

The following information resources have been selected by the National Health Library and Knowledge Service Evidence Virtual Team in response to your question. The resources are listed in our estimated order of relevance to practicing healthcare professionals confronted with this scenario in an Irish context. In respect of the evolving global situation and rapidly changing evidence base, it is advised to use hyperlinked sources in this document to ensure that the information you are disseminating to the public or applying in clinical practice is the most current, valid and accurate. For further information on the methodology used in the compilation of this document—including a complete list of sources consulted—please see our National Health Library and Knowledge Service Summary of Evidence Protocol.

YOUR OUESTION

What are the most recent international definitions for a close contact of COVID-19 case, particularly with regard to enclosed settings such as offices or schools?

IN A NUTSHELL

There appears to be strong consensus on the definition of a close contact as within a 2 metre distance for greater than 15 minutes with the exception of the World Health Organisation² who instead specify a distance of 1 metre; and Japan, where the distance has recently been reduced from 2 metres to 1 metre²⁰.

Documents relating to criteria for schools, offices or other work settings are included 3.4.5.

Among the agencies and governments reviewed, only Ireland, Australia and Tasmania have indicated a timeframe of greater than 2 hours as part of the parameters to be considered in risk assessments of closed spaces 1.11.13.

Among the additional criteria that should be taken into consideration when designating a close contact are: the correct use of appropriate PPE 1.4.5.7.9.14.15; type of activity 14; room ventilation 1; face-to-face or side-by-side interaction 18; direct contact with infectious secretions including aerosol-generating procedures 1.12; period of infectivity 2; cumulative interpretation of time exposures 13.



DEFINITIONS

Health Protection Surveillance Centre (2020) Novel Coronavirus 2019 (COVID-19) National Interim Guidelines for Public Health management of contacts of cases of COVID-19 V8.4 20.05.2020¹

Close Contact Definition

- Any individual who has had greater than 15 minutes face-to-face [<2 meter distance] contact with a case in any setting. A distance of 1 metre is generally regarded as sufficient to minimize direct exposure to droplets; however, for Public Health purposes, a close contact definition of 2 metres has been specified.</p>
- Household contacts defined as living or sleeping in the same home, individuals in shared accommodation sharing kitchen or bathroom facilities and sexual partners.
- Healthcare workers including laboratory workers who have not worn appropriate PPE or had a breach in PPE during the following exposures to the case: direct contact with the case, their body fluids or their laboratory specimen; or present in the same room when an aerosol generating procedure is undertaken on the case.
- Passengers on an aircraft sitting within two seats in any direction of the case, travel companions or persons providing care; and crew members serving in the section of the aircraft where the index case was seated. If severity of symptoms or movement of the case indicate more extensive exposure, passengers seated in the entire section or all passengers on the aircraft may be considered close contacts.

For those contacts who have shared a closed space with a case for longer than two hours, a risk assessment should be undertaken taking into consideration the size of the room, ventilation and the distance from the case. This may include office and school settings and any sort of large conveyance.



World Health Organisation (2020) Q and A on coronaviruses (COVID-19), 17 April 2020²

How does COVID-19 spread?

People can catch COVID-19 from others who have the virus. The disease spreads primarily from person to person through small droplets from the nose or mouth which are expelled when a person with COVID-19 coughs, sneezes or speaks. These droplets are relatively heavy, do not travel far and quickly sink to the ground. People can catch COVID-19 if they breathe in these droplets from a person infected with the virus. This is why it is important to stay at least 1 meter away from others. These droplets can land on objects and surfaces around the person such as tables, doorknobs and handrails. People can become infected by touching these objects or surfaces, then touching their eyes, nose or mouth. This is why it is important to wash your hands regularly with soap and water or clean with alcoholbased hand rub.

When possible maintain at least a 1 meter distance between yourself and others. This is especially important if you are standing by someone who is coughing or sneezing. Since some infected persons may not yet be exhibiting symptoms or their symptoms may be mild, maintaining a physical distance with everyone is a good idea if you are in an area where COVID-19 is circulating.

What should I do if I have come in close contact with someone who has COVID-19?

If you have been in close contact with someone with COVID-19, you may be infected. Close contact means that you live with or have been in settings of less than 1 metre from those who have the disease. In these cases, it is best to stay at home.

World Health Organisation (2020) Considerations for school-related public health measures in the context of COVID-19. Annex, 10 May 2020³

In a recent framework for reopening schools, partners highlight 6 key dimensions to consider when planning: 1 policy; 2 financing; 3 safe operations; 4 learning; 5 reaching the most marginalized; and 6 wellbeing protection. National authorities can facilitate a risk-based approach at the local level by offering standard operating procedures or checklists for schools based on local epidemiology and conditions. Decision makers should consider the following when deciding on whether to open or close schools:



- current understanding about COVID-19 transmission and severity in children
- local situation and epidemiology of COVID-19 where the schools are located
- school setting and ability to maintain COVID-19 prevention and control measures

Additional factors to consider in deciding how or when to partially close or reopen schools include assessing what harm might occur due to school closure—eg risk of non-return to school, widening disparity in educational attainment, limited access to meals, domestic violence aggravated by economic uncertainties—and the need to maintain schools at least partially open for children whose caregivers are key workers for the country.

World Health Organisation (2020) COVID-19 and food safety: guidance for food businesses Interim guidance 7 April 2020⁴

Food Workers

Physical distancing is very important to help slow the spread of COVID-19. This is achieved by minimising contact between potentially infected individuals and healthy individuals. All food businesses should follow physical distancing guidance as far as reasonably possible. WHO guidelines are to maintain at least 1 metre between fellow workers. Where the food production environment makes it difficult to do so, employers need to consider what measures to put in place to protect employees. Examples of practical measures to adhere to physical distancing guidance in the food-processing environment are to:

- Stagger workstations on either side of processing lines so that food workers are not facing one another.
- Provide PPE such as face masks, hair nets, disposable gloves, clean overalls and slip reduction work shoes for staff. The use of PPE would be routine in high-risk areas of food premises that produce ready-toeat and cooked foods. When staff are dressed in PPE it is possible to reduce distance between workers.
- Space out workstations which may require reduction in the speed of production lines.
- Limit the number of staff in a food preparation area at any one time.
- Organise staff into working groups or teams to facilitate reduced interaction between groups.



World Health Organisation (2020) Operational considerations for COVID-19 management in the accommodation sector. Interim guidance 30 April 2020⁵

In the context of a hotel and tourism accommodation establishment, a contact could be considered as:

- guest companions or persons providing care who had close contact with the suspected case
- a staff member designated to look after the ill person and other staff members who may have been in close contact with the ill person or the facilities used [eg bathroom] or usual articles [eg linen and clothes].

<u>European Centre for Disease Control and Prevention (2 March 2020) Case</u> definition and European surveillance for COVID-19⁶

A close contact of a probable or confirmed case is defined as:

- A person living in the same household as a COVID-19 case.
- A person having had direct physical contact with a COVID-19 case: eg shaking hands.
- A person having unprotected direct contact with infectious secretions of a COVID-19 case: eg being coughed on; touching used paper tissues with a bare hand.
- A person having had face-to-face contact with a COVID-19 case within 2 metres and >15 minutes.
- A person who was in a closed environment such as a classroom, meeting room or hospital waiting room with a COVID-19 case for 15 minutes or more and at a distance of less than 2 metres.
- A healthcare worker or other person providing direct care for a COVID-19 case, or laboratory workers handling specimens from a COVID-19 case without recommended personal protective equipment or with a possible breach of PPE.
- A contact in an aircraft sitting within two seats in any direction of the COVID-19 case, travel companions or persons providing care; and crew members serving in the section of the aircraft where the index case was seated. If severity of symptoms or movement of the case indicate more extensive exposure, passengers seated in the entire section or all passengers on the aircraft may be considered close contacts.



The epidemiological link to a probable or confirmed case may have occurred within a 14-day period before the onset of illness in the suspected case under consideration.

European Centre for Disease Control and Prevention (8 April 2020)
Contact tracing: public health management of persons, including healthcare workers, having had contact with COVID-19 cases in the European Union⁷

A contact of a COVID-19 case is any person who has had contact with a COVID-19 case within a timeframe ranging from 48 hours before the onset of symptoms of the case to 14 days after the onset of symptoms. If the case had no symptoms, a contact person is defined as someone who has had contact with the case within a timeframe ranging from 48 hours before the sample which led to confirmation was taken to 14 days after the sample was taken. The associated risk of infection depends on the level of exposure which will, in turn, determine the type of management and monitoring.

High-Risk Exposure [Close Contact]

A person:

- having had face-to-face contact with a COVID-19 case within two metres for more than 15 minutes;
- having had physical contact with a COVID-19 case;
- having unprotected direct contact with infectious secretions of a COVID-19 case: eg being coughed on;
- who was in a closed environment such as a household, classroom, meeting room, hospital waiting room with a COVID-19 case for more than 15 minutes;
- in an aircraft, sitting within two seats in any direction of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated; if severity of symptoms or movement of the case indicate more extensive exposure, passengers seated in the

Low-Risk Exposure

A person:

- having had face-to-face contact with a COVID-19 case within two metres for less than 15 minutes;
- who was in a closed environment with a COVID-19 case for less than 15 minutes;
- travelling together with a COVID-19 case in any mode of transport [except sitting in an aircraft as specified opposite];
- a healthcare worker or other person providing care to a COVID-19 case or laboratory workers handling specimens from a COVID-19 case wearing the recommended PPE.



- entire section or all passengers on the aircraft may be considered close contacts);
- a healthcare worker or other person providing care to a COVID-19 case or laboratory workers handling specimens from a COVID-19 case without recommended PPE or with a possible breach of PPE.

Centers for Disease Control and Prevention (2020) Evaluating and Testing Persons for Coronavirus Disease 2019 (COVID-19), 3 May 2020⁸ A close contact is defined as:

1. Being within approximately 2 meters of a COVID-19 case. Close contact can occur while caring for, living with, visiting or sharing a healthcare waiting area or room with a COVID-19 case.

- or -

2. Having direct contact with infectious secretions of a COVID-19 case: eg being coughed on.

<u>UpToDate (2020) Coronavirus disease 2019 (COVID-19): Epidemiology, virology, clinical features, diagnosis, and prevention⁹</u>

Section: Diagnosis, Clinical Suspicion and Criteria for Testing Has had close contact with a confirmed or suspected case of COVID-19 in the prior 14 days including through work in health care settings. Close contact includes being within approximately 2 meters of the individual with COVID-19 for more than a few minutes while not wearing personal protective equipment or having direct contact with infectious secretions while not wearing PPE.

Section: Transmission

Direct person-to-person transmission is the primary means of transmission of SARS-CoV-2. It is thought to occur through close-range contact, mainly via respiratory droplets; virus released in the respiratory secretions when a person with infection coughs, sneezes or talks can infect another person if it makes direct contact with the mucous membranes; infection can also occur



if a person touches an infected surface and then touches his or her eyes, nose or mouth. Droplets typically do not travel more than 2 meters.

Scottish Government (2020) COVID-19: Test, Trace, Isolate, Support: A Public Health Approach to Maintaining Low Levels of Community Transmission of COVID-19 in Scotland, May 2020¹⁰

For the purposes of contact tracing, a close contact is someone who has been physically close enough to the confirmed case for a long enough period of time that they may have had the infection transmitted to them. For COVID-19, this includes everyone who has been less than 2 metres away from a confirmed case for 15 minutes or more. The risk of the disease being transmitted is higher the closer the contact, the greater the exposure to respiratory droplets or the longer the duration of the contact.

Health Direct Australia (2020) Physical distancing and how to avoid the COVID-19 infection¹¹

A close contact is someone who:

- has had more than 15 minutes of face-to-face contact over the course of a week in any setting with a person with confirmed or probable COVID-19 including in the 48 hours before their symptoms appeared
- has shared a closed space with a person with confirmed or probable COVID-19 for more than 2 hours including in the 48 hours before their symptoms appeared

Ministry of Health, New Zealand (6 May 2020) Contact tracing for COVID-19¹²

Close contacts are those that are likely to be at a higher risk of being infected. A close contact is defined as any person with the following exposure to a suspect, confirmed or probable case during the infectious period of the case and without appropriate personal protective equipment:

- direct contact with the body fluids or the laboratory specimens of a case
- presence in the same room in a health care setting when an aerosolgenerating procedure is undertaken on a case
- living in the same household or household-like setting with a case



- face-to-face contact in any setting within two metres of a case for 15 minutes or more
- having been in a closed environment such as a classroom, hospital waiting room, or conveyance other than aircraft within 2 metres of a case for 15 minutes or more
- having been seated on an aircraft within 2 metres of a case [in any direction including seats across the aisle]
- aircraft crew exposed to a case

Tasmanian Government (17 May 2020) Close contacts¹³

A close contact is anyone who:

- has had face-to-face contact for more than 15 minutes [cumulative over the course of a week] with someone known to have COVID-19 while that person was or may have been infectious including in the 48 hours before their symptoms started
- shared a closed space such as a waiting room or classroom for more than 2 hours with someone known to have COVID-19 while that person was or may have been infectious including in the 48 hours before their symptoms started

Close contacts do not include healthcare workers and other people who used infection control precautions including the recommended personal protective equipment while caring for someone with COVID-19. Other contact is deemed low risk.

Ministero della Salute (23 May 2020) FAQ: Covid-19 Questions and Answers¹⁴

Containment Measures in Italy Permitted activities with limitations:

- Access to parks, villas and public gardens is allowed, subject to strict compliance with the ban on assembly as well as with the interpersonal safety distance of at least 1 metre.
- Outdoor sports and exercise activities are permitted ... provided that the interpersonal safety distance of at least 2 metres for the sports activity and at least 1 metre for any other activity is respected unless the presence of an accompanying person is necessary for minors or persons who are not completely self-sufficient.



Contact is to be understood as 'close contact' with a probable or confirmed case, as defined by the <u>Circular of the Ministry of Health of March 9, 2020</u>, namely:

- a person living in the same house as a COVID-19 case
- a person who has had direct physical contact with a COVID-19 case: eg a handshake
- a person who has had unprotected direct contact with the secretions of a case of COVID-19: eg touching used paper tissues with bare hands
- a person who has had direct [face-to-face] contact with a case of COVID-19 at less than 2 metres and lasting longer than 15 minutes
- a person who has been in an enclosed environment such as a classroom, meeting room or hospital waiting room with a case of COVID-19 for at least 15 minutes at less than 2 meters
- a health care professional or other person providing direct assistance to a COVID-19 case or laboratory personnel handling samples of a COVID-19 case without using the recommended PPE or having used unsuitable PPE
- a person who has travelled seated on an aircraft in the 2 adjacent seats in any direction of a COVID-19 case as well as his or her travelling companions or caregivers and crew members sitting in the section of the aircraft where the index case was seated; if the index case has severe symptoms or has moved within the aircraft, resulting in increased passenger exposure, consider all passengers seated in the same section of the aircraft or throughout the aircraft as close contacts

In this case, the epidemiological link may have taken place within a period of 14 days before the onset of the disease.

British Colombia Centre for Disease Control (15 May 2020) Interim Guidance: Public Health Management of cases and contacts associated with novel coronavirus (COVID-19) in the community¹⁵

A high-risk close contact is defined as a person who:

— provided direct care for the case, including healthcare workers, family members or other caregivers or who had other similar close physical



- contact without consistent and appropriate use of personal protective equipment
- lived with or otherwise had close face to face contact within 2 metres with a probable or confirmed case for more than 15 minutes up to 48 hours prior to symptom onset
- had direct contact with infectious body fluids of a probable or confirmed case while not wearing recommended PPE
- has been identified by the local MHO as a possible contact

<u>Ministry of Health, Toronto (15 April 2020) Public health management of cases and contacts of COVID-19 in Ontario. Version 7.016</u>

A close contact is defined as:

- a person who provided care for the patient including healthcare workers, family members or other caregivers
- a person who had other similar close physical contact or who lived with or otherwise had close, prolonged contact with a probable or confirmed case while the case was ill

PHUs should assess each contact based on exposure setting and risk of exposure based on the interaction with the case.

<u>Public Health Wales (2020) Novel Coronavirus (COVID-19): Advice for</u> Parents or Carers¹⁷

What to do if pupils, students or staff in your institution are contacts of a confirmed case of COVID-19 who was symptomatic while attending your childcare or educational setting?

The definition of a contact includes: any pupil, student or staff member in close face-to-face or touching contact including those undertaking small group work within 2 metres of the case for more than 15 minutes; talking with or being coughed on for any length of time while the individual is symptomatic; anyone who has cleaned up any bodily fluids of the individual; close friendship groups; any pupil, student or staff member living in the same household as a confirmed case or equivalent setting such as boarding school dormitory or other student accommodation. Contacts are not considered cases and if they are well are very unlikely to have spread the infection to others; however, contacts will be asked to self-isolate at home or within their boarding school dormitory room for 14 days from the last time they had contact with the confirmed case and follow the home isolation



advice sheet. Family and friends who have not had close contact with the original confirmed case do not need to take any precautions or make any changes to their own activities such as attending childcare or educational settings or work, unless they become unwell.

gov.uk (26 May 2020) [Website] Our plan to rebuild: the UK Government's COVID-19 recovery strategy¹⁸

The risk of infection increases the closer you are to another person with the virus and the amount of time you spend in close contact: you are very unlikely to be infected if you walk past another person in the street. Public Health England recommends trying to keep 2 metres away from people as a precaution. However, this is not a rule and the science is complex. The key thing is to not be too close to people for more than a short amount of time as much as possible.

Avoid being face to face with people if they are outside your household. You are at higher risk of being directly exposed to respiratory droplets released by someone talking or coughing when you are within 2 metres of someone and have face-to-face contact with them. You can lower the risk of infection if you stay side-to-side rather than facing people.

Keeling et al (2020) [Preprint Not Yet Peer-Reviewed] The Efficacy of Contact Tracing for the Containment of the 2019 Novel Coronavirus (COVID-19)¹⁹

Using detailed survey information on social encounters coupled to predictive models, we investigate the likely efficacy of the current UK definition of a close contact—within 2 meters for 15 minutes or more—and the distribution of secondary cases that may go untraced. Taking recent estimates for COVID-19 transmission, we show that less than 1 in 5 cases will generate any subsequent untraced cases; although this comes at a high logistical burden with an average of 36.1 individuals traced per case. Changes to the definition of a close contact can reduce this burden, but with increased risk of untraced cases. We estimate that any definition where close contact requires more than 4 hours of contact is likely to lead to uncontrolled spread.

Nippon.com (21 April, 2020) [News Article] Japan's National Institute of Infectious Diseases (2020) Japan Changes Definition of Close Contact with COVID-19 Patients²⁰

Japan's National Institute of Infectious Diseases has changed the definition of people who had close contact with patients of the COVID-19 disease



caused by the novel coronavirus. According to the new definition, people who were at a distance of 1 meter from an infected person for 15 minutes or more without taking infection prevention measures such as wearing a face mask 2 days before the person started to display symptoms or later are regarded as those with close contact with the patient. The Institute had previously defined people who were at a distance of 2 meters from a COVID-19 patient on the day he or she began to show symptoms or later as those with close contact. The old definition did not include a duration of contact.

CLINICAL TRIALS

Oslo University Hospital (2020) Risk Factors for Community and Workplace Transmission of COVID-19²¹

The impact of knowing the risk factors for COVID-19 can enable governments to conduct more targeted public health measurements than today to reduce the spread of the virus.

Produced by the members of the National Health Library and Knowledge Service Evidence Team[†]. Current as at 27 May 2020. This evidence summary collates the best available evidence at the time of writing and **does not replace clinical judgement or guidance**. Emerging literature or subsequent developments in respect of COVID-19 may require amendment to the information or sources listed in the document. Although all reasonable care has been taken in the compilation of content, the National Health Library and Knowledge Service Evidence Team makes no representations or warranties expressed or implied as to the accuracy or suitability of the information or sources listed in the document. This evidence summary is the property of the National Health Library and Knowledge Service and subsequent re-use or distribution in whole or in part should include acknowledgement of the service.

The following search strategy was used:

PUBLIC HEALTH; TRANSMISSION; CLOSE CONTACT; CONTACT TRACING; GOVERNMENT AGENCIES; DEFINITION; COMMUNICABLE; RISK ASSESSMENT; SOCIAL DISTANCING.

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¹ Health Protection Surveillance Centre. Novel Coronavirus 2019 (COVID-19) National Interim Guidelines for Public Health management of contacts of cases of COVID-19 V8.4 20.05.2020. <u>Health Protection Surveillance Centre. Novel Coronavirus 2019 (COVID-19) National Interim Guidelines for Public Health management of contacts of cases of COVID-19 V8.4 20.05.2020 Accessed 25 May 2020</u>



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