RAPID RISK ASSESSMENT

Risk of COVID-19 transmission related to the end-of-year festive season

4 December 2020

Summary

After a scale-up of non-pharmaceutical interventions implemented by several Member Sates starting from the end of October, a recent overall decreasing trend in the 14-day COVID-19 notification rate and in the weekly test positivity proportion for the EU/EEA and the UK has been observed. However, SARS-CoV-2 transmission in the EU/EEA and the UK remains high compared with the low levels observed over the summer.

The end-of-year festive season is traditionally associated with activities such as social gatherings, shopping and travelling, which would pose significant additional risks for intensified transmission of SARS-CoV-2. An aggravating factor is that there are reports of what has been described as 'pandemic fatigue', with some people becoming de-motivated to follow recommended protective measures, especially during this period.

Lifting measures too early would result in an increase in cases and hospitalisations, and this would be particularly rapid if measures were lifted abruptly. If response measures implemented in October or November were to be lifted on 21 December, modelled projections suggest that a resurgence in COVID-19 hospitalisations could occur as early as the first week of January 2021. If response measures were lifted on 7 December, it is projected that this increase could occur before 24 December. In the current epidemiological situation in the EU/EEA and the UK, the earlier that measures are lifted the larger and more rapid the resultant increase in case numbers, hospitalisations and deaths could be, causing additional pressure on healthcare systems.

Based on the current epidemiological situation in most EU Member States, any adaptation of measures should be undertaken in a targeted, proportionate and coordinated manner, according to the prevailing epidemiology and population vulnerability at the level at which the measures are applied. These measures should be communicated clearly in order to mitigate the risk of increased transmission during the end-of-year season, while also taking into account the social, personal and economic impact for the population.

What risk is being assessed

This document assesses the risk of SARS-CoV-2 transmission to the general population and medically vulnerable individuals in the EU/EEA and the UK, from the perspective of the upcoming end-of-year festive season. Given the current epidemiological situation and the measures implemented, and anticipating end-of-year festive season gatherings, events, mobility, and reports of fatigue to measures in the EU/EEA and the UK, the risk that the COVID-19 pandemic poses to the general population is assessed as **high**. For vulnerable individuals, including the elderly and people with underlying medical conditions, the risk is assessed as **very high**.

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Options for response

Preparing for the end-of-year festive season, the following options for response should be considered together with the recommendations published in the Commission strategy 'Staying safe from COVID-19 during winter' and the latest ECDC Guidelines for the implementation of non-pharmaceutical interventions against COVID-19 [1,2]:

- Addressing pandemic fatigue should be the key element of risk communication activities. The buy-in of citizens is critical to its success and is more likely to be achieved if measures are clear, proportionate, and transparent and supported by quantified goals and epidemiological targets.
- Ensuring physical distance, hand and respiratory hygiene, use of face masks (particularly in closed spaces or when physical distancing cannot be guaranteed), and sufficient ventilation are essential measures that should be applied in all contexts.
- Cancelling or limiting the size and length of social gatherings and events, offering online alternatives when possible and gatherings only within households should be encouraged.
- Recommending small 'social bubbles' before and during the festive season, self-quarantine before family and friends gatherings, encouraging online gathering alternatives and shielding medically- and socially-vulnerable populations.
- Reinforcing testing, case isolation and contact tracing capacities, ensuring surge capacity.
- Ensuring healthcare capacity and personnel and surge capacity.
- International travel restrictions and systematic testing and quarantine of travellers are not recommended in the current epidemiological situation.

Event background

Epidemiological situation for COVID-19 in the EU/EEA and the UK

Notification rates started increasing across the EU/EEA and the UK in July, after a period of low notification rates in the late spring and early summer. All countries in the region have now exceeded the peaks observed during the first wave. The current epidemiological situation in the EU/EEA and the UK, based on case notifications, testing trends, hospitalisations and deaths, indicates that COVID-19 transmission remains high.

Overall, for the EU/EEA and the UK, there has recently been a decreasing trend in the 14-day COVID-19 notification rate and in the weekly test positivity proportion. However, the 14-day death notification rate that had been increasing for 72 days has only just begun to stabilise and the 14-day case notification rate for the EU/EEA and the UK remains high at 473 per 100 000 population in the week ending 29 November 2020 (Figure 1). The current situation varies considerably between Member States, with some Member States still observing increases in COVID-19 case notification rates, while others have observed decreasing rates (Figure 2, Annex 2).

Figure 1. 14-day COVID-19 case and death notification rates, testing rate and test positivity trends in the EU/EEA and the UK, 1 March–29 November

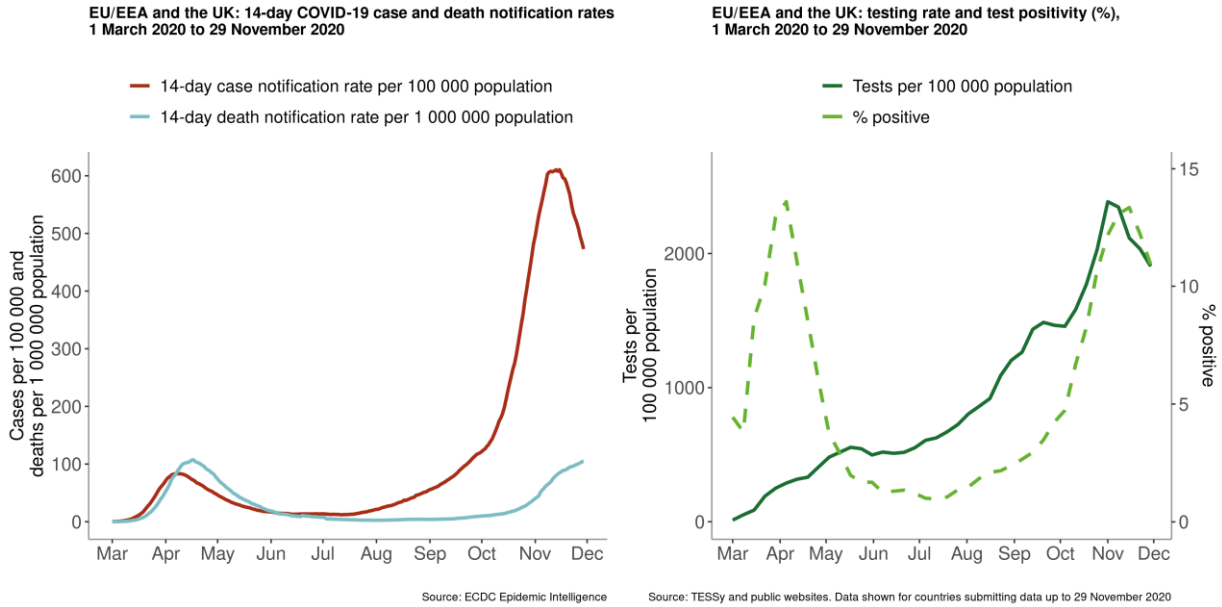
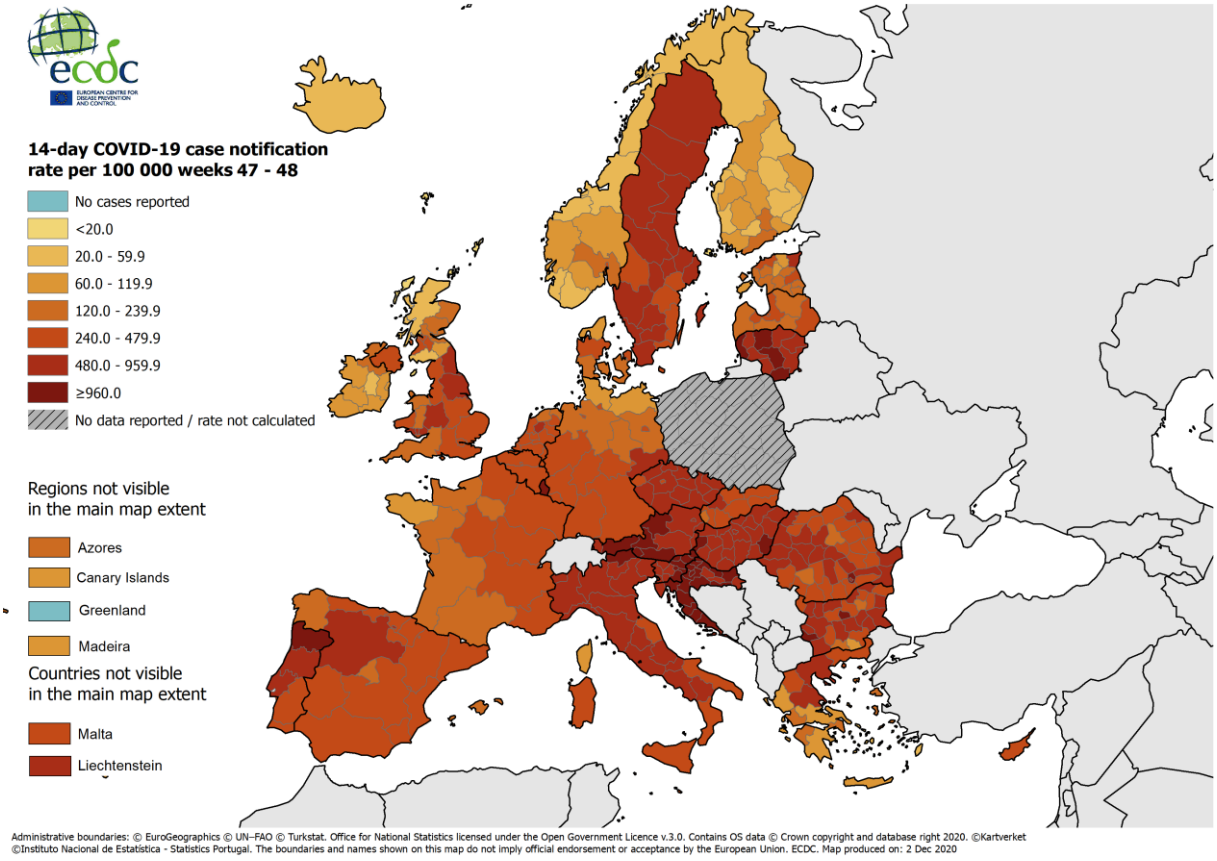


Figure 2. Current 14-day COVID-19 case notification rate per 100 000 population in EU/EEA and UK, 29 November 2020



ECDC has developed epidemiological criteria to categorise the epidemiological situation in countries as being 'of serious concern', 'of concern', or having a 'stable' situation (see Annex 1). The epidemiological situation is of serious concern when high or increasing notification rates are observed among older age groups and/or in death rates. In addition, high rates of hospital and ICU admissions continue to be observed and the number of patients per capita in ICU due to COVID-19 continue to increase. In the week from 23 to 29 November 2020, 30 out of 31 countries had a situation of 'serious concern'. Only Iceland had a 'stable' epidemiological situation. A table with values for all indicators and the assessment for each country is available in Annex 2.

In recent weeks, most countries have observed some stabilisation or decline in case notification rates, test positivity and new hospital or intensive care unit (ICU) admissions, however the absolute values of these indicators remain high (Annex 2). This suggests that COVID-19 transmission is still widespread. Furthermore, case rates among older age groups, hospital and ICU occupancy, and death rates are still increasing or remain high in many countries.

The latest assessment of indicators and trends in individual countries are available at: https://covid19-country-overviews.ecdc.europa.eu/. The latest maps combining the 14-day notification rate, testing rate and test positivity for the EU/EEA and the UK are available at: https://www.ecdc.europa.eu/en/covid-19/situation-updates/weekly-maps-coordinated-restriction-free-movement

Measures implemented by countries

Following a resurgence of confirmed COVID-19 cases and associated hospitalisations and deaths in late October, many EU/EEA countries and the UK have scaled up non-pharmaceutical interventions. Measures implemented at the national level relate to further restrictions on public and private gatherings, the use of face masks, and actions for international travellers including advice to avoid unnecessary travel and to quarantine upon return. Detailed information on the measures implemented at the national level are available in the ECDC Weekly COVID-19 country overview [3,4].

Projections of COVID-19 activity in the EU/EEA and the UK

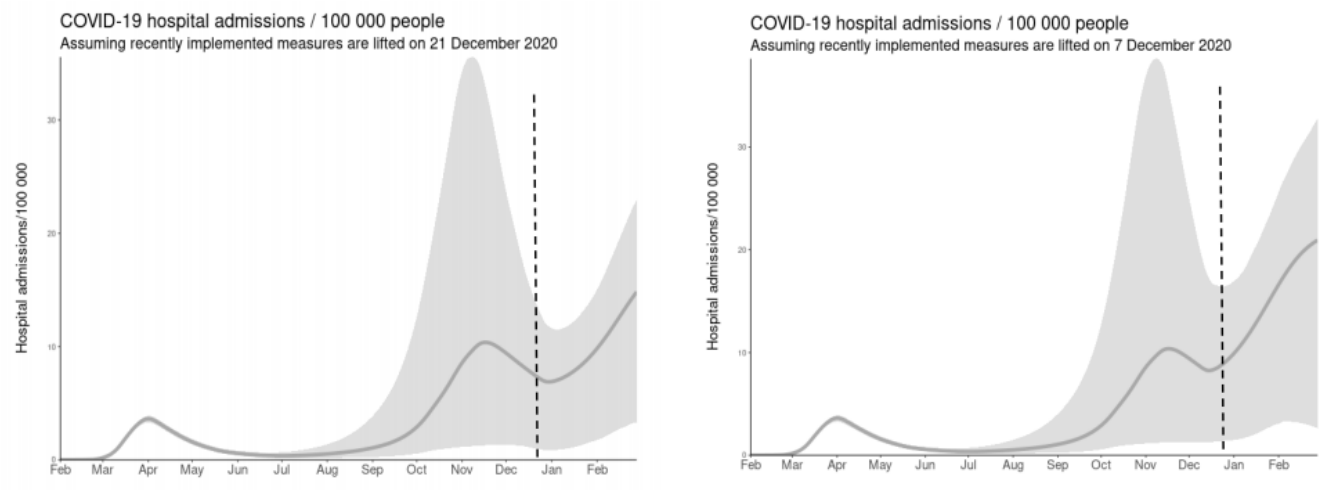
On 23 November 2020, ECDC published a technical report with projected COVID-19 activity for each country, up to 25 December 2020 [5]. The projections were based on the response measures that were in place in each Member State on 17 November 2020, and the assumption that these measures would be maintained until 25 December 2020.

The model suggested that by 25 December 2020, as a consequence of maintaining the response measures in place on 17 November 2020 until 25 December 2020, over half of EU/EEA Member States would observe a reduction of more than 50% in the daily number of confirmed cases compared with 22 November 2020, and an associated reduction in hospitalisations and deaths. Projections for each individual Member State are available in the report available here: https://www.ecdc.europa.eu/sites/default/files/documents/covid-forecasts-modelling-november-2020.pdf

Two alternative scenarios were modelled illustrating the potential resurgence of COVID-19 if the additional measures introduced by some Member States in October–November 2020 were to be lifted (entirely removed) prior to 25 December 2020 (Figure 3). The projections illustrate that:

- lifting these more recent measures on 21 December may cause an increase in COVID-19 hospitalisations as early as the first week of January 2021
- lifting them on 7 December may cause an increase in COVID-19 hospitalisations before 24 December 2020
- the earlier measures are lifted, the larger and more rapid the increase in case numbers, hospitalisations and deaths would be.

Figure 3. Potential impact on hospital admission rate due to lifting measures on 21 December 2020 or 7 December 2020



Settings and activities with increased risk of COVID-19 transmission

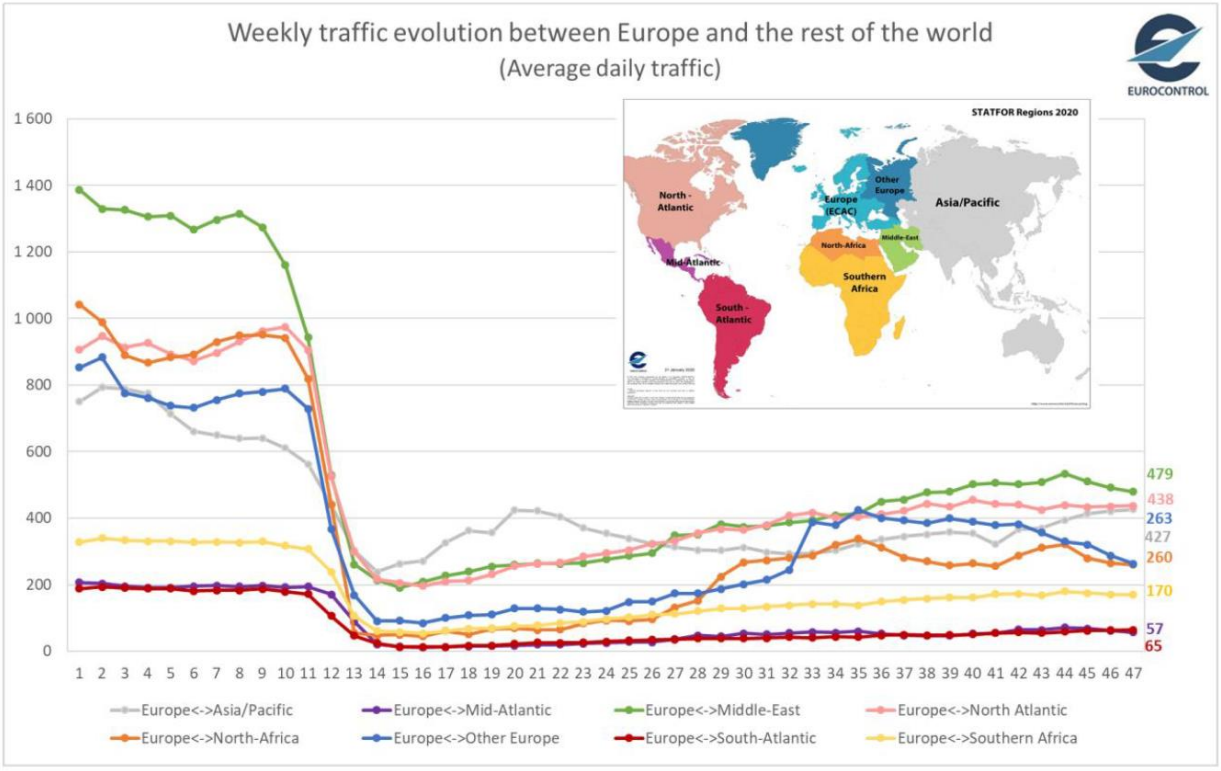
Traditionally, during the end-of-the year festive season, activities associated with more frequent social gathering and increased mobility of people are common. These activities can include taking part in various social and religious events and festivities, celebrations at the workplace, shopping and travelling (such as to warmer regions or winter-sports resorts). These activities and settings, which involve the gathering and mixing of people, increase the probability of close interpersonal contacts and the risk of COVID-19 transmission [6-16].

During the first wave, participation in recreational activities, such as winter sports was documented as an important driver of increased COVID-19 transmission, with subsequent COVID-19 super spreading events and/or clusters among people visiting ski resorts [6,7,9,11,12]. More generally, holiday settings have been shown to act as potential amplifiers of infections that transmit via close contact, due to the mixing of people belonging to different age groups [17,18].

More recently, festive celebrations such as Thanksgiving in Canada have been associated with an increase of COVID-19 cases [19]. National holiday celebration in the US resulted in an increase in COVID-19 cases despite restrictions on events and other measures being recommended at the time [20]. Religious events and services have also been linked to an increase in COVID-19 transmission [6,21-23].

Domestic and international trips usually peak in the summer and over the end-of-year festive season [24]. While people have travelled significantly less in 2020 [24-27], it is expected that some travel will occur in the end-of-year season although less than in the previous years.

Figure 4. Weekly traffic evolution between Europe and the rest of the word in 2020



Source: Eurocontrol. Eurocontrol assessment on the impact on COVID-19

Disease background

For information on the latest scientific evidence on COVID-19, SARS-CoV-2, virus transmission, diagnostic testing, infection, clinical characteristics, risk factors and risk groups, immunity, and vaccines and treatment please visit the ECDC website: https://www.ecdc.europa.eu/en/covid-19/latest-evidence

ECDC risk assessment

This assessment is based on information available to ECDC at the time of publication and, unless otherwise stated, the assessment of risk refers to the risk that existed at the time of writing. It follows the ECDC rapid risk assessment methodology [28], with relevant adaptations. The overall risk is determined by a combination of the probability of an event occurring and its consequences (impact) for individuals or the population [28].

Risk assessment question

From the perspective of the upcoming end-of-year festive season, what is the risk of SARS-CoV-2 transmission to the general population and medically vulnerable individuals in the EU/EEA and the UK?

Epidemiological situation

After months of continuous increase, the most recent epidemiological data indicate that the number of notified cases has just begun to decrease overall in the EU/EEA and the UK. However, national notification rates show variable trends across countries and transmission rates remain high in most part of Europe. In the week from 23 to 29 November 2020, 30 out of 31 countries had a situation of 'serious concern'.

High levels of transmission are a threat for healthcare capacity due to the increase of healthcare demand and the risk that more healthcare workers might be sick and isolated or quarantined. The bed and ICU occupancy rates are still increasing or remain high in many countries, and further increases may challenge healthcare capacity.

Gatherings and events

Social gatherings and events that are traditionally common during the end-of-the-year season are associated with close contact between people (e.g. family members and/or friends, or unknown individuals) that do not normally meet in day-to-day life. Although the mobility and number of gatherings, events and the number of people participating in them is expected to be lower this year compared with previous years, more mobility and gatherings and consequent mixing of the population, compared with preceding weeks is to be anticipated during the end-of-year festive season, increasing opportunities for transmission.

Gatherings at this time of the year in EU/EEA countries and UK are associated with a higher risk of transmission than at other times of the year, as they are more likely to happen indoors, in less ventilated spaces due to colder outdoor temperatures. Eating and drinking in close proximity without a mask, and often relaxed attitudes and related risk-taking behaviour by individuals are common in a festive context, adding further to the risk of transmission.

Regarding vulnerable populations, festive season gatherings often happen with family or friends from high-risk groups (e.g. older family members, people with co-morbidities). In long-term healthcare facilities, residents and staff may go out and celebrate with family and friends, and the visitor policy may be also relaxed during the end-of-year festive season.

Mobility

Increased mobility of people in shared transport to meet family and friends, attend gatherings, travel to winter-sport resorts or to warmer areas within their country, in Europe and/or other continents, also represents an additional opportunity of for COVID-19 infection/transmission in shared transport and at gatherings at destination.

In the current epidemiological situation, where SARS-CoV-2 is established in the community of all EU/EEA countries and the UK, imported cases account for a very small proportion of all detected cases and are unlikely to significantly increase the rate of transmission. Therefore, international travel restrictions, including border closures, would not be expected to have a significant impact on the evolution of the pandemic. The residual risk of imported cases should be managed through national public health resources for testing suspect cases, contact tracing, and subsequent isolation of cases and quarantine of contacts.

Measures implemented and compliance

In late October, many EU/EEA countries and the UK scaled up non-pharmaceutical interventions following a resurgence of confirmed COVID-19 cases and associated hospitalisations and deaths. Although there has recently been a decreasing trend in the overall 14-day COVID-19 notification rate and the weekly test positivity proportion, the 14-day death notification rate has only begun to stabilise in the last week, and the 14-day case notification and death rates for the EU/EEA and the UK remain high. In light of continued high rates of transmission and the projected impact of relaxing measures, it is difficult to justify lifting control measures at this point in time. If, in the context of the end-of-year festive season, any temporary loosening of rules on social gatherings and events is considered, it should be accompanied by clear and strict guidance on how to mitigate the associated risks.

If measures are lifted, an increase in hospitalisations could be expected about three weeks after their lifting. The earlier measures are lifted, the larger and more rapid the increase in case numbers, hospitalisations and deaths would be [5]. Consideration should also be given to the likelihood that relaxing measures at a later date, closer to the peak period of celebrations, in particular mobility restrictions, may result in crowding of travellers in shared transport and may not allow individuals to self-quarantine before meeting family and friends.

Signs of what has been described as 'pandemic fatigue' – defined by WHO as 'de-motivation to follow recommended protective measures' have been reported by countries in Europe [29,30]. Pandemic fatigue brings with it the risk of increased infection rates, increased strains on healthcare capacity, increased impact on the economy and society, and the likelihood that even stricter measures may be needed in the near future to control the further spread of the virus.

For the reasons described above, there is a threat for all EU/EEA and UK countries, irrespective of if they are in an epidemiological situation of serious concern or not, that there will be increases of COVID-19 infections and possible associated excess hospitalisations and deaths during or after the end-of-year festive season.

In summary, the probability of infection with SARS-CoV-2 during the forthcoming end-of-year festive season is considered as very high both for the general population and the medically vulnerable individuals.

Consistent with previous ECDC rapid risk assessments, and because of the threat of experiencing substantial increases in healthcare demand after the festive season, the impact of SARS-CoV-2 transmission during the forthcoming end-of-year festive season is assessed as moderate for the general population and very high for medically-vulnerable individuals (individuals with risk factors for severe COVID-19 disease, such as the elderly) [30,31].

Given the current epidemiological situation and the measures implemented, and anticipating end-of-year festive season gatherings, events, mobility, and reports of fatigue to measures in the EU/EEA and the UK, the risk of transmission of SARS-CoV-2 to the general population is assessed as **high**. For vulnerable individuals, including the elderly and people with underlying medical conditions, the risk is assessed as **very high**.

Options for response

Considering the current epidemiological situation in the EU/EEA and the UK and the possibility of accelerated transmission in relation to the end-of-year festive season, continued implementation of COVID-19 measures in a sustainable manner should be ensured while awaiting the roll-out of vaccines. The following range of risk control measures should be considered together with the recommendations published in the EU strategy 'Staying safe from COVID-19 during winter' for continued COVID-19 control measures [1] to prepare for the end-of-year festive season.

Risk communication: addressing pandemic fatigue

Addressing pandemic fatigue should be a key element of risk communication activities as the festive season approaches, when people are considering how and where they will spend the holidays.

Pandemic fatigue presents a significant dilemma for risk communicators working to reduce new cases of COVID-19. Authorities will need to make a trade-off between what is essentially an epidemiological risk and a social and economic risk [33], particularly at a time that can be of particular social, religious, and economic significance. Balancing the potentially conflicting impact of messages advocating relaxation of measures over the end-of-year festive season period on the one hand, and messages advocating restrictions that reduce the epidemiological risk on the other hand [34] needs to be based on an assessment of the prevailing epidemiological and social situations, and the overall impact on physical, mental, social and economic wellbeing.

Irrespective of context however, the following core risk communication principles should be considered [35]:

- It is crucial at this time that authorities are able to show empathy with the population, that they acknowledge the difficulties people have been facing, and that they are seen to be listening to the concerns of their constituents.;
- New measures must be clearly explained and justified to the population, with an indication of their likely duration and the criteria that will be used to determine when they will end;
- Messages should be presented in an accessible and emotionally engaging manner and in terms that people can easily relate to;
- Messages should follow the standard principles of consistency, transparency about uncertainty, and ease of understanding for the target audience;
- Visualisations may be a useful means of explaining epidemiological data.

The following key messages may be relevant in advance of the festive season, whereby people should be encouraged to:

- Reduce travel and social activities, and only engage in those that are genuinely important;
- Take extra precautions before meeting friends and family – where possible, for example, by self-isolating in advance, as per local recommendations – to minimise the potential risk of transmission;
- Consider alternative activities that can replace those traditionally practiced during the festive season, such as the creation or maintenance of small 'social bubbles' some time before and during the festive season, or online gatherings;
- Consider the potential consequences of infecting others and sparking a chain of transmission that could lead to severe disease or even death in some people;
- People with a positive test, or with symptoms compatible with COVID-19 and people in quarantine because of contact with COVID-19 cases should not travel or participate in any gatherings, irrespective of whether they have laboratory confirmation;
- Plan their end-of year activities taking into account physical distancing, mask wearing, hand and respiratory hygiene, reducing time spent indoors, and ensuring appropriate ventilation;
- Remember that treatments have been improving in recent months, and that there is also now the prospect that vaccines will start to become available early next year. Thus, there is room for some optimism, and we should use this to help us through the rest of the winter [36].

Non-pharmaceutical interventions to prevent increased transmission

No single control measure currently available is sufficient to mitigate or control COVID-19 spread. Several measures should be in place, irrespective of the epidemiological situation. Simultaneously implementing all measures, including confinement of the whole population to their home ('lockdown') was effective in decreasing transmission intensity and healthcare utilisation during the spring and autumn waves in Europe. The non-pharmaceutical interventions (NPIs) described in the latest ECDC Guidelines for the implementation of NPIs against COVID-19 remain valid [2].

Following a resurgence of confirmed COVID-19 cases and associated hospitalisations and deaths in late October, many EU/EEA countries and the UK have scaled up NPIs. Lifting measures too early and abruptly would result in an increase in cases and hospitalisations again. Relieving mobility restrictions too close to celebration dates may also result in crowding of travellers in shared transport and may not allow individuals to self-quarantine before meeting family and friends. Based on the current epidemiological situation in most EU Member States, NPI's should be continued or scaled up at national, regional and/or local level in order to mitigate the risk of increased mobility and social gatherings related to end-of-year season.

Measures should be proportionate, taking into consideration the epidemiological situation, the capacity of the public health and healthcare systems, the social and personal impact for the population and the economic impact. The goal is to implement NPIs in the most effective, coordinated and targeted manner possible, minimising their undesired social, economic and health impacts, including mental health.

Ensuring physical distance, hand and respiratory hygiene, use of face masks and sufficient ventilation

Crowded places should be avoided. Keeping a physical distance of 1.5-2 metres, regular hand hygiene, respiratory hygiene and the use of face masks particularly in closed spaces or when physical distancing cannot be guaranteed are essential measures to prevent transmission in any context.

Ventilation of closed spaces with fresh air as much as possible and permitted by the climatic conditions is recommended to decrease the risk of transmission. Ventilation can be ensured either through natural or mechanical means [37]. Confined spaces with poor ventilation where people gather should be avoided.

Limiting the size or cancelling of social gatherings and events

Gatherings including family and friends and other social or religious events increase the number of close contacts among people for long periods, often in confined or enclosed spaces, thereby increasing the risk of transmission. Cancelling indoor and outdoor social gatherings and events should be considered to reduce the likelihood of SARS-Co-V-2 spread [36,37]. If this is not possible, limiting the size and length of the gatherings and events should also limit transmission opportunities. Social bubbles and online alternatives can be used to mitigate the negative impact of limiting social interaction and entertainment. Organising gatherings in poorly ventilated spaces should be avoided.

Irrespective of the number of people in a gathering, interpersonal distancing measures should always be in place, along with regular hand and respiratory hygiene, the wearing of face masks particularly in closed spaces or when physical distancing cannot be guaranteed, and sufficient ventilation.

Asymptomatic people with a recent negative rapid antigen or RT-PCR test should continue to apply the aforementioned measures. People with a positive RT-PCR or rapid antigen SARS-CoV-2 test, or with symptoms compatible with COVID-19 and people in quarantine because of contact with COVID-19 cases, irrespective of whether they have laboratory confirmation, should not participate in gatherings.

In order to decrease the risk of transmission during and after gatherings and the events of the end-of-year festive season, an anticipation and an extension of the school holidays, or a time of distance learning for students could be considered. In the same way, a similar time of teleworking could be considered for workers to reduce the opportunities for transmission in the workplace before and after the end-of-year break.

Recommending 'social bubbles'

One approach to reducing the risk from social gatherings involves 'social bubbles' [38-40] . Consistently meeting with the same people who keep the same precautions and NPIs, whether members of a household, family, friends or co-workers, and avoiding gatherings with people outside this group can allow for a greater degree of contact, while still minimising the risk of SARS-CoV-2 transmission and associated outbreaks. People should participate in only one social bubble. The concept has been used in several countries (e.g. New Zealand, Belgium, Spain and the United Kingdom) to mitigate the negative effect of social isolation by allowing increased social contacts, while limiting transmission risk [41-43].

When possible, having a small 'social bubble' some time before and during the festive season is advised. Gatherings only with members of the same household pose the lowest risk of transmission. If not possible, self-quarantine before gatherings with members of the same social bubble but a different household is advised. Physical distancing when possible, hand and respiratory hygiene, use of face masks and sufficient ventilation during gatherings should be ensured. Online gatherings with members outside the household or bubble is a safe alternative.

Shielding medically- and socially-vulnerable populations

Public health authorities should implement strategies to protect persons from medically- and socially-vulnerable populations, in particular residents of long-term care facilities and other populations living in confined spaces e.g. prisons, migrant camps and reception centres) [44-49]. This includes helping them avoid crowded places, both indoors and outdoors, and providing infection prevention and control support, logistic and mental support, and access to testing. The need of medically and socially vulnerable people for social interaction should also be taken into account.

When possible, smaller social bubbles and self-quarantine before celebrations/meetings with people from vulnerable populations is advised.

Ensuring healthcare capacity and personnel

Essential services, primary care facilities and hospitals should have appropriate business continuity plans and ensure surge capacity, given the holiday season and the possibility of further or new increases in transmission in some areas. Moreover, the demand for healthcare could further increase with the start of the seasonal influenza period. Therefore, efforts should continue focusing on strengthening healthcare capacity to manage potentially high numbers of COVID-19 patients, while reducing the risk of collateral harm from sequelae as a result of deferred care.

Travel-related measures

People with symptoms compatible with COVID-19 and people in quarantine because of contact with COVID-19 cases, irrespective of whether they have laboratory confirmation, should stay at home or a specific place of accommodation and not travel or participate in gatherings.

People travelling during the end-of-year festive season should be made aware that travel in shared transport may increase their own risk of COVID-19, and the risk for their co-passengers if they are travelling when unaware of being infected, and make the decision to travel or postpone the travel according to an assessment of the personal risk, risk for co-passengers and the risk of family and friends they plan to meet.

Individual and environmental measures, such as physical distancing, hand hygiene, respiratory hygiene, use of face masks, sufficient ventilation, in addition to a clear risk communication, are key interventions to decrease the risk of transmission not only for those travelling with shared transportation means, but also for those working in the travel sector. Jointly with the European Union Aviation Safety Agency , the European Union Agency for Railways and the European Maritime Safety Agency, ECDC has also published guidance for safe air travel [52], rail travel [53] and cruises [54].

In the current epidemiological situation, where SARS-CoV-2 is established in the community of all EU/EEA countries and the UK, imported cases account for a very small proportion of all detected cases and are unlikely to significantly increase the rate of transmission. Therefore, international travel restrictions, including border closures, would not be expected to have a significant impact on the evolution of the pandemic. The residual risk of imported cases should be managed through national public health resources for testing suspect cases, contact tracing, and subsequent isolation of cases and quarantine of contacts.

The implementation of systematic testing or quarantine of travellers is not recommended, except in specific epidemiological situations, as it may detract public health resources and laboratory capacity from essential public health activities, such as timely testing of possible cases in the community and high-risk settings, contact tracing, and cluster investigations [52,55].

Reinforcing testing, case isolation and contact tracing

Easy and timely access to testing during the end-of-year festive season is essential in order to rapidly identify infections in the community, monitor the evolution of the epidemic and optimise the effectiveness of public health interventions such as isolation of cases and contact tracing. If the number of suspected cases exceeds the testing capacity in an area or a country, testing needs to be redirected towards priority groups [56]. Countries should ensure that there is adequate staff capacity taking into account holidays, surge capacity, adequate supplies of laboratory reagents, consumables and personal protective equipment, to prevent shortages and long result turn-around times that will limit the effective implementation of infection prevention and control measures.

People that experience any COVID-19 compatible symptoms should self-isolate for 10 days from the onset of symptoms, if they cannot have laboratory confirmation or until they have a negative test result. ECDC has published guidelines for discharge and ending of isolation of people with COVID-19 [57]. People that have been in close contact with confirmed cases within 10 days of their symptom onset should quarantine for 14 days or can discontinue quarantine on day 10 with a negative RT-PCR test [58]. ECDC has published guidelines for contact tracing: public health management of persons, including healthcare workers who have had contact with COVID-19 cases in the European Union [58].

The use of clinically validated rapid antigen tests with adequate sensitivity and specificity (≥80% and ≥97%) can contribute to the strengthening of COVID-19 testing capacity, also offering advantages due to the shorter turnaround times (usually <30 minutes) and reduced costs, enabling rapid isolation and contact tracing of highly infectious cases. ECDC has published guidelines for the use of rapid antigen tests in the EU/EEA and UK [59]. It is important to note that rapid antigen tests perform best in cases with high viral load in pre-symptomatic and early symptomatic cases, up to five days from symptom onset. Trained healthcare or laboratory staff or trained operators are needed to carry out sampling, test analysis, interpretation and reporting of test results to clinical staff and public health authorities at local, regional, national and international level.

Limitations

This assessment is undertaken based on information known to ECDC at the time of publication and has several key limitations.

The epidemiological data used in this assessment are dependent on the availability from Member States through surveillance reporting or publicly available websites. The data not only reflect the epidemiological situation but are also dependent on local testing strategies and local surveillance systems.

It is also important to consider the lag time between infection, symptoms, diagnosis, case notification, death, and death notification. The effects and impact of lifting or imposing response measures may take weeks to be reflected in the population's disease rates.

Assessing the impact of response measures is complex as many countries have lifted or relaxed multiple measures simultaneously. Changes in individual behaviour, compliance with measures, and cultural, societal, and economic factors all play a role in the dynamics of disease transmission.

The assessment of the epidemiological situation and of the effectiveness of the control measures should therefore be interpreted with caution. Moreover, such assessment requires careful consideration of the national and subnational contexts.

Source and date of request

ECDC internal decision, 27 November 2020.

Consulted experts

ECDC experts (in alphabetic order): Leonidas Alexakis, Agoritsa Baka, Eeva Broberg, Margot Einöder-Moreno, Marlena Kaczmarek, John Kinsman, Otilia Mardh, Angeliki Melidou, Nathalie Nicolay, Diamantis Plachouras, Pasi Penttinen, Ettore Severi, Andrea Würz.

Disclaimer

ECDC issues this risk assessment document based on an internal decision and in accordance with Article 10 of Decision No 1082/13/EC and Article 7(1) of Regulation (EC) No 851/2004 establishing a European centre for disease prevention and control (ECDC). In the framework of ECDC's mandate, the specific purpose of an ECDC risk assessment is to present different options on a certain matter. The responsibility on the choice of which option to pursue and which actions to take, including the adoption of mandatory rules or guidelines, lies exclusively with the EU/EEA Member States. In its activities, ECDC strives to ensure its independence, high scientific quality, transparency and efficiency.

This report was written with the coordination and assistance of an Internal Response Team at the European Centre for Disease Prevention and Control. All data published in this risk assessment are correct to the best of our knowledge at the time of publication. Maps and figures published do not represent a statement on the part of ECDC or its partners on the legal or border status of the countries and territories shown.

References

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Annex 1. Criteria for epidemiological assessment

Epidemiological situation is 'of concern'

Countries with at least two of the following:

1. High (≥ 60/100 000) or sustained increase[1] (≥ 1 week) in 14-day case notification rates
2. High (≥ 3%) or sustained increase (≥ 1 week) in test positivity
3. High (≥60/100 000) or sustained increase (≥ 1 week) in 14-day case notification rates in the older age groups (65+yr)
4. High (≥ 10/1 000 000) or sustained increase (≥ 1 week) in 14-day death notification rates

Epidemiological situation is 'of serious concern'

Countries whose epidemiological situation is 'of concern' and which meet at least one of criteria 3-4.

Epidemiological situation 'stable'

Countries not meeting the criteria described above for 'of concern'

Additionally, data on ICU and hospital admissions or occupancy due to COVID-19 are considered but not formally used as part of the assessment. The following provisional thresholds have been used in the table below, but these are subject to change as they are undergoing internal review within ECDC:

- High (≥25% of the peak value during the pandemic) or sustained increase (≥ 1 week) in the rate of weekly hospital admissions due to COVID-19; and/or the 7-day mean hospital occupancy due to COVID-19.
- High (≥25% of the peak value during the pandemic) or sustained increase (≥ 1 week) in the rate of weekly ICU admissions due to COVID-19; and/or the 7-day mean ICU occupancy due to COVID-19.

[1] Definitions of increases for each indictor can be found at https://covid19-country-overviews.ecdc.europa.eu/

Annex 2. Key indicators and weekly trends per country as of 29 November 2020, EU/EEA and the UK

Country	Assessment	Case rate		Death rate		Positivity (%)		Testing rate		65+yr		Hospital admissions		Hospital occupancy		ICU admissions		ICU occupancy	
		Value	Trends	Value	Trends	Value	Trends	Value	Trends	Value	Trends	Value	Trends	Value	Trends	Value	Trends	Value	Trends
Austria	Of serious concern	1065.7		94.5		20.6		2,345		898.6				43.6				7.6	
Belgium	Of serious concern	498.6		218.8		11.4		1,748		650		18.6		49.7				11.3	
Bulgaria	Of serious concern	660.2		169.7		40.1		829						83.3				5	
Croatia	Of serious concern	876		135.4		32		1,422		257.8		37.2		43.6					
Cyprus	Of serious concern	295.1		18.3		1.7		9,289		232.4		4.1				0.2			
Czechia	Of serious concern	746.8		226.7		22.9		1,336		766.7		87.4		57.5		15.4		8.5	
Denmark	Of serious concern	265.3		7.1		1.7		8,673		113.9		5.4		4.3				0.7	
Estonia	Of serious concern	259.8		10.6		5.7		2,942		155.8		6.8		10		0.6		1.1	
Finland	Of serious concern	69.4		2.4		2.6		1,448		29				1.5				0.2	
France	Of serious concern	564.6		124.6		13.4		1,197				20.3		48.3		3.1		7	
Germany	Of serious concern	312.9		32.9		9.2		1,668		225.2		1.9							
Greece	Of serious concern	329.3		72.5		12.3		1,332		238.4						3.3			
Hungary	Of serious concern	665.1		139.4		22.2		1,555		569.6				75.9				6.1	
Ireland	Of serious concern	107.8		15.7		3.4		1,587		92.6		1.8		5.7		0.2		0.7	
Italy	Of serious concern	792		135.8		15.6		2,502		545.9				61.7				6.1	
Latvia	Of serious concern	253.3		29.7		6.6		1,973		196.2		17.1		20.5		2.1			
Liechtenstein	Of serious concern	896.3		130.3															
Lithuania	Of serious concern	788.1		61.2		14.5		2,809		600.5		23.4		30.8		2.6			
Luxembourg	Of serious concern	1186		122.2		5.5		11,351		690.6				37.7				7.4	
Malta	Of serious concern	361.3		70.9		4.2		4,269		276.6		5.3							
Netherlands	Of serious concern	432.6		52.5		12.4		1,716		345.5		1.5				1.1		3.4	
Norway	Of serious concern	154.1		3.9		3.1		2,547		68.8				2.5					
Poland	Of serious concern	847.5		148.8		46.4		864		30.4				59.5					
Portugal	Of serious concern	802.1		95		15.7		2,776		589.6		3.7		29.7				4.5	
Romania	Of serious concern	596.5		109.4		28.7		1,070		532.3		264.5						6	
Slovakia	Of serious concern	396.1		53.8		19.6		906		361.1				32.7					
Slovenia	Of serious concern	961.7		134.1		27.9		1,748		1174.2		35.4		60.2		5.9		9.8	
Spain	Of serious concern	485.5		80.7		10.3		2,030		291.4		2.6		41.8		0.1		6.6	
Sweden	Of serious concern	615.6		41.1		12.2		2,486		329.5						1.4			
United Kingdom	Of serious concern	483.1		86.1		6.4		3,482				16.9		24.5				2.1	
Iceland	Stable	57.7		22.4		1.2		1,968		31.5		1.1		16.3				0.9	

Indicators shown: 14-day COVID-19 case notification rate per 100 000 population, 14-day COVID-19 death rate per 1 000 000 population, test positivity, testing rate per 100 000 population, age-specific case notification rate per 100 000 population for the age groups 65 years or older, weekly hospital and ICU admissions due to COVID-19 per 100 000 population, 7-day mean hospital and ICU occupancy due to COVID-19.

Notes: The Sparkline shows the evolution of the epidemic in each country in terms of the indicators shown since the beginning of March 2020. The colour of the entire Sparkline denotes the current trend in the indicator, based on a comparison of its most recent value with that seven days earlier.

Red – sustained increasing trend;

Grey – stable or decreasing trend;

Values in the column next to the Sparkline are the current value for the indicator. If no data are available for the current week then the value from the previous week is shown. If no data are available for the last two weeks then the value is left blank. Values that are considered high for the indicator, according to the criteria listed above, are shown in red.