

Considerations relating to social distancing measures in response to the COVID-19 epidemic

Scope of this document

This document aims to support public health preparedness planning and response activities based upon social distancing measures aimed at minimising the spread of COVID-19.

Social distancing is an action taken to minimise contact with other individuals; social distancing measures comprise one category of non-pharmaceutical countermeasures (NPCs)¹ aimed at reducing disease transmission and thereby also reducing pressure on health services [1, 2].

This document builds upon existing ECDC documents, including [guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV](#), a [rapid risk assessment: outbreak of novel coronavirus disease – 5th update](#), a [technical report on the use of evidence in decision-making during public health emergencies](#), and a [guidance document on community engagement for public health events caused by communicable disease threats in the EU/EEA](#).

Target audience

Public health authorities in the EU/EEA Member States and the United Kingdom.

Key points

- Social distancing aims, through a variety of means, to minimise contact between individuals and thereby to reduce the possibility for new infections.
- Decisions on when and how to implement social distancing measures should always be informed by evidence, but they will very rarely be purely evidence-based. Social and political considerations will also need to be taken into account.

¹ Other NPCs include personal protective measures (which refer to hand and respiratory hygiene, cough etiquette, and use of respirators or facemasks) and environmental measures (which refer to routine cleaning of frequently used surfaces, clothes and objects; minimising the sharing of objects; and ensuring appropriate ventilation.)

- The detection of COVID-19 cases and/or deaths outside of known chains of transmission is a strong signal that social distancing measures should be considered.
- The early, decisive, rapid, coordinated and comprehensive implementation of closures and quarantines is likely to be more effective in slowing the spread of the virus than a delayed implementation.

Background

With the rapidly escalating COVID-19 epidemic, governments in all countries have been urged by WHO to regard containment of the disease as a 'top priority' [3]; ECDC has made a similar call for EU/EEA Member States [4]. This short guide discusses various aspects of the implementation of social distancing measures, including the decision-making process and some of the socio-economic effects that they may bring about.

Decision-making and evidence for social distancing measures

The COVID-19 outbreak is an emerging, rapidly evolving situation for which social distancing measures may be justified and implemented as a core component of the response. Public health authorities should ensure that decision makers are aware of, and understand, the current scientific uncertainties related to the virus [5]. These uncertainties include, among other issues:

- The precise mode(s) of transmission of the virus, and the possibility of aerosol transmission
- How long someone needs to be exposed in order to be infected
- Whether infectiousness starts before onset of symptoms, and how long a person is infectious
- Whether seasonality will affect transmission
- The role of children in transmission.

Public health authorities should also recognise that extra-scientific factors (e.g. feasibility of implementing scientific advice, time pressure, socio-political factors, institutional factors, economic interests, pressure from neighbouring countries) are inherent to the decision-making process. These factors will also influence the implementation of any proposed response measures [1, 5]. Decisions should therefore always be evidence-informed, but they will very rarely be purely evidence-based.

Lessons identified from previous influenza pandemics (e.g. from 1918, 1957, 1968, 2009) and from the SARS outbreak in 2003 may be taken into account in the decision-making and implementation process. However, it is important to bear in mind that COVID-19 is a new disease with its own, as yet incompletely understood properties.

Objectives of social distancing measures

Social distancing aims, through a variety of means, to decrease or interrupt transmission of COVID-19 in a population (sub-)group by minimising contact between potentially infected individuals and healthy individuals, or between population groups with high rates of transmission and population groups with no or a low level of transmission. Community-level measures are needed when containment is no longer feasible in order to delay the peak of the epidemic and decrease the peak magnitude to protect healthcare capacity (Figure 1). There are several different types of social distancing measures (Table 1), which can be categorised in 'layers' in ascending order. Each progressive layer of measures includes all measures from the previous layers.

Figure 1. Illustration of the objectives of social distancing measures to reduce and delay the peak of the epidemic and protect healthcare capacity

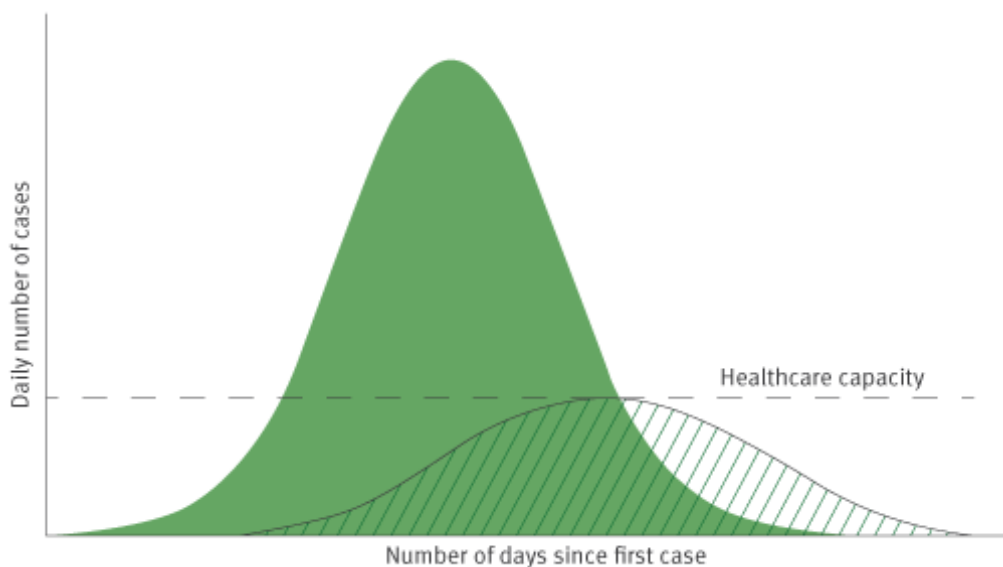


Table 1: Description of social distancing measures and their rationale; in ascending order

Social distancing measure	Description	Rationale
Individual social distancing		
Isolation² of cases	<ul style="list-style-type: none"> Confirmed or suspected cases of COVID-19 are isolated, meaning either hospitalised (usually for moderate or severe cases) to provide care, or recommended to self-isolate at home (mild cases) In a situation of widespread community transmission, a blanket recommendation for individuals with symptoms to stay home may be given Isolation of cases can be voluntary or mandatory 	<ul style="list-style-type: none"> Separate sick from the healthy persons and provide appropriate care by trained personnel who should wear personal protective equipment (PPE)
Quarantine² of contacts	<ul style="list-style-type: none"> Healthy person(s) who have had a high- or low-risk contact with a confirmed COVID-19 case, according to the investigation Quarantine of cases can be voluntary or mandatory² 	<ul style="list-style-type: none"> Usually recommended to self-quarantine in a safe area or at home, and self-monitor for appearance of COVID-19-compatible symptoms; if symptoms are detected, a test may be carried out promptly Rationale includes prompt diagnosis and separation from other healthy persons to avoid transmission, even during asymptomatic or subclinical phases of the disease
Stay-at-home recommendations	<ul style="list-style-type: none"> Blanket recommendation for the public to stay at home and avoid mass gatherings and close contact with persons, particularly targeting the known high-risk groups 	<ul style="list-style-type: none"> Recommendations for voluntary social distancing of persons, particularly the high-risk groups, in order to reduce transmission, avoid increased morbidity, and thereby decrease the pressure to the health system

² In the context of public health, confirmed or suspected patients of an infectious disease ('cases') are isolated while their contacts (depending on the epidemiology of the disease), who are in general healthy persons, are quarantined. The word quarantine has an inherent enforcement meaning. Sometimes 'voluntary self-isolation', or even 'voluntary quarantine', or 'self-quarantine' are used to infer that persons comply voluntarily to public health recommendations.

Social distancing measure	Description	Rationale
Social distancing affecting multiple persons		
Closure of educational institutions	<ul style="list-style-type: none"> Schools (including day care centres, kindergartens, primary and secondary schools) Closure of higher educational institutions (including universities, research institutes, etc.) 	<ul style="list-style-type: none"> Preventing contact among children is a known prevention measure in influenza outbreaks and pandemics Universities and other educational institutions are also areas where large numbers of people congregate in confined spaces In studies of influenza outbreaks, both measures usually have the biggest effect when applied early in the transmission phase and when they last until the circulation of the pathogen decreases (i.e. after several weeks) Need to also prevent meeting/gathering of youths outside school in order to ensure effectiveness
Measures for special populations	<p>Measures to limit outside visitors and limit the contact between the inmates/patients in confined settings, such as:</p> <ul style="list-style-type: none"> Long-term care facilities, either for the elderly or persons with special needs Psychiatric institutions Homeless shelters Prisons 	<ul style="list-style-type: none"> These institutions house a large percent of people in high-risk groups for severe disease and poor outcome, are often are densely populated, and outbreaks of COVID-19 can lead to significant morbidity and mortality Measures should be applied early in the outbreak and should be continued until the circulation of COVID-19 decreases in the community
Mass gathering cancellations	<ul style="list-style-type: none"> Cultural events (theatres, cinemas, concerts, etc.) Sporting events (football, indoor and outdoor athletic games, marathon runs etc.) Festivals, faith-based events Conferences, meetings, trade fairs, etc. 	<ul style="list-style-type: none"> The aim is to avoid transmission among large numbers of people in confined spaces For some events – even though they may be conducted outdoors (e.g. football matches) –, attendees may be in close contact on public transportation, at the entrance and exit, etc.
<i>Cordon sanitaire</i>/mandatory quarantine of a building or residential area(s)	<ul style="list-style-type: none"> Refers to the quarantine and closing off of a building or whole residential area (city, region, etc.) 	<ul style="list-style-type: none"> Aims at limiting the contact between high-transmission areas and those with no or low levels of transmission This measure implies that the measures above (e.g. school and higher education closures, cancellations of mass gatherings) are also implemented in order to maximise social distancing within the <i>cordon sanitaire</i>

When to initiate and end social distancing measures

Due to the relatively high transmissibility of COVID-19 and the limited effectiveness of most social distancing measures, the impact of such measures on the peak magnitude of the epidemic and the potential delay of the peak depends on how early the measures are taken in the context of the local epidemiological situation.

Observational and modelling evidence from past pandemics (e.g. influenza pandemics) and from the experiences with COVID-19 in China indicates that the early, decisive, rapid, coordinated and comprehensive implementation of social distancing measures are likely to be more effective in slowing the spread of the virus than delayed actions [6-8]: it is estimated that if a range of non-pharmaceutical interventions, including social distancing, had been conducted one week, two weeks, or three weeks earlier in China, the number of cases could have been reduced by 66%, 86%, and 95%, respectively, together with significantly reducing the number of affected areas [9].

There is no one-size-fits-all method of deciding on the best time to enact social distancing measures. In an epidemiological situation between scenario 3 (localised outbreaks, which start to merge, becoming indistinct) and scenario 4 (widespread sustained transmission of COVID-19) [4], the detection of COVID-19 cases and/or deaths outside of known chains of transmission provides a signal that social distancing measures should be implemented. In addition, data support the simultaneous implementation of several layers of social distancing at once, rather than one by one [7].

As a means of facilitating public acceptance of the measures, it is important that an anticipated end-date is established, but it should also be made clear to the population that this could be extended if circumstances require it. It is also important to plan for, and to communicate to the public, the possibility that social distancing measures could be re-imposed if there is a future wave of transmission.

Considerations when enacting social distancing measures

Some of the generic challenges authorities will face when enacting social distance measures are presented below; details refer to the specific measures given in Table 2 below.

Social and political factors

Every EU/EEA country has a specific social, political and constitutional context. What may be acceptable and feasible in one setting may not be in another. Societal norms and values underpinning freedom of movement and travel will need to be weighed against precautionary principles and the public acceptance of risks [10]. It is important to consider, anticipate and plan for mitigation, while keeping in mind the considerable public reaction that social distancing measures may cause. There is no one-size-fits-all approach for implementation of social distancing measures.

Human rights and proportionality of response

Restrictive public health measures must always respect existing national legislation, as well as international legal and ethical principles, such as the UN Siracusa Principles [11] and the International Health Regulations, Article 3 [12]. On this basis, the following conditions should be met:

'Public necessity, demonstrated effectiveness and scientific rationale, proportionality and least infringement, reciprocity, justice and fairness' [13].

It is important, for example, that people should not be quarantined to protect the wider population if they themselves are then isolated in a high-transmission setting. Furthermore, quarantine should not differentiate between social or economic groups in a population [14].

Risk communication

A comprehensive risk communication strategy should be developed, for example by presenting to the public the rationale and justification behind social distancing measures. If social distancing measures are effective and there are relatively few cases, the population may question whether the burdensome measures taken are actually worth it ('After all, nothing really happened'). This paradox needs to be addressed in risk communication. People should also be encouraged to take action at a personal level as a means of protecting themselves. Different audiences should be targeted (for example through minority languages). A monitoring system should be put in place to observe public perceptions and opinions of both the outbreak and the response to the outbreak [15].

Countering stigma

Evidence from previous infectious disease epidemics indicates that people who have been subjected to quarantine – even if not infected themselves – may be stigmatised [16], which can undermine their capacity to adhere to the public health measures in place and may have longer-term social implications [17]. It is important for the authorities to proactively address potential stigma by promoting a sense of solidarity in the population: everyone is to some extent at risk, and that 'we are all in this together' [18].

Support for people and communities subjected to social isolation measures

To facilitate adherence to, and implementation of, social isolation measures, a support system should be prepared and communicated to ensure the continued provision of essential services and supplies (e.g. food, medication and access to healthcare) to affected individuals and communities [19, 20]. Consideration should also be given to the potential effects of the social distancing measures on mental health of the affected individuals [17, 19].

Special support for vulnerable groups

Vulnerable individuals – for example the elderly, those with underlying health conditions, disabled people, people with mental health problems, homeless people, and undocumented migrants will also require extra support [21]. Authorities may want to consider coordinating with and supporting civil society and religious groups who already work with these populations [15].

Financial compensation for lost income and employment

Restrictive social distancing measures carry with them short- and possibly medium-term financial burdens [1]. Families, communities and businesses will be affected, with low-wage and gig-economy (zero-hour contracts) workers facing particular challenges. Financial compensation for losses incurred may be seen as an essential component of the wider preventive strategy because it may facilitate adherence to the prescribed public health measures [22].

Ensuring business continuity

Business continuity management is the process by which an organisation ensures that its most critical activities and processes are operational regardless of incidents or disruptions. Some business continuity measures, such as teleworking, may also reduce transmission of the virus [23]. Business continuity should be ensured for those essential services for which the societal consequences of disruption would be high (e.g. law enforcement, healthcare, fire services, long-term care facilities, pharmacies, grocery shops, internet providers, prisons, and the utilities (water, gas, electricity) sector). Business continuity support should also be provided to non-critical and smaller businesses, which may be more prone to failure [24].

Process and impact evaluation

The epidemiological and social effects of mandated social distancing measures should be monitored throughout the period of enforcement and should be adapted accordingly in real time. Once the measures have been lifted, it will be important to conduct a systematic, comprehensive post-event evaluation in each setting in order to identify lessons and thereby inform future practice, for example in the event of a resurgence of the epidemic [1, 15].

Table 2. Overview of implementation, stakeholders, considerations and potential barriers per type of social distancing measure to be implemented

Social distancing measure	Stakeholders (in addition to public health authorities)	Considerations and potential barriers
Individual social distancing		
Isolation of cases	Authorities at local and/or national levels responsible for: <ul style="list-style-type: none"> Internal affairs Transport/ points of entry Judicial system and law enforcement bodies 	<ul style="list-style-type: none"> In the phase of widespread transmission, confirmed COVID-19 cases with mild symptoms, or patients with symptoms consistent with COVID-19, may be requested to self-isolate at home Mandatory isolation of cases and/or and quarantine of their contacts should be considered if persons do not comply with voluntary isolation or self-quarantine Teleworking may not be an option for all quarantined cases, and personal financial losses may occur Essential services (healthcare, schools, utilities, etc.) may be severely affected if identified cases and/or contacts include key workers
Quarantine of contacts		
Recommended self-isolation		

Social distancing measure	Stakeholders (in addition to public health authorities)	Considerations and potential barriers
Social distancing affecting multiple persons		
<p>Closure of educational institutions:</p> <ul style="list-style-type: none"> Schools (including day care centres, kindergartens, primary and secondary schools) [25] Higher education institutions closure (universities, research institutes, academic institutes, etc.) 	<p>Ministries/authorities at local and/or national levels responsible for:</p> <ul style="list-style-type: none"> Health Education Internal affairs Regional education authorities Foreign affairs Deans/boards of public and private universities Boards of research institutions Parent associations Student associations 	<p>Considerations for educational institutions</p> <ul style="list-style-type: none"> Need to ensure continuity of education, but be aware of unequal access to digital education Dropout rates may increase while schools and universities are closed Social isolation because educational institutions are a hub of social activity and human interaction Community and financial pressures to remain open <p>Schools</p> <ul style="list-style-type: none"> Parents may miss work and will incur financial losses; some may lose their jobs, which could disproportionately affect one-parent households Adverse effect on health system because a significant percentage of women work in the health sector and may need to stay home to care for children Adverse effect on children's nutrition because many rely on meals provided at schools <p>Higher education</p> <ul style="list-style-type: none"> Universities may need to cancel other mass gathering events, e.g. conferences, project meetings, workshops, etc., therefore incurring loss of funds Research trips and field work may need to be postponed/cancelled, therefore incurring loss of funds Consider the needs of visiting students and teaching staff from other countries who may have specific visas and/or limited resources Special considerations and instructions are needed for dormitories Research laboratories may need to maintain skeleton staff to take care of long-lasting and/or costly experiments, or feed/take care of laboratory animals
Measures for special confined populations		
<p>Including:</p> <ul style="list-style-type: none"> Long-term care facilities [26] Psychiatric institutions Prisons, etc. 	<p>Ministries/ authorities at local and/or national levels responsible for:</p> <ul style="list-style-type: none"> Health Interior affairs Judicial system and law enforcement bodies 	<p>Considerations for institutions</p> <ul style="list-style-type: none"> Increased mental-health issues (e.g. depression) among patients/inmates and further alienation of patients/inmates from society Strict instructions to staff of such institutions saying that they should not come to work if they experience symptoms of respiratory illness and/or fever Virtual family visits can be organised if outside visitors are not allowed for an extended period of time Need to ensure appropriate infection control within facilities <p>Prisons</p> <ul style="list-style-type: none"> Prisoner discontent; riots

Social distancing measure	Stakeholders (in addition to public health authorities)	Considerations and potential barriers
Mass gathering cancellation		
<p>Including:</p> <ul style="list-style-type: none"> • Culture events (theatres, cinemas, concerts, etc.) • Sporting events (football, indoor and outdoor athletic games, marathons, etc.) • Festivals • Faith-based events • Conferences <p>[27, 28]</p>	<p>Ministries/authorities at local and/or national levels responsible for:</p> <ul style="list-style-type: none"> • Health • Interior affairs • Foreign affairs • Culture and religious affairs • Event-organising committees (national and international levels) • Regional and local authorities • Professional associations and boards • Religious leaders 	<p>All mass gathering events</p> <ul style="list-style-type: none"> • Financial losses for organisers and possible rise in unemployment • Financial losses for attendees (ticket fees, accommodation fees, transportation fees, etc.) • Financial losses for affiliated businesses (media, catering, sponsorships, etc.) • Damage to brand names • Subsequent decreases in tourism • Decreased revenue from taxes • Disappointment from fans who consider cancellation an overreaction (with potential accompanying political cost) <p>Faith-based events</p> <p>Given that religious leaders play a strong role in shaping opinions, they need to be engaged early in the process in order to facilitate adherence</p>
Cordon sanitaire:		
<ul style="list-style-type: none"> • Mandatory quarantine of a building or residential area(s) [29] 	<p>Ministries/ authorities at local and/or national levels (may need to escalate to the highest government authority) responsible for:</p> <ul style="list-style-type: none"> • Health • Interior • Regional & local authorities • Businesses and trade unions • Homeowner and rental associations • Judicial system and law enforcement bodies • Civil protection • Long-term care facilities • Prisons • Mental health care facilities • Community and faith leaders • Education 	<p>All areas</p> <ul style="list-style-type: none"> • Consideration of which categories of activities and individuals could be exempted from the restrictions • Considering the needs of older adults, persons with disabilities, and other vulnerable individuals (e.g. homeless people, people with mental health problems, and undocumented migrants) • Timing of the announcement in order to minimise the number of people seeking to 'escape' before enforcement • Need to ensure availability of basic necessities including food, water, medicine, and sanitation supplies • Functioning utilities (water, gas, electricity, internet) • Human rights of people living in the area • Significant financial losses throughout the region • Need to frequently revisit rationale to ensure that social distancing measures are still needed • Need to ensure access to health services for the population within the cordon • Need to ensure appropriate measures are taken within the cordon to decrease transmission within the population <p>Businesses</p> <ul style="list-style-type: none"> • Financial losses for most or all businesses • Loss of employment if there is no possibility to telework • Change in patterns of commerce • Interrupted supply/delivery

Note: For details of these measures and their rationale, please see Table 1.

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