



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Face mask use by healthy people in the community to reduce SARS-CoV-2 transmission – protocol for rapid evidence update

Published: 17 December 2020

Version	2.0
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Revision Record	
Revision Date	Description of change
20 November 2020	Provided to the Expert Advisory Group for information.
17 December 2020	Updated to reference inclusion of laboratory studies in search.

Purpose and Aim

The purpose of this protocol is to outline the process by which the Health Information and Quality Authority's (HIQA's) Health Technology Assessment (HTA) Team will identify and review relevant evidence to support the National Public Health Emergency Team (NPHE) in their response to COVID-19.

Background to policy question

As of the first drafting of this protocol (20 November 2020), the Government of Ireland provides the following advice regarding settings in which the wearing of face masks must take place:⁽¹⁾

By law, face masks must be worn on public transport and in shops and other indoor settings that are listed in the regulations (unless an individual has a reasonable excuse or exemption for not doing so).⁽²⁾ These include the following locations:

- shops, including pharmacies
- shopping centres
- libraries
- cinemas and cinema complexes
- theatres
- concert halls
- bingo halls
- museums
- nail salons
- hair salons and barbers
- tattoo and piercing parlours
- travel agents and tour operators
- laundries and dry cleaners
- betting shops and bookmakers.

Additionally, as of 20 November 2020, it is mandatory for retail staff to wear a face covering unless there is a partition or where they take reasonable steps to keep a two-metre distance from others. In restaurants and cafes (including pubs that serve food and hotel restaurants), face masks must be worn by staff in customer-facing roles where no other protective measures are in place, for example: protective screens and where physical distancing of two metres is not possible. They must also be worn by customers when arriving to and leaving their table.

Wearing of face masks is also recommended in the following circumstances:

- by people visiting the homes of those who are over 70 years of age or who are medically vulnerable
- by people who are being visited in their homes by those who are over 70 years of age or who are medically vulnerable
- if you are travelling in a vehicle with someone you don't live with.

Government advice currently recommends that medical grade face masks be reserved for healthcare workers. ⁽¹⁾

Policy question

The HTA team has previously [published a review](#) of the evidence to answer the following question:

'What evidence is available to indicate that routine wearing of face masks by healthy persons in the community reduces the transmission of respiratory pathogens?'

This previous review included evidence published up until 24 June 2020. A verbal presentation was provided to NPHET in September 2020 on emerging evidence, which did not change the conclusions of the review. The presentation followed an [update to the review](#) for academic publication purposes, and included evidence published up to 27 August 2020.

The present review will take the format of a rapid evidence update.

A scoping search will be performed to identify additional evidence published as of 20 November 2020. Any additional evidence which relates to the following question will be included in the search to address the following question:

'What evidence is available to indicate that routine wearing of face masks in the community reduces the transmission of SARS-CoV-2?'

1. Process outline

The process for this rapid evidence update will comprise the following:

- 1.** Review of evidence for the effectiveness of the use of face masks in the community.
- 2.** Identification of policy and guidance on the use of face masks in the community in relevant jurisdictions, and identification of the evidence basis underlying such policy.
- 3.** Summary of findings and formulation of advice to NPHET.

1.1 Review of evidence for the effectiveness of the use of face masks in the community

This review of evidence will primarily consider the direct evidence of the effectiveness of the routine wearing of face masks by people in the community to reduce the transmission of SARS-CoV-2, that is, epidemiological evidence. Indirect evidence from experimental volunteer or laboratory studies, or mathematical modelling studies, will also be included where relevant studies specific to SARS-CoV-2 transmission are identified. For epidemiological studies, published peer-reviewed articles and non-peer-reviewed pre-prints identified through searching will be screened against the PICOS framework outlined in Appendix 2.

Due to the short timeframe available for completing this rapid evidence update, a systematic search will not be possible. A scoping search approach will be adopted to identify articles published between 27 August 2020 and 20 November 2020. At a minimum, the following sources will be searched:

- WHO COVID-19 database
 - o <https://search.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/>
- Google Scholar
- Google.com
- Preprint servers: MedRxiv.

Additionally, in line with HIQA standard operating procedure for the conduct of scoping reports, a search of the literature will be undertaken using the PubMed Clinical Queries Tool. The results will be limited to English-language studies conducted in humans and published since August 2020. The following search terms will be used, in combination with the PubMed filters for identifying COVID-19 literature and transmission-related topics within COVID-19 literature:

- (face mask* OR face cover* OR cloth mask).

1.2 Identification of policy and guidance

Grey literature search approach for identifying policy and guidance in relevant jurisdictions:

The review of policy and guidance will focus on the national response to COVID-19 in 17 countries that have been experiencing a resurgence in SARS-CoV-2 cases during October 2020 and which have been identified by NPHET as being in a similar phase of pandemic response as Ireland. The list of countries predominantly comprises European countries (including EU/EEA and UK countries), where the epidemiological situation has been described by the European Centre for Disease Prevention and Control (ECDC) as 'of serious concern'. The following countries,

which are considered to represent reasonable comparators to Ireland with respect to pandemic response, will also be included in the review: USA, Canada, and Australia. However, due to the time constraints associated with this review, a systematic search of individual states, regions or provinces will not be completed. Finally, the following supranational organisations will be searched: World Health Organization (WHO) and the European Centre for Disease Control and Prevention (ECDC). The list of countries and associated governmental sources that will be searched is provided in Appendix 1.

Information on the use of face masks to limit the spread of COVID-19 will be sought from reliable government resources only. Where information on public health measures and strategies cannot be extracted due to language barriers, or a lack of information is available, this will be documented.

1.3 Summary of findings and formulation of advice to NPHE

A descriptive overview of the identified evidence will be compiled and presented to HIQA's COVID-19 Expert Advisory Group for clinical input and interpretation. Feedback from the EAG will be incorporated into an advice document which will be sent to NPHE in pdf format.

1.4 Timelines

This rapid evidence synthesis will be conducted in line with the processes outlined for Phase 2 of HIQA's COVID-19 response.

The following timeline will apply:

- drafting of protocol: 20 November 2020
- protocol to be sent to HIQA's COVID-19 Expert Advisory Group (EAG) for information: 20 November 2020
- drafting of report: 21-24 November 2020 (2 working days)
- draft of report to be sent to EAG and to NPHE: 24 November 2020
- presentation of report during meeting of EAG: 25 November 2020
- formulation of advice and communication of advice to NPHE: 25 November 2020.

References

1. Department of Health. When to wear face coverings and how to make them [updated 27 August 2020. Available from: <https://www.gov.ie/en/publication/aac74c-guidance-on-safe-use-of-face-coverings/>.
2. Citizens Information. Face coverings during COVID-19 [updated 16 November 2020. Available from:

https://www.citizensinformation.ie/en/health/covid19/face_coverings_during_covid19.html.

Appendix 1: Identification of policy and guidance; list of countries and associated sources

EU/EEA countries

- Austria
 - <https://metropole.at/coronavirus-updates-in-english/>
- Belgium
 - <https://www.info-coronavirus.be/en/faq/>
 - <https://www.info-coronavirus.be/en/covid/>
 - <https://www.info-coronavirus.be/en/>
- Czech Republic
 - <https://www.vlada.cz/en/media-centrum/aktualne/measures-adopted-by-the-czech-government-against-coronavirus-180545/>
- Denmark
 - <https://coronasmitte.dk/en>
 - <https://coronasmitte.dk/en/rules-and-regulations>
 - <https://coronasmitte.dk/en/overview>
- France
 - <https://www.gouvernement.fr/info-coronavirus>
- Germany
 - <https://www.bundesregierung.de/breg-en>
- Ireland
 - <https://www.gov.ie/en/>
 - <https://www.gov.ie/en/publication/e5175-resilience-and-recovery-2020-2021-plan-for-living-with-covid-19/>
 - <https://www.gov.ie/en/campaigns/resilience-recovery-2020-2021-plan-for-living-with-covid-19/>
- Italy
 - <http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioFaqNuovoCoronavirus.jsp?lingua=english&id=230#11>
- Netherlands
 - <https://www.government.nl/topics/coronavirus-covid-19>
- Portugal
 - <https://www.visitportugal.com/en/node/421175>
- Spain
 - <https://english.elpais.com/news/society/>
 - <https://www.lamoncloa.gob.es/lang/en/Paginas/index.aspx>

Non-EU/EEA countries

- United States of America
 - Centers for Disease Control and Prevention (CDC):
<https://www.cdc.gov/>
- Canada
 - Government of Canada
<https://www.canada.ca/en.html>
- Australia

- Australian Government Department of Health
<https://www.health.gov.au/>

Due to time constraints associated with this review, individual states, regions or provinces within countries will not be systematically searched.

Guidance from supranational organisations

- World Health Organization (WHO)
- European Centre for Disease Prevention and Control (ECDC).

Appendix 2: Identification of evidence from epidemiological studies; Population, Intervention, Comparator, Outcomes and Study Designs (PICOS) of interest

Population	<p>General population/community dwelling population of all ages.</p> <p>Subgroups:</p> <ul style="list-style-type: none"> ▪ Where information available, consider separately for: <ul style="list-style-type: none"> ○ adults versus children ○ medically vulnerable groups ○ different settings (e.g. outdoors versus indoors).
Intervention	<ul style="list-style-type: none"> ▪ Routine wearing of masks in the community (including in household settings, but excluding healthcare settings). ▪ Mask wearing by pre-symptomatic or asymptomatic persons to prevent transmission of infection. ▪ Mask wearing by healthy individuals to prevent acquisition of infection. <p>Subgroups:</p> <ul style="list-style-type: none"> ▪ Different types of face masks: medical grade face masks, respirator masks (e.g. N-95), cloth face masks.
Comparator	<ul style="list-style-type: none"> ▪ Lack of use of face mask, in the context of similar levels of other non-pharmaceutical interventions (e.g. physical distancing). Non-pharmaceutical interventions in place will be noted. ▪ Alternative type of face mask (e.g. medical grade face mask versus cloth mask).
Outcomes	<p>Primary outcome:</p> <ul style="list-style-type: none"> ▪ community transmission of SARS-CoV-2 <ul style="list-style-type: none"> ○ transmission of infection by pre-symptomatic or asymptomatic persons wearing masks (source control) ○ acquisition of infection by healthy persons wearing masks. <p>Secondary outcomes:</p> <ul style="list-style-type: none"> ▪ compliance with face mask interventions or guidance ▪ optimal use of mask (e.g. wearing as intended, appropriately covering nose and mouth) ▪ adverse outcomes, risks or unintended consequences such as reduced compliance with other non-pharmaceutical interventions (e.g. hand-washing, physical distancing).

Study designs	Include: <ul style="list-style-type: none">▪ systematic reviews▪ RCTs▪ observational studies (cohort, case-control, cross-sectional, ecological). Exclude: <ul style="list-style-type: none">▪ case series, case reports.
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