



GIG  
CYMRU  
NHS  
WALES

Iechyd Cyhoeddus  
Cymru  
Public Health  
Wales



Iechyd Rhyngwladol  
International Health

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

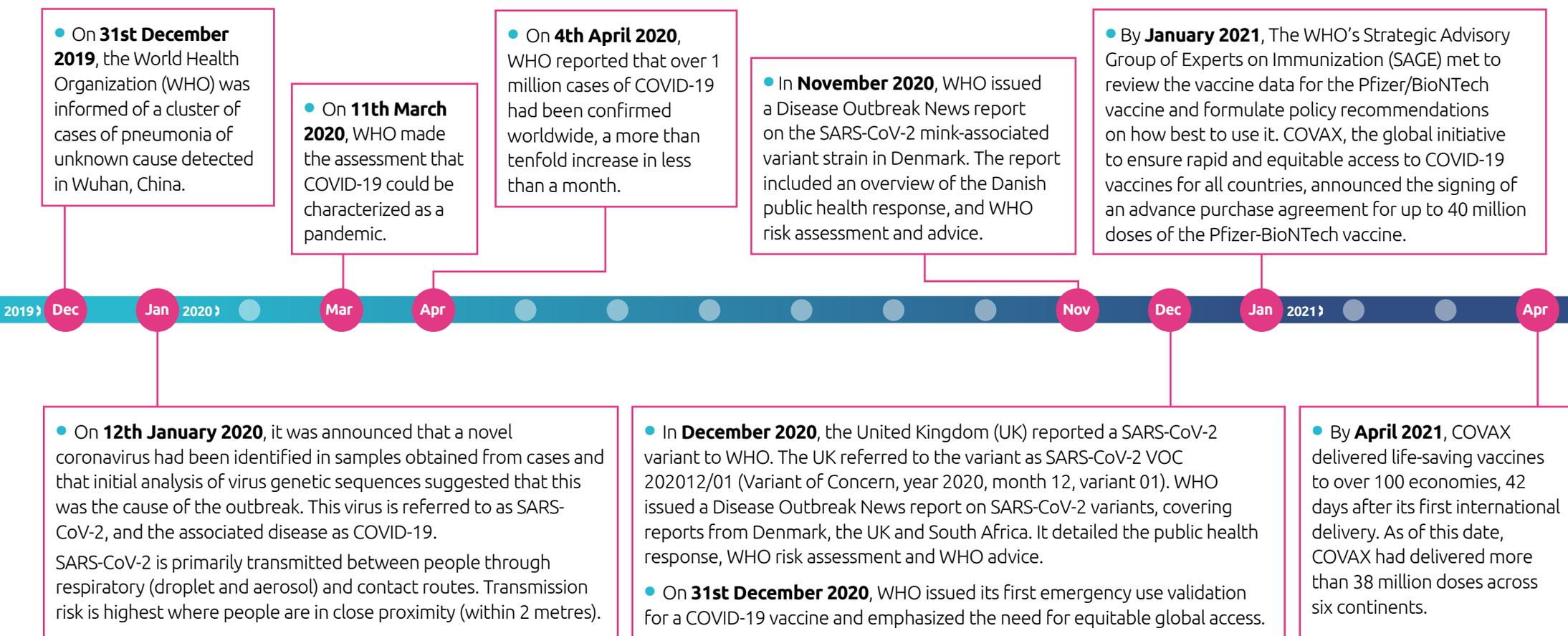
## Summary Calendar April 2020 – March 2021

Canolfan Gydweithredol Sefydliad  
Iechyd y Byd ar Fuddsoddi  
ar gyfer Iechyd a Llesiant



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

## Background Information: The COVID-19 pandemic



### Footnotes:

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-background-information/wuhan-novel-coronavirus-epidemiology-virology-and-clinical-features>

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-background-information>

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline#>

# The International Horizon Scanning Reports

The rapidly evolving nature and uncertainties of the COVID-19 pandemic have led to unprecedented challenges for health systems and have caused significant social, economic and well-being impacts. To understand, mitigate and address these, a collaborative, timely, and evidence-informed public health action is essential across all governance levels, sectors and stakeholders, nationally and internationally. Continuous and timely learning from the experience of other countries and the emerging evidence and guidance, provided by key international organisations, is critical to inform such actions, approaches and decision-making processes in Wales.

The International Horizon Scanning and Learning work stream was initiated by the World Health Organization Collaborating Centre on Investment for Health and Well-being (hereafter referred to as WHO CC), Public Health Wales, to inform the evolving COVID-19 public health response and recovery plans in Wales. It focuses primarily on COVID-19 international evidence, experience and measures as well as transition and recovery approaches, to understand and explore solutions for addressing the on-going and emerging health, well-being, social and economic impacts (potential harms and benefits).

This work is aligned with and feeds into the Welsh Government Office for Science, particularly into the Technical Advisory Group International Health, 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 Well-being of Future Generations (Wales) Act, the Prosperity for All national strategy and Wales' long term plan for health and social care. The work stream therefore aims to contribute to a healthier, more equal, resilient, prosperous and globally responsible Wales. It is important to note that the reports may vary in focus and scope, depending on the evolving COVID-19 situation as well as public health and policy needs. Reports are publically available on the [WHO CC repository](#).

Topics covered in the reports are linked to the four COVID-19 related harms set out by Welsh Governments recovery framework:

- Harm from death and mortality arising directly from SARS-CoV2 infection.
- Harm from overwhelming NHS Capacity which impacts immediately other treatment procedures and patients with other health issues as a result of transfer of medical resources to COVID patients. Also, this includes transmission of COVID to other patients or staff in the hospital environment.
- Harm from the predicted morbidity and mortality arising from non-COVID illness and diseases as a result of non-detection or non-treatment, i.e. potential patients and existing patients not presenting themselves for investigation or treatment, e.g. cancer diagnosis and/or treatment.
- Harm (current and future) resulting from the control measures themselves, e.g. socioeconomic impact on lower socio-economic and deprived groups, anxiety and mental health harm from shielding isolation, physical distancing, closure of schools and large scale unemployment.

Each report also includes:

- Epidemiological and data insights, e.g. 'R' value analysis, variation in cases/deaths/testing/reporting
- Existing and emerging evidence, and guidance, e.g. prevention and control measures; test, track and trace; social distancing
- Response and recovery policies and approaches, e.g. re-opening services, education, transport, risk communications
- Wider socio-economic and equity impacts and modelling, e.g. (un)employment, vulnerable groups, violence, homelessness
- In-depth country reviews

---

## Footnotes:

The Well-being of Future Generations (Wales) Act: <https://gov.wales/well-being-of-future-generations-wales>

Prosperity for all; economic action plan: <https://gov.wales/prosperity-all-economic-action-plan>

A healthier Wales: long term plan for health and social care: <https://gov.wales/healthier-wales-long-term-plan-health-and-social-care>

Leading Wales out of the coronavirus pandemic: a framework for recovery: <https://gov.wales/leading-wales-out-coronavirus-pandemic-html>

## The International Horizon Scanning Reports: Methodology

The International Horizon Scanning reports have been published regularly since April 2020, synthesising data, evidence and empirical learning from key organizations, research and relevant countries. To gain an understanding and overview of the current available international evidence in regards to COVID-19 the reports include a variety of data sources including scientific literature, government communications and non-governmental organisations' reports and analysis. The methodological approach involves a three step process consisting of a scoping review, evidence synthesis and final edit. This systematic approach aims to provide dynamic, up-to-date, actionable intelligence and communicate key findings, allowing for the report to be concise and easily understandable.

To gain an understanding and overview of the available evidence in regards to the topic of interest the project team considers not just primary but also secondary evidence sources. This is due to the rapidly evolving COVID-19 situation internationally and a consequently emerging evidence base, often lacking in robust primary evidence sources such as academic peer reviewed articles. However, this varies quite heavily depending on the topic of interest. The inclusion criteria for each scoping review includes, working with identified evidence which addresses the COVID-19 pandemic, in addition to reliable and robust resources, using evidence such as from the World Health Organization (WHO), the European Centres for Disease Prevention and Control (ECDC) and the World Bank Data Catalogue amongst others, along with robust clinical and academic peer reviewed journal articles. The hierarchy of evidence is used to assess how robust research studies are.

Relevant evidence is extracted, synthesised and formulated into high level summaries for the report. To report findings, the final selection of published and grey evidence gathered through the various databases will be added to the report template. The reports usually cover two to three priority areas of interest and an accompanying epidemiological update on selected countries based on the findings of the topic of interest. The content of the priority areas is dependent on the type of question and the type of available and relevant evidence.

## International Horizon Scanning and Learning: Summary Calendar

This Summary Calendar has collated, synthesised and presented a clear and concise summary of the COVID-19 International Horizon Scanning Reports over the past year, since April 2020 through to March 2021. The International Horizon Scanning and Learning work stream has proved to showcase informative and impactful research whilst collating data from other countries, providing guidance, recommendations and useful insights regarding the evolving nature and uncertainties of the COVID-19 pandemic; This has sought to improve and inform such actions and approaches in Wales. The summary aims to inform a succinct overview of comprehensive, coherent, inclusive and evidence-informed policy action, which has supported and continues to support 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.

The Summary Calendar has brought together all the learning so far with one page per report including key messages and key recommendations from the high level synthesis page of each International Horizon Scanning (IHS) report.

Each report page shows an epidemiological update in Wales at the time of the report publication. Data for the epidemiological update in Wales has been taken from Public Health Wales (available [here](#)). Data on COVID-19 cases in Wales includes confirmed cases in hospitals and elsewhere, by specimen date. Data on COVID-19 deaths in Wales shows suspected deaths to be caused by COVID-19 in people who have tested positive for COVID-19, shown by date of death (these figures only include deaths occurring in individuals who were laboratory confirmed with COVID-19).

**This document is best viewed on a desktop or laptop computer using Adobe Acrobat Reader (available [here](#) as a free download).**

# International Horizon Scanning and Learning: Dissemination and Impact

In total, 26 reports have been developed over 2020/21: two pilot and 24 published reports, disseminated as part of the WHO CC International Resource weekly/bi-weekly update, including additional information and links to useful resources, such as webinars and relevant published reports. All reports are published and can be found on the WHO CC repository (available [here](#)). The reports have dynamically informed COVID-19 response decision making and policies in Wales.

Key target audiences include:

- Welsh Government and specifically the Welsh Government Office for Science and particularly Welsh Government's Technical Advisory Group (International Health) with evidence from a report featured for example in a Technical Advisory Cell thematic summary briefing
- Public Health Wales' Gold Command Group and the Director of the WHO CC
- Our international stakeholders such as WHO EURO and EuroHealthNet
- National and international (public) health and care professionals
- Policy makers and (public health) advocates at national and local level

Evidence from the reports has also been presented through webinars, targeting the WHO CCs international stakeholders and an abstract was accepted at the European Public Health Conference 2021. The team has delivered various presentations on the reports and organised webinars to present findings. For example, in October 2020, members of the project team have organized a webinar together with Public Health Network Cymru to present findings from the reports (available [here](#)).



International Horizon Scanning and Learning



# Contents

# International Horizon Scanning, 30th April 2020

## Key Findings

### Prevention and control measures:

- Recommendations on the use of masks were inconsistent
- Many countries were facing shortages of sufficient Personal Protective Equipment (PPE)
- There was not enough evidence about the effectiveness of antibody-mediated immunity
- The use of “immunity passport” or “risk-free certificate” was not backed up by sufficient evidence

### Socio-economic and multidimensional impacts:

- The outbreak will exacerbate current inequities within Wales and have the highest degree of impact on the most vulnerable and marginalised segments of the population
- Restrictive public health measures are increasing exposure to gender-based violence

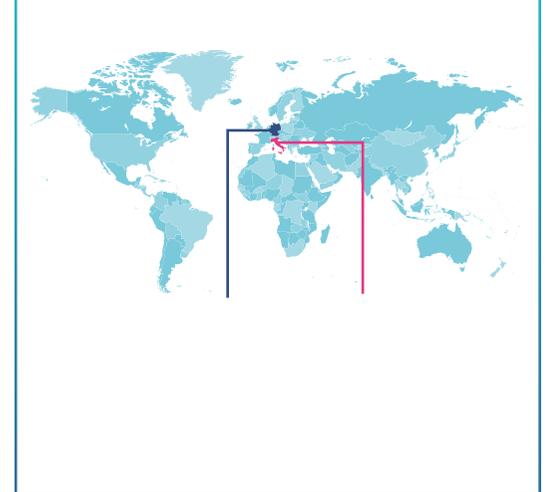
### Groups most at risk of COVID-19:

- Refugees, migrants, minorities, persons with disabilities, LGBTQI (Lesbian, gay, bisexual, transgender, queer and intersex), women, the elderly, youth and children

### To mitigate excess morbidity:

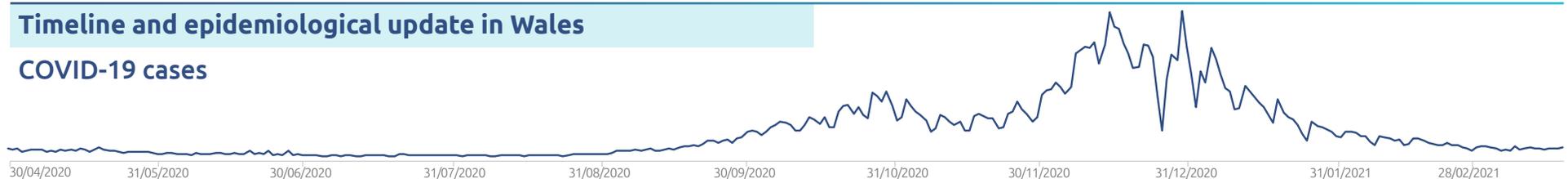
- Reinforce social capital, promote social inclusion and cohesion
- Protecting economic wellbeing, ensuring financial protection
- Safeguarding peace and stability
- Undertake fiscal stimulus and support for the most vulnerable
- Protect Human Rights and focus on inclusion
- Support education
- Prioritise social cohesion measures

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 7th May 2020

## Key Findings

### Impact on care homes and other enclosed settings:

- Due to differences in testing availabilities, policies and approaches to recording deaths, international comparisons are difficult
- Facilities should screen all Healthcare Practitioners (HCP) at the beginning of their shift for fever and symptoms of COVID-19 and facilities should develop (or review) existing plans to mitigate staffing shortages from illness or absenteeism

### Personal Protective Equipment (PPE):

- The WHO has launched a new COVID-19 supply portal, a purpose-built tool to facilitate and consolidate submission of supply requests from national authorities and all implementing partners supporting COVID-19 National Action Plans

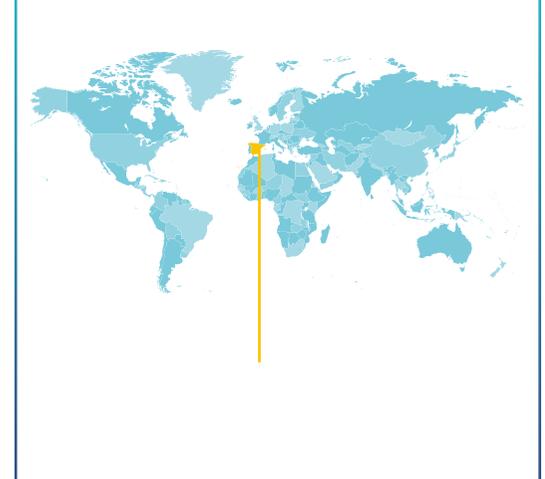
### Impact on the education system:

- Staggering impact of COVID-19 on education globally, with an estimated 1.38 billion learners impacted by school closures
- School re-opening approach should be comprehensive and include: policy reforms; financial provisions; compensatory and hybrid learning models, action to reach the most marginalised: wellness and protection measures; safe operations

### Transition approaches and considerations:

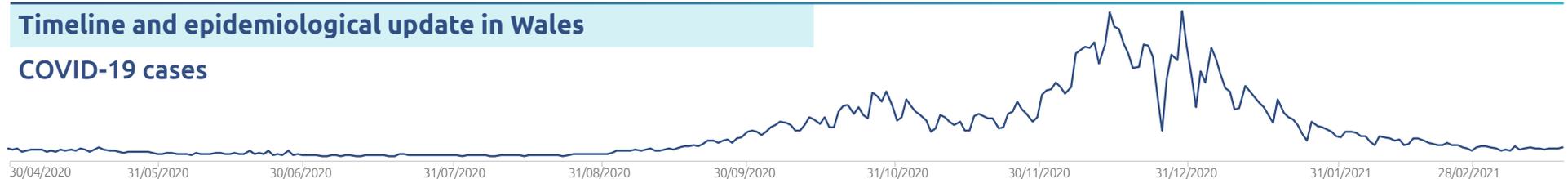
- Transition should be informed by national, local and community-level risk assessments, as well as international evidence and experience
- Focus must be on balancing and mitigating wider public health, health service, social and economic impacts, including equity and vulnerability

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 14th May 2020

## Key Findings

### Impact on employment and related financial and health burden

- The rise in the number of those unemployed was estimated to be between 5.3 and 24.7 million globally
- Low-income workers are less likely to be able to work from home and are more likely to visit densely populated areas, unlike higher-income workers who are more able to work remotely
- New employees were missing out on the furlough scheme due to payroll rules
- At GE Aviation in Wales, 50% of engine manufacturing staff were furloughed and profits fell by 40% in the first 3 months of 2020, in response to reduced demand from the aviation industry as flights are grounded across the world
- Tata steel requested £500 million of Government support

### Impact on vulnerable groups

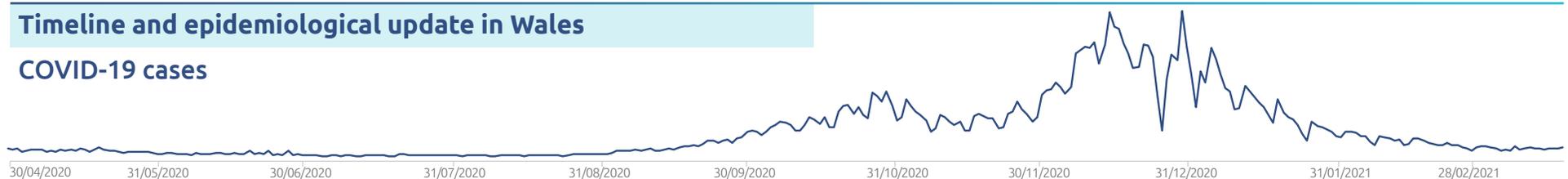
- Men are more vulnerable to contracting and dying from COVID-19; while women face higher risk of job and income loss, violence, exploitation, abuse or harassment during times of crisis and quarantine
- Older people are at higher risk of dying from COVID-19, as well as that of discrimination, food poverty, digital exclusion and increased stigma
- Marginalised groups have a higher COVID-19 disease burden, most significantly ethnic minorities, the socio-economically disadvantaged and the elderly
- Policy recommendations:
  - ✓ Allocate resources, applying evidence-based methods to address violence in COVID-19 response plans, use sex-disaggregated data to understand impact and put women at the centre of policy change, solutions and recovery
  - ✓ Build capacity of key services, including dedicated funding to protect women from falling into poverty
  - ✓ Strengthen service provision, including child-friendly reporting mechanisms

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 21st May 2020

## Key Findings

### Health system recovery:

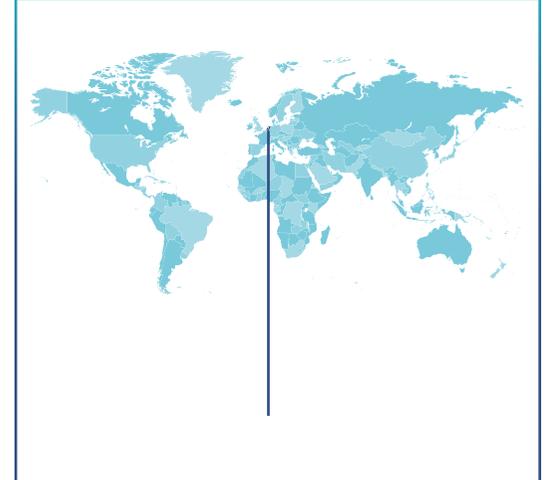
- Many health and care charities in the UK are concerned about the time it will take until health services are fully restarting again
- Five immediate challenges to the health care system have been identified:
  1. Managing infection control and impact on capacity
  2. Understanding and addressing the full extent of unmet needs
  3. Reassuring the public about using services
  4. Looking after and growing the workforce
  5. Improving and not just recovering services
- Recommendations:
  - ✓ Build on primary health care to respond to pent-up demand from chronic conditions and delayed care seeking
  - ✓ Proactively use primary care population health management information systems to identify and work with high-risk individuals
  - ✓ Enhance and resource optimised service delivery platforms

- ✓ Strengthen coordination between primary health care, social services and social care to provide comprehensive support to older people close to home supported through increased recruitment, cross-training and rapid learning cycles

### Re-opening the education sector:

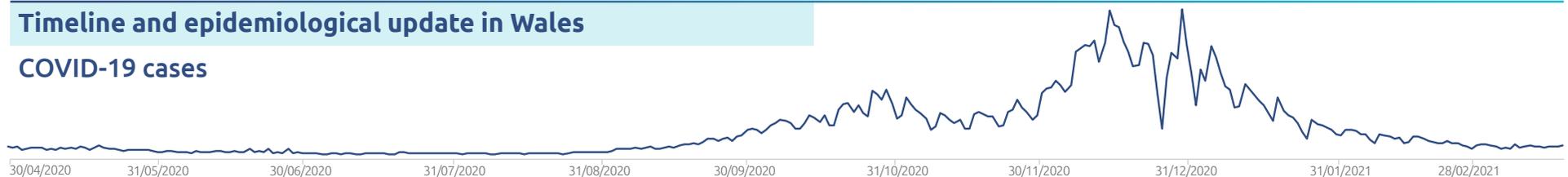
- Severe COVID-19 infections are rare in those under 18 years of age, comprising only 1.4% of those admitted to hospital. Only 0.8% are under 5 years of age
- There was no consistent approach, nor common measures, implemented across European countries; and national decisions might not be optimal due to subnational variance
- The limited existing evidence shows that children are not substantially contributing to household transmission, e.g. they are not yet 'super spreaders' of COVID-19

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 28th May 2020

## Key Findings

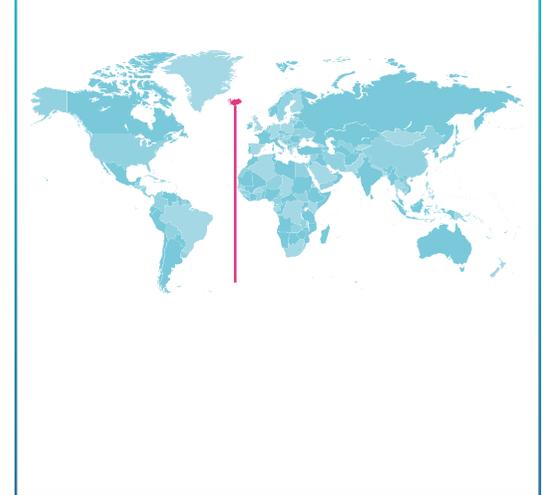
### COVID-19 testing practices:

- Serology (measuring serum antibodies) testing and data are essential for surveillance, assessing the potential for herd immunity, and for accurate modelling of virus transmission dynamics, which provide the foundation for policies to reopen societies
- There was no evidence that COVID-19 serological (antibody) tests show if a person has developed immunity and is no longer at risk of becoming re-infected
- Testing timeframes varied, with the fastest being results sent to individuals within 24 hours

### Adherence to lockdown measures:

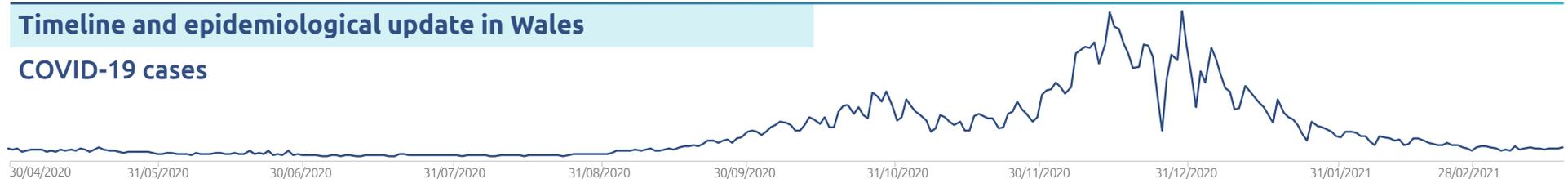
- The level of adherence varied across countries, depending on the different response measures implemented, especially related to lockdown strictness and enforcement
- Creating and maintaining a sense of collective identity was critical to ensure the continued collective action necessary to keep the virus at bay, while returning to normal. Such sense is created by being inclusive of all societal groups and local communities
- To succeed with adherence, it is critical to gain an understanding of issues such as: trust in health authorities, recommendations and information; risk perceptions; acceptance of recommended behaviours; knowledge; barriers/drivers to recommended behaviours; misperceptions; stigma
- To sustain collective action effectively over a prolonged period, such collective identity need to reflect the experiences of the pandemic by all citizens and to include perspectives from the different local communities and social categories that make up civil society

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 4th June 2020

## Key Findings

### Outdoor transmission of COVID-19:

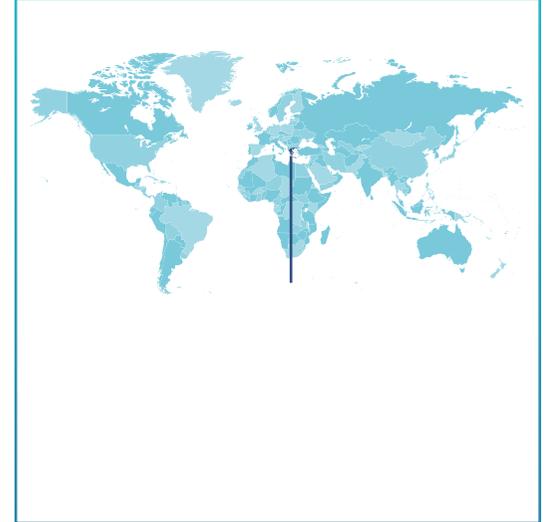
- The transmission of the virus is far less likely in outdoor environments in comparison to indoors
- It is not yet proven that high temperature and UV radiation can reduce the transmission of COVID-19
- Meteorological impacts on the COVID-19 transmission have been explored, with the spread of the virus peaking in temperate regions with a mean temperature of 5°C
- Direct transmission of the virus via swimming and bathing water is highly unlikely

### Long-term impacts of lockdown:

- Higher-income parents are much more likely than the less well-off to report that their child's school provides online classes and access to online videoconferencing with teachers
- Early lockdown studies found that up to 37% of adults showed signs of psychological distress; up to 45% of adults felt adverse effects on mental health; and up to 70% felt this period was the most stressful of their careers

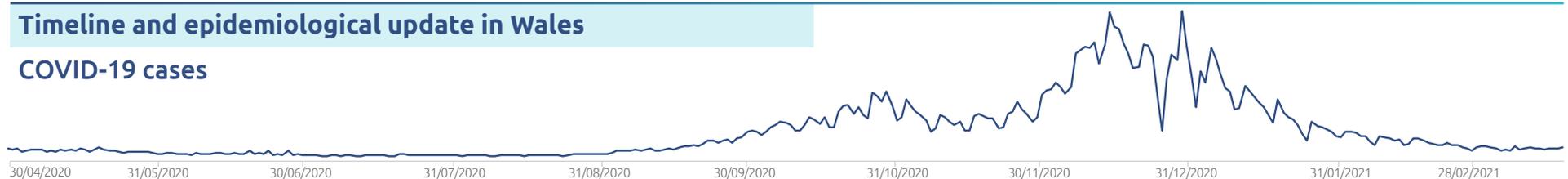
- In April 2020, attendance at A&E was 57% lower than in April 2019 in the UK, suggesting the public may be reluctant to use NHS and social care services for fear of infection
- The WHO recommends six criteria for countries to consider: First, that surveillance is strong, cases are declining and transmission is controlled. Second, that health system capacities are in place to detect, isolate, test and treat every case and trace every contact. Third, that outbreak risks are minimised in special settings such as health facilities and nursing homes. Fourth, that preventive measures are in place in workplaces, schools and other places where it is essential for people to go. Fifth, that importation risks can be managed. Sixth, that communities are fully educated, engaged and empowered to adjust to the 'new norm'

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 11th June 2020

## Key Findings

### Pre-school childcare:

- COVID-19 is likely to have greater impact on women and children, due to disproportionate risk; lack of social and labour protections in the informal job sector; and more women having childcare responsibilities
- The use of grandparents as carers was mostly stopped or reduced, however, it remained a concern, as many parents had been forced to continue using them in order to continue working
- Many countries have provided financial assistance for childcare to parents and preschool settings, especially to key essential workers
- In Italy, nurseries remain closed despite parents returning to work
- Parents have been forced to leave children with elderly family members who are at high risk, due to lack of childcare options

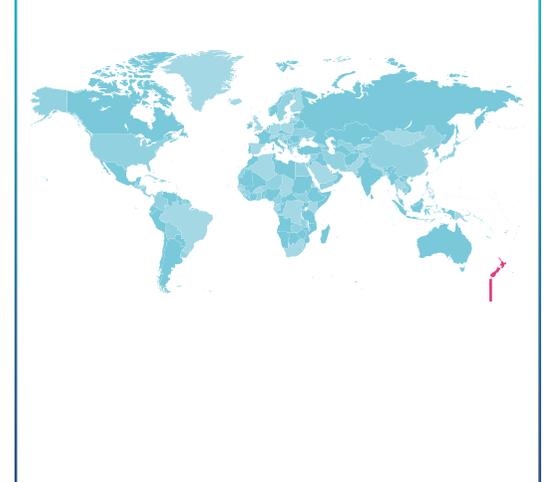
### The 'social bubble' approach:

- The 'social bubble' approach was applied by countries during easing of lockdown. The general principle was that each household is allowed to interact with a limited number of other households
- In Belgium, since 14th May 2020, grandparents without underlying health conditions and younger than 65 years of age were allowed to take care of their grandchildren

### Re-opening public transport:

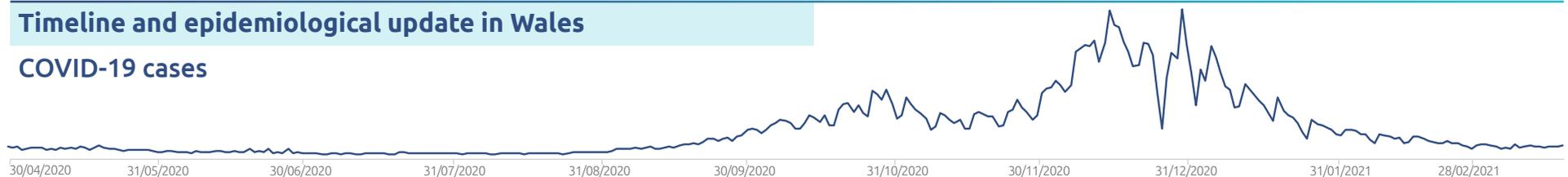
- In places with large transport hubs, such as Madrid and Singapore, vending machines have been installed to sell face masks and hand sanitiser for passengers
- Passengers may be refused admission if they do not have face-masks or face-coverings

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 18th June 2020

## Key Findings

### Repeat testing:

- There was a lack of a clear-cut “gold-standard” for COVID-19 testing, which made the evaluation of testing accuracy challenging
- Repeat testing can be a useful tool when complemented with preventative measures and with readily available testing capacity, but it should not be relied upon as a sole measure for decision-making
- Variation of testing strategies and protocols has significantly impacted countries’ reported statistics, including case fatality rates and the age distribution of cases

### Social distancing:

- There was no clear correlation between the implemented social distancing measures and the rate of infection across different countries
- 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%

- 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

### Strengthening community resilience:

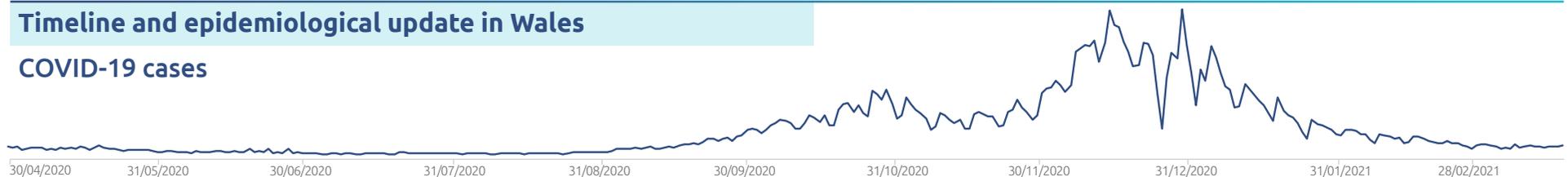
- Governments need to work together with people, communities and partners across sectors to “Build Back Better” towards more sustainable and resilient societies
- “Building Back Better” involves using crisis as an opportunity to transform bureaucracies, attitudes and infrastructures. To improve peace, equity, sustainability and adaptability requires integration of short and long-term perspectives, as early-decisions and investment can determine long-term recovery rate, inclusiveness and sustainability

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 25th June 2020

## Key Findings

### Outbreak hotspots:

- Hotspots includes meat processing plants, factories, buildings with aggressive ventilation systems and fast-paced environments
- Expert assessment of evidence indicates that COVID-19 virus can potentially spread via bio-aerosols and if ventilation systems are not correctly used, this may contribute to airborne diseases transmission and spread, as previously proposed for SARS
- Mitigation approaches, recommended by the Centres for Disease Control and Prevention (CDC): Single-file movement with six-foot distance between each worker where possible; Designating workers to monitor and facilitate distancing on processing floor lines; Visual cues (e.g. floor markings/signs) as a reminder to maintain social distancing; Staggering break times and arrival times to avoid congregations in parking areas

### Homelessness:

- The COVID-19 outbreak can impact housing security, with loss of income, causing rent or mortgage arrears or even homelessness
- People experiencing homelessness are a vulnerable group, often with chronic physical or mental problems, and exposure to COVID-19 can negatively affect their health

### Impact of climate change on incidence rates:

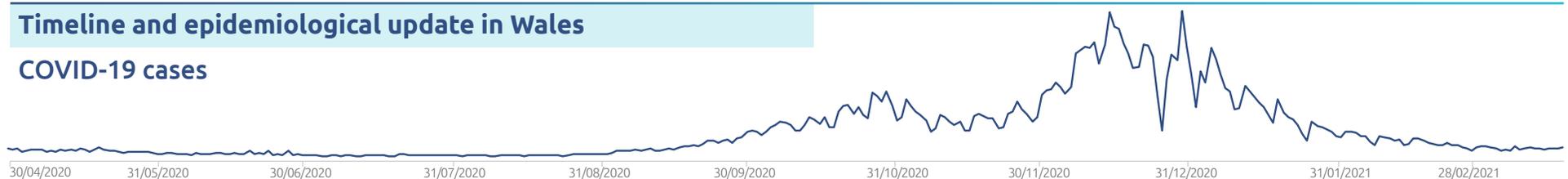
- Seasonal patterns of similar viruses show they spread more during cold months
- Particulate matter, such as droplets, can last longer in cold and less humid environments
- Population behaviour show that people tend to gather more in closed spaces during colder months
- Low winter temperatures can make human body more vulnerable to viral infections

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 9th July 2020

## Key Findings

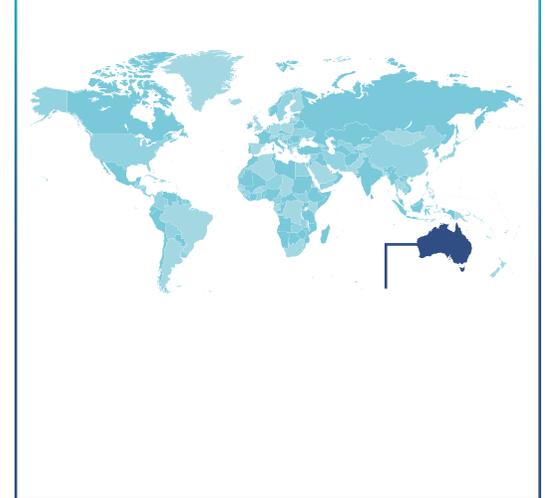
### Outbreak hot-spots and transmission routes

- In many countries, COVID-19 outbreak shows high regional/district/city variation and is a significantly regionalized phenomenon
- Lower-income neighbourhoods with high population density, less access to green spaces and greater air pollution, suffer disproportionately and need targeted support
- The WHO estimates that up to 50% of all COVID-19 deaths to date have occurred among care home residents in Europe
- Indoor markets' outbreaks have wider impacts, disrupting food supply chains and food production; loss of income and labour shortages, creating tensions and food insecurity

### Human behaviour during pandemics:

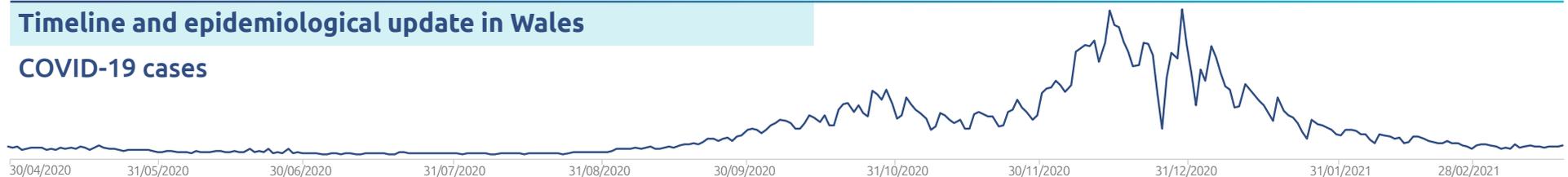
- Three types of behaviour identified: preventive, avoidant and management of disease
- Being older, female, more educated, or non-white, is associated with a higher chance of adopting protective behaviours
- 'Optimism bias' is the belief that bad things are less likely to happen to oneself, useful for avoiding negative emotions, but also underestimating risk and reducing compliance
- Key predictors of adherence to and compliance with measures, include: levels of perceived susceptibility to, severity of and risk from the disease; belief in the effectiveness of the recommended behaviours; levels of anxiety, fear and trust in authorities
- Information disseminated should be accurate, clear, uncomplicated, not sensationalistic or alarmist, and as reassuring as possible
- Understanding the underlying transmission patterns among different populations provides insights into what may have happened retrospectively

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 23rd July 2020

## Key Findings

### Vitamin D:and COVID-19

- There was no conclusive evidence that taking vitamin D supplements specifically assists in the prevention or treatment of COVID-19
- Vitamin D deficiency is common in Europe and the Middle East. It occurs in less than 20% of the population in Northern Europe, in 30–60% in Western, Southern and Eastern Europe and up to 80% in Middle Eastern countries
- In Scandinavia only 5% of the population is affected by vitamin D deficiency
- In Germany, France and Italy more than 25% is affected, particularly older people
- In Austria up to 90% of senior citizens have low vitamin D levels

### Influenza rates and COVID-19:

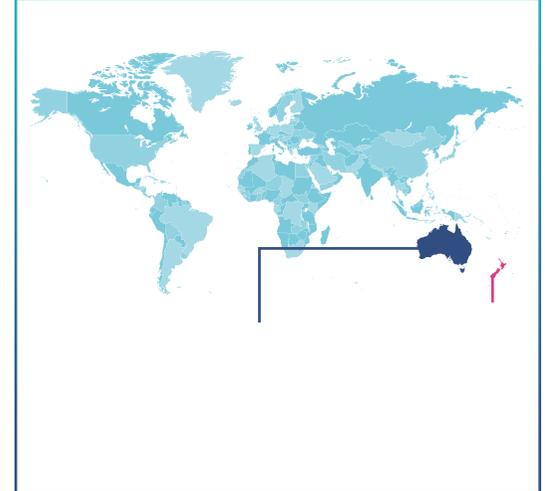
- Public health measures to prevent, reduce and manage COVID-19 spread and risks, have been implemented across the world, which could have also led to decrease in seasonal influenza incidence
- Conclusions from data should be made carefully, as the reduced number of influenza cases may be also due to a decrease in testing and overburdened surveillance systems

- Combined, pressures from influenza outbreaks and the COVID-19 pandemic have the potential to challenge and overburden healthcare systems worldwide
- Patterns and measures, taken in Southern Hemisphere countries (currently in 'influenza season'), can inform approaches in Northern Hemisphere countries

### COVID-19 risk communication:

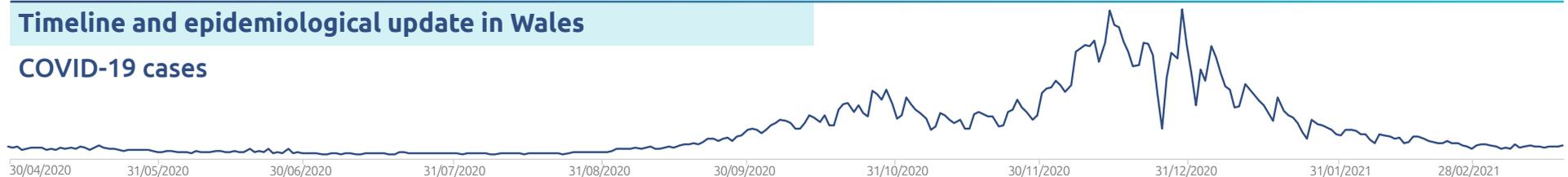
- Every mass public health intervention raises ethical and human rights concerns
- Scientifically sound risk communication requires explicit analysis of the decisions facing people, empirical assessment of relevant beliefs, values and decision-making processes, development and empirical evaluation of messages, focusing on the facts critical to individuals' choices

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 6th August 2020

## Key Findings

### COVID-19 and obesity:

- Evidence suggests excess weight is associated with an increased risk for COVID-19, including: a positive test, hospitalisation, advanced levels of treatment (including mechanical ventilation or admission to intensive or critical care) and death
- Limited evidence has been identified across countries regarding obesity strategies. Several countries in Europe have classified obese people as 'vulnerable' to reduce their exposure to the coronavirus

### COVID-19 impact on unemployment:

- The COVID-19 pandemic outbreak has had an enormous economic impact with the estimated number of unemployed individuals being between 5.3 and 24.7 million globally
- The immediate shock to the Spanish economy is predicted to be the most significant, especially for sectors such as tourism, leisure, hospitality and accommodation

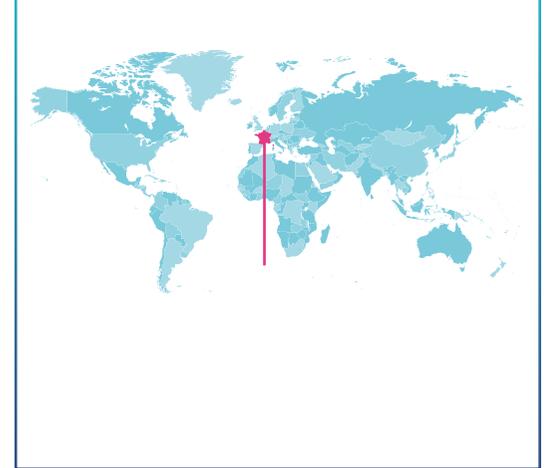
### Black, Asian and Minority Ethnic (BAME) populations and COVID-19:

- Causes for COVID-19 disparities in incidence and death rates are multifactorial, but it is clear that structural inequalities are partly driving the pandemic
- Few countries and their respective surveillance agencies report ethnicity data. Only the CDC in the US and Public Health England are reporting COVID-19 data by ethnic group

### Environmental and social impacts of PPE:

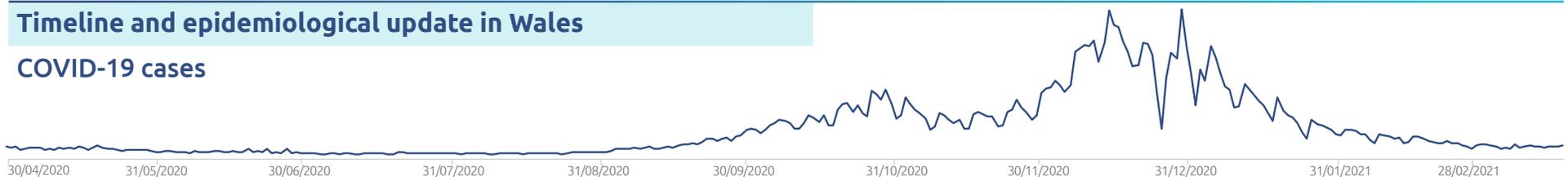
- Population-wide daily use of just one disposable mask per person could result in up to 66,000 tonnes of contaminated plastic waste
- Disposable, single-use masks are usually made from plastic. Polypropylene is a dense thermoplastic, non-recyclable and non-biodegradable. In the environment, it is estimated that it can take up to 450 years to breakdown

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 2nd September 2020

## Key Findings

### COVID-19 reporting methods and public perception of risk:

- Countries across the world vary greatly in their reporting methods, including disparity in the definitions of COVID-19 cases and deaths
- Risk perception correlates positively and significantly with an index of preventative health behaviours such as washing hands, wearing a face mask, and physical distancing
- Notably, risk perception was highest in the UK, followed by Spain, both significantly higher than all other countries. Countries with less trust in their government include: USA, Mexico and Spain. UK has an even distribution of scores for trust in government; and higher scores for trust in medical professionals

### COVID-19 in the Southern Hemisphere:

- There was no conclusive evidence that weather (short term variations in meteorological conditions), climate (long-term averages) or temperature have a strong influence on COVID-19 transmission and spread

- In parallel with other continents, the approach to tackling the COVID-19 pandemic has varied across the African nations
- In Africa, public health strategies included: Implementation of the continental African strategy, technical working groups that review the latest evidence and best practice and the African CDC introduced the Partnership to Accelerate COVID-19 Testing (PACT) at the beginning of June 2020

### Epidemiology update and R insight:

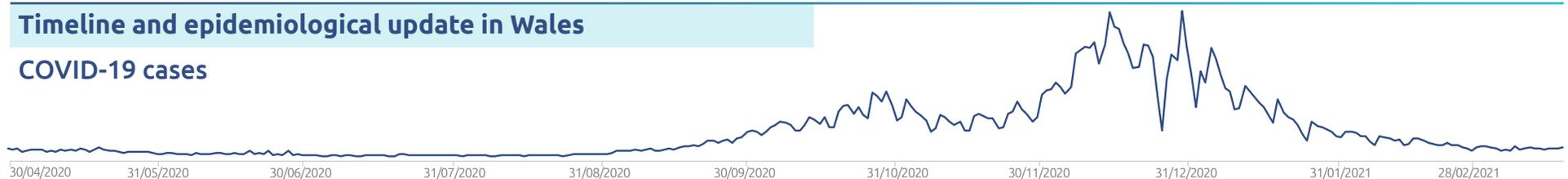
- The comparative country analysis shows: Countries may have high case number/prevalence but low mortality, such as Germany, Singapore and Iceland
- Looking at total (cumulative) numbers, some countries, such as the UK, Italy and Spain, appear to have been more severely affected by the pandemic; while Sweden, the Netherlands and Belgium less so

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 22nd September 2020

## Key Findings

### 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; 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

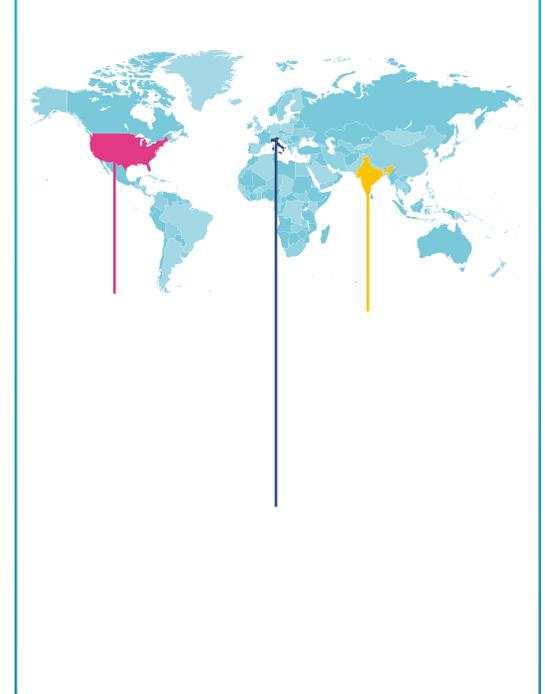
### COVID-19 impact on children and young people:

- 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

### COVID-19 impact on mental health and well-being:

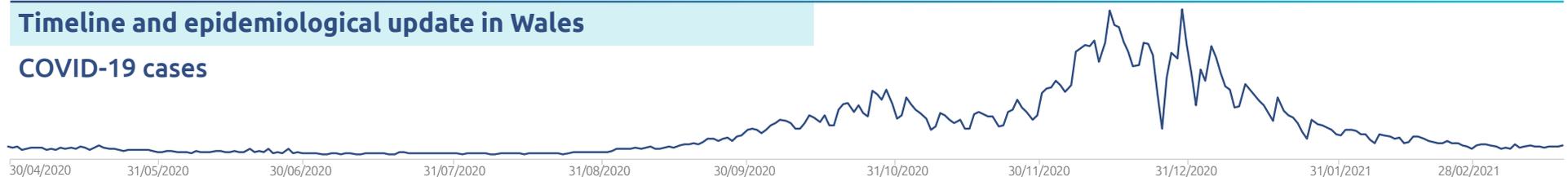
- More than half of adults, over two thirds of young people and three quarters of people aged 18–24 years indicate deteriorating mental health during lockdown, including people with and without pre-existing mental health problems
- Quarantine can contribute to stress, anger and high risk behaviours
- Key drivers of poor mental health include: limiting social contact; not able to go outside; anxiety about family/friends; boredom for young people; feelings of loneliness, especially for young people; not feeling entitled to seek help and having difficulty accessing it

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 8th October 2020

## Key Findings

### COVID-19 impact on universities and international students:

- Measures to control COVID-19 in universities varied widely, depending on the status of the outbreak in the region where the university is based
- Many universities maintained a blended approach, combining online and face-to-face learning
- Some countries/universities have seen a significant reduction in the number of international students

### COVID-19 and pregnancy:

- Pregnant women are considered a high risk group for COVID-19 infection, and the potential adverse effects on maternal and perinatal outcomes are of concern
- Risk factors for severe outcomes from COVID-19 in pregnancy include older maternal age, high body mass index, and pre-existing comorbidities
- Pregnant women from BAME backgrounds with COVID-19 are at higher risk of hospitalisation
- Pregnant women with COVID-19 are more likely to experience preterm birth and their babies are more likely to require neonatal care

### COVID-19 quarantine and isolation facilities:

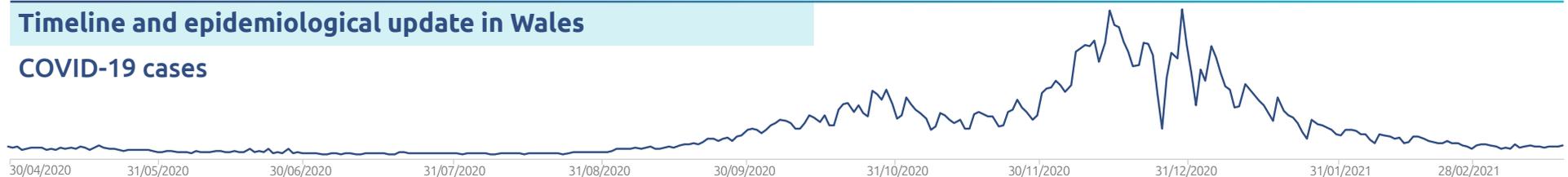
- Country criteria for admission to a COVID-19 isolation/quarantine facility varied and generally required:
  - ✓ A positive test result or suspected exposure to an infected person
  - ✓ A person being unable to self-isolate at home
  - ✓ Travel to or from a country or region with a high infection rate
- Some countries used designated quarantine facilities, such as hotels and have implemented measures to ensure compliance
- Better data, funding, preparation, and flexibility are necessary to secure the right number of extra beds, in the right places, at the right time

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 22nd October 2020

## Key Findings

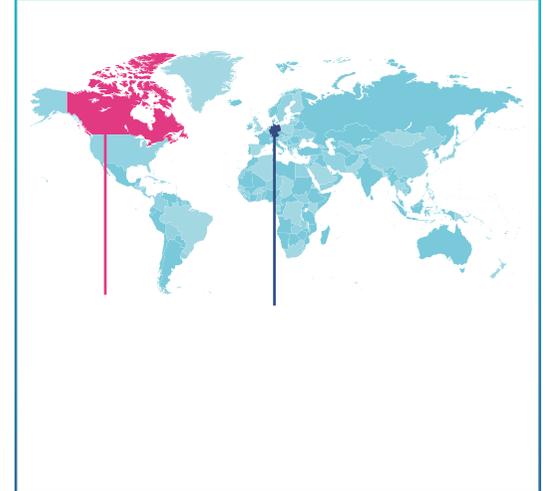
### Transmission of COVID-19 in children and young people:

- Only a small proportion of COVID-19 cases were reported in persons younger than 19 years of age (fewer than 5% in the European Union/European Economic Area and the UK)
- Most children develop a very mild form of the COVID-19 disease, if any (i.e. remain asymptomatic), with very low hospitalisation and death rates
- The small proportion of cases reported amongst children could be due to their lower risk of developing symptoms and testing strategies not prioritising mild symptoms/children
- The role of children in COVID-19 transmission is not fully understood yet, including:
  - ✓ Children's susceptibility to the COVID-19 virus across different age groups
  - ✓ Children's capability of COVID-19 transmission when asymptomatic/ symptomatic
- Closures of childcare and educational institutions are unlikely to be an effective single control measure for COVID-19 response and any such decisions need to be taken in the context of a comprehensive community mitigation strategy

### COVID-19 epidemiology update:

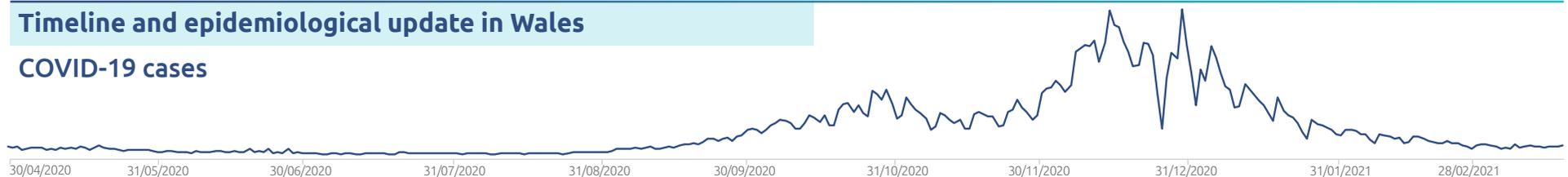
- Most countries across Europe, including the UK and Wales, are experiencing a rise in COVID-19 cases, i.e. increasing trends of case rate per 100,000
- The case rate trends are not always followed by increasing trends in death rate, i.e. deaths have remained relatively stable across many countries in Europe
- Increasing death rate trends are reported mostly in Central and Eastern Europe, for example, in Romania, Czechia, Hungary, Poland, Bulgaria, Croatia, Slovakia and Greece
- Testing rates are increasing in all countries, with positivity rates increasing in most, but not all countries

### Country Insight



### Timeline and epidemiological update in Wales

#### COVID-19 cases



# International Horizon Scanning, 5th November 2020

## Key Findings

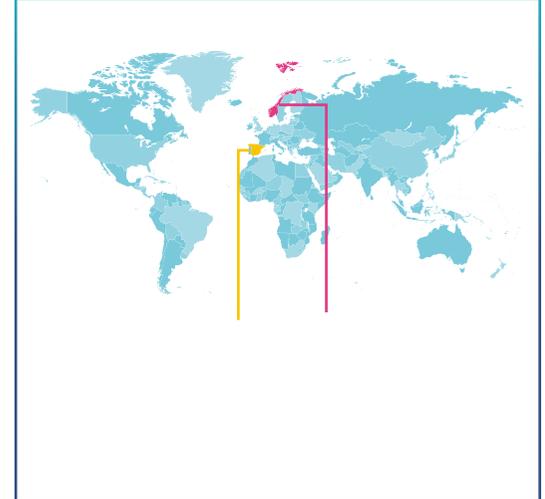
### Approaches to COVID-19 during autumn and winter across Europe:

- The current epidemiological situation as of November 2020 in Europe requires decisive public health measures:
  - ✓ To reduce transmission of the infection through: upscaling and targeting of non-pharmaceutical interventions; testing, isolation and contact tracing
  - ✓ To protect individuals at higher risk and ensure access to healthcare for all by: protecting individuals at higher risk of severe disease; protecting healthcare workers; ensuring access to health services
- Many European countries have introduced a stratified risk approach (e.g. a traffic light system) to facilitate and communicate decision-making about introducing more strict measures and limiting cross-border travel

### Disruption to essential health services: impact and mitigation:

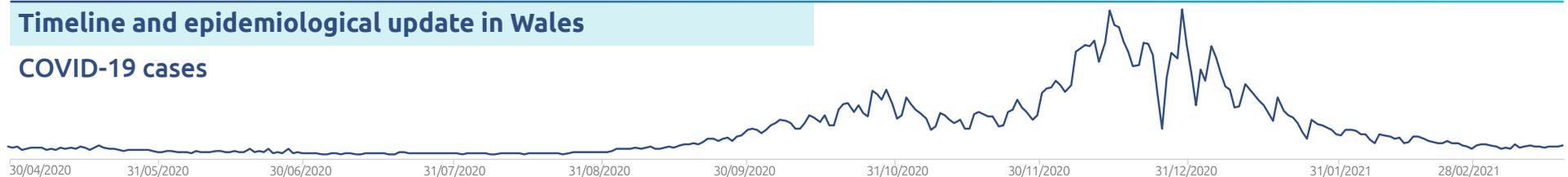
- Delivery of health care services for all conditions has been disrupted, compounded by fear, stigma, misinformation and limitations on movement
- Disruption of health services has impacted those living with non-communicable diseases (NCDs) most notably, cancer, heart disease and mental health
- Countries across the globe reported significant disruption of NCDs services with dental care, rehabilitation and palliative care most likely to be completely disrupted
- COVID-19 and NCDs have a reciprocal effect, with NCDs increasing vulnerability to transmission and severe outcomes; and COVID-19 exacerbating chronic conditions
- The more severe the COVID-19 transmission phase, the more services are disrupted
- COVID-19 has disrupted or stopped critical mental health services in 93% of 130 countries worldwide, including life-saving emergency and essential services

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 19th November 2020

## Key Findings

### COVID-19 and international travel:

- There was limited evidence on how international travel contributes to COVID-19 rates
- Worldwide, countries have implemented different mitigation cross-border measures, including exit/entry screening strategies and quarantine/self-isolation
- Screening strategies can include symptoms assessment, temperature check, travel and contact exposure history, a requirement for a negative test prior to arrival, and rapid tests
- Countries should perform continuous risk assessment, including current epidemiological situation, capacity of the national response; and risk-benefit analysis

### Socio-economic impact of COVID-19:

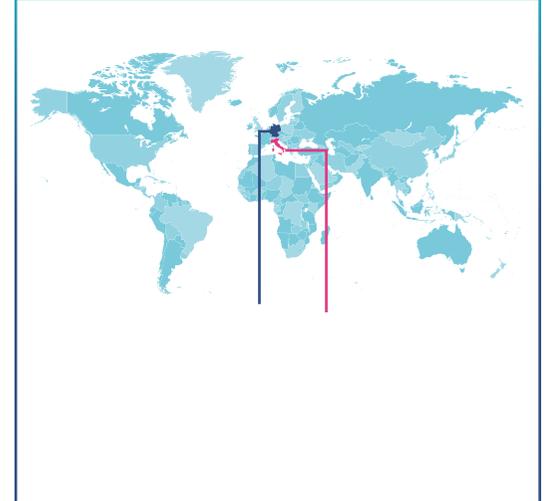
- COVID-19 has triggered an economic recession and rapid rise in unemployment in many countries globally with 40-60 million people pushed into extreme poverty
- COVID-19 socio-economic impact is felt differently across countries, depending on their underlying economic, demographic and governance structures

- Disproportionately high burden on the poor, women, informal workers, migrants, refugees, internally displaced and people with disabilities
- The health impact from COVID-19 lockdowns and the induced recession are greater in terms of Quality Adjusted Life Years (QALYs) than the direct COVID-19 deaths
- The short-term (1 year) negative health impact of lockdown / social distancing amount to 88,000 QALYs lost, mostly due to increasing mental health issues (depression/anxiety), musculoskeletal disorders and domestic abuse

### COVID-19 epidemiology update:

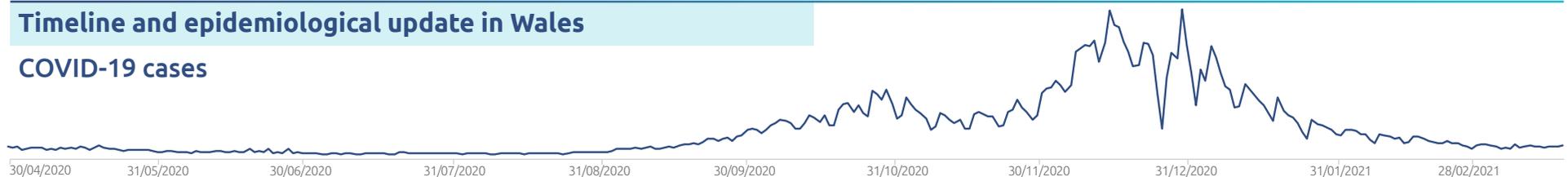
- Most countries across Europe, including the UK, experienced a rise in COVID-19 cases and testing rates are increasing in most countries

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 3rd December 2020

## Key Findings

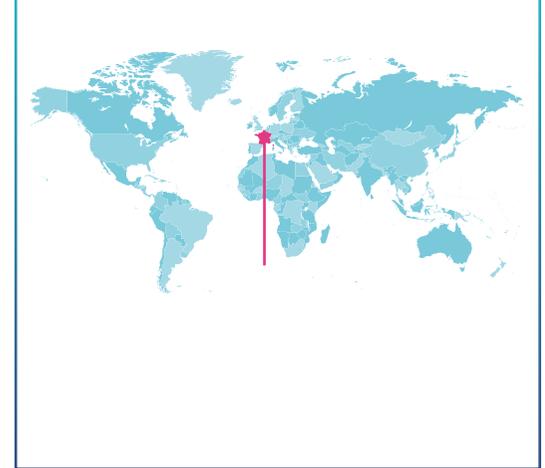
### Impact of COVID-19 measures on interpersonal violence:

- COVID-19 isolation measures have created an unprecedented wave of interpersonal violence, including intimate partner violence (IPV), sexual and gender based violence (SGBV), and violence against children
- COVID-19 measures, and associated socio-economic and psychological impacts, have led to reduced access to services and psychosocial support for victims of violence and abuse, especially the displaced and the most vulnerable
- COVID-19 has acted as a catalyst for the rise in child maltreatment, abuse and neglect by increasing known risk factors, such as household poverty, overcrowded housing, social isolation, parental burnout and stress, IPV and substance abuse
- Lesbian, gay, bisexual, trans and gender-diverse (LGBT+) groups are at higher risk of isolation, increased stress and violence, particularly older persons and youth

### COVID-19 and alcohol consumption:

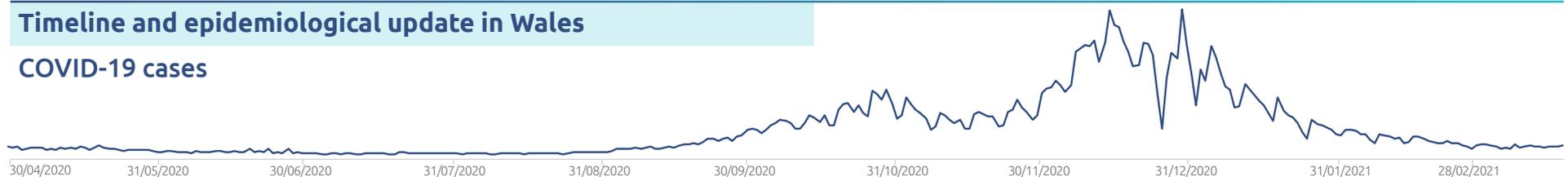
- Isolation measures can contribute to an increase in alcohol consumption, especially for vulnerable groups and high-risk workers, due to factors, including financial insecurity/hardship, social isolation, stress, and disruption to health/social care services
- Alcohol consumption increases vulnerability to COVID-19 and adverse outcomes, due to harmful health, behavioural and socio-economic impacts
- Population-level myths associated with alcohol and COVID-19 may perpetuate harmful behaviours
- Some countries have imposed alcohol restrictions to reduce COVID-19 transmission
- Evidence-based effective policy solutions to reduce alcohol consumption and resulting harm include restricting hours of sale and delivery of alcohol, and increasing the price through tax or minimum unit pricing (MUP)

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 17th December 2020

## Key Findings

### Pandemic fatigue and population adherence to COVID-19 measures:

- A “pandemic fatigue” to COVID-19 measures, resulting in a demotivation to engage in protective behaviours and to seek information, has been growing across the world
- Key strategies to increasing population adherence include: understand people to develop tailored and effective policies, interventions; communication, informed by evidence; engage people as part of the solution, involve communities and individuals; allow people to live their lives, but reduce risk; acknowledge and address the hardship people experience, and the profound impact the pandemic has had on their lives

### COVID-19 vaccine distribution and hesitancy:

- Multiple underlying factors play a role in COVID-19 vaccine hesitancy, including: speed of the vaccine development; concerns of side-effects; social norms; costs in terms of time and effort; trust in the health system, government, and decision making bodies

- A global survey across 19 countries found that nearly 72% of respondents would be likely to take a vaccine if it becomes generally available, and proven safe and effective

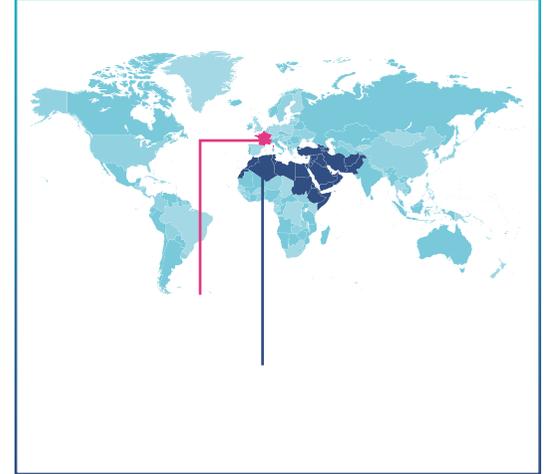
### Comparing COVID-19 cumulative rates:

- COVID-19 reporting of incidence (cases) and mortality (deaths) across countries vary substantially
- Country comparisons are difficult and must always consider population, contextual and methodological factors

### Measures to prevent COVID-19 in long-term care facilities:

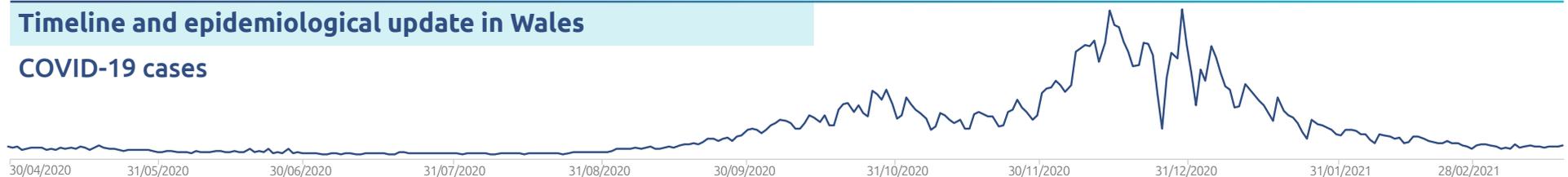
- LTCF have been severely affected by COVID-19 across Europe, with deaths among residents accounting for 37–66% of all COVID-19-related deaths
- Key measures to prevent COVID-19 transmission in LTCF include: regular and systematic monitoring, testing, isolation, meticulous infection, prevention and control measures, limiting visitors, wearing appropriate PPE, education and training of staff

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 21st January 2021

## Key Findings

### Genomic sequencing for COVID-19:

- Globally, 49 countries have published more than 100 genome sequences, with large variation in the number of genomic sequences performed across countries
- The UK and the USA account for the majority of published genome sequences with sequencing efforts improving in many countries
- COVID-19 genomic sequencing has enabled the identification of several Variations of Concern (VOC), currently including:
  - ✓ 'UK variant' (VUI202012/01)
  - ✓ 'South African variant' (501Y.V2)
  - ✓ Two variants identified in Brazil (P1 and 20B/S.484K.V2)

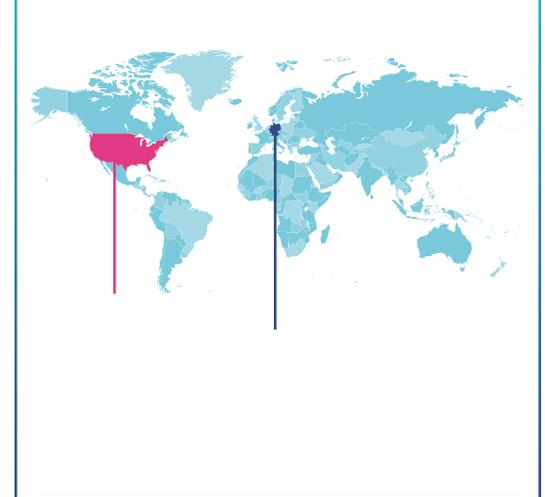
### Loss of education due to COVID-19:

- The first wave of the COVID-19 pandemic has caused an unprecedented global learning crisis with a broad range of adverse impacts, such as malnutrition
- COVID-19 has further engrained gender inequalities in education, especially in developing countries
- There is a strong link between schooling and children's health, safety, and future life prospects

### COVID-19 impact on migrants, refugees and asylum seekers:

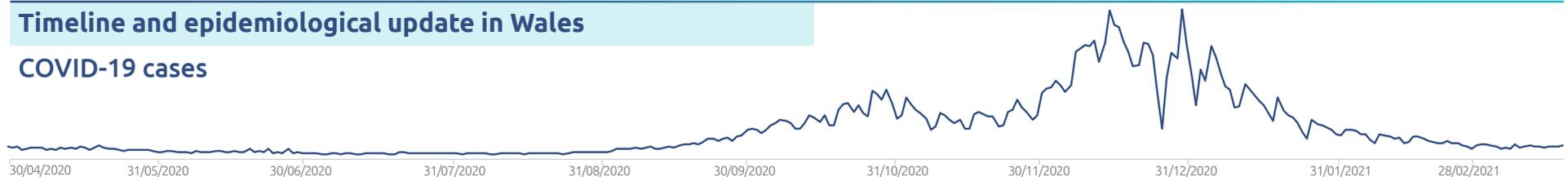
- Migrants, refugees and asylum seekers are often at higher risk of contracting COVID-19, due to living in overcrowded conditions, lack of access to basic sanitation, and reduced ability to follow public health measures
- Travel restrictions and border closures have created new challenges for migrant populations, while exacerbating existing vulnerabilities
- Migrants, refugees and asylum seekers face barriers when accessing healthcare and other public services or support

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 4th February 2021

## Key Findings

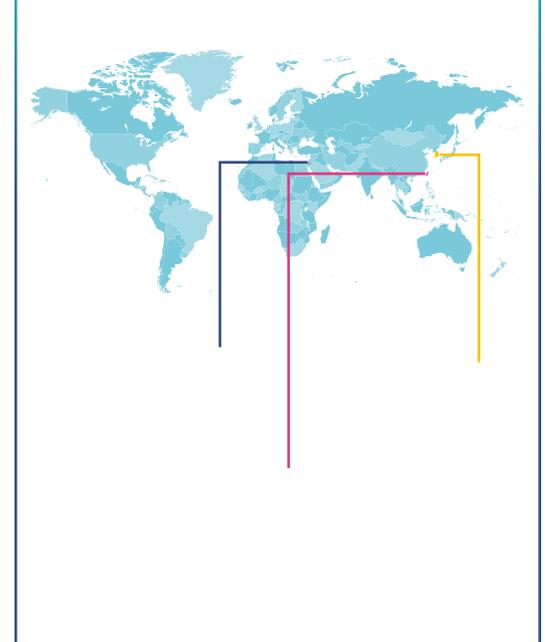
### Genomic sequencing for COVID-19:

- The global genomic data sets for SARS-CoV-2 are too large for many current analytic tools, which impedes emergency response; and requires increased levels of automation
- Efficient response to the pandemic and the variants of concern (VOC) is challenged by the limited reusability of the available primary genomic data, due to providing limited metadata
- A predefined, widely adopted multidimensional approach to organize critical genomic data is critical to be prepared for the next pandemic
- Countries across the world have tightened cross-border restrictions and WHO has recommended that countries:
  - ✓ Should not require proof of vaccination from incoming travellers
  - ✓ Should take a coordinated evidence-based approach
  - ✓ Ensure health authorities work closely with the transport and travel sector
  - ✓ Prioritise essential travellers and avoid all non-essential travel

### Psychological impact of COVID-19 and lockdown fatigue:

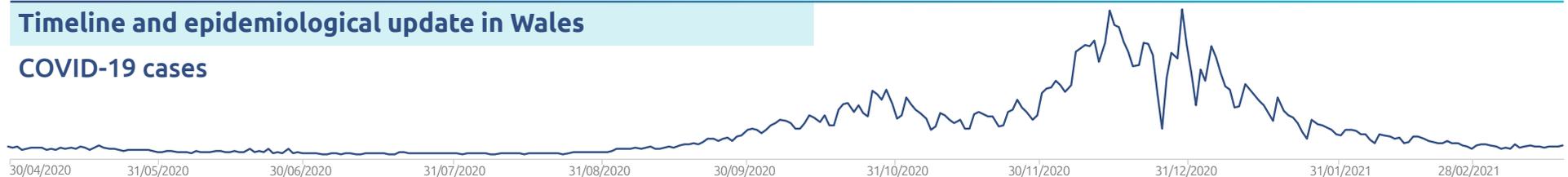
- The COVID-19 pandemic and measures have resulted in short and long-term psychological consequences, associated with negative health outcomes, including suicidal behaviour
- Psychological effects are exacerbated with the escalation of new cases together with inadequate, anxiety-provoking information by the media
- Public health measures may be compromised by abnormally elevated anxiety
- Inadequate public health information may be a significant stressor and could lead to confusion about the purpose or the importance of measures
- Older adults, especially those with mental health issues, may become more anxious, angry, stressed, agitated and withdrawn

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 18th February 2021

## Key Findings

### The long-term health impact of remote working:

- Working from home has been associated with various (unintended) public health risks, as well as positive effects, which have been (or could be) influenced by COVID-19
- Potential negative impacts can include mental and physical health issues, related to work-family balance, social isolation, or inadequate working space/equipment
- Potential positive impacts, due to reduced/lack of commuting, are related to both the individual and the environment
- Men and women experience remote working differently, with women generally experiencing and reporting more negative outcomes than men

### Predicting futures and scenario planning:

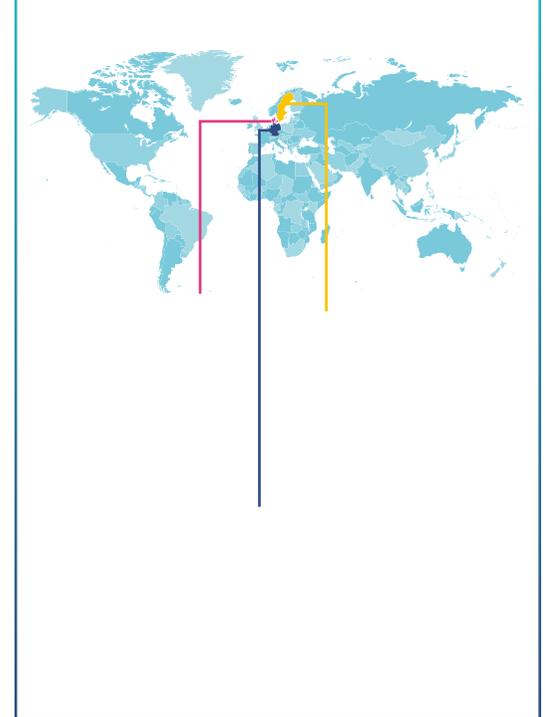
- Future scenario planning can help both short and long-term decision-making and preparedness
- COVID-19 transmissibility predictions consider mobility, new variant spread, vaccination pace and mask use

- There is an opportunity to develop agile responsive educational systems, with multiple variations across 'evolutionary', as well as 'revolutionary' scenarios

### Sustainable recovery from COVID-19:

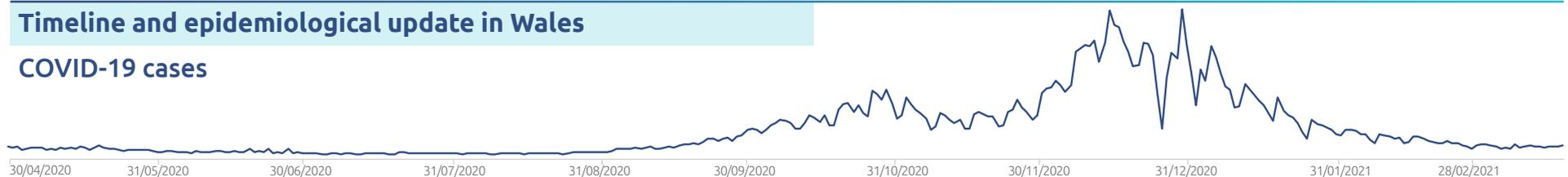
- The COVID-19 pandemic has emphasized the need for a transformative recovery that rebuilds health, social and economic systems to be sustainable, inclusive and greener
- Many countries are steering away from business as usual, aiming at innovations and transformation with a particular focus on sustainability and building resilience
- Transformation design and implementation need to be informed by timely dynamic data, intelligence and research and supported by targeted protected investment
- The integral connection between the environment, health and the economy requires health leaders to be directly involved in the design and implementation of recovery plans

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 4th March 2021

## Key Findings

### COVID-19 transmission in hospital settings:

- Key factors influencing the risk of nosocomial infections include effective PPE use, hospital ventilation systems, frontline staff communication, and effective processes and interventions to identify, monitor and mitigate against transmission
- Different mitigation measures have been implemented across countries, including innovative solutions to increase surge capacity in intensive care units

### COVID-19 impact on physical activity:

- Physical activity (PA) has decreased during COVID-19 lockdowns; and sedentary behaviour has increased with potential long-term negative consequences on health
- COVID-19 restrictions have resulted in temporary positive impacts on air quality, with substantial reduction in pollutant emissions across Europe

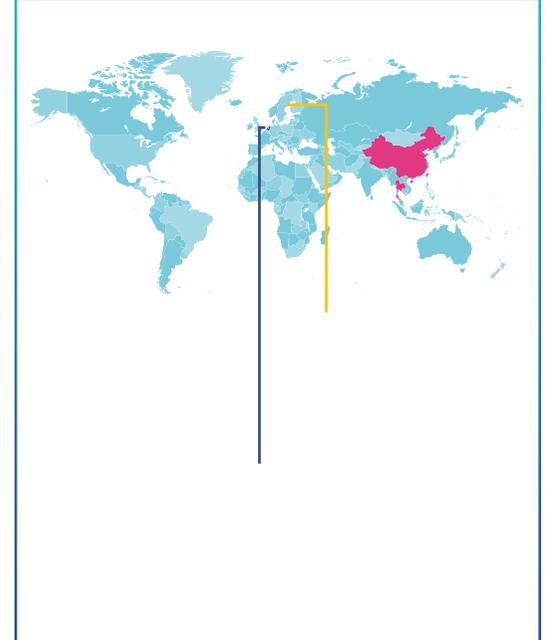
### COVID-19 and food poverty:

- The most vulnerable include those already exposed to food/dietary deprivation before the pandemic; migrants and displaced people and communities
- Mitigation measures include reducing child poverty; better data gathering and analysis; counteracting discrimination towards people on the move, and promoting their inclusion

### COVID-19 impact on rural areas:

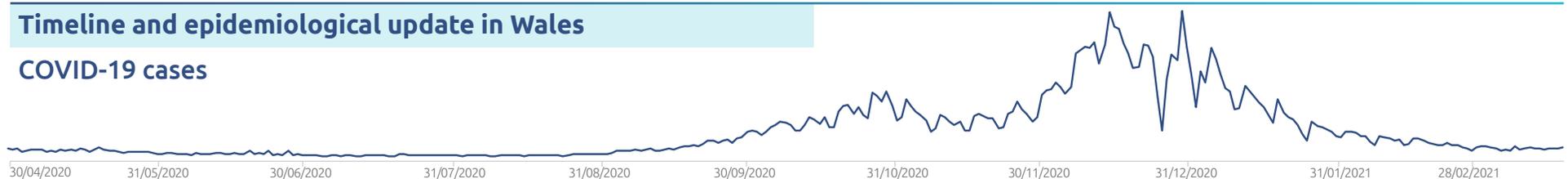
- Rural areas have been particularly affected by COVID-19 due to specific demographic, geographic, socio-economic and healthcare vulnerabilities
- Targeted rural mitigation measures include investment in digital infrastructures and health care, and supporting social innovation and solidarity projects

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



# International Horizon Scanning, 18th March 2021

## Key Findings

### Pregnancy and COVID-19

- COVID-19 transmission from woman to her baby before/during birth is uncommon
- Aside from preterm birth, there is no evidence that COVID-19 infection has an adverse effect on the foetus or on neonatal outcomes
- There is insufficient evidence to assess the efficacy and safety of COVID-19 vaccines in pregnant patients and their new-borns, but early data do not reveal safety concerns
- Positions on the vaccination of pregnant women with COVID-19 vary across countries
- Overall, recommendations indicate that pregnant women may be vaccinated after a consultation with their healthcare provider, if they are at a higher risk

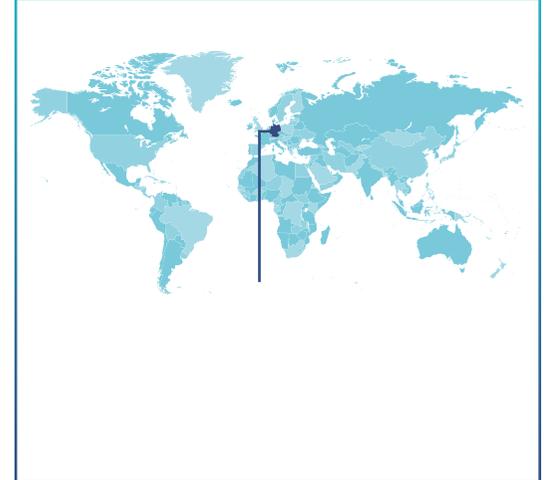
### COVID-19 transmission in supermarkets

- A greater number of people in supermarkets, and queuing up, can increase the likelihood of infection for customers and workers
- Since the start of the pandemic, countries have introduced a variety of measures to reduce COVID-19 transmissions in supermarkets, such as restricting the number of customers; changes to the store layout; and enforcing mandatory face covering
- Heating, ventilation and air-conditioning (HVAC) systems may have a complementary role in decreasing COVID-19 transmission in indoor spaces

### COVID-19 epidemiological update

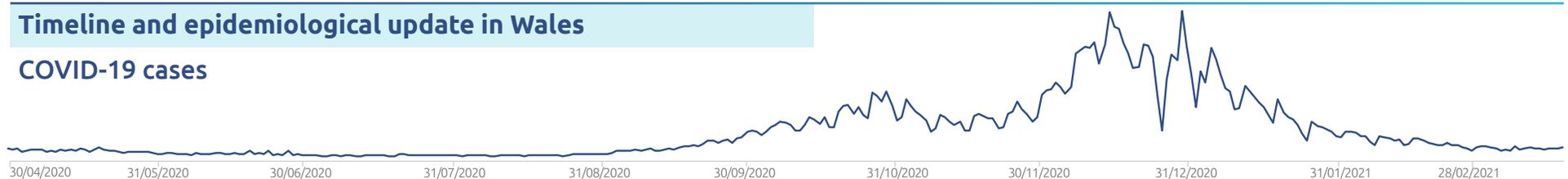
- Some countries have recently experienced a peak in both COVID-19 cases and deaths
- Japan has a considerably lower COVID-19 case and death rate

## Country Insight



## Timeline and epidemiological update in Wales

### COVID-19 cases



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

---

Executive lead and WHO CC Director: Mark A Bellis

---

International health lead and WHO CC Deputy Director: Mariana Dyakova

---

Public health consultant: Claire Beynon

---

Authors: Charlotte Bowles, Anna Stielke, James Allen, Abigail Instone, Lauren Couzens

---

Contributors: Andrew Cotter-Roberts, Mischa van Eimeren, Benjamin Bainham

---

Design: Jenney Creative

---

[phwwhocc.co.uk](http://phwwhocc.co.uk)

 @phwwhocc

 /Phwwhocc

Canolfan Gydweithredol Sefydliad  
Iechyd y Byd ar Fuddsoddi  
ar gyfer Iechyd a Llesiant



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