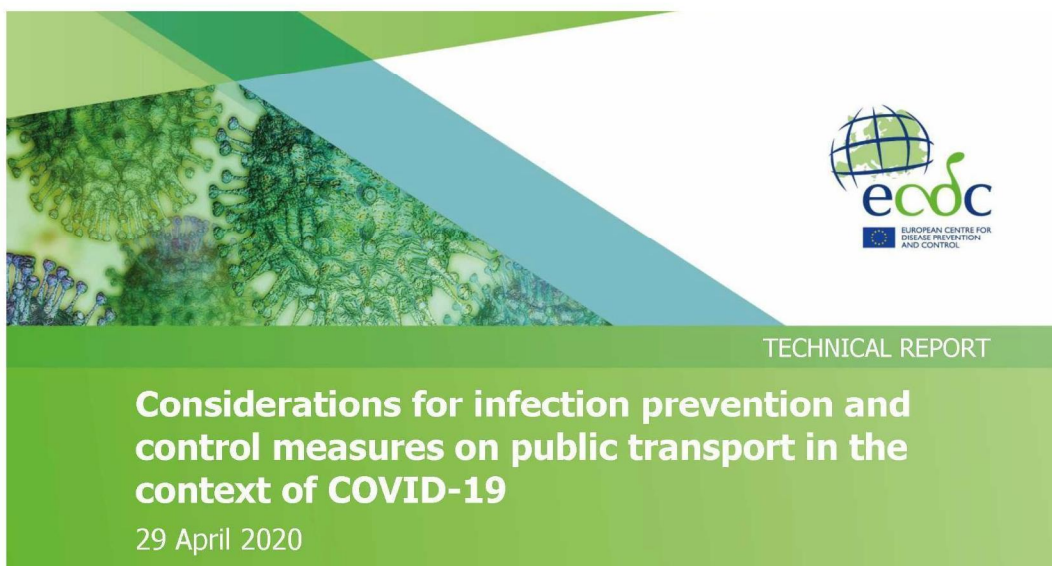




Scope of this document

This document provides advice on personal protective measures on public transport (e.g. bus, metro, train, commuter boats).

Target audience

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

Background

As a result of the COVID-19 pandemic, several EU/EEA countries and the UK have issued advice to travellers for mitigating the risk of spreading COVID-19 (e.g. respiratory etiquette, hand hygiene, etc.), and implemented local transport restrictions in order to limit physical contacts between people. The European Commission outlines some of these measures on the webpage on mobility and transport in the framework of the COVID-19 response, examples of which are found below [1]:

Belgium: rescheduled offer of public transport

Belgium has rescheduled public transport during lockdown measures, reducing approximately 75% of public transport services - while the use of those services has dropped to 8-10%. The general aim is to allow 1.5 metre physical distancing on public transport [2,3].

Ireland: revised timetables for rail and bus passenger services

From 30 March 2020, the intercity services and the commuter services in the Dublin area have been reduced to 45-65% of the normal levels. Individual trains operate at maximum train size where possible to facilitate physical distancing. Revised timetables have also been in place from the April for Dublin Bus, Go-Ahead Ireland and Bus Éireann, with services running at approximately at 80% of normal levels [4].

Italy: rationalisation of inter-regional bus services and changes to rail passenger transport services

As of 13 March 2020, inter-regional non-scheduled bus services were rationalised due to restrictions on mobility in the Italian territory [5]. This measure consisted of changes and reductions of non-scheduled services authorised by the Ministry of Infrastructure and Transport. A minimum level of services has been maintained [5].

Rail passenger transport was also rescheduled, reducing the traffic from 13 March 2020 for the protection of passengers and railway employees [6]. For each route, a connection with at least one other scheduled train was guaranteed [6].

Portugal: rationalisation and restrictions of public transport

Public transport services have been rescheduled in order to protect passengers and employees by: i) matching supply and demand of transport needs, safeguarding the continuity of essential public service; ii) limiting the maximum number of passengers to a third of the capacity of the vehicles; iii) ensuring enough distance between staff and passengers; iv) implementing cleaning and disinfection of facilities and equipment used by passengers [7].

Slovakia: limitation of national bus services and requirement to wear protective equipment

By decision of the Central Crisis Staff of Slovakia, from 13 March 2020, national bus services have been limited to running on schedules similar to the ones on weekends or holidays. The Competent Authorities and carriers have taken measures to ensure that all passengers are required to wear a face mask [1].

Slovenia: temporary prohibition and restrictions on public transport

Temporary bans and restrictions on public transport have been implemented in the Republic of Slovenia from 16 March 2020 for the purpose of containing and controlling the COVID-19 epidemic [8].

Personal protective measures on public transport in the context of COVID-19

Public transport is an essential service. In the context of the COVID-19 pandemic there are two types of risks related to public transport. First, crowding in public transport and their use by large numbers of people can contribute to direct transmission of COVID-19 through respiratory droplets and indirect transmission through contaminated surfaces; second, public transport staff are at increased risk of infection. The following measures are recommended to mitigate these risks and maintain public transport services:

- Inform the passengers about the signs and symptoms of COVID-19 and advise that they should not use public transport if showing COVID-19 compatible symptoms (cough, sore throat, general weakness and fatigue, and muscular pain) [9];
- Ensure physical distancing for service staff at booths, ideally behind glass or plastic panels;
- Consider using protective barriers for the driver, when the driving compartment is not physically separated from the travellers [10];
- Disseminate information infographics for display in waiting areas, platforms and docks, explaining the importance of physical distancing, hand hygiene, respiratory etiquette, and the appropriate use of face masks if advised by health authorities [11];
- Facilitate physical distancing on public transport:
 - Prevent crowding in public transport and in the waiting areas through the provision of sufficient vehicles and consider enhancing the service during rush hour times.
 - Encourage physical distancing in the waiting areas only and allow the use of every other seat when on the vehicle/wagon/boat.
 - Consider reducing the maximum number of passengers per vehicle/wagon/boat to avoid crowding and ensure physical distancing of at least one metre. If the distance is less than two metres, the use of face masks may be considered.
 - In buses, introduce boarding from the rear doors to ensure physical distancing from the driver if the driving compartment is not physically separated from the travellers.
- Ensure the availability of face masks to staff [10] who are not physically separated from travellers when working;
- Ensure proper ventilation in the vehicle/wagon/boat at all times. Avoid recirculating air and encourage the use of windows, skylight panels and fans to increase replacement with fresh air. Such measures should be adapted based on local conditions, needs and type of vehicles and other equipment in use;
- Remind the public about proper hand hygiene before boarding and after disembarking the vehicle/wagon/boat. Consider making alcohol based hand-rub solutions available on the vehicles and at transport hubs [10];
- Consider the use of face masks (medical or non-medical) for passengers on public transport, particularly if physical distancing cannot be guaranteed, paying attention to proper mask use and disposal [11].

Cleaning and disinfection

The main route of transmission of SARS-CoV-2 is through inhalation of large respiratory droplets containing the SARS-CoV-2 virus. Contact with contaminated fomites due to persistence of the virus on surfaces is another route implicated in the transmission of SARS-CoV-2 virus [12]. In order to reduce the risk of infection through contaminated fomites, it is essential to establish procedures for the correct cleaning and disinfection of environments visited by many people.

Recent publications have evaluated the survival of SARS-CoV-2 on different surfaces. The environmental stability of SARS-CoV-2 is up to three hours in the air post-aerosolisation, up to four hours on copper, up to 24 hours on cardboard and up to two to three days on plastic and stainless steel, albeit with significantly decreased titres [12]. These findings resulted from experiments in a controlled environment and should be interpreted with caution in the real-life environment.

The following measures are recommended for cleaning and disinfection of public transport services:

- Ensure frequent cleaning and disinfection particularly of frequently touched surfaces such as handles and rails following the suggested approach and products [13]. Cleaning of frequently touched surfaces in a conveyance after each trip is recommended if possible;
- In areas with sustained community transmission, the likelihood that COVID-19 affected passengers have been on board of a conveyance or in a closed waiting area (e.g. subway platform) is high. Therefore, these areas should be kept well ventilated with fresh air as much as possible, and frequently and carefully cleaned with a neutral detergent, followed by decontamination of surfaces using a disinfectant effective against viruses. Several products with virucidal activity are licensed in the national markets and can be used following the manufacturer's instructions. Alternatively, 0.05-0.1% sodium hypochlorite (NaClO) (dilution 1:50, if household bleach is used, which is usually at an initial concentration of 2.5 to 5%) is suggested. For surfaces that can be damaged by sodium hypochlorite, products based on ethanol (at least 70%) can be used for decontamination after cleaning with a neutral detergent;
- The cleaning of public toilets, bathroom sinks and sanitary facilities used by several people (e.g. in underground stations and on board of trains and boats) should be carefully performed. Consider the use of a disinfectant effective against viruses, such as 0.1% sodium hypochlorite, or other licensed virucidal products following the instructions for use provided by the manufacturer;
- Staff engaged in cleaning should wear personal protective equipment (PPE) when performing cleaning activities. More information on PPE can be found [here](#) [13];
- The cleaning material should be properly disinfected at the end of every cleaning session;
- Proper hand hygiene should be ensured by the cleaning staff each time PPE such as gloves are removed.
- Waste material produced during the cleaning should be placed in the unsorted garbage [13].

Contributing ECDC experts (in alphabetical order)

(10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e), (10)(2e).

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