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

Report 15, 22/09/2020

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.

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 severity and diverging trends for cases and deaths**
- **COVID-19 impact on children and young people**
- **COVID-19 impact on mental health and wellbeing**

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

"Although children have largely been spared many of the most severe health effects of the virus, they have suffered in other ways."
Dr Tedros Adhanom Ghebreyesus, WHO Director-General

COVID-19 severity and diverging trends for cases and deaths

- COVID-19 incidence rates (new case notifications) and mortality rates (death notifications) have **changed dynamically** since the beginning of the pandemic, showing **diverging trends** during a 'second wave' in some countries
- **Potential explanations** for variation in COVID-19 mortality rates and diverging trends:
  - ✓ Dynamic **change in the age** of the population exposed to and dying from COVID-19
  - ✓ Variation in **approaches to surveillance and reporting**, also **over the course** of the pandemic, including testing strategies, case/death definitions, estimation methods, etc.
  - ✓ **Preparedness, availability and quality of health care**, such as improved treatment
  - ✓ **Different demographic, health and socio-economic profile** of the exposed population and patients across countries
  - ✓ **Potential genetic evolution of the virus**, becoming less virulent
- **Data on COVID-19 severity,** measured by Infection Fatality Ratio (IFR) and Case Fatality Ratio (CFR), is largely **lacking at national and local levels**
- Available COVID-19 **CFR estimates show wide variability** across countries (from less than 0.1% to over 25%) and comparisons can be misleading
- COVID-19 **incidence and mortality rates remain more timely measures** to allow for evidence-based decisions
- COVID-19 **test sensitivity and specificity** have an impact on case detection/reporting
- Currently COVID-19 antigen testing shows **high sensitivity** (between 85% and 98%), which **decreases with self-testing** to around 60%; and **very high specificity** (close to 100%)
- **Interpretation** of COVID-19 test results depends on:
  - ✓ the **accuracy of the test**
  - ✓ the **pre-test probability** or estimated risk of infection
- There is **a lack of clear-cut "gold-standard" for testing**
- Clinicians should **share information with patients** about the accuracy of COVID-19 tests

More information is summarised <mark>on pp. 5-8</mark>

COVID-19 impact on children and young people

- Children and young people are **particularly vulnerable** to the changing systems, related to COVID-19 control and prevention measures
- Less than 10% of reported cases and less than 0.2% of deaths are in young people under the age of 20
- **Major areas of concern** include:
  - ✓ Disruption to **health and social care services**
  - ✓ Disruption to **education, training and professional development**
  - ✓ Massive increase in **youth unemployment**
  - ✓ **Financial insecurity**, leading to food insecurity
  - ✓ **Reduced exercise** and movement
  - ✓ Deterioration of **mental health and emotional wellbeing**
  - ✓ Strained **parent-child relationship**

- ✓ Increased **domestic violence, abuse or neglect**
- ↓ **Key policy measures** to secure the wellbeing of future generations include:
    - ✓ Apply a **youth and intergenerational lens** in crisis response and recovery measures
    - ✓ Translate political commitment into **actionable programmes** with youth stakeholders
    - ✓ Gather **disaggregated data** on the impact of the crisis
    - ✓ Provide targeted policies and services for the **most vulnerable** young people
    - ✓ Ensure health and social services **prevention, early intervention and preparedness**
    - ✓ Create and strengthen institutions to **monitor the consequences**
    - ✓ Use **impact assessments to forecast** disruption and plan resources
    - ✓ Promote **age diversity** and **participation** in public consultations and state institutions
    - ✓ Leverage **young people's mobilisation** in mitigating the crisis and **build resilience**
    - ✓ **Closing schools** should be a last resort, temporary and only at a local level
    - ✓ Align short-term emergency response with **investment into long-term economic, social and environmental objectives**

*More information is summarised *

COVID-19 impact on mental health and wellbeing

- ↓ More than half of adults, over two thirds of young people and three quarters of people aged 18–24 indicate **deteriorating mental health during lockdown**, including people with and without pre-existing mental health problems
- ↓ **Quarantine** can contribute to **stress, anger and high risk behaviours**
- ↓ **Key drivers** of poor mental health include: limiting social contact; not able to go outside; anxiety about family/friends; boredom for young people; feeling of loneliness, especially for young people; not feeling entitled to seek help and have difficulty accessing it
- ↓ **Specific groups face greater mental health challenges, including**:
    - ✓ Those with disabilities, learning difference, or long-term illnesses
    - ✓ Young people, specifically age 18 to 24; and older people
    - ✓ BAME communities
    - ✓ Women and LGBTQ+ (non-binary) people
    - ✓ People experiencing social deprivation
    - ✓ Unemployed, seeking work, and with changed employment status
    - ✓ Frontline workers, e.g. health and social care
    - ✓ People hospitalised with COVID-19
- ↓ **Health and social care** for people with severe mental health conditions and psychosocial disabilities must be part of the **essential services** in all countries
- ↓ **Digital health phenotyping** can be used for population-wide screening
- ↓ **Education, self-care and family support** should form part of mental health prevention strategies, involving **multiagency collaboration**
- ↓ **Older people** should be consulted and participate in policy decision making
- ↓ Prevention of and response to **domestic violence** should be a key part of response plans
- ↓ Solutions that help isolated people **stay connected, reduce loneliness** (especially in older adults) and **reduce boredom** (especially in young people) should be promoted
- ↓ Developing a **culture of wellbeing**, allowing and promoting mitigation of inequalities

*More information is summarised *

COVID-19 severity and diverging trends for cases and deaths

Diverging trends for COVID-19 incidence and mortality

- **Diverging trends** for incidence rates (new case notifications) and mortality rates (death notifications) are observed currently during a second wave of COVID-19
- The **definition of a 'second wave'** (and subsequent waves) of COVID-19 can include[1]:
  - ✓ A **spike in clinical cases** of COVID-19, as well as
  - ✓ The **impact on society and the burden of disease** over time

Measuring severity of COVID-19 disease[2]

- The **severity of an infectious disease** is measured by its ability to cause death, described by two recognised **measures:**
  - ✓ **Infection fatality ratio (IFR)**, showing the true severity of a disease, estimated by the proportion of deaths among all infected individuals (identified by serological testing of a representative random sample of the population)
  - ✓ **Case fatality ratio (CFR)**, showing severity among detected case, estimated by the proportion of deaths among diagnosed (confirmed) cases
- **Challenges when estimating COVID-19 severity** (IFR or CFR):
  - ✓ Overall, there is a **lack of publicly available data on both IFR and CFR at a national and local level**, and there are ongoing studies to estimate these
  - ✓ **Estimating IFR accurately** requires a complete picture of the number of COVID-19 infections, produced by serological surveys, involving a significant investment in time and resource (in many countries they may not be conducted timely, or even at all)
  - ✓ There is a **wide variability of CFR estimates across countries** - from less than 0.1% to over 25%, so **comparison can be misleading**
- COVID-19 incidence and mortality rates remain more timely measures to allow for evidence-based decisions

Potential explanations for variation in COVID-19 mortality and diverging trends[2345]

- **Preparedness, availability and quality of health care**, including continuous learning and improved treatment; earlier hospitalisations (more hospital capacity over time), etc.
- **Significant variation in approaches to surveillance and reporting** of COVID-19 cases and deaths, also **over the course of the pandemic**, including difference in:
  - ✓ case and death **definitions** (WHO recommends using surveillance definitions[67])
  - ✓ **testing strategies and changes** over time, e.g. those with severe illness (in hospitals) can be preferentially tested, especially in the early stages, and if limited resources
  - ✓ dynamic **change in the age of the population exposed to and dying** from COVID-19, e.g. older ages (60+) affected and dying more earlier in the pandemic; while younger ages (15-24) are affected more, and older ages dying less currently
  - ✓ **lag** between symptoms onset and death / between case and death notifications
  - ✓ **CFR estimation methods** and their accuracy, e.g. using crude estimation[8]

[1] https://www.limu.ac.uk/~/media/phi-reports/2020-07-direct-and-indirect-impacts-of-covid19-on-health-and-wellbeing.pdf
[2] https://www.who.int/news-room/commentaries/detail/estimating-mortality-from-covid-19
[3] https://www.cebm.net/covid-19/declining-death-rate-from-covid-19-in-hospitals-in-england/
[4] https://www.ft.com/content/c011e214-fb95-4a64-b23c-2bd87ebb29d7
[5] https://www.kingsfund.org.uk/publications/deaths-covid-19
[6] https://www.who.int/publications/i/item/global-surveillance-for-covid-19-caused-by-human-infection-with-covid-19-virus-interim-guidance
[7] https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf?ua=1
[8] https://www.cebm.net/covid-19/estimating-the-infection-fatality-ratio-in-england/
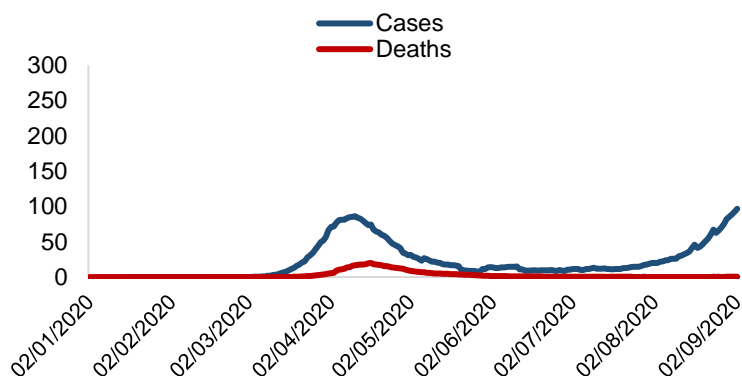
- **Potential genetic evolution of the virus**, becoming less virulent, as it passes through human populations, producing less (or more) severe variants
- **Different demographic, health risk and socio-economic profile of the exposed population and patients** across countries, including higher mortality rates for:
  - ✓ Older age (60+)[9]
  - ✓ Males
  - ✓ Underlying conditions (comorbidities), such as cancer and autoimmune diseases
  - ✓ Underlying risk factors, such as smoking and obesity
  - ✓ Area deprivation, e.g. 120% higher mortality in the most deprived compared with the least deprived decile in the UK
  - ✓ Ethnic minority groups, including Black, Asian and Minority Ethnic (BAME) populations
  - ✓ People working in some public-facing occupations, such as nurses, social care workers, security guards, transport workers, sales and retail assistants
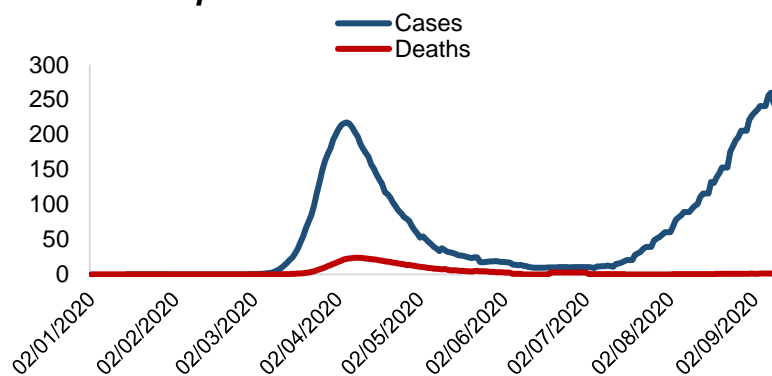
Country examples

- Analysis of trends for COVID-19 incidence and mortality in **France, Spain[10]** and **Germany[11]** shows *(Figures 1 and 2):*
  - ✓ In the early stages of the pandemic, deaths mirror cases, peaking in all countries; followed by decrease for both rates over late May to July
  - ✓ Recent trends diverge, with cases increasing whilst deaths continue to decline through August and the beginning of September
  - ✓ Surveillance data for Spain shows more case notifications in the older age categories (65+) early in the pandemic (March – May), compared to more case notifications in the younger age categories (15-24 years) over August – September *(Figure 3)*[12]
- Recent trends show CFR in Germany declining in all age groups, with the older age groups (60+) driving the overall reduction[11] *(Figure 4)*
- **In the UK**, case numbers have increased among all age groups since early July, except for over 70s; with fastest increase for children, teenagers and people in their 20s/30s[13]

Figure 1. 14-day COVID-19 case and death notifications, rate per 100,000, France and Spain, 1st February to 2nd September 2020

France

Spain

[9] https://www.nature.com/articles/s41586-020-2521-4
[10] https://www.ecdc.europa.eu/en/publications-data/data-national-14-day-notification-rate-covid-19
[11] https://www.cebm.net/covid-19/declining-covid-19-case-fatality-rates-across-all-ages-analysis-of-german-data/
[12] https://www.ecdc.europa.eu/en/covid-19/country-overviews
[13] https://www.ft.com/content/c011e214-fb95-4a64-b23c-2bd87ebb29d7

Figure 2. Trend in cases and deaths (log scale) in Germany,
Week 10 (commencing 3rd March) to week 35 (ending 31st August)
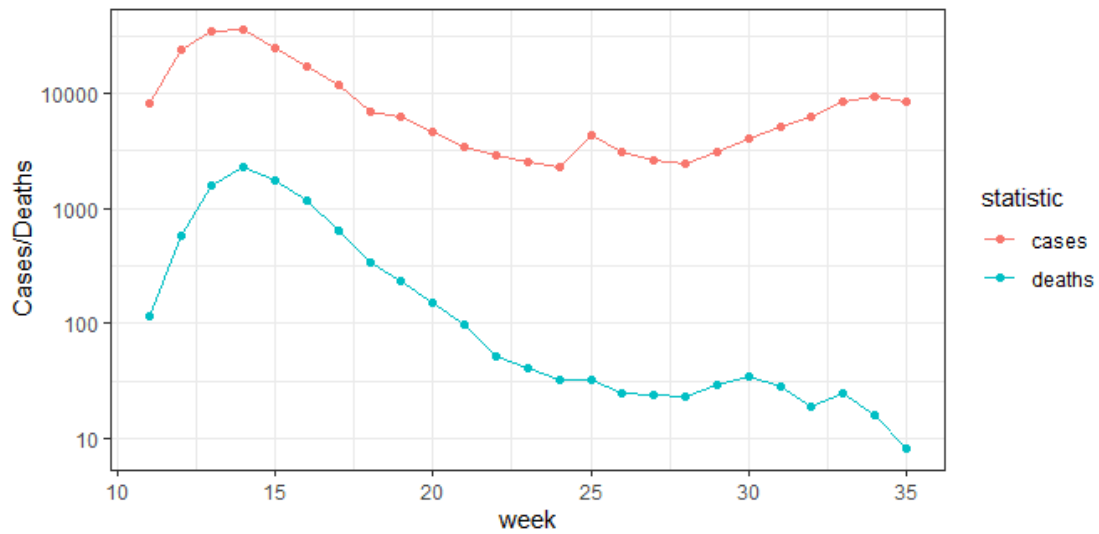
Figure 3. 14-day age-specific COVID-19 case notification rate in Spain[14]
Age-specific weekly data available from weeks ending 12th Jan to 30th Aug 2020
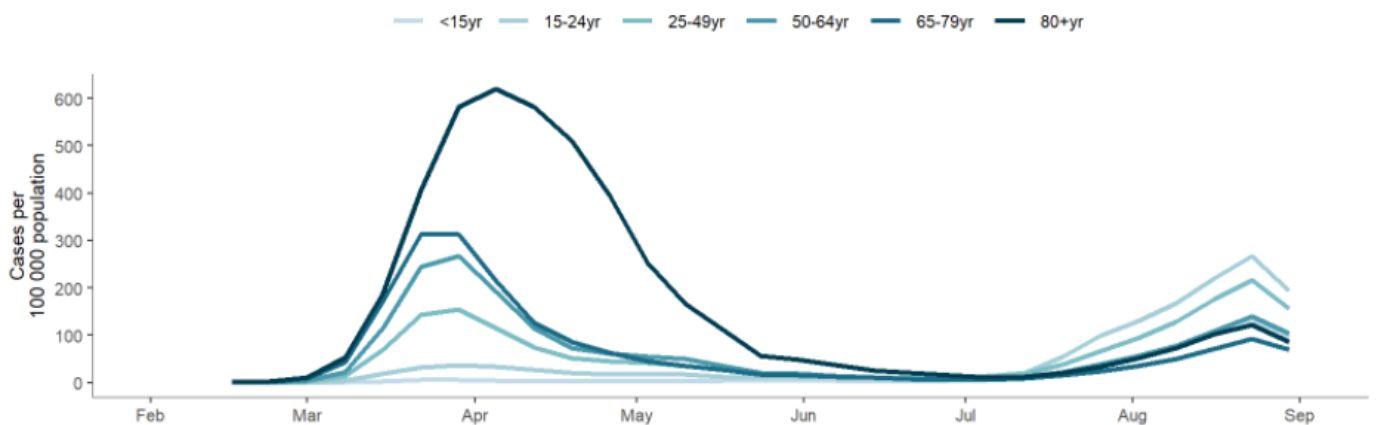
Figure 4. CFR crude estimates over time in Germany: large decrease in the ages 80+ and 60-79
Week 10 (commencing 3rd March) to week 35 (ending 31st August)

[14] https://www.ecdc.europa.eu/en/covid-19/country-overviews
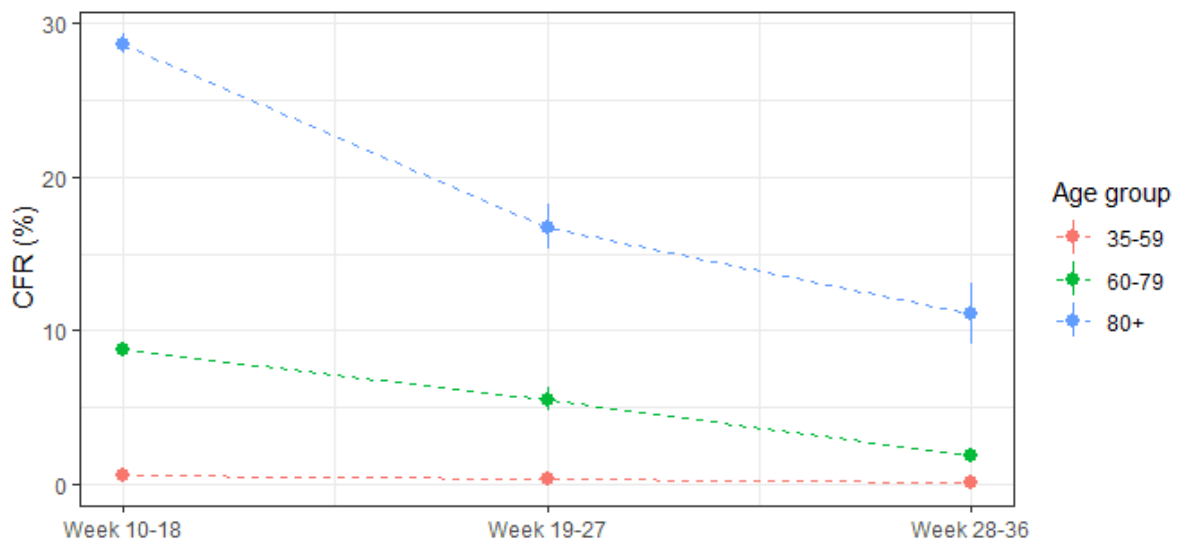
Impact of COVID-19 test sensitivity and specificity on case detection

> **Accurate testing** allows identification of people who might need treatment, or who need to isolate (quarantine) to prevent infection spread. Failure to detect COVID-19 (a false negative result) may delay treatment and increase risk of adverse outcomes and further transmission.
> - **Test sensitivity** measures how often the test **correctly identifies those who have the virus**, so a test with high sensitivity will not have many false-negative results.
> - **Test specificity** measures how often the test **correctly identifies those who do not have the virus**, so a test with high specificity will not have many false-positive results.

Analysis of testing in the UK[15]
- Current studies suggest **COVID-19 testing has relatively high sensitivity** (between 85% and 98%); **and very high specificity** (close to 100%)
- When including **self-testing** (individuals self-swabbing) **sensitivity falls** to around 60% (between 45% and 75%), including the performance of both the test and the self-swabbing

Interpretation of COVID-19 test result[16]
- Interpretation depends on two things:
  - ✓ the **accuracy of the test**
  - ✓ the **pre-test probability** or estimated risk of infection
- A **positive COVID-19 antigen (RT-PCR) test has more weight** than a negative test because of the high specificity but moderate sensitivity
- A single **negative COVID-19 test should not be used to rule-out infection** in patients with strongly suggestive symptoms
- Clinicians should **share information** with patients about the accuracy of COVID-19 tests
- There is a **lack of clear-cut "gold-standard" for testing**, which makes evaluation of test accuracy challenging

Accuracy of antibody testing [17]
- A systematic review looked at **whether antibody tests**
  - ✓ Are accurate enough to diagnose COVID-19 in people with or without symptoms
  - ✓ Can be used to find out if someone has already had COVID-19
- Findings for antibody testing:
  - ✓ Sensitivity is too low in the first week since symptom onset to have a primary role for the diagnosis of COVID-19
  - ✓ It may have a role, complementing other testing in individuals presenting later, when RT-PCR tests are negative, or are not done
  - ✓ It is likely to have a useful role for detecting previous COVID-19 infection, if used 15 or more days after the onset of symptoms.
  - ✓ The duration of antibody rises is currently unknown, and there little data beyond 35 days post symptom onset

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[15] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/england17july2020?utm_medium=email&utm_source=CampaignMonitor_Editorial&utm_campaign=LNCH%20%2020200720%20%20Lloyds%20%20SM+CID_2c153324104ee560a1188435f9cf4068#test-sensitivity-and-specificity
[16] https://www.bmj.com/content/bmj/369/bmj.m1808.full.pdf
[17] https://www.cochrane.org/CD013652/INFECTN_what-diagnostic-accuracy-antibody-tests-detection-infection-covid-19-virus

COVID-19 impact on children and young people

Overview[18]
- Implementation of **Non-Pharmaceutical Interventions (NPIs)** to contain and prevent the spread of COVID-19, e.g. lockdown, has had a **range of unintended adverse effects**
- Changing systems and new ways of living pose **health and wellbeing risks** to all, however, **children and young people are particularly vulnerable**
- **Measures taken in a community** to reduce the risk of COVID-19 transmission **will reduce the risk in schools** too
- Decisions to **close schools should be a last resort, temporary and only at a local level** in areas with intense transmission
- Less than 10% of reported cases and less than 0.2% of deaths are in young people under the age of 20

Major areas of concern[18]
- **Disruption to health and social care services**, such as routine immunisations, mental health support, etc.
- **Disruption to education, training and professional development** due to closure / interruption of schools, universities, technical/vocational training, work‑based learning (e.g. apprenticeships), resulting in **reduced chances for career progression and pay growth**
- **Massive increase in youth unemployment**, particularly for young women[19] and those in informal jobs / in hard hit sectors *(Figures 6 and 7)*
- **Financial insecurity**, leading to **food insecurity,** having detrimental impact on families and their **children development and wellbeing**
- **Reduced exercise and movement,** having negative impact on **children's development** and wellbeing, including developing a **robust immune system**[20]
- **Deterioration of mental health and emotional wellbeing** due to loneliness, can lead to higher rates of **depression, anxiety**[21] and increased risk of **self-harm** within young people
- **Strained parent-child relationship**, related to **enhanced stress** (due to higher insecurity), having a negative influence on **children's development and wellbeing**
- **Increased domestic violence, abuse or neglect** many children experience in their own homes, i.e. **Adverse Childhood Experiences (ACEs)[22],** having detrimental impacts to children's **physical health, mental wellbeing**, as well as **later in life**
- **Social disruption,** having an impact on **child adjustment**[23] *(Figure 5)*

Key policy measures to secure the wellbeing of future generations[24]
1. Apply a **youth and intergenerational lens in crisis response and recovery measures** across public administration
2. Update national **youth strategies** in collaboration with youth stakeholders to translate political commitment into **actionable programmes**

[18] https://www.unicef.org.uk/coronavirus-children-in-lockdown/
[19] https://www.europarl.europa.eu/news/en/headlines/society/20200709STO83004/covid-19-how-the-eu-fights-youth-unemployment
[20] https://www.sciencedirect.com/science/article/abs/pii/S1471489216300479
[21] https://www.sciencedirect.com/science/article/pii/S0890856720303373
[22] https://phw.nhs.wales/files/aces/
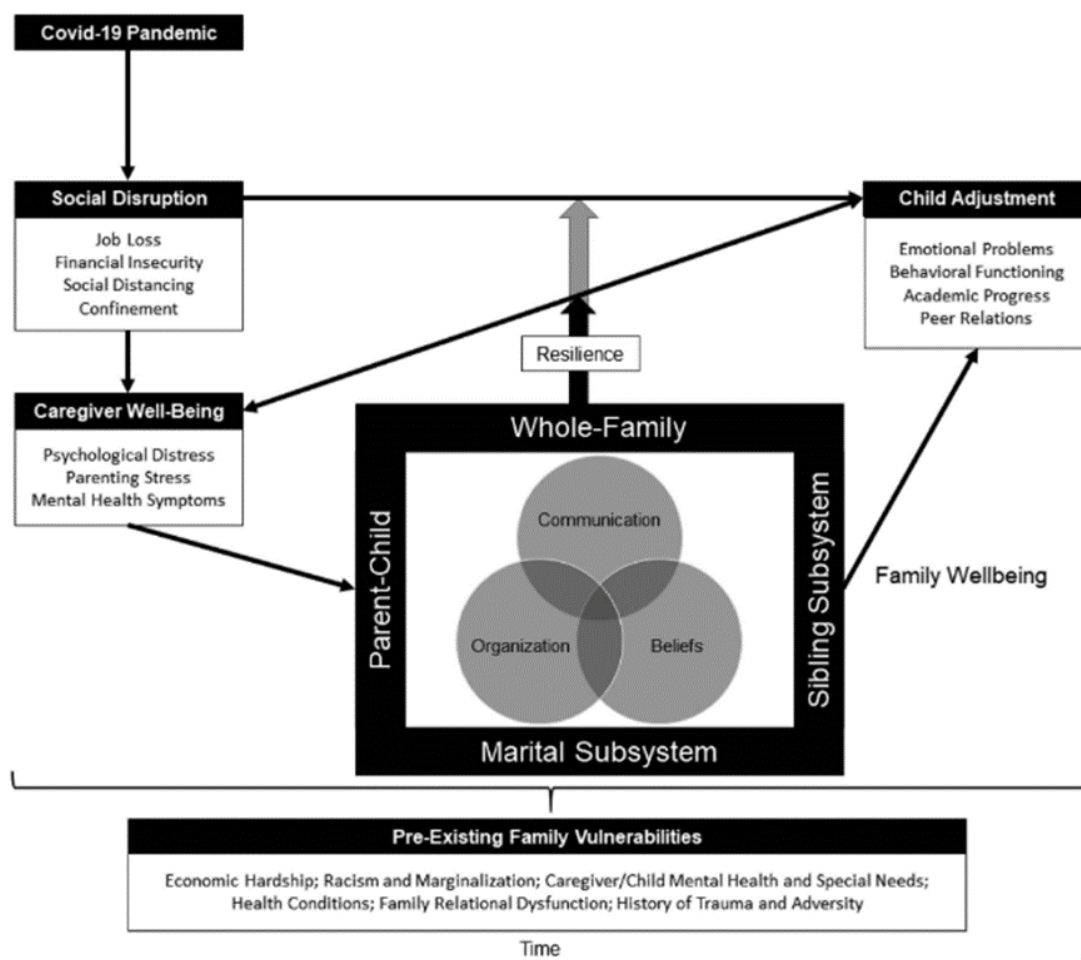[23] https://psycnet.apa.org/fulltext/2020-34995-001.pdf
[24] https://read.oecd-ilibrary.org/view/?ref=134_134356-ud5kox3g26&title=Youth-and-COVID-19-Response-Recovery-and-Resilience

3. Gather **disaggregated data on the impact** of the crisis **by age group to track inequalities and inform decision-making** (in addition to other factors such as sex, education, socio-economic background, and employment status)
4. Provide **targeted policies and services for the most vulnerable** young people, including those not in employment, education or training **(NEETs)**; young **migrants**; **homeless**; and young women, adolescents and children facing increased risks of **domestic violence**
5. Ensure health and social services **prevention, early intervention and preparedness** for an increase in mental health problems
6. Create and strengthen institutions to **monitor the consequences** on children/young people
7. Anticipate the **distributional effects of NPIs and the allocation of public resources** across different age cohorts by using **impact assessments**
8. Promote **age diversity** in public consultations and state institutions to reflect the needs and concerns of different age cohorts
9. Leverage **young people's mobilisation in mitigating the crisis** through existing mechanisms, tools and platforms (e.g. the use of digital tools and data) to **build resilience** in societies against future shocks and disasters
10. Align short-term emergency response with **investment into long-term economic, social and environmental objectives** to ensure the well-being of future generations

Figure 5: Impact of social disruption due to COVID-19 on child adjustment[25]

[25] https://psycnet.apa.org/fulltext/2020-34995-001.pdf

Country examples

Key issues	Country	Evidence / experience, related to COVID-19
Exercise and movement Obesity Disrupted physical development and wellbeing	Canada[26]	Only 4.8% of children (2.8% girls, 6.5% boys) and 0.6% of youth (0.8% girls, 0.5% boys) meeting combined movement behaviour guidelines during COVID-19 restrictions
	Italy[27]	The removal of structured school activities, coupled with home confinement, resulted in **large increases in consumption of unhealthy food, increases in screen time and sleep**
Parent-child relationship and **Mental health and well-being** Worry, Fear, Stress Insecurity Helplessness Loneliness Anxiety Depression Deterioration of behaviour Violence and abuse ACEs	Italy[28]	– **Parents at higher risk of experiencing distress**, which can potentially impair their ability to be supportive caregivers, thus in turn increasing the problems experienced by young people – Living in a more at-risk area and the quality of the home environment can have an effect on families' well-being
	USA[29][30][31]	– High anxiety and depressive symptoms are associated with higher parental perceived stress, and with higher potential for child abuse – **Racial and ethnic differences** impact COVID-19 related stressors, but not mental health risk, protective factors, perceived stress, or child abuse potential – **Male caregivers** report higher levels of generalised anxiety, depression and parent perceived child stress – 27% of parents reported **worsening mental health** for themselves, and 14% reported worsening behaviour for their children – The proportion of families with moderate or severe **food insecurity** increased from 6% before March 2020 to 8% afterwards
	India[32]	– **Quarantined** young people experienced greater **psychological distress** – Worry (68.59%), helplessness (66.11%) and fear (61.98%) were the most common feelings experienced under quarantine
	Japan[33]	– School closures were found to result in no significant change in suicide rates during the school closure period
Education and employment Disruption Disadvantage Inequality Economic downturn Limited career progression/growth Informal employment Financial / food insecurity	UK[34]	– School closures and loss of early years provision can **widen the attainment gap**, i.e. children from disadvantaged backgrounds achieving poorer results at school
	Globally[35][36]	– **178 million** young people (more than four in ten) employed in hard-hit sectors – Nearly **77% (328 million)** of young workers employed in informal jobs – **Rates of informal youth employment** ranges from 32.9% in Europe and Central Asia to **93.4% in Africa** – The proportion of young people (age 18-29) who reported having **stopped working after the onset of the pandemic** has impacted all income brackets *(Figure 6)* – Economic downturn has made it **harder for workers to move into higher paid occupations**, which is particularly important for early-career wage growth – **Acute contraction in sectors that have effectively been shut down during lockdown (hard-hit sectors)**, resulting in lost jobs and difficulty for young workers to progress in their career *(Figure 7)*

[26] https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-020-00987-8
[27] https://onlinelibrary.wiley.com/doi/full/10.1002/oby.22861
[28] https://www.frontiersin.org/articles/10.3389/fpsyg.2020.01713/full
[29] https://www.sciencedirect.com/science/article/pii/S0145213420303549
[30] https://link.springer.com/content/pdf/10.1007/s10578-020-01037-x.pdf
[31] https://pediatrics.aappublications.org/content/early/2020/08/28/peds.2020-016824
[32] https://link.springer.com/content/pdf/10.1007/s12098-020-03347-3.pdf
[33] https://www.sciencedirect.com/science/article/pii/S0145213420303355
[34] https://www.unicef.org.uk/coronavirus-children-in-lockdown/
[35] https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_745963.pdf
[36] https://www.ifs.org.uk/uploads/BN299-COVID-19-and-the-career-prospects-of-young-people-1.pdf

Figure 6. Global survey on youth and COVID-19: proportion of young people (aged 18-29) who reported having stopped working after the onset of the pandemic (%)[37]
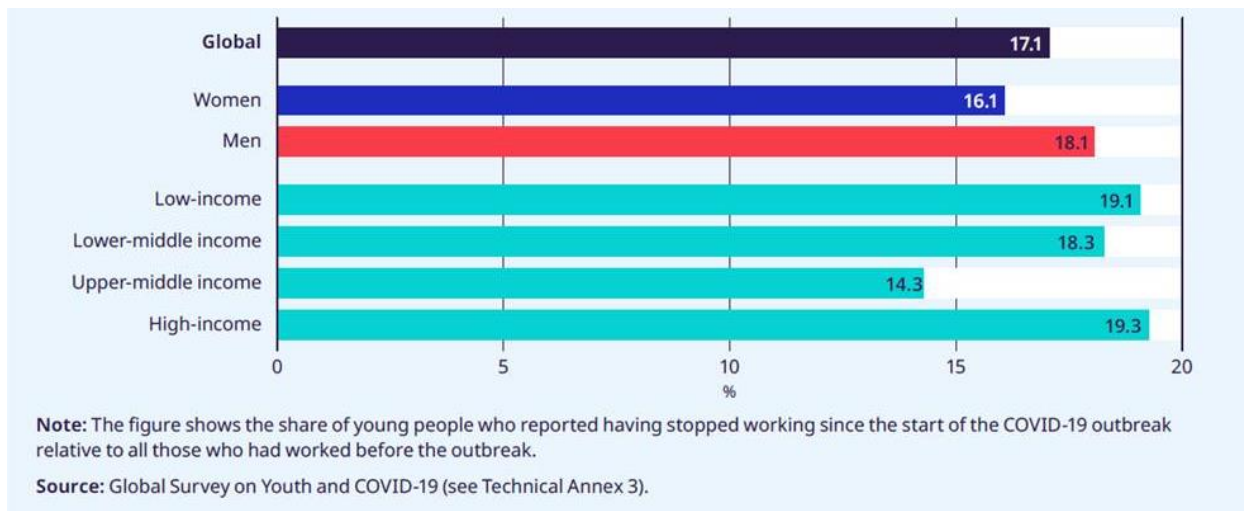

Note: The figure shows the share of young people who reported having stopped working since the start of the COVID-19 outbreak relative to all those who had worked before the outbreak.

Source: Global Survey on Youth and COVID-19 (see Technical Annex 3).

Figure 7. Global estimates of youth employment in hard-hit sectors[37]

Economic sector	Impact of crisis on economic output	Baseline employment estimates for 2020 (before COVID-19 crisis)		
		Level of employment (millions)	Share in global youth employment (%)	Share of young women in total youth employment (%)
Wholesale and retail trade; repair of motor vehicles and motorcycles	High	74.8	17.5	41.7
Manufacturing	High	59.2	13.8	36.9
Real estate; business and administrative activities	High	16.4	3.8	43.8
Accommodation and food services	High	28.1	6.6	50.8
Transport, storage and communication	Medium-high	21.0	4.9	16.4
Arts, entertainment and recreation, and other services	Medium-high	28.4	6.6	60.3
Mining and quarrying	Medium	2.9	0.7	22.6
Financial and insurance services	Medium	4.6	1.1	54.7
Construction	Medium	33.1	7.7	5.4
Agriculture, forestry and fishing	Low-medium	123.7	28.9	36.0
Utilities	Low	2.0	0.5	21.3
Public administration and defence; compulsory social security	Low	8.6	2.0	33.3
Human health and social work activities	Low	11.8	2.7	74.2
Education	Low	13.2	3.1	69.5

Note: Impact ratings are based on the ILO's assessment of real-time and financial data (see the second edition of the *ILO Monitor*, released on 7 April 2020), ILOSTAT baseline data on sectoral distribution of employment (ISIC Rev. 4) and ILO Harmonized Microdata.

Source: ILO modelled estimates, November 2019.

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[37] https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf

COVID-19 impact on mental health and wellbeing

Overview[38]

✓ More than **half of adults** (60%), over **two thirds of young people** (68%), and **three quarters of people aged 18–24** (74%) have indicate **deteriorating mental health during lockdown** (from early April to mid-May)

✓ **People with experience** of mental health problems are **more likely to see their mental health worsen** as a result of COVID-19 restrictions

✓ Many **without previous experience** of mental health problems have experienced **poor mental health** during lockdown and have seen their mental health and wellbeing **decline**

− Since the start of the pandemic, there has been[39]:

   ✓ A **decrease in the number of referrals** for mental health services

   ✓ An **increase in the number of people self-referring** and **presenting in crisis**

   ✓ An **increase in demand** from those affected by factors associated with COVID-19, such as grief, social isolation and financial hardship, and from health and social care staff, providing frontline services

Key drivers of poor mental health[38]

✓ Restrictions of **social contact** / not able to meet anyone (79%)

✓ Not being able to **go outside** (74%)

✓ **Anxiety / worry** about family and friends getting the diseases (74%)

✓ **Boredom** for young people (83%)

✓ Feeling of **loneliness**, especially for young people (72%)

✓ **Not feeling entitled to seek help** and have difficulty accessing it:

   ✓ 30% of adults and more than 25% of young people did not access support during lockdown because they did not think they deserve it

   ✓ A quarter (25%) of adults and young people who tried to access support didn't get it

   ✓ Not feeling comfortable using phone/video call technology has been one of the main barriers to accessing support

✓ **Quarantine can contribute to stress, anger and an increase in risky behaviours,** such as drinking and online gambling[40]

Specific (e.g. demographic) groups face greater mental health challenges[38]

   ✓ Those with disabilities, learning difference, or long-term illnesses

   ✓ Young people aged 18–24 (see previous section) and older people

   ✓ BAME communities

   ✓ Women and non-binary people

   ✓ People experiencing social deprivation

   ✓ People experiencing unemployment, seeking work and whose employment status has changed as a result of COVID-19

   ✓ Health care workers

Table 1 outlines examples of COVID-19 impact on mental health of specific groups.

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[38] https://www.mind.org.uk/media-a/5929/the-mental-health-emergency_a4_final.pdf
[39] https://www.rethink.org/news-and-stories/blogs/2020/05/what-impact-has-covid-19-had-on-mental-health-services/
[40] https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30307-2/fulltext

Table 1. COVID-19 impact on the mental health of specific groups

Group	Mental health impact
Children and young people[40434142]	– Evidence from previous pandemics suggests that children **experiencing quarantine** are more likely to develop **adjustment disorders, acute stress disorder and grief** – There has been an increase in the number of **hospital admissions, cases of self-harm and suicides among under 18's with autism,** who are unable to cope with the changing environment – There has been an increase in the number of **young people contacting helplines with anxiety**

Women and girls[4344454647]	– Globally, lockdown restrictions have **exacerbated pre-existing inequalities for women and girls**, including mental health and wellbeing
	– Quarantine and containment measures can significantly **reduce women's economic and livelihood** activities, **increasing poverty rates**, and exacerbating **food insecurity**
	– **Young women** are the most likely to have experienced **high levels of depression, anxiety and loneliness** during lockdown
	– Young women (age 16 to 24) with worse than average mental health scores before the crisis have deteriorated during the pandemic
	– **Factors** likely to impact women's mental health include:
	  ✓ Disrupted access to sexual and reproductive health, and gender-based violence services
	  ✓ An increase in gender-based violence and abuse
	  ✓ An increase in informal (unpaid) care work with the closure of nurseries and schools, and increased needs of older relatives
	  ✓ Vulnerability to financial shocks, as women are more likely to be in precarious employment or earning low wages

Men[48]	– Over half of men aged 19 to 24 have met with groups of friends during lockdown, and 20% have been **reprimanded by the police** – Men aged 19 to 24 are likely to have a positive perception of people their age who **break the rules**, regarding them as 'cool' and 'independent', while others see them as 'self-centred' and 'immature' – Up to half of young men feel significantly **more anxious than before** the lockdown
Older people[4950]	– Social isolation, reduced physical activity and reduced intellectual stimulation can **increase the risk of cognitive decline and dementia** – Older people in care, those with dementia and cognitive decline may experience higher levels of **anxiety, stress, anger, agitation and emotional withdrawal** during lockdown – **Social stigmatisation**, caused by portrayal of COVID-19 as an 'older people disease', has **exacerbated age based discrimination**, with outcomes ranging from increased isolation to violation to their right to health and life

BAME communities[515253]	– People from **BAME backgrounds have reported more negative effects from lockdown** than those from white backgrounds, including:
	  ✓ Higher levels of **loneliness, depression and anxiety**, with 30% more thoughts of death, and 70% higher reports of self-harm
	  ✓ Higher levels of **anxiety and worry regarding unemployment** (61% compared to 51%), financial stress (52% compared to 45%) and housing (30% compared to 23%)
	  ✓ A 14% deterioration in the mental health of BAME men, compared to 6.5% in white British men
	  ✓ A 23% increase in mental distress among men of Bangladeshi, Indian and Pakistani heritage

LGBTQ+[545556]	– Evidence suggests 69% have suffered **depressive symptoms** during lockdown, rising to around 90% for those who had experienced homophobia or transphobia – Highest rates of depression reported among younger LGBT people **confined with relatives not supportive of their sexual orientation**

[41] https://pubmed.ncbi.nlm.nih.gov/24618142/
[42] https://www.sciencedirect.com/science/article/pii/S0889159120308126?via%3Dihub
[43] https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2020/policy-brief-the-impact-of-covid-19-on-women-en.pdf?la=en&vs=1406
[44] https://www.weforum.org/agenda/2020/04/covid-19-coronavirus-pandemic-hit-women-harder-than-men/
[45] https://www.ucl.ac.uk/ioe/news/2020/aug/poor-mental-health-lockdown-most-common-among-young-women
[46] https://www.ifs.org.uk/publications/14876
[47] https://www.unfpa.org/press/women-girls-health-workers-must-not-be-overlooked-global-covid-19-response
[48] https://www.sheffield.ac.uk/news/nr/young-men-most-likely-break-coronavirus-lockdown-rules-psychology-mental-health-study-1.888316
[49] https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30307-2/fulltext
[50] https://www.un.org/development/desa/ageing/wp-content/uploads/sites/24/2020/04/POLICY-BRIEF-ON-COVID19-AND-OLDER-PERSONS.pdf
[51] https://www.ucl.ac.uk/news/2020/jul/levels-depression-and-anxiety-higher-amongst-those-bame-backgrounds-during-lockdown
[52] https://www.mind.org.uk/news-campaigns/news/existing-inequalities-have-made-mental-health-of-bame-groups-worse-during-pandemic-says-mind/
[53] https://www.medscape.com/viewarticle/935332
[54] https://www.medrxiv.org/content/10.1101/2020.08.03.20167403v1 *(awaiting peer review)*
[55] https://www.bbc.co.uk/news/health-53223765
[56] https://www.rethink.org/news-and-stories/blogs/2020/05/what-impact-has-covid-19-had-on-mental-health-services/

	– 11,000 people accessed the **LGBT Hero suicide prevention web pages** between April and July 2020, a 44% increase since the beginning of the year – **Influencing factors** include being unable to access LGBTQ+ networks while in lockdown, having to conceal sexual orientation or gender identity, substance misuse, domestic violence and abuse
People with disabilities[57][58]	– Reporting higher levels of **social isolation** – Policies around rationing of medical care may intensify **discriminatory attitudes, increasing anxiety** about becoming ill – In one study, 48% of people with a disability reported a **decline in their mental health** since the start of the pandemic – Individuals who are **deaf** may experience increased isolation due to mask-wearing policies, making lip-readying challenging
People hospitalised with COVID-19[59][60]	– People hospitalised with COVID-19 can experience **post-intensive-care syndrome**[61], which can also extend to the family of the patient – Emerging evidence suggests that people with acute COVID-19 are at greater risk of developing depression, anxiety, fatigue, PTSD, and in rare cases, neuropsychiatric syndromes in the longer term
Healthcare workers[62][63][64]	– Over half (57%) of NHS staff reported **working additional hours**, based on data gathered in April – Nearly 70% of NHS staff reported **higher anxiety levels** than before the outbreak. 32% of NHS staff did not feel anxious at all before the pandemic, with the rate falling to just 7% during the outbreak – Signs of **PSTD** have been reported amongst some UK healthcare workers – Evidence suggests that hospital staff under quarantine, is more likely to develop acute stress disorder, report exhaustion, detachment from others, anxiety when dealing with febrile patients, irritability, insomnia, poor concentration and indecisiveness, deteriorating work performance, and reluctance to work or consideration of resignation – Findings from previous epidemics show the effect of quarantine as a predictor of **post-traumatic stress disorder symptoms** in hospital employees, presenting for up to 3 years
Income and employment-related factors[65][66][67][68]	– The economic downturn and associated factors such as unemployment, financial insecurity and poverty, can **induce mental health problems in previously healthy people and exacerbate pre-existing conditions** – Previous economic crises are associated with **higher rates of suicide**, for example, 2008 saw a rise in the number of suicides and substance-use related mortality in working age Americans – In the UK, **12.5 million people report their households have been affected financially** – Those with reduced income reported a 19% **higher average anxiety levels** – During the pandemic there has been an **increase in occupational burnout**

Recommendations[40][69][70][71]

- Health and social care for people with **severe mental health conditions and psychosocial disabilities must be part of the essential services** in all countries
- Community monitoring and mental health screening could **focused on selected groups**
- **Digital health and digital phenotyping** could be used to switch from individual-based approaches to population-wide screening
- Anxiety can be caused by **inconsistent, incomprehensible or threatening communications**, which should include **advice on emotional well-being**
- **Education, self-care and family support** should form part of mental health prevention strategies, involving multiagency collaboration between housing, education, and employment services, with support from the voluntary and mental health sectors

[57] https://www.apa.org/topics/covid-19/research-disabilities
[58] https://theconversation.com/mental-health-impact-of-coronavirus-pandemic-hits-marginalized-groups-hardest-142127
[59] https://content.sciendo.com/view/journals/itim/5/2/article-p90.xml
[60] https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366%2820%2930203-0/fulltext
[61] https://www.sciencedirect.com/science/article/pii/S0889159120308126?via%3Dihub
[62] https://yougov.co.uk/topics/health/articles-reports/2020/04/24/covid-19-how-are-nhs-staff-coping
[63] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext
[64] https://www.dauk.org/
[65] https://www.sciencedirect.com/science/article/pii/S0889159120308126?via%3Dihub
[66] https://www.bmj.com/content/347/bmj.f5612.full
[67] Personal and economic well-being in Great Britain: June 2020 (ONS)
[68] https://www.who.int/mental_health/evidence/burn-out/en/
[69] https://www.un.org/development/desa/ageing/wp-content/uploads/sites/24/2020/04/POLICY-BRIEF-ON-COVID19-AND-OLDER-PERSONS.pdf
[70] https://www.health.org.uk/news-and-comment/blogs/emerging-evidence-of-covid-19s-unequal-mental-health-impacts-on-health-and
[71] https://www.un.org/sites/un2.un.org/files/un_policy_brief-covid_and_mental_health_final.pdf

- **Digital services (telehealth)** should not replace **face-to-face treatment** for those requiring intensive mental health treatment and support, when in-person contact is safe
- **Older people** should be consulted and **participate in policy decision making** that affect their lives; and measures that guarantee their **inclusion** must be put in place
- Prevention of and response to **domestic violence** (against women, children, older adults, or persons with disability) should be a key part of national COVID-19 response plans
- Solutions that help isolated people **stay connected**, reduce loneliness (especially in older adults) and reduce boredom (especially in children / adolescents) should be promoted
- Developing a culture where the **wellbeing of staff is paramount,** allowing and promoting mitigation of inequalities

Country examples of measures, mitigating mental health impacts of COVID-19

Country	Mitigation measures
Belgium[7273]	- A campaign "Check Yourself" to increase awareness of how to take care of mental health issues - The campaign website includes contact numbers for different groups; a link to an independent mental health resilience test; and ten tips on how to strengthen your mental resilience
Germany[7475]	- Information and tips on how to cope when staying at home, including free numbers for counselling - A possibility to search for appropriate physician / psychotherapists according to their foreign language skills
Italy[7677]	- Mental health services (in/outpatient) are recognised by authorities as fundamental services to the community during a global pandemic - In Lombardy the regional authority specified that mental health and substance misuse services should maintain full functionality
New Zealand[7879]	- An easy to read guidance on how to cope with the impact of COVID-19 on your mental health and wellbeing published, in addition to mental wellbeing helplines for different population groups
Spain[8081]	- A citizen's web portal ("Emotion-al Management") established in Catalonia, providing a tool for self-evaluation to identify risk and allow authorities to proactively contact the at-risk individuals - Municipal Strategy against Loneliness launched in Barcelona, identifying six main areas for action - A mental-health shock plan launched by Barcelona City Council, budgeting an extra 1.5 million EUR to deal with COVID-19 related psychological suffering; and prioritizing groups that are hit hardest
Sweden[8283]	- Government invested SEK 24 million regional support to develop and strengthen digital contact channels for patients with mental health issues - All non-acute physical visits to mental health care facilities rearranged for people age 70 and above - Contacts performed by telephone or online; a home visit considered in severe cases only
The Netherlands[84]	- Digital information and referral centre "Steunpunt Corona Care" promoting mental health, providing information and advice for different groups, such as people diagnosed with COVID-19, healthcare professionals; and around specific themes such as mourning, financial concerns and stress
USA[8586]	- Peer to peer networks launched in New Jersey, such as Mom2Mom, Worker2Worker and Cop2Cop - Mom2Mom support workers describe how parents generally appreciated the phone calls with someone asking about their feelings as a break in the day - Medical student volunteers (removed from clinical duties) serve as virtual patient navigators in New York, using social media to reach community members, improving awareness of precautions and increasing access to medical care. They also collaborate with colleagues from other disciplines to provide legal guidance to immigrants, fearful of seeking care because of their status

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[72] https://www.zorg-en-gezondheid.be/6-tips-om-je-mentale-gezondheid-op-peil-te-houden
[73] https://www.zorgenvoormorgen.be/checkjezelf
[74] https://www.infektionsschutz.de/coronavirus/psychische-gesundheit.html#c12550
[75] https://www.kbv.de/html/arztsuche.php
[76] https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366%2820%2930133-4/fulltext
[77] https://pubmed.ncbi.nlm.nih.gov/32315881/
[78] https://covid19.govt.nz/assets/resources/accessible-information/easy-read/Looking-after-how-you-are-feeling-while-staying-at-home-Easy-Read-fact....pdf
[79] https://covid19.govt.nz/health-and-wellbeing/mental-wellbeing/where-to-go-for-help/
[80] https://www.barcelona.cat/covid19/en/emotional-support
[81] https://publichealth.jmir.org/2020/2/e19106/PDF
[82] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7403743/
[83] https://www.government.se/articles/2020/05/about-covid-19--for-older-people-people-with-health-conditions-and-health-care-and-social-services-staff/
[84] https://www.rivm.nl/ivccorona
[85] https://academic.oup.com/tbm/article/10/3/503/5860854
[86] https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html

United Nations (UN)[87]	"My Hero Is You" book developed by UN and non-UN agencies, published to help children aged 6 to 11 years cope with their worries about COVID-19. The book's messages resonate with children from different backgrounds and cultures, based on interviews with more than 1700 children, parents, caregivers and teachers from around the world
WHO[88]	An easy-to-read flyer on coping with stress during the COVID-19 outbreak published *(Figure 8)*

Figure 8. Coping with stress during the COVID-19 pandemic outbreak

[87] https://www.un.org/sites/un2.un.org/files/un_policy_brief-covid_and_mental_health_final.pdf
[88] https://www.who.int/docs/default-source/coronaviruse/coping-with-stress.pdf?sfvrsn=9845bc3a_8

Iechyd Cyhoeddus Cymru

Public Health Wales

GIG CYMRU NHS WALES

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