

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

Report 16, 08/10/2020



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Overview





The International Horizon Scanning and Learning work stream was initiated following and informing the evolving coronavirus (COVID-19) public health response and recovery plans in Wales. It focuses on COVID-19 international evidence, experience, measures, transition and recovery approaches, to understand and explore solutions for addressing the on-going and emerging health, wellbeing, social and economic impacts (potential harms and benefits).

The learning and intelligence is summarised in weekly reports to inform decision-making. These may vary in focus and scope, depending on the evolving COVID-19 situation and public health / policy needs.

This work is aligned with and feeding into the Welsh Government Office for Science and into Public Health Wales Gold Command. It is part of a wider Public Health Wales' systematic approach to intelligence gathering to inform comprehensive, coherent, inclusive and evidence-informed policy action, which supports the Wellbeing of Future Generations (Wales) Act and the Prosperity for All national strategy towards a healthier, more equal, resilient, prosperous and globally responsible Wales.

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

In focus this week

-  **COVID-19 impact on universities and international students**
-  **COVID-19 and pregnancy**
-  **COVID-19 quarantine and isolation facilities**
-  **Country in focus: Sweden**

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

“The pandemic underlines the fundamental importance of investing in public health and primary health care, even as we fight the virus.”

Dr Tedros Adhanom Ghebreyesus, WHO Director-General

COVID-19 impact on universities and international students

- ✚ Measures to control COVID-19 in universities **vary widely, depending on the status of the outbreak in the region** where the university is based
- ✚ Many universities maintain a **blended approach**, combining online and face-to-face learning
- ✚ Some countries/universities have seen a **significant reduction in the number of international students**
- ✚ Concerns for (international) students’ **wellbeing, housing, work and opportunities**, as a result of COVID-19, are increasing, including financial and housing stress; increased sense of loneliness and impact on academic performance
- ✚ **Financial support** (hardship grants) have been made available from many universities
- ✚ **Families** remain a key source of support for many international students, which can have inequity implications

More information is summarised **on pp. 5-7**

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 (Black Asian Minority Ethnic) background** 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
- ✚ Pregnant women **in hospital** with COVID-19 may have **increased risk of respiratory distress and admission to intensive care**, but not death
- ✚ **Vertical maternal-foetal transmission** appears to be **rare**; and its **clinical significance is unclear**
- ✚ **Mothers with COVID-19** should:
 - Continue **breastfeeding, hold the new-born and perform skin-to-skin care**
 - **Wear a mask** when feeding their baby
 - **Wash hands and routinely clean / disinfect** surfaces
 - **Ensure routine immunizations** after birth
- ✚ **Access to antenatal, delivery and postnatal services should be maintained** during the pandemic

More information is summarised **on pp. 8-9**

COVID-19 quarantine and isolation facilities

- ✚ Country **criteria** for admission to a COVID-19 isolation / quarantine facility **varies and generally requires:**
 - 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 use **designated quarantine / isolation facilities**, such as hotels; and have implemented **measures to ensure compliance**
- ✚ Experience across counties suggest, it is **more beneficial to have small permanent units, such as ‘intermediate infection hospitals’ or ‘Fever Hospitals’**, rather than to build large, temporary structures
- ✚ Globally, **multiple (temporary) facilities** have been established to increase healthcare capacity, but many remained **unused or sparsely used** with substantial financial implications
- ✚ Better **data, funding, preparation, and flexibility** are necessary to secure the **right number of extra beds, in the right places, at the right time**

*More information is summarised on **pp. 10-13***

Country in focus: Sweden

- ✚ The Swedish response to COVID-19 has relied on the **‘principle of responsibility’**, which has been **highly controversial**. Key elements include:
 - No strict lockdown implemented
 - Emphasis placed on personal hygiene and voluntary social distancing
 - This approach aimed to slow, rather than eradicate COVID-19
 - It was thought that this may result in higher levels of community herd immunity
 - Consistency of the recommendations and guidelines, designed to be easily understood
 - Recommendations are intended to provide informed choice, and are not enforced
- ✚ The **epidemiological situation update** shows:
 - Low rate of positive COVID-19 tests, while testing expanded to record levels
 - Rise in local cases, most likely due to community transmission
 - The 14-day case notification rate per 100,000 has started to rise
 - The 14-day death notification rate continues to fall
- ✚ COVID-19 has had a **major impact on the older people**, with excess mortality and revealing deficiencies in the organisation of elderly care

*More information is summarised **on pp. 14-17***

COVID-19 impact on universities and international students

Overview and examples of international measures¹

- Measures to control COVID-19 in universities vary widely, depending on the status of the outbreak in the region where the university is based (*Table 1*)
- In some cases, there are no special restrictions for foreign students, in addition to the standard COVID 19 regulations
- Many universities maintain a blended approach, combining online and face-to-face learning
- In some countries (France), many universities have gone back to full capacity
- Some universities have seen a significant reduction in the number of international students. Sweden², for example, has received 2800 less foreign students
- Concerns for the wellbeing, housing, work and future opportunities of students are increasing, especially for foreign students
- Financial support to students (hardship grants) have been made available from many universities, under certain conditions
- Families remain a significant source of support for many international students

Table 1: Examples of measures to mitigate the impact of the COVID-19 on universities and (international) students in selected countries

| Country | Mitigation measures |
|-------------------------------|--|
| France³ | <ul style="list-style-type: none"> - International students may enter with an appropriate visa or attend study for less than 90 days from a country exempted from visa requirements, and you can prove you have accommodation - Mask wearing is mandatory at all times and social distancing is encouraged. Some institutions find this challenging due to full classes and a lack of means to introduce alternative measures |
| Germany⁴⁵⁶⁷ | <ul style="list-style-type: none"> - Entry for international students was approved in July for those resident in countries: <ul style="list-style-type: none"> ✓ On a pre-approved list without entry restrictions ✓ Other than those on the pre-approved list – if the training provider confirms that attendance is required despite the current situation and, for example, online alternatives are not suitable - When entering from a high-risk area (where resided for at least 14 days) students and others must go directly to their destination and isolate until a negative test result is obtained. Tests are provided free of charge - During June-August 2020 eligible students could access financial support ('Stop-gap Aid'), if their income is reduced by 60% compared to May-April 2019. This was criticised due to the strict criteria |
| Belgium⁸⁹¹⁰ | <ul style="list-style-type: none"> - The Belgium Erasmus Network launched an information channel for (international) students with daily updates on the latest developments in relation to COVID 19 - The number of students allowed at a university depends on the status of the outbreak in the region where the university is located. When higher number of cases, capacity of the lecture halls, for example, is reduced to 1/5 of the regular capacity - Several universities use rotation systems where students attend university 1/3 of the time for lectures - The University of Ghent has 1 week at the university and 2 weeks at home, with all classes streamed online - Other universities follow a 'normal' approach with lectures held with mandatory face coverings, good hygiene and the installation of advanced ventilation systems |

¹ <https://www.theguardian.com/world/2020/sep/25/universities-respond-to-covid-surge>

² <https://www.thelocal.se/20200824/swedish-universities-welcome-fewer-international-students-due-to-the-coronavirus>

³ <https://www.diplomatie.gouv.fr/en/coming-to-france/coronavirus-advice-for-foreign-nationals-in-france/>

⁴ <https://www.bmi.bund.de/SharedDocs/faqs/DE/themen/bevoelkerungsschutz/coronavirus/reisebeschraenkungen-grenzkontrollen/reisebeschraenkungen-grenzkontrollen-liste.html#:~:14284018>

⁵ <https://www.bmi.bund.de/SharedDocs/faqs/EN/topics/civil-protection/coronavirus/travel-restrictions-border-control/travel-restriction-border-control-list.html#:~:13919566>

⁶ <https://www.wsws.org/en/articles/2020/09/04/qerm-s04.html>

⁷ <https://www.auswaertiges-amt.de/de/service/visa-und-aufenthalt/Aktuell>

⁸ <https://esnbelgium.org/news/covid-19-information-channel-international-students-belgium>

⁹ <https://radio1.be/universiteit-gent-gebruikt-ingenieurs-rotatiesysteem-voor-studenten-code-oranje> (Dutch)

¹⁰ <https://www.vrt.be/vrtnws/nl/2020/06/19/ku-leuven-gaat-voor-een-zo-normaal-mogelijk-academiejaar-vanaf-s/> (Dutch)

| | |
|--|--|
| <p>The Netherlands¹¹¹²</p> | <ul style="list-style-type: none"> - To ensure social distancing between students and staff is maintained, schedules have been adjusted and education takes place partially online - Students with an entry visa or a valid study residence permit are granted exemption from travel bans - Financial support for students - compensation for master's degree at research universities or bachelor's degree at universities of applied sciences between September 2020 and January 2021. The maximum amount is 3 months of tuition fees (€ 535) |
| <p>New Zealand¹³¹⁴</p> | <ul style="list-style-type: none"> - Support and information resources for experiencing hardship, including obtaining food parcels and other essential items - COVID-19 care is provided free of charge to anyone who requires it, including international students - Facilities connected to a confirmed or probable case of COVID-19 must close on an individual or group basis to allow contact tracing, and then potentially for a further 14 days - A short-term visitor visa has been introduced to help temporary migrants who are unable to leave New Zealand due to international travel restrictions. This includes international students who have completed their study - Universities adopted a 'check-in program' for students and faculty members to log their location, helping the effective tracing of movements and closely monitor potential transmission |

Country insight: Australia

The experience of international students before and during COVID-19: housing, work, study, and wellbeing¹⁵

Methodology:

- Over a thousand international students (still living in Australia) surveyed before and during the COVID-19 pandemic (852 eligible to participate)
- Data from the two surveys not linked; some difference in the two samples' composition
- It is possible to make observations about how things have changed for international students during COVID-19, but not the precise degree of the change.

Summary findings from during the COVID-19 pandemic (2020):

- **Dramatic job losses; financial stress intensified as incomes have fallen**

For example, 61% reported losing their jobs because of the lockdown; only 15% of those had managed to find a new job; and 63% of those who had retained their jobs, had their hours reduced (Figure 1). The average loss of income was 23%; with 28% of students losing more than 50% of their income and a further 27% losing up to 50% (Figure 2 and 3).

- **Difficulties paying rent rose sharply; most who tried to renegotiate rent were unsuccessful; more skipping meals**

For example, 27% reported not being able to meet their full rental payments subsequent to COVID-19 restrictions; and a third (33%) agreed that they quite often go without necessities like food so that they can pay for their accommodation - around 10% higher than pre-COVID-19.

- **Financial and housing stress has affected academic performance**

For example, 58% agreed or strongly agreed that stress around their financial situation was having an impact on their academic studies.

- **Loneliness has increased sharply during COVID-19**

For example, 63% agreed or strongly agreed that they felt lonelier since the pandemic.

- **Support has come from organisations, friends, and family**

For example, most students reliant on support from families in their home country; 62% reported their institution offered forms of financial assistance; 56% said that counselling was available.

¹¹ <https://www.rijksoverheid.nl/onderwerpen/coronavirus-covid-19/ouders-scholieren-en-studenten-kinderopvang-en-onderwijs/hogescholen-en-universiteiten-hoger-onderwijs>

¹² <https://www.studvinholland.nl/sites/default/files/2020-07/covid-19-and-studying-in-the-netherlands.pdf>

¹³ <https://enz.govt.nz/news-and-research/ed-news/covid-19-novel-coronavirus-information-for-students-agents-and-peak-bodies/>

¹⁴ <https://www.businessinsider.com.au/how-this-new-zealand-university-had-a-contact-tracing-system-up-and-running-in-four-weeks-to-minimise-covid-19-transmission-2020-9>

¹⁵ <https://internationalstudentsandhousing.files.wordpress.com/2020/08/international-students-and-housing-survey-report-final-no-logos-5-aug-2020.pdf>

Figure 1. Job loss and reduction of hours since COVID-19 pandemic, international students, Australia (n = number of respondents)

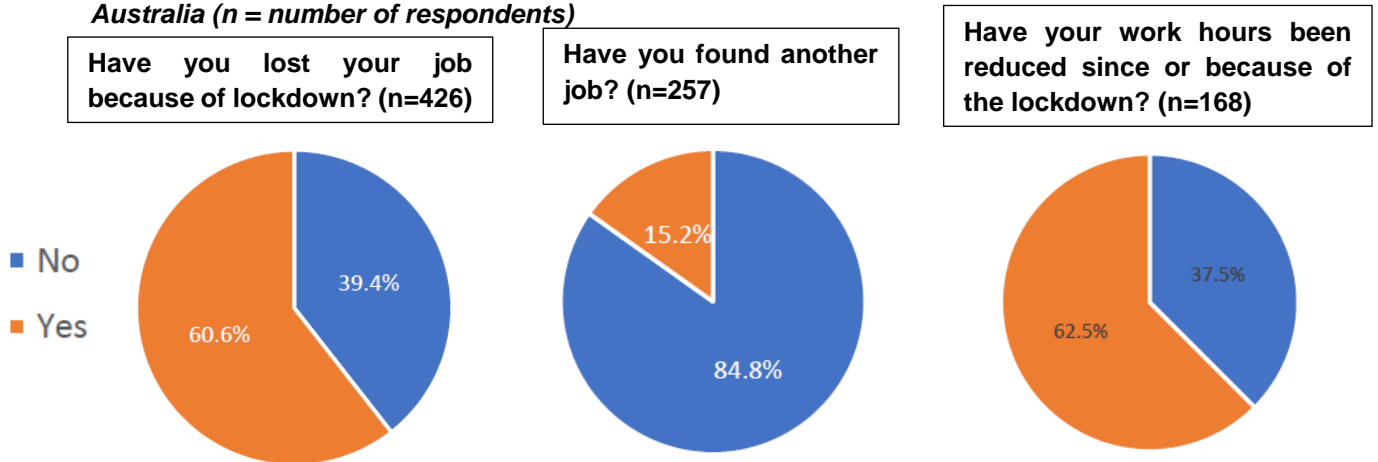


Figure 2. Calculated from ratio of income per week during and before COVID-19 (all sources) using category mid points (n=704), international students, Australia

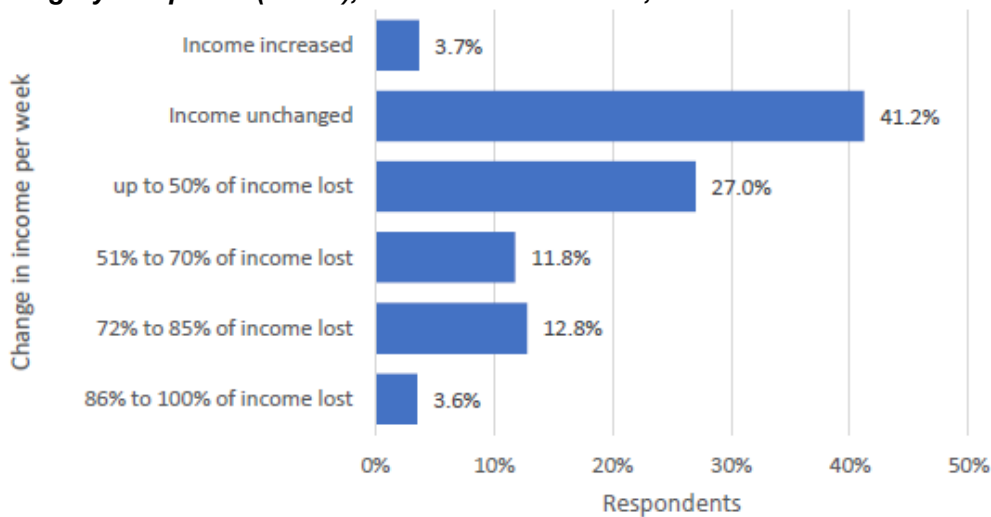
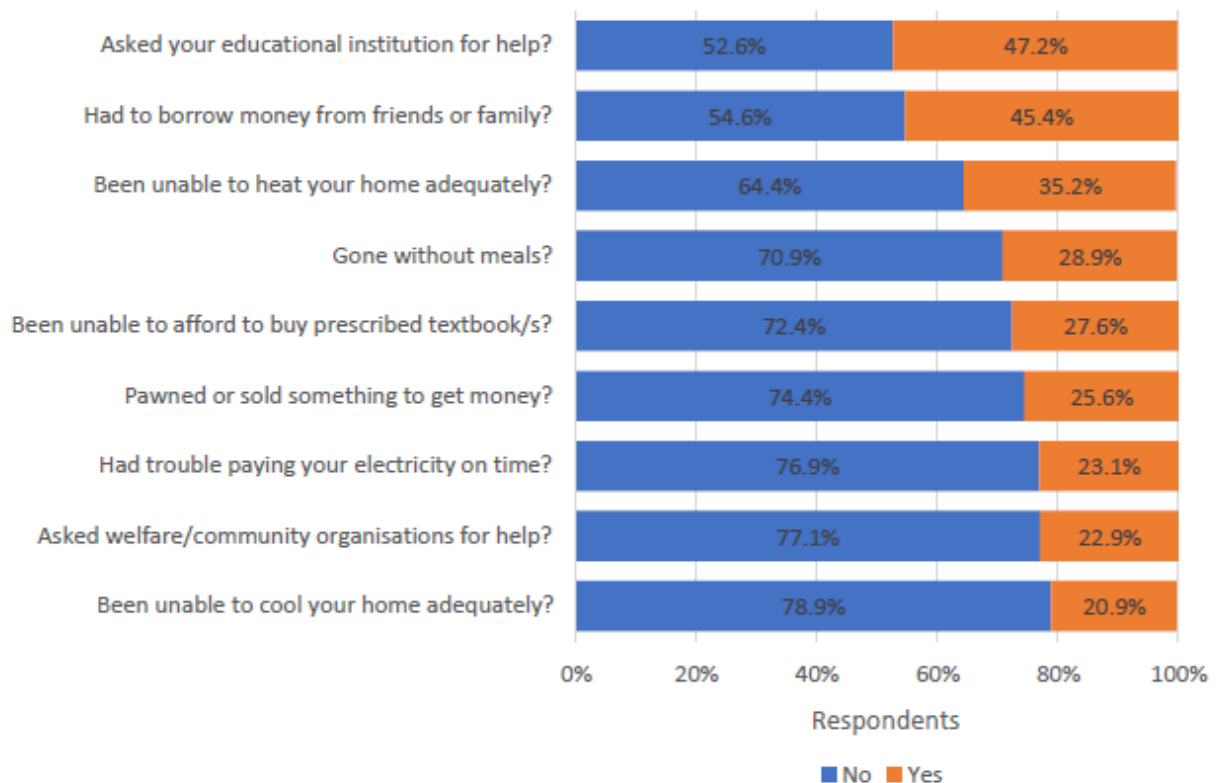


Figure 3. Since the COVID-19 lockdown, because of shortage of money, have you... (n=724)



COVID-19 and pregnancy

Overview¹⁶

- 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 (Black Asian Minority Ethnic) background** 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
- **Pregnant women in hospital with COVID-19:**
 - ✓ Are less likely to show symptoms than non-pregnant women of similar age
 - ✓ May have increased risk of respiratory distress and admission to intensive care¹⁷
 - ✓ In high-income countries are more likely to have access to up-to-date guidelines, testing and dedicated isolation rooms¹⁸
- **Access to antenatal, delivery and postnatal services should be maintained** during the pandemic¹⁹

Neonatal (vertical) transmission of COVID-19

- **Limited evidence** has raised concern of possible intrauterine, intrapartum, or peripartum transmission
- **Vertical maternal-foetal transmission appears to be rare; and its clinical significance is unclear**²⁰
- Public Health England periCOVID study²¹ is investigating vertical transmission in 70,000 pregnant women across five countries (Kenya, Malawi, Uganda, Mozambique and Gambia)
- A study²² from Wuhan, China, investigating babies born to mothers with COVID-19 from January to February 2020, has found:
 - ✓ From 33 neonates, born to mothers with COVID-19, 3 neonates (9%) presented with early onset of COVID-19 infection
 - ✓ As strict infection control and prevention procedures were implemented during the delivery, it is likely that the source is maternal transmission
 - ✓ No clinical findings or investigations were suggestive of COVID-19 in the non-symptomatic neonates
 - ✓ Screened samples of amniotic fluid, cord blood, and breast milk, were negative for COVID-19, though vertical maternal-foetal transmission cannot be ruled out

UNICEF recommendations for pregnant women and mothers²³

- Take the same precautions to avoid COVID -19 infection as other people: practice physical distancing, avoid physical gatherings and use online health services
- Seek medical care early, if they live in affected/high risk area; and if symptoms appear

¹⁶ <https://www.bmj.com/content/370/bmj.m3320>

¹⁷ <https://www.bmj.com/content/370/bmj.m3391>

¹⁸ <https://gh.bmj.com/content/5/6/e002967>

¹⁹ <https://www.unicef.org/press-releases/pregnant-mothers-and-babies-born-during-covid-19-pandemic-threatened-strained-health>

²⁰ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-newborns.html>

²¹ <https://www.pericovid.com/>

²² <https://jamanetwork.com/journals/iamapediatrics/fullarticle/2763787>

²³ <https://www.unicef.org/press-releases/pregnant-mothers-and-babies-born-during-covid-19-pandemic-threatened-strained-health>

- Closely monitor themselves for symptoms of COVID-19 and seek advice from the nearest designated facility, if they have concerns or experience symptoms
- Have a birth plan in place to reduce anxiety and to ensure they get to the place on time
- Continue breastfeeding their baby even if they are infected, or suspect being infected, as the virus has not been found in samples of breastmilk
- Wear a mask when feeding their baby; wash hands before and after touching the baby; and routinely clean and disinfect surfaces
- Continue to hold the new born and perform skin-to-skin care
- Ensure routine immunizations after the baby is born

Emerging research, experience and trends across selected countries

USA²⁴²⁵²⁶²⁷²⁸

- COVID-19 in pregnant women was associated with hospitalization, increased risk of intensive care admission, and receipt of mechanical ventilation, but not death
- New York City has seen a surge in the number of pregnant women diagnosed with COVID-19, but the Caesarean section rate has remained unchanged
- Between 22nd January and 7th June 2020, 46.2% of the pregnant women admitted to hospital with confirmed COVID-19 were from Hispanic or Latino ethnicity
- Support and resources provided to states/jurisdictions to add a COVID-19 supplement to the maternal and infant health surveillance systems, such as the Pregnancy Risk Assessment Monitoring System (PRAMS)
- The Epidemiology of SARS-CoV-2 in Pregnancy and Infancy (ESPI) Network's Electronic Cohort study aims to understand the characteristics of COVID-19 during pregnancy, up to six months after the end of pregnancy, and up to six months of age of the infants

Italy²⁹

A cohort study of 77 patients in 12 maternity hospitals found that one in five women (20%) hospitalized with COVID-19 required urgent delivery for respiratory distress; or were admitted to Intensive Care

Israel³⁰

Mayanei Hayeshua Medical Center, Bnei Brak saw a 23% increase in home deliveries in April 2020, compared to April 2019

UK³¹³²³³³⁴³⁵³⁶

- Out of the 427 pregnant women, admitted to hospital with confirmed COVID-19, 233 (56%) were from BAME background (1st March - 14th April 2020)
- The Royal College of Midwifery launched a campaign aimed at pregnant women from BAME backgrounds to ensure close monitoring and support
- UK Obstetric Surveillance System used for near-real-time surveillance of pregnant women in hospitals who test positive for COVID-19
- Imperial College London running a surveillance programme (PAN-COVID) to monitor pregnancy and neonatal outcomes for pregnant women with COVID-19

²⁴ <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/special-populations/pregnancy-data-on-covid-19/what-cdc-is-doing.html>

²⁵ <https://www.cdc.gov/prams/index.htm>

²⁶ <https://icahn.mssm.edu/>

²⁷ <https://www.cdc.gov/mmwr/volumes/69/wr/mm6925a1.htm>

²⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7287463/>

²⁹ <https://pubmed.ncbi.nlm.nih.gov/32433453/>

³⁰ <https://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/news/news/2020/6/coronavirus-and-pregnancy-preserving-maternal-health-across-the-european-region>

³¹ <https://www.bmj.com/content/369/bmj.m2628>

³² <https://www.npeu.ox.ac.uk/ukoss>

³³ <https://pan-covid.org/>

³⁴ <https://www.pericovid.com/>

³⁵ <https://jamanetwork.com/journals/jama/article-abstract/2768389>

³⁶ <https://www.bmj.com/content/369/bmj.m2107>

COVID-19 quarantine and isolation facilities

Overview

- Country criteria for **admission to a COVID-19 isolation/quarantine facility varies** and generally **requires**:
 - ✓ 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
- Experience across countries suggest, it is **more beneficial to have small permanent units**, in the form of intermediate infection hospitals or 'Fever Hospitals', rather than build large, temporary structures
- **'Fever Hospitals'**:
 - ✓ Are small permanent structures, specialised in treating patients with infectious diseases, such as scarlet fever, smallpox, etc.; and currently COVID-19
 - ✓ Could provide extra capacity and effective strategy of training staff in infection control
 - ✓ Could divert patients who need care for infectious diseases, like COVID-19 and Influenza, away from main hospitals where there are vulnerable patients³⁷

Country examples

- Globally, **multiple facilities** have been established to increase healthcare capacity in response to the COVID-19 pandemic
- Many of the structures built were **unused or sparsely used**, resulting in massive financial outlays
- International examples of quarantine and isolation measures for citizens/travellers are presented in *Table 2*; and of special clinical facilities (e.g. hospitals) in *Table 3*

Country insight: Australia³⁸

- Those travelling from overseas or been in Victoria in the last 14 days must enter into quarantine for 14 days, with limited exceptions for transiting passengers
- Travellers are housed in designated accommodation for the 14-day quarantine period
- People in quarantine who get tested for COVID-19 and the result is negative still need to remain in quarantine until the end of the 14 day period
- All travellers who arrive by plane undergo a COVID-19 symptom and temperature check at the airport
- If a person has COVID-19 symptoms (e.g. fever, cough, shortness of breath) they are tested at the airport and transferred to a hotel managed by health authorities to await the results
- Individuals are liable for the cost of the hotel and invoiced at the end of their stay
- Not following quarantine rules is a **criminal offence and attracts heavy penalties**. For individuals, the maximum penalty is \$11,000 or 6 months in prison, or both, with a further \$5,500 fine for each day the offence continues

³⁷ <https://www.bmj.com/content/369/bmj.m2332>

³⁸ <https://www.health.nsw.gov.au/Infectious/factsheets/Pages/hotel-quarantine.aspx>

Table 2. Quarantine and isolation measures for citizens and travellers

| Country | System | Criteria | Duration | Cost / Compensation |
|--|---|--|---|--|
| Greece ³⁹ | <p>Mandatory surveillance and isolation for citizens returning to Greece (March – April 2020)</p> <ul style="list-style-type: none"> – Transfer to a designated hotel for testing – If negative - transported to place of residency – If positive - remain at the hotel under medical supervision – Daily checks to ensure compliance with home isolation – Fines / criminal charges for non-compliance <p>Two villages and a Roma settlement quarantined after several residents tested positive, allowing only medication and food supplies by medical and municipal staff</p> | Returning from abroad | 14 days | The cost of hosting positive cases in a designated hotel is covered by the Greek state |
| Germany / Belgium ^{40,41,42} | Measures in place for travellers - self-isolation at a specified address e.g. home or a hotel | Travelling from 'red' (high risk) areas | 14 days | |
| France ^{43,44} | <p>For citizens:</p> <ul style="list-style-type: none"> – Self-isolation at home or in a requisitioned hotel, if home isolation is not possible – Travel to French territories is restricted | <ul style="list-style-type: none"> – Confirmed cases – Possible - contacts of a confirmed case | Initially 14 days Reduced to 7 days (11/09) to encourage compliance | |
| | <p>For travellers:</p> <ul style="list-style-type: none"> – Initially, all travellers from outside Europe quarantined; confirmed cases in strict isolation - deemed anti-constitutional and banned on 11 May – Currently, arrivals from certain countries quarantined unless they provide a negative test taken less than 72 hours before travel – Certain countries exempt from quarantine | <ul style="list-style-type: none"> – Confirmed cases – Possible - symptomatic or in potential contact with a confirmed case | 14 days | |
| New Zealand ^{45,46} | <ul style="list-style-type: none"> – Quarantine/isolation facilities for residents returning from travel with limited exceptions – Arriving by air: confirmed/possible cases go to a designated hotel; everyone else quarantine as well – Arriving by sea: isolation completed on the vessel | <ul style="list-style-type: none"> – Confirmed cases – Possible - symptomatic or in contact with a suspected, probable or confirmed case in the last 14 days | <p>Isolation: at least 14 days and free from symptoms for at least 72h</p> <p>Quarantine: 14 days and negative test</p> | People may be charged rates for staying in quarantine and isolation hotels |

³⁹ <https://www.covid19healthsystem.org/countries/greece/livinghit.aspx?Section=1.3%20Isolation%20and%20quarantine&Type=Section>

⁴⁰ <https://www.bundesgesundheitsministerium.de/coronavirus-infos-reisende/faq-tests-entering-germany.html>

⁴¹ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikogebiete_neu.html

⁴² <https://www.info-coronavirus.be/en/faq/#faq>

⁴³ <https://www.gov.uk/foreign-travel-advice/france/entry-requirements>

⁴⁴ <https://www.covid19healthsystem.org/countries/france/livinghit.aspx?Section=1.3%20Isolation%20and%20quarantine&Type=Section>

⁴⁵ <https://www.miq.govt.nz/being-in-managed-isolation/entering-isolation/>

⁴⁶ <https://www.miq.govt.nz/assets/MIQ-documents/miq-fees-flowchart.pdf>

| | | | | |
|---------------------------------------|---|---|--|--|
| South Africa ⁴⁷⁴⁸⁴⁹ | For travellers: – An application process to choose a place to self-isolate, and/or – Quarantine/isolate in a state appointed facility (usually a hotel) | – Everyone entering – Possible - symptomatic or may have been exposed to the virus | – 14 days – 10 days in a state appointed facility | Employers may need to pay additional costs if workers need to quarantine |
| | For citizens: – Quarantine in 438 government approved facilities, mostly hotels and lodges, with a total of 12,532 beds | People who may have been exposed to the virus or are awaiting test results | 14 days | No cost |

Table 3. Examples of designated COVID-19 clinical (isolation) facilities

| Continent / Country | Clinical facilities |
|------------------------------------|--|
| France ⁵⁰⁵¹ | Mulhouse – In March, a military field hospital with 30 beds, including intensive care (ICUs) and ventilators, was set up – The ICUs were dismantled in May for use overseas |
| Italy ⁵²⁵³ | Genoa – The passenger ferry ‘Splendid’ was converted into a hospital ship and docked in the port of Genoa – Accepted patients recovering after hospitalisation and awaiting a negative test |
| Spain ⁵⁴⁵⁵⁵⁶⁵⁷⁵⁸ | Madrid – In March, a convention centre was converted into a field hospital with 1,350 beds and 16 ICUs. During its first phase of operation the hospital treated 4,000 patients and is currently being considered for re-opening – Currently, triage tents set outside a military hospital, out of precaution with the rising infection rate Zaragoza – A triage area with a capacity for 40 patients was set in the car park of the University Hospital – The hospital already has four dedicated floors with a capacity for 230 patients with COVID-19 Barcelona – A temporary hospital for vulnerable people at the Fira Barcelona Montjuic centre established in March |
| Sweden ⁵⁹⁶⁰⁶¹⁶² | Göteborg – In March, a field hospital with 20 ICU beds (with the potential for increased capacity) was constructed next to the Östra Hospital. It was dismantled in August. Stockholm – In April, a convention centre was converted into a field hospital with 140 bed capacity and scope to increase to 600 beds if necessary – No patients were admitted as regular hospital capacity also increased. It was dismantled in June |

⁴⁷ <https://www.gov.uk/foreign-travel-advice/south-africa/entry-requirements>

⁴⁸ https://www.gov.za/sites/default/files/gcis_document/202007/43504qon749.pdf

⁴⁹ <https://bhkisisa.org/health-news-south-africa/2020-07-13-south-africa-has-thousands-of-potential-covid-19-quarantine-hotels-but-theyre-empty/>

⁵⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7235548/>

⁵¹ <https://www.rfi.fr/en/france/20200522-french-military-hospital-closes-redeployed-fight-covid-19-battle-overseas-mavotte>

⁵² <https://www.rina.org/en/media/CaseStudies/hospital-ship-coronavirus#>

⁵³ <https://www.lavoicedigenova.it/2020/05/06/leqqi-notizia/argomento/sanita-2/articolo/il-medico-a-bordo-della-nave-ospedale-ne-servono-altre-per-isolare-i-pazienti.html>

⁵⁴ <https://www.aa.com.tr/en/europe/spain-army-sets-up-field-hospital-in-zaragoza/1938603>

⁵⁵ <http://www.telemadrid.es/programas/telenoticias-fin-de-semana/instalan-tiendas-enfermos-Gomez-Ulla-2-2269893001--20200919032651.html>

⁵⁶ <http://www.telemadrid.es/programas/telenoticias-1/UCl-Madrid-ocupadas-enfermos-Covid-2-2269293075--20200917035729.html>

⁵⁷ https://www.elespanol.com/espana/madrid/20200917/hospital-gomez-ulla-tiendas-campaña-evolucion-coronavirus/521449026_0.html

⁵⁸ <https://www.cncb.com/2020/04/03/photos-of-field-hospitals-set-up-around-the-world-to-treat-coronavirus-patients.html>

⁵⁹ <https://www.thelocal.se/20200406/stockholm-field-hospital-to-open-its-doors-to-coronavirus-patients>

⁶⁰ <https://www.reuters.com/article/us-health-coronavirus-sweden-field-hospital-idUSKBN23B1U1>

⁶¹ <https://lnde-stories.com/fighting-corona-linde-sweden-readies-field-hospitals-in-record-time/>

⁶² <https://www.dagensmedicin.se/artiklar/2020/08/13/falstjukhus-for-covid-19-stangs-i-goteborg/>

| | |
|---|---|
| <p>USA^{63,64} and South America⁶⁵</p> | <ul style="list-style-type: none"> - US Army engineers built 37 temporary hospitals with a combined capacity of more than 15 000 beds. Some designed for patients with COVID-19 and others for non-COVID cases. Most sat empty or cared for only a few dozen patients before closing - The US Southern Command donated three field hospitals to Costa Rica and two to Dominican Republic in August. This was made possible as part of ongoing assistance to nations responding to the COVID-19 pandemic in Central America, South America and the Caribbean and funded through the command's Humanitarian Assistance Programme - The UNHCR has been supporting a field hospital in Boa Vista, which has the capacity to treat and isolate up to 1,782 COVID-19 confirmed and suspected cases. More than 600 Venezuelans and many Brazilians, including indigenous people, have received care at the hospital <p>Seattle</p> <ul style="list-style-type: none"> - In March US Army engineers built an emergency field hospital with 250 beds in an exhibition hall. It was designed to handle non-COVID cases to free up beds in hospitals <p>New York</p> <ul style="list-style-type: none"> - A field hospital set in a convention hall and another in Central Park, treating more than 1400 patients |
| <p>Africa^{66,67,68,69}</p> | <p>Uganda</p> <ul style="list-style-type: none"> - The Mandela Football Stadium is used as a field hospital for 1,200 COVID-19 patients <p>South Africa</p> <ul style="list-style-type: none"> - Médecins Sans Frontières (MSF) have developed a 60-bed overflow treatment facility in a field hospital next to the district hospital in Khayelitsha - Africa's biggest field hospital 'The Hospital of Hope' was opened in Cape Town in June 2020 |
| <p>Wuhan, China^{64,69}</p> | <ul style="list-style-type: none"> - The government built two new hospitals to treat patients with COVID-19 - 16 temporary facilities within large existing structures such as exhibition centres and sports arenas were also established. These spaces were reserved for patients with mild to moderate COVID-19 - The hospitals, which could be assembled in as little as 29 hours, offered medical care, monitoring, and social activities to patients - The 16 facilities, built over a three week period beginning 5 February 2020, supplied 13 000 extra beds and cared for about 12 000 patients with COVID-19 by 10 March, when the last hospital closed |

⁶³ <https://www.defense.gov/Explore/Features/Story/Article/2326470/southcom-donates-field-hospitals-to-support-covid-19-response-in-costa-rica/>

⁶⁴ <https://www.bmj.com/content/369/bmj.m2332>

⁶⁵ <https://www.unhcr.org/uk/news/stories/2020/8/5f2d78694/brazil-field-hospital-life-saver-indigenous-stricken-covid-19.html>

⁶⁶ <https://www.bmj.com/content/370/bmj.m2830.full.pdf>

⁶⁷ <https://www.africanews.com/2020/07/06/uganda-builds-field-hospital-in-mandela-stadium/>

⁶⁸ <https://www.msf.org/msf-opens-field-hospital-south-africa-braces-covid-19>

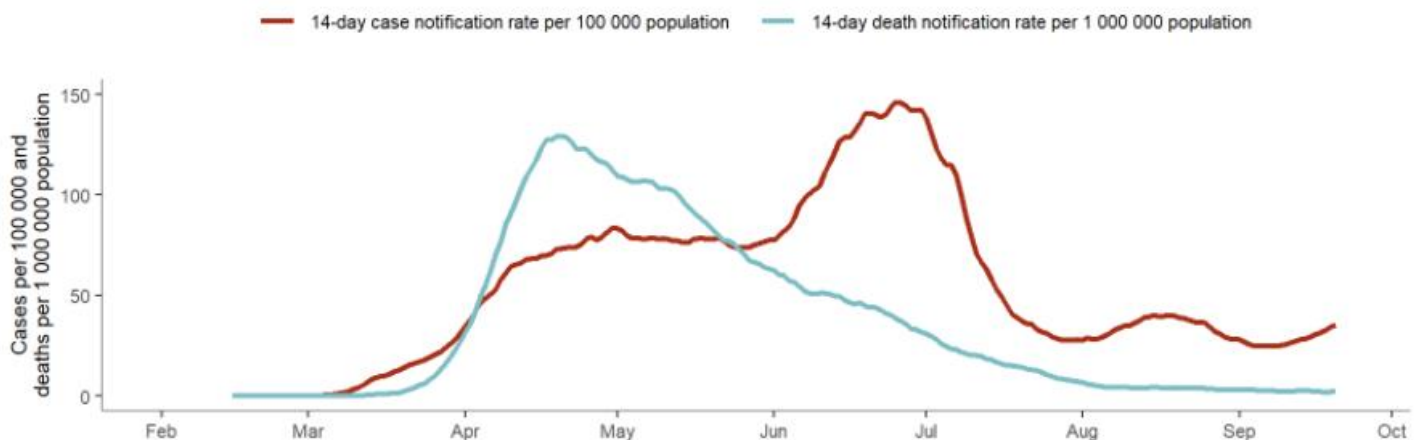
⁶⁹ http://www.xinhuanet.com/english/2020-06/09/c_139124305.htm

Country in focus: Sweden

COVID-19 situation update⁷⁰

- Sweden has recently registered its **lowest rate of positive COVID-19 tests**, while its testing regime has been expanded to record levels. Over the past week the country carried out more than 120,000 tests, of which only 1.3% identified the disease. At the height of the pandemic the proportion was 19%^{71,72}
- There has been a **rise in local cases**, thought to link to sports events (trainings and games); and universities and high schools (parties)
- **Community transmission** is thought to be the main cause of the spread of the virus⁷³
- The **14-day case notification rate** per 100,000 is starting to rise, although, the latest reported case notification rate is considerably lower than that observed June/July (*Figure 4*)
- The **14-day death notification rate** continues to fall: its peak was in mid-April (approx. 130 deaths per 1,000,000 population); with most recent data showing it to be less than 5 deaths per 1,000,000 population (*Figure 4*)
- 62 excess deaths per 100,000 population (6,372 in total) reported for the period 18th March - 8th September 2020

Figure 4. 14-day COVID-19 case and death notification rates in Sweden (totals: 89,188 cases (1 Feb - 20 Sep 2020), 5,869 deaths (12 Mar - 19 Sep 2020))



Health system organisation and COVID-19 preventive measures^{72,74,75}

- The Swedish **healthcare system is governed on 3 levels**:
 - i) At national level, the government is responsible for policy and legislation, including governance of the national agencies, such as the Public Health Agency and the National Board of Health and Welfare, which have the most significant role in relation to the pandemic
 - ii) At regional level - 21 regions with responsibility for healthcare
 - iii) At municipal level - 290 municipalities providing care for the elderly and disabled
- The **COVID-19 response key aims** are outlined in the pandemic preparedness plan:
 - a) To **reduce the mortality and the morbidity** in the population, and

⁷⁰ <https://www.ecdc.europa.eu/en/covid-19/country-overviews>

⁷¹ <https://www.thetimes.co.uk/article/swedens-low-positive-test-rate-vindicates-coronavirus-strategy-5nw0k2vd7>

⁷² <https://uk.reuters.com/article/us-health-coronavirus-sweden-strategy-idUKKB25Z2TM>

⁷³ <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20201005-weekly-epi-update-8.pdf>

⁷⁴ <https://www.government.se/articles/2020/06/swedens-response-in-the-global-fight-against-the-covid-19-virus/>

⁷⁵ <https://www.sciencedirect.com/science/article/pii/S2211883720300812>

- b) To **minimise negative consequences** to individuals and society
- No strict lockdown has been enforced in Sweden, however, other measures have been put in place to slow the spread of the outbreak. These are summarised in *Figure 5*.

Figure 5: Milestones of preventative measures in Sweden⁷⁶⁷⁷⁸

| | |
|--|---|
| <p>February 23: Risk of the virus spreading in Sweden is upgraded from "very low" to "low" by the Swedish Public Health Agency</p> | <p>February</p> |
| <p>March</p> <p>March 2nd: Swedish health authorities upgrade the risk of the virus spreading in Sweden from "low" to "moderate"</p> <p>March 4th: The Public Health Agency announces increased testing, including those with symptoms after traveling abroad or who have been in close contact with confirmed cases.</p> <p>March 6th: The Foreign Ministry advises against all non-essential travel to northern Italy and provinces in South Korea until further notice.</p> <p>March 10th: Health authorities upgrade the risk of the virus spreading in Sweden to "very high", the highest possible level on a five-point scale. This is due to signs of community spread in the Stockholm and Västra Götaland regions. The Public Health Agency advises against non-essential visits to hospitals and care homes, and reiterates the importance of people who work with vulnerable groups staying away from work if symptomatic.</p> | <p>March 12th: The Public Health Agency updates its guidelines to urge anyone with symptoms of COVID-19 or a cold, regardless of travel history, to stay at home and limit social contact until symptom-free for at least two days.</p> <p>March 13th: Many hospitals have introduced bans on external visitors. Sweden cancels its upcoming university entry exam, högskoleprovet, which would have been sat by ~ 70,000 prospective students.</p> <p>March 16th: Stockholm residents are urged to work from home if they can.</p> <p>March 19th: The Public Health Agency shares its three key messages: stay at home if you feel at all unwell, work from home if you can, and do not travel within Sweden unless it is essential to do so.</p> <p>March 20th: Universities close as part of nationwide efforts to limit the spread of the virus. Education continues online and by distance learning.</p> <p>March 24th: Table service only at bars, restaurants, night clubs and cafés. Any venue that does not comply with the new rules risks being shut down.</p> |
| <p>April</p> <p>April 1st: Shops, sports facilities and public transport bring in social distancing measures. Employers asked to allow employees work from home.</p> <p>April 17th: A new strategy for sampling is presented. Testing will primarily be for patients and people in the health care and social care systems. Secondly, for health care and social care personnel and thirdly, for people in other essential sectors.</p> <p>29th April: A nationwide testing strategy is launched to assess the level of COVID-19 in the community.</p> | <p>May</p> <p>May 12th: At the end of April, about 1 percent of the population in Sweden had an active covid-19 infection. In Stockholm 2.3 percent had an active infection.</p> <p>May 13th: Updated recommendations for travel are issued, extending the advice to avoid non-essential trips overseas but introducing more clarity around domestic travel.</p> |
| <p>June</p> <p>June 13th: Restrictions on domestic travel are lifted, allowing people without symptoms to travel within the country this summer.</p> <p>June 15th: The Stockholm region offers tests for antibodies and tests for ongoing disease to all citizens. Several other regions are doing the same.</p> <p>26th June: Sweden further extended a temporary ban on entering the country from outside the EU, and this now applied until July 7th</p> | <p>August</p> <p>21st August: Sweden's government on Friday said that the limit on public events would remain at 50, but that it is looking into granting exceptions for seated events.</p> |
| <p>September</p> <p>1st September: Restrictions are expected to remain in place throughout autumn. Additional local or regional measures may be implemented if cluster outbreaks occur.</p> | |

⁷⁶ <https://www.thelocal.se/20200310/timeline-how-the-coronavirus-has-developed-in-sweden>

⁷⁷ <https://www.government.se/articles/2020/04/strategy-in-response-to-the-covid-19-pandemic/>

⁷⁸ <https://www.covid19healthsystem.org/countries/sweden/countrypage.aspx>

- COVID-19 is subject to mandatory reporting. The Public Health Agency collects and reports the following data to monitor the spread of COVID19:⁷⁹
 - ✓ **Number of deaths:** laboratory confirmed COVID-19, regardless of the cause of death; all-cause mortality compared to expected deaths is analysed every week.
 - ✓ **Number of patients in intensive care**
 - ✓ **Number of hospitalised patients**
 - ✓ **Number of patients seeking care:** primary care providers work with sentinel surveillance, used to monitor the situation
 - ✓ **Proportion of the population infected:** random sampling to measure the prevalence in the population

The Swedish approach - based on the 'principle of responsibility'^{80,81,82}

- **No strict lockdown** implemented
- Emphasis placed on **personal hygiene and voluntary social distancing**
- This approach aimed to **slow, rather than eradicate** COVID-19
- It was thought that this may result in **higher levels of community herd immunity**
- Swedish **guidelines** designed to be easily understood and retained for an extended period
- **Consistency** of the recommendations has resulted in the majority of the population being familiar with the requirements
- Recommendations are intended to **provide informed choice**, and are not enforced
- From a **cultural perspective**, Swedes hold a very high value in being self-sufficient and taking responsibility, and therefore, approach their health concerns from a place of personal responsibility
- **Levels of trust are higher in Nordic countries** than elsewhere. This is expected to contribute to the willingness of the population to accept advice.
For example, people stating that “Most people can be trusted” were 62.8%, 72.1%, and 68.4% in Sweden, Norway, and Finland respectively, while it was 40.2% in the UK⁸³
- **Levels of trust in authorities are strong** as experts on the COVID-19 outbreak are independent, reporting without political interference
- The approach has been **highly controversial** with increased scrutiny on Swedish experts

COVID-19 impact on the care for older people in Sweden⁸²

- There have been **pre-existing challenges** in elderly care, such as **adherence to hygiene** routines and organizational challenges in the **collaboration between municipalities and regions**, which have been exposed / aggravated by the pandemic
- **Excess mortality**, related to COVID-19, was reported in elderly care homes
- The Health and Social Care Inspectorate carried out an **evaluation** of 1045 elderly housing units and identified that approximately 10% had severe deficiencies in relation to how they handle the pandemic
- A summary of factors, reported to influence outcomes in elderly care homes, is provided in *Table 4*

⁷⁹ <https://www.covid19healthsystem.org/countries/sweden/countrypage.aspx>

⁸⁰ <https://uk.reuters.com/article/us-health-coronavirus-sweden-strategy-idUKKBN25Z2TM>

⁸¹ <https://www.government.se/articles/2020/06/swedens-response-in-the-global-fight-against-the-covid-19-virus/>

⁸² <https://www.sciencedirect.com/science/article/pii/S2211883720300812>

⁸³ <http://www.worldvaluessurvey.org/WVSONline.jsp>

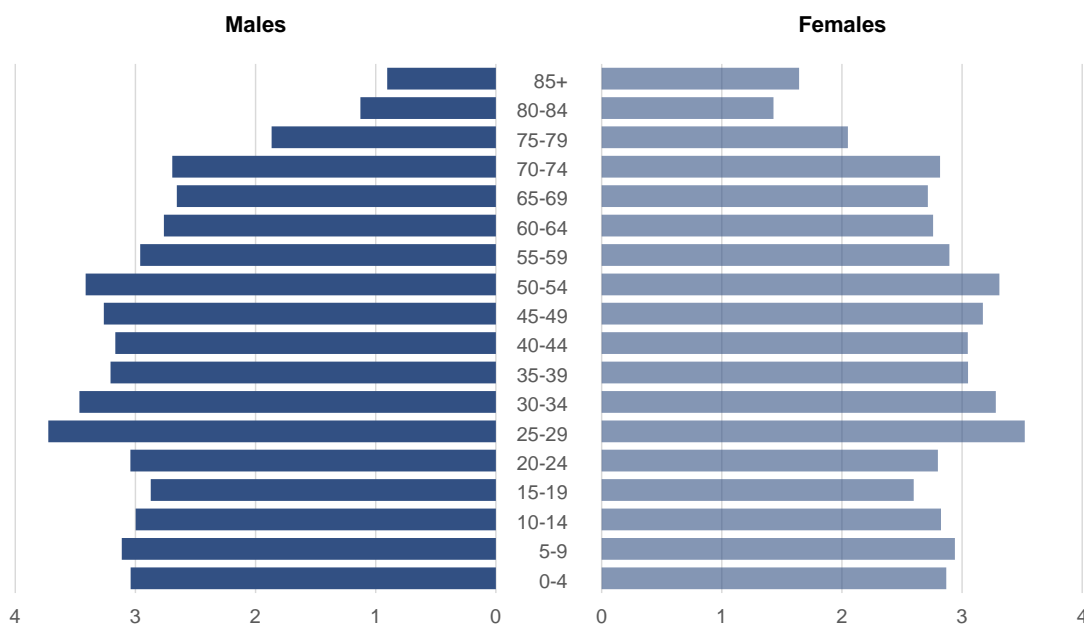
Table 4. Summary of factors influencing outcomes in care homes in Sweden

| Positive factors | Negative factors |
|--|---|
| <ul style="list-style-type: none"> - Ensuring adherence to basic hygiene routines including demonstrations, web-training, written and verbal instructions - Clear leadership - Active planning of personnel - Use of Personal Protective Equipment (PPE) - Dedicated personnel for COVID-patients or other means for cohort care - Separation or isolation of infected - Access to hygiene supplies and PPE - Individual risk analysis for specific patients | <ul style="list-style-type: none"> - Inability to handle personal concerns of personnel - Difficulty managing the flood of information from all official agencies to personnel - Challenge to develop functional procedures for hygiene and protection - Challenge of obtaining an acceptable and sustainable planning of resources |

Characteristics of the Swedish population⁸⁴

- Demographic characteristics in a country have an **impact on morbidity and mortality** for most diseases, including COVID-19
- The **population pyramid for Sweden** (Figure 6) is showing:
 - ✓ Lower percentage of young people in the age groups from 0 to 24
 - ✓ Higher percentage of people in the age groups from 25 to 59, for both sexes
 - ✓ In the older age groups (70+), females make up a larger proportion of the population
- **88% of the population are from areas classed as urban**, compared to 12% of the population that are from rural communities
- **Ethnically**, the majority of the population is Swedish (81%); with minority groups including Syrian, Finnish and Iraqi, 2%, 1% and 1%, respectively
- Church of Sweden (Lutheran) is the largest **religion** (60%); 9% of the population are Roman Catholic, Orthodox, Baptist, Jewish, Muslim and Buddhist; and 31% have no religion or have not specified one

Figure 6. Population pyramid (demographic structure) of Sweden, 2019



⁸⁴ <https://ec.europa.eu/eurostat/web/population-demography-migration-projections/data/database>

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