



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Protocol: What measures have been taken to support people in self-isolation or restriction of movements to improve compliance with and effectiveness of such measures?

Date: 22 January 2021

Purpose and aim

The purpose of this protocol is to outline the process by which the Health Information and Quality Authority (HIQA) will synthesise evidence to inform advice from HIQA to the National Public Health Emergency Team (NPHE). The advice will take account of expert interpretation of the evidence by HIQA's COVID-19 Expert Advisory Group. This evidence synthesis was requested by NPHE to address the following policy issue:

In the context of the overall public health response to COVID-19, effective management of cases and contacts is key.

"What measures are being taken internationally to support compliance with self-isolation and restricted movement requirements and is there any evidence as to how effective are these measures."

Measures include but are not limited to monetary supports, other community based supports, legislative requirements, inspection, and penalties. It may also consider specific measures used for different population groups.

The following research questions (RQs) were formulated to inform this policy issue:

RQ1. What public health guidance or measures have been implemented to support those who are in self-isolation or restriction of movements to improve compliance and prevent the spread of SARS-CoV-2? [An international review]

RQ2. What evidence is there that measures to support those in self-isolation or restriction of movements improves compliance with these restrictive measures and prevents the spread of respiratory pathogens in a pandemic or epidemic setting? [An evidence synthesis]

1. Process outline

A standardised approach to the process has been developed and documented to allow for transparency and to aid in project management. Five distinct steps have been identified in the process for completion. These are listed below and described in more detail in Sections 2.1-2.5:

1. Search relevant sources
2. Screen identified studies
3. Data extraction and quality appraisal of included studies
4. Data synthesis

5. Summarise findings.

2. Review process

This review will address the following RQs:

RQ1. What public health guidance or measures have been implemented to support those who are in self-isolation or restriction of movements to improve compliance and prevent the spread of SARS-CoV-2? [An international review]

RQ2. What evidence is there that measures to support those in self-isolation or restriction of movements improves compliance with these restrictive measures and prevents the spread of respiratory pathogens in a pandemic or epidemic setting? [An evidence synthesis]

The PIS and PIOS frameworks, specifying the inclusion and exclusion criteria, are detailed in Table 1 and Table 2 below for RQ1 and RQ2, respectively.

Table 1. PIS for RQ1

Population	Individuals of any age with a confirmed or suspected diagnosis of COVID-19, who are in self-isolation or are close contacts of a confirmed case and are restricting their movements. The sub-groups of interest are: ▪ children and young adults ▪ those affected by increased levels of economic deprivation ▪ dependent individuals.
Intervention	Any public health guidance or measures that have been implemented internationally to support those who are in self-isolation or restricting movements.
Types of studies	Include: Documents which detail public health measures that have been implemented to support those who are in self-isolation or restriction of movements to improve compliance and prevent the spread of SARS-CoV-2. This includes, but is not limited to: ▪ public health guidance and policy documents ▪ guidance and recommendation documents from a number of international agencies including the WHO, ECDC, and the CDC. Exclude:

	Guidance from general pre-pandemic settings or from other pandemic settings (for example, SARS, MERS, H1N1, seasonal influenza).
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Table 2. PIOS for RQ2.

Population	Individuals of any age in self-isolation due to confirmed or suspected infection with SARS-CoV-2 (or other respiratory pathogens (SARS-CoV-1, MERS, influenza) during an epidemic or pandemic situation from 2000-2021) or are close contacts of confirmed cases who are restricting their movements.
Intervention	Public health interventions implemented to support those in self-isolation or restriction of movements. For example, financial support, support with everyday tasks such as food shopping or collection of prescriptions, phone calls to those who live alone.
Outcomes	- Compliance with public health measures or strategies. - Reduction in spread of infection.
Types of studies	Include: - Any original research studies or reviews that report the measures implemented to support those in self-isolation or restriction of movements. Exclude: - Evidence from non-respiratory pathogens or non-pandemic settings.

2.1 Search relevant sources

Firstly, the search process will aim to identify the public health guidance and measures that have been implemented to support those who are in self-isolation or restriction of movements to prevent the spread of SARS-CoV-2 (international review). Secondly, the search process will also aim to identify evidence of the effectiveness of measures aimed at supporting those in self-isolation or restriction of movements to improve compliance with these restrictive measures and reduce spread of infection (evidence synthesis).

For RQ1, the public health agencies and governmental departments listed below, will also be searched. The countries listed below were selected primarily due to their relevance to the Irish context (in terms of geography, healthcare system, high-income status).

Protocol: What measures have been taken to support people in self-isolation or restriction of movements to improve compliance with and effectiveness of such measures?

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- Australian Government Department of Health
<https://www.health.gov.au/resources>
- Federal Ministry of Social Affairs, Health, Care and Consumer Protection, Austria
<https://www.sozialministerium.at/>
- Federal Public Service, Health, Food Chain Safety and Environment, Belgium
<https://www.info-coronavirus.be/en/>
- Government of Canada
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents.html>
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/awareness-resources.html>
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html>
- Danish Health Authority, Denmark
https://www.sst.dk/en/English/Corona-eng/Symptoms_tested-positive-or-a-close-contact/Self-isolation-and-voluntary-out-of-home-stays
- Public Health England
<https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance>
- National Health Service (NHS) England
<https://www.england.nhs.uk/coronavirus/publication/page/2/?filter-keyword&filter-category&filter-publication&filter-date-from&filter-date-to&filter-order-by=modified-desc>
- Finnish Institute for Health and Welfare
<https://thl.fi/en/web/infectious-diseases-and-vaccinations/what-s-new/coronavirus-covid-19-latest-updates>
- Government of France
<https://www.gouvernement.fr/en/coronavirus-covid-19>
- Federal Ministry of Health, Germany
<https://www.bundesregierung.de/breg-en/federal-government/ministries/federal-ministry-of-health>
- Directorate of Health, Iceland
<https://www.landlaeknir.is/um-embaettid/greinargrein/item43539/Instructions-for-persons-under-home-based-quarantine>

Protocol: What measures have been taken to support people in self-isolation or restriction of movements to improve compliance with and effectiveness of such measures?

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- Government of Iceland
<https://www.government.is/government/covid-19/>
- Government of the Netherlands, National Institute for Public Health and Environment, Netherlands
<https://lci.rivm.nl/langdurig-neusverkouden-kinderen>
<https://www.rijksoverheid.nl/onderwerpen/coronavirus-covid-19/ouders-scholieren-en-studenten-kinderopvang-en-onderwijs>
- Ministry of Health New Zealand
<https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus>
- Public Health Agency of Northern Ireland
<https://www.publichealth.hscni.net/>
<https://www.publichealth.hscni.net/covid-19-coronavirus/guidance-professionals-and-organisations>
<https://www.publichealth.hscni.net/covid-19-coronavirus/guidance-hsc-staff-healthcare-workers-and-care-providers/guidance-healthcare>
- Norwegian Institute of Public Health (NIPH)
<https://www.fhi.no/en/id/infectious-diseases/coronavirus/>
- Health Protection Scotland
<https://www.hps.scot.nhs.uk/a-to-z-of-topics/covid-19/>
- Ministry of Health Singapore
<https://www.moh.gov.sg/covid-19/advisories-for-various-sectors>
- Ministry for Health, and Ministry for Education and Vocational Education, Spain
<https://www.educacionyfp.gob.es/portada.html>
- Public Health Agency of Sweden
<https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/>
- Federal Office of Public Health, Switzerland
<https://www.bag.admin.ch/bag/en/home/krankheiten/ausbrueche-epidemien-pandemien/aktuelle-ausbrueche-epidemien/novel-cov.html>
- Welsh Government
<https://gov.wales/coronavirus>
- World Health Organization (WHO)
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance-publications?healthtopics=b6bd35a3-cf4f-4851-8e80-85cb0068335b&publishingoffices=aeebab07-3d0c-4a24-b6ef-7c11b7139e43&healthtopics-hidden=true&publishingoffices-hidden=true>
- European Centre for Disease Prevention and Control (ECDC)

https://www.ecdc.europa.eu/en/search?s=&sort_by=field_ct_publication_date&sort_order=DESC&f%5B0%5D=diseases%3A2942

- Centers for Disease Control and Prevention (CDC)
<https://www.cdc.gov/coronavirus/2019-ncov/whats-new-all.html>

For RQ2, the following electronic databases will be searched using the search strategy defined in Appendix 1:

- PubMed
- Embase
- Europe PMC
- NHS Evidence.

2.2 Screen identified studies

All potentially eligible citations identified in the search strategy will be exported to Covidence (www.covidence.org) and single screened against the appropriate framework (see Table 1, Table 2). No language restrictions will be applied. Non-English studies will be translated via Google translate, and this will be noted as a potential caveat. Full text papers will be single screened against the appropriate framework, with any uncertainty checked by a second reviewer.

2.3 Data extraction and quality appraisal of included studies

Data extraction templates are detailed in Appendix 2.

For RQ1, data extracted will include country or organisation, guidance/document title, URL, date published/last updated, measures of support available. For RQ2, data on the study design, participant demographics and relevant outcome data will be extracted; see Appendix 2.

Where available, information from the 'Review of restrictive public policy measures to limit the spread of COVID-19' report which was conducted by HIQA, will be extracted to provide context for the degree of relevant restrictions that were in place in particular countries at the time of data collection. This will not be conducted for evidence syntheses where data from multiple countries are collated and or where the date of data collection is unknown. Furthermore, where information on the level of restrictions for particular countries, are not reported in the review of restrictive measures, these data will not be searched de-novo for the purpose of this review question, given time and resource constraints.

A range of study designs are likely to be included in this evidence summary and hence a range of quality appraisal tools are required. For consistency, the

appropriate quality appraisal tool from the suite of tools developed by the Joanna Briggs Institute will be used.⁽¹⁾

Data from pre-print publications may contain errors and or older data, which may be corrected and or updated when the final published version becomes available in a peer-reviewed journal. Prior to the final version of this evidence summary being published on the HIQA website, pre-print publications will be checked to identify if final published versions have become available since the original search was conducted. Any discrepancies identified will be corrected.

2.4 Data analysis

Given the likely heterogeneity of included study designs and outcomes, a quantitative synthesis of the data may not be possible. Hence, a narrative synthesis will be undertaken, describing the findings at the various levels of evidence.

2.5 Summarise findings

A summary of the findings will be drafted with all extracted data presented in the report.

3. Evidence to Advice

Following completion of this evidence synthesis, and in conjunction with input from the expert advisory group (EAG), advice will be generated. A document outlining the key findings of the evidence synthesis, expert input from the EAG and the resultant advice will be provided to NPHET for consideration.

4. Quality assurance process

The review question will be led by an experienced systematic reviewer. A minimum of 5 team members will be assigned to assist perform the review. The second reviewers will be required to read all the key studies and check that the evidence reports accurately reflect the body of literature, and will help expedite the process given the short turnaround time. The summary will be reviewed by a senior member of the team, to ensure processes are followed and quality maintained.

5. Timelines

This rapid evidence synthesis will be conducted in line with the processes and timelines outlined for Phase 2 of HIQA's COVID-19 response. Work will commence on 18 January 2021 and a final draft will be completed by 04 February 2021. Draft outputs from the rapid evidence synthesis will be circulated to HIQA's COVID-19 EAG for review, with a view to providing advice and recommendations to NPHET on 9 February 2021.

Protocol: What measures have been taken to support people in self-isolation or restriction of movements to improve compliance with and effectiveness of such measures?

Health Information and Quality Authority

6. References

1. Joanna Briggs Institute. Critical appraisal tools [cited 2021 Jan 19].
<https://joannabriggs.org/critical-appraisal-tools>

Appendix 1

Search strategy for RQ2

PubMed		
1	"Pandemics"[Mesh] OR "pandemics"[Text Word] OR "pandemically"[Text Word] OR "pandemicity"[Text Word] OR "pandemic"[Text Word] OR "outbreaks" [Text Word] OR "Disease Outbreaks"[Mesh:NoExp] OR "Severe Acute Respiratory Syndrome" OR "SARS" OR "Middle East Respiratory Syndrome"[Text Word] OR "MERS" OR "SARS-CoV-1" OR "SARS-CoV1" OR "epidemic influenza" OR "pandemic influenza" OR "Influenza, Human"[Mesh] OR "Influenza A Virus, H1N1 Subtype"[Mesh] OR "Influenza A virus"[Mesh] OR "swine virus" [Text Word] OR "porcine virus" [Text Word] OR "H1N1" [Text Word]	272,220
2	"Quarantine"[Mesh]	3,824
4	(quarantin* or self-isolat* or (restrict* adj2 move*))	14,519
6	#2 OR #4	14,519
7	#1 AND #6	5,340
8	(adhere* or (comply* or complian*) or conform*)	935,256
9	(non-adhere* or nonadhere* or (non-complian* or noncomplian*) or (non-conform* or nonconform*))	35,725
10	#9 OR #8	942,750
11	#7 AND #10	302
Embase		
1	'coronavirinae'/exp	47,487
2	'covid 19':ab,ti	75,326
3	'coronavirus':ab,ti	42,476
4	'corona virus':ab,ti	1,500
5	wuhan NEAR/3 virus	134
6	'2019-ncov' OR '2019 ncov':ab,ti	1,459
7	'severe acute respiratory syndrome coronavirus 2':ab,ti	7,968
8	2019 AND (new OR novel) AND coronavirus:ab,ti	12,992
9	'pandemic'/exp OR 'pandemic influenza'/exp OR '2009 h1n1 influenza'/exp OR 'avian influenza'/exp OR 'seasonal influenza'/exp OR 'influenza'/exp/mj OR 'pandemic*':ti,ab,kw OR 'disease outbreak*':ti,ab,kw OR 'severe acute respiratory syndrome' OR 'sars' OR 'middle east respiratory syndrome':ti,ab,kw OR 'mers' OR 'sars-cov-1' OR 'sars-cov1' OR 'epidemic influenza':ti,ab,kw OR 'human influenza':ti,ab,kw OR 'influenza a virus'/exp OR 'swine influenza virus'/exp OR 'swine virus':ti,ab,kw OR 'porcine virus':ti,ab,kw OR 'h1n1':ti,ab,kw	195,683
10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	227,478
11	#10 AND [2000-2021]/py	202,787
12	'quarantine'/exp OR 'quarantine'	16,563
13	quarantin*:ab,ti OR 'self isolat*':ab,ti OR ((restrict* NEAR/2 move*):ab,ti)	10,933
14	#12 OR #13	2,1158
15	#11 AND #14	7,188
16	adhere*:ti,ab OR comply*:ti,ab OR complian*:ti,ab OR conform*:ti,ab	78,3179
17	'non adhere*':ab,ti OR nonadhere*:ab,ti OR 'non complian*':ab,ti OR	56,966

Protocol: What measures have been taken to support people in self-isolation or restriction of movements to improve compliance with and effectiveness of such measures?

Health Information and Quality Authority

	noncomplan*:ab,ti OR 'non conform*':ab,ti OR nonconform*:ab,ti	
18	adhere*:ab,ti OR comply*:ab,ti OR complian*:ab,ti OR conform*:ab,ti	783,179
19	'non adhere*':ti,ab OR nonadhere*':ti,ab OR 'non complian*':ti,ab OR noncomplan*':ti,ab OR 'non conform*':ti,ab OR nonconform*':ti,ab	56,966
20	#16 OR #17 OR #18 OR #19	795,029
21	#15 AND #20	274
22	#21 AND [2000-2021]/py	128
Europe PMC		
	((("Pandemics" OR "pandemics" OR "pandemically" OR "pandemicity" OR "pandemic" OR "outbreaks" OR "Disease Outbreaks" OR "Severe Acute Respiratory Syndrome" OR "SARS" OR "Middle East Respiratory Syndrome" OR "MERS" OR "SARS-CoV-1" OR "SARS-CoV1" OR "epidemic influenza" OR "pandemic influenza" OR "human Influenza" OR "Influenza A Virus" OR "H1N1" OR "Influenza A virus" OR "swine virus" OR "porcine virus" OR coronavirus OR covid-19 OR "covid 19" OR "SARS-CoV-2" OR SARS OR MERS OR influenza) AND (TITLE or ABSTRACT:"self-isolation" OR TITLE or ABSTRACT:"isolation" OR TITLE or ABSTRACT:"quarantine" OR TITLE or ABSTRACT:"restriction of movement") AND ("compliance" OR "adherence") AND ("measure" OR "measures" OR "intervention" or "interventions" OR "campaign" OR "campaigns" OR "strategy" OR "strategies" OR "support")) AND (SRC:PPR)	647
NHS Evidence		
1	(coronavirus OR covid 19 OR covid 19 OR SARS CoV 2 OR SARS OR influenza OR flu OR pandemic OR MERS OR Respiratory OR influenza OR H1N1 OR CoV 1 OR virus) AND (isolation OR quarantine OR restriction of movement) AND (compliance OR adherence OR adhering) AND (measure OR measures OR intervention or interventions OR campaign OR campaigns OR strategy OR strategies OR support)	268
2	Limit to: primary research, secondary research, practice based information, implementation support (which result in): Evidence type: Evidence Summaries Remove Evidence type: Evidence Summaries filter Evidence type: Primary Research Remove Evidence type: Primary Research filter Evidence type: Systematic Reviews Remove Evidence type: Systematic Reviews filter Evidence type: Audit and Inspection Reports Remove Evidence type: Audit and Inspection Reports filter Evidence type: Implementation Support Remove Evidence type: Implementation Support filter Evidence type: Case Studies Remove Evidence type: Case Studies filter Evidence type: Economic Evaluations Remove Evidence type: Economic Evaluations filter	266

Appendix 2

Template data extraction for RQ1

Study descriptors	Primary outcome	Restrictive measures
Organisation Guidance title URL Date published/updated	Measure(s) available.	Relevant restrictive measures in place at time of data collection.

Template data extraction for RQ2

Study descriptors	Population characteristics	Primary outcome	Restrictive measures
Author (year) Country DOI Study design Respiratory infection Date of data collection	Sample size Setting Age (mean $\pm$ SD) Sex (% male) Measure(s) implemented	Compliance with measure(s). Reduction in spread of infection.	Relevant restrictive measures at time of data collection.

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