

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

Report 9, 18/06/2020



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, 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

-  **Repeat testing**
-  **Social distancing**
-  **Strengthening community resilience**

## Contents

|   |           |
|---|-----------|
| <b>At a glance: summary of international learning on COVID-19 .....</b> | <b>3</b>  |
| <b>Repeat testing .....</b>   | <b>5</b>  |
| <b>Social distancing.....</b>   | <b>11</b> |
| <b>Strengthening community resilience .....</b>                         | <b>15</b> |

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

*“It’s critical that we learn the lessons from the COVID-19 pandemic, which remind us once again that we are only as strong as the weakest link.”  
Dr Tedros Adhanom Ghebreyesus, WHO Director-General*

### Repeat testing

- ✚ Currently, there is a **lack of a clear-cut “gold-standard” for COVID-19 testing**, making the evaluation of testing accuracy challenging
- ✚ **Repeat testing** can be a useful tool **when complemented with preventative measures and with readily available** testing capacity / facilities, but it **should not be relied upon as a sole measure** for decision-making
- ✚ The use of **repeat RT-PCR testing** as a “gold standard” **is likely to underestimate the true rate of false negatives**, increasing the risk of COVID-19 transmission
- ✚ **Rapid serology test kits need to be developed** and their clinical performance needs to be demonstrated before deployment at scale
- ✚ Currently, there is **no evidence that COVID-19 serology (antibody) tests show if a person has developed immunity** and is no longer at risk of becoming re-infected
- ✚ **False positive serology (antibody) tests could cause false reassurance**, behaviour change, and higher risk of disease spread
- ✚ **Variation of testing** strategies and protocols has **significantly impacted countries' reported statistics**, including case fatality rates and the age distribution of cases
- ✚ Some countries have **focused testing on vulnerable communities and populations**, such as those who are socially / economically deprived or at high risk due to working environment
- ✚ An **effective strategy that tests, tracks people infected and traces their contacts** (TTT), helps to reduce the spread of the virus and bring its R number below one

More information is summarised **on pp.5-10**

### Social distancing

- ✚ There is **no consensus** on an optimal social (physical) distancing rule
- ✚ Countries have established **varying** social distancing measures, ranging from 1m to 2m, which have **not changed considerably** since lockdown started
- ✚ It is **no clear correlation** between the implemented social distancing measures and the rate of infection (R value; number of cases and deaths) across different countries
- ✚ There is an association between proximity of the exposed individual with the risk of infection:
  - ✓ **1m social (physical) distancing rule is highly effective**
  - ✓ **2m distancing decreases the chance of infection by a further 50%**
- ✚ It is **not clear to what extent time duration has been considered** as a contributing factor to the risk of infection when comparing social distancing measures
- ✚ The effectiveness of each social distancing measure should **not be considered in isolation but in the context** of the specific setting and different other measures

More information is summarised **on pp.11-14**

## Strengthening community resilience

- ✚ Governments need to work **together with people, communities and partners across sectors to “Build Back Better”** towards more sustainable and resilient societies
- ✚ “Building back better” -
  - ✓ involves using crisis as **an opportunity to transform bureaucracies, attitudes and infrastructures; to improve peace, equity, sustainability and adaptability**
  - ✓ requires **integration of short- and long-term perspective**, as early-decisions and investment can determine long-term recovery rate, inclusiveness and sustainability
- ✚ A **holistic approach**, including public health measures and wider cross-sector multi-agency action is essential - **rights-based, evidence informed, equity and gender responsive; culturally and context tailored**
- ✚ Focused **support to different settings and communities, especially vulnerable / deprived ones** is essential for strengthening resilience
- ✚ **Links and synergies between governance levels** (national – regional – local) and institutions should be strengthened
- ✚ Appropriate, consistent, timely, transparent, credible, culturally and context tailored **public health communication** and engagement are critical
- ✚ **Four key inter-related areas** for action:
  1. **Support adherence** by individuals and communities to public health measures necessary to prevent COVID-19 transmission
  2. **Mitigate wider public health impacts** (including from the public health measures, e.g. lockdown) with a special **focus on inequalities and vulnerable groups**
  3. Promote and **support urban and settings-based resilience**, through identifying risks and solutions, supporting **community-based initiatives, coalitions and partner engagement**, including the **third and the private sectors**
  4. Actively support communities to recover and thrive, by **achieving sustainable health outcomes and future proofing societies** from experiencing similar shocks

More information is summarised **on pp.15-17**

## Repeat testing

### Overview<sup>1</sup>

- COVID-19 testing can detect:
  - ✓ Current infection (presence of SARS-CoV-2 virus) with or without symptoms, through *RT-PCR (Reverse transcription polymerase chain reaction)* test (throat/nose swab)
  - ✓ Past infection (presence of antibodies produced in response to the virus) with or without symptoms, through *serology / antibody testing* (blood sampling)
- Countries have adopted a broad range of testing strategies, varying in choosing whom to test, how often to test, analysis protocols, sample collection and the uses of test results
- Variation of testing strategies and protocols has likely significantly impacted countries' reported statistics, including case fatality rates and the age distribution of cases
- There is currently a lack of a clear-cut "gold-standard" for COVID-19 testing, making the evaluation of test accuracy challenging<sup>2</sup>
- There is no evidence currently, that COVID-19 serology (antibody) tests show if a person has developed immunity and is no longer at risk of becoming re-infected
- Rapid serology test kits need to be developed and their clinical performance needs to be demonstrated before deployment at scale can happen<sup>3</sup>
- An effective strategy that tests, tracks people infected and traces their contacts (TTT), helps to reduce the spread of the virus and bring its R number below one

### COVID-19 RT-PCR and serology (antibody) test accuracy<sup>4</sup>

A systematic review of the accuracy of COVID-19 tests reports **false negative rates of between 2% and 29%** (equating to sensitivity of 71% to 98%), based on negative RT-PCR tests which were positive on repeat testing (*Figure 1*).

In summary:

- The use of repeat RT-PCR testing as a "gold standard" is likely to underestimate the true rate of false negatives, as not all patients received repeat testing, and those with clinically diagnosed COVID-19 were not considered as actually having the infection
- RT-PCR tests have limitations when used to guide decision making for individual patients. Positive tests can be useful to "rule-in" COVID-19, a negative swab test cannot be considered definitive for "ruling out"
- The time course and accuracy of serology tests are still under investigation, but the same principles of incorporating the test result with the clinical impression applies
- False positive serology tests could cause false reassurance, behaviour change, and disease spread
- If suitable accuracy can be established, the benefits of these antibody tests include establishing when healthcare workers are immune, helping to inform decisions about the lifting of lockdowns, and allowing the population to return to work

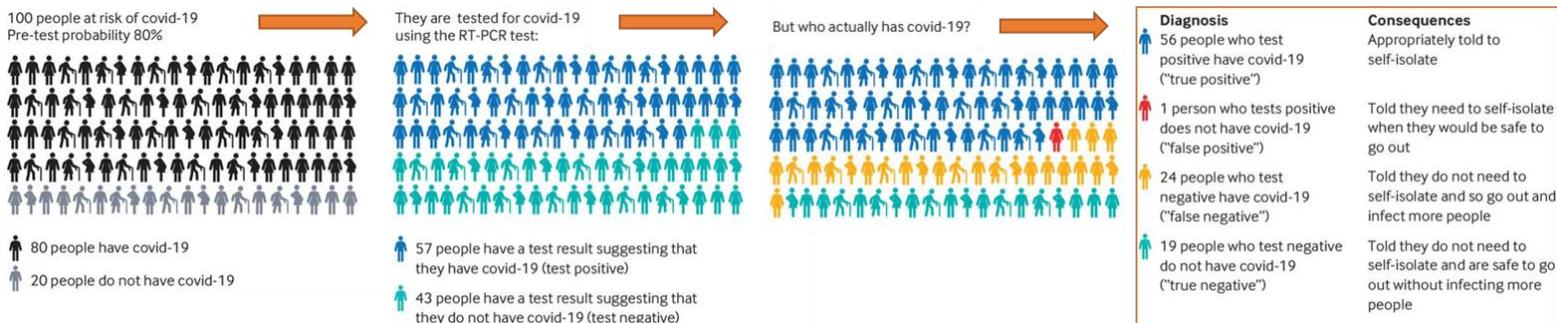
<sup>1</sup> <http://www.oecd.org/coronavirus/policy-responses/testing-for-covid-19-a-way-to-lift-confinement-restrictions-89756248/>

<sup>2</sup> <https://www.bmj.com/content/369/bmj.m1808>

<sup>3</sup> <http://www.oecd.org/coronavirus/policy-responses/testing-for-covid-19-a-way-to-lift-confinement-restrictions-89756248/>

<sup>4</sup> <https://www.bmj.com/content/369/bmj.m1808>

**Figure 1. Outcomes when a 100 people with a pre-test probability of 80% are tested for COVID-19 (adapted image)**



## Evidence and practice insight: North America

### Nursing homes guidelines for testing (CDC)<sup>5</sup>

- **After initial viral testing** of all residents and Health Care Practitioners (HCP), **repeat testing is recommended** to ensure there are no new infections among residents and HCP, and that transmission has been terminated as described below
- Repeat testing should be coordinated with the local, territorial, or state health department
- Immediately perform viral testing of any resident or HCP who subsequently develops signs or symptoms consistent with COVID-19
- **Continue repeat viral testing of all previously negative residents and HCP, generally between every 3 days to 7 days**, until the testing identifies no new cases among residents or HCP for a period of at least 14 days since the most recent positive result
- If viral test capacity is limited, **repeat rounds of testing to residents who leave and return** to the facility (e.g. for outpatient dialysis) or have known exposure to a case (e.g., roommates of cases or those cared for by a HCP with confirmed infection).
- For large facilities with limited viral test capacity, **testing all residents on affected units** could be considered, especially if facility-wide repeat viral testing demonstrates no transmission beyond a limited number of units
- If testing capacity is limited, **repeat testing to HCP who work at the current facility and also work at other facilities** where there are known cases
- At the start of each shift, take the temperature of all HCP and ask about the presence of COVID-19 symptoms; perform viral testing of any HCP who have signs or symptoms
- At least daily, take the temperature of all residents and ask them about presence of COVID-19 symptoms; perform viral testing of any residents who have signs or symptoms

### Emerging evidence from enclosed settings testing

#### Findings from a test/retest strategy study in a nursing home<sup>6</sup> (79 residents, 34 HCP)

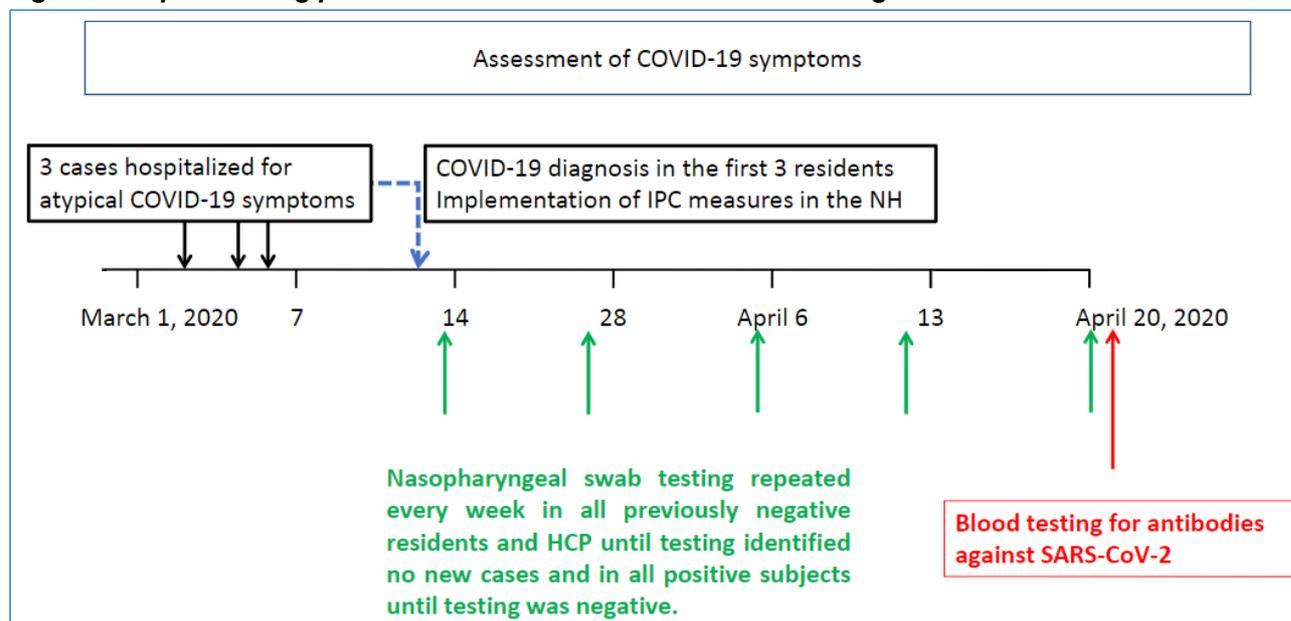
- Seven days after identification of a COVID-19 resident, all residents and HCP underwent RT-PCR testing with nasopharyngeal swabs
- This was repeated weekly in all previously negative subjects until the testing identified no new cases; and in all positive subjects until the testing was negative (*Figure 2*)

<sup>5</sup> <https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-testing.html>

<sup>6</sup> <https://www.sciencedirect.com/science/article/pii/S1525861020305181?via%3Dihub>

- A wide testing strategy is effective in detecting asymptomatic COVID-19 residents/ HCP
- Six weeks after initial testing, all residents underwent serology/antibody testing

**Figure 2. Repeat testing procedure of residents and staff in a nursing home**



### COVID-19 diagnostic testing in nursing facilities: recommendations of a Delphi Panel of Long-Term Care Clinicians<sup>7</sup>

- Aggressive testing has been a hallmark and best practice for countries to “flatten the curve”
- Taking the same approach in enclosed settings, such as assisted living facilities, is essential because of the susceptibility of the population
- Testing every 1 to 2 weeks is recommended, if testing is readily available, based on the incubation period for developing symptoms varies from 3–5 days up to 2 weeks
- Consistent support for point prevalence facility-wide testing of all staff and residents when testing is readily available
- Aggressive use of testing, intensive infection prevention and control procedures, and PPE provides the best protection for both residents and staff

### Temperature checking in nursing home residents systematically tested for COVID-19<sup>8</sup>

- While fever adds specificity for COVID-19 screening, fever of 38°C has not been reliably present, even for those reporting to the hospital
- A fever threshold definition of 38°C can serve as an excellent proxy for underlying COVID-19 population prevalence, but such a threshold lacks sensitivity for surveillance purposes when applied to a nursing home population
- Most older residents do have temperature elevations when infected with SARS CoV-2, but this elevation rarely meets a fever threshold 38°C. Lower temperature excursions, such as 0.5°C, can improve sensitivity, and recurrent excursions
- Consideration of triggering COVID-19 screening based on an excursion threshold from a personalized temperature range may lead to earlier recognition of COVID-19 activity

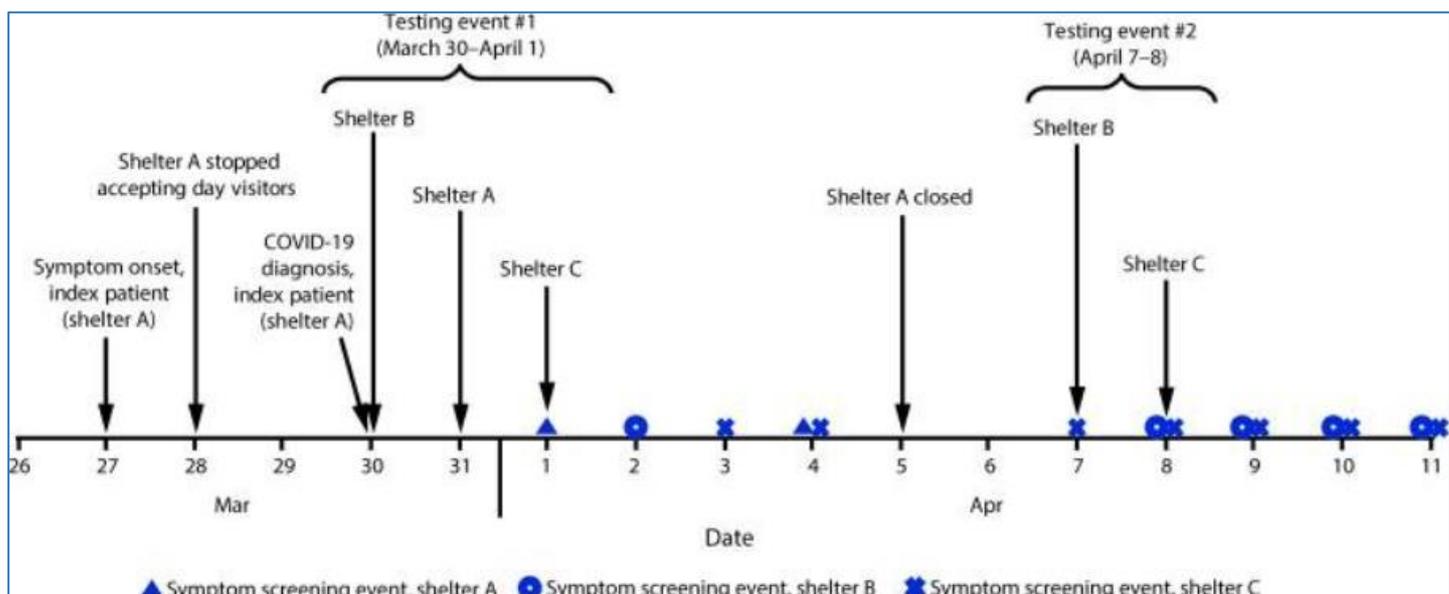
<sup>7</sup> <https://link.springer.com/article/10.1007/s12603-020-1401-9>

<sup>8</sup> [https://www.jamda.com/article/S1525-8610\(20\)30513-2/pdf](https://www.jamda.com/article/S1525-8610(20)30513-2/pdf)

### Homeless shelters testing (USA)<sup>9</sup>

- COVID-19 testing offered to all residents and staff members at three homeless shelters
- From 181 tested, 19 (10.5%) had positive results, incl. 15 residents and four staff members
- Repeat testing was offered to all residents and staff members who were not tested initially or who had negative test results
- From 118 persons tested in the second round, 18 (15.3%) were positive (16 residents and two staff members)
- Two additional cases in residents identified during separate symptom screening; and four identified after two residents and two staff members independently sought health care
- In total, COVID-19 was diagnosed in 35 of 195 (18%) residents and eight of 38 (21%) staff members who received testing at the shelter or were evaluated elsewhere (*Figure 3*)
- Recommendation for homeless service providers to implement appropriate infection control practices; apply physical distancing measures, incl. ensuring resident's heads are at least 2m while sleeping; and promote use of cloth face coverings among all residents<sup>10</sup>

**Figure 3. Timeline outbreak and testing practice at three homeless shelters**



### Country comparison summary

- Of the countries reviewed, **most have implemented focused or repeat testing** strategies to complement their national public health responses
- Most countries have **focused testing on vulnerable communities and populations**, such as those who are socially and economically deprived or at higher risk due to their working environments

**Repeat / targeted testing strategies in selected countries are presented below.**

<sup>9</sup> <https://www.cdc.gov/mmwr/volumes/69/wr/mm6917e2.htm>

<sup>10</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7206987/>

| Country                        | Evidence of repeat / targeted testing strategies  | Other information  |
|--------------------------------|---|--|
| <b>Ireland</b> <sup>1112</sup> | <p>Priority for testing given to symptomatic people in the following groups:</p> <ul style="list-style-type: none"> <li>• Close contacts of a confirmed case</li> <li>• Frontline health care workers</li> <li>• Groups most at risk of severe infection and their households</li> <li>• Staff and residents of nursing homes and other residential care settings and those in direct provision</li> <li>• Homeless, Roma and travelling community settings where symptom management is difficult</li> <li>• Prison staff and inmates where it may be difficult to implement self-isolation advice</li> <li>• Pregnant women</li> </ul> | A sero-prevalence study of several thousand people from Dublin and Sligo began in June to obtain a better idea of the spread of the virus among the Irish population   |
| <b>France</b> <sup>1314</sup>  | <p>Testing measures to ease restrictions include the systematic testing of:</p> <ul style="list-style-type: none"> <li>• Health professionals</li> <li>• Older people and vulnerable individuals</li> <li>• Anyone with COVID-19 or in contact with an infected case</li> </ul>   | Asymptomatic people identified as contacts of a confirmed case can receive a serological test  |
| <b>Germany</b> <sup>15</sup>   | <ul style="list-style-type: none"> <li>• Since 25/03 all people in nursing homes, schools or day care centres can be tested if a case has occurred in the facility</li> <li>• Nursing homes and nursing services can be tested regardless of cases. The responsible health authority decides whether such a measure will be carried out.</li> <li>• Those hospitalised are tested</li> </ul>  | A preliminary unpublished study investigated COVID-19 antibodies in the population of Gangelt, a municipality of around 12,000 people. It found that 14% of the population had antibodies. The relatively high percentage is likely caused by a carnival that took place in the village                |
| <b>Italy</b> <sup>16</sup>     | <p>A patient can be declared recovered when symptoms have cleared and two tests, taken at least 24 hours apart, show a negative result. Guidance on the timing of repeat testing states:</p> <ul style="list-style-type: none"> <li>– Positive patients still showing symptoms must be tested no earlier than 7 days after the first positive test</li> <li>– If asymptomatic, the second test should be performed no earlier than 14 days from the first positive result</li> </ul>  | The Lazio Regional Council approved 300,000 antibody tests on workers in healthcare (community, private and nursing homes) and law enforcement   |
| <b>Belgium</b> <sup>17</sup>   | <p>Since 08/05 testing in order of priority:</p> <ul style="list-style-type: none"> <li>• Any 'possible case', with special attention to caregivers and people in residential facilities</li> <li>• People who have had a high-risk contact with a case of COVID-19 and who are themselves in professional contact with people at risk of developing a severe form of the disease</li> <li>• Any person requiring hospitalisation</li> <li>• Any person entering a residential facility for the first time</li> </ul>   | Serological testing to open to ambulatory or hospitalized patients who have a long-term clinical picture suggestive of COVID-19, but whose PCR test is negative, or who could not be tested within 7 days of the onset of symptoms. Serology is performed at least 14 days after the onset of symptoms |
| <b>Denmark</b> <sup>18</sup>   | <p>Since May 4, staff and citizens in hospitals, nursing homes and other assisted living facilities who tested negatively, should be retested every 7 days</p>  | -  |

<sup>11</sup> <https://www.covid19healthsystem.org/countries/ireland/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>12</sup> <https://www.hse.ie/scopi>

<sup>13</sup> <https://www.gouvernement.fr/info-coronavirus/tests-et-depistage>

<sup>14</sup> <https://www.covid19healthsystem.org/countries/france/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>15</sup> <https://www.sciencemediacentre.org/expert-reaction-to-unpublished-preliminary-findings-looking-at-the-presence-of-antibodies-to-sars-cov-2-virus-in-residents-of-gangelt-in-germany/>

<sup>16</sup> <https://www.covid19healthsystem.org/countries/italy/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>17</sup> <https://www.covid19healthsystem.org/countries/belgium/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>18</sup> <https://www.covid19healthsystem.org/countries/denmark/livinghit.aspx?Section=1.5%20Testing&Type=Section>

|  |   |   |
|--|---|---|
| <b>Iceland<sup>19</sup></b>              | <ul style="list-style-type: none"> <li>• Iceland initiated targeted testing of persons who are at high risk for infection: mainly those who are symptomatic, with travel history to risk areas, or had contact with infected persons in January.</li> <li>• Since 31 March this targeted approach has been supplemented with mass population screening</li> </ul>   | From 15 June onwards, Iceland plans to offer coronavirus tests to arriving travellers as a way to avoid the two weeks mandatory quarantine  |
| <b>Spain<sup>202122</sup></b>            | <p>One million antibody tests to accompany PCR testing in enclosed settings, e.g. hospitals, assisted living and prisons.<br/>For symptomatic patients:</p> <ul style="list-style-type: none"> <li>– a positive result is confirmation of infection and no PCR test is needed</li> <li>– a negative result will require further PCR testing</li> </ul>  | -   |
| <b>Portugal<sup>23</sup></b>             | <ul style="list-style-type: none"> <li>• 5,000 PCR testing kits became available in mid-April, which deliver results in around 45 minutes</li> <li>• These are reserved testing suspected cases in health care settings or pregnant women</li> </ul>  | -   |
| <b>New Zealand<sup>2425 262728</sup></b> | <p>Sentinel testing in the wider population as part of broader surveillance measures to provide assurance testing for:</p> <ul style="list-style-type: none"> <li>• Māori and Pacific populations, and</li> <li>• Communities with high deprivation, crowded housing and barriers to access to healthcare</li> </ul> <p>Targeted population-based testing will also be employed especially in institutional settings:</p> <ul style="list-style-type: none"> <li>• Health care workers and other staff working at health facilities, including aged residential care facilities</li> <li>• Essential workers in workplaces where there has been a case</li> <li>• Staff in quarantine hotel</li> <li>• Police working in areas with a higher incidence of confirmed cases</li> <li>• Migrant workers</li> <li>• In the approach for managing cluster outbreaks, particularly in high-risk settings, asymptomatic contacts may require a secondary test</li> </ul> | The lower risk groups with high consequence of undetected transmission include backpacker hostels and prisons. District Health Boards will consider undertaking asymptomatic testing of these communities |
| <b>Singapore<sup>29</sup></b>            | <ul style="list-style-type: none"> <li>• Since 09/05 testing started for all 30,000 staff and residents in Singapore's residential care homes for the elderly and is expected to be finished early June</li> <li>• Repeat tests will be carried out at about two-week intervals as a precautionary measure, although those who show acute respiratory symptoms will be tested immediately</li> </ul>  | All in-bound travellers will be tested for COVID-19 before the end of their 14 day obligatory stay-home notice/quarantine from 17 June  |

<sup>19</sup> <https://rs-delve.github.io/addenda/2020/05/27/a-review-of-international-approaches-to-tti.html>

<sup>20</sup> <https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/sanidad/14/Paginas/2020/050420test-coronavirus.aspx>

<sup>21</sup> [https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Guia\\_test\\_diagnosticos\\_serologicos\\_20200407.pdf](https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Guia_test_diagnosticos_serologicos_20200407.pdf)

<sup>22</sup> <https://www.covid19healthsystem.org/countries/spain/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>23</sup> <https://www.covid19healthsystem.org/countries/portugal/livinghit.aspx?Section=1.5%20Testing&Type=Section>

<sup>24</sup> <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/health-and-disability-services-alert-level-2#screening>

<sup>25</sup> <https://www.health.govt.nz/system/files/documents/pages/covid-19-health-and-disability-services-at-alert-level-2-12may2020.pdf>

<sup>26</sup> <https://rs-delve.github.io/addenda/2020/05/27/a-review-of-international-approaches-to-tti.html>

<sup>27</sup> [https://www.health.govt.nz/system/files/documents/pages/testing\\_approach\\_to\\_eliminate\\_covid-19-28april2020.pdf](https://www.health.govt.nz/system/files/documents/pages/testing_approach_to_eliminate_covid-19-28april2020.pdf)

<sup>28</sup> [https://www.health.govt.nz/system/files/documents/pages/testing\\_approach\\_to\\_eliminate\\_covid-19-28april2020.pdf](https://www.health.govt.nz/system/files/documents/pages/testing_approach_to_eliminate_covid-19-28april2020.pdf)

<sup>29</sup> <https://www.straitstimes.com/singapore/testing-for-covid-19-begins-for-all-residents-staff-at-homes-for-elderly>

## Social distancing

### Overview

- During the early stages of the COVID-19 pandemic, **WHO guidance** advised individuals to maintain a distance of **at least a 1metre (3 feet)** between themselves and others<sup>30</sup>
- The available evidence indicates that the spray dispersal of droplets from coughing, sneezing or speaking could carry the virus onto surfaces and between hosts<sup>31</sup>
- **European Centre for Disease Control (ECDC) guidelines** recommend **more than 2meters** social distancing to be maintained regardless of transmission rate (*Table 1*)<sup>31</sup>

**Table 1. ECDC physical distancing guidelines**

| Non-pharmaceutical intervention  | To be maintained regardless of transmission rates | To be considered in the event of increased incidence | Geo-level                 | Comment  |
|--|---|--|---------------------------|--|
| <b>Physical distancing</b>   |   |  |                           |  |
| 'Stay-at-home' orders and recommendations                                    |   | x  | Sub-national (preferably) | To consider at local/regional level first to minimise socio-economic disruption and political acceptability. |
| Recommended >2 metres physical distance between individuals in public places | x   |  | National                  |  |

### Key messages from emerging evidence

- There has not been a consensus on an optimum social (physical) distancing rule
- Countries have established varying physical distancing measures, ranging from 1m to 2m
- A rapid systematic review and meta-analysis assessed the evidence on the optimum distance for avoiding person-to-person virus transmission, comparing COVID-19, SARS and MERS viruses (*Figure 4*)<sup>32</sup>. The evidence indicates:
  - ✓ A strong association between proximity of the exposed individual with the risk of infection
  - ✓ **1m social (physical) distancing** rule is highly effective - transmission of the three viruses is lower with physical distancing of 1m or more (compared with less than 1m) with protection increasing as distance increases
  - ✓ Physical distance of **more than 1m** results in a larger reduction in virus infection: with every 1m further in distancing, the relative effect may increase two times - **2m** distancing is likely to be more effective decreasing the risk of infection by a further 50%
  - ✓ It is not clear to what extent **time duration** has been considered as a contributing factor to the risk of infection when comparing social distancing measures<sup>33</sup>
  - ✓ The effectiveness of each social distancing measure should **not be considered in isolation**, as contextual settings and differing other measures are likely to have a pronounced effect

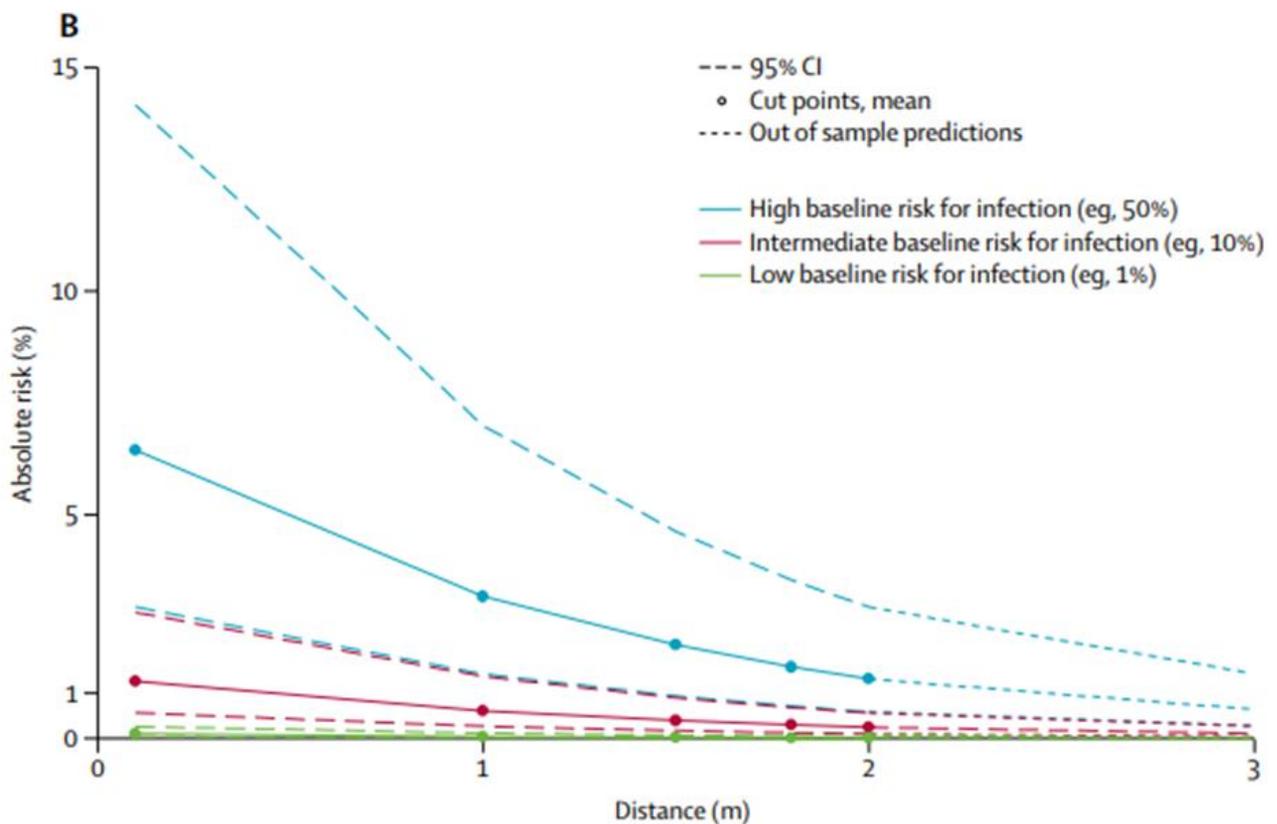
<sup>30</sup> <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

<sup>31</sup> <https://www.ecdc.europa.eu/sites/default/files/documents/RRA-COVID19-update10-2020-06-11.pdf>

<sup>32</sup> [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext)

<sup>33</sup> <https://www.newscientist.com/article/2237475-covid-19-news-new-coronavirus-outbreak-linked-to-market-in-beijing/#ixzz6PWE6Xcin>

**Figure 4. Absolute risk of transmission from an individual infected with SARS-CoV-2, SARS-CoV, or MERS-CoV with varying baseline risk and increasing distance (time duration not clear)**



### Comparative Country Data

The overview of **selected countries on page 14** focuses on **social distancing in the workplace and hospitality settings**. In summary:

- The established social distancing measures vary from country to country.
- Most countries are still enforcing social distancing measures, with measures not changed considerably since lockdown started
- During the final phases of lockdown, which are expected to be implemented in August or September in most countries, more significant changes may be seen

### Epidemiology

It is not possible to correlate the number of new cases and deaths to the difference in social distances (*Figure 5*).

For example:

- In the UK, the current R value has been ranging between 0.7 and 0.9, with the South West region showing the highest rate (between 0.8 and 0.11)<sup>34</sup>. The R peaked in the first week at 0.7 to 1.0, while social distancing had already been implemented. At the same time, the UK has the highest number of new infections
- France and Italy are comparable with Singapore, which all have a 1m distancing rule
- **New Zealand has currently a 0m social distancing and no new cases (or deaths)**

<sup>34</sup> <https://www.gov.uk/guidance/the-r-number-in-the-uk>

**Figure 5. Overview of R, new cases and deaths and social distancing measures in place**  
 Note: the R values for New Zealand and Iceland are skewed due to the very low number of cases

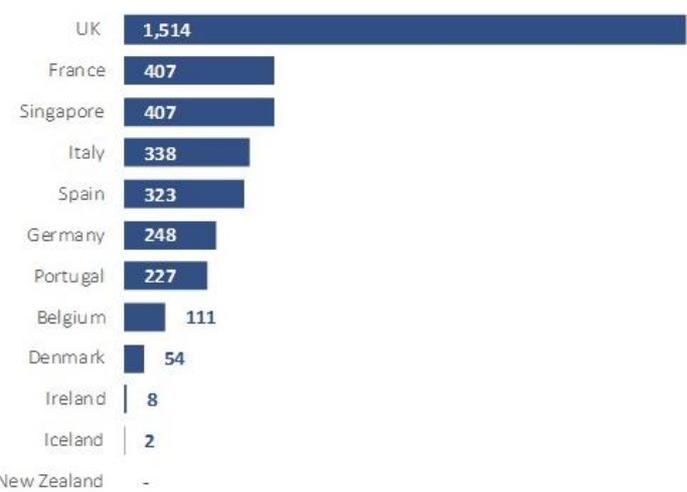
**Initial R value, compared to current R value, selected countries, 2020**



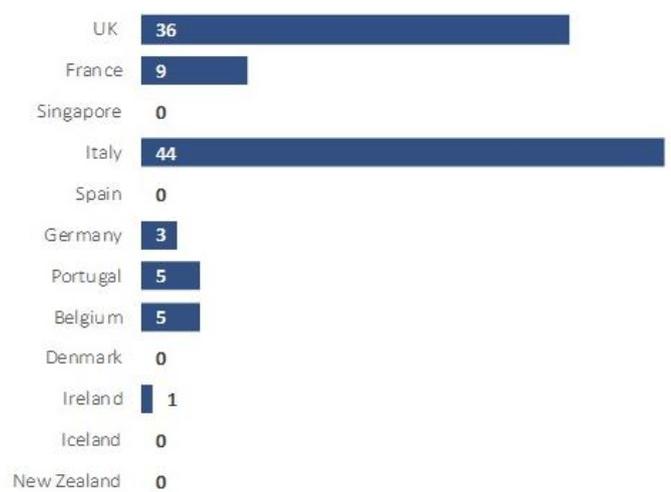
**Social distancing in the workplace**



**New COVID-19 cases, selected countries, data extracted 14 June 2020**



**New COVID-19 deaths, selected countries, data extracted 14 June 2020**





| Country                                | Distance in work places & hospitality settings (m) | Has/will it ease in work places | Has/will it ease in hospitality settings | When          | Physical / facial barriers | Other  |
|--|--|---------------------------------|--|---------------|----------------------------|--|
| Belgium <sup>35</sup><br><sup>36</sup> | 1.5  | ✗                               | ✗  | ✗             | ✓                          | It is not permitted to eat or drink while standing in a restaurant or bar  |
| Denmark <sup>37</sup>                  | 1 (2 in confined spaces)                           | ✓                               | ✗  | Phase 4 (Aug) | ✓                          | Music venues and night life remain closed until Phase 4. Barriers required in workplaces where 1m distance cannot be maintained, e.g. opticians, hairdressers  |
| France <sup>38</sup>                   | 1  | ✓                               | ✗  | Phase 3 (Aug) | ✓                          | All cinemas, theatres and museums open on June 22 <sup>nd</sup> - mandatory to wear masks as social distancing not be achievable   |
| Germany <sup>39</sup>                  | 1.5  | ✗                               | ✗  | ✗             | ✓                          | Large events prohibited until at least Aug 31 <sup>st</sup> . Physical barriers required for reception staff in hospitality, specifically hotels; face masks mandatory in all public spaces within these establishments. <sup>40</sup>                           |
| Ireland <sup>41</sup>                  | 2  | ✓                               | ✗  | 20 July       | ✗                          | Risk-based return to work assessments once distancing eases  |
| Italy <sup>42</sup>                    | 1  | ✗                               | ✗  | ✗             | ✓                          | Face masks mandatory in closed public spaces, even if social distancing in place   |
| Spain <sup>43</sup>                    | 2  | ✗                               | ✗  | ✗             | ✓                          | Distance b/n seller and customer must be at least 1m when protection elements or barriers in place, or 2m without such   |
| Portugal <sup>44</sup>                 | 2  | ✗                               | ✗  | ✗             | ✓                          | Use of masks for visitors mandatory for access/stay in commercial establishments and in buildings serving the public <sup>45</sup>   |
| Iceland <sup>46</sup>                  | 2  | ✗                               | ✗  | ✗             | ✗                          | Number of people permitted at gatherings increased from 200 to 500. Masks only worn in close proximity settings, such as hairdressers or optometrists, if there is the slightest suspicion of infection, or if the client is high risk <sup>47</sup>             |
| Singapore <sup>48</sup>                | 1  | ✗                               | ✗  | ✗             | ✓                          | If not feasible/practical to apply, or in permitted businesses, the 1m requirement can be enforced between groups of not more than <b>five persons</b> , and no mixing between groups. Masks mandatory for all essential workers at all workplaces <sup>49</sup> |
| New Zealand <sup>50</sup>              | ✗  | ✓                               | ✓  | 12 June       | ✗                          | Social distancing measures originally 1m - now lifted as mandatory action in all public spaces; instead recommended at work  |

<sup>35</sup> <https://employment.belgium.be/sites/default/files/content/documents/Coronavirus/Genericguide.pdf>

<sup>36</sup> <https://economie.igov.be/sites/default/files/Files/Publications/files/Coronavirus-Guide-for-a-safe-restart-of-hospitality.pdf>

<sup>37</sup> <https://www.sst.dk/-/media/Uddannelsen/2020/Corona/Forebyggelse-af-smittespredning/Forebyggelse-af-smittespredning-publikation.ashx?la=da&hash=FD3E64042EEDB7A6C3305BD37A003B5B58B1BC79>

<sup>38</sup> <https://www.gouvernement.fr/info-coronavirus/les-actions-du-gouvernement>

<sup>39</sup> <https://www.infektionsschutz.de/coronavirus/verhaltensregeln.htm>

<sup>40</sup> <https://www.hospitalityandcateringnews.com/2020/05/deutsche-hospitality-announces-reopening/>

<sup>41</sup> <https://www.gov.ie/en/news/58bc8b-taoiseach-announces-roadmap-for-reopening-society-and-business-and-u/?referrer=http://www.gov.ie/roadmap/>

<sup>42</sup> <http://www.governo.it/it/coronavirus>

<sup>43</sup> [https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Plan\\_Transicion\\_Guia\\_Fase\\_2.pdf](https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Plan_Transicion_Guia_Fase_2.pdf)

<sup>44</sup> <https://covid19.min-saude.pt/wp-content/uploads/2020/04/Distanciamento-social-07-04-2020.pdf>

<sup>45</sup> <https://www.theportugalnews.com/news/minimum-fines-of-120-euros-for-no-mask/53982>

<sup>46</sup> <https://www.covid.is/>

<sup>47</sup> [https://www.landlaeknir.is/servlet/file/store93/item41449/Guidelines%20for%20beauty%20salons\\_hair%20salons\\_massage%20parlours\\_vision%20testing\\_and\\_comparable%20services.pdf](https://www.landlaeknir.is/servlet/file/store93/item41449/Guidelines%20for%20beauty%20salons_hair%20salons_massage%20parlours_vision%20testing_and_comparable%20services.pdf)

<sup>48</sup> <https://www.moh.gov.sg/news-highlights/details/moving-into-phase-two-of-re-opening>

<sup>49</sup> <https://www.gov.sg/article/when-should-i-wear-a-mask>

<sup>50</sup> <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-information-specific-audiences/guidelines-businesses-and-services-alert-level-1#4>

## Strengthening community resilience

### Key findings

- Governments need to work **together with people, communities and partners across sectors** to **'Build Back Better'** towards more sustainable and resilient societies
- **A holistic approach**, including public health measures and wider cross-sector multi-agency action is essential - **rights-based, evidence informed, equity and gender responsive; culturally and context tailored**
- Links and synergies between **governance levels (national – regional – local) and institutions** should be strengthened
- Appropriate, consistent, timely, transparent, credible, culturally and context tailored **public health communication** and engagement are critical
- **Focused support to settings and communities** is essential for strengthening resilience, including<sup>51</sup>:
  - ✓ Cities and municipalities, including villages, remote and island communities
  - ✓ Workplaces, including hospitals and key workforce (health and wider)
  - ✓ Education facilities
  - ✓ Transport authorities
  - ✓ Residential, sheltered and community housing
  - ✓ Prisons and detention centres
  - ✓ Open markets where essential for food systems and local incomes
  - ✓ Preventing violence and injury in the home
  - ✓ Vulnerabilities of specific groups
- **Four key inter-related areas** for action:
  1. Support **adherence** by individuals and communities to public health measures necessary to prevent COVID-19 transmission
  2. Mitigate **wider public health impacts** (including from the public health measures, e.g. lockdown) with a special **focus on inequalities and vulnerable groups/communities**
  3. Promote and support **community, urban and settings-based resilience**, through identifying risks and solutions, supporting community-based initiatives, coalitions and partner engagement, including the third and private sector
  4. Actively support communities to **recover and thrive**, by achieving **sustainable health outcomes** and **future proofing societies** from experiencing similar shocks

**Specific key findings across the four areas are summarised in table 2, based on a recent WHO rapid scoping literature review (unpublished).**

<sup>51</sup> Extracted from WHO Healthy Settings Framework adapted to COVID-19 context and response (unofficial)

**Table 2. Summary of key findings across four areas for strengthening community resilience**

| Area for action   | Relevant action, informed by evidence from United Nations / WHO guidance, research literature and other international reports   |
|---|---|
| <p><b>1. Support adherence by individuals and communities to public health measures necessary to prevent COVID-19 transmission</b></p>  | <ul style="list-style-type: none"> <li>✓ <b>Policies and legislation</b> in place that support and enable the public health measures in place</li> <li>✓ Positive approach that emphasise <b>strength and community assets</b> should be used when assessing needs and vulnerabilities, to overcome barriers to preparedness and response</li> <li>✓ The role of the <b>political climate and trust</b>, as well as <b>community leadership and social capital</b>, are critical for securing adherence</li> <li>✓ Public health communication (to both general population and vulnerable groups) should be delivered through engagement via <b>existing, trusted and effective channels</b>; as well as <b>cultural, social or family-based networks</b></li> <li>✓ <b>Community context and diversity</b> (socio-cultural, economic, psychological, health and health literacy) should be considered to inform risk communication and messages</li> <li>✓ Emergency/risk communication should be <b>appropriate and consistent, evidence-informed</b> and through involving the community</li> <li>✓ <b>Messages</b> should be credible, coherent, transparent, timely, complete, clear, relevant, practical, culturally tailored, native language translated and coordinated across borders</li> <li>✓ <b>Social media and other non-traditional communication methods</b> should be considered to reach vulnerable / special groups</li> </ul>  |
| <p><b>2. Mitigate wider public health impacts (including from the public health measures, e.g. lockdown) with a special focus on inequalities and vulnerable groups/communities</b></p> | <ul style="list-style-type: none"> <li>✓ Implementing <b>legislation and governance</b> approaches through all the phases of the emergency</li> <li>✓ Establishing <b>coordinated multi-sectoral working</b>, involving stakeholders beyond the health care sector, including the public</li> <li>✓ Understanding and recognising the <b>wider impact</b> of public health measures to address risks appropriately and employ gender sensitive approaches, tailored to the needs of the population at risk, specifically vulnerable groups to decrease inequalities</li> <li>✓ Disaster response measures, such as quarantine / isolation / lockdown, can cause a <b>range of stressors</b>, such as life / community disruption, inadequate supplies and information, financial loss, job-insecurity, stigma and others, leading to <b>negative mental wellbeing and psycho-social impacts</b>. These include but are not limited to post-traumatic stress symptoms, confusion, anger, fear, frustration, boredom and loneliness</li> <li>✓ <b>Complex, multi-sectoral, contextual, integrated responses</b> are required to improve public health during, after and in the long-term</li> <li>✓ <b>Psycho-social harms may be mitigated</b>: a) through economic and public welfare support; b) through appropriate policies and communication, which emphasise altruism; promote voluntariness (i.e. 'choice'); limit quarantine time as possible; and provide clear rationale and information</li> <li>✓ <b>Disaster response must be holistic</b> to ensure vulnerable groups preparedness and support through multi-sectoral collaboration, functional needs approach and addressing different barriers and contexts. Taking life-course and gender-sensitive approaches is critical</li> <li>✓ Governance should be <b>flexible, adaptive and include individual and collective participation</b> in the design, implementation and evaluation of responses, fostering social support, cohesion, networks, social capital and participation to reduce negative wellbeing effects</li> <li>✓ <b>Community, family, non-for-profit and new technologies interventions</b> hold promise to mitigate / address harmful impacts of disasters</li> </ul> |

|   |   |
|---|---|
| <p><b>3. Promote and support community, urban and settings-based resilience, through identifying risks and solutions, supporting community-based initiatives, coalitions and partner engagement, including the third and private sector</b></p> | <ul style="list-style-type: none"> <li>✓ Appropriate and sustainable <b>governance</b> needed to support and engage the community</li> <li>✓ National and international <b>collaboration at all levels, by all sectors</b>, to strengthen the emergency response</li> <li>✓ Community resilience approaches are using <b>proactive leadership and diverse coalitions</b> to reduce negative impacts through individual psychological resilience and assisting resource access, with lower reliance upon government resources</li> <li>✓ <b>Coalitions, collaborations and partnerships</b> are the cornerstone of building community resilience and whole-of-community approaches to disaster preparedness</li> <li>✓ <b>Community engagement strategies</b> can help foster relationships between communities and authorities to encourage collaboration, build resilience and increase community participation</li> <li>✓ Governance and policy approaches at different levels enable community resilience activities, promoting <b>broader considerations, holistic response</b>, improved information utilisation and long-term engagement</li> <li>✓ Policies, focusing on <b>psychological and social attitudes</b>, may help build community cohesion, social capital and community resilience</li> <li>✓ Supporting <b>organisational resilience and industry preparedness</b> is important for whole-of-society preparedness</li> <li>✓ <b>Vulnerable and culturally diverse communities</b> need deliberate inclusion into emergency planning</li> <li>✓ There are <b>various challenges</b> to utilising community resilience approaches, such as ignoring cultural differences</li> </ul> |
| <p><b>4. Actively support communities to recover and thrive, by achieving sustainable health outcomes and future proofing societies from experiencing similar shocks</b></p>  | <ul style="list-style-type: none"> <li>✓ Recognising the <b>interdependencies and synergies</b> of sectors and governance levels (national / regional / local) to create more sustainable responses and solutions to emergencies</li> <li>✓ Strengthening community resilience fosters sustainable recovery from emergencies</li> <li>✓ <b>Community mobilisation</b> and involvement, sustained governance support, and economic principles are a critical aspects of better recovery</li> <li>✓ <b>Challenges</b> include, but are not limited to: <ul style="list-style-type: none"> <li>○ no uniform understanding /consensus of “<i>better</i>”, its achievement or maintenance</li> <li>○ poor partnerships, lack of transparency and no grass-root involvement</li> <li>○ unclear about how to sustain health system post-disaster benefits, or how to scale them to non-disaster zones</li> </ul> </li> <li>✓ Understanding that communities are <b>diverse</b> and demand tailored approaches is critical</li> <li>✓ <b>“Building back better” involves</b> using crisis as an opportunity to transform bureaucracies, attitudes and infrastructures; to improve peace, equity, sustainability and adaptability</li> <li>✓ <b>“Building back better” requires</b> an integration of short- and long-term perspectives (immediate and continuous recovery), as early-decisions and capacity / investment determine long-term recovery rate, inclusiveness and sustainability</li> </ul>   |

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](mailto:mariana.dyakova@wales.nhs.uk))

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