

International Horizon Scanning and Learning to Inform Wales' COVID-19 Public Health Response and Recovery

Report 6, 28/05/2020



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World Health Organization
Collaborating Centre on
Investment for Health and Well-being



Overview

The International Horizon Scanning and Learning work stream was initiated following and informing the evolving coronavirus (COVID-19) public health response and recovery plans in Wales. It focuses on COVID-19 international evidence, experience, measures, transition and recovery approaches, to understand and explore solutions for addressing the on-going and emerging health, wellbeing, social and economic impacts (potential harms and benefits).

The learning and intelligence is summarised in weekly reports to inform decision-making. These may vary in focus and scope, depending on the evolving COVID-19 situation and public health / policy needs.

This work is aligned with and feeding into the Welsh Government Office for Science and into Public Health Wales Gold Command. It is part of a wider Public Health Wales' systematic approach to intelligence gathering to inform comprehensive, coherent, inclusive and evidence-informed policy action, which supports the Wellbeing of Future Generations (Wales) Act and the Prosperity for All national strategy towards a healthier, more equal, resilient, prosperous and globally responsible Wales.

In focus this week

-  **COVID-19 testing practices**
-  **Adherence to lockdown measures**
-  **Easing lockdown impact on R across the USA**
-  **Country insight: Iceland**

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At a glance: summary of international learning on COVID-19

“To suppress and control the epidemic, countries must isolate, test, treat and trace...”

Dr Tedros Adhanom Ghebreyesus, Director-General of WHO

Testing practices

- ✚ Serology (measuring serum antibodies) testing and data are **essential for surveillance**, assessing the potential for herd immunity, and **for accurate modelling** of virus transmission dynamics, which provide the foundation for policies to reopen societies
- ✚ Currently, there is **no evidence that COVID-19 serological (antibody) tests show if a person has developed immunity and is no longer at risk** of becoming re-infected. They can only indicate whether a person has been exposed to the virus (infected) in the past
- ✚ Intelligence on how serological testing and data is used to inform clinical practice across countries (e.g. isolation/cohorting of staff or patients) is not found currently
- ✚ Testing strategies for COVID-19 have **evolved** since the beginning of the outbreak and **vary widely** across countries, including: drive through testing centres; mobile testing units; in primary care settings or hospitals; by appointment or GP referral only; walk ins; etc.
- ✚ **Home test kits** are not widely used and some countries recommend against them
- ✚ **Testing timeframes vary**, the fastest being results sent to individuals within 24 hours

More information is summarised **on pp. 4-7**

Adherence to lockdown

- ✚ The **level of adherence varies** across countries, depending on the different response measures implemented, especially related to lockdown strictness and enforcement
- ✚ Lockdown fatigue and frustration are causing increased number of protests and breaches
- ✚ The speed at which measures are lifted is a **complex interplay** between:
 - the adherence of the public to lockdown measures;
 - the national infrastructure to identify, isolate and treat those who are infected; and
 - the strength of surveillance mechanisms to detect changes in the virus transmission.
- ✚ Creating and maintaining a **sense of collective identity** is critical to ensure the continued collective action necessary to keep the virus at bay, while returning to normal. Such sense is created by being inclusive of all societal groups and local communities.
- ✚ To be effective, crisis response measures need to be perceived as consistent, competent, fair, objective, empathetic and sincere; also they have to be easily understood and communicated through trusted people and accessible channels
- ✚ Adherence for each country can be estimated by looking at the **number of fines issued and population / community mobility data** (Figure 1 on page 11)

More information is summarised **on pp. 8-11**

Easing lockdown impact on R across the USA

- ✚ **Cautious and gradual lifting of restrictions** has helped a number of US States to keep their rate of transmission (R_t) under one and lowering.

More information is summarised **on pp. 12-16**

Testing practices

Key messages¹²³

Serological (antibody) testing

- The SARS-CoV-2 (the virus causing COVID-19) has been the subject of intense research assessing all facets of the pathogen and its rapid global spread
- Serology (the measurement of serum antibodies, specific proteins produced in response to infections, which can indicate presence and levels of immunity) provides crucial data for understanding key aspects of the infection and identifying asymptomatic cases
- At the level of populations, serologic data can provide insights into the spread of the virus, enabling assessment of the overall attack rate and the potential for herd immunity
- Serologic testing and data are essential for developing accurate models of virus transmission dynamics, which provide the foundation for policies to reopen societies
- Serology (antibody) testing remain under scrutiny - many countries are still cautious on its validity and are not yet carrying such testing
- Currently, there is no evidence serological (antibody) tests show if a person has developed immunity and is protected, e.g. no longer at risk of becoming re-infected
- Serological (antibody) tests can indicate whether a person has been exposed to the virus (infected) in the past, and was either asymptomatic or recovered
- If detected antibodies do provide immunity, we don't know how much antibody is protective or how long protection might last
- Not all people who recover from COVID-19 develop the same immune response and have the antibodies to fight a second infection
- Serology (antibody) testing remain under scrutiny - many countries remain cautious on its validity and are not yet carrying such testing
- Intelligence on how serological testing and data is used to inform clinical practice across countries (e.g. isolation/cohorting of staff or patients) is not found currently

Overall testing strategies and practices

- Testing strategies for COVID-19 have evolved since the beginning of the outbreak and vary widely across countries on where and how tests are carried out, including: drive through testing centres; mobile testing units; in primary care settings or hospitals; by appointment or GP referral only; walk ins; etc.
- Home test kits are currently not widely used and some countries recommend against them
- Testing timeframes vary, the fastest being results sent to individuals within 24 hours

Country insight

Testing strategies across selected countries is presented in the table below.

¹ <https://osf.io/evy4q/>

² <https://www.cdc.gov/coronavirus/2019-ncov/lab/serology-testing.html>

³ <https://www.cnbc.com/2020/04/17/who-issues-warning-on-coronavirus-testing-theres-no-evidence-antibody-tests-show-immunity.html>

Country	Who can be tested?	Where and How?	Timeframe	Serological (antibody) testing
UK	People in England, Scotland, Wales or Northern Ireland with any of the symptoms can ask for a test through NHS website ⁴	<ul style="list-style-type: none"> - Drive through testing facilities - Mobile testing units e.g. at care homes, police stations and prisons - Home test kit 	<p>Within 48h (swab)</p> <p>Within 72h (home test)</p>	England starts antibody testing programme, prioritising NHS & care home staff from end of May Clinicians able to request testing for patients in both hospital and social care settings as appropriate
Ireland	Community wide testing is available to those who are assessed as requiring one by their GP	<ul style="list-style-type: none"> - Community Testing Centres - Hospitals 	Within 3 days for 90% of cases	Plans to conduct a study and test a small number of the population (5,000 people) from two regions over the next year
France	From 11 th May (ease of lockdown) systematic testing of health professionals, older and vulnerable people Progressively - of all persons presenting symptoms of COVID-19 or in contact with an infected case <i>Testing strategy modified several times since start of the outbreak</i>	<ul style="list-style-type: none"> - Hospitals (hospitalised patients) - Community tests prescribed by a GP - Large-scale testing in nursing homes for residents and staff launched in early April, using the medical care reserve and mobile testing buses⁵ 	Within 24	
Germany⁶	Anyone in contact with a confirmed case within the last 14 days Anyone who has been in high risk area within the last 14 days and has symptoms If in high risk area within the last 14 days or have had contact with a person from the risk area (and have no symptoms), clarification from a GP can be sought	<ul style="list-style-type: none"> - GP (consultation by phone) - Specially set up test centres - Hospitals & emergency services - At home for high risk individual - Care facilities for elderly and people with disabilities periodically tested incl. asymptomatic nurses and residents 	1-2 days	No information found
Spain	New guidance on surveillance and monitoring states that all suspected cases will have a PCR test (or similar) within the first 24 hours after contacting the health system (from 9 th May) Tests can only be requested by any medical doctor, and are approved once public health authorities check whether the patient fulfils set testing criteria	<ul style="list-style-type: none"> - Primary care centres - Hospitals - Drive-through testing facilities <p>Primary care coordination and response teams set up to assess via telephone or home visit of the self-isolating patients that advise transfer for testing</p>	No information found	Communities have carried out 1,335,070 rapid antibody tests

⁴ <https://www.gov.uk/coronavirus>

⁵ <https://www.connexionfrance.com/French-news/France-director-general-health-urges-public-to-get-tested-for-coronavirus-Covid-19>

⁶ <https://www.gesundheit.de/krankheiten/infektionskrankheiten/atemwegsinfektionen/coronavirus/test>

Portugal	All suspected cases	<ul style="list-style-type: none"> - Testing centres (e.g. drive-through's) test possible cases, close contacts and even asymptomatic persons - Hospital lab - Private lab - National Institute of Health - Home testing for mild cases 	45 min (PCR testing) to 5-6 hours	No information found
Belgium	<p>Any 'possible case', with special attention to caregivers and people in residential facilities</p> <p>People (at high risk) in contact with a confirmed case and who are themselves in professional contact with people at high risk (test on day 12 of isolation)</p> <p>Then if the testing capacity is sufficient:</p> <ul style="list-style-type: none"> - Any person requiring hospitalisation - Any person entering a residential facility for the first time 	<ul style="list-style-type: none"> - 120 sampling centres: specific sites organised by GPs, hospitals, municipalities - Each federated entity is responsible for ensuring an adequate distribution of centres on its territory 	No information found	<p>Serological testing is available for those who meet specific criteria, such as: inpatients who meet the 'possible case' definition AND have a chest CT suggestive of COVID-19 but a negative PCR. Test performed a minimum of 7 days after symptom onset</p> <p>In outpatients or inpatients with a suggestive and prolonged clinical picture for COVID-19 but a negative PCR test or who could not be tested within 7 days of symptom onset. Test performed a minimum of 14 days after symptom onset</p>
The Netherlands	From 1 st June - everyone with symptoms can be tested by the municipal health service (capacity of 30.000 tests per day)	Home testing kits not part of the testing strategy	within 24h / max 48h	Large-scale study on immunity/herd immunity indicates that approximately 3% of the Dutch population has developed antibodies ⁷ . (preliminary results published 16 th April)
Denmark	<p>From 18th May - all citizens can get tested (the societal track) without a referral through a website</p> <p>Citizens with symptoms must call their GP to be referred to a test at a hospital (the health care track)</p> <p><i>Testing strategy modified several times since March</i></p>	<p>Track 1. The health care track</p> <ul style="list-style-type: none"> - referred citizens with symptoms - patients in hospitals - health care personnel <p>Track organized by the five regions</p> <p>Track 2. The societal track</p> <ul style="list-style-type: none"> - asymptomatic "close contacts" - citizens for random sample testing - social care personnel, etc. <p>Track organised by national authorities, takes place in temporary test facilities in 16 locations across the country</p>	No information found	No information found

⁷ <https://www.reuters.com/article/us-health-coronavirus-netherlands-study/dutch-study-suggests-3-of-population-may-have-coronavirus-antibodies-idUSKCN21Y102>

Sweden	<p>Priority groups:</p> <ul style="list-style-type: none"> - Hospitalised patients - Health or elderly care personnel with suspected COVID-19 	Home test kits not recommended according to the Public Health Agency Hospitals	No information found	Public Health Agency national strategy to increase testing capacity includes: <ul style="list-style-type: none"> 1. PCR testing for ongoing infections 2. Serological testing for antibodies 																														
Iceland	<p>Criteria for testing:</p> <ul style="list-style-type: none"> - Person identified as a possible case - Person who fits all of symptom specific criteria <p>Decision to test is always made by a medical doctor Priority is given to health care personnel and individuals at risk for severe disease</p>	<p>Primary Care Centres using drive-through</p> <p>One central laboratory</p>	No information found	No information found																														
New Zealand	<p>Those with cold or flu like symptoms advised to call the GP, health provider, or free Health line⁸</p> <p>District Health Boards (DHBs) are asked to:</p> <ul style="list-style-type: none"> - Test all contacts where the source of infection is unknown regardless of symptoms - Undertake targeted testing of asymptomatic people at high-risk of exposure 	<ul style="list-style-type: none"> - Community Based Assessment Centres in some areas of the country <p>Structures include:</p> <ul style="list-style-type: none"> - Walk-in clinics - Bookable appointments - Referral by either the GP or through Health line 	No information found	No information found																														
Italy	<p>End of March: Veneto tested healthcare professionals (aiming at 100,000) before rolling out to the wider population. Laboratories in Padua and Verona. 2nd April: Emilia-Romagna started testing healthcare workers, aiming at 200,000. Individuals testing negative to be tested again after 15 days. Initially testing for presence of antigens, with positive tests undergoing antibody testing. 25 laboratories across the region⁹ 23rd April: Sero-prevalence study in Lombardy, initially with people in voluntary quarantine 25th May: Nationwide serological testing programme begins for 150,000 individuals. Conducted by Italian Red Cross in co-operation with the Italian Statistical Institute¹⁰. Testing at sampling centres¹¹ or at home for fragile or vulnerable¹². Results communicated by each region to participants on their territory within 15 days¹³</p> <table border="1"> <thead> <tr> <th>Implemented</th> <th>Type</th> <th>Manufacturer</th> <th>Country</th> <th>Results in</th> <th>Sensitivity/Specificity</th> </tr> </thead> <tbody> <tr> <td>Veneto</td> <td>CLIA</td> <td>Snibe Diagnostics</td> <td>China</td> <td></td> <td>Between 80-90%/ ≈ 100%¹⁴</td> </tr> <tr> <td>Lombardy</td> <td>ELISA</td> <td>DiaSorin</td> <td>Italy</td> <td></td> <td>90-97%/ 98%¹⁵</td> </tr> <tr> <td>Emilia Romagna</td> <td>Chromatographic/ CLIA/ ELISA</td> <td>Various</td> <td>Various</td> <td></td> <td>Various</td> </tr> <tr> <td>Italy (All)</td> <td>CLIA</td> <td>Abbott</td> <td>Italy</td> <td>15 days</td> <td>99.4%/ 93.8%¹⁶</td> </tr> </tbody> </table> <p>CLIA = Chemiluminescent immunoassay, ELISA = Enzyme linked immunosorbent assay, RDT = Rapid diagnostic test</p>				Implemented	Type	Manufacturer	Country	Results in	Sensitivity/Specificity	Veneto	CLIA	Snibe Diagnostics	China		Between 80-90%/ ≈ 100% ¹⁴	Lombardy	ELISA	DiaSorin	Italy		90-97%/ 98% ¹⁵	Emilia Romagna	Chromatographic/ CLIA/ ELISA	Various	Various		Various	Italy (All)	CLIA	Abbott	Italy	15 days	99.4%/ 93.8% ¹⁶
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⁸ <https://covid19.govt.nz/>

⁹ Il Resto Cardolino (2020) - <https://www.ilrestodelcarlino.it/cronaca/test-sierologici-1.5137784>

¹⁰ Croce Rossa Italiana (2020) - <https://www.cri.it/25-05-2020-al-via-da-oggi-lindagine-di-sieroprevalenza>

¹¹ Italian Health Ministry (2020) - http://www.salute.gov.it/portale/news/p3_2_6_1_1.jsp?lingua=italiano&menu=campagne&p=dacampagne&id=146

¹² Italian Health Ministry (2020) <http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioNotizieNuovoCoronavirus.jsp?lingua=italiano&id=4805>

¹³ Istat (2020) - <https://www.istat.it/it/archivio/243400>

¹⁴ Order of Surgeons and Dentists of the Province of Verona (2020) - <https://www.omceovr.it/public/wp-content/uploads/2020/04/OMCEO-Serological-Test-FAQ-1.pdf>

¹⁵ Johns Hopkins (2020) - <https://www.centerforhealthsecurity.org/resources/COVID-19/serology/Serology-based-tests-for-COVID-19.html>

¹⁶ Tang et al (2020) - <https://academic.oup.com/clinchem/advance-article/doi/10.1093/clinchem/hvaa120/5836557>

Adherence to lockdown

Overview

- With varied response measures to COVID-19 across Europe, especially in terms of lockdown strictness and enforcement, the level of adherence is also varied.
- As lockdown fatigue and frustration sets in, an increased number of protests and breaches have been seen.
- There is a degree of risk associated with lifting each measure¹⁷.
- The speed at which measures are lifted is a complex interplay between the adherence of the public with the measures; the national infrastructure to identify, isolate and treat those who are infected; and the strength of national surveillance mechanisms that detect changes in the transmission of the virus.
- In countries in later phases of the pandemic where restrictions have been relaxed, subsequent outbreaks of COVID-19 have been detected. This has required national governments to move quickly to identify, isolate and contain these clusters, to break the chain of transmission.
- For crisis response measures to affect public behaviours, they need to be perceived as consistent, competent, fair, objective, empathetic and sincere. They also need to be easily understood and communicated through trusted people and accessible channels¹⁸.
- To succeed with adherence, it is critical to gain an understanding of issues such as:
 - ✓ trust in health authorities, recommendations and information
 - ✓ risk perceptions
 - ✓ acceptance of recommended behaviours
 - ✓ knowledge
 - ✓ barriers/drivers to recommended behaviours
 - ✓ misperceptions
 - ✓ stigma
- Wearing masks in public places is increasingly seen as having an important contribution to containing the spread of COVID-19, especially when physical distancing is not possible

Adherence and collective identity

- The main challenge that the lockdown and the implementation of an exit strategy pose to our society is the creation and maintenance of a sense of collective identity, connecting and coordinating citizens at the local, regional and national level. This is critical to ensure the continued collective action necessary to keep the virus at bay, while gaining back some normalcy and starting up the economy.
- To sustain collective action effectively over a prolonged period, such collective identity need to reflect the experiences of the pandemic by all citizens and to include perspectives from the different local communities and social categories that make up civil society¹⁹.

¹⁷ <https://post.parliament.uk/analysis/covid-19-and-international-approaches-to-exiting-lockdown/>

¹⁸ <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/technical-guidance/who-tool-for-behavioural-insights-on-covid-19>

¹⁹ <https://www.psychologicalscience.org/publications/observer/obsonline/maintaining-lockdown-and-preparing-an-exit-strategy-a-view-from-social-and-behavioral-sciences.html>

- An emphasis on coercion and control to promote protective behaviours may inadvertently stigmatize those who are ill as being responsible for their plight, either because of their movements, or because of who they are, such as the elderly. Such emphasis on repression will also threaten collective identification.
- Public authorities that consider citizens as unable to understand the situation or unwilling to behave responsibly, risk coming across as paternalistic and provoke distrust and disengagement from the common cause.
- Individuals experiencing specific constraints (e.g. financial difficulties) or disadvantages (e.g. “at risk” professional groups, cultural minorities, gender and age groups) may come to see their own individual or subgroup interests as conflicting with the common cause. This is likely to make competing interests or divisions salient, challenging collective effort.
- As subgroups of people (e.g. based on professions or age) will progressively “exit” the lockdown, this may create new psychological barriers between social categories. These categorizations may come across as illegitimate and lead people who feel treated unfairly or even excluded, to disengage from collective action.
- To the extent that public authorities (especially at a national level) currently embody and represent the ‘collective’, people’s sense of collective identity will be impaired if these authorities come across as lacking in competence or commitment to the common cause.

The ‘prevention paradox’

Germany has experienced the so-called called “**prevention paradox**” at times of epidemics.

It arises from the government enacting policies (e.g. lockdown) that involve high costs in terms of money, time and effort and which cause inconvenience, boredom and other psychological issues. The potential benefit of such policies is huge at the population level, but relatively low at an individual level, which is evoking contradictory responses. Some welcome it, identifying with the warning issued by the authorities; others protest, calling lockdown measures an ‘overkill by authorities that destroys economies and causes job-loss’.

Germany has implemented quick and effective response measures and public health interventions, resulting in overall health security for the population. Therefore people have not realised the threat from COVID-19; and have not realised that lockdown measures have helped mitigating the spread of the virus. Citizens have started to protest and claim that government has overreacted, paired with political and economic pressure to return to ‘normal’.

There has been also a variation between the national (federal government) policies and rules and their interpretation on regional level.

Community mobility data

By looking at the number of **fines issued in countries and population / community mobility data**, it is possible to create an estimation of how well measures have been adhered to in each country.

In order to determine how the movement within nations has altered, data from Google Analytics can be used to generate Community Mobility Reports. The dataset is presented by location and highlights the percentage change in visits to places like grocery stores, transport hubs and parks within a geographic area²⁰ - see Figure 1.

The comparative analysis shows that when looking specifically at transit stations, including public transport hubs, such as subway, bus and train stations, **Singapore** shows the largest percentage decrease in mobility compared to the baseline period, a 62% reduction. This compares to a 28% reduction in mobility in **Germany** (the lowest percentage decrease). When looking at workplace mobility, again, Singapore shows the largest percentage decrease in mobility compared to the baseline (a 48% reduction). The smallest percentage change in workplace mobility was observed in Germany, a 5% reduction compared to the baseline. As you would expect, mobility in residential places increased in all selected countries compared to the baseline period. The largest increase observed in Singapore (31% increase) and the smallest increase observed in Germany (5% increase).

It is important to remember the wider context in which these statistics have been presented. Countries may vary in the following ways:

- Urban/rural classification
- Economy
- Demographics
- Technology
- Stage of the COVID-19 pandemic

Location accuracy and the understanding of categorized places varies from region to region, so **it is not recommended using this data to compare changes between countries, or between regions with different characteristics (e.g. rural versus urban areas).**

²⁰Google COVID-19 Community Mobility Report: <https://www.google.com/covid19/mobility/>

Figure 1. Change in community mobility due to COVID-19 in selected countries, 16th May (percentage change compared to baseline)



*Data for April 2020; †Data for the period 07-11 April 2020; - Data unavailable; ^Baseline is the median value for the corresponding day of the week during the 5 week period Jan 3 – Feb 6 2020.

Easing lockdown impact on R across the USA

Overview

The data, including R_t , and policies for **seven US States**, transitioning out of lockdown over the past few weeks, are examined and compared. A comparison of each State's position prior to lockdown implementation is provided, in addition to their current status.

Of the states which have re-opened, **Texas and Alabama** currently display significant potential for a re-emergence of a rise in the epidemic curve, i.e. a second wave. **Georgia** appears to have stabilised its R_t value and kept it significantly below 1.0, seeing an effective decrease in the number of new cases. **Hawaii, Idaho, Colorado and Mississippi** had all reported relatively few cases per 100,000 population, and so their resulting epidemic curves should be viewed in light of this.

Summary analysis

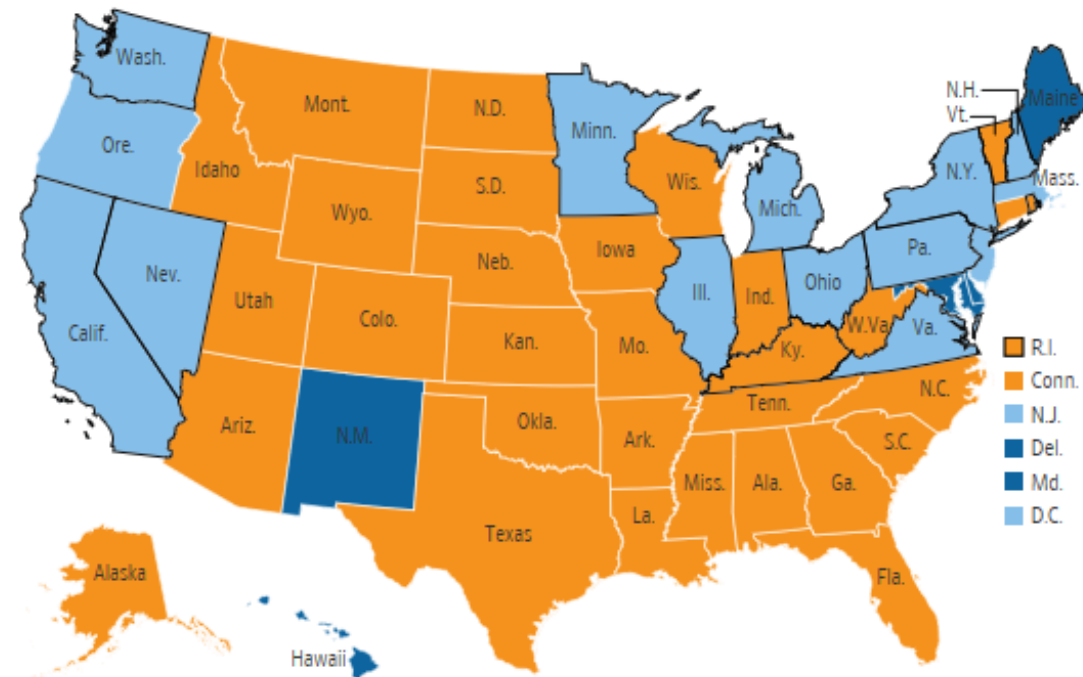
The R_t in **Colorado** has remained constantly below one, despite the easing of lockdown. In comparison to other States, the lifting of restrictions has been a cautious exercise - with strict restrictions still in place for public gatherings and bars and restaurants – which could be a contributing factor to the State's control on their R_t .

Georgia have flattened the curve by reducing their R_t to below one, even through the easing of lockdown measures.

Slowly Reopening

Many states are lifting restrictions imposed to slow the spread of the new coronavirus.

- Comprehensive restrictions on business and travel
- Some restrictions
- Lifted many restrictions, or never enacted major restrictions
- Plans announced to lift restrictions



Note: As of May 21
 Source: the states
 Kathryn Tam and Luis Melgar/THE WALL STREET JOURNAL

The R_t in **Mississippi** remains below one, and is still reducing even through the easing of lockdown. Like Colorado, the lifting of restrictions is very cautious and they are still in the early stages (non-essential travel is still banned, compared to most other US States); so the R_t will not be challenged until we see a sudden lift of restrictions.

Alabama's R_t fluctuates slightly, but remains below one. The fluctuation seems to now be under control due to the Safer At Home order being extended from 15th May to 22nd May. We may see a slight rise in R_t by next week due to further easing of restrictions.

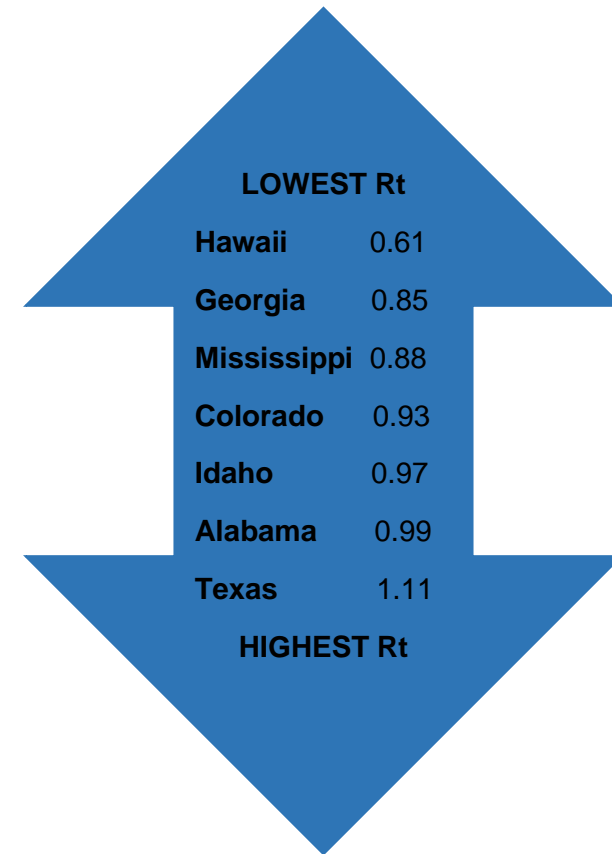
Texas has the highest R_t out of all the States, at above one, so the State's infection rate is still considered dangerous; even though the rate of new cases seems to be gradually declining. The easing of lockdown has not been as gradual as other States, which could be a contributing factor to the lack of control over R_t .

Idaho's R_t remains below one, but it is still higher than it was when lockdown started. They are still to establish a way to control the R_t whilst easing restrictions.

Hawaii's already low R_t has continued to reduce – it is now the lowest of all States, at 0.61.

A recent study, carried out by Imperial College London, found that an increase in mobility following the easing of lockdown will lead to a resurgence of transmission²¹ Even though the States are reducing their R_t , the report found no evidence of herd immunity in any of them and confirmed the epidemic was far from over.

An overview of the measures put in place by the state government can be seen on Figures 2 and 3 below.



²¹ <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-23-united-states/>

Figure 2. R_t at the start of lockdown and as of 27th May 2020, selected US states

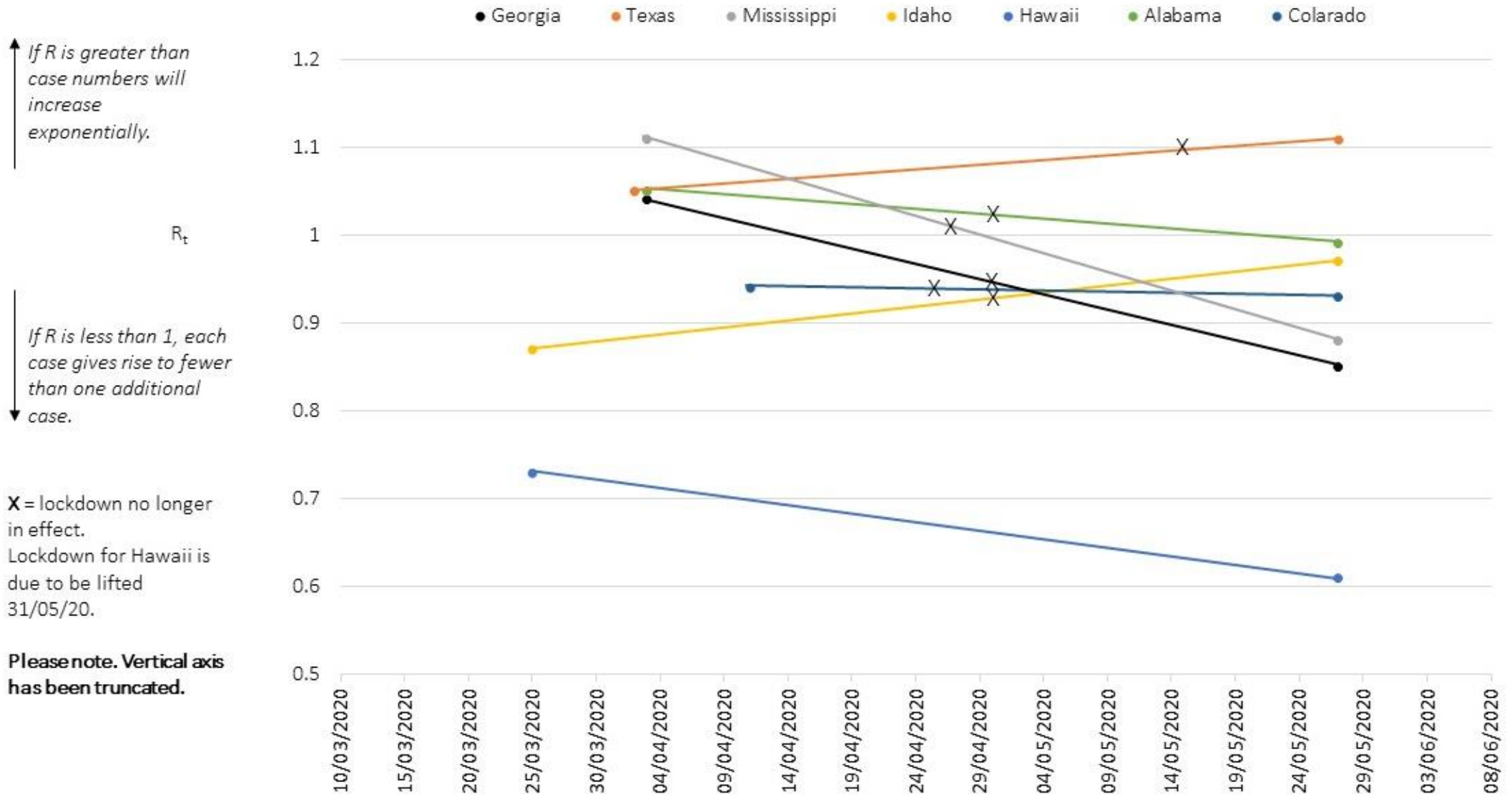


Figure 3. 14 day trend for COVID-19 cases, Rt and deaths

Decreasing 14-Day trend

Increasing 14-Day trend

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Texas	-5% Decreasing	55,971		1.0 - 1.3	35		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Georgia	7% Increasing	43,344		0.8 - 0.9	37		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Colorado	-25% Decreasing	24,174		0.8 - 1.1	50		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Mississippi	19% Increasing	13,458		0.6 - 1.1	30		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Hawaii	Low case count	643		0.0 - 1.8	1,038		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Alabama	31% Increasing	14,730		0.8 - 1.1	25		Minimal Level 1

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

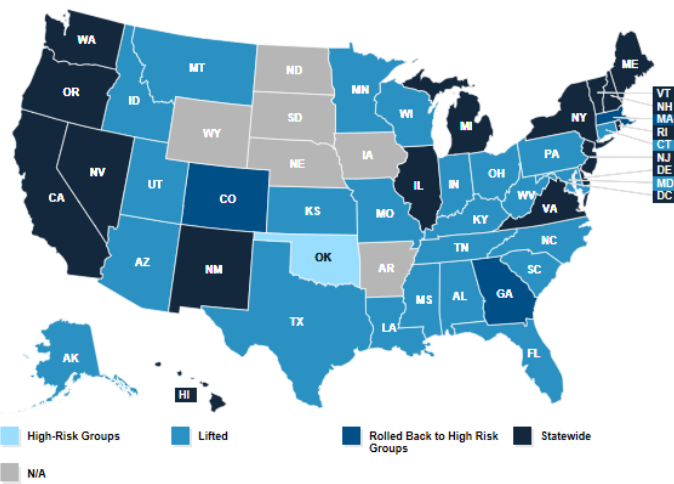
STATE	14-DAY TREND OF COVID+	TOTAL COVID+	LAST 30 DAYS OF COVID+ (ROLLING)	RT RANGE (90% CI)	DOUBLING TIME (DAYS)	LAST 14 DAYS OF DEATHS (ROLLING)	INFLUENZA-LIKE ILLNESS
Idaho	34% Increasing	2,626		0.5 - 1.4	59		Moderate Level 6

14-day trend is red if increasing, yellow if flat, green if decreasing. Rt represents the effective reproduction rate. The data for Rt comes from <https://rt.live>. The data in the table is the lower and upper bound of the 90% confidence interval. ILI is influenza-like illness.

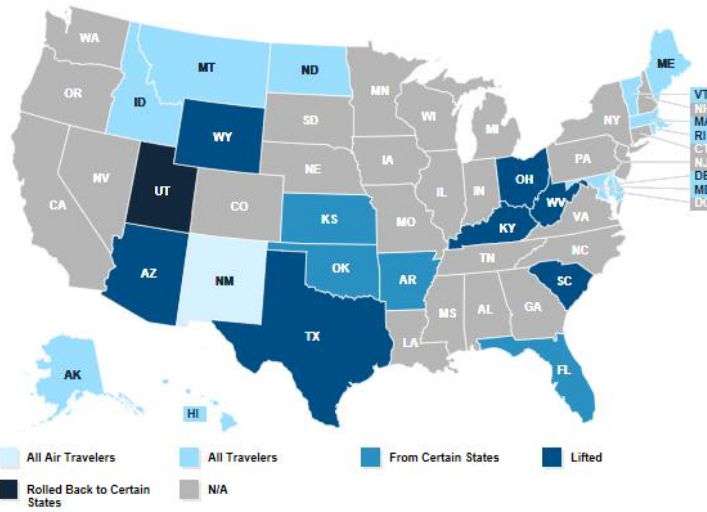
²² <https://www.covidexitstrategy.org/>

Figure 4. US state social distancing actions

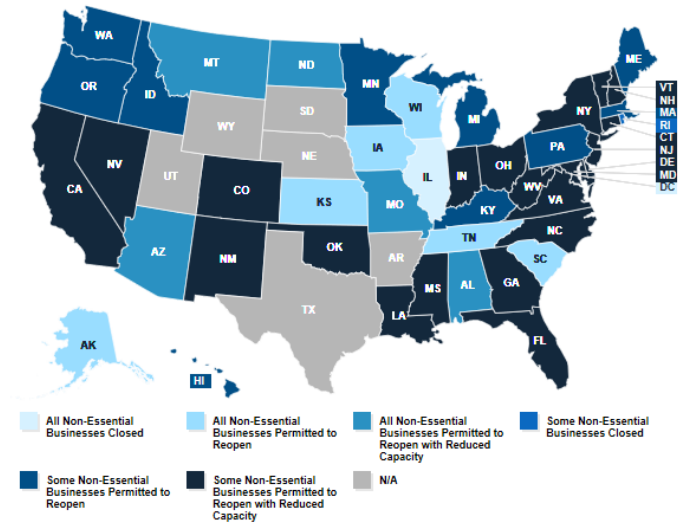
Stay at Home Order



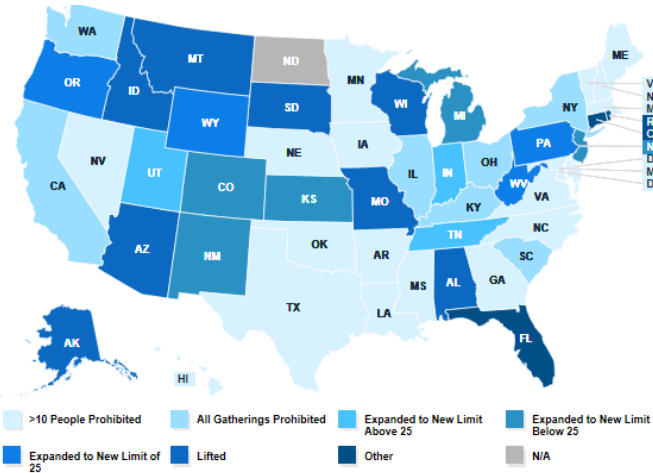
Mandatory Quarantine for Travelers



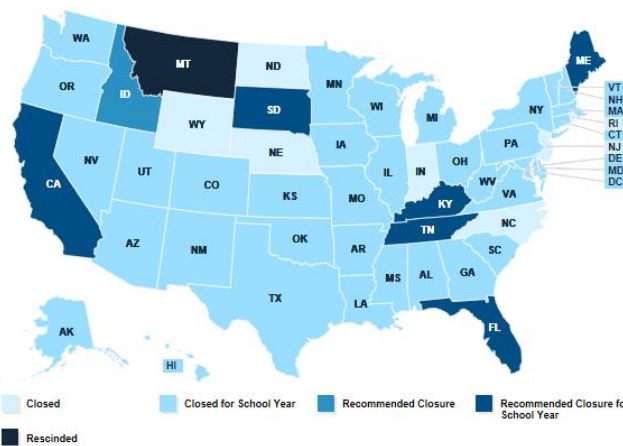
Non-Essential Business Closures



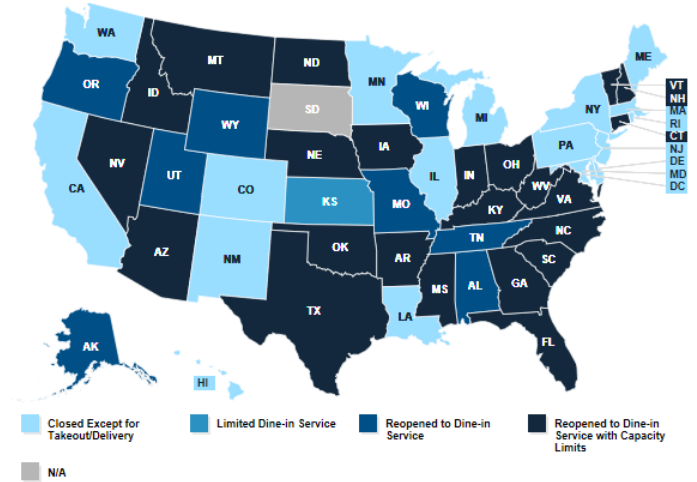
Large Gatherings Ban



School Closures



Restaurant limits



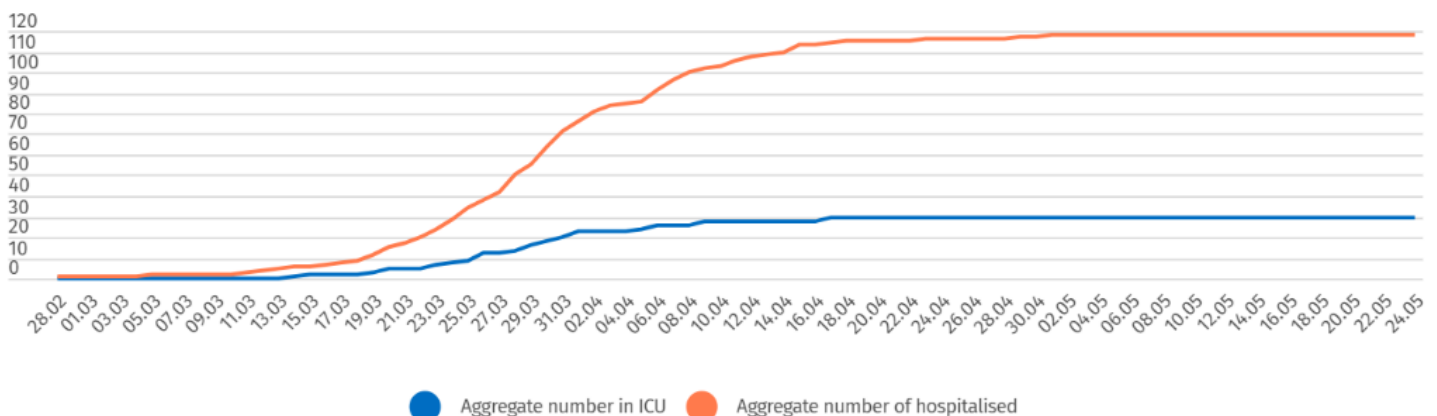
Country insight: Iceland²³

Overview

- Iceland has a unique geographical situation - an island state with few points of entry and the lowest population density in Europe
- Iceland took an early and robust approach to contact tracing, testing, isolation and quarantine, beginning testing from 1st February 2020
- Iceland has taken strict measures to limit the spread of the COVID-19 disease in the country, adopting aggressive testing, contact tracing and quarantine of individuals considered to be likely carriers.
- Very strict measures have been in place for several weeks to protect the groups considered most vulnerable from infection, as well as measures to minimize the risk of infection at medical facilities.
- Iceland has provided accessible public data throughout the pandemic, building trust within the population in the measures being taken. This was a contributing factor to them not having to impose a lockdown nationally.
- Relatively low numbers of patients have been hospitalised or needing ICU treatment:

Aggregate number of hospitalised patients with confirmed COVID-19 diagnosis

- Updated on Tuesdays



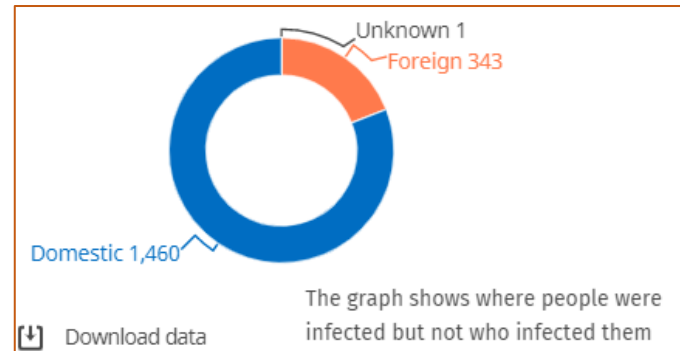
Key measures

- Early definition of high-risk areas
- Quarantine requirements of all residents returning from areas abroad
- Large-scale screening for COVID-19
- High infection tracing rate (over 95% to date)
- Quarantine requirements for anyone who has been in contact with infected individuals
- Ban on larger gatherings (20-person limit)
- University and upper secondary school-closures. Limited opening of elementary schools and preschools
- Active communication with the general public, including daily press briefings

²³ <https://www.covid.is/data>

Contact Tracing and Testing

- Iceland has tested a higher proportion of the population than most other countries yielding valuable insights into the behaviour of the virus. Approximately 59,000 tests have been carried out.
- Due to the robust contact tracing approach adopted, Iceland is able to identify the origin of the majority of infections, where overseas or domestic



Education

- There are no school restrictions as of 4th May in kindergartens and elementary schools. All students can attend school at the same time, go outdoors and attend a cafeteria. Organised sports activities are allowed without any restrictions. Sanitation and handwashing is encouraged and the two-meter social distancing rule should be respected as much as possible.
- Sports at school are carried out according to restrictions for organised sports for adults. Sanitation and hand washing are encouraged.
- Parents and other guardians are encouraged to read the Guidelines on children and the ban on gatherings Social centres may be open.
- Teachers, other staff or guests may not have more than 200 people in one place. Entertainment e.g. spring holidays, spring trips and graduations can take place with that restriction.
- High schools and universities are open, but the number of students is limited to a maximum of 200 persons.

Travel

Self-quarantine for 14 days is an obligation when arriving in Iceland. Restrictions on modified quarantine are extended, applied from 15th May where some professionals, including scientists, filmmakers and athletes will be eligible.

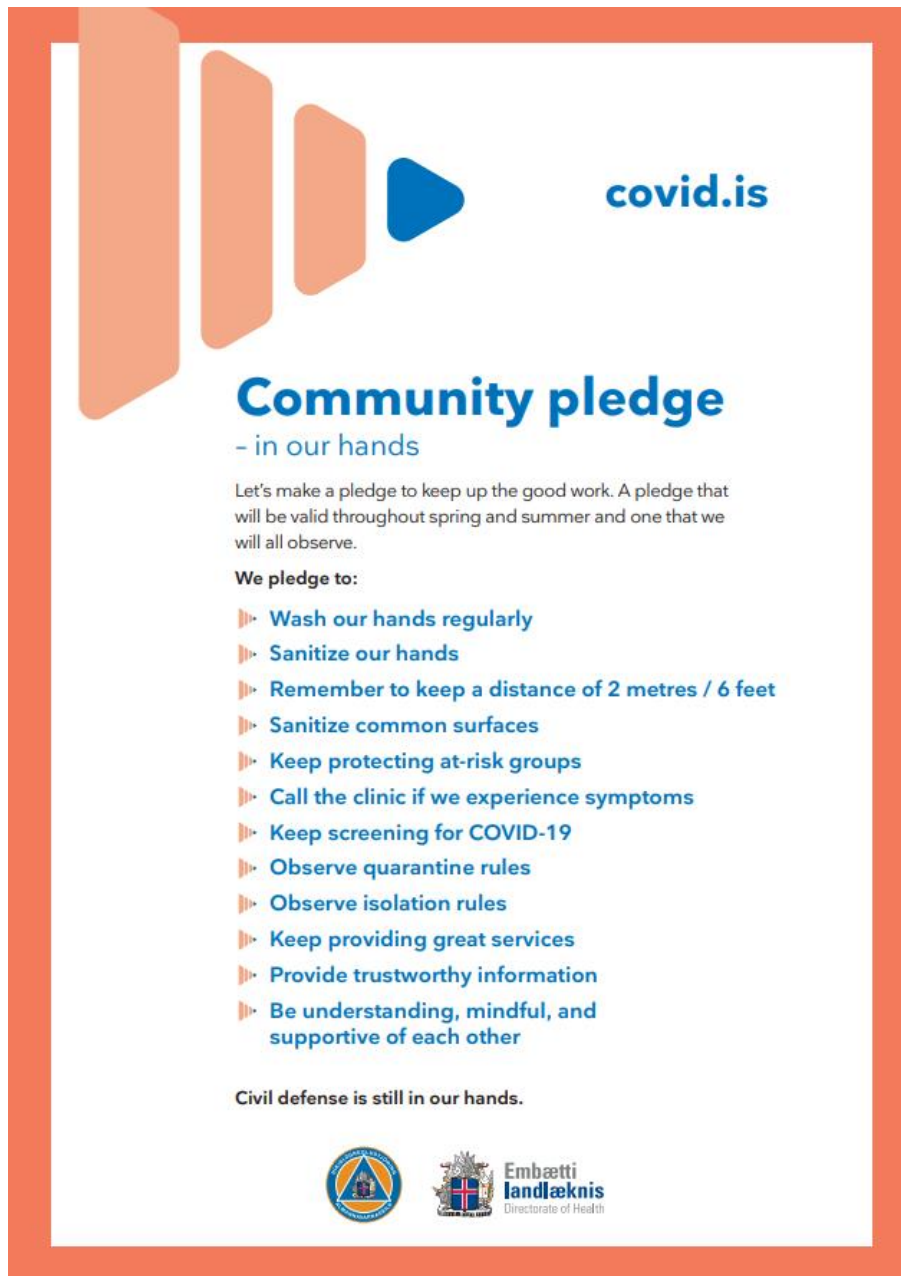
Greenland and Faroe Islands are no longer defined as high risk areas. Thus, there are no quarantine restrictions in Iceland when arriving from these countries. Travel restrictions and border measures will be re-evaluated before 15th June.

Adherence to lockdown and the easing of restrictions

Iceland has taken a trust-based approach to lockdown, only closing or limiting movement as and when necessary. It has invited nationals to take a '**community pledge**' (see next page), to foster individual responsibility in the outbreak response efforts. For example, its guidance on public gatherings states that social distancing should be interpreted more as a **societal norm and courtesy** for individuals who are vulnerable or have a preference for such distancing.

Iceland has begun to **ease restrictions**, including:

- Gym facilities may have a number of practitioners equal to half the maximum permitted number under the operating license. Limits of 200 people in the facility along with the two meters rule between individuals is followed, as much as possible. Special attention should be paid to hygiene and hand washing.
- Nightclubs, bars and game rooms. Lottery machines are open if disinfected and limits of 200 people along with the two meters rule between individuals is followed, as much as possible. Sanitation and hand washing are encouraged.
- Public swimming pools are open with restrictions. Children, born in 2015 and earlier, are not included in count of the facilities. Maintain a distance of 2 meters wherever possible.
- Healthcare services, dental practices and physiotherapy.
- Hair salons, massage parlours, physical therapy clinics, beauty parlours, museums, and other similar services.



covid.is

Community pledge



- in our hands

Let's make a pledge to keep up the good work. A pledge that will be valid throughout spring and summer and one that we will all observe.

We pledge to:

- ▶ Wash our hands regularly
- ▶ Sanitize our hands
- ▶ Remember to keep a distance of 2 metres / 6 feet
- ▶ Sanitize common surfaces
- ▶ Keep protecting at-risk groups
- ▶ Call the clinic if we experience symptoms
- ▶ Keep screening for COVID-19
- ▶ Observe quarantine rules
- ▶ Observe isolation rules
- ▶ Keep providing great services
- ▶ Provide trustworthy information
- ▶ Be understanding, mindful, and supportive of each other

Civil defense is still in our hands.

Embætti
landlæknis
Directorate of Health

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