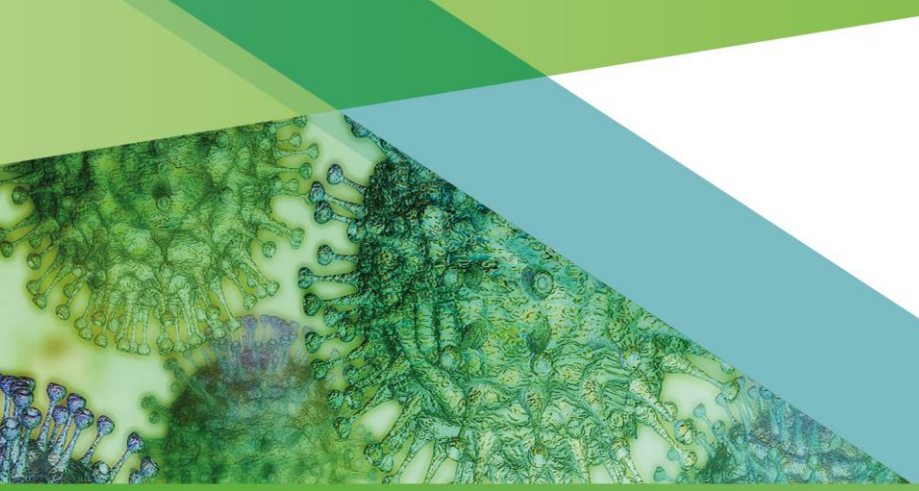

TECHNICAL REPORT

Considerations relating to social distancing measures in response to COVID-19 – second update

23 March 2020

What is new in this update

- Additional information about workplace closures
- Discussion of the term 'social distancing' vis-à-vis the practice of 'physical distancing'
- Discussion of the importance of promoting solidarity and mutual community support when social distancing measures are implemented

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 and supports existing ECDC documents, including guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV [2], a rapid risk assessment: outbreak of novel coronavirus disease – sixth update [4a], a technical report on the use of evidence in decision-making during public health emergencies [5], and a guidance document on community engagement for public health events caused by communicable disease threats in the EU/EEA [15].

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

Erratum. On 26 March 2020, the first bullet point in Table 1 on page 3 was revised. The version of this document initially published stated: 'Confirmed or suspected cases of COVID19 are isolated [...] or recommended to self-isolate at home (mild cases).' This has now been amended to ensure consistency with other ECDC publications.

Suggested citation: European Centre for Disease Prevention and Control. Considerations relating to social distancing measures in response to COVID-19 – second update. Stockholm: ECDC; 2020.

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 physical 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.
- The detection of COVID-19 cases and/or deaths outside of known chains of transmission is a strong signal that social distancing measures, such as closures of workplaces/schools, cancellations of mass gatherings, and the quarantine of affected areas, should be considered.
- The early, decisive, rapid, coordinated and comprehensive implementation of measures, 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 pandemic, governments in all countries have been urged by WHO to regard control of the disease as a 'top priority' [3]; ECDC has made a similar call for EU/EEA Member States [4, 4a]. 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 for social distancing measures

The COVID-19 pandemic 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
- The minimum infectious dose/number of infectious viral particles needed to initiate infection
- The degree of infectivity prior to onset of symptoms, and how long a person is infectious after recovery
- Whether seasonality will affect transmission
- Immune responses in humans and duration of immunity.

Mathematical modelling of the effects of social distancing interventions can support decision-making, based on the local contact patterns and known or assumed parameters of infectiousness, incubation time and duration of immunity [30].

Public health authorities should 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 etc.) 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), annual seasonal influenza epidemics, and from the SARS outbreak in 2003 may be taken into account in the decision-making and implementation process [31, 32]. 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

The term 'social distancing' refers to efforts that aim, through a variety of means, to decrease or interrupt transmission of COVID-19 in a population (sub-)group by minimising physical 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 social distancing measures are needed in parallel

with containment efforts (e.g. contact tracing [33]) whenever it becomes clear that containment alone is no longer sufficient as a means of delaying the peak of the epidemic, decreasing the peak magnitude to protect healthcare capacity, or protecting vulnerable groups at risk of severe outcomes (Figure 1). There are several different types of social distancing measures (Table 1), and these can be categorised in 'layers', in ascending order of scale. Each progressive layer of measures includes all measures from the previous layers.

It is important to note that the term 'social distancing' focuses on reducing physical contact as a means of interrupting transmission, but while reduction of social contact may be an outcome of that, it is not a specific aim. Indeed, the success of social distancing measures that are implemented over an extended period may depend on ensuring that people maintain social contact – from a distance – with friends, family and colleagues. Internet-based communications are therefore a key tool for ensuring a successful social distancing strategy.

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

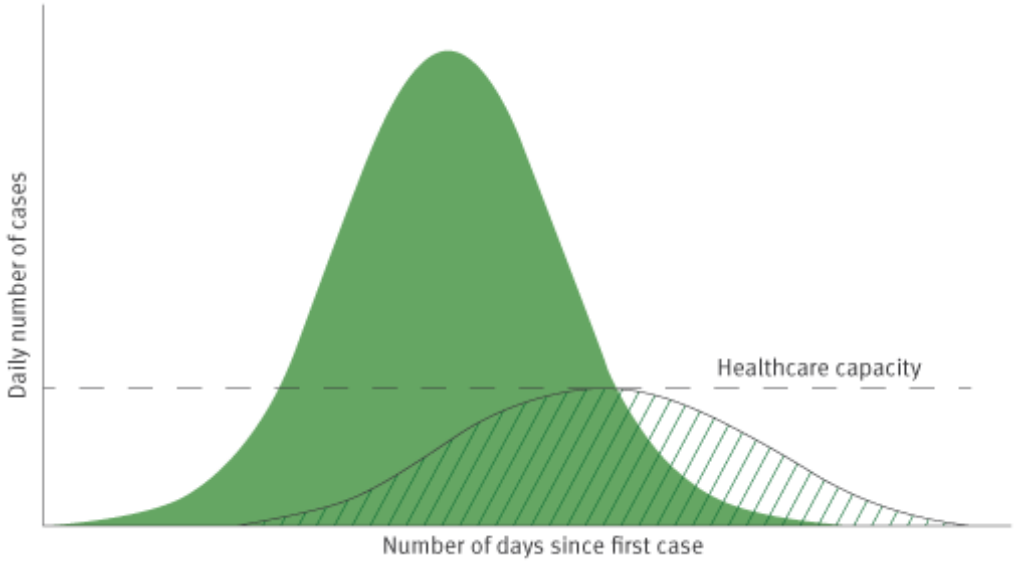

Table 1: Description of social distancing measures and their rationale, at individual and group level

Social distancing measure	Description	Rationale
Individual social distancing		
Isolation[2] of cases	• Confirmed or suspected cases of COVID19 are isolated, meaning either hospitalised (usually for moderate or severe cases) to provide care, or managed in dedicated isolation facilities or 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	• Separating sick from healthy persons to avoid transmission
Quarantine[2] of contacts	• Healthy person(s) who have had a high- or low-risk contact with a confirmed COVID-19 case, according to the contact investigation • Quarantine of cases can be voluntary or mandatory[2]	• 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 • Separation from other healthy persons to avoid transmission if disease develops, even during asymptomatic or subclinical phases of the disease

[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
Stay-at-home recommendations	• Blanket recommendation for the public to stay at home and avoid mass gatherings and close contacts with people, especially known high-risk groups	• 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
Social distancing affecting multiple persons		
Closure of educational institutions	• Schools (including day care centres, kindergartens, primary and secondary schools) • Closure of higher educational institutions (including universities, research institutes, etc.)	• 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) [34] • Need to also prevent meeting/gathering of youths outside school in order to ensure effectiveness
Workplace closures	• Closure of offices, factories, retail outlets, agricultural production, construction, restaurants, cafes/bars, sports clubs, haulage/transport etc. • Can include: flexible working schedules/shifts for employees; opportunities for distance working/teleworking; encouraging physical distancing measures within the workspace; increased use of email and teleconferences to reduce close contacts; reduced contact between employees and customers; reduced contact between employees; adoption of flexible leave policies; and promoting the use of other personal protective and environmental countermeasures	• The aim is to avoid transmission among medium-to-large numbers of people in confined spaces over extended periods • Depending on the proximity of people working in different workplace settings as well as the rate and nature of their interactions, different individuals and groups will be at higher risk of infection than others. Closures can therefore be targeted to these areas.
Measures for special populations	Measures to limit outside visitors and limit the contact between the inmates/patients in confined settings, such as: • Long-term care facilities, either for the elderly or persons with special needs • Psychiatric institutions • Homeless shelters • Prisons	• These institutions house a large percent of people in high-risk groups for severe disease and poor outcome, are often densely populated, and outbreaks of COVID-19 can lead to significant morbidity and mortality • Measures should be applied early in the outbreak and be continued until the circulation of COVID-19 decreases in the community
Mass gathering cancellations	• 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.	• 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.
***Cordon sanitaire*/mandatory quarantine of a building or residential area(s)**	• Refers to the quarantine and closing off of a building or whole residential area (city, region, etc.)	• Limiting the contact between high-incidence 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 *cordon sanitaire*

When to initiate social distancing measures and exit strategies

There is uncertainty over the effectiveness of most social distancing measures as a means of controlling COVID-19. However, due to the relatively high transmissibility of the virus, the impact of such measures on the peak magnitude of the epidemic and the potential delay of the peak is likely to depend on how early the measures are taken in the context of the local epidemiological situation. In addition, layering of multiple measures is likely to increase the composite effectiveness of individual measures.

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 COVID-19 cases could have been reduced by 66%, 86%, and 95%, respectively, while also 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 that involve closures, cancellations or quarantine of entire affected areas. In an epidemiological situation between scenario 3 (localised outbreaks that 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 such 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]. For example, if schools are closed but workplaces remain open, parents and caregivers may need to ask grandparents to take care of their (possibly infected) children while they continue working. This could lead directly to increased transmission to individuals who are at high risk of severe disease.

In the meantime, as a means of facilitating public acceptance of social distancing measures, it is important that an anticipated end date is established and communicated as soon as possible. It should also be made clear to the population that a) the measures could be extended if circumstances require it, and that b) some measures may be removed or reduced while others remain in place. In addition, plans should be drawn up and communicated to the public that there is the possibility of re-imposing large-scale social distancing measures if there is a resurgence of transmission following the lifting of measures. ECDC is currently working on an analysis of possible exit strategies (including timing). The results will be included in the next edition of this document.

Note that in the absence of mass vaccination programmes, the development of sufficient levels of immunity in the population through natural infection ('herd immunity') is the only way to eventually decrease transmission opportunities in the community. Ultimately, when 'herd immunity' is sufficient, social distancing measures become obsolete.

Considerations when implementing social distancing measures

Some of the generic challenges authorities will face when implementing social distance measures are presented below; details of the specific measures are 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. It should, among other things, present to the public the rationale and justification behind the implemented social distancing measures. In addition to informing the population about mandated measures, a key component of this should be to encourage people 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 also 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 and/or groups who have been subjected to quarantine or self-isolation – 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 distancing 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 people and communities subjected to social distancing measures [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]. Encouraging contact with friends, family and other networks via internet-based communications systems, social media and phone is an important means of promoting mental well-being. The benefits of encouraging people to engage in physical activity – whether in their homes or, alone, outside – should also be stressed, as should advice to eat healthy, well-balanced meals; drink enough water; and try to avoid smoking, alcohol and drugs [35].

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 require extra support [4a]. Authorities may want to consider coordinating with, and supporting, civil society and religious groups that already work with these populations [15].

Promoting solidarity and mutual community support

There is anecdotal evidence from several countries where rigorous quarantine measures have been implemented of communities spontaneously engaging in shows of mutual support. These have included singing together and applauding health workers from the balconies of apartment buildings; hanging banners with encouraging messages (e.g. 'Andrà tutto bene' in Italy, which translates as 'Everything will be alright'); donations of food and face masks; and people reaching out to elderly or otherwise vulnerable neighbours to make sure that they feel supported and remembered. From the business community, there have also been offers from the producers of alcoholic drinks to turn their focus and activities towards the provision of hand sanitiser, which is in short supply in many settings. Official acknowledgment and promotion of such gestures of solidarity and mutual community support may facilitate stronger adherence to these very challenging measures for the population.

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 **Quarantine of contacts** **Stay-at-home recommendations**	Authorities at local and/or national levels responsible for: • Internal affairs • Judicial system and law enforcement bodies	• In the phase of widespread transmission, confirmed COVID-19 cases with mild symptoms, or people 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 • Environmental cleaning should be conducted along with the use of other personal protective measures (hand hygiene and respiratory etiquette) while on self-isolation • Face masks should be used at all times by symptomatic, ill people when in contact with other people in the household in order to avoid infecting them

Social distancing measure	Stakeholders (in addition to public health authorities)	Considerations and potential barriers
Social distancing affecting multiple persons		
Closure of educational institutions: • Schools (including day care centres, kindergartens, primary and secondary schools) [25] • Higher education institutions closure (universities, research institutes, academic institutes, etc.)	Ministries/authorities at local and/or national levels responsible for: • Health • Education • Internal affairs • Regional education authorities • Foreign affairs • Deans/boards of public and private universities • Boards of research institutions • Parent associations • Student associations	**Considerations for educational institutions** • 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 **Schools** • 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 **Higher education** • 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
Workplace closures: • Offices • Factories • Retail Outlets • Construction • Restaurants, cafes/bars • Sports clubs • Haulage/transport	• Trade Ministry • Finance Ministry • Emergency services • Employers • Business federations • Trade Unions	**Considerations for workplaces** • Every effort should be made to ensure that essential services are maintained (e.g. law enforcement, healthcare, fire services, long-term care facilities, pharmacies, grocery shops, internet providers, prisons, and utilities such as water, gas and electricity), even if they can only be manned by skeleton staff • Wherever possible, employees should telework from home and use videoconferencing tools for meetings • Teleworking may not be an option in all cases, and substantial personal financial losses and/or loss of employment may occur • Low-wage and gig-economy (zero-hour contracts) workers may face particular challenges • Some social distancing measures can be taken while workplaces remain open (see Table 1) • Financial compensation from the state 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

Social distancing measure	Stakeholders (in addition to public health authorities)	Considerations and potential barriers
Measures for special confined populations, including: • Long-term care facilities [26] • Psychiatric institutions • Prisons, etc.	Ministries/ authorities at local and/or national levels responsible for: • Health • Interior affairs • Judicial system and law enforcement bodies	**Considerations for institutions** • 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 **Prisons** • Prisoner discontent; riots
Mass gathering cancellation, Including: • Culture events (theatres, cinemas, concerts, etc.) • Sporting events (football, indoor and outdoor athletic games, marathons, etc.) • Festivals • Faith-based events • Conferences [27, 28]	Ministries/authorities at local and/or national levels responsible for: • 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 and organisations	**All mass gathering events** • 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) **Faith-based events** 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
Cordon sanitaire: Mandatory quarantine of a building or residential area(s) [29]	Ministries/ authorities at local and/or national levels (may need to escalate to the highest government authority) responsible for: • 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	**All areas** • 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 **Businesses** • Financial losses for most or all businesses • Loss of employment • Change in patterns of commerce • Interrupted supply/delivery

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

Contributing authors (in alphabetical order)

Cornelia Adlhoch, Agoritsa Baka, Massimo Ciotti, Joana Gomes Dias, John Kinsman, Katrin Leitmeyer, Angeliki Melidou, Teymur Noori, Anastasia Pharris, Pasi Penttinen, Paul Riley, Andreea Salajan, Jonathan Suk, Svetla Tsolova, Marieke van der Werf, Emma Wiltshire, Andrea Würz

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