect change in the definition of high risk groups: <ul style="list-style-type: none"><li>• Northern Ireland</li><li>• Norway</li><li>• Singapore</li><li>• Sweden</li></ul> Updated advice: <ul style="list-style-type: none"><li>• Northern Ireland</li><li>• Wales</li><li>• Ireland</li><li>• New Zealand</li></ul>

## Table of contents

Version history .....	2
Key points.....	6
Background.....	7
Methods.....	8
Results .....	8
England, Public Health England (PHE) .....	8
Northern Ireland, Public Health Agency (PHA).....	11
Scotland, Health Protection Scotland (HPS).....	12
Wales, Welsh Government .....	14
Australia, Department of Health.....	15
Canada, Government in Canada.....	16
Finland, Finish Institute of Health and Wellness (THL) .....	17
Germany, Robert Koch Institute (RKI).....	17
New Zealand, Ministry of Health .....	19
Norway, Norwegian Institute of Public Health (NIPH) .....	21
Singapore, Ministry of Health.....	24
Sweden, Public Health Agency of Sweden.....	25
Switzerland, Federal Office of Public Health (FOPH).....	27
USA, Centers for Disease Control and Prevention (CDC).....	27
Conclusion .....	29
References.....	52

## Key points

- A variety of protective measures are being taken to protect vulnerable groups who are at high risk of severe illness from COVID-19 in all countries included in this review.
- In general, people included in the vulnerable group categories are those of older age, those with chronic conditions such as diabetes, high blood pressure and respiratory conditions and those in receipt of therapies that weaken the immune system.
- Australia, Canada, Finland, Germany, New Zealand, Singapore, Sweden, Switzerland, United States and Wales have a single grouping for vulnerable people, while England, Northern Ireland, Scotland and Norway distinguish between those considered at “highest risk” and those at “increased risk”.
- Some countries have published additional risk factors that increase risk, although these do not always necessitate inclusion in the vulnerable group category. These risk factors include ethnicity, smoking, high BMI and pregnancy in conjunction with another condition.
- Advice for vulnerable groups typically includes stay at home, practice hand hygiene, physical distancing and avoid all contact with others.
- For the countries that distinguished high risk from highest risk, proportionate advice is given. This usually means those at highest risk are advised to not leave the house, while those that are an increased risk can leave the house but are strongly advised to practice physical distancing and not meet others.
- As some countries have begun to ease restrictions, the advice for people in the vulnerable group has changed to include the choice to go outside. For some countries this has also included meeting people outside of their household, including physical contact with grandchildren.

## Background

In Ireland, protective measures are being taken to protect vulnerable groups who may be at risk of severe illness from coronavirus disease (COVID-19), in particular extremely medically vulnerable groups. On 27 March, the Health Protection Surveillance Centre (HPSC) issued guidance on 'cocooning' for these groups, which is a practice used to protect or shield those who may suffer the most from coming into contact with the virus.<sup>(1)</sup> The extremely medically vulnerable groups, defined by the HPSC in Ireland, include:

- People aged  $\geq 70$  years
- Solid organ transplant recipients
- People with specific cancers:
  - people with cancer who are undergoing active chemotherapy or radical radiotherapy for lung cancer
  - people with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment
  - people having immunotherapy or other continuing antibody treatments for cancer
  - people having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors
  - 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 cystic fibrosis, severe asthma, pulmonary fibrosis/ lung fibrosis/ interstitial lung disease and severe COPD
- People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as 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.

On 27 March, the specific advice given to these groups was to stay at home at all times and avoid any face-to-face contact with others. It was announced on 1 May that those cocooning could go outside for a walk, provided they followed strict physical distancing and hygiene guidelines. However, avoidance of shops is still recommended. This was outlined in [guidance](#) by the HPSC and includes meeting people in groups of up to four people outdoors.<sup>(2)</sup>

On 5 June, as restrictions were eased for the general population, the advice for those cocooning was updated to include more activities outside the home. These now include measures aimed at minimising the risk of acquiring COVID-19 infection, such as leaving the home to go for a drive, visiting shops and public services, when receiving visitors, and for members of the public supporting those who are cocooning when they are outside their home (see Table 1 for all measures).

Similar measures have been implemented in other settings to protect vulnerable groups. We undertook a rapid review of public health guidance on COVID-19, to summarise the range of advice and recommendations that have been issued to protect vulnerable groups who may be at risk of severe illness from the virus.

## Methods

The review was first undertaken on 23 March, in line with the '*Protocol for the identification and review of new and updated relevant COVID-19 public health guidance*', available on [www.hiqa.ie](http://www.hiqa.ie). The review was updated twice-weekly and as of 25 May, it is updated on a weekly basis. A detailed account of the methods used in this review are provided in the protocol.

## Results

A number of protective measures have been undertaken in different health care settings to protect vulnerable groups who may be at high risk of severe illness from COVID-19. Table 1 provides a 'live' overview of the protective measures that are being undertaken across different countries. A variety of names have been used to describe the measures which ultimately resemble 'cocooning' and involve strict isolation advice. These include 'shielding' and 'protective self-separation'. The specific measures that have been undertaken in each health care setting to protect vulnerable groups, as identified in this rapid review, are summarised separately below.

The neighbouring countries of Ireland are presented first, including England, Northern Ireland, Scotland and Wales, followed by Australia, Canada, Finland, Germany, New Zealand, Norway, Singapore, Sweden, Switzerland and the United States.

### *England, Public Health England (PHE)*

On 21 March, PHE issued [guidance on 'shielding' and protecting people who are clinically extremely vulnerable](#), including children.<sup>(3)</sup> The advice is to remain in place until 30 June. As per PHE, shielding is a practice used to protect clinically extremely vulnerable people from coming into contact with COVID-19. These people include:

- People who have had an organ transplant
- People with specific cancers:
  - People with cancer who are undergoing active chemotherapy
  - People with lung cancer who are undergoing radical radiotherapy
  - People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment
  - People having immunotherapy or other continuing antibody treatments for cancer
  - People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors

- 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 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.
- Other people have also been classed as clinically extremely vulnerable, based on clinical judgement and an assessment of their needs. GPs and hospital clinicians have been provided with guidance to support these decisions.

On 31 May, the advice was updated to take into account that COVID-19 disease levels for England are substantially lower now than when shielding was first introduced. PHE continues to strongly advise people in this group to stay at home as much as possible. However, if people in this group want to leave their home they can now do so if they wish. The current advice is:

- if you wish to spend time outdoors (though not in other buildings, households, or enclosed spaces) you should take extra care to minimise contact with others by keeping 2 metres apart.
- if you choose to spend time outdoors, this can be with members of your own household. If you live alone, you can spend time outdoors with one person from another household (ideally the same person each time).
- you should stay alert when leaving home: washing your hands regularly, maintaining physical distance and avoiding gatherings of any size.
- you should not attend any gatherings, including gatherings of friends and families in private spaces, for example, parties, weddings and religious services.
- you should strictly avoid contact with anyone who is displaying symptoms of COVID-19 (a new continuous cough, a high temperature, or a loss of, or change in, sense of taste or smell).

PHE states that this guidance is still advisory. People in this group will not be fined or sanctioned if they prefer to follow the guidance on staying alert and safe (physical distancing). When outside they are advised to:

- keep the number of visits outside to a minimum (for instance once per day)
- travel on your own, or with members of your household. If you live alone, you can spend time outdoors with one person from another household (ideally the same person each time)
- go outside when there are fewer people around, such as early in the morning
- ideally spend time in open areas
- always keep a physical distance of 2 metres
- take particular care to minimise contact with others
- do not share or exchange personal belongings (such as cups) with others
- avoid going into enclosed spaces and other households, shops and buildings

- spend as long as you feel comfortable outside.

Guidance is also provided for people living with a person who falls in this group:

- Minimise the time other people living with you spend in shared spaces, such as kitchens, bathrooms and sitting areas, and keep shared spaces well ventilated.
- Keep 2 metres away from people you live with and encourage them to sleep in a different bed where possible. If you can, use a separate bathroom from the rest of the household. Use separate towels from the other people in your house, both for drying themselves after bathing or showering and for handhygiene purposes.
- If you share a toilet and bathroom with others, it's important that they are cleaned every time after use (for example, wiping surfaces you have come into contact with). Consider drawing up a rota for bathing, with you using the facilities first.
- If you share a kitchen with others, avoid using it while they're present. If you can, take your meals back to your room to eat. If you have a dishwasher, use it to clean and dry the family's used crockery and cutlery. If this is not possible, wash them using your usual washing-up liquid, warm water and dry them thoroughly. If you are using your own utensils, remember to use a separate tea towel for drying these.
- Everyone in your household should regularly wash their hands, avoid touching their face and clean frequently touched surfaces.

As of 31 May, unpaid carers who have been notified by NHS Test and Track that they are a contact of a person who has tested positive for COVID-19, are advised not to provide care for someone who is clinically extremely vulnerable.

On 6 April, NHS Digital published details on the process for maintaining the [Shielded Patient List](#) (SPL) - a list of people at "high risk" of complications from COVID-19, who should be shielded. Patients are eligible based on the criteria for extremely vulnerable people (above).<sup>(4)</sup> On 2 June it was announced that given the emerging evidence and the improving epidemiology, the Government's Shielding policy is currently under review.<sup>(4)</sup>

The "high risk" list was defined as a subset of a wider group of people who may be "at risk". Specific advice is provided for these groups; currently the advice for the "at risk" group, which is a large group (approximately 19 million people) who are normally at risk from the flu, is to practice strict physical distancing; the advice for the "at high risk" group, which is a smaller sub-group (approximately 1.5 million people) defined by the Chief Medical Officer (CMO), is to practice complete social "shielding". The SPL is generated from NHS Digital data repositories, and additional sources, as directed by NHS England and the CMO for England. These include additional cancer patients and patients identified by GP practices and acute hospital. In the future, hospital specialists and GPs will be able to add or subtract individual patients from this register.

As of 29 March, all people on this list were to be contacted by the NHS and extra supports in relation to coronavirus were being made available: SMS Shielding Service, assistance with food and or prescriptions, food and essential supplies deliveries (free).

On 11 May, PHE guidance on social distancing<sup>(5)</sup> was superseded by [Staying alert and safe \(social distancing\)](#).<sup>(6)</sup> Within this guidance, the specific advice for clinically vulnerable people, as listed below, remains unchanged (that is, to stay at home as much as possible and, when outside, to take particular care to minimise contact with others). Clinically vulnerable people are those who are:

- Aged 70 or older (regardless of medical conditions)
- Under 70 with an underlying health condition listed below (i.e., anyone instructed to get a flu jab as an adult each year on medical grounds):
  - Chronic (long-term) mild to moderate respiratory diseases, such as asthma, chronic obstructive pulmonary disease (COPD), emphysema or bronchitis
  - Chronic heart disease, such as heart failure
  - Chronic kidney disease
  - Chronic liver disease, such as hepatitis
  - Chronic neurological conditions, such as Parkinson’s disease, motor neurone disease, multiple sclerosis (MS), or cerebral palsy
  - Diabetes
  - A weakened immune system as the result of conditions, treatments like chemotherapy, or medicines such as steroid tablets
  - Being seriously overweight (a body mass index (BMI) of 40 or above).
- Those who are pregnant.

Since 11 May, the guidance for physical distancing measures has been included in the [Staying safe outside your home guidance](#).<sup>(7)</sup>

Since 11 May, PHE has advised that those who want to go out to help a vulnerable person can do so provided physical distancing and hand hygiene is maintained, unless they have coronavirus symptoms, even if these symptoms are mild. As with shielding, unpaid carers that have been notified by NHS Test and Track, are advised not to provide care for someone who is clinically extremely vulnerable.

### ***Northern Ireland, Public Health Agency (PHA)***

From 23 March, the PHA in Northern Ireland was following PHE’s guidance on shielding for people who are extremely vulnerable. On 23 April, upon advice from Northern Ireland’s CMO, two additional conditions were added to the list of extremely vulnerable groups. These included those undergoing renal dialysis and those with Motor Neurone Disease. On 15 May, in addition to PHE criteria, people who have had a splenectomy were added to the list (see Table 1). People in this risk group are advised to stay at home at all times and avoid all face-to-face contact for at least 12 weeks. As of 8 June, news reports indicate that advice now allows for those shielding to go outside.<sup>(8)</sup> Official advice has however not been updated.

Similarly, for older people and people with an underlying health condition, PHA was following PHE's guidance on physical distancing.<sup>(5)</sup> A link to the [criteria](#) is listed on the NI Direct website,<sup>(9)</sup> which appears to be based on the criteria used by PHE for identifying those who are at an increased risk of severe illness from COVID-19 and those that should practice physical distancing measures. This includes people over the age of 70, people who are pregnant, and others who have certain conditions (see Table 1). On 22 March, it was estimated that 40,000 people meet these criteria in Northern Ireland. On 6 June, people who have motor neurone disease and people who have problems with their spleen were removed from the vulnerable person criteria, but remain on the extremely vulnerable criteria.

### ***Scotland, Health Protection Scotland (HPS)***

On 23 March, HPS was following PHE's guidance on social distancing.<sup>(5)</sup> The protective measures announced by PHE (on shielding) have also been included in relevant guidance issued by HPS. On 28 April, there was an estimated 150,000 clinically vulnerable people shielding in Scotland ([link](#)).<sup>(10)</sup>

On 3 April, [detailed criteria](#) were provided by the Scottish government for identifying people considered to be at the highest risk of severe illness:<sup>(11)</sup>

- Solid organ transplant recipients - includes people who have had a transplant of heart, lung, stomach or other part of intestine, liver and kidney. People will be in this group because they need to take medications to prevent rejection of the transplanted organ.
- People with specific cancers - made up of five sub-groups:
  - People with cancer who are undergoing active chemotherapy or have had radical radiotherapy specifically for lung cancer
  - People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment
  - People having immunotherapy or other continuing antibody treatments for cancer
  - People having other specialised, targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors
  - 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 Disease (COPD), severe bronchiectasis and pulmonary hypertension. People in this group include:
  - All patients with cystic fibrosis
  - People with severe asthma, having severe asthma means being on regular inhalers AND long term oral steroid tablets, e.g. prednisolone, OR regular injections to control your asthma
  - People with severe COPD, this means being too breathless to walk 100 yards, having 2 or more lung infections per year or requiring oxygen to help with your breathing. Usually you will be on several different inhaler medications that include two long acting preventers (Long Acting Beta

Agonists and Long Acting Anti-Muscarinic Antagonists) and a steroid inhaler

- If you are on home oxygen for your lung condition.
- People with rare diseases including all forms of interstitial lung disease/sarcoidosis and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell disease)
  - There are many conditions classed as a rare disease. Not everyone with a rare disease will be at a higher risk of severe illness from COVID-19.
- People on immunosuppression therapies sufficient to significantly increase risk of infection, or who have had their spleens removed.
  - Immunosuppressive therapy may be used to keep a person from rejecting a bone marrow or organ transplant. It may also be used to treat conditions in which the immune system is overactive, such as autoimmune diseases and allergies
  - In some cases these treatments may put people at a higher risk should they contract Covid-19 infection. The following situations put people into the highest risk group for Shielding:
    - Patients on high dose corticosteroid treatment (equivalent to Prednisolone 20mg or more) for 4 weeks or more
    - Patients on specific single therapies, for example Cyclophosphamide. These medications are usually prescribed by specialists in hospitals and clinical judgement is needed to determine if medications would indicate highest risk
    - Patients on lower dose of corticosteroids (equivalent to Prednisolone 5mg per day for 4 weeks or more), in combination with other disease modifying medication
    - Patients on several different disease modifying medications taking into account their other chronic medical conditions (Patients on a single Disease Modifying medications (DMARD) or Biologic such as Methotrexate, Azathioprine, Ciclosporin, Leflunomide plus others, would not automatically be considered in the highest risk group if they are otherwise healthy, but should be decided upon by a specialist or GP if unsure.)
- People who are pregnant with significant heart disease, congenital or acquired
  - If you are being followed up by a specialist heart clinic during your pregnancy then you fall within this group
- People who are receiving renal dialysis treatment
  - People receiving and those starting renal dialysis.

The advice for people in these groups is to:

- strictly avoid contact with anyone in your household who is displaying symptoms of coronavirus (COVID-19) - these symptoms include high temperature and or new and continuous cough
- don't leave your house
- don't go out for shopping, leisure or travel and, when arranging food or medication deliveries, these should be left at your front door to minimise contact

- keep in touch with family and friends using technology such as phone, internet, and social media.

This advice is to remain in place until 31 July 2020. However, following an assessment, the Scottish Government plans to update this advice on 17 June 2020 if the rate of infection is sufficiently low. The advice for those who are shielding will change to allow people to leave their home to exercise outdoors. This advice will not apply to those who are shielding and living in care homes. If the infection rate is sufficiently low, then there will be no limit on the amount of times people can go out, or for how long people can stay outdoors. If someone does decide to go out for exercise, the proposed advice will be that they:

- should go for a run, walk, wheel or cycle
- can go out on their own or with someone from their household
- should maintain strict physical distancing (also known as social distancing), at all times, even if the person is from their household
- should not meet with anyone from another household
- should choose times and areas that are quiet, if possible
- should wash their hands as soon as they get back home

[Additional advice](#) is provided for those with specific medical conditions, including: cancer; diabetes; heart disease; IBD; chronic kidney and liver disease; dermatological; neurological; (specific) ophthalmic respiratory and rheumatic conditions; chronic pain, and rare diseases.<sup>(12)</sup>

On 11 May, the HPS updated their [methods](#) for identifying patients that meet the shield criteria.<sup>(13)</sup> The document sets out details of the groups, as defined by the criteria listed above. It serves the same function as the NHS Digital Shielded Patient List (see England, Public Health England (PHE)).

From 23 May, those at increased clinical risk are able to leave their home for essential purposes. This includes people over 70 years of age, pregnant women and those who receive the influenza vaccination for medical reasons. For people in the highest risk group (listed above) the advice remains the same (also listed above).<sup>(14)</sup>

### ***Wales, Welsh Government***

Since 24 March, the Welsh government has been following PHE advice on shielding and protecting people defined on medical grounds as extremely vulnerable from COVID-19. The criteria for identifying people in this group are identical to the PHE criteria with the addition of children up to the age of 18 with significant heart disease, congenital or acquired (see Table 1 for full criteria).

An update was made on 1 June to allow those shielding to leave home, to exercise or meet outside with people from another household. This is reportedly due to fewer people infected with COVID-19 and as a result, the risk of catching COVID-19 has reduced. In addition, it is acknowledged that the risk of catching COVID-19 when outside is low, providing physical distancing and good hygiene measures are strictly followed. On 4 June this advice was updated to allow those shielding to leave home

to exercise or meet outside with people from another household. This will remain in place until 16 August 2020.<sup>(15)</sup>

### ***Australia, Department of Health***

On 24 March, further measures to limit the spread of COVID-19 were introduced in Australia. This moved the country away from a policy of physical distancing to one of a more restrictive nature, such as protective self-separation. The updated advice was for everyone to stay at home, including those at highest risk of severe illness. Minor layout changes, with no change in the listed conditions, occurred on the 23 April which included listing specific examples of haematologic neoplasm and providing minor additional details for disease-modifying anti-rheumatic drugs. People at higher risk include:

- people aged 70 years and over
- people aged 65 years and over with chronic medical conditions
- people with compromised immune systems (e.g. cancer)
- aboriginal and Torres Strait Islander people aged 50 years and over with one or more medical conditions.

The following chronic conditions are of concern in Aboriginal and Torres Strait Islander people over 50 years and non-indigenous people over 65 years:

- chronic renal failure
- coronary heart disease
- congestive cardiac failure
- chronic lung disease, such as severe asthma, cystic fibrosis, bronchiectasis, suppurative lung disease, chronic obstructive pulmonary disease, chronic emphysema
- poorly controlled diabetes
- poorly controlled hypertension.

People with immune system conditions that put them at greater risk:

- due to haematologic neoplasms such as leukemias, lymphomas and myelodysplastic syndromes
- post-transplant, following a solid organ transplant and are on immunosuppressive therapy
- post-transplant, following a haematopoietic stem cell transplant in the last 24 months or are on treatment for graft versus host disease (GVHD)
- by primary or acquired immunodeficiency including HIV infection
- by having chemotherapy or radiotherapy.

Medical treatments that put people at greater risk, including any biological disease-modifying anti-rheumatic drug (bDMARD) or any of the following immunosuppressive drugs, include:

- azathioprine >3.0 mg/kg/day
- 6-Mercaptopurine >1.5 mg/kg/day
- methotrexate >0.4 mg/kg/week
- prednisone >20 mg/day. If <14 days treatment, can resume work when treatment ceased

- high-dose corticosteroids ( $\geq 20$  mg of prednisone per day, or equivalent) for  $\geq 14$  days
- tacrolimus (any dose)
- cyclosporine (any dose)
- cyclophosphamide (any dose)
- mycophenolate (any dose)
- disease-modifying anti-rheumatic drugs (DMARDs) are used to treat inflammatory forms of arthritis. They suppress the immune system and this slows the development of the arthritis.
- any combination of these or other DMARDs.

Since 10 May, Australia has initiated a [3-step framework](#) for removing restrictive measures.<sup>(16)</sup> As of 8 June, this advice remains in place for those at the highest risk of severe illness, which is to stay at home and work from home if possible, avoid non-essential travel and avoid contact with others.

### *Canada, Government in Canada*

In Canada, the Public Health Agency has advised those considered at [high risk of severe illness](#) from COVID-19 to practice “protective self-separation”, which involves avoiding unnecessary face-to-face social interaction and physical contact with others.<sup>(17)</sup> These groups, as defined by the WHO, include:

- older adults (age not specified)
- those with underlying medical conditions (such as heart disease, hypertension, diabetes, chronic respiratory diseases, cancer)
- those who are immunocompromised as a result of a medical condition or treatment (e.g. chemotherapy).

In addition to the advice to stay at home as much as possible, people who fall into these categories are advised to avoid contact with others, especially those who have travelled or been exposed to the virus, and to reconsider attending gatherings, including large gatherings and smaller events in crowded or enclosed settings.

Additional social groups that may be vulnerable to severe illness were defined as anyone who has:

- Difficulty reading, speaking, understanding or communicating
- Difficulty accessing medical care or health advice
- Difficulty doing preventive activities, like frequent hand washing and covering coughs and sneezes
- Ongoing specialised medical care or groups that need specific medical supplies
- Ongoing supervision needs or support for maintaining independence
- Difficulty accessing transportation
- Economic barriers
- Unstable employment or inflexible working conditions
- Social or geographic isolation, like in remote and isolated communities
- Insecure, inadequate, or non-existent housing conditions

### ***Finland, Finish Institute of Health and Wellness (THL)***

On 2 April, it was estimated that 200,000 people aged 18 to 69 are at high risk due to illness and 870,000 people are at higher risk due to advanced age, compared to the rest of the population. People over 70 years of age are more susceptible to severe coronavirus infections.

In addition, the risk of developing a severe coronavirus infection may be increased by pre-existing conditions that significantly impair the functioning of the lungs, heart, or immune system. These include:

- Severe heart disease
- Lung disease that is not clinically stabilised
- Diabetes that involves organ damage
- Chronic liver or kidney failure
- Diseases that weaken the immune system, such as leukaemia or lymphoma that is currently undergoing cytostatic treatment (not maintenance therapy)
- Medication which significantly weakens the immune system (e.g. high-dosage cortisone therapy).

Other factors that generally impair lung functioning and may increase the health risk of a coronavirus infection include morbid obesity (BMI over 40) and daily smoking.

Since 16 March 2020, the Finish Government [imposed an obligation](#) on those over 70 years of age to avoid close contact with other people as far as possible. This means that they can go out provided they practice physical distancing. Shopping is permitted if crowds can be avoided.

If a visit to someone in this risk group is essential, handshakes, hugging and other close contact should be avoided unless essential for care or treatment reasons, in the case of staff, for instance. All visitors should use a scarf or other protection for their nose and mouth. People close to those over 70 and in risk groups have been urged to consider the potential risk of infection via their other contacts.

On 19 May, the Institute [published advice](#) explicitly aimed at people over 70 years of age. It advised these groups to follow the general guidelines on physical distancing to reduce the risk of infection, keep in touch with family and friends but avoid contact with others and, when shopping, to avoid peak hours and do not spend more time in stores than necessary. Advice is also provided on wellbeing, functional ability and for neighbours, family and friends who provide important support.

### ***Germany, Robert Koch Institute (RKI)***

On 21 May, an assessment by the RKI found the risk level to the health of the German population overall was high and very high for the following [risk groups](#):

- older people (with a steadily increasing risk of severe course from around 50 to 60 years; 86% of those who died from COVID-19 in Germany were 70 years old or older [median age: 82 years])
- smokers

- very obese people
- people with certain medical conditions:
  - of the cardiovascular system (e.g. coronary heart disease and high blood pressure)
  - chronic diseases of the lungs (e.g. COPD)
  - patients with chronic liver disease
  - patients with diabetes mellitus
  - patients with cancer
  - patients with a weakened immune system (for example, due to a disease that is associated with an immunodeficiency or by taking medication that can influence and reduce the immune defence, such as cortisone).

The [current advice](#) for these groups is to stay at home wherever possible, have family or neighbours take care of supplies, reduce personal contact to the bare minimum and maintain physical distance when meeting others.

For citizens over 60, the [advice](#) is to reduce social contact to a bare minimum. Remain at home, if and where possible and avoid contact with grandchildren.

On 7 May, a summary of current evidence on pregnancy and associated risk was published by the RKI. This is presented below with references to relevant studies where cited:

For pregnant women:

Acquisition of infection - There is currently no data on susceptibility to SARS-CoV-2 infection in pregnant women. Due to the physiological adaptation and immunological changes during pregnancy, an increased susceptibility to infections by SARS-CoV-2 cannot be excluded.

Clinical presentation- Pregnant patients seem to develop symptoms less frequently, corresponding to a low manifestation index. In a screening study of 215 women in the third trimester, 33 women (15%) tested positive, but only 4 (12%) of the 33 women tested positive had symptoms.<sup>(18)</sup> Another study showed that pregnant women had fewer fevers than the control group. The indication for examination for SARS-COV-2 can therefore be made generously in pregnant patients.

Severity of the course of the disease in pregnant women - There are only a few studies to date, in which pregnant women with COVID-19 were examined.<sup>(18-21)</sup> These available studies and the results of the report of the "WHO-China Joint Mission on Coronavirus Disease 2019"<sup>(22)</sup> provide no indication of a more severe course of COVID-19 in pregnant women compared to non-pregnant women. Deaths seem to occur very rarely, individual cases have so far been reported.<sup>(23)</sup> It is possible that an increased risk of a severe course can only be reliably examined in population-based studies.

Since COVID-19 can be associated with hypercoagulability and there is also physiological hypercoagulability during pregnancy, the indication for thromboprophylaxis should be carefully examined.<sup>(24)</sup>

For unborn children:

There is little data on this question, especially no long-term data, so no valid statements can be made about this question. Basically, high fever during the first trimester of pregnancy can increase the risk of complications and malformations.

### ***New Zealand, Ministry of Health***

On 25 March, New Zealand moved to Level 4 of its four-level alert system. The advice to everyone in New Zealand was to stay at home, except for those providing essential services. In particular people over 70 or people with existing underlying medical conditions were advised to follow the advice.<sup>(25)</sup> These conditions, as listed by the [New Zealand Government](#) include:

- serious respiratory disease such as chronic lung disease or moderate to severe asthma
- serious heart conditions
- immunocompromised conditions
- severe obesity — a BMI of 40 or higher
- diabetes
- chronic kidney disease
- people undergoing dialysis
- liver disease.

Many conditions can cause a person to be immunocompromised (as listed above), including:

- cancer treatment
- smoking related illness
- bone marrow or organ transplantation
- haematologic neoplasms
- immune deficiencies
- poorly controlled HIV or AIDS
- prolonged use of corticosteroids and other immune weakening medications such as disease-modifying anti-rheumatic drugs.

Other people at risk include:

- those over 70
- residents of aged care facilities
- pregnant women in their third trimester.

New guidance was issued when New Zealand transitioned from Alert Level 4 to Alert Level 3 on 28 April. For those in the at-risk groups, the advice focused on creating a safe “bubble”, as detailed in Table 1. On 2 May, the Ministry [published advice](#) for these groups on how to manage their “bubble”, which stated that they can now leave their

house for activities when previously they were advised not to. If people share their bubble with someone who is more vulnerable to COVID-19, then the risks of extending their bubble needs to be considered.

On 29 April, the dedicated government website [covid19.gov.nz](https://covid19.gov.nz) advised pregnant women to take extra precautions during the third trimester as a growing baby puts increased oxygen demands on the woman. Pregnant women working in areas where there is high risk of exposure to COVID-19, for example, some healthcare settings, were advised to discuss and agree with their employer an assessment of the risk and options for working differently if needed.

On 13 May, New Zealand moved to Alert Level 2 and allowed those at risk to meet friends and family outside of the home. On 8 June, New Zealand has moved to Alert Level 1. At Level 1, everyone can return without restriction to work, school, sports and domestic travel, and can get together with as many people as they want.<sup>(26)</sup> For people at higher risk of COVID-19, the following advice has been issued:

- keep a 2 metre distance from people you don't know in public places and take extra care with hygiene practices
- avoid touching surfaces and wash your hands before and after you leave home
- wipe keys, handrails and regularly touched surfaces
- avoid passing around your mobile phone to other people.

There is more [detailed guidance available](#) for people who are at higher risk of COVID-19 at Alert Level 2, which includes advice on shopping, work, socialising, travel and recreation.

On 15 May, the Ministry published an [updated list](#) of medical conditions and treatments that are risk factors for severe illness from COVID-19 and other factors contributing to a higher risk (see below):<sup>(27)</sup>

Relevant medical conditions include:

- chronic lung disease such as cystic fibrosis, bronchiectasis, chronic obstructive respiratory disease and emphysema, severe asthma that needs multiple medications and medical care
- serious heart conditions such as congestive heart failure
- hypertension that is not well controlled
- diabetes that is not well controlled
- chronic kidney disease
- liver disease.

Conditions and treatments that weaken the immune system include:

- having chemotherapy or radiotherapy
- bone marrow or organ transplantation
- some blood cancers
- immune deficiencies including HIV infection

- immunity weakening medications such as high-dose corticosteroids and disease-modifying anti-rheumatic drugs that treat inflammatory forms of arthritis.
- older people (updated 15 May)
- people in aged care facilities (updated 15 May).

Other factors contributing to risk (updated 15 May):

- ethnicity
- smoking
- obesity (BMI of 40 or higher)
- pregnancy (pregnant women in their third trimester).

### ***Norway, Norwegian Institute of Public Health (NIPH)***

On 17 April, the NIPH amended its [criteria for high risk groups](#),<sup>(28)</sup> moving the majority of conditions into a category for “those that may be at risk of severe COVID-19 disease”. These groups included those aged over 65 years, cardiovascular disease (including high blood pressure), and diabetes. On 21 May, the criteria for [two new risk groups](#) replaced the previous criteria. The risk groups describe those that are considered to be at “moderate to high risk” and “slightly increased risk” of severe illness from COVID-19. For each risk group, specific advice is provided, which depends on the rate of transmission in the community of the applicable person (low-level spread and widespread community transmission). Currently, NIPH reports that the transmission of the virus is low in all counties in Norway, but there may be local clusters of transmission, for example in workplaces, regions, or municipalities.<sup>(29)</sup>

People at moderate (clinically vulnerable) / high risk (clinically extremely vulnerable) include:

- Those over 80 years of age
- Residents of nursing homes
- Those aged 66 to 80 years with one of the following chronic diseases, OR age 50 to 65 years with two or more of the following chronic diseases:
  - cardiovascular disease (other than well-regulated high blood pressure)
  - morbid obesity (BMI  $\geq 35$  kg/m<sup>2</sup> in combination with weight-related diseases or BMI  $\geq 40$  kg/m<sup>2</sup>)
  - diabetes
  - chronic kidney disease and kidney failure
  - chronic lung disease (other than well-regulated asthma)
  - chronic liver disease
  - in immunosuppressive therapy such as chemotherapy, radiation therapy and immunosuppressive therapy in autoimmune diseases.
- Those with severe health condition, regardless of age\*:
  - people with active cancer, ongoing or recently discontinued treatment for cancer (especially immunosuppressive therapy, radiation therapy to the lungs or chemotherapy). Leukaemia has a higher risk than other types of cancer
  - neurological or muscular disease with impaired coughing strength or lung function (e.g. ALS)

- congenital immunodeficiency in an unstable phase that carries the risk of severe respiratory tract infections
- blood disorders that include cells or organs that are important for the immune system
- bone marrow transplant or organ transplant
- HIV infection with low CD4 counts
- significant renal impairment or significantly impaired liver function
- other, assessed by a physician.

*\*Some serious health conditions in this list are included due to a precautionary principle, although at present there are no studies indicating a higher risk of severe progression for the diseases.*

The advice for people in this group (that is, "moderate to high risk") depends on whether transmission is low or widespread in their communities:

Low-level spread (current situation):

*Increase physical distancing*

- You can be with your closest circle as normal, and travel and socialise with others as long as:
  - you and your closest circle are particularly careful to follow general advice, keeping a safe distance and good hand hygiene and cough etiquette
  - you limit your number of close contacts
  - you avoid crowded places (e.g. public transport, shopping malls) or only go to such places when they are quieter.
- Workplace planning and adjustment may be appropriate.

Widespread transmission or community outbreaks:

*Social shielding*

- To avoid infection, you should withdraw during this period. You can go outside and maintain normal contact with your closest circle as long:
  - you keep a greater distance from others (preferably 2 metres) than your closest circle
  - you ask others to help you with necessary purchases
  - your closest circle should also limit their social contact. If not, you should keep a safe distance to them. If this is not possible, it might be necessary to consider other temporary housing arrangements.
- If workplace adjustments or remote working is impossible, sick leave should be considered.

People at slightly increased risk include those:

- Aged 65–80 years (especially over 70)
- Aged 50–65 years with one of the following chronic diseases:
  - cardiovascular disease (other than well-regulated high blood pressure)
  - morbid obesity (BMI  $\geq$  30 kg/m<sup>2</sup>) in combination with weight-related diseases or BMI  $\geq$  40 kg/m<sup>2</sup>)
  - diabetes
  - chronic kidney disease and kidney failure
  - chronic lung disease (other than well-regulated asthma)

- chronic liver disease
- in immunosuppressive therapy such as chemotherapy, radiation therapy and immunosuppressive therapy in autoimmune diseases.
- People under 50 years of age have a lower risk of developing severe COVID-19 disease. However, some people with poorly-regulated chronic conditions or a combination of several chronic diseases might be at increased risk.

The advice for people in this group also depends on whether transmission is low or widespread in their communities:

Low-level spread (current situation):

*Live like others*

- You can generally live like the rest of the population, travel, work and attend events, but be particularly careful to follow the general advice:
  - keep the recommended distance to people, apart from your closest circle
  - remember hand hygiene and cough etiquette
  - stay home when you are ill
  - avoid being with people who are sick.
- Consider whether you will be able to follow these measures before travelling or participating in social activities.

Widespread transmission or community outbreaks:

*Increase social distancing*

- You can be in normal contact with your closest circle, and travel and socialise with others as long as:
  - you and your closest circle are particularly careful to follow general advice, keeping a safe distance and follow good hand hygiene and cough etiquette.
  - you limit your number of close contacts
  - you avoid crowded places (for example, public transport, shopping malls) or only go to such places when they are less busy
- Workplace planning and adjustment may be appropriate.

These protective measures could be described as “protective self-separation”, although the Norwegian Institute of Public Health does not use any label to describe the advice issued.

On 17 April, advice is offered on a method of assessment for risk groups at work, which is based on age and underlying chronic conditions. Employees in risk groups are advised to talk to their employer about the possibility of remote working and videoconference facilities. Sick leave is not recommended unless workplace adjustment or remote working is not possible. The advice for the specific groups is as follows:

- Aged over 65 years - It is particularly important to shield this group from infection. The need for shielding applies especially to people with underlying chronic conditions.
- Aged 50-65 years - This group has a lower risk of severe disease than people over the age of 65. People with chronic conditions may be at increased risk of severe disease, but the risk is expected to be limited if their condition is well

regulated. The need for shielding for COVID-19 infection should therefore be considered on an individual basis.

- Aged under 50 years - The risk of severe COVID-19 disease is low in this group. Further shielding is usually not necessary but may be appropriate for people with chronic conditions that are poorly regulated or with multiple chronic conditions.

Advice is also provided to someone who has developed symptoms and lives with a person who is at higher risk. This includes:

- If you live with someone who is at risk, and you have symptoms of a respiratory tract infection or do not feel well, then you should limit time spent together.
- If possible, stay and sleep in separate rooms and have your own bathroom or toilet.
- If this is not possible, try to keep your distance and have a separate towel in the bathroom or toilet and your own toiletries.

### ***Singapore, Ministry of Health***

On 24 March, the Multi-Ministry Taskforce in Singapore introduced tighter measures to minimise the further spread of COVID-19. Included in the measures was specific advice for older adults [age not specified] and anyone with underlying medical conditions. On 5 June, an advisory issued by the Ministry of Health provided further indications for risk of poorer clinical outcomes in the event of infection.<sup>(30)</sup> These include:

- Persons who are aged 60 and above
- Patients who are immunocompromised or have concurrent medical conditions such as obesity (BMI > 31), hypertension, diabetes, chronic heart and lung diseases, kidney diseases on dialysis, hypercoagulable states, cancer, or patients on drugs that cause immunosuppression.

The advice to these groups was to avoid social gatherings and crowded places as far as possible, and only go out for essential purposes, such as to work or buy food.<sup>(31)</sup> The advice is similar to the advice issued in Ireland, and could be described as 'protective self-separation'. On 21 April, it was announced that the emergency measures will be extended for another four weeks, until 1 June, with no specific reference to vulnerable groups. A [press release](#) published by the Ministry on 19 May, suggests that the advice for vulnerable groups is likely to remain the same after 1 June.<sup>(32)</sup> As of 8 June this advice is currently in use. From 2 June, the use of face masks (that completely cover the nose and mouth) are required outside of the home by everyone. Face shields may be worn for people who have health conditions that may result in breathing or other medical difficulties, when a mask is worn for a prolonged period of time.<sup>(33)</sup>

## ***Sweden, Public Health Agency of Sweden***

On 1 April, the Public Health Agency advised all those with symptoms of COVID-19 to avoid social contact, in order to reduce the risk of spreading the virus. The Agency also advised those aged 70 years or over to limit their contacts with other people and not to travel by public transport, (for example, by train, bus, tram or subway), or visit supermarkets or other venues where a large group of people may be gathered at the same time. From 1 April, all private visits to nursing homes were prohibited by the government.

There is an increased risk of severe illness from COVID-19 among those of old age, along with those with pre-existing medical conditions such as:

- High blood pressure
- Cardiovascular disease
- Pulmonary disease
- Diabetes.

The Public Health Agency of Sweden also advised that people with asthma, allergies, or kidney disease may be at high risk of severe illness from COVID-19, but the evidence is unclear. In addition, it advised that people with conditions that make them vulnerable to infectious diseases, for example, due to problems with the immune system, should seek advice from their doctor about how to manage their condition and how to decrease the risks associated with COVID-19.

[Additional information](#) relating to those at high risk was published on 5 June.<sup>(34)</sup> This is said to be informed by a [recent preprint publication](#) of a study conducted using a dataset of 17 million adult NHS patients collected since the beginning of February.<sup>(35)</sup> Below is a translation of the additional information.

The risk of becoming seriously ill gradually increases with age:

- those who are 60-70 years of age have twice the risk of becoming seriously ill, compared to someone who is 50-60 years of age
- those who are 70-80 years of age have a five-fold higher risk of becoming seriously ill, compared to those who are 50-60 years
- the risk is greatest for those over 80 years of age. Then the risk of getting seriously ill is twelve times higher than for a person who is 50-60 years.

### **70 years and older**

Below, are some diseases that in addition to rising age, Public Health Agency of Sweden consider to further increase the risk of becoming seriously ill.

- organ transplantation
- blood cancer diseases, existing and past
- neurological disorders (for example, MS, Parkinson's, Myasthenia gravis)
- obesity (increased risk with increased degree of obesity)
- diabetes (less risk if well treated)
- current cancer treatment
- chronic lung disease (including asthma, but very marginal if well treated)

- stroke / dementia
- other immunosuppressive disease or treatment
- liver disease
- renal impairment
- cardiovascular disease.

High blood pressure alone does not appear to increase the risk, and is therefore no longer on the list.

### **Younger than 70 years**

People under the age of 70 may also be at increased risk of becoming seriously ill if they have:

- any or all of the diseases mentioned above
- any disease that involves an increased risk of serious disease in respiratory tract infections.

These groups are not counted as risk groups:

- children even those who have any of the conditions or illnesses that increase the risk for adults and the elderly
- people who smoke are not a risk group but tobacco smoking increases the risk of serious symptoms of respiratory infections.

The Agency states that according to current knowledge, pregnant women do not appear to be at higher risk than others of being affected by severe illness from COVID-19, but acknowledged that there have been some instances where pregnant women have needed intensive care in Sweden. The Agency advised that pregnant women should be extra careful, especially at the end of their pregnancy and before giving birth. This is because a respiratory infection during late stages of pregnancy can pose a risk for the woman. Pregnant women with risk factors such as high blood pressure, diabetes, and obesity should be extra careful, consult with the midwife or physician, and limit close contact with people outside the household.

People considered at high risk have been are currently advised to:

- Limit close physical contact with others and completely avoid public transportation
- Avoid travelling by bus, tram or subway, shopping in supermarkets, or visiting venues where a large group of people gather at any one time. Instead, ask friends, family or neighbours to do your shopping etc.
- While remaining at home, you may still go out for walks.

On 20 April, a new report ([link](#) – in Swedish) from the Swedish National Board of Health and Welfare ("Socialstyrelsen") identified the groups most at risk of being severely affected if they contract COVID-19. The criteria are listed in Table 1.

Swedish welfare has proposed to the government, that people who live with someone who has an increased risk of acquiring COVID-19, should temporarily refrain from working outside of the home. Particularly if their work situation is such that the Agency's advice regarding contagion protection cannot be followed.

The list is based on knowledge from the time that the coronavirus first occurred in January. The knowledge of risk factors is still low, and the Agency states the assessment may need to be reconsidered and developed.

On 11 May, the Ministry of Health and Social Affairs published an [article](#) for older people, people with health conditions, and health care and social services staff. The article outlined measures, advice, and restrictions specific to these populations.<sup>(36)</sup>

### ***Switzerland, Federal Office of Public Health (FOPH)***

In Switzerland, the following groups have been [identified](#) as at high risk:

- Those over the age of 65
- Those who have one of the following conditions:
  - Cancer
  - Cardiovascular disease
  - Chronic respiratory diseases
  - Conditions and therapies that weaken the immune system
  - Diabetes
  - High blood pressure.
- Or with obesity class III (morbid, BMI greater than or equal to 40 kg/m<sup>2</sup>).

People who are at high risk are being advised to stay at home. If they do leave the home, they should strictly follow hygiene and physical distancing guidelines and avoid places frequented by large numbers of people. For example, railway stations, public transport or shopping centres during peak times,<sup>(37)</sup> and avoid unnecessary contacts. Although the guidance issued in Switzerland has not been labelled, it is consistent with 'protective self-separation'.

Additional conditions, listed in Table 1, are detailed in the [Ordinance on Measures to Combat the Coronavirus \(COVID-19\)](#), which is updated by FOPH when evidence emerges. According to this document, persons at high risk may not be involved in providing services at schools, higher education institutions and other education and training institutions. The first phase of measures to protect the public have been eased, but the advice still applies. Additional guidance issued to these vulnerable groups is listed in Table 1.

The [FOPH advises](#) that adults should only visit their parents if they need assistance that they cannot get elsewhere. Since 20 May, visiting old people's and nursing homes are now allowed in principle, but the rules are set at canton level (member states of the Swiss Confederation).<sup>(38)</sup>

Since 11 May, schools have resumed in Switzerland and advice has been issued to grandparents over the age of 65 or with an underlying medical condition, instructing them not to look after their grandchildren.<sup>(38)</sup>

### ***USA, Centers for Disease Control and Prevention (CDC)***

In the USA, those aged 65 years and older are considered at high risk for severe illness from COVID-19. These people are being asked to stay at home if possible.<sup>(39)</sup> The groups listed below have also been identified as high risk,<sup>(40)</sup> but no guidance has been issued for these groups. An update on 2 April included additional conditions

associated with being immunocompromised. As of 7 April, people who are pregnant are no longer listed as high risk, this was said to be based on available information: “we do not currently know if pregnant people have a greater chance of getting sick from COVID-19 than the general public nor whether they are more likely to have serious illness as a result”. On 5 May, additional information was provided for people with chronic liver disease, including hepatitis B and hepatitis C.

Groups at higher risk for severe illness include:

- People 65 years and older
- People who live in a nursing home or long-term care facility
- Other high-risk conditions could include:
  - Chronic lung disease or moderate to severe asthma
  - Serious heart conditions
  - Conditions that can cause a person to be immunocompromised, including cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications.
  - Severe obesity (BMI of 40 or higher)
  - Diabetes
  - Chronic kidney disease and those who are undergoing dialysis
  - Liver disease
  - People with moderate to severe asthma.

## Conclusion

A variety of protective measures are being taken to protect vulnerable groups who are at a high risk of severe illness from COVID-19. These broadly involve social or physical distancing and protective self-separation. However, highly protective measures are also being taken to shield, or cocoon, those who are considered extremely medically vulnerable to severe illness from COVID-19, as evidenced in Ireland and the UK.<sup>(1, 3)</sup>

All 14 countries included in the review have published inclusion criteria for “vulnerable groups”. Australia, Canada, Finland, Germany, New Zealand, Singapore, Sweden, Switzerland, US and Wales have a single grouping, while England, Northern Ireland, Scotland and Norway distinguish between those considered at “highest risk” and those at “increased risk”.

In general, people who are considered vulnerable to more severe illness are those that are older aged, those with chronic conditions such as diabetes, high blood pressure and respiratory conditions and those in receipt of therapies that weaken the immune system. Some countries have published additional risk factors that increase risk, although these do not always require inclusion in the vulnerable group category. These risk factors include ethnicity, smoking, high BMI and pregnancy in conjunction with another condition.

Specific advice is provided by all countries for people who are vulnerable. This typically includes advice to stay at home, practice hand hygiene, physical distancing and avoid all contact with others. For the countries that distinguished high risk from highest risk, proportionate advice is given. This usually means those at highest risk are advised to not leave the house, while those that are a high risk could leave the house but were strongly advised to practice physical distancing and not to meet others. For Norway, the advice is further stratified according to local transmission levels, with higher restrictions in place where community case numbers are high.

As some countries have begun easing restrictions, the advice for people at higher risk has changed to include the choice to go outside and for some countries this has also included meeting people outside of their household, including physical contact with grandchildren.

Since 2 June, Northern Ireland has removed people who have motor neurone disease and people who have problems with the spleen from the vulnerable person group. This is presumably due to those conditions being included in the extremely vulnerable group on 21 May. Scotland has announced that the current advice for those shielding will remain in place until 31 July, although the results of an updated assessment is said to be due on 17 June and, if infection rates are sufficiently low, proposed new advice, that has been published in advance, will come into effect. Wales has updated their advice to allow those shielding to leave their home to exercise or meet outside with people from another household and is stated to remain in place until 16 August. Norway has lowered the minimal BMI criteria for slightly increased and moderate to high risk groups from  $\geq 35$  BMI to  $\geq 30$  BMI. Singapore has issued an advisory that

included further details on indications for high risk. Sweden has published additional details on conditions that relate to those considered at higher risk. New Zealand has moved to Alert Level 1, where everyone can return without restriction to work, school, sports and domestic travel, and no restrictions on gatherings, while those at a higher risk are advised to stay vigilant when outside and maintain physical distance from others.

As of 8 June, three of the four neighbouring countries of Ireland now appear to allow those who are shielding or cocooning to go outside and meet with others. Scotland will make an announcement on the 16 June based on the current infection rate and if low it has indicated that it will also ease restrictions for people in this group.

Although some of the measures may seem stringent, research by Ferguson et al.<sup>(41)</sup> in March 2020 suggests that physical distancing of the elderly and others most at risk of severe disease, in combination with home isolation of suspected cases and home quarantine of those living in the same household as suspected cases, could considerably reduce hospital demand and mortality.

Protective measures for vulnerable groups may also be in place in other settings that were not identified in this rapid review.

The findings from this rapid review were accurate as of 8 June 15.00 GMT, however, it is important to note that the protective measures identified above may change as the situation and response to COVID-19 evolves.

**Table 1 Overview of protective measures for vulnerable groups from COVID-19 [UPDATED 08/06/2020 15.00 GMT]**

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
Australia  Guidance provided by: <a href="#">Department of Health</a>	Protective self-separation	<p>The following chronic conditions are of concern in Aboriginal and Torres Strait Islander people over 50 years and non-Indigenous people over 65 years:</p> <ul style="list-style-type: none"> <li>• Chronic renal failure</li> <li>• Coronary heart disease or congestive cardiac failure</li> <li>• Chronic lung disease (severe asthma, cystic fibrosis, bronchiectasis, suppurative lung disease, chronic obstructive pulmonary disease, chronic emphysema)</li> <li>• Poorly controlled diabetes</li> <li>• Poorly controlled hypertension.</li> </ul> <p>Weakened immune system due to:</p> <ul style="list-style-type: none"> <li>• haematologic neoplasms such as leukemias, lymphomas and myelodysplastic syndromes</li> <li>• Post-transplant, a solid organ transplant and on immunosuppressive therapy</li> <li>• Post-transplant, a haematopoietic stem cell transplant in the last 24 months or on treatment for graft versus host disease (GVHD)</li> <li>• primary or acquired immunodeficiency including HIV infection</li> <li>• chemotherapy or radiotherapy.</li> </ul> <p>Taking any biological disease-modifying anti-rheumatic drug (bDMARD) or any of the following immunosuppressive drugs:</p> <ul style="list-style-type: none"> <li>• Azathioprine, more than 3 mg per kg per day</li> <li>• 6-mercaptopurine, more than 1.5 mg per kg per day</li> <li>• Methotrexate, more than 0.4 mg per kg per week</li> <li>• High-dose corticosteroids (20 mg or more of prednisone per day or equivalent) for 14 days or more</li> <li>• Tacrolimus</li> <li>• Cyclosporine</li> <li>• Cyclophosphamide</li> <li>• Mycophenolate</li> </ul>	Stay home unless it's absolutely necessary to go outside.

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>Any combination of these or other DMARDs</li> </ul>	
Canada  Guidance provided by: <a href="#">Government of Canada</a>	Protective self-separation	<ul style="list-style-type: none"> <li>Older adults [age not specified]</li> <li>Those with chronic underlying medical conditions (such as high blood pressure, heart disease, lung disease, cancer or diabetes)</li> <li>Those who are immunocompromised as a result of a medical condition or treatment (e.g. chemotherapy).</li> </ul> Social groups that may be vulnerable were listed as anyone who has: <ul style="list-style-type: none"> <li>Difficulty reading, speaking, understanding or communicating</li> <li>Difficulty accessing medical care or health advice</li> <li>Difficulty doing preventive activities, like frequent hand washing and covering coughs and sneezes</li> <li>Ongoing specialized medical care or needs specific medical supplies</li> <li>Ongoing supervision needs or support for maintaining independence</li> <li>Difficulty accessing transportation</li> <li>Economic barriers</li> <li>Unstable employment or inflexible working conditions</li> <li>Social or geographic isolation, like in remote and isolated communities</li> <li>Insecure, inadequate, or non-existent housing conditions.</li> </ul>	Avoid contact with others, and stay home when possible.
England  Guidance provided by: <a href="#">PHE</a>	Shielding	<ul style="list-style-type: none"> <li>Solid organ transplant recipients.</li> <li>People with specific cancers:               <ul style="list-style-type: none"> <li>people with cancer who are undergoing active chemotherapy</li> <li>people with lung cancer who are undergoing radical radiotherapy</li> <li>people with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment</li> <li>people having immunotherapy or other continuing antibody treatments for cancer</li> </ul> </li> </ul>	Guidance is to stay at home as much as possible and shield until 30 June. It also advised that this is a personal choice. If for example, a person is terminally ill or has a prognosis of less than 6 months to live, or has some other special circumstances, that person may decide not to stay at home. Other advice includes: <ul style="list-style-type: none"> <li>If you wish to spend time outdoors (though not in other buildings, households, or enclosed</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• people having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors</li> <li>• people who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs.</li> <li>• People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD</li> <li>• People with rare diseases that significantly increase the risk of infections (such as SCID, homozygous sickle cell)</li> <li>• People on immunosuppression therapies sufficient to significantly increase risk of infection</li> <li>• Women who are pregnant with significant heart disease, congenital or acquired.</li> </ul>	<p>spaces) you should take extra care to minimise contact with others by keeping 2 m apart.</p> <ul style="list-style-type: none"> <li>• If you choose to spend time outdoors, this can be with members of your own household. If you live alone, you can spend time outdoors with one person from another household (ideally the same person each time).</li> <li>• You should stay alert when leaving home: washing your hands regularly, maintaining social distance and avoiding gatherings of any size.</li> <li>• You should not attend any gatherings, including gatherings of friends and families in private spaces, for example, parties, weddings and religious services.</li> <li>• You should strictly avoid contact with anyone who is displaying symptoms of COVID-19 (a new continuous cough, a high temperature, or a loss of, or change in, your sense of taste or smell).</li> </ul> <p>For people living a person who falls in this group:</p> <ul style="list-style-type: none"> <li>• Minimise the time other people living with you spend in shared spaces, such as kitchens, bathrooms and sitting areas, and keep shared spaces well ventilated.</li> <li>• Keep 2m away from people you live with and encourage them to sleep in a different bed where possible. If you can, use a separate bathroom from the rest of the household. Use separate towels from the other people in your house, both for drying themselves after bathing or showering and for hand hygiene purposes.</li> <li>• If you share a toilet and bathroom with others, they should be cleaned every time after use (for example, wiping surfaces you have come into</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			<p>contact with). Consider drawing up a rota for bathing, with you using the facilities first.</p> <ul style="list-style-type: none"> <li>• If you share a kitchen with others, avoid using it while they're present. If you can, take your meals back to your room to eat. If you have one, use a dishwasher to clean and dry the family's used crockery and cutlery. If this is not possible, wash them using your usual washing-up liquid and warm water and dry them thoroughly. If you are using your own utensils, use a separate tea towel for drying these.</li> <li>• Everyone in your household should regularly wash their hands, avoid touching their face and clean frequently touched surfaces.</li> </ul>
<p>England</p> <p>Guidance provided by: <a href="#">PHE</a></p>	<p>Social distancing</p>	<ul style="list-style-type: none"> <li>• Aged 70 or older (regardless of medical conditions)</li> <li>• Under 70 with an underlying health condition listed below: <ul style="list-style-type: none"> <li>○ Chronic (long-term) mild to moderate respiratory diseases, such as asthma, COPD, emphysema or bronchitis</li> <li>○ Chronic heart disease, such as heart failure</li> <li>○ Chronic kidney disease</li> <li>○ Chronic liver disease, such as hepatitis</li> <li>○ Chronic neurological conditions, such as Parkinson's disease, motor neurone disease, multiple sclerosis (MS) or cerebral palsy;</li> <li>○ Diabetes</li> <li>○ A weakened immune system as the result of certain conditions, treatments like chemotherapy, or medicines such as steroid tablets</li> <li>○ Being seriously overweight (BMI of 40 or above).</li> </ul> </li> <li>• Those who are pregnant.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid contact with someone who is displaying symptoms of COVID-19. These symptoms include high temperature and or new and continuous cough.</li> <li>• Avoid non-essential use of public transport when possible.</li> <li>• Work from home, where possible.</li> <li>• Avoid large and small gatherings in public spaces, noting that pubs, restaurants, leisure centres and similar venues are currently shut as infections spread easily in closed spaces where people gather together.</li> <li>• Avoid gatherings with friends and family. Keep in touch using remote technology such as phone, internet, and social media.</li> <li>• Use telephone or online services to contact your GP or other essential services.</li> </ul> <p>Those who want to go out to help a vulnerable person, can do so unless they have coronavirus symptoms,</p>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			however mild and whenever possible to ensure social distancing and hand hygiene is maintained.
Finland  Guidance provided by: <a href="#">Finish Institute for Health and Welfare</a>		<ul style="list-style-type: none"> <li>• Persons over 70 years of age.</li> <li>• The risk of severe coronavirus infection may be increased by those underlying diseases that significantly impair lung or heart function or the body's resistance, such as:                             <ul style="list-style-type: none"> <li>○ Severe heart disease</li> <li>○ Lung disease that is not clinically stabilised</li> </ul> </li> <li>• Diabetes that involves organ damage</li> <li>• Chronic liver or kidney failure</li> <li>• Diseases that weaken the immune system, such as leukaemia or lymphoma that is currently undergoing cytostatic treatment (not maintenance therapy)</li> <li>• Medication which significantly weakens the immune system (e.g. high-dosage cortisone therapy).</li> </ul> <p>Other factors that generally impair lung functioning and may increase the health risk of a coronavirus infection include morbid obesity (BMI over 40) and daily smoking.</p>	<ul style="list-style-type: none"> <li>• Avoid close contact with other people as far as possible. This means that they can go out, provided they practice social distancing. Shopping is permitted if crowds can be avoided.</li> <li>• If a visit to someone in this risk group is essential, handshakes, hugging and other close contact should be avoided unless essential for care or treatment reasons, in the case of staff, for instance. It is important that all visitors use a scarf or other protection for their nose and mouth. People close to those over 70 and in risk groups have been urged to consider the potential risk of infection via their other contacts.</li> </ul> <p>For older people and in particular those over 70, advice is to follow the general guidelines to reduce the risk of infection, keep in touch with family and friends but avoid contact with others and when shopping to avoid peak hours and do not spend more time in stores than necessary.</p>
Germany  Guidance provided by: <a href="#">Robert Koch Institut</a>		<ul style="list-style-type: none"> <li>• Older people (with a steadily increasing risk of severe course from around 50–60 years)</li> <li>• Very obese</li> <li>• Smokers</li> <li>• People with certain medical conditions:                             <ul style="list-style-type: none"> <li>○ of the cardiovascular system (e.g. coronary heart disease and high blood pressure)</li> <li>○ chronic diseases of the lungs (e.g. COPD)</li> <li>○ Patients with chronic liver disease)</li> <li>○ Patients with diabetes mellitus</li> <li>○ Patients with cancer.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Stay at home wherever possible</li> <li>• Have family or neighbours take care of supplies</li> <li>• Reduce personal contact to the bare minimum and, if you do have to see people, keep your distance.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		Patients with a weakened immune system (for example, due to a disease that is associated with an immunodeficiency or by taking medication that can influence and reduce the immune defence, such as cortisone, on a regular basis).	
Ireland  Guidance provided by: <a href="#">Health Protection Surveillance Centre</a> and <a href="#">Department of Health</a>	'Cocooning'	<ul style="list-style-type: none"> <li>• People aged ≥ 70 years</li> <li>• Solid organ transplant recipients</li> <li>• People with specific cancers:               <ul style="list-style-type: none"> <li>○ people with cancer who are undergoing active chemotherapy or radical radiotherapy for lung cancer</li> <li>○ people with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment</li> <li>○ people having immunotherapy or other continuing antibody treatments for cancer</li> <li>○ people having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors</li> <li>○ people who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs.</li> </ul> </li> <li>• People with severe respiratory conditions including cystic fibrosis, severe asthma, pulmonary fibrosis/ lung fibrosis/ interstitial lung disease and severe COPD</li> <li>• People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell)</li> <li>• People on immunosuppression therapies sufficient to significantly increase risk of infection</li> <li>• Women who are pregnant with significant heart disease, congenital or acquired.</li> </ul>	<p>If you choose to go for outside for exercise you should:</p> <ul style="list-style-type: none"> <li>• strictly adhere to 2m social distancing measures</li> <li>• avoid close face-to-face contact</li> <li>• avoid touching people or surfaces</li> <li>• wash your hands on returning home</li> </ul> <p>If you choose to go for a drive, you should adhere to the following measures:</p> <ul style="list-style-type: none"> <li>• stay local and within a 20km distance from your home</li> <li>• don't share the journey with anyone who is not cocooning with you</li> <li>• strictly adhere to the 2m social distancing measures when out</li> <li>• wash your hands on returning home</li> </ul> <p>The use of public transport is to be avoided if possible, should only be used in non-peak times and where a physical distance of 2m can be maintained. Face coverings should be used, and wash your hands on returning home.</p> <p>If you need to attend essential services for example healthcare appointments and have no other means of attending other than getting a taxi, the following measures can be taken to minimise risk of spread:</p> <ul style="list-style-type: none"> <li>• indicate to the driver in advance that you are cocooning</li> <li>• maintain strict hand hygiene</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			<ul style="list-style-type: none"> <li>• the use of face coverings for both passenger and driver</li> <li>• keeping as much distance as is practical</li> </ul> <p>If you choose to go shopping, it is best to adhere to the following measures:</p> <ul style="list-style-type: none"> <li>• attend shops that provide dedicated hours for those who are cocooning which will enable you to do your shopping in a safer way</li> <li>• ideally wear a face covering</li> <li>• strictly adhere to the 2m social distancing measures when out</li> <li>• wash your hands on returning home.</li> </ul> <p>You can also have a small number of visitors to your home (outdoors as much as possible), ideally from a core group of family or friend who are aware of your circumstances and willing to adhere to protective measures while you cocoon. In addition, visitors must not visit you if they are unwell, should keep at least 2m away from you, wash their hands with soap and water for at least 20 seconds on arrival to your house and should wear face coverings.</p> <p>If you choose to visit other people’s homes, tell them in advance that you are coming, make sure that no one in the household is unwell with COVID-19, ideally wear a face covering, strictly adhere to the 2m social distancing measures and wash your hands on returning home. Make the visits outdoors as much as possible.</p> <p>You may also attend a funeral of a close relative or friend, but as with any gathering of people, it is important that you maintain strict physical distancing,</p>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			<p>strictly adhere to 2m social distancing measures, wear a face covering, avoid close face-to-face contact, avoid touching people and wash your hands on returning home.</p> <p>In general, group activities or group sports should be avoided at this time.</p> <p>Those who are working remotely should continue to do so and only return to the workplace if appropriate safety measures are in place.</p>
<p>New Zealand Guidance provided by <a href="#">Ministry of Health</a> and <a href="#">Government of New Zealand</a></p>	<p>None</p>	<ul style="list-style-type: none"> <li>• People over 70</li> <li>• People with underlying medical conditions such as:                             <ul style="list-style-type: none"> <li>○ serious respiratory disease such as chronic lung disease or moderate to severe asthma</li> <li>○ serious heart conditions</li> <li>○ immunocompromised conditions*</li> <li>○ severe obesity — a BMI of 40 or higher</li> <li>○ diabetes</li> <li>○ chronic kidney disease</li> <li>○ people undergoing dialysis</li> <li>○ liver disease.</li> </ul> </li> </ul> <p>*Many conditions can cause a person to be immunocompromised, including:</p> <ul style="list-style-type: none"> <li>○ cancer treatment</li> <li>○ smoking related illness</li> <li>○ bone marrow or organ transplantation</li> <li>○ haematologic neoplasms</li> <li>○ immune deficiencies</li> <li>○ poorly controlled HIV or AIDS</li> <li>○ prolonged use of corticosteroids and other immune weakening medications such as disease-modifying anti-rheumatic drugs</li> <li>○ people in aged care facilities (updated 15 May).</li> </ul>	<p>At Level 1:</p> <ul style="list-style-type: none"> <li>• Stay vigilant when out and about</li> <li>• Maintain physical distance from others if you possible</li> <li>• Keep up good hygiene practices</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• Other factors contributing to risk                             <ul style="list-style-type: none"> <li>○ ethnicity</li> <li>○ smoking</li> <li>○ obesity (BMI of 40 or higher)</li> <li>○ pregnancy (pregnant women in their 3<sup>rd</sup> trimester).</li> </ul> </li> </ul>	
<p>Northern Ireland</p> <p>Guidance provided by: <a href="#">Public Health Agency</a> and <a href="#">Government of Northern Ireland</a> (NI Direct)</p>	<p>Shielding</p>	<p>Extremely vulnerable people:</p> <ul style="list-style-type: none"> <li>• Solid organ transplant recipients</li> <li>• People with specific cancers:                             <ul style="list-style-type: none"> <li>• People with cancer and are undergoing active chemotherapy</li> <li>• People with lung cancer and are having radical radiotherapy</li> <li>• People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment</li> <li>• People having immunotherapy or other continuing antibody treatments for cancer</li> <li>• People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors</li> <li>• People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs</li> </ul> </li> <li>• People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD</li> <li>• People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell)</li> <li>• People on immunosuppression therapies sufficient to significantly increase risk of infection</li> <li>• Women who are pregnant with significant heart disease, congenital or acquired</li> <li>• People with Motor Neurone Disease</li> <li>• People undergoing renal dialysis</li> </ul>	<p>Those that are shielding are directed to the PHE website for advice.</p> <p>This advice is due to change on 8 June to allow those shielding to go outside.</p> <p>Guidance is provided for people living with a person who falls in this group:</p> <ul style="list-style-type: none"> <li>• minimise the time spent in shared spaces (kitchen, bathroom and sitting areas) and keep shared spaces well ventilated.</li> <li>• aim to keep 2m (3 steps) away from others and encourage them to sleep in a different bed where possible.</li> <li>• use separate towels from other people in the house and, if possible, use a separate bathroom from the rest of the household, or clean the bathroom after every use.</li> <li>• avoid using the kitchen when others are present, take your meals back to your room to eat where possible, and ensure all kitchenware is cleaned thoroughly.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• People who have had a splenectomy.</li> </ul> <p>Other relevant conditions:</p> <ul style="list-style-type: none"> <li>• A person’s immunity remains compromised for some time after finishing chemotherapy. If you have completed chemotherapy in the last 3 months, please contact your care team to discuss your circumstances.</li> <li>• People with metastatic cancer in the lungs could also be more vulnerable and therefore at highest clinical risk from COVID-19.</li> <li>• Those who are currently on targeted therapies for lung cancer are also classed as the highest clinical risk.</li> </ul>	
<p>Northern Ireland</p> <p>Guidance provided by: <a href="#">Public Health Agency</a> and <a href="#">Government of Northern Ireland</a> (NI Direct)</p>	<p>Self-isolate</p>	<p>Vulnerable groups</p> <ul style="list-style-type: none"> <li>• Over the age of 70</li> <li>• Under 70 with an underlying health condition listed below:                             <ul style="list-style-type: none"> <li>○ Chronic (long-term) mild to moderate respiratory diseases, such as asthma, COPD, emphysema or bronchitis</li> <li>○ Chronic heart disease, such as heart failure</li> <li>○ Chronic kidney disease</li> <li>○ Chronic liver disease, such as hepatitis</li> <li>○ Chronic neurological conditions, such as Parkinson’s disease, multiple sclerosis (MS), a learning disability or cerebral palsy</li> <li>○ Diabetes</li> <li>○ A weakened immune system as the result of conditions such as HIV and AIDS or medicines such as steroid tablets or chemotherapy</li> <li>○ Being seriously overweight (BMI of 40 or above).</li> </ul> </li> <li>• Those who are pregnant.</li> </ul>	<ul style="list-style-type: none"> <li>• Everyone should be staying at home and following social distancing measures.</li> <li>• Older people and vulnerable people, including those with underlying health conditions and pregnant women should be particularly strict when following them.</li> </ul>
<p>Norway</p> <p>Guidance provided by:</p>	<p>Protective self-separation</p>	<p>People at moderate (clinically vulnerable) / high risk (clinically extremely vulnerable):</p> <ul style="list-style-type: none"> <li>• Over 80 years of age</li> <li>• Residents of nursing homes</li> </ul>	<p>Advice for people in this group depends on whether transmission is low or widespread in their communities.</p> <p>Low-level spread (current situation):</p>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
<a href="#">Norwegian Institute of Public Health</a>		<ul style="list-style-type: none"> <li>• Age 66–80 years with 1 of the following chronic diseases, OR age 50–65 years with 2 or more of the following chronic diseases:                             <ul style="list-style-type: none"> <li>○ cardiovascular disease (other than well-regulated high blood pressure)</li> <li>○ morbid obesity (BMI <math>\geq</math> 35 kg/m<sup>2</sup> in combination with weight-related diseases or BMI <math>\geq</math> 40 kg/m<sup>2</sup>)</li> <li>○ diabetes</li> <li>○ chronic kidney disease and kidney failure</li> <li>○ chronic lung disease (other than well-regulated asthma)</li> <li>○ chronic liver disease</li> <li>○ in immunosuppressive therapy such as chemotherapy, radiation therapy and immunosuppressive therapy in autoimmune diseases.</li> </ul> </li> <li>• Severe health condition, regardless of age*:                             <ul style="list-style-type: none"> <li>○ people with active cancer, ongoing or recently discontinued treatment for cancer (especially immunosuppressive therapy, radiation therapy to the lungs or chemotherapy). Leukaemia has a higher risk than other types of cancer</li> <li>○ neurological or muscular disease with impaired coughing strength or lung function (e.g. ALS)</li> <li>○ congenital immunodeficiency in an unstable phase that carries the risk of severe respiratory tract infections</li> <li>○ blood disorders that include cells or organs that are important for the immune system</li> <li>○ bone marrow transplant or organ transplant</li> <li>○ HIV infection with low CD4 counts</li> <li>○ significant renal impairment or significantly impaired liver function</li> <li>○ other, assessed by a physician.</li> </ul> </li> </ul> <p><i>*Some serious health conditions in this list based on a precautionary principle, although at present there are no studies indicating a higher risk of severe progression for the diseases.</i></p>	<p><i>Increase social distancing</i> You can be with your closest circle as normal, and travel and socialise with others as long as:</p> <ul style="list-style-type: none"> <li>• You and your closest circle are particularly careful to follow general advice, keeping a safe distance and follow good hand hygiene and cough etiquette.</li> <li>• You limit your number of close contacts</li> <li>• You avoid crowded places (e.g. public transport, shopping malls) or only go to such places when they are less busy.</li> </ul> <p>Workplace planning and adjustment may be appropriate.</p> <p>Widespread transmission or outbreaks in your community:</p> <p><i>Social shielding</i> To avoid infection, you should withdraw during this period. You can go outside and maintain normal contact with your closest circle as long if you follow the advice in the yellow box and in addition:</p> <ul style="list-style-type: none"> <li>• Keep a greater distance from others (preferably 2m) than your closest circle.</li> <li>• Ask others to help you with necessary purchases.</li> <li>• Your closest circle should also limit their social contact. If not, you should keep a safe distance to them. If this is not possible, it might be necessary to consider other temporary housing arrangements.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			<p>If workplace adjustment or remote working is impossible, sick leave should be considered.</p>
<p>Norway</p> <p>Guidance provided by: <a href="#">Norwegian Institute of Public Health</a></p>	<p>Protective self-separation</p>	<p>People at slightly increased risk:</p> <ul style="list-style-type: none"> <li>• Age 65–80 years (especially over 70)</li> <li>• Age 50–65 years with one of the following chronic diseases:                             <ul style="list-style-type: none"> <li>○ cardiovascular disease (other than well-regulated high blood pressure)</li> <li>○ morbid obesity (BMI ≥ 35 kg/m<sup>2</sup>) in combination with weight-related diseases or BMI ≥ 40 kg/m<sup>2</sup>)</li> <li>○ diabetes</li> <li>○ chronic kidney disease and kidney failure</li> <li>○ chronic lung disease (other than well-regulated asthma)</li> <li>○ chronic liver disease</li> <li>○ in immunosuppressive therapy such as chemotherapy, radiation therapy and immunosuppressive therapy in autoimmune diseases</li> </ul> </li> </ul> <p>People under 50 years of age have a lower risk of developing severe COVID-19 disease. However, some people with poorly-regulated chronic conditions or a combination of several chronic diseases might be at increased risk.</p>	<p>Advice for people in this group depends on whether transmission is low or widespread in their communities.</p> <p>Low-level spread (current situation):</p> <p><i>Live like others</i></p> <p>You can generally live like the rest of the population, travel, work and attend events, but be particularly careful to follow the general advice:</p> <ul style="list-style-type: none"> <li>• Keep the recommended distance to people, apart from your closest family and friends</li> <li>• Remember hand hygiene and cough etiquette</li> <li>• Stay home when you are ill</li> <li>• Avoid being with people who are sick.</li> </ul> <p>Consider whether you will be able to follow these measures before travelling or participating in social activities.</p> <p>Widespread transmission or outbreaks in your community:</p> <p><i>Increase social distancing</i></p> <p>You can be in normal contact with your closest circle, and travel and socialise with others as long as:</p> <ul style="list-style-type: none"> <li>• You and your closest circle are particularly careful to follow general advice, keeping a safe distance and follow good hand hygiene and cough etiquette.</li> <li>• You limit your number of close contacts</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
			<ul style="list-style-type: none"> <li>You avoid crowded places (e.g. public transport, shopping malls) or only go to such places when they are less busy.</li> </ul> <p>Workplace planning and adjustment may be appropriate.</p>
<p>Scotland</p> <p>Guidance provided by: <a href="#">Health Protection Scotland</a> and <a href="#">Scottish Government</a></p>	<p>'Shielding'</p>	<p>Highest risk group:</p> <ul style="list-style-type: none"> <li>Solid organ transplant recipients.                             <ul style="list-style-type: none"> <li>Includes people who have had a transplant of heart, lung, stomach or other part of intestine, liver and kidney. People will be in this group because they need to take medications to prevent rejection of the transplanted organ.</li> </ul> </li> <li>People with specific cancers:                             <ul style="list-style-type: none"> <li>People with cancer who are undergoing active chemotherapy or have had radical radiotherapy specific for lung cancer</li> <li>People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment</li> <li>People having immunotherapy or other continuing antibody treatments for cancer</li> <li>People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors</li> <li>People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs.</li> </ul> </li> <li>People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD, severe bronchiectasis and pulmonary hypertension:                             <ul style="list-style-type: none"> <li>All patients with cystic fibrosis</li> <li>Severe asthma means being on regular inhalers AND long term steroid tablets, e.g. prednisolone, OR regular injections to control your asthma</li> </ul> </li> </ul>	<p>You should stay at home and minimise non-essential contact with the other people in your household. You should also follow these face-to-face distancing measures:</p> <ul style="list-style-type: none"> <li>strictly avoid contact with anyone in your household who is displaying symptoms of coronavirus (COVID19) - these symptoms include high temperature and/or new and continuous cough</li> <li>don't leave your house</li> <li>don't go out for shopping, leisure or travel and, when arranging food or medication deliveries, these should be left at your front door to minimise contact</li> <li>keep in touch with family and friends using technology such as phone, internet, and social media.</li> </ul> <p>For other people who live with you</p> <ul style="list-style-type: none"> <li>Other people in your household do not have to shield themselves at home for 12 weeks.</li> <li>This means that if they have to leave the house to go to work, such as if they're a key worker, they can carry on doing so.</li> <li>However, to help keep you safe, they must follow guidance on social distancing and reducing their contact outside the home where they can.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>○ Severe COPD- means being too breathless to walk 100 yards, having 2 or more lung infections per year or requiring oxygen to help with your breathing. Usually on several different inhaler medications that include 2 long acting preventers (Long Acting Beta Agonists and Long Acting Anti-Muscarinic Antagonists) in the last year, and a steroid inhaler</li> <li>○ On home oxygen for your lung condition.</li> <li>• People with rare diseases including all forms of interstitial lung disease/sarcoidosis and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell disease)             <ul style="list-style-type: none"> <li>○ There are many conditions classed as a rare disease. Not everyone with a rare disease will be at a higher risk of severe illness from COVID-19.</li> <li>○ Your clinician will know if you should be in the highest risk group and will make sure that you are added. If you are added to this group you will receive a letter telling you what to do.</li> </ul> </li> <li>• People on immunosuppression therapies sufficient to significantly increase risk of infection or who have had their spleens removed:             <ul style="list-style-type: none"> <li>○ Patients on high dose corticosteroids (equivalent to Prednisolone 20mg or more) for 4 weeks or more</li> <li>○ Patients on specific single therapies, for example Cyclophosphamide, however, clinical judgement is needed to determine if medications would indicate highest risk.</li> <li>○ Patients on lower dose of corticosteroids (equivalent to Prednisolone 5mg per day for 4 weeks or more), in combination with other disease modifying medication</li> <li>○ Patients on several different disease modifying medications taking into account their other chronic medical conditions (Patients on a single Disease Modifying medications (DMARD) or Biologic such as</li> </ul> </li> </ul>	<p>In your home, you should:</p> <ul style="list-style-type: none"> <li>• minimise the time you spend with others in shared spaces (kitchen, bathroom and sitting areas) and keep any shared spaces well ventilated</li> <li>• aim to keep 2m away from others and encourage them to sleep in a different bed where possible</li> <li>• use separate towels and, if possible, use a separate bathroom from the rest of the household or, if this is not possible, clean the bathroom with cleaning products after every use</li> <li>• avoid using the kitchen when others are present, take your meals back to your room to eat where possible, and ensure all kitchenware is cleaned thoroughly, using a dishwasher set to 60 degrees if you can, or in very warm, soapy water</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<p>Methotrexate, Azathioprine, Ciclosporin, Leflunomide plus others, would not be considered automatically in the highest risk group if they are otherwise healthy, but should be decided by a specialist or GP if not sure).</p> <ul style="list-style-type: none"> <li>• People who are pregnant with significant heart disease, congenital or acquired</li> <li>• People who are receiving renal dialysis treatment.</li> </ul>	
<p>Scotland</p> <p>Guidance provided by: <a href="#">Health Protection Scotland</a> and <a href="#">Scottish Government</a></p>	<p>Social distancing</p>	<p>High risk group:</p> <p>People over the age of 70 are considered vulnerable, even if they do not have an underlying health condition. This also applies to those who are pregnant.</p> <p>Others considered vulnerable include people who have:</p> <ul style="list-style-type: none"> <li>• Chronic (long-term) respiratory diseases, such as asthma, COPD, emphysema or bronchitis</li> <li>• Chronic heart disease, such as heart failure</li> <li>• Chronic kidney disease</li> <li>• Chronic liver disease, such as hepatitis</li> <li>• Chronic neurological conditions, such as Parkinson’s disease, motor neurone disease, MS, a learning disability or cerebral palsy</li> <li>• Diabetes</li> <li>• Problems with your spleen – for example, sickle cell disease or if you have had your spleen removed</li> <li>• A weakened immune system as the result of conditions such as HIV and AIDS, or medicines such as steroid tablets or chemotherapy</li> <li>• Being seriously overweight (BMI of 40 or above)</li> </ul>	<p>Everyone should be staying at home and following social distancing measures. Older people and vulnerable people, including those with underlying health conditions and pregnant women should be particularly strict when following them.</p>
<p>Singapore</p> <p>Guidance provided by: <a href="#">Ministry of Health</a> and</p>	<p>Protective self-separation</p>	<ul style="list-style-type: none"> <li>• Persons who are aged 60 and above</li> <li>• Patients who are immunocompromised or have concurrent medical conditions such as obesity (BMI &gt; 31), hypertension, diabetes, chronic heart and lung diseases, kidney diseases on dialysis, hypercoagulable states, cancer, or patients on drugs that cause immunosuppression.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid social gatherings and crowded places as far as possible, and to only go out for essential purposes (e.g. work, purchase food and supplies).</li> <li>• Face shields may be worn for people who have health conditions that may result in</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
<a href="#">Government of Singapore</a>			breathing or other medical difficulties when a mask is worn for a prolonged period of time. For all others, face masks must be worn.
Sweden  Guidance provided by: <a href="#">The Public Health Agency of Sweden</a>	Social distancing	<p>Older age combined with pre-existing medical conditions such as:</p> <ul style="list-style-type: none"> <li>• High blood pressure</li> <li>• Cardiovascular disease</li> <li>• Pulmonary disease</li> <li>• Diabetes.</li> </ul> <p>People with asthma, allergies, or kidney disease may have a higher risk of severe illness, but the evidence is unclear.</p> <p>Any condition that makes a person vulnerable to an infectious diseases. For example, problems with the immune system, people should seek advice from their doctor about how to manage their condition and how to decrease the risks associated with COVID-19.</p> <p>According to a report published on 20 April by the Swedish National Board of Health and Welfare ("Socialstyrelsen"), people that are most at risk are those:</p> <ul style="list-style-type: none"> <li>• Advanced age, 70 years and older</li> <li>• Obesity, with a BMI over 40</li> <li>• Cancer or with ongoing or recently completed cancer treatment</li> <li>• Neuromuscular disorders such as Parkinson's, MS or ALS with involved muscular functioning</li> <li>• Intellectual impairment and disability (multifunctional impairment)</li> <li>• At least 2 of the following: cardiovascular disease (angina, heart failure, stroke), hypertension, diabetes with complications, chronic kidney disease and kidney failure, chronic lung disease (other than asthma) and chronic liver disease.</li> </ul>	<ul style="list-style-type: none"> <li>• Limit their physical close contact with others and completely avoid public transportation.</li> <li>• Avoid travelling by bus, tram or subway, shopping in supermarkets, or visiting venues where many people gather at any one time. Instead, ask friends, family or neighbours to do your shopping etc.</li> <li>• While remaining at home, you may still go out for walks.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• People with immunodeficiency diseases, diseases, or residual conditions after diseases that seriously affect certain organ functions, spinal cord injury with a need for continuous respiratory support, as well as treatment that may impair the body's defence against viral infections.</li> <li>• The combination of several risk factors increases the risk further.</li> </ul>	
<p>Switzerland</p> <p>Guidance provided by: <a href="#">Federal Office of Public Health</a></p>	<p>Protective self-separation</p>	<ul style="list-style-type: none"> <li>• Those over the age of 65</li> <li>• Those who have one of the following conditions in particular:                             <ul style="list-style-type: none"> <li>○ High blood pressure</li> <li>○ Diabetes</li> <li>○ Cardiovascular disease</li> <li>○ Chronic respiratory diseases</li> <li>○ Conditions and therapies that weaken the immune system.</li> </ul> </li> <li>• Cancer</li> <li>• Severe obesity (BMI of 40 or over).</li> </ul> <p>An additional list is provided in the <a href="#">COVID ordinance 2 document</a>:</p> <p>High blood pressure (hypertension):</p> <ul style="list-style-type: none"> <li>• Arterial hypertension with end-organ damage</li> <li>• Therapy-resistant arterial hypertension</li> </ul> <p>Cardio-vascular diseases:</p> <p><i>General criteria:</i></p> <ul style="list-style-type: none"> <li>○ Patients with dyspnea of functional class NYHA ≥ II and NT per BNP &gt; 125 pg/ml</li> <li>○ Patients with 2 cardiovascular risk factors (one of which is diabetes or arterial hypertension)</li> <li>○ Prior stroke and/or symptomatic vasculopathy</li> <li>○ Chronic renal insufficiency (Stage 3, GFR &lt;60ml/min)</li> </ul> <p><i>Other criteria:</i></p> <p>Coronary heart disease:</p> <ul style="list-style-type: none"> <li>○ Myocardial infarction (STEMI and NSTEMI) in the past 12 months</li> </ul>	<ul style="list-style-type: none"> <li>• Stay at home</li> <li>• Avoid gatherings</li> <li>• Have a friend or neighbour do the shopping for you and leave it outside the door</li> <li>• Adults should only visit their parents if they need assistance that they can't get elsewhere. Although the Federal government permits visits to care homes for the elderly in principle, it is a matter for the cantons to set the rule.</li> <li>• Grandparents over the age of 65 or with an underlying medical condition are advised not to look after their grandchildren.</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>○ Symptomatic chronic coronary syndrome despite medical treatment (irrespective of any prior revascularisation)</li> <li>Disease of the heart valves:               <ul style="list-style-type: none"> <li>○ Moderate or serious stenosis and/or regurgitation in addition to meeting at least one general criterion</li> <li>○ Any surgical or percutaneous valve replacement in addition to meeting at least on general criteria</li> </ul> </li> <li>Cardiac insufficiency:               <ul style="list-style-type: none"> <li>○ Patient with functional class NYHA ≥ II-IV or NT-Per BNP &gt; 125pg/ml despite medical treatment for any LVEF (HFpEF, HFmrEF, HFrEF)</li> <li>○ Cardiomyopathy with any cause</li> <li>○ Pulmonary arterial hypertension</li> </ul> </li> <li>Arrhythmia:               <ul style="list-style-type: none"> <li>○ Auricular fibrillation with a CHA2DS2-VASc score of at least 2 points</li> <li>○ Prior implant of pacemaker (incl. ICD and/or CRT implantation) in addition to meeting one general criterion</li> </ul> </li> <li>Adults with congenital heart disease               <ul style="list-style-type: none"> <li>○ Congenital heart disease according to the individual assessment of the attending cardiologist</li> </ul> </li> <li>Chronic respiratory diseases:               <ul style="list-style-type: none"> <li>● Chronic obstructive lung diseases GOLD Grade II-IV</li> <li>● Pulmonary emphysema</li> <li>● Unmanaged asthma, in particular serious bronchial asthma</li> <li>● Interstitial lung diseases</li> <li>● Active lung cancer</li> <li>● Pulmonary arterial hypertension</li> <li>● Pulmonary vascular disease</li> <li>● Active sarcoidosis</li> <li>● Cystic fibrosis</li> </ul> </li> </ul>	

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• Chronic lung infections (atypical mycobacteriosis, bronchiectasis, etc.)</li> <li>• Ventilated patients</li> </ul> <p>Diabetes:</p> <ul style="list-style-type: none"> <li>○ Diabetes mellitus, with long-term complications or a HbA1c von &gt; 8%</li> </ul> <p>Diseases/Therapies that weaken the immune system:</p> <ul style="list-style-type: none"> <li>○ Serious immunosuppression (e.g. CD4+ &lt; 200µl)</li> <li>○ Neutropenia ≥1 week</li> <li>○ Lymphocytopenia &lt;0.2x10<sup>9</sup>/L</li> <li>○ Hereditary immunodeficiencies</li> <li>○ Use of medication that suppresses the immune defences (such as long-term use of glucocorticoids, monoclonal antibodies, cytostatics, etc.)</li> <li>○ Aggressive lymphomas (all entities)</li> <li>○ Acute lymphatic leukaemia</li> <li>○ Acute myeloid leukaemia</li> <li>○ Acute promyelocytic leukaemia</li> <li>○ T-cell prolymphocytic leukaemia</li> <li>○ Primary lymphomas of the central nervous system</li> <li>○ Stem cell transplantation</li> <li>○ Amyloidosis (light-chain (AL) amyloidosis)</li> <li>○ Aplastic anaemia undergoing immunosuppressive treatment</li> <li>○ Chronic lymphatic leukaemia</li> <li>○ Asplenia / splenectomy</li> <li>○ Multiple myeloma</li> <li>○ Sickle-cell disease</li> </ul> <p>Cancer:</p> <ul style="list-style-type: none"> <li>• Cancer undergoing medical treatment</li> </ul> <p>Obesity:</p> <ul style="list-style-type: none"> <li>• Patients with a body-mass index (BMI) of 40 kg/m<sup>2</sup> or more</li> </ul>	

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
<p>United States</p> <p>Guidance provided by: <a href="#">Center for Disease Control</a></p>	<p>Protective self-separation</p>	<ul style="list-style-type: none"> <li>• People who live in a nursing home or long-term care facility.</li> <li>• Other high-risk conditions could include:                             <ul style="list-style-type: none"> <li>○ Chronic lung disease or moderate to severe asthma</li> <li>○ Serious heart conditions</li> <li>○ Conditions that can cause a person to be immunocompromised, including cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications.</li> <li>○ Severe obesity (BMI of 40 or higher)</li> <li>○ Diabetes</li> <li>○ Chronic kidney disease and who are undergoing dialysis</li> <li>○ Liver disease</li> </ul> </li> <li>• People with moderate to severe asthma</li> </ul>	<p>Stay home if possible.</p>
<p>Wales</p> <p>Guidance provided by: the <a href="#">Welsh Government</a></p>	<p>Shielding</p>	<ul style="list-style-type: none"> <li>• Solid organ transplant recipients</li> <li>• People with specific cancers:                             <ul style="list-style-type: none"> <li>○ People with cancer who are undergoing active chemotherapy or radical radiotherapy for lung cancer</li> <li>○ People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment</li> <li>○ People having immunotherapy or other continuing antibody treatments for cancer</li> <li>○ People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors</li> <li>○ People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs.</li> </ul> </li> <li>• People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD</li> <li>• People with severe single organ disease (e.g. Liver, Cardio, Renal, Neurological)</li> </ul>	<p>Those who have been shielding at home are now able to leave home to exercise or meet outside with people from another household.</p> <p>This advice also includes:</p> <ul style="list-style-type: none"> <li>• Avoid any contact with anyone showing symptoms of coronavirus (these include a high temperature (&gt; 37.8 °C) or new and continuous cough or loss of or change to your normal sense of smell or taste)</li> <li>• Only leave home to exercise outdoors or to meet outside with people from another household but strictly follow social distancing (stay 2m or 3 steps away from other people) and practice good hygiene.</li> <li>• Stay away from gatherings of large numbers of people, including weddings, other celebrations and religious services;</li> </ul>

Country / setting	Protective measure	Vulnerable/high-risk groups	Specific advice
		<ul style="list-style-type: none"> <li>• People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell)</li> <li>• People on immunosuppression therapies sufficient to significantly increase risk of infection</li> <li>• Pregnant women with significant heart disease, congenital or acquired.</li> <li>• Children up to the age of 18 with significant heart disease, congenital or acquired.</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange for food and medication to be delivered to your home</li> <li>• Keep in touch with other people using remote technology such as the phone, internet, and social media</li> <li>• Use phone or online services to contact your GP or other essential services</li> <li>• Regularly wash your hands with soap and warm water for 20 seconds, and make sure all carers or support workers who visit your home do the same.</li> </ul>

Last updated 08/06/2020 15.00 GMT

## References

1. Health Protection Surveillance Centre. Guidance on cocooning to protect people over 70 years and those extremely medically vulnerable from COVID-19 Dublin, Ireland: Health Protection Surveillance Centre; 2020 [Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/vulnerablegroupsguidance/COVID-19%20Guidance%20for%20extremely%20medically%20vulnerable%20V1.pdf>]. Accessed on: 02 April 2020
2. (Hpsc) Hpsc. Guidance for protecting people over 70 and extremely medically vulnerable people V1.3. Dublin: 2020. Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/vulnerablegroupsguidance/COVID-19%20Guidance%20for%20extremely%20medically%20vulnerable%20group.s.pdf>.
3. Public Health England. Guidance on shielding and protecting people defined on medical grounds as extremely vulnerable from COVID-19 England: Public Health England; 2020 [Available from: <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>]. Accessed on: 23 March 2020
4. NHS Digital. Coronavirus (COVID-19): Shielded patients list: NHS Digital; 2020 [Available from: <https://digital.nhs.uk/coronavirus/shielded-patient-list>]. 14 May 2020
5. Public Health England. Guidance on social distancing for everyone in the UK: Public Health England; 2020 [Available from: <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>]. Accessed on: 23 March 2020
6. Public Health England. Staying alert and safe (social distancing): Public Health England; 2020 [Available from: <https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing>]. Accessed on: 12 May 2020
7. Public Health England. Staying safe outside your home: Public Health England; 2020 [updated 11/05/20. Available from: <https://www.gov.uk/government/publications/staying-safe-outside-your-home/staying-safe-outside-your-home>]. Accessed on: 14 March 2020
8. News B. Coronavirus: Small shops in NI can reopen from Friday BBC2020 [Available from: <https://www.bbc.com/news/uk-northern-ireland-52925516>]. Accessed on: 8 June 2020
9. Direct N. Coronavirus (COVID-19): advice for vulnerable people: NI Diet; 2020 [Available from: <https://www.nidirect.gov.uk/articles/coronavirus-covid-19-advice-vulnerable-people>]. Accessed on: 21 April 2020

10. Cabinet Secretary for Health and Sport. Coronavirus (COVID-19) update: Health Secretary Statement to Parliament 28 April 2020 Edinburgh: Scottish Government; 2020 [Available from: <https://www.gov.scot/publications/coronavirus-covid-19-update-health-secretary-statement-parliament-28-april-2020/>]. Accessed on: 28/04/20
11. Scottish Government. Coronavirus (COVID-19): shielding support and contacts: Safer Communities Directorate; 2020 [Available from: <https://www.gov.scot/publications/covid-shielding/pages/highest-risk-classification/>]. Accessed on: 14 March 2020
12. Scottish Government. Coronavirus (COVID-19): advice for people with specific medical conditions: Scottish Government; 2020 [Available from: <https://www.gov.scot/publications/coronavirus-covid-19-tailored-advice-for-those-who-live-with-specific-medical-conditions/>]. 25 May 2020
13. Health Protection Scotland. Search criteria for highest risk patients for shielding Version 4.0. Health Protection Scotland, 2020. Available from: [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/3008/documents/1\\_covid-19-search-criteria-highest-risk-patients.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/3008/documents/1_covid-19-search-criteria-highest-risk-patients.pdf).
14. Scottish Government. Coronavirus (COVID-19): guidance on support, information, food and other essentials: Scottish Government; 2020 [Available from: <https://www.gov.scot/publications/coronavirus-covid-19-guidance-on-support-information-food-and-other-essentials/>]. Accessed on: 25 May 2020
15. Welsh Government. Guidance on shielding and protecting people defined on medical grounds as extremely vulnerable from coronavirus (COVID-19): Welsh Government; 2020 [Available from: <https://gov.wales/guidance-on-shielding-and-protecting-people-defined-on-medical-grounds-as-extremely-vulnerable-from-coronavirus-covid-19-html>]. Accessed on: 8 June 2020
16. Department of Health. 3-Step Framework for a COVIDSafe Australia: Australian Government; 2020 [Available from: <https://www.health.gov.au/resources/publications/3-step-framework-for-a-covidsafe-australia>]. Accessed on: 12 May 2020
17. Government of Canada. Community-based measures to mitigate the spread of coronavirus disease (COVID-19) in Canada Canada 2020 [Available from: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/public-health-measures-mitigate-covid-19.html>]. Accessed on: 23 March 2020
18. Sutton D, Fuchs K, D'Alton M, Goffman D. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. *New England Journal of Medicine*. 2020.
19. Gajbhiye R, Modi D, Mahale S. Pregnancy outcomes, Newborn complications and Maternal-Fetal Transmission of SARS-CoV-2 in women with COVID-19: A systematic review. *medRxiv*; 2020.
20. Breslin N, Baptiste C, Gyamfi-Bannerman C, Miller R, Martinez R, Bernstein K, et al. COVID-19 infection among asymptomatic and symptomatic pregnant women: Two weeks of confirmed presentations to an affiliated pair of New York City hospitals. *American journal of obstetrics & gynecology* MFM. 2020:100118.
21. yang H, Sun G, Tang F, Peng M, Gao Y, Peng J, et al. Clinical features and outcomes of pregnant women suspected of coronavirus disease 2019. *Journal*

- of Infection.
22. WHO. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19). Geneva: World Health Organization (WHO), 2020. Available from: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>.
  23. Karimi-Zarchi M, Neamatzadeh H, Dastgheib SA, Abbasi H, Mirjalili SR, Behforouz A, et al. Vertical Transmission of Coronavirus Disease 19 (COVID-19) from Infected Pregnant Mothers to Neonates: A Review. *Fetal and Pediatric Pathology*. 2020:1-5.
  24. Royal College of Midwives RCoPaCH, Public Health England and Public Health Scotland,. Coronavirus (COVID-19) infection and pregnancy. London: Royal College of Midwives, Royal College of Paediatrics and Child Health, Public Health England and Public Health Scotland, 2020. Available from: <https://www.rcog.org.uk/coronavirus-pregnancy>.
  25. Ministry of Health. Vulnerable people. New Zealand2020 [Available from: <https://covid19.govt.nz/help-and-advice/for-everyone/vulnerable-people/>]. Accessed on: 02 April
  26. New Zealand Government. New Zealand is at Alert Level 1: New Zealand Government,; 2020 [Available from: <https://uniteforrecovery.govt.nz/updates-and-resources/latest-updates/new-zealand-moved-to-alert-level-1-on-tuesday-9-june/>]. Accessed on: 8 June2020
  27. Ministry of Health. COVID-19: Advice for higher risk people: New Zealand Government; 2020 [Available from: <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-information-specific-audiences/covid-19-advice-higher-risk-people>]. Accessed on: 15 May 2020
  28. Norwegian Institute of Public Health. Risk groups and their relatives - advice and information: Norwegian Institute of Public Health; 2020 [Available from: <https://www.fhi.no/en/op/novel-coronavirus-facts-advice/facts-and-general-advice/risk-groups---advice-and-information/>]. Accessed on: 18 May 2020
  29. Norwegian Institute of Public Health. Risk groups - advice and information Norway2020 [Available from: <https://www.fhi.no/en/op/novel-coronavirus-facts-advice/facts-and-general-advice/risk-groups---advice-and-information/>]. Accessed on: 23 March 2020
  30. Ministry of Health. Advisory on vulnerable group: Ministry of Health; 2020 [Available from: [https://www.moh.gov.sg/docs/librariesprovider5/advisories/advisory-on-vulnerable-group-\(moh\).pdf](https://www.moh.gov.sg/docs/librariesprovider5/advisories/advisory-on-vulnerable-group-(moh).pdf)]. Accessed on: 8 June2020
  31. Ministry of Health. Tighter measures to minimise further spread of COVID-19 Singapore2020 [Available from: <https://www.moh.gov.sg/news-highlights/details/tighter-measures-to-minimise-further-spread-of-covid-19>]. Accessed on: 02 April
  32. Ministry of Health. End of circuit breaker, phased approach to resuming activities safely: Singapore Government; 2020 [Available from: <https://www.moh.gov.sg/news-highlights/details/end-of-circuit-breaker-phased-approach-to-resuming-activities-safely>]. 21 May 2020
  33. Ministry of Health (Singapore). Guidance for Use of Masks and Face Shields: Ministry of Health (Singapore),; 2020 [Available from:

- <https://www.moh.gov.sg/news-highlights/details/guidance-for-use-of-masks-and-face-shields>]. Accessed on: 2 May 2020
34. Public Health Agency of Sweden. Information till riskgrupper om covid-19: Public Health Agency of Sweden,; 2020 [Available from: <https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/rad-och-information-till-riskgrupper/>]. 8 June2020
  35. Williamson E, Walker AJ, Bhaskaran KJ, Bacon S, Bates C, Morton CE, et al. OpenSAFELY: factors associated with COVID-19-related hospital death in the linked electronic health records of 17 million adult NHS patients. medRxiv. 2020:2020.05.06.20092999.
  36. Ministry of Health and Social Affairs. Article from Ministry of Health and Social Affairs
- About COVID-19: For older people, people with health conditions and health care and social services staff: Government Offices of Sweden; 2020 [Available from: <https://www.government.se/articles/2020/05/about-covid-19--for-older-people-people-with-health-conditions-and-health-care-and-social-services-staff/>]. Accessed on: 15 May 2020
37. Federal Office of Public Health in Switzerland. New coronavirus: Federal government measures Switzerland2020 [Available from: <https://www.bag.admin.ch/bag/en/home/krankheiten/ausbrueche-epidemien-pandemien/aktuelle-ausbrueche-epidemien/novel-cov/massnahmen-des-bundes.html#-135155760>]. Accessed on: 23 March 2020
  38. Fereral Office of Public Health. Frequently Asked Questions (FAQs) about the new coronavirus: FOPH; 2020 [Available from: <https://www.bag.admin.ch/bag/en/home/krankheiten/ausbrueche-epidemien-pandemien/aktuelle-ausbrueche-epidemien/novel-cov/haeufig-gestellte-fragen.html#188370762>]. Accessed on: 14 May 2020
  39. Centers for Disease Control and Prevention. Older Adults United States2020 [Available from: <https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications/older-adults.html>].
  40. Centers for Disease Control and Prevention. People who are at higher risk for severe illness United States2020 [Available from: <https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/people-at-higher-risk.html>]. Accessed on: 23 March 2020
  41. Ferguson N, Laydon D, Nedjati Gilani G, Imai N, Ainslie K, Baguelin M, et al. Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand. Imperial College COVID-19 Response Team. 2020;16.

**Published by the Health Information and Quality Authority (HIQA).**

**For further information please contact:**

**Health Information and Quality Authority**

**George's Court**

**George's Lane**

**Smithfield**

**Dublin 7**

**D07 E98Y**

**+353 (0)1 8147400**

**info@hiqa.ie**

**www.hiqa.ie**

**© Health Information and Quality Authority 2020**