



COVIDWATCHEU-NPA PROJECT #411 FINAL REPORT 3 - March, 2021

3. COVID-19 Public Health Responses

3.1 Introduction: Northern Europe and the Arrival of SARS-CoV-2

The 9 countries/regions involved in this project have experienced very different outcomes due to the pandemic to date. Although this is the third potentially lethal coronavirus discovered since the turn of century, this is the first pandemic to reach the shores of Europe.

Accordingly, there was no tried and tested approach, although observation of countries more familiar with previous pandemics (SARS-CoV-1 and MERS) such as South Korea and Taiwan provided evidence of the benefits of a robust “Trace, Test and Treat” response. This section outlines how NPA regions applied -or did not apply- these elements in their response, in addition to border controls and other travel restrictions.

3.2 National Responses

Table 6 outlines common measures and rules that countries have advised, and sometimes mandated, citizens abide by over the past 10 months.

The measures are far-reaching and unprecedented, with severe curtailment of educational and recreational activities, in addition to restrictions on movement. These measures are supported in all regions by public health guidelines on hand hygiene, physical distancing and reducing social contacts.

Mask wearing is also now recommended to reduce viral transmission, which would not previously have been commonplace in the Western world. Some countries instituted this measure earlier than others, and some have been less energetic in their messaging around mask-wearing than others, presumably because empirical evidence was somewhat lacking early in the pandemic. Despite this, having applied the “precautionary principle” many regions did adopt mask wearing early and saw the benefits in the first wave of the pandemic in 2020. It is well recognised that COVID-19 is an economic as well as a healthcare crisis, and many countries have recognised economic support for people being mandated to stay at home as a vital part of the governmental response.

Citizens of Finland, Norway, the Faroes and Iceland were rewarded for their country’s control of the virus by having restrictions reduced in the 2nd quarter of 2020, and although some measures still remain in place, education provision and freedom of movement remain largely unhindered at the present time in these countries. Other countries, including Sweden, Northern Ireland, Ireland and Scotland, saw measures like school closures and freedom of movement restrictions relaxed during the summer 2020, only to tighten again in Autumn-Winter 2020 when virus activity increased rapidly.

Table 1- National Responses during the COVID-19 pandemic

Country Health Response	Faroe Islands	Finland	Greenland	Iceland	Ireland	Northern Ireland	Norway	Scotland	Sweden
Work from home	Mar 12th 2020-May 4th 2020	Mar 12th 2020	N/A	Mar 13th 2020-May 4th 2020 Jul 30th 2020-Sep 7th 2020 Oct 5th 2020-	Mar 27th 2020-	Mar 28th 2020- Oct 16th 2020	Mar 12th 2020	Mar 16th 2020	Mar 16th 2020
Cocooning for the elderly / vulnerable	Mar 12th 2020-May 8th 2020 Aug 6th 2020-Aug 19th 2020 Dec 24th-26th 2020	Mar 16th 2020-Jun 17th 2020	N/A	-	Mar 27th 2020-Jun 8th 2020	Mar 19th 2020-Jul 31st 2020	Mar 12th 2020	Mar 16th 2020-Jul 17th 2020	Mar 10th 2020-Oct 1st 2020 Nov 21st 2020
Stay at home measures	Mar 12th 2020-Apr 20th 2020	Mar 12th 2020-Jun 23rd 2020	N/A	Mar 13th 2020-May 4th 2020	Mar 27th 2020-Jun 8th 2020 15th Jul 2020- Sep 17th 2020 Oct 1st 2020 Dec 27th 2020	Mar 23rd 2020-May 18th 2020 Sep 22nd 2020-	Mar 12th 2020-Apr 27th 2020	Mar 16th 2020	Mar 11th 2020
Education	All schools closed in March and April 2020	Mar 18th 2020-May 14th 2020	N/A	Mar 13th 2020-May 4th 2020	Mar 27th 2020 Sep 1st 2020 (outbreak) Dec 16th 2020 (outbreak) Christmas break 2020-Feb 2021	Mar 23rd 2020-Aug 24th 2020 Oct 14th 2020-Oct 19th 2020 Jan 8th 2020-	Mar 12th 2020-May 11th 2020	Mar 19th 2020-Aug 11th 2020	Mar 17th 2020-Jun 15th 2020 Dec 7th 2020-Jan 6th 2021
Closure of restaurants / bars	Complete closure March 18th to April 29th. Relaxed over May to August, followed by short complete closure and then restricted opening of varying degrees until Mid-January 2021. Now open as usual	Apr 4th 2020-Jun 22nd 2020 Sep 30th 2020-	N/A	Mar 24th 2020-May 25th 2020 Sep 18th 2020 (Reykjavik)	Mar 27th 2020-Jun 29th 2020 Aug 4th 2020 (11pm)-Sep 8th 2020 Sep 17th 2020 (no indoor dining) Oct 14th 2020 (takeaway only)- Dec 4th 2020 Dec 24th 2020-Apr 2021	Mar 28th 2020-Jul 4th 2020 Sep 30th 2020-	Mar 24th 2020-Jun 1st 2020	Mar 20th 2020-Jul 15th 2020	N/A
Curfew	N/A	Sep 29th 2020-	N/A	-	N/A	N/A	N/A	N/A	N/A
Limit to social gathering	Gatherings discouraged Mar 12th to May 4th 2020. Gatherings of < 100 people OK since Aug 2020, with gatherings of max <20 recommended over Christmas period	Mar 12th 2020	N/A	Mar 13th 2020-May 4th 2020 Jul 30th 2020-Sep 7th 2020 Oct 5th 2020	Mar 27th 2020-Jun 8th 2020 Jul 15th 2020 Sep 17th 2020 Oct 1st 2020 Oct 14th 2020 Oct 19th 2020-Dec 22nd 2020 Dec 26th 2020	Mar 23rd 2020-May 18th 2020 Aug 20th 2020-	Mar 24th 2020-ongoing but extent depending on regional COVID-19 situation	Mar 15th 2020-Jun 19th 2020 Sep 14th 2020-	Mar 11th 2020-Jun 15th 2020 Nov 1st 2020-
Unemployment financial support	Mar 19th 2020	Mar 20th 2020 May 8th 2020 Sep 3rd 2020	N/A	-	Mar 26th 2020 Aug 21st 2020 Aug 28th 2020 Sep 7th 2020	Jul 6th 2020	Mar 13th 2020 Mar 28th 2020 May 29th 2020	Mar 11th 2020 Mar 17th 2020 Mar 18th 2020 Mar 29th 2020	Mar 16th 2020 Apr 30th 2020 Aug 27th 2020
Loosening restrictions	Apr 20th 2020 (+ end of Aug 2020 + mid Jan 2021)	May 14th 2020	N/A	May 4th 2020 Sep 7th 2020	May 18th 2020	May 18th 2020	Apr 20th 2020	May 29th 2020	May 29th 2020

Smaller countries, like the Faroe Islands and Iceland, have employed a more agile response, with measures being initiated and paused on a rolling basis as dictated by case counts of the virus. Just one country, Finland, has implemented a nightly curfew, although in practice it seems to simply translate into earlier closing times for businesses, which has been seen in many other countries at various times over the past 12 months.

3.3 Travel Restrictions

To prevent the spread of SARS-CoV-2, one of the primary strategies is to reduce the movement of humans (or animal hosts as seen in Denmark²⁷). To date restricting human movement has involved reducing international and domestic travel. Airlines and airports have been significantly affected by reduced international travel, while hospitality, recreation, dining, leisure, social activity and sports facilities and events have all suffered greatly domestically.

Efforts to limit the importation of new cases of SARS-CoV-2 has recently been given renewed focus given the emergence of newer and more infectious strains of SARS-CoV-2¹⁰⁻¹¹. If travel continues freely from areas which have experienced widespread transmission (and consequently, natural mutation) of the virus, variants will continue to emerge. This is concerning as new mutations could potentially affect disease severity and render national responses and vaccines less effective.

Table 2- Travel Restrictions by Country

Travel Restriction	Finland	Ireland	Northern Ireland	Norway	Scotland	Sweden	Greenland	Faroe Islands	Iceland
Travel Ban	Mar 12th 2020-May 14th 2020	Feb 2020 (non-essential)	Oct 14th 2020-	Mar 13th 2020-Jul 10th 2020	Mar 11th 2020 (Non-Essential travel discouraged)	Mar 19th 2020-	Mar 16th 2020 non-essential travel not encouraged		
	Jun 15th 2020-Sep 11th 2020	Green list issued Jul 9th 2020 (non-essential still banned) Free travel green list Sep 15th 2020 Nov 12th 2020 (advised not to return home for xmas)	Dec 22nd 2020	Aug 12th 2020-present Travelling from high risk countries discouraged. Limited use of travel ban for short periods of time.	Nov 20th 2020 -Dec 24th 2020	Jun 30th 2020 Jul 2nd 2020 (NON EU ONLY) Jul 29th 2020 (EEA EU ban)-Aug 31st 2020 Oct 22nd 2020 (Areas outside EEA EU)-January 31st 2021	Country remains closed Jan 2021 (aside from pre-authorised travellers approved for essential travel only)	Mar 12th 2020-Jun 15th 2020	Mar 20th 2020 (no non-EU/Schengen area travellers)
Need for test before entering country	Oct 12th 2020	N/A - being introduced 16th Jan 2021	N/A	Nov 7th 2020	N/A	N/A	N/A	Jun 15th 2020	N/A
Test on Arrival	Oct 12th 2020	Nov 29th 2020 (quarantine then test within 5 days)	N/A	Jun 22nd 2020 (Mandatory testing since Dec 31st 2020)	N/A	N/A	Apr-20	Jun 27th 2020	Jun 15th 2020
Quarantine on arrival into country ADVISED	Mar 12th 2020	Mar 16th 2020 Green list Jul 9th 2020 : no quarantine. Northern Ireland Travellers also exempt.	Jul 10th 2020 if arriving from outside of common travel area (GB, RoI, Isle of Man)	Mar 12th 2020- Quarantine MANDATORY but enforcement limited	Jun 8th 2020	N/A	Quarantine ENFORCED	Mar 12th 2020	Apr 24th 2020
Borders / Personal Travel Restrictions	Mar 16th 2020-Jul 13th 2020	2km Travel bubbles for citizens unless essential worker Mar 28th 2020 (subsequently revised to 5km)	N/A	Non-essential travel discouraged. Mar 15th 2020- May 12th 2020 (foreign nationals), Jun 15th 2020 (Denmark/Finland)	5 mile Travel bubble for citizens Jun 19th 2020- Jul 3rd 2020	N/A	Country remains closed Jan 2021 (aside from pre-authorised travellers approved for essential travel only)	N/A	N/A
	January 7th 2021-			Jul 15th 2020 (low incidence schengen region open). Restricting measures imposed Jan 4th 2021					
Masks Enforced	August 13th 2020	August 10th 2020. Mandatory on public transport.	July 10th 2020	August 17th 2020 - Recommendations for airtravel and health care. Mandatory when local outbreaks.	June 22nd 2020	December 18th 2020	N/A	N/A	August 14th 2020

The enforcement of quarantine guidelines varies from country to country. While Norway facilitates people to quarantine in a “suitable place of residence”, they also have designated quarantine hotels, where people must pay to stay in for 10 days if they arrive from a “red area”. However, those arriving from “yellow areas” are exempt from quarantine. Similarly, in Scotland, travellers arriving from certain “red-list” countries must secure a place in a quarantine hotel. Northern Ireland and the Republic of Ireland have not yet implemented mandatory hotel quarantine, although the Republic plans to do this in March 2021²⁸. Mandatory quarantine for all arriving travellers it is not without precedent internationally (e.g., South Korea²⁹, Australia³⁰ and New Zealand³¹).

An additional measure here to strengthen systems and reduce importation is the use of specific testing protocols for those entering countries and crossing borders. Regions such as the Faroes and Iceland that introduced mandatory testing (normally on arrival and day 5 after arrival) for travellers early in the pandemic have significantly reduced the impact of COVID-19 importation. In Iceland, quarantine is mandatory until the second test negative result is received.

References

1. Jones N R, Qureshi Z U, Temple R J, Larwood J P J, Greenhalgh T, Bourouiba L et al. Two metres or one: what is the evidence for physical distancing in covid-19? *BMJ* 2020; 370 :m3223 doi:10.1136/bmj.m3223
2. The Atlantic. America Is Trapped in a Pandemic Spiral. 09/09/2020. Available at: <https://www.theatlantic.com/health/archive/2020/09/pandemic-intuition-nightmare-spiral-winter/616204/> (accessed 20/03/21)
3. Cao C, Chen W, Zheng S, Zhao J, Wang J, Cao W. *Biomed Res Int.* Aug 2016. Analysis of spatiotemporal characteristics of Pandemic SARS spread in mainland China. 2016;2016:7247983. doi: 10.1155/2016/7247983. Epub 2016 Aug 15. PMID: 27597972; PMCID: PMC5002496. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5002496/>
4. World Health Organisation (WHO) Regional Office for Europe Website. Jan 2021. The WHO European Healthy Cities Network: a response to the COVID-19 pandemic close to the people <https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/who-european-healthy-cities-network/the-who-european-healthy-cities-network-a-response-to-the-covid-19-pandemic-close-to-the-people>
5. Levin AT, Hanage WP, Owusu-Boaitey N. et al. Assessing the age specificity of infection fatality rates for COVID-19: systematic review, meta-analysis, and public policy implications. *Eur J Epidemiol* 35, 1123–1138 (2020). <https://link.springer.com/article/10.1007/s10654-020-00698-1>
6. Public Health England (PHE) Report. July 2020. Excess Weight and COVID-19: Insights from new evidence. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907966/PHE_insight_Excess_weight_and_COVID-19_FINAL.pdf
7. Popkin BM, Du S, Green WD, et al. *Obesity Reviews.* Aug 2020. Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships. <https://doi.org/10.1111/obr.13128>
8. Deeks JJ, Dinnes J, Takwoingi Y, Davenport C, Spijker R, Taylor-Phillips S, Adriano A, Beese S, Dretzke J, Ferrante di Ruffano L, Harris IM, Price MJ, Dittrich S, Emperador D, Hooft L, Leeflang MM, Van den Bruel A. *Cochrane Database Syst Rev.* Jun 2020. Cochrane COVID-19 Diagnostic Test Accuracy Group. Antibody tests for identification of current and past infection with SARS-CoV-2. 25;6(6):CD013652. doi: 10.1002/14651858.CD013652.
9. Department of Health (DOH) Ireland. Mar 2020. Press release- Statement from the National Public Health Emergency Team - Wednesday 11 March

Available at: <https://www.gov.ie/en/press-release/451b35-statement-from-the-national-public-health-emergency-team-wednesday-1/>

10. US Centre for Disease Control Website. New Variants of the Virus that Causes COVID-19 (updated 12-02-21). Available at <https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant.html> (accessed 19/03/2021).
11. Tang JW, Tambyah PA, Hui DSC. Journal of Infection. December 28, 2020
Emergence of a new SARS-CoV-2 variant in the UK
[https://www.journalofinfection.com/article/S0163-4453\(20\)30786-6/fulltext#articleInformation](https://www.journalofinfection.com/article/S0163-4453(20)30786-6/fulltext#articleInformation)
12. World Health Organisation (WHO). Apr 2020.
International Guidelines for Certification and Classification (CODING) of COVID-19 as Cause of Death. Available at -
https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf?ua=1 (accessed 20/03/2021)
13. Raleigh V. British Medical Journal (BMJ). June 2020.
Editorial. Tackling UK's mortality problem: Covid-19 and other causes.
<https://www.bmj.com/content/369/bmj.m2295.full>
14. World Health Organisation (WHO). Apr 2020. COVID-19-virtual press conference -30 March 2020. Available at: https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-30mar2020.pdf?sfvrsn=6b68bc4a_2 (accessed 20/03/2021)
15. Oran DP, Topol EJ. Prevalence of Asymptomatic SARS-CoV-2 Infection: A Narrative Review. Ann Intern Med. 2020;173:362-367. [Epub ahead of print 3 June 2020]. doi:10.7326/M20-3012
16. Ioannidis JPA. Infection fatality rate of COVID-19. Bulletin of the World Health Organization. Oct 2020. Available at:
https://www.who.int/bulletin/online_first/BLT.20.265892.pdf (accessed 20/03/2021)
17. Eurostat. Excess Mortality Statistics. Available at:
https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Excess_mortality_statistics#Excess_mortality_in_the_European_Union_between_January_2020_and_January_2021 (accessed 20/03/2021).
18. Central Statistics Office (CSO), Ireland. Measuring Mortality Using Public Data Sources 2019-2020. 2nd November 2020. Available at:
<https://www.cso.ie/en/releasesandpublications/fb/b-mpds/measuringmortalityusingpublicdatasources2019-2020/> (accessed 20/03/2021)
19. Scottish Government. Statistics.gov.scot website. Available at:
<https://statistics.gov.scot/data/deaths-involving-coronavirus-covid-19> (accessed 20/03/2021)

20. National Records of Scotland. Deaths involving coronavirus (COVID-19) in Scotland. Available at: <https://www.nrscotland.gov.uk/files/statistics/covid19/covid-deaths-data-week-53.xlsx> (accessed 12/03/2021)
21. Northern Ireland Statistics and Research Agency (NISRA). Excess Mortality & Covid-19 Related Deaths. Mar 4 Update. Available at: <https://www.nisra.gov.uk/publications/excess-mortality-covid-19-related-deaths> (accessed 20/03/2021)
22. UK Government. GOV.UK official website. Coronavirus (COVID-19) in the UK – Scotland figures. Available at: <https://coronavirus.data.gov.uk/details/deaths?areaType=nation&areaName=Scotland> (accessed 20/03/2021)
23. Northern Ireland Statistics and Research Agency (NISRA). Statistical bulletin- Excess Mortality and Covid-19 Related Deaths in Northern Ireland March to December 2020. Available at: <https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/Excess%20mortality%20%26%20Covid-19%20related%20deaths%20in%20Northern%20Ireland-Mar-Dec%202020.pdf> (accessed 20/03/2021)
24. UK Government. GOV.UK official website. Coronavirus (COVID-19) in the UK – Northern Ireland figures. Available at: <https://coronavirus.data.gov.uk/details/deaths?areaType=nation&areaName=Northern%20Ireland> (accessed 20/03/2021)
25. Kontis V, Bennett JE, Rashid T et al. Nature Med 26, 1919–1928. Oct 2020. Magnitude, demographics and dynamics of the effect of the first wave of the COVID-19 pandemic on all-cause mortality in 21 industrialized countries. <https://www.nature.com/articles/s41591-020-1112-0>
26. EuroMOMO project: European mortality monitoring. EuroMOMO Bulletin, Week 1, 2021. Available at- <https://www.euromomo.eu/> (accessed 20/03/2021)
27. World Health Organisation (WHO). Mink-strain of COVID-19 virus in Denmark. Nov 2020. Available at- <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/11/mink-strain-of-covid-19-virus-in-denmark> (accessed 02/02/2021)
28. Government of Ireland, GOV.IE website. Mandatory Hotel Quarantine. Updated 11/03/2021. Available at: <https://www.gov.ie/en/publication/a6975-mandatory-hotel-quarantine/> (accessed 20/03/2021).
29. Department of Foreign Affairs (DFA), Ireland. Guidance on Travel to Korea, Republic of (South Korea). Updated 8th Jan 2021. <https://www.dfa.ie/travel/travel-advice/a-z-list-of-countries/republic-of-korea/> (accessed 20/03/2021)

30. Australian Government- Department of Home Affairs Website. COVID-19 and the border- Travel restrictions and exemptions. Updated 19/03/2021. Available at <https://covid19.homeaffairs.gov.au/travel-restrictions> (accessed 20/03/2021)
31. Ministry of Health, New Zealand. COVID-19: Border controls. Updated 15/03/2021. Available at: <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-response-planning/covid-19-border-controls> (accessed 20/03/2021)
32. Burton JK et al. Evolution and effects of COVID-19 outbreaks in care homes: a population analysis in 189 care homes in one geographical region of the UK. October 2020. The Lancet Healthy Longevity, Volume 1, Issue 1, e21 - e31.
33. Public Health Scotland. Vaccination Update Dashboard. Available at: https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview (accessed 20/03/2021)
34. International Monetary Fund (IMF). Reopening from the Great Lockdown: Uneven and Uncertain Recovery. June 2020. Available at: <https://blogs.imf.org/2020/06/24/reopening-from-the-great-lockdown-uneven-and-uncertain-recovery/> (accessed 20/03/2021)
35. Goolsbee A, Syverson C. Fear, lockdown, and diversion: Comparing drivers of pandemic economic decline 2020. Journal of Public Economics, Volume 193. November 2020. DOI: <https://doi.org/10.1016/j.jpubeco.2020.104311>.
36. Hart JT. The Inverse Care Law. Lancet, 1971(1): p. 405-412.
37. Pavelka M, Van-Zandvoort K, Abbott S, Sherratt K, Majdan M. The impact of population-wide rapid antigen testing on SARS-CoV-2 prevalence in Slovakia. Science. 23 Mar 2021. DOI: 10.1126/science.abf9648
38. Colizza, V., Grill, E., Mikolajczyk, R. et al. Time to evaluate COVID-19 contact-tracing apps. Nat Med 27, 361–362 (2021). <https://doi.org/10.1038/s41591-021-01236-6>
39. Fonseca L, McMaster I. Coronavirus and the NPA: EPRC Briefing paper. 2020, European Policies Research Centre.