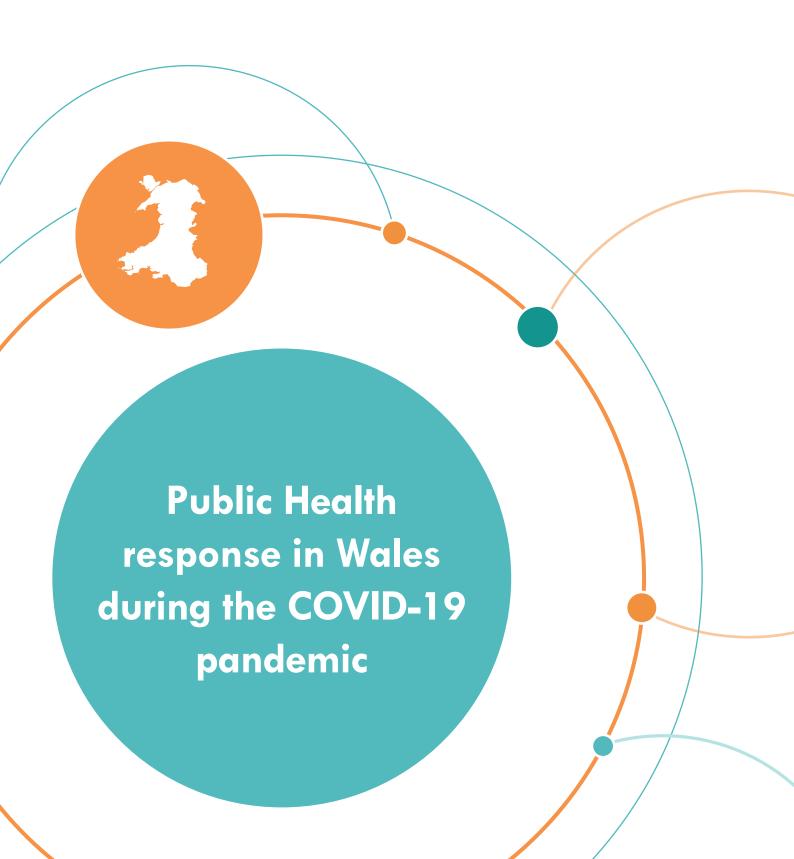


COronavirus Vulnerabilities and INFOrmation dynamics Research and Modelling



Authors

Stéphanie Barillé, Sergei Shubin, Louise Condon, Diana Beljaars Swansea University

To cite this report: Barillé, S., Shubin, S., Condon, L., & Beljaars, D. (2021). Public health response in Wales during the COVID-19 pandemic. Country report, July 2021. COVINFORM H2020 Project No. 101016247.

Swansea University

Disclaimer

The content of this publication is the sole responsibility of the authors, and in no way represents the view of the European Commission or its services.



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 101016247.

Table of Contents

| Structure of the Welsh health care system4 |
|---|
| The Welsh context4 |
| Organisational structure5 |
| Revenue Collection Mechanism and Coverage6 |
| Provision of Health Services |
| Role of private insurance and long-term care system7 |
| COVID-19 specific bodies, communication and health initiatives |
| The national level8 |
| The local level: Swansea Council |
| Epidemiological outcomes and evolution during COVID-19 pandemic10 |
| Country-specific factors influencing the COVID-19 pandemic 11 |
| General country-specific factors influencing COVID-19 pandemic11 |
| Within-country social and cultural differences impacting COVID-19 pandemic 13 |
| Legal and data collection factors influencing COVID-19 pandemic |
| Legal factors influencing the COVID-19 pandemic15 |
| Data collection factors influencing the COVID-19 pandemic |
| Vulnerable groups in the health care system and the COVID-19 pandemic |
| Vulnerability in government and public health17 |
| Thinking about vulnerability18 |
| Public Health information and communication campaigns 19 |
| General communication |
| Specific communication campaigns and vaccination communication20 |
| Focus on vulnerable groups21 |
| Impacts of COVID-19 on health care workers22 |
| Reflection on intersectionality |
| Reflection on complex systems, risks, uncertainties and adaptation 24 |
| Risk perception policy makers and citizens24 |
| Crucial moments/tipping points |
| |

Structure of the Welsh health care system



The Welsh context

In 2019, the population of Wales is estimated to be around 3.2 million individuals¹. Total expenditure on health for all programme budget categories in 2018-2019 was £6.8 billion or £2,167 per capita² (9% of GDP), which is slightly lower than the EU average of EUR 2884 per capita (OECD, 2019). Life expectancy in 2019 in Wales is 78.5³, which is slightly lower than the EU average⁴.

The basic model of the Welsh healthcare system can be characterized as the so-called Beveridge or national healthcare model, based on universal health care coverage for all citizens provided by the Government (Kulesher & Forrestal, 2014). This national healthcare model is funded through taxation with a small proportion raised through national insurance contributions, and the Government has ownership of most of the delivery of health services (ibid.).

Since the devolution of Wales in 1999, the country is responsible for healthcare provision and the National Health Service (NHS Wales) takes responsibility for health services to the population through seven Local Health Boards supported by three specialist NHS trusts (Longley et al., 2012). Healthcare is therefore primarily provided through the publicly funded NHS Wales for all in Wales, although the private sector also provides healthcare (Yar et al., 2006).



¹ see here | ² see here | ² see here | ³ see here | ⁴ se

Organisational structure

NHS Wales was reorganised in 2009 and single local health organisations are responsible for delivering all healthcare services within a geographical area. NHS Wales now delivers services through seven Local Health Boards and three NHS Trusts in Wales. The seven Local Health Boards (LHBs) in Wales now plan, secure and deliver healthcare services in their areas, as shown in figure 1.

The 3 NHS Trusts operate in Wales alongside the Local Health Boards:

- The Welsh Ambulance Services Trust: offers emergency services
- Velindre NHS Trust: offers specialist cancer care and a range of national support services⁵
- Public Health Wales is one of the eleven organisations which makes up NHS Wales, and it is the national public health agency in Wales. The organisation chart of the healthcare system in Wales is represented in Figure 2.

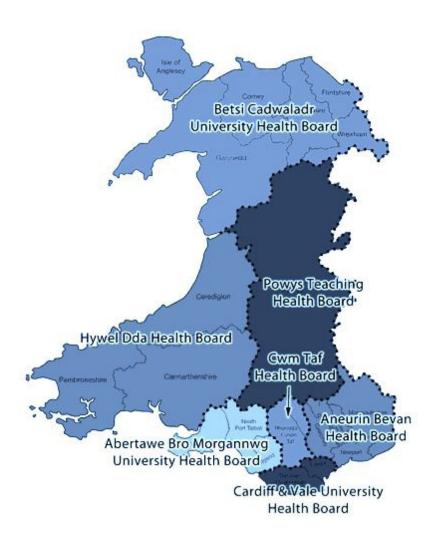


Figure 1. The 7 Local Health Boards in Wales (NHS Wales).

Structure of the NHS in Wales

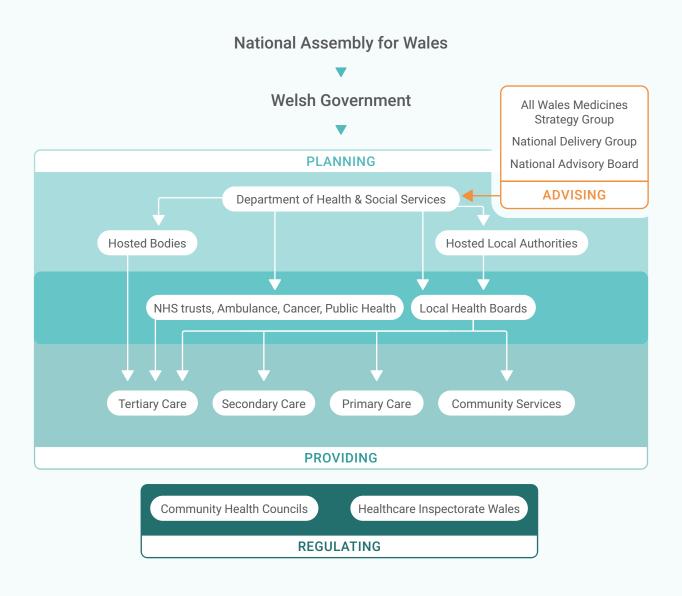


Figure 2. NHS Wales organisation chart (NHS Wales).

Revenue Collection Mechanism and Coverage

The National Health System (NHS Wales) is funded through general taxation and purchases health services through Local Health Boards. The NHS mandate to deliver universal access to health care at no cost means that the vast majority of healthcare services is free (Kulesher & Forrestal, 2014).

Although an increasing percentage of the population in Wales and the UK use private services for healthcare⁶, everyone in Wales is entitled to healthcare services with the NHS.

⁶ see here



Provision of Health Services

NHS Wales provides a range of primary, secondary, and specialist tertiary care services as well as emergency services. General hospitals in Wales provide outpatient, inpatient, and accident and emergency services, and there is a network of community hospitals run by General Practitioners. NHS Wales also funds General Practitioners services, dental services, pharmacies, and sexual health services. Community services are also provided, including district nurses, health visitors, midwives, community-based speech therapists, physiotherapists and occupational therapists⁷.

In 2017, the number of GP practitioners in Wales is 83 per 100 000 inhabitants⁸, which is slightly higher than the European average of 78 per 100 000 inhabitants (European Commission, 2019). **The services of NHS Wales are based on a need's basis and not individuals' ability to pay** (Courbage & de Coulon, 2004). Each patient needs to be registered and consult first with a General Practitioner, which can then refer the patient to a specialist if needed (ibid.); waiting to see a specialist or for surgery is frequent (ibid.).



Role of private insurance and long-term care system

In addition to the public NHS system runs a private healthcare system. In 2002, 10% of the UK population have some form of private healthcare insurance (Courbage & de Coulon, 2004), and the main reason behind the purchase of private insurance is the length of awaiting treatment with the NHS (ibid).

Around 660 000 individuals in Wales are aged 65 years old or more in 2019°, representing 20% of the population. Long-term care in Wales is organised differently depending on the healthcare needs of the elderly.

In Wales and the United Kingdom, there is no single long-term care scheme. 'Social care for the elderly and disabled is provided by local authorities, private and charitable organisations. Full cost of care benefits for severely disabled people (Attendance Allowance, Disability Living Allowance and Personal Independence Payment) is financed by the State.' (European Commission, 2016). People with complex needs may be eligible to have their care costs covered by the NHS or their local authority¹⁰ however most people have to pay for their own long-term care.



COVID-19 specific bodies, communication and health initiatives



In the Welsh context, a range of key actors, organisations and initiatives were of relevance during the unfolding of the COVID-19 pandemic.



The national level

The Welsh Government is responsible for the public health response to the coronavirus pandemic in Wales. Key decisions taken at the national level included measures relating to travel restrictions, shop and restaurant closures, schools and sports and events restrictions. The Welsh Government exercises its legal powers to impose restrictions that prevent or slow the spread of COVID-19. The Welsh Government oversees the Welsh NHS, and provides support to businesses and individuals who have been affected by the economic impact of the public health measures taken. The Welsh Government website has laid out the functioning bodies responsible for the COVID-19 response in Wales¹¹:









Welsh Ministers

Within the Welsh Government all major decisions in relation to the coronavirus emergency are taken or approved by the First Minister Mark Drakeford MS, in consultation with the Welsh Government Cabinet. The Cabinet meets formally at least once a week but Ministers also meet daily to assess the latest situation.

Primary responsibility for the Welsh NHS lies with the Minister for Health and Social Services Vaughan Gething **MS**. He also has primary responsibility for public health matters, having regard to the advice of the Chief Medical Officer for Wales, Dr Frank Atherton. Responsibility for legal matters (in particular the legislation made in response to the emergency) rests with the Counsel General, Jeremy Miles MS. The Counsel General is also responsible for co-ordinating the Welsh Government's approach to the longer term recovery from the impact of the pandemic.

Within the Welsh Civil Service, the Permanent Secretary to the Welsh Government, Dame Shan Morgan, has created an executive committee of senior officials tasked solely with dealing with coronavirus related issues. This committee meets twice a week and among other things has overseen a widespread redeployment of officials to coronavirus related work.

¹¹ see here



The Welsh Government's Department for Health and Social Services is responsible for the management of the public health response to the coronavirus in Wales. The Department is headed by Director General, Andrew Goodall, who is also the Chief Executive of the Welsh NHS. The Welsh Government has also established a COVID-19 Project team to support a coordinated and joined-up approach to the Welsh Government's overall response.

In addition, the Emergency Coordination Centre (Wales) (ECC(W)) co-ordinates the Welsh Government's response to major emergencies in Wales that require a multi-agency approach. Its role is mainly focused on situational awareness – gathering and disseminating information and keeping the Welsh Ministers, senior Welsh Government officials and the UK Government informed as situations develop. The ECC(W) also disseminates information to, and receives information from, Welsh Strategic Co-ordinating Groups (SCGs) which may include, for example, the police, fire and rescue services, transport authorities and the military. It also provides a means for SCGs to raise concerns with the Welsh Government and, if necessary, the UK Government.

Public Health Wales

Public Health Wales is the national public health agency in Wales and is one of the public bodies that forms part of the Welsh NHS. One of its roles is to protect the public from infection and to provide advice on epidemiology (the incidence and prevalence of disease). Although operationally independent of the Welsh Government, it acts at the Welsh Government's direction.



Welsh NHS

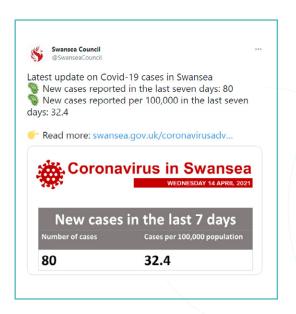
Wales' seven Local Health Boards are responsible for planning and providing community and hospital-based NHS healthcare and mental health services for their local populations. They are independent organisations but take their strategic direction from the Welsh Government.

The health boards, together with Velindre NHS Trust (which provides specialist cancer care) and the Welsh Ambulance Services NHS Trust, are enacting their plans to respond to the coronavirus pandemic. These focus on increasing critical care capacity, the number of ventilators and overall hospital bed numbers, including through the development of temporary field hospitals.



The local level: Swansea Council

Although the national government designs and issues the COVID-19 measures, the regional and local governments have the power to enact (stricter) measures at the regional and local level. Swansea Council bases its decisions on Welsh government advice but can take action to impose different measures if necessary. Contact-tracing is also the responsibility of local authorities¹², who also enforce local restrictions when necessary¹³.



Epidemiological outcomes and evolution during COVID-19 pandemic

Read accompanied by our **Excel timeline**

The list of vulnerabilities presented in the Excel timeline includes some groups of individuals as defined as 'vulnerable' by Government and Public Health in Wales and groups we are interested in for our case study. However it should be noted that groups and individuals whose vulnerability was exacerbated by Government policy is not limited to this list; several other groups were potentially disadvantaged one way or another during the pandemic such as low-income individuals, the homeless, victims of domestic abuse, self-employed individuals, people who could not work from home, people living in rural areas.

Country-specific factors influencing the COVID-19 pandemic





General country-specific factors influencing COVID-19 pandemic

In Wales, the COVID-19 crisis started on **February** 28, 2020, when the first case was confirmed in a man returning from Northern Italy¹⁴. The first death from COVID-19 in Wales occurred on March 16, 2020¹⁵.

Initially the four nations forming the United Kingdom worked together to respond to the coronavirus pandemic. On March 23, 2020, the British Prime Minister Boris Johnson asks the public to 'Stay At Home', which will be known as the UK lockdown. Although Wales entered lockdown with England on March 23, schools and nonessential retail had been closed since March 20.

The Coronavirus Restrictions¹⁶ were approved by the Welsh Parliament on March 25, giving Wales the power to manage the pandemic independently of the other British nations. The 'Stay at Home' message in Wales lasted until May 30, 2020 and transformed to 'Stay Local' until July 6, 2020. On June 22 non-essential retail shops in Wales were able to open, as well as schools on June 29, 2020; other sectors were progressively re-opened throughout July 202017. COVID-19 cases subsided in Wales in July and August 2020 but started to rise again in September 2020.

On October 23, 2020, a Welsh 'firebreak' lockdown was implemented and lasted for 17 days; the stated aim of the firebreak was to 'save lives and prevent the NHS from being overwhelmed'18. Despite the cases decreasing a little in November 2020 they rose again sharply shortly after¹⁹, compelling the Welsh Government to close schools on December 11 and to introduce a third lockdown on **December 19, 2020**. Restrictions begin to ease on March 15, 2021 with the reopening of primary schools for all children.

Wales was not among the first European countries to report COVID-19 deaths. In line with this, Wales was also not very early in implementing restrictive measures. In a comparison based on the number of days that had passed between the third death caused by COVID-19 country and the implementation of various measures, Wales and the UK were 'slower' to impose lockdown/restrictive measures than at least 12 other European countries (Hirsch, 2020). Testing capacity remained low in Wales in the first phase of the pandemic, but it increased in May 2020 with the roll-out of home testing kits and again in June 2020 with the possibility to book a test through an online organisation portal²⁰.

¹⁴ see here | ¹⁵ see here | ¹⁶ see here | ¹⁷ see here | ¹⁸ see here | ¹⁹ see here | ²⁰ see here

Dates when measures were put in place in 2020

| | | Events suspended | All schools closed | Non- essential shops closed | Non- essential movement banned | Land borders closed | Non- essential production stopped | Date of third confirmed death | |
|-----------------|----------|---------------------|--------------------|--------------------------------------|---|---------------------------|--|-------------------------------------|--|
| | Wales | Mar 17 | Mar 21 | Mar 23 | Mar 23 | | | | |
| | Italy | Mar 5 | Mar 5 | Mar 10 | Mar 10 | | Mar 26 | Feb 25 | |
| | France | Feb 29 | Mar 16 | Mar 14 | Mar 17 | | | Mar 3 | |
| - Ca | Spain | Mar 10 | Mar 15 | Mar 15 | Mar 16 | Mar 16 | Mar 29 | Mar 6 | |
| | U.K. | Mar 17 | Mar 23 | Mar 21 | Mar 24 | | | Mar 9 | |
| | Belgium | Mar 14 | Mar 15 | Mar 17 | Mar 17 | Mar 20 | | Mar 12 | |
| | Germany | Mar 20 | Mar 15 | | Mar 22 | Mar 16 | | Mar 12 | |
| | Greece | Mar 8 | Mar 10 | Mar 16 | Mar 23 | Mar 15 | | Mar 15 | |
| | Poland | Mar 9 | Mar 16 | Mar 15 | Mar 25 | Mar 15 | | Mar 15 | |
| | Sweden | Mar 11 | | | | | | Mar 16 | |
| | Austria | Mar 10 | Mar 15 | Mar 16 | Mar 16 | | | Mar 17 | |
| (1) | Portugal | Mar 11 | Mar 16 | Mar 16 | Mar 16 | Mar 16 | | Mar 20 | |
| | Hungary | Mar 11 | Mar 16 | Mar 17 | Mar 28 | Mar 17 | | Mar 21 | |
| | Czech R. | Mar 11 | Mar 11 | Mar 14 | Mar 16 | Mar 16 | | Mar 25 | |
| | | | | | | | | | |
| | | | | | | | | | |

Source: POLITICO Research, Frontex, Oxford COVID-19 Government Response Tracker

international travellers (Hirsch, 2020). Wales was particularly slow to introduce compulsory

The UK and Wales were also slower than most face mask wearing in indoor public spaces on European countries in introducing border September 14, 2020²¹, almost six months after measures to limit the arrival and departure of Czech Republic became the first European country to make face coverings mandatory in such spaces.



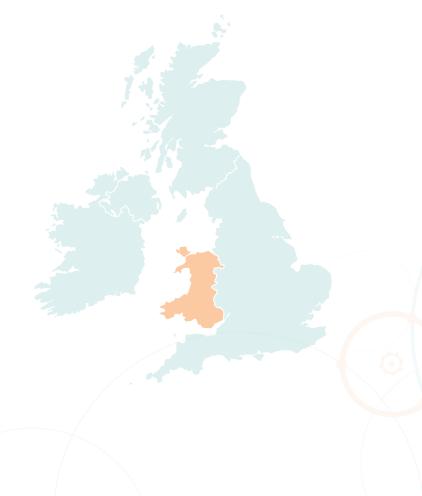
‡

Within-country social and cultural differences impacting COVID-19 pandemic

Significant socioeconomic, cultural and ethnic differences continue to exist in Wales. Before the pandemic, almost a quarter of the Welsh population lived in poverty (Matejic, 2020; StatsWales 2020). According to StatsWales, 'a person lives in relative income poverty if they live in a household where the household income is below 60 per cent of the UK median household income'. The COVID-19 pandemic has exacerbated socioeconomic disadvantage²². Not only did health risks and mortality increase disproportionately for those with underlying health conditions and Black, Asian and Minority Ethnic (BAME) communities, but the economic impacts of the pandemic have affected more seriously individuals with low-income, especially if they are young and female (Platt & Warwick, **2020**). Women's employment has been especially affected by the pandemic²³, and among all genders

lower earners were three times as likely as others to have lost their job or be furloughed during the pandemic, and twice as likely to work in places exposing them to health risks²⁴. The same report identifies more low earners resorting to borrowing, while high earners' savings became higher. Other types of inequalities and their consequences were observed. With lockdown measures, those experiencing domestic violence or abuse at home experienced greater difficulties in accessing support²⁵. Phenomena such as digital exclusion prevented certain populations receiving essential services including food delivery and distance learning²⁶.

Inequalities in vaccination uptake were also noted between ethnic group adults aged 80 years old and over, and in adults living in deprived areas in Wales²⁷.







486 CASES IN FEMALES PER 100,000 POPULATION





649 CASES IN MALES PER 100,000 POPULATION

PUBLIC HEALTH ENGLAND REPORT CONFIRMED THAT THE HIGHEST DIAGNOSIS RATES OF COVID-19 WERE IN PEOPLE OF BLACK ETHNIC GROUPS



BRITONS.

VARIOUS FACTORS
CAN PLAY INTO
THESE HEALTH
INEQUALITIES.
ACCORDING TO
PUBLIC HEALTH
ENGLAND.
INCLUDING
SOCIO-ECONOMIC
SITUATION, AND
ACCESS TO
HEALTH CARE.

PEOPLE LIVING IN MORE DEPRIVED AREAS ARE TWICE AS LIKELY TO DIE FROM COVID-19 THAN THOSE LIVING IN LESS DEPRIVED AREAS.

SOURCES

WWW.ITV.COM/NEWS/2020-05-07/BAME-GROUPS-TWO-TO-THREE-TIMES-MORE-LIKELY-TO-DIE-FROM-CORONAVIRUS/

WWW.ONS.GOV.UK/PEOPLEPOPULATIONAND COMMUNITY/BIRTHSDEATHSANMARRIAGES/DEATHS/ METHODOLOGIES/CORONAVIRUSRELATEDDEATHSBY ETHNICGROUPENGLANDANDWALESMETHODOLOGY

WWW.THEGUARDIAN.COM/WORLD/2020/MAY/16/BAME-MAJORITY-PREGNANT-WOMEN-HOSPITALISED-COVID -19-TROUBLING-MIDWIVES

WWW.TELEGRAPH.CO.UK/NEWS/2020/06/09/BAME-CORONAVIRUS-DEATHS-BLACK-ETHNIC-MINORITY/

WWW,IFS,ORG,UK/INEQUALITY/CHAPTER/ARE-SOME-ETHNIC-GROUPS-MORE-YULNERABLE-TO-COVID-19-THAN-OTHERS/

@LEADERSINCOMMUNITY
WWW.LICPROJECTS.ORG



Legal and data collection factors influencing COVID-19 pandemic





Legal factors influencing the COVID-19 pandemic

Although the United Kingdom was initially slow to address the pandemic, it responded in late March 2020 with lockdown measures which limited people's movements. The Health Protection Regulations provide local authorities with the power to act upon a significant risk made to human health (Griffiths, 2020). Grogan (2020) notes that the measures were 'introduced through statutory legislation: regulations which were made by the government and not debated nor legislated by Parliament.' (p. 2). However, the use of lockdown measures cannot be considered unlawful as the British Health and Social Care Act 2008 confers the Government the power to enforce a new set of regulations during pandemics (King, 2020).

Other concerns have been expressed about giving law enforcement officials the power to enforce public health regulations (Farrow, 2020) or how contact-tracing in Europe can be a challenge to the right of privacy (van Kolfschooten & de Ruijter, 2020).



Data collection factors influencing the COVID-19 pandemic

The availability and reliability of data on the COVID-19 pandemic is important to ensure that governments, public health officials and the public can work together to reduce the spread of the virus.

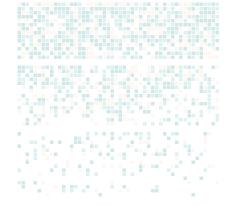
A report from Reuters shows that China refused to give raw data on early COVID-19 cases to the World Health Organisation, jeopardising efforts to understand how the outbreak began (Goh, 2021). There has been concerns about the accuracy of data shared about COVID-19 in certain countries or regions. The Russian Statistical Agency Rosstat announced deaths which were double the figures announced by the government taskforce on COVID-19 (Reuters Staff, 2021)and some countries do not have the organisational structure to record COVID-19 cases, several others have unreliable reporting of COVID-19 cases (The Lancet, 2020).

It is also worth noting that COVID-19 data in the UK comes with temporal delays that affects healthcare responses to the pandemic. First, data is not presented for the immediate period before the date it is published on, there is always a time lag²⁸. Similarly, a publication points to the "average" emergence delay of two weeks between the initial exposure to the virus leading to potential infection, hospitalization, and then either recovery or death"29. This results in very particular healthcare responses: "When government officials, businesses, and the population feel that the results are favorable ("cold" no issues), testing those with fevers, etc. they ease social distancing or other policies." Second, there has been an issue in Wales with the COVID19 data which was collected but only released in several "tranches", which shows the actual pressure on the NHS³⁰. "Significant under-reporting" of Wales

COVID19 data has also been highlighted by the BBC, leading to claims that Wales data collection system was "on its last legs" in December 2020³¹.

Data privacy challenges need to be overcome for timely and reliable data collection. Dozens of countries have used data collected during the COVID-19 pandemic for security purposes (Boudreaux et al., 2020), including the UK, calling for the need to balance carefully data collection and privacy concerns. The authors recommend transparency, anonymity and temporal limitation to collect data effectively. According to an article in MIT Technology Review, the less privacy concerns users have, the more they are willing to use contact-tracing applications (Jee, 2020). Public attitudes towards the contact-tracing app in the UK were overridden by misconceptions about what the app could and could not do; several users thought they could identify COVID-19 cases among their contacts and neighbourhoods (Williams et al., 2021). To support the efforts to control the spread of the virus in Wales, Bright et et al.'s (2020) recommendations included establishing clear communication with contact tracers.

There have been reported problems with Wales data collection, particularly that collected by NHS Wales Informatics Service. At the initial stages of the pandemic they did not separate confirmed and suspected COVID19 cases, which created an improbable picture³².



Vulnerable groups in the health care system and the COVID-19 pandemic





Vulnerability in government and public health

Individuals with underlying health conditions³³ and at higher risk of getting seriously ill if catching coronavirus have been identified as vulnerable by the Welsh Government. People 'at increased risk from coronavirus'34 have been recognised as vulnerable, while those with 'a very specific list of pre-existing and long-term serious health conditions' have been recognised as 'extremely vulnerable'35.

The Welsh Government includes those who are at increased risk from coronavirus as:

- aged 70 or older (regardless of medical conditions)
- under 70 with an underlying health condition (the list includes for example chronic diseases, neurological conditions, learning disabilities
- those who are pregnant

People in the 'extremely vulnerable' group include:

- Solid organ transplant recipients
- People with specific cancers (list provided)
- People with severe respiratory conditions
- People with severe single organ disease
- People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections
- People on immunosuppression therapies sufficient to significantly increase risk of infection
- Adults with Down's syndrome
- Pregnant women with significant heart disease, congenital or acquired

Other groups identified as vulnerable by Public Health Wales are the elderly, individuals of BAME communities, the blind and partially sighted community, and people who are deaf or with a hearing impairment³⁶. Individual with health-related risk factors were also more likely to experience anxiety and mental health difficulties during the pandemic (Rettie & Daniels, 2020; Frank et al., 2020). In terms of vaccinations, Wales Health minister considered "residents in care homes for older adults" to be the most vulnerable people³⁷.

Keeping in mind that different types of vulnerabilities are intertwined, Calderón-Larrañaga et al. (2020) remind us that physical and social vulnerability often interact. Access to support services for vulnerable populations during the pandemic has proven a challenging task for certain groups such as sex workers (Platt et al., 2020), migrants (Guadano, 2020), people with dementia (Giebel et al., 2021) or people who are homeless (Rolin Lima et al., 2020).



Thinking about vulnerability

Going beyond health and socio-economic definitions of vulnerability, we would like to reflect on the concept of vulnerability as understood by Butler (2016) as an 'exposure'. Often described as a diminished capacity and a weakness, Herring (2016) argues that vulnerability is universal to the human condition rather than the condition of certain groups or individuals. Virokannas et al. (2018) recognise that the use of the concept of vulnerability can deny the agency and voice of those who are identified as vulnerable and that acknowledging and conceptualising vulnerability is important to address the consequences of using this specific term.

The use of the concept of vulnerability also has practical and ethical implications as it structures the way we categorise certain individuals or populations (Brown, 2011). In policy and practice,

Brown finds the use of the concept exclusive and oppressive; she argues that only through the idea that vulnerability is universal can the concept be of 'transformative quality' benefiting equality and social justice (ibid., p.317). In other words, policy and practice often focus on the capacities and abilities of the vulnerable instead of focusing on the essence of being human, which is to be vulnerable.

If everyone has varying degrees of need and fragility, all humans are vulnerable which means that they are all 'open to' (Lawlor, 2018, p. 217). Vulnerability is an exposure and suggest that our bodies are always potentially open to harm. The way we manage this potential harm is often defined by support systems and infrastructure (Clavijo, 2020), which can ignore, recognise or exacerbate vulnerability.

Based on our reading group discussions, we have been talking about two different meanings of being "vulner-able":

- 1) Able in terms of "to be", in terms of essence (vulnerability is a part of being human, existential vulnerability)
- 2) Able to capacity and ability (vulnerability as degrees, something circumstantial)

Public Health information and communication campaigns





General communication

Communication about the COVID-19 pandemic in Wales happens in partnership between the Welsh Government and Public Health Wales. Throughout the pandemic, information was communicated through official government websites such as the Welsh Government and Public Health Wales, as well as their respective social media accounts. Official advice on hand washing and social distancing was given out early in the UK³⁸.

The Welsh Government and Public Health Wales have a section dedicated to COVID-19 on their websites, and links to more resources and support. To support the implementation of stricter measures to contain the spread of coronavirus, the British Government implemented a campaign with the slogan 'Stay Home, Protect the NHS, Save lives'. In May, the message in England changed to 'Stay alert' but Wales maintained its emphasis on 'Stay Home'³⁹.

Press and ministerial briefings were shown live on television with the latest news on coronavirus and the restrictions. From the beginning of the pandemic, posters with key hygiene messages were printed and distributed to all Welsh municipalities so that they could be distributed in local schools, hospitals, and other public places. Some municipalities and institutions also made their own printed posters. Messages about the importance of hygiene and of respecting restrictions were regularly communicated through various media.

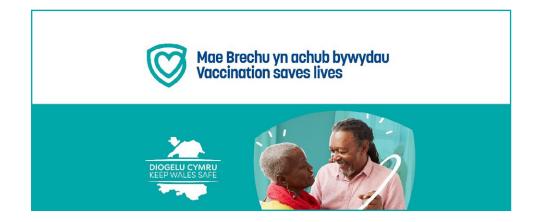




Specific communication campaigns and vaccination communication

While it became obvious that the lockdown in Wales would have greater impact than health and the economy, Public Health Wales launched a well-being campaign in April 2020 with help and advice on how to look after yourself and others during the pandemic⁴⁰. In addition to national communication campaigns, there were also regional campaigns. When we examine Swansea, the potential region which will be used in the COVINFORM case study, we note that their campaigns focus on social distancing, foodbanks, local business support (business grants), homelessness and recycling services. Swansea Council used the social media campaign #HereForSwansea to communicate about COVID-19, and launched a #StayConnected campaign for young people during the pandemic. Recommendations from Swansea Council were also communicated through social media and the hashtags #DoYourBit and #StopTheSpread consistently used to appeal to individual behaviour to respect the restrictions.

Public Health Wales has started a campaign to encourage residents in Wales to take the vaccine protecting from COVID-19; the 'Vaccination saves lives' campaign offers information about the vaccine, individuals' eligibility and resources. Public Health Wales, the Welsh Government and Welsh councils all run social media actions to encourage vaccination uptake in Wales.









Focus on vulnerable groups

Not all Welsh residents have equal access to information, and therefore some efforts have been made to communication about COVID-19 with certain groups. If we understand vulnerability as being 'exposed to', everyone is potentially vulnerable in the COVID19 context. Some groups have been recognised by the government as vulnerable, such as individuals with chronic diseases, Black and Minority Ethnic people, or the elderly. The general message in government, public health and organizations' guidance is set out to respond to the 'least' vulnerable individuals. This critique has been widely circulating in Wales and in the UK. **General recommendations and**

restrictions best cater for white, healthy, employed, middle class individuals with access to information. For example, the advice to 'isolate' when you have symptoms remains out of reach for low-income families who are not eligible for financial support schemes. Similarly, the five-mile rule, advising anyone not to travel beyond five miles of their home, is unsuitable for people living in rural areas or for nomadic Gypsy and Roma Travellers, and what is considered 'essential' varies from one individual or culture to another. To cater for the needs of certain groups, several communities have compiled guidance for specific groups. Examples are given below:

Ethnic Minorities and Youth Support Team Wales has a dedicated section of its website devoted to COVID19 as well as the latest guidance in over 60 different languages.

Social care Wales has developed a website with information and resources on COVID-19 for staff and carers, adults and elderly individuals, as well as people with dementia and learning disabilities. Mental health organisations and charities have also gathered information and resources to help individuals throughout the pandemic.

Resources for people working with charities and communities have been compiled by the Interim Youth Work Board's Digital Youth Work Advisory Group and supported by the Welsh Government and local authorities. A helpline for young people is helping them through the difficulties they may face during the pandemic.

The organisation Travelling Ahead provides information and support for Gypsy and Roma Travellers Communities.

Most of these organisations have developed 'Easy read' versions from official guidance documents to facilitate the transmission of information among various groups.





Impacts of COVID-19 on health care workers

The risk to health care workers and others working on the frontline has been recognised early in the pandemic (Sim, 2020). Healthcare workers are more exposed to infection and death from COVID-19, and they also suffer from more stress, burnout and mental health risks (ibid.; C3 Health). Healthcare professionals have been deemed more exposed and vulnerable to depression, anxiety, insomnia and distress, not to mention trauma and suicide (Kinman et al., 2020). The risk of transmitting coronavirus within the workplace or to family members adds additional pressure on health care workers (Almaghrabi et al., 2020).

In Wales and the UK, many health care workers have Black, Asian and Minority Ethnic (BAME) backgrounds and they also have been disproportionately hit by COVID-19⁴¹. Several studies are currently taking place to understand why healthcare workers from BAME backgrounds have a higher risk of developing severe COVID-19 symptoms and more likely to die⁴².

Disproportionate health care demands further complicated the work of health care staff (Verhagen et al., 2020), and the supply and demand for healthcare was mismatched in several locations across the UK (ibid.). Hospital beds were unequally distributed in England and Wales, putting a lot of pressure on workers in some areas, especially rural regions in Wales (ibid). Migrant health care workers also earn less than non-migrant health workers and are more likely to have precarious work contracts than others (Fasani & Mazza, 2020).

In Wales, the UK and many other countries the appreciation for healthcare workers was shown through public recognition such as 'Clap for carers' in the UK (Woods & Skeggs, 2020). However, some health care workers have experienced abuse during the pandemic: in the UK people filmed hospital wards that seemed to be empty to suggest that COVID is a hoax⁴³ ⁴⁴.





Reflection on intersectionality

Individuals living at the intersections of multiple inequalities have been disproportionally affected by the COVID-19 pandemic and its response (Smith et al., 2020). However, intersectionality cannot be reduced to a description of multiple inequalities because the concept is inextricably linked with power and the political (Bowleg, 2020).

Bowleg argues that intersectionality cannot be understood without recognising its links to Black feminist activism history and its transformative potential (ibid.). She argues that public health response and data surveillance must incorporate an intersectional lens to articulate 'the structures that explain the racialized and economic inequality of COVID-19' (ibid.). She contends that the implementation of intersectionality in public health practice is essential and can be best achieved by community and grassroots-led initiatives.



Reflection on complex systems, risks, uncertainties and adaptation





Risk perception of policy makers and citizens

Reflecting on 'the politics of possibility', Louise Amoore (2013) reminds us of the performative aspect of risk which 'produces the effects that it names' (p.7). **She understands risk as a political construction and argues that the governance around threats and danger is not about risk itself but the representation of risk**. Risk and scenario planning have become integral components of government strategies, in particular after 9/11.

A report from the Technical Advisory Group in Wales in January 2021 highlights the importance of developing behavioural science around risk communication 'outside of emergencies' (p.3)⁴⁵. Risk perception and preventative health behaviours are connected (Dryhurst et al., 2020); interestingly, Dryhurst et al.'s study shows that risk perception levels are highest in the UK (out of ten countries in total). They partially explain this with the idea that risk is based on people's experiences, values and trust in institutions.



Crucial moments/tipping points

COVID-19 has been described as a complex problem in a complex system that is made up of multiple interacting components (Rutter et al., 2020). Within complex systems theory, a tipping point signifies a critical point at which dramatic shifts occur in a complex system (Scheffer, 2010). In the context of the COVID-19 crisis, tipping points can be understood to be moments of critical change influencing the course of the pandemic and related decision-making.

In the context of the pandemic, tipping points are specifically related to healthcare systems capacity, and public health responses monitored these carefully. In October 2020, the First Minister of Wales Mark Drakeford used the words 'tipping point' to describe the COVID-19 situation in Wales, in particular the fact that COVID-19 cases and hospitalisations had risen steadily over the past weeks⁴⁶.

References



Almaghrabi, R. H., Alfaradi, H., Wedjan. A., Al Hebshi, A., Albaadani, M.M. (2020). Healthcare workers experience in dealing with Coronavirus (COVID-19) pandemic. *Saudi Medical Journal 41*(6), 657-660. doi: 10.15537/smj.2020.6.25101

Amoore, L. (2013). The politics of possibility: risk and security beyond probability. Durham NC: Duke University Press.

Atchison, C., Bowman L.R., Vrinten C., Redd, R., Pristerà P., Eaton, J. & Ward, H. (2021). Early perceptions and behavioural responses during the COVID-19 pandemic: a cross-sectional survey of UK adults. *BMJ Open 11* (e043577). DOI:10.1136/bmjopen-2020-043577

Bowleg, L. (2021). We're Not All in This Together: On COVID-19, Intersectionality, and Structural Inequality. *American Journal of Public Health 111*(1), 88-90. doi: 10.2105/AJPH.2020.306031

Brown, K. (2011). 'Vulnerability': Handle with Care. *Ethics and Social Welfare 5*(3), 313-321. 10.1080/17496535.2011.597165.

Bright, D., Brown, G., Roberts, R.J., Cottrell, S., Gould, A., Jesurasa, A., Daniels, P. & Davies, L. (2020). COVID-19 contact tracing: The Welsh experience. *Public Health in Practice 1* (100035) Public Health in Practice Short Communication. DOI: 10.1016/j.puhip.2020.100035

Butler, J. (2016). Rethinking Vulnerability and Resistance in Butler, J., Gambetti, Z. and Sabsay, L. (Eds) *Vulnerability in Resistance*. Duke University Press.

Calderón-Larrañaga, A., Dekhtyar, S., Vetrano, D.L., Bellander, T. & Fratiglioni, L. (2020). COVID-19: risk accumulation among biologically and socially vulnerable older populations. *Ageing Research Reviews* 63(101149). DOI: 10.1016/j.arr.2020.101149

Clavijo, N. (2020). Reflecting upon vulnerable and dependent bodies during the COVID-19 crisis. Gender, Work and Organization 27(5) Special Issue: Feminist Frontiers Special Issue: Gendered labor and work, even in pandemic times, 700-704. doi: 10.1111/gwao.12460

Courbage, C. & de Coulon, A. (2004). Prevention and Private Health Insurance in the U.K. *The Geneva Papers on Risk and Insurance - Issues and Practice* 29, 719–727.

Dryhurst, S., Schneider, C. R., Kerr, J., Freeman, A.L.J., Recchia, G., van der Bles, A.M., Spiegelhalter, D. & van der Linden, S.(2020). Risk perceptions of COVID-19 around the world. *Journal of Risk Research 23* (7-8): COVID-19 Special Issue, 994-1006. DOI: 10.1080/13669877.2020.1758193

European Commission. (2019). Joint Report on Health Care and Long-Term Care Systems and Fiscal Sustainability – Belgium Country Document 2019 Update (Institutional Paper No. 105). Economic and financial affairs, Economic policy commission. https://ec.europa.eu/info/publications/joint-report-health-care-and-long-term-care-systems-and-fiscal-sustainability-country-documents-2019-update_en

European Commission. (2016). Joint Report on Health Care and Long-Term Care Systems & Fiscal Sustainability Volume I (Institutional Paper No. 037). Economic and financial affairs, Economic policy committee. https://ec.europa.eu/info/sites/info/files/file_import/ip037_vol1_en_2.pdf

Farrow, K. (2020). Policing the Pandemic in the UK Using the Principles of Procedural Justice. *Policing: A*

Journal of Policy and Practice 14(3), 587–592. DOI: 10.1093/police/paaa031

Fasani, F. & Mazza, J. (2020). A Vulnerable Workforce: Migrant Workers in the COVID-19 Pandemic. *Publications Office of the European Union.* doi:10.2760/316665, JRC120730.

Frank, P., Iob, E., Steptow, A. & Fancourt, D. (2020). Trajectories of depressive symptoms among vulnerable groups in the UK during the COVID-19 pandemic. *JAMA Network Open.* DOI: 10.1001/jamanetworkopen.2020.26064

Giebel C., Pulford D., Cooper C., et al. (2021). COVID-19-related social support service closures and mental well-being in older adults and those affected by dementia: a UK longitudinal survey. *BMJ Open 11* (e045889). DOI: 10.1136/bmjopen-2020-045889

Goh, B. (2021). China refused to provide WHO team with raw data on early COVID cases, team member says. Reuters February 13, 2021. https://www.reuters.com/article/us-health-coronavirus-who-china-idUSKBN2AD090

Griffiths, R. (2020). Using public health law to contain the spread of COVID-19. *British Journal of Nursing* 29(5). DOI: 10.12968/bjon.2020.29.5.326

Guadagno, L. (2020). Migrants and the COVID-19 pandemic: An initial analysis. *Migration Research Series N° 60*. International Organization for Migration (IOM). Geneva.

Herring, J. (2016). Vulnerable adults and the Law. Oxford: Oxford University Press.

Hirsch, C. (2020, March 31). Europe's coronavirus lockdown measures compared. POLITICO. https://www.politico.eu/article/europes-coronavirus-lockdown-measures-compared/

Jee, C. (2020). Is a successful contact tracing app possible? These countries think so. MIT Technology Review. https://www.technologyreview.com/2020/08/10/1006174/covid-contract-tracing-app-germany-ireland-success/

King, J. (2020). The Lockdown is Lawful. UK Constitutional Law Blog U.K. Const. L. Blog.

Kinman, G., Teoh, K. & Harriss, A. (2020). Supporting the well-being of healthcare workers during and after COVID-19. *Occupational Medicine* 70(5), 294–296. doi: 10.1093/occmed/kqaa096

Lawlor, L. (2018). Vulnerability and Violence: On the Poverty of the Remainder. *Journal of the British Society for Phenomenology* 49 (3), 217-228.

Longley, M., Riley, N., Davies, P. & Hernández-Quevedo, C. (2012). *United Kingdom (Wales): health system review.* World Health Organization. Regional Office for Europe, European Observatory on Health Systems and Policies.

Matejic, P. (2020). Poverty in Wales 2020. Report, Joseph Rowntree Foundation.

Platt, L. & Warwick, R. (2020). COVID-19 and Ethnic Inequalities in England and Wales. *Fiscal Studies 41*(2), 259-289.

Platt, L., Elmes, J., Stevenson, L., Holt, V., Rolles, S. & Stuart, R. (2020). Sex workers must not be forgotten in the COVID-19 response. *The Lancet* 396, 9-11. DOI: 10.1016/S0140-6736(20)31033-3

Rettie, H. & Daniels, J. (2020). Coping and Tolerance of Uncertainty: Predictors and Mediators of Mental Health during the COVID-19 pandemic. *American Psychologist*. Advance online publication. DOI: 10.1037/amp0000710

Reuters Staff (2021). Russia's COVID-19 death toll surpasses 200,000: Rosstat. Reuters March 5, 2021. https://www.reuters.com/article/us-health-coronavirus-russia-toll-idUSKCN2AX272

Rolim Lima, N.N., de Souza, R.I., Walisson Gomes Feitosa, P., de Sousa Moreira, J.L., Gleidiston Lima da Silva, C. & Rolim Neto, M.L. (2020). People experiencing homelessness: Their potential exposure to COVID-19. *Psychiatry Research* 288 (112945). DOI: 10.1016/j.psychres.2020.112945.

Sandford, T. (2021). Nursing Minds: A response to the escalating concerns about nurses' mental health and wellbeing. C3 Health (accessed on 7 April 2021: https://www.c3health.org/blog/nursing-minds/)

Sim, M.R. The COVID-19 pandemic: major risks to healthcare and other workers on the front line. *Occupational and Environmental Medicine* 77, 281-282.

Smith, J., Davies, S.E., Feng, H., et al. (2021): More than a public health crisis: A feminist political economic analysis of COVID-19. *Global Public Health*. doi: 10.1080/17441692.2021.1896765

Stats Wales (2020). Percentage of all individuals, children, working-age adults and pensioners living in relative income poverty for the UK, UK countries and regions of England between 1994-95 to 1996-97 and 2016-17 to 2018-19 (3 year averages of financial years). National Statistics Wales.

The Lancet (2020). COVID-19: the worst may be yet to come. Editorial 396 (10244), p.71. DOI: 10.1016/S0140-6736(20)31517-8

van Kolfschooten, H. & de Ruijter, A. (2020). COVID-19 and privacy in the European Union: A legal perspective on contact tracing. *Contemporary Security Policy 41*(3), 478-491.

Verhagen, M. D., Brazel, D. M., Dowd, J. B., Kashnitsky, I., & Mills, M. (2020). Forecasting spatial, socioeconomic and demographic variation in COVID-19 health care demand in England and Wales. *OSF Preprints*. https://doi.org/10.31219/osf.io/g8s96

Virokannas, E., Suvi Liuski, I. & Kuronen, M. (2018). The contested concept of vulnerability – a literature review. *European Journal of Social Work* 23(2), 327-339. DOI: 10.1080/13691457.2018.1508001

Williams, S.N., Armitage, C.J., Tampe, T. & Dienes, K. (2021). Public attitudes towards COVID⊠19 contact tracing apps: A UK-based focus group study. *Health Expectations*. DOI: 10.1111/hex.13179

Woods, H. & Skeggs, B. (2020). Clap for carers? From care gratitude to care justice. *European Journal of Cultural Studies 23*(4), 641-647. doi: 10.1177/1367549420928362

Yar, M., Dix, D. & Bajekal, M. (2006). Socio-demographic characteristics of the healthcare workforce in England and Wales–results from the 2001 Census. *Health statistics quarterly/Office for National Statistics* 32(32), 44-56.

The COVINFORM project

Acronym COVINFORM

Title COronavirus Vulnerabilities and INFOrmation dynamics Research and Modelling

Coordinator SYNYO GmbH

Reference 101016247

Type Research and Innovation Action (RIA)

Programme HORIZON 2020

Topic SC1-PHE-CORONAVIRUS-2020-2C Behavioural, social and economic impacts of

the outbreak response

Start 01 November 2020

Duration 36 months

Contact

Consortium SYNYO GmbH (SYNYO), Austria

Magen David Adom in Israel (MDA), Israel

Samur Proteccion Civil (SAMUR), Spain

Universita Cattolica del Sacro Cuore (UCSC), Italy

SINUS Markt- und Sozialforschung GmbH (SINUS), Germany

Trilateral Research LTD (TRI UK), UK

Trilateral Research LTD (TRI IE), Ireland

Kentro Meleton Asfaleias - Center for Security Studies (KEMEA), Greece

Factor Social Consultoria em Psicossociologia e Ambiente LDA (FS), Portugal

Austrian Red Cross (AUTRC), Austria

Media Diversity Institute (MDI), UK

Societatea Natională de Cruce Rosie Din România - Romanian Red Cross

(SNCRR), Romania

University of Antwerp (UANTWERPEN), Belgium

Sapienza University of Rome (SAPIENZA), Italy

University Rey Juan Carlos (URJC), Spain

Swansea University (SU), UK

Gotenborg University (UGOT), Sweden





































Disclaimer

The content of this publication is the sole responsibility of the authors, and in no way represents the view of the European Commission or its services.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 101016247.

