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

Report 19, 19/11/2020

GIG CYMRU NHS WALES
Iechyd Cyhoeddus Cymru
Public Health Wales

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, and 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.

Disclaimer: The reports provide high-level summary of emerging evidence from country experience and epidemiology; research papers (peer-reviewed/not); and key organisations' guidance / reports, including sources of information to allow further exploration. The reports don't provide detailed or in-depth data/evidence analysis. Due to the novelty of COVID-19 virus/disease, and dynamic change in situation, studies and evidence can be conflicting, inconclusive or depending on country/other context.

In focus this week

- **COVID-19 and international travel**
- **Socio-economic impact of COVID-19, including on employment, migrant workers and QUALYs lost**
- **COVID-19 epidemiology update**

Contents

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

"The time has come for a fundamental shift towards health being seen as an investment, rather than a cost, and the foundation of productive, resilient and stable economies"
Dr Tedros Adhanom Ghebreyesus, WHO Director-General

COVID-19 and international travel

- There is **limited evidence** on how international travel contributes to COVID-19 rates
- Worldwide, countries have implemented **different mitigation cross-border measures**, including **exit/entry screening strategies and quarantine / self-isolation**
- **Screening strategies** can include symptoms assessment, temperature check, travel and contact exposure history, a requirement for a negative test prior to arrival, and rapid tests
- Overall, there is limited evidence to suggest that entry screening is effective with **high uncertainty and variation in accuracy of all screening strategies**
- **One-time screening** in asymptomatic people **is likely to miss infections**; and is of limited use without other public health measures
- **Temperature screening** is a **high-cost, low-efficiency** measure
- **Rapid tests** can accelerate COVID-19 testing, depending on their utility and performance, which is **still under investigation**
- Emphasis should be placed on **discouraging symptomatic individuals from travelling**
- **Priority** should be given to essential travel, such as emergency, humanitarian action, etc.
- **A comprehensive approach to supporting and managing travellers before departure and on arrival**, using a combination of preventative measures, is recommended
- Countries should perform **continuous risk assessment**, including current epidemiological situation, capacity of the national response; and **risk-benefit analysis**

More information is summarised on pp.5-8

Socio-economic impact of COVID-19

Economic recession and impact on employment

- COVID-19 has triggered an **economic recession** and **rapid rise in unemployment** in many countries globally:
  - ✓ 40-60 million people pushed into extreme poverty
  - ✓ Number of people facing food crisis will double
  - ✓ Over 90% of COVID-19 cases are reported in urban areas
  - ✓ Only 20% of unemployed people are covered by benefits (social protection)
  - ✓ About 1.6 billion informal workers have lost 60% of their income
  - ✓ Tourism is one of the hardest hit sectors with 100-120 million jobs at risk
- COVID-19 **socio-economic impact is felt differently** across countries, depending on their **underlying economic, demographic and governance** structures
- **Disproportionately high burden** on the **poor, women, informal workers, migrants, refugees, internally displaced and people with disabilities**
- **Pre-existing inequalities prevent** certain population groups **from coping** with the impact
- **Unemployment** is associated with **a two- to three-fold increased relative risk of death from suicide**, compared to those in employment

- The potential for **telework (working from home**) seems to be **lower in the countries hit hardest** by the crisis
- **Pre-existing digital divide** has been **exacerbated** by lockdown and school closures
- **Digital exclusion** is worse in the **elderly, unemployed, women, migrants and people with disabilities**

Impact on migrant workers

- **Migrants** are at a much higher risk of COVID-19 due to vulnerabilities, such as living in poverty, overcrowded housing, and working in jobs where physical distancing is difficult
- **Policy responses to mitigate unemployment among migrants** include:
  - ✓ Facilitating flexibility in visas/permits in case of unemployment and/or reduced income
  - ✓ Extending coverage of support measures
  - ✓ Extending work rights
  - ✓ Easing foreign credential recognition / other measures, especially in the health sector

Impact from lockdown and the induced economic recession in the UK

- The health impact from COVID-19 lockdowns and the induced recession are greater in terms of **Quality Adjusted Life Years (QALYs)*** than the direct COVID-19 deaths
- The **short-term (1 year)** negative health impact of lockdown / social distancing amount to 88,000 QALYs lost, mostly due to increasing mental health issues (depression/anxiety), musculoskeletal disorders and domestic abuse
- In the **mid-term (2-5 years after lockdown)**, the 18,000 excess deaths as a result of the lockdown-induced recession is equivalent to 157,000 QALYs lost
- Lockdown and the resulting recession are estimated to have the **greatest socio-economic impact on health over the short and long term combined** (from March 2020 to more than 5 years ahead), reducing England's health by **over 970,000 QALYs**
- Lockdown / social distancing measures has had a **profound health impact and severe health service disruptions**, including: delayed diagnosis; delayed, incomplete or interrupted therapy; delayed care-seeking for emergencies; worsened prognosis, and increased behavioural risk factors

More information is summarised on pp.9-13

COVID-19 epidemiology update

- **Most countries** across Europe, including the UK, are experiencing a **rise in COVID-19 cases**, i.e. increasing trends of case rate per 100,000
- The case rate trends are not always followed by increasing trends in death rate, i.e. **increasing death rates** are reported across Europe, while few countries, such as **Ireland, Norway and Finland, have retained stable death rates**
- **Testing rates are increasing** in most countries

More information is summarised on pp.14-15

***QALY is accounting for both quantity and quality of life. One QALY is equal to one year of life in perfect health. Definition at:** https://www.nice.org.uk/glossary?letter=q*

COVID-19 and international travel

Reducing the risk of COVID-19 transmission from international travel[1][2][3][4][5][6]

- Worldwide, countries have implemented **different mitigation cross-border measures** to prevent the introduction of new cases and stop/slow the spread of COVID-19
- Many countries in the European Union/European Economic Area (EU/EEA) and the UK are implementing **entry screening for passengers arriving by air, depending on the country of origin**, such as:
  - ✓ Filing in a Passenger Locator Form (PLF) to allow contact tracing
  - ✓ Filling in a Health Declaration Form about possible symptoms and exposure
  - ✓ Temperature screening upon arrival
  - ✓ A requirement for a negative test[7] before/upon arrival at destination
- 27 EU member states follow common criteria with a **traffic light system**, including testing, to restrict free movement *(see International Horizon Scanning report 18 from 05/11/2020)*[8][9]
- **European guidelines** recommend a set of **measures for national authorities and airlines**[10][11], including:
  - ✓ **Exit and entry screening**, such as checking for signs/symptoms and interviewing passengers about respiratory infection symptoms and exposure to high-risk contacts
  - ✓ **Symptomatic** travellers and identified **contacts** should be guided to seek or **channelled to further medical examination**, followed by a COVID-19 test
- The World Health Organization (WHO) **guidance on surveillance and contact tracing** recommends:
  - ✓ **Priority** should be given to essential travel, such as emergencies, humanitarian action, travel of essential personnel, and repatriation
  - ✓ Countries should conduct continuous **risk assessment**, including current epidemiological situation, capacity of the national response; and risk-benefit analysis

Effectiveness of mitigation strategies at country exit and entry points[1][2][3][4][6]

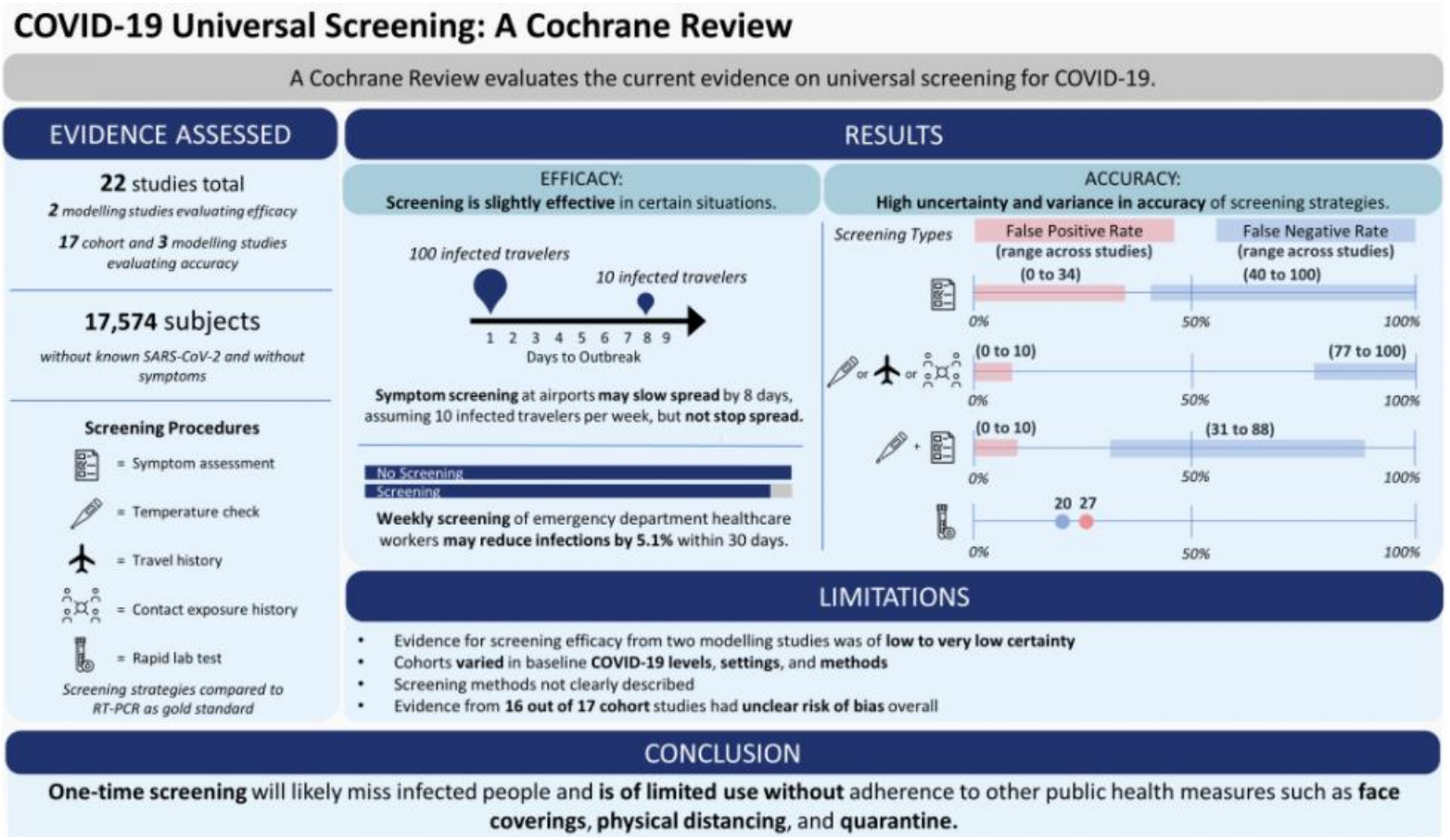
- There is **limited evidence** showing the extent to which international travel contributes to COVID-19 infection rates
- Evidence from previous outbreaks suggests that **entry screening using temperature control is a high-cost, low-efficiency measure**
- Emerging evidence suggests that **entry screening is ineffective** in preventing COVID-19 introduction**,** instead, emphasis should be placed on **discouraging symptomatic individuals from travelling**
- Multiple countries have implemented or are considering to implement **requirements for a recent negative test**, but the evidence behind this is unclear
- If a **recent test** is negative (for example, 72 hours prior to departure), it could reduce the risk of transmission of asymptomatic, pre-symptomatic or symptomatic COVID-19 cases
- A **comprehensive approach to supporting and managing travellers before departure and on arrival**, using a combination of preventative measures, is recommended

[1] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/travel-advice
[2] https://www.who.int/travel-advice
[3] https://www.who.int/news-room/articles-detail/updated-who-recommendations-for-international-traffic-in-relation-to-covid-19-outbreak
[4] https://www.who.int/news-room/articles-detail/public-health-considerations-while-resuming-international-travel
[5] https://www.ecdc.europa.eu/en/covid-19/facts/questions-answers-travel
[6] https://www.ecdc.europa.eu/sites/default/files/documents/Considerations-related-to-measures-for-travellers-reduce-spread-COVID-19-in-EUEEA.pdf
[7] ***COVID-19 antigen RT-PCR test***
[8] https://ihcc.publichealthnetwork.cymru/files/3116/0464/3971/PHW_COVID19_IntHorizonScan_Report_18_5Nov2020.pdf
[9] https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-during-coronavirus-pandemic/common-approach-travel-measures-eu_en
[10] https://www.ecdc.europa.eu/en/publications-data/covid-19-aviation-health-safety-protocol
[11] https://www.ecdc.europa.eu/sites/default/files/documents/EASA-ECDC_COVID-19_Operational-guidelines-for-management-of-passengers-issue-2.pdf

COVID-19 airport screening systematic review *(Figure 1)*[12]

- The effectiveness of airport screening was assessed across **Europe, USA, and Asia**
- **22 studies** were found: **17 observational (cohort, 17,574 people) and five modelling**
- **Screening procedures** included symptoms assessment, temperature measurements, travel history, contact exposure history, and rapid lab tests
- Observational studies compared screening strategies to the **'gold standard' COVID-19 antigen RT-PCR testing**
- **Conclusions:**
  - ✓ There is high uncertainty and variance in accuracy of all screening strategies
  - ✓ One-time screening in apparently healthy people is likely to miss infections; and is of limited use without other public health measures
  - ✓ It is not clear if combined screening, repeated symptom assessments, or rapid laboratory tests are effective

Figure 1. Airport screening systematic review: summary of evidence



COVID-19 rapid testing (comparison of seven commercial tests)[13*]

- Rapid antigen point of care tests (AgPOCT) are becoming available and can accelerate COVID-19 testing, depending on their utility and performance
- The sensitivity range of most AgPOCT overlaps with viral load figures typically observed during the first week of symptoms, which is the infectious period in the majority of patients
- Certain AgPOCTs may enable shortcuts in decision making in healthcare and public health

[12] https://www.cochrane.org/news/cochrane-rapid-review-investigates-effectiveness-screening-covid-19
[13] https://www.medrxiv.org/content/10.1101/2020.11.12.20230292v1.full.pdf ***NB: This is new research that has not been peer reviewed and should not be used to guide clinical practice!***

Country comparison of mitigation strategies

- **Air travel in 2020 has decreased by almost 50% (until now)** in comparison to 2019
- Preventative cross-border strategies are compared for selected countries *(Table 1)*
- Most countries require travellers to provide proof of a negative test, done in the 72 hours preceding arrival, and to complete **self-declaration health / passenger locator forms**
- In Sweden, no travel from non EU/EEA countries allowed until at least 22/12/2020[14]

Table 1. Country examples

Country	Requirements for travellers (air/land/water)	Test required and type (if identified)	Quarantine / self-isolation length (days)	Additional information
Belgium[15]	Pre-entry test Self-declaration form	Yes	10 (+4 extra vigilant)	Travellers staying less than 48h are not required to quarantine Test and a quarantine are not mandatory on return to Belgium
France[16]	Pre-entry test Self-declaration form	Yes - PCR	7	Traveller must quarantine if they: − Test positive at the airport − Display symptoms − Do not have a negative test 72h prior to arrival
Italy[17]	Pre-entry test Self-declaration form	Yes - PCR	10-21	Free tests are available at certain airports or testing facilities after arrival
The Netherlands[18]	Self-declaration form		10	Quarantine for 10 days on arrival, including those staying for less than 10 days
Spain[19]	Pre-entry test Self-declaration form	Yes - PCR	14	Travel allowed only from the EU, Schengen Area and specified countries
Denmark[20]	Pre-entry test	Yes – PCR	14	Entry only permitted for a limited set of criteria
China[21]	Pre-entry test Arrival screening	Yes - nucleic acid and IgM	14	Parents will be separated from their child/children if one parent tests positive
Singapore[22]	Pre-entry or on arrival test depending on country of departure	Yes - PCR	7-14	Travellers may be required to wear an electronic tracker for 14 days
New Zealand[23]	Pre-entry test	Yes - PCR	14	Travel is permitted for critical purposes only Mandatory 14-day isolation in a managed isolation / quarantine facility
Australia[2425]	Temperature screening	Yes	14	If travellers become unwell they must self-isolate and notify state authorities

Country insight: Germany[2627]

- The German government has expanded quarantine entry measures to create more unified regulations across the federal states[28]
- Travellers, who have spent time in a 'risk area' within 14 days prior to entry, can be subject to quarantine under a law issued by the German Federal State[29]

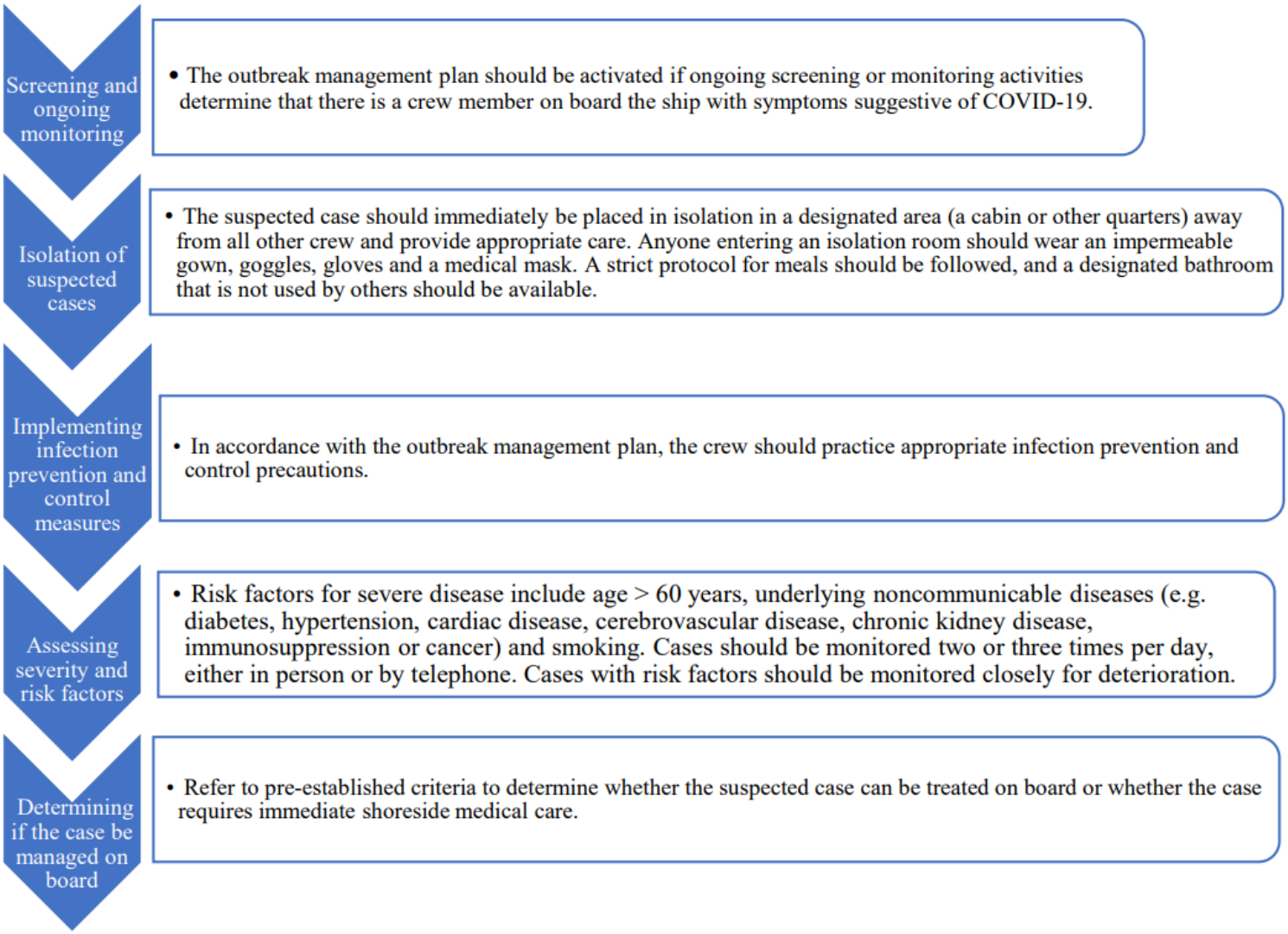
[14] https://www.swedenabroad.se/en/about-abroad-for-swedish-citizens/united-kingdom/travel-advice/travel-information/information-about-covid-19/
[15] https://diplomatie.belgium.be/en
[16] https://www.gov.uk/foreign-travel-advice/france/entry-requirements https://www.diplomatie.gouv.fr/en/coming-to-france/coronavirus-advice-for-foreign-nationals-in-france/
[17] https://www.esteri.it/mae/en/ministero/normativaonline/decreto-iorestoacasa-domande-frequenti/focus-cittadini-italiani-in-rientro-dall-estero-e-cittadini-stranieri-in-italia.html
[18] https://www.gov.uk/foreign-travel-advice/netherlands/entry-requirements
[19] https://www.spain.info/en/discover-spain/practical-information-tourists-covid-19-travel-spain/
[20] https://coronasmitte.dk/en/entry-into-denmark ; https://www.gov.uk/foreign-travel-advice/denmark/entry-requirements
[21] https://www.gov.uk/foreign-travel-advice/china/entry-requirements
[22] https://safetravel.ica.gov.sg/health/shn ; https://safetravel.ica.gov.sg/files/SHN-and-swab-summary.pdf
[23] https://www.immigration.govt.nz/about-us/covid-19/border-closures-and-exceptions
[24] https://www.gov.uk/foreign-travel-advice/australia/entry-requirements
[25] https://www.health.gov.au/sites/default/files/documents/2020/10/coronavirus-covid-19-information-for-international-travellers.pdf
[26] https://www.bundesregierung.de/breg-de/themen/buerokratieabbau/musterquarantaeneverordnung--1798178
[27] https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikogebiete_neu.html
[28] https://www.bundesregierung.de/breg-de/themen/coronavirus/faq-reisen-1735032
[29] https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/Archiv_Tests/Test_07102020_en.pdf?__blob=publicationFile

- Travellers from risk areas may be exempt from quarantine if they prove that they are not infected with COVID-19 (through prior testing/medical certificate)
- Antigen PCR tests are accepted and must be done within 48h prior to entry
- On arrival, travellers must report immediately to the responsible health authority
- The obligation to self-isolate may be removed if a negative result is received after a test, done at least five days of quarantine, unless symptoms appear
- Some states recommend that a test is repeated after five to seven days due to the potentially long incubation period of the virus
- There are certain exemptions to mandatory quarantine, for example, being an essential worker or having valid family reasons

Guidance for ships (cargo and fishing) *(Figure 2)*[30]

- Ship owners should have a written contingency plan covering surveillance and reporting; case management; cleaning and disinfection; communication; and training
- Pre-boarding screening advised for all persons to identify symptomatic/exposed individuals
- Risk analysis must take into consideration two potential types of exposure to COVID-19: (1) contact between shore personnel and crew members; and (2) contact between crew members, with zoning measures in place to minimise contact

Figure 2. Pathway to identify and care for suspected cases of COVID-19 on water vessels



[30] https://www.who.int/publications/i/item/WHO-2019-nCoV-Non-passenger_ships-2020.1

Socio-economic impact of COVID-19

This report provides **an update, focusing on employment, migrants and Quality Adjusted Life Years (QALYs)[31] lost,** related to COVID-19. See **earlier reports[32]**, including impact on:

- Children and young people; and mental health and wellbeing in ***Report 15/22Sept2020***
- Un/employment and related financial/health burden; specific and vulnerable groups; and BAME populations in ***Report 13/6Aug2020*** and ***Report 4/14May2020***
- Of lockdown; and homelessness in ***Report 10/25June2020*** and ***Report 7/4June2020***

Impact on employment and the economy

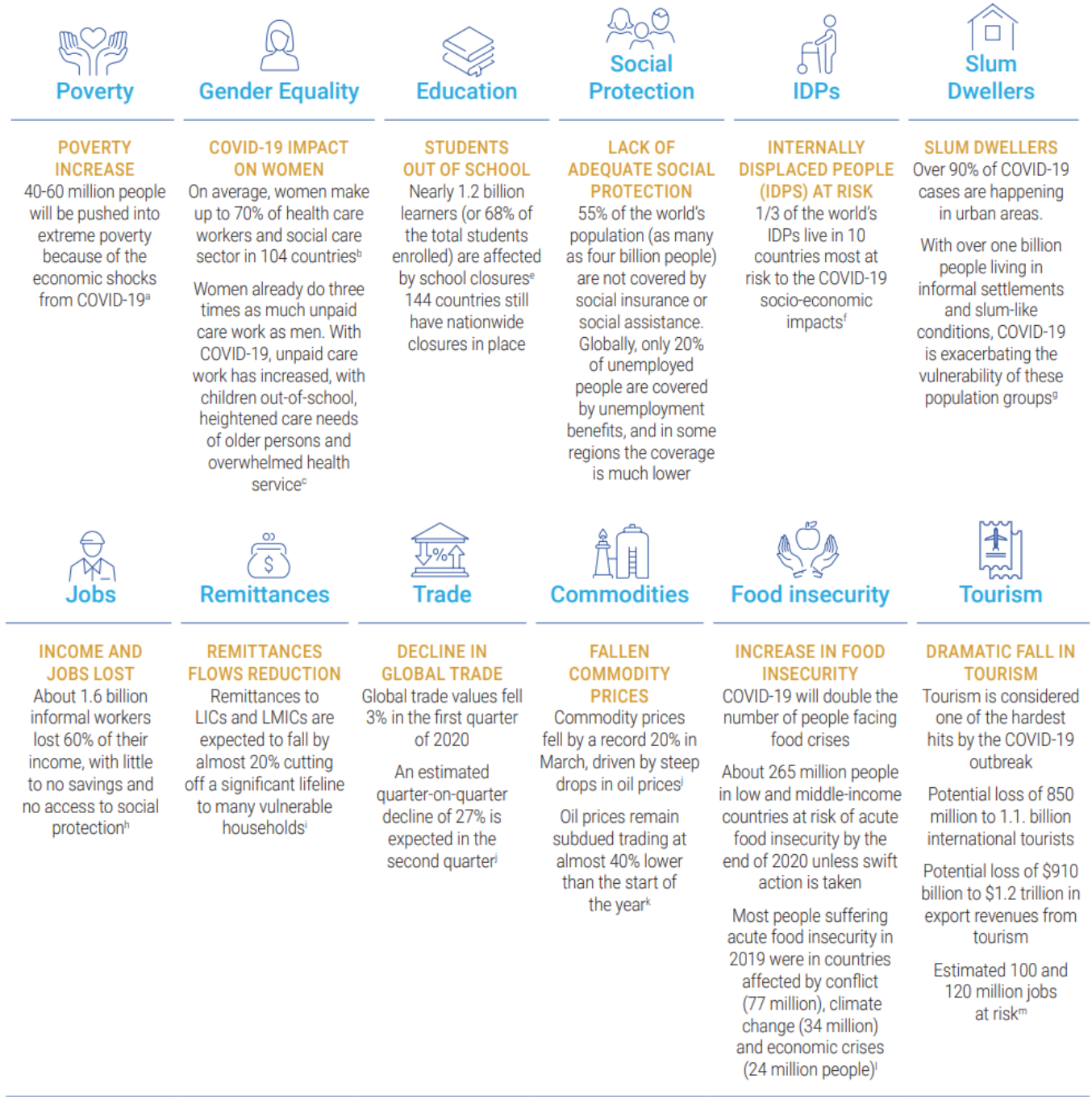
- COVID-19 has triggered an **economic recession** and rapid rise in **unemployment** in many countries worldwide[33]
- **GDP fell by 14%** and **retail trade volume fell by 1.8%** in Europe[34]
- The **largest decrease in the total retail trade volume** was observed in Romania, Slovenia (both -1.6%), and Portugal (-1.4%) in July[35]
- **People with disabilities** are at risk of more severe financial and economic impacts due to pre-existing socio-economic exclusion[36]
- Unemployment is associated with a **two- to three-fold increased relative-risk of death from suicide**, compared to those in employment[37]
- **In Australia**, recent statistics reveal an **increase in suicide rates** of 22% and 12% for unemployed men and women respectively[38]
- For those in **high-paid employment, work could be done at home**:
  - ✓ 83% for educational services
  - ✓ 80% for professional, scientific and technical services
  - ✓ 79% for management of companies and enterprises
- The potential for **telework (working from home) seems to be lower in the countries that are being hit hardest** by the COVID crisis[39]
- The share of **jobs that can be done at home exceeds 40% in Sweden and the UK**, decreasing in France (38%), Italy (35%) or Spain (32%)[40]
- While income has dropped for some groups, **spending has decreased** for more than half of the UK population, which has resulted in increased savings for some households[41]

Socio-economic impact across countries[42]

- 63 United Nations (UN) country-level socio-economic impact assessments done, including 31 from Africa; 11 from Latin America and the Caribbean; 9 from Asia-Pacific; 6 from the Arab States; and 6 from Europe and the Commonwealth of Independent States (CIS)
- Overview of findings shows *(Figure 3)*:
  - ✓ COVID-19 socio-economic impact is felt differently, depending on their **underlying economic, demographic and governance structures** at the local level
  - ✓ **Disproportionately high burden on the poor, women and informal workers, migrants, refugees, internally displaced people and the most vulnerable**
  - ✓ **Pre-existing inequalities** prevent certain population groups from coping with the impact

[31] ***QALY is accounting for both quantity and quality of life. One QALY is equal to one year of life in perfect health.*** https://www.nice.org.uk/glossary?letter=q
[32] https://ihcc.publichealthnetwork.cymru/en/news/covid-19-international-horizon-scanning-and-learning/
[33] https://www.bmj.com/content/bmj/371/bmj.m3687.full.pdf
[34] https://www.ifs.org.uk/publications/15077
[35] https://ec.europa.eu/eurostat/documents/2995521/10663810/4-05102020-AP-EN.pdf/f35894fa-382a-3b54-1029-70cc146d21ed
[36] https://www.sddirect.org.uk/media/2063/query-no-42-economic-impacts-of-covid-19.pdf
[37] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0051333
[38] https://academic.oup.com/ije/article/43/5/1500/696882
[39] https://link.springer.com/article/10.1007/s40812-020-00168-5
[40] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7162753/pdf/main.pdf
[41] https://data.gov.uk/dataset/b49458f4-38f3-4384-a9e3-89b606906845/socio-economic-impact-of-covid-19
[42] https://www.undp.org/content/undp/en/home/covid-19-pandemic-response/socio-economic-impact-of-covid-19.html

Figure 3. COVID-19 socio-economic country impact assessment findings (adapted)[43]

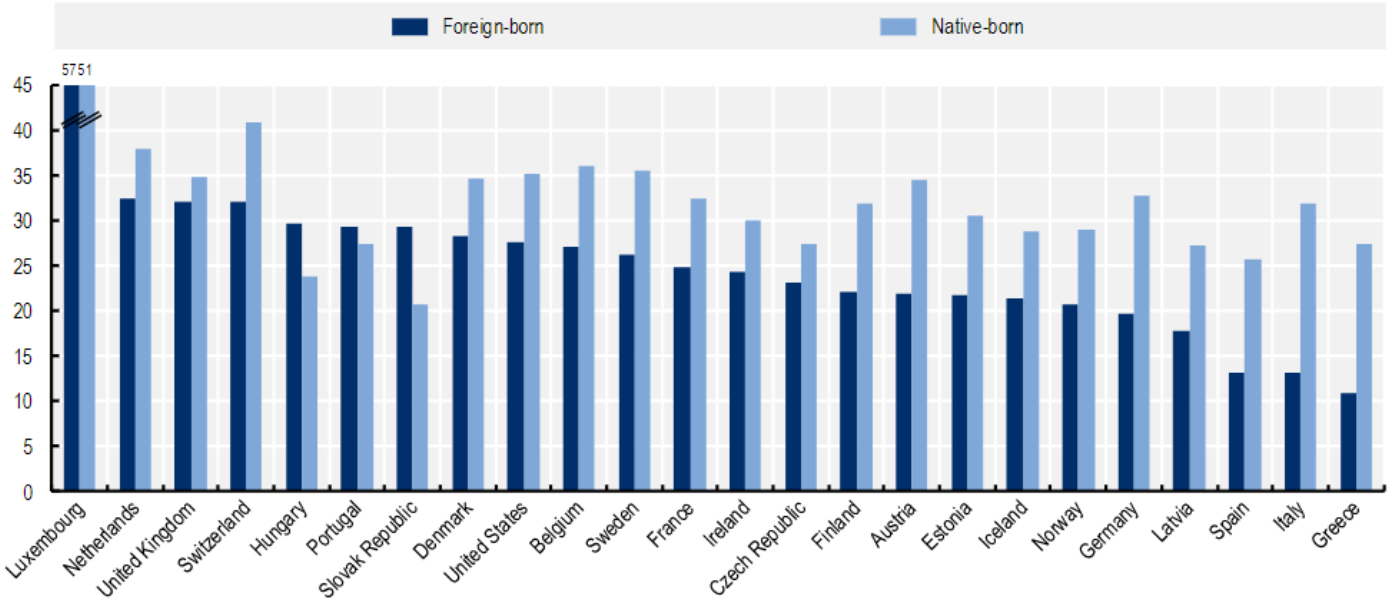


COVID-19 impact on migrants[44][45]

- Migrants are at a much higher risk of COVID-19 due to vulnerabilities, such as living in poverty, overcrowded housing, and working in jobs where physical distancing is difficult
- In most countries, the share of migrants able to work from home is at least 5% lower than native-born counterparts (*Figure 4*)
- The rise in unemployment for EU nationals in Germany and Austria is nearly twice as high as the increase in unemployment for nationals, but still lower than other migrant groups
- In Norway, migrant women from Central and Eastern Europe are the hardest-hit group thus far, with an increase in unemployment by more than 10%

[43] https://www.undp.org/content/undp/en/home/covid-19-pandemic-response/socio-economic-impact-of-covid-19.html
[44] https://www.oecd.org/sdd/labour-stats/unemployment-rates-oecd-10-2020.pdf
[45] https://read.oecd-ilibrary.org/view/?ref=137_137245-8sahegv0k3&title=What-is-the-impact-of-the-COVID-19-pandemic-on-immigrants-and-their-children%3F

Figure 4. Share of the employed population who can work from home (native-born verses foreign-born in OECD countries)[46]



Examples of policy responses to mitigate unemployment among migrants[47]

1) Facilitating **flexibility in visas/permits** in case of unemployment and/or reduced income
- Migrant workers who lose their jobs often struggle to comply with the conditions of their residency permits
- Spain, Greece, the Czech Republic and Germany did not withdraw permits for migrants who lost their job during the pandemic
- France, Slovenia, Estonia, Italy, Ireland, Poland, and Portugal automatically extended or renewed permits for a certain period
- A number of countries, including the Netherlands and Ireland, introduced policies to prolong the post-graduation stay of international students seeking employment

2) Extending coverage of support measures
- Many countries modified their access to, and the duration of, unemployment benefits
- Belgium included the COVID-19 pandemic within its "temporary unemployment due to force majeure" regime
- Sweden prolonged financial support to newly started businesses, among which businesses operated by immigrants are overrepresented

3) Extending work rights
- Czech Republic and Finland have allowed migrant workers, who have lost their jobs, to change employer area/sector of work
- New Zealand has allowed temporary foreign workers in essential services to adjust working hours, perform different roles in their current employment, or current role in a different workplace

4) Easing foreign credential recognition and other measures
- Chile and Spain facilitated recruitment in their national health services
- Belgium, Germany, Ireland and Luxembourg expedited applications for the recognition of foreign qualifications of health professionals
- France allowed foreign-trained health workers in non-medical roles in the health sector

[46] https://www.oecd-ilibrary.org/docserver/400cf397-en.pdf?expires=1604593995&id=id&accname=guest&checksum=403879ABD40C314B51FBEBE30E3AE4AD
[47] https://read.oecd-ilibrary.org/view/?ref=137_137245-8sahegv0k3&title=What-is-the-impact-of-the-COVID-19-pandemic-on-immigrants-and-their-children%3F

Country insight: Italy

- A **pre-existing digital divide** has been **exacerbated** by lockdown and school closures, highlighting an inadequate digital network, causing system-wide overload and slowdown
- **Digital exclusion** is worse in the **elderly, unemployed, women, migrants and people with disabilities**
- In Southern Italy, the percentage of families **without access to computers** exceeds 41% compared to 30% in other areas of the country[48]
- **Lockdown/social distancing** impacted **2.2 million companies, with 49% being suspended**. Solutions to re-open include:
  - ✓ **Accelerated automation** as a strategy to minimize risks for health while preserving production and economic activity[49]
  - ✓ **Increased financial support -** the European Commission has approved a €1.5 billion scheme to support companies operating in regions of Southern Italy[50]
  - ✓ **Decree-law** to implement further urgent measures in the field of health protection, support for workers and companies, justice and safety, related to COCID-19[51]

Country insight: QALYs loss, related to COVID-19, in the UK[52][53][54]

Direct and indirect health impacts of COVID-19 have been estimated using **QALYs** and **Years of Life Lost (ILL)**, including mortality (excess deaths) and morbidity.
These include:

- **Direct** health impacts from contracting COVID-19
- **Indirect** health impacts from **changes to health and social care**, including changes to emergency and elective (non-urgent) care, adult social care, primary and community care
- **Indirect** health impacts from factors affecting the wider population, both from **lockdown / social distancing and the resulting economic impacts** increasing deprivation

The **health impacts from COVID-19 lockdown and the induced economic recession are greater in terms of QALYs** than the direct COVID-19 deaths *(Figures 5 and 6, Table 2):*

- The **short-term (1 year) negative health impact of lockdown / social distancing** amount to **88,000 QALYs lost,** mostly due to **increasing mental health issues** (depression/anxiety), **musculoskeletal disorders and domestic abuse**
- In the **mid-term (2-5 years after lockdown),** the **18,000 excess deaths** as a result of the lockdown-induced recession is equivalent to **157,000 QALYs lost**
- **Lockdown and the resulting recession** are estimated to have **the greatest socio-economic impact on health** over the **short and long term combined** (from March 2020 to more than 5 years ahead), reducing England's health **by over 970,000 QALYs**
- **Lockdown and social distancing measures** are having **profound health impact** and **severe health service disruptions**, including: delayed diagnosis; delayed, incomplete or interrupted therapy; delayed care-seeking for emergencies; worsened prognosis (e.g. cancer), and increased behavioural risk factors (e.g. lower physical activity, etc.)

[48] https://www.researchgate.net/profile/Vincenzo_Auriemma/publication/344681154_COVID-19_Pandemic_Socio-Economic_Consequences_of_Social_Distancing_Measures_in_Italy/links/5f894d5da6fdccfd7b65628f/COVID-19-Pandemic-Socio-Economic-Consequences-of-Social-Distancing-Measures-in-Italy.pdf
[49] https://link.springer.com/article/10.1007/s40812-020-00168-5
[50] https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1847
[51] http://www.governo.it/it/curaitalia-misure-economiche
[52] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907616/s0650-direct-indirect-impacts-covid-19-excess-deaths-morbidity-sage-48.pdf
[53] https://www.ons.gov.uk/news/statementsandletters/estimatingtheimpactsofcoronavirusonenglandsmortalityandmorbidity
[54] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/morepeoplehavebeenhelpingothersoutsidetheirhouseholdthroughthecoronaviruscovid19lockdown/2020-07-09

Table 2. Direct and indirect health impacts of COVID-19: summary

1) Direct impacts	2) Indirect impacts dues to changes to health and social care			3) Indirect impacts due to measures and resulting economic impact		
1 year (3/2020-3/2021)	**Emergency & elective care**	**Adult social care**	**Primary & community care**	**Impacts of social distancing**	**Impacts of a lockdown-induced recession**	
Excess deaths = 530,000 QALYs lost & 700,000 YLL Morbidity = 40,000 QALYs lost Long-term health impacts unknown	Excess deaths = 41,000 (emergency for 1 year) / 45,000 (elective for 5 yrs) QALYs lost Morbidity = 140,000 (emergency for 1 year) / 90,000 (elective for 5 yrs) QALYs lost Mental health impact on staff (for 1 year) = 17,000 QALYs lost	Non-COVID excess deaths in care homes = 73,000 QALYs lost Morbidity impact not possible to quantify Mental health impacts on staff (for 1 year) = 21,000 QALYs lost	Excess deaths from cancer (for 1 year) = 3,500 QALYs lost Morbidity impact not possible to quantify	Mortality = 30,000 QALYs gained (less deaths due to better air quality, lower alcohol misuse, road injuries and childhood infectious diseases / more deaths due to lower physical activity, increased home accidents, self-harm and musculoskeletal conditions) Morbidity = 134,000 QALYs lost (more mental health issues, musculoskeletal and domestic abuse)	***Short-term*** Mortality = 30,000 QALYs gained Morbidity = 17,000 QALYs gained (less unintentional & transport injuries, and chronic respiratory diseases / more mental health issues)	***Medium-/long-term*** Excess deaths = 157,000 QALYs lost (2-5 yrs, mostly due to cardiovascular disease) Morbidity = 438,000 QALYs lost (more musculoskeletal and mental health issues) Mortality impact (more than 5 yrs) = 294,000 QALYs lost

Health impact of COVID-19-related to reduction of health care services[55]

- During lockdown, **referrals via the 2-week-wait urgent pathway for suspected cancer** are reported to have **decreased by up to 84%**
- **Changes in health-seeking behaviour**, and the **availability of and access to essential diagnostic services** may result in additional deaths from breast, colorectal, lung, and oesophageal cancer in the medium (1 year) and longer term (5 years)
- Depending on the referrals backlog, months in lockdown and diagnostic capacity, it is estimated that COVID-19 may have caused **361-1231 additional lives lost due to delayed cancer screening[56]**

Cancer	Lower estimate	Central estimate	Upper estimate
Excess deaths	820	1420	2010
LY lost	2750	4930	7320
QALYs Lost (mortality)	1920	3450	5130
QALYs lost (morbidity)	140	260	390
Total QALYs lost	2070	3710	5510

Impact on carers and front-line social care workers[57]

- Of the 4,830 current and 217 former carers surveyed, 11% reported that their caring responsibilities had been **affected by additional pressures** from the measures imposed
- **70%** reported that **they are providing more care** and **22% were more anxious** about contact time with clients
- **Social care workers** diagnosed **with severe to mild levels of anxiety/depression** could be losing between **3,000 and 64,000 QALYs in total**

[55] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907616/s0650-direct-indirect-impacts-covid-19-excess-deaths-morbidity-sage-48.pdf
[56] https://pubmed.ncbi.nlm.nih.gov/32702311/
[57] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/morepeoplehavebeenhelpingothersoutsidetheirhouseholdthroughthecoronaviruscovid19lockdown/2020-07-09

COVID-19 epidemiology update

EU/EEA countries and the UK

A comparison between case rate, death rate, positivity rate (% of positive tests) and testing rate across Europe is presented in *Table 3, as of 13th November 2020*[58].

Cases reported over the latest 14-day period

- All countries currently have a case rate greater than 1,000 per 100,000 population
- Highest case rates are currently in countries such as Czechia, Luxembourg, Belgium, Liechtenstein and Slovenia
- Current case rate for the United Kingdom is 476.3 per 100,000 population
- The lowest case rates are currently in Iceland, Ireland, Latvia, Estonia, Norway and Finland - all below 200 per 100,000 population

Deaths reported over the latest 14-day period

- Czechia currently has the highest death rate (244.5 per 1,000,000 population), closely followed by Belgium (202.4 per 1,000,000 population)
- Current death rate for the United Kingdom is 62.2 per 1,000,000 population
- The lowest death rates are currently in Denmark, Cyprus, Finland, Norway and Estonia - all below 10 per 1,000,000 population

Testing for COVID-19

- Luxembourg and Denmark have the highest testing rates, 11,046 and 7,944 per 100,000 population, respectively
- The testing rate for the United Kingdom is currently 3,185 per 100,000 population
- Romania and Bulgaria have the lowest testing rates, 1,085 and 1,019 per 100,000, respectively

Other countries

Singapore[59][60]

- Latest data shows 58,091 cases in total, since the start of the pandemic and 28 deaths
- Cases have been considerably lower since the end of the July, and very small number of deaths reported in the same period
- 19,900 per 100,000 tested over the course of the pandemic, as of 13th November 2020

New Zealand[61][62]

- There have been 1,635 cases and 25 deaths since the start of the pandemic
- The number of cases in recent weeks is considerably lower than that observed towards the end of March, but marginally higher than in June/July 2020
- 1,162,740 COVID-19 test carried out as of13th November 2020

[58] https://covid19-country-overviews.ecdc.europa.eu/#3_eueea_and_the_uk
[59] https://covid19.who.int/region/wpro/country/sg
[60] https://www.moh.gov.sg/covid-19
[61] https://covid19.who.int/region/wpro/country/nz
[62] https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-testing-data

Table 3. 14-day case and death rates (per 1,000,000), positivity (%) and testing rate (per 1,000,000) for countries of the EU/EEA and the UK (extracted 13/11/2020)

Country	Case rate		Death rate		Positivity (%)		Testing rate	
	Value	Trends	Value	Trends	Value	Trends	Value	Trends
Czechia	1506.3		244.5		31.1		2,299	
Belgium	1366.4		202.4		21.4		2,239	
Hungary	515.4		103.7		23.8		1,310	
Slovenia	1105		94.7		28.4		1,687	
Spain	602.3		86.9		13		2,354	
Poland	736.6		86.5		35.7		1,174	
France	988.2		82.4		19.8		2,174	
Croatia	754.2		79.2		26.6		1,417	
Bulgaria	527.5		78.3		30.3		1,019	
Romania	469.8		76		26.4		1,085	
Luxembourg	1428.3		66.8		6.7		11,046	
Italy	659.4		63.8		15.9		2,331	
United Kingdom	476.3		62.2		7.5		3,185	
Netherlands	712.8		54.4		16.5		1,862	
Portugal	558.9		53.6		13.3		2,365	
Liechtenstein	1107.4		52.1					
Malta	337.1		44.6		4.1		4,980	
Austria	753.3		38.4		20		2,253	
Slovakia	603		35.2		18.4		1,592	
Lithuania	470.3		26.5		11.4		2,476	
Latvia	177.8		21.9		5.1		2,043	
Iceland	187.4		19.6		2.1		2,693	
Greece	231.4		17.3		10.5		1,383	
Germany	276.2		15.1		8		1,888	
Ireland	178.4		12.8		4.3		1,599	
Sweden	414.2		10.5		10.8		2,229	
Denmark	255.2		6.9		1.7		7,944	
Cyprus	277.1		3.4		5.6		3,064	
Finland	49.5		1.6		1.4		1,593	
Norway	112.5		1.1		2.2		3,104	
Estonia	119.4		0		6.5		1,201	

The International Horizon Scanning and Learning reports are developed by the International Health Team (the International Health Coordination Centre, IHCC) at the WHO Collaborating Centre on Investment for Health and Well-being (WHO CC), Public Health Wales.

Executive lead and Director of the WHO CC: Professor Mark A Bellis

International health lead: Dr Mariana Dyakova (mariana.dyakova@wales.nhs.uk)

Senior programme manager: Lauren Couzens (lauren.couzens@wales.nhs.uk)