

COVID-19 Wales Situational Report

COVID-19 Intelligence Cell:
04 November 2021

Health Protection Advisory Group:
05 November 2021

Data as at 02 November 2021 unless otherwise specified

Contents

COVID-19 Situation Report Summary	2
Key indicators	3
What is the current status of the epidemic?	4
What is the situation with the NHS and social care?	7
What is the situation with education, children and young adults?	10
Wastewater Monitoring for Covid-19 (Pilot)	13
What is the situation with arriving travellers?	17
Mobility data and UK Comparison	19
Vaccine and Immunity Status	21
What does the situation look like going forward?	23
Key risks and sources	24
Key risks	24
Key Sources for this update	24

COVID-19 Situation Report Summary

Key points to note

Wales moved to **Alert Level 0** on 7 August 2021.

Overall cases of COVID-19 and have decreased across Wales compared to last week, while test positivity has remained stable. We will need to continue monitoring case rates and other key indicators in each nation carefully to better understand the impact of easements of restrictions, return of schools and universities, and impact on the NHS.

The JBC consensus estimate of the reproduction number for Wales is between 0.8 and 1.1 and a doubling time of flat (as at 3 November 2021), while PHW's estimate is 0.9 with a halving time of 31 days to flat (3 November 2021). Note that JBC's estimate is typically lagged by 2-3 weeks while PHW, which uses a different methodology, is lagged by around 1 week. *Slide 3, Source: PHW*

Covid-19 pressure on the NHS has generally increased. As at 3 November 2021, there were 857 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed (+28 compared to previous week), of which 585 were confirmed. As at 3 November 2021, there were 72 compared patients with Suspected or Confirmed COVID-19 in critical care beds in Wales; 92 lower than the maximum COVID-19 position of approximately 164.

As at 2 November 2021, Wales has had 55,966 (+1,211) confirmed cases of the dominant Delta variant, and 3,714 (+3,714) confirmed cases of VUI-21OCT-01 (AY4.2). No other variants of concern were confirmed by genomic sequencing in Wales. *Source: PHW*

As at 3 November 2021, a total of 5,194,869 doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. 2,448,204 were first doses. 2,246,341 were second doses. 500,324 were booster doses. Please note that the third dose and booster dose figures represent several weeks of vaccine rollout which have recently been published. *Source: PHW*

Key indicators

Cases, admissions and deaths are showing signs of decreases. Prevalence continues to increase.

Please note that the arrows represent a change in comparison for the last week.

	Current value (30/10/21)	Change since previous week (23/10/21 – 30/10/21 unless stated otherwise)	
		Percentage change	Value change
Confirmed case rate (rolling 7 day sum per 100k)	548	-19% ↓	(-125)
Confirmed case rate for over 60s (rolling 7 day sum per 100k)	343	-7% ↓	(-25)
Test positivity (7 day RA)	23%	+1% ↑	(+0.2 percentage points)
Population estimated to have COVID-19 (prevalence) ¹	2.39%	-0.17% ↓	(-0.17 percentage points)
NHS COVID-19 Admissions ²	58	-7% ↓	(-5)
ONS deaths (7 day sum) ³	73	-6% ↓	(-5)
PHW deaths (7 day sum)	63	-5% ↓	(-3)

Footnotes

1. Latest Covid Infection Survey data is taken from 24 October 2021 to 30 October 2021.
2. Seven day rolling average to the current date of confirmed COVID-19 admissions.
3. Latest ONS deaths data is to 22 October 2021 (rather than 30 October 2021) for the current value. Data to 15 October 2021 is used for the change since previous week.

What is the current status of the epidemic?

The JBC consensus Reproduction number (Rt) estimate for Wales is between 0.8 and 1.1 (reported 04 November 2021), with daily growth rate between –3% to +2%. Using PHW positive test data only (more timely data but limited by variation in testing), Rt is estimated to be 0.9 for Wales with a halving time of 28 days (03 November 2021). The central Rt estimate is highest for the Betsi Cadwaladr Health Board at 1.0. *Source: JBC/PHW*

The 7-day cumulative case incidence in Wales has decreased by 22% to 546.2 per 100,000 population.

Case incidence is increasing in 3 of the 22 local authorities. Case incidence is above 500 per 100,000 population for 12 local authorities. Local authorities with the highest case incidences are Torfaen (761), Vale of Glamorgan (741.8) and Caerphilly (730.1) per 100,000 population, respectively.

Case incidence is increasing in all age groups, remaining highest in 10-19. Case incidence has decreased in most Local Health Boards over the past few days. Case incidence is highest in Aneurin Bevan University Health Board at 677 cases per 100,000 population as of 29 October 2021. There has been a significant decrease in the case rate in the Aneurin Bevan LHB in the past 9 days to 29 October from 1040 per 100,000 to 677 per 100,000.

The second table below provides estimates of doubling and halving times based on PHW COVID-19 positive test data. In this table, **doubling times are positive, whilst halving times are negative**. The 95% confidence intervals are shown in brackets after the central estimate. An asterisk (*) means that there are small numbers and estimates should be treated with caution. Local health board level estimates of Rt and halving times will be unstable when incidence is low.

Table 1: Cases per 100,000 population (7 day period ending 29th October 2021)

Local Authority	Number	% of All Wales Total	Case Incidence per 100,000	Change from previous week
Torfaen	715	4.2%	761.0	-26% ↓
Vale of Glamorgan	991	5.8%	741.8	-15% ↓
Caerphilly	1322	7.7%	730.1	-25% ↓
Pembrokeshire	827	4.8%	657.3	-23% ↓
Blaenau Gwent	458	2.7%	655.6	-44% ↓
Neath Port Talbot	926	5.4%	646.1	-28% ↓
Newport	974	5.7%	629.7	-29% ↓
Cardiff	2207	12.8%	601.5	-22% ↓
Monmouthshire	531	3.1%	561.4	-26% ↓
Carmarthenshire	968	5.6%	512.8	-18% ↓
Swansea	1251	7.3%	506.5	-17% ↓
Merthyr Tydfil	304	1.8%	503.9	-30% ↓
Rhondda Cynon Taf	1185	6.9%	491.2	-32% ↓
Denbighshire	449	2.6%	469.2	-22% ↓
Bridgend	687	4.0%	467.2	-23% ↓
Powys	610	3.5%	460.6	-21% ↓
Ceredigion	326	1.9%	448.4	-30% ↓
Gwynedd	551	3.2%	442.4	-7% ↓
Wrexham	557	3.2%	409.7	8% ↑
Flintshire	624	3.6%	399.7	1% ↑
Isle of Anglesey	277	1.6%	395.5	5% ↑
Conwy	426	2.5%	363.5	-12% ↓
Unknown	56	0.3%	-	-25% ↓
Total	17222	100.00%	546.2	-22% ↓

Figure 1: Cases per 100k (PHW Data) (7 day rolling sum to 29th Oct)

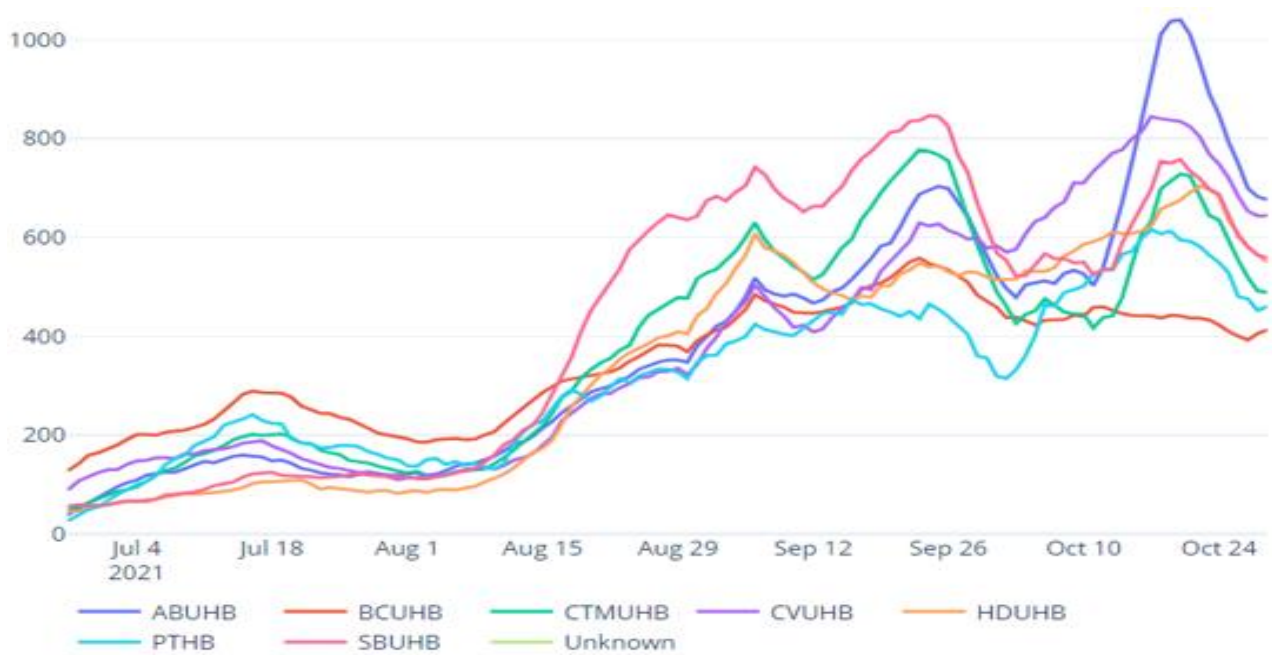


Figure 2: Cases per 100k by age (PHW Data) (7 day rolling sum to 29th Oct)

Cases per 100k by age and local authority

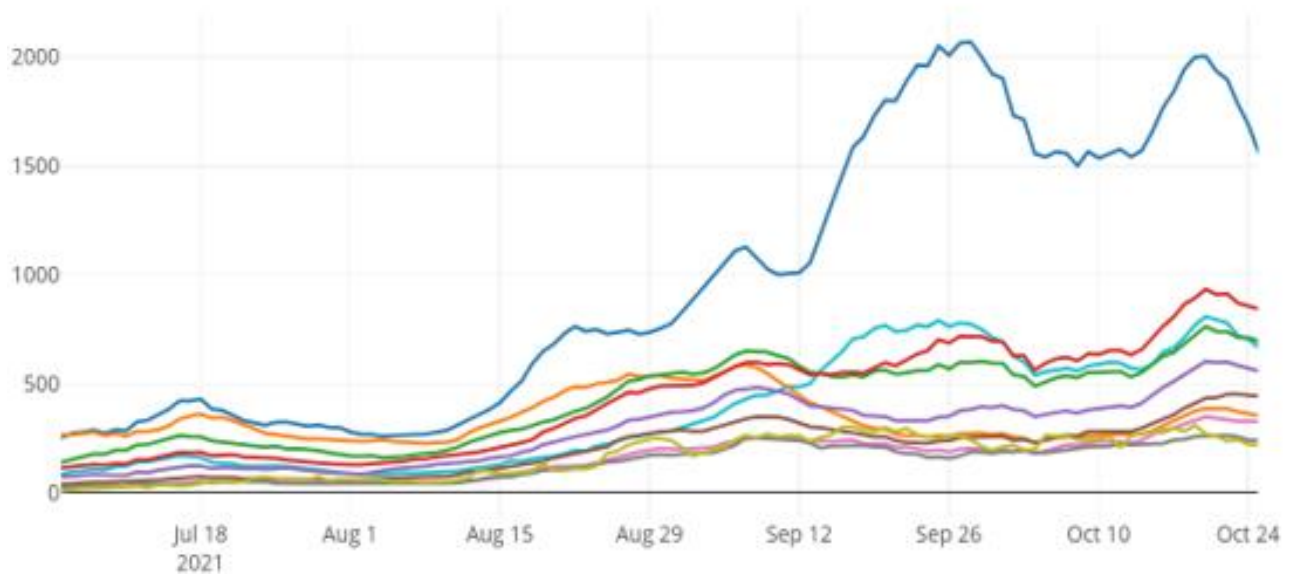


Table 2: Reproduction number and doubling time (PHW methodology) PHW data by Local Health Board (3rd November 2021 estimate)

Local Health Board	All Wales	Swansea Bay UHB	CTM UHB	Aneurin Bevan UHB	Cardiff & Vale UHB	Hywel Dda UHB*	Powys THB*	Betsi Cadwaladr UHB
Rt (cases)	0.9 (0.85 to 0.9)	0.85 (0.8 to 0.9)	0.8 (0.8 to 0.85)	0.8 (0.8 to 0.85)	0.9 (0.85 to 0.9)	0.85 (0.8 to 0.9)*	0.9 (0.8 to 0.95)*	1.0 (0.95 to 1.0)
Doubling time (days)	-28 (15 to 178)	-25 (15 to 65)	-18 (11 to 62)	-16 (11 to 29)	-34 (15.2 to -135)	-35 (16 to -165)*	-30 (14 to -187)*	218 (20 to -25)

What is the situation with the NHS and social care?

The number of beds occupied with COVID-19 patients (confirmed, suspected and recovering) fluctuates. Taking this into account, since July 2021 COVID-19 pressure on the NHS has generally increased. Over the latest week, the number of beds occupied with COVID-19 related patients has increased. This was due to an increase in recovering and suspected COVID-19 patients despite a decrease in confirmed COVID-19 patients. As at 3 November 2021, there were 857 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed. This compares to 829 (28 more occupied beds) on 27 October 2021. Confirmed patients accounted for 585 of the total occupied beds.

There are 72 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales. This is 92 lower than the maximum COVID-19 position of approximately 164. The total number of patients in critical care for both COVID-19 and non-COVID-19 stands at 187, 35 more than the 152 baseline number of critical care beds available before the COVID-19 pandemic. Note: The charts presented do not include recovering patients.

Non-COVID-19 urgent & emergency pressure is currently comparable to that we would experience at the height of winter, with above seasonal prevalence of non-COVID 19 respiratory disease evident whilst the NHS also continues to try and recover from the considerable backlogs that have developed over the past 18 months. There is also a considerable staffing challenge in health and care system, with staff sickness absence rates (currently 7.2%, pre-covid around 5%), culminating in a lack of flow through the system and extended ambulance and emergency department waiting times.

There is the potential for significant harm in the community (and our hospitals) for people with non-COVID illnesses or injuries, which may exceed the direct harm from COVID-19 at this point in time.

In the latest National Situation Background Assessment Recommendation (SBAR) report covering the week of 25th October to 31st October 2021, IMTs reported 81 care homes in 'red' status (an ongoing outbreak/incident reported in last 7 days) last week, compared to 86 in the previous week.

Source: National SBAR.

Figure 3: Covid-19 Confirmed Hospital occupancy (7 day rolling average)

StatsWales COVID-19 Confirmed Hospital Occupancy (7 day rolling average)

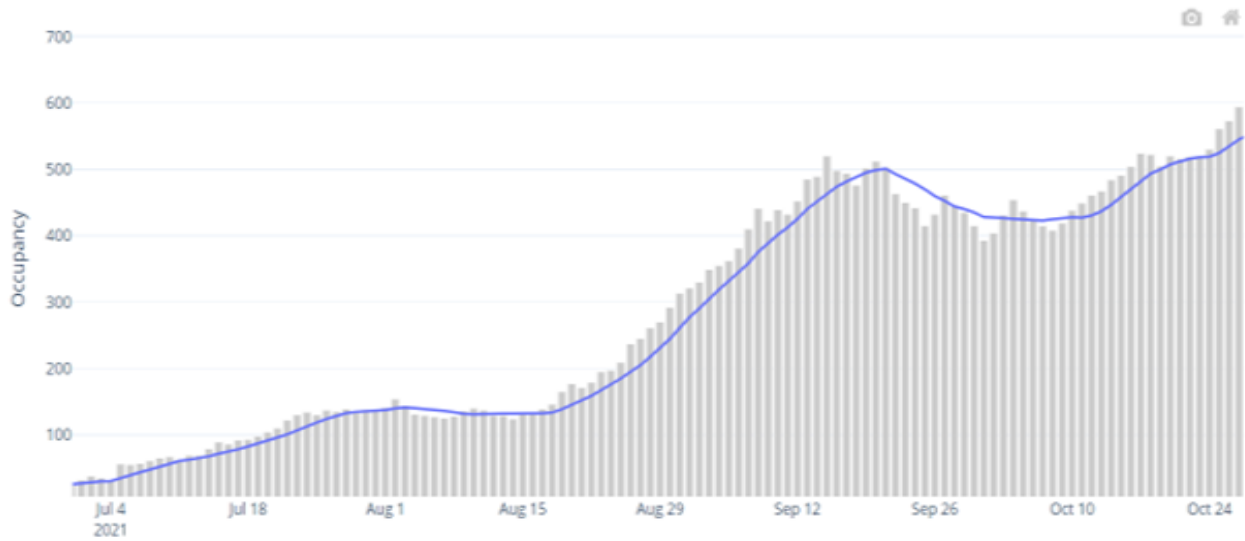


Figure 4: Overall invasive ventilated bed occupancy (7 day rolling average)

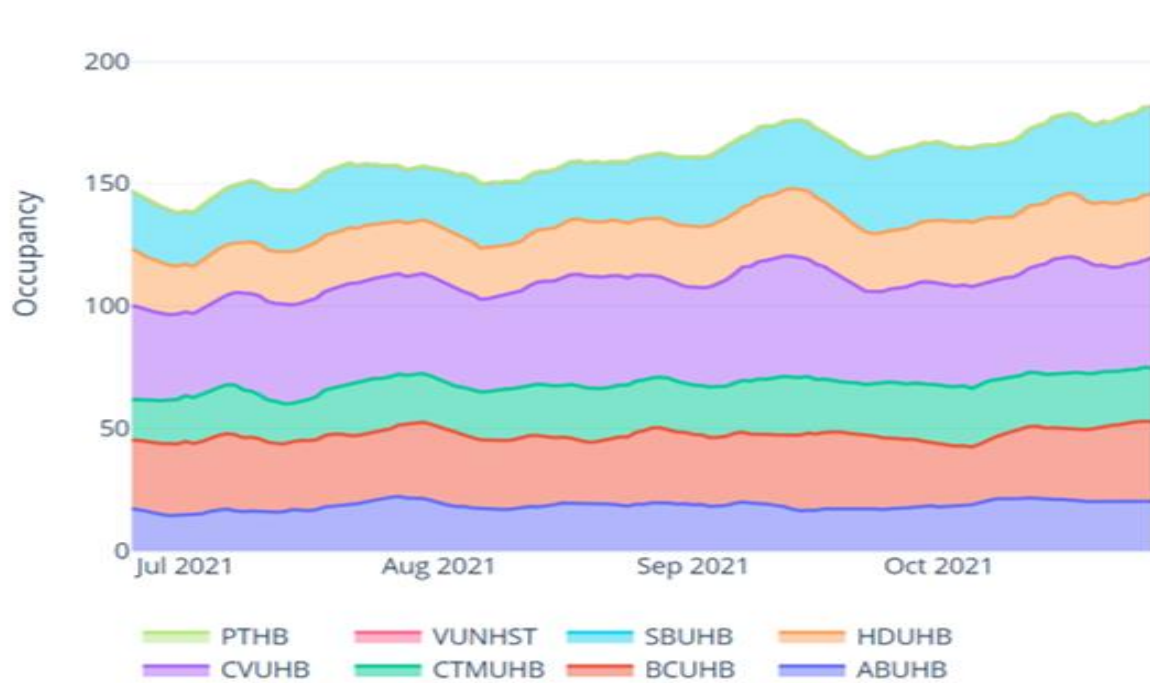


Figure 5: Number of adult care homes reporting an ongoing outbreak / incident in the last 7 days

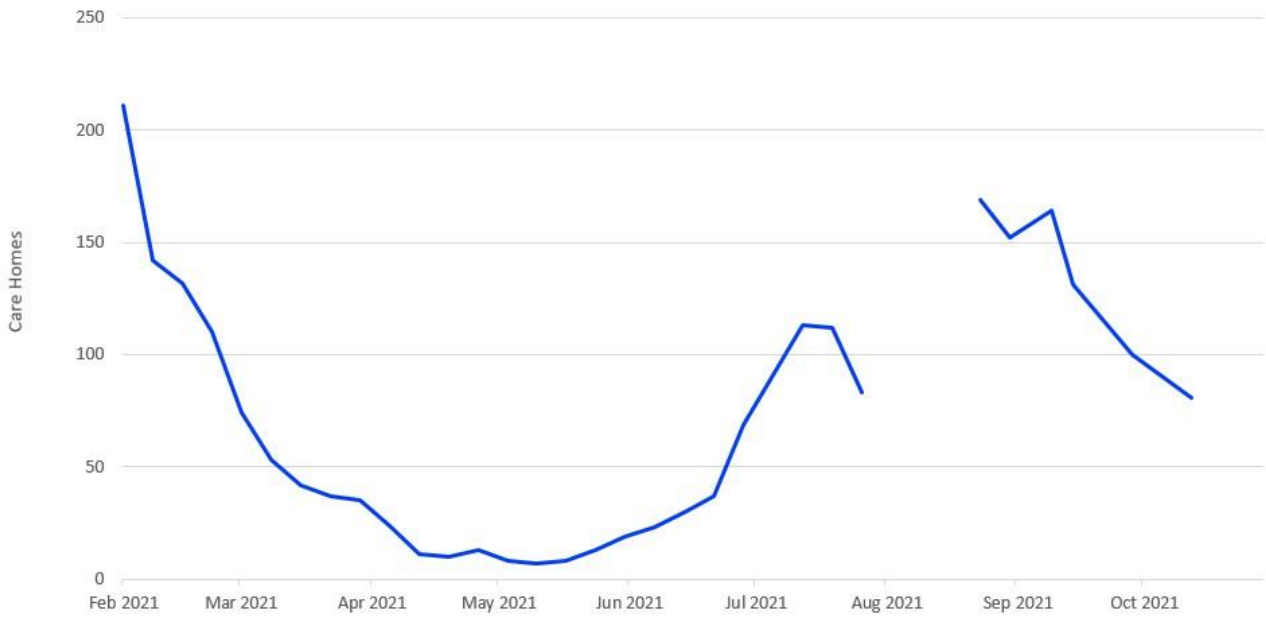


Figure 6: Hospital bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)

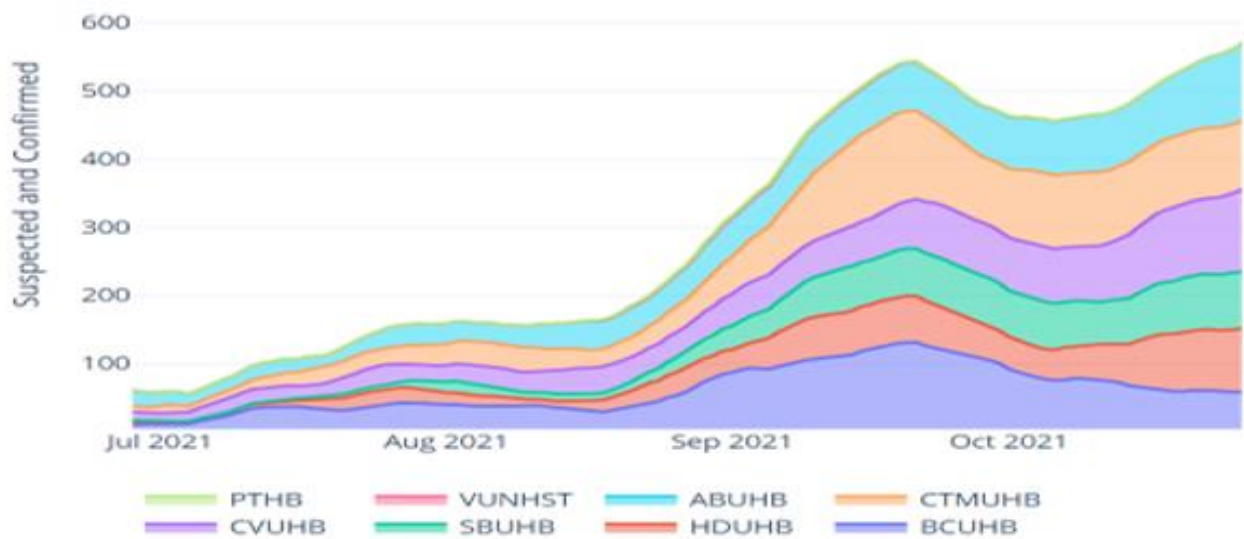
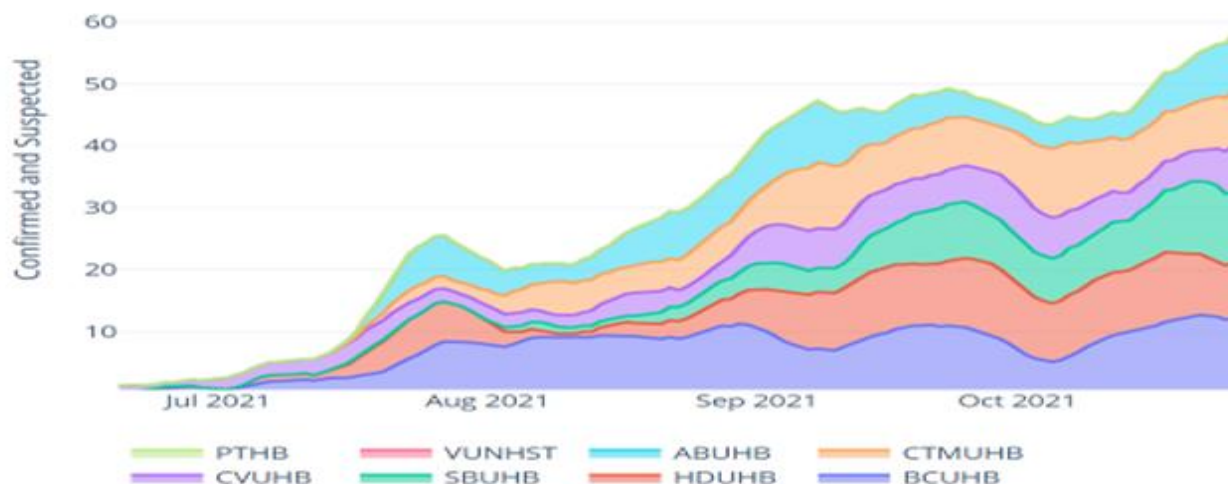


Figure 7: Invasive ventilated bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)



What is the situation with education, children and young adults?

School attendance

For the week 18 –22 October an average of 85.5% of all pupils were present in school, down from 87.8% the week before. This data is provisional.

In the same time period 2% of pupils were absent due to a known C-19 related reason, with an average of 1.9% of all primary and 2.2% of all secondary pupils absent for this reason. **Source Stats Wales, Schools in Wales**

Schools

Last week was half term in our schools and therefore information on new clusters is unavailable. IMTs continue to report difficulties in accurately determining the source of infection in school children given the high case rates in this age group and continued widespread community transmission. However, some IMTs have identified cases in school children associated with sports clubs, these clusters remain small in size.

From next week updates on all educational settings will change and include details of significant outbreaks and notable public health intelligence linked to these settings.

Childcare settings

The latest NSBAR reported nothing significant for this sector, with 6* new clusters reported compared to 1 new cluster in childcare settings the previous week.

Further Education (FE) Higher Education Institutions (HEIs)

According to the latest SBAR there were no new clusters reported in FE this week compared to 1 cluster reported last week. In HE there were no new clusters reported this week compared to 1 new cluster reported last week. **Source National SBAR**
**Figures do not include data from 6 LA's.*

Please note: Due to accuracy & timeliness limitations with the capability of our surveillance systems, distinguishing exact case associations between children over 19, school staff and/or family members is currently not possible. We are looking to develop this with local health protection officers.

Figure 8: Attendance of pupils in maintained schools by day from 6 Sep -15th Oct

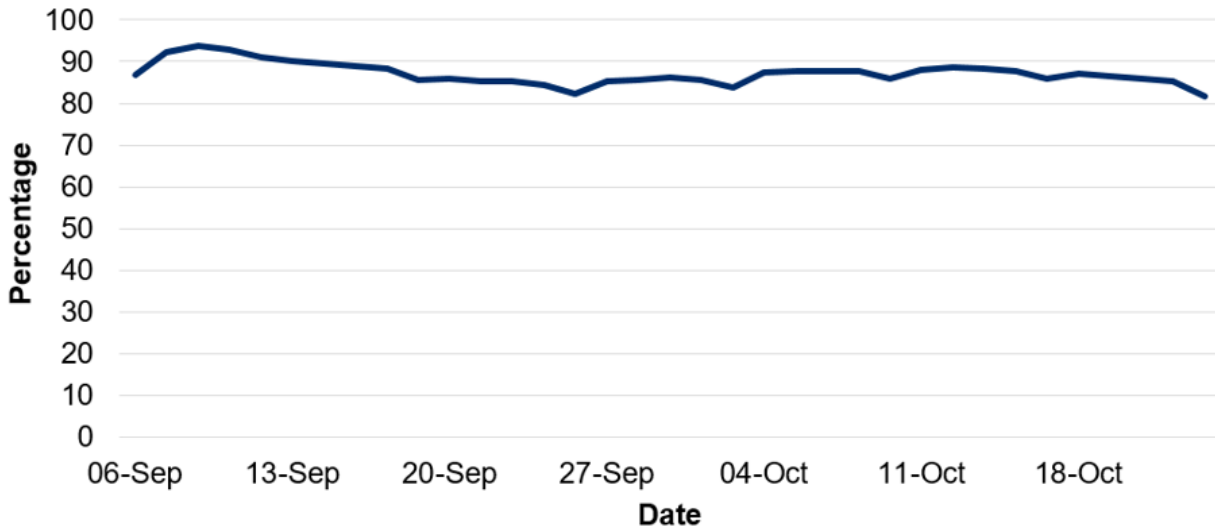


Figure 9: Percentage pupils by number of days missed due to COVID-19 related reason and all reasons, 12th Apr – 15th Oct

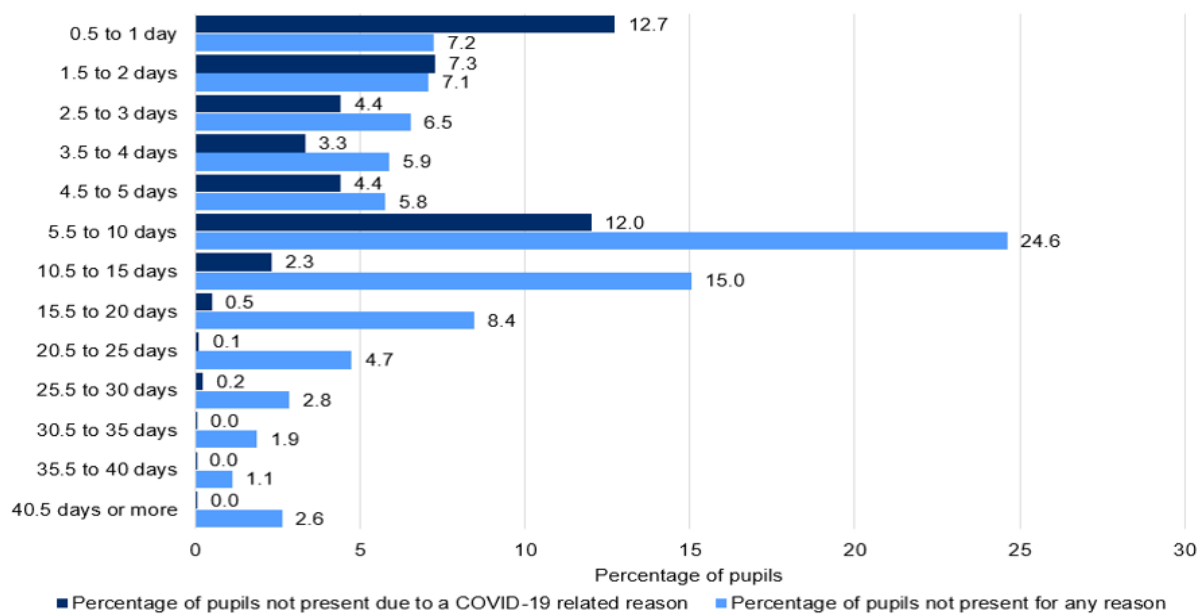


Figure 10: Absence due to COVID-19 by day and phase, 13th September – 15th October

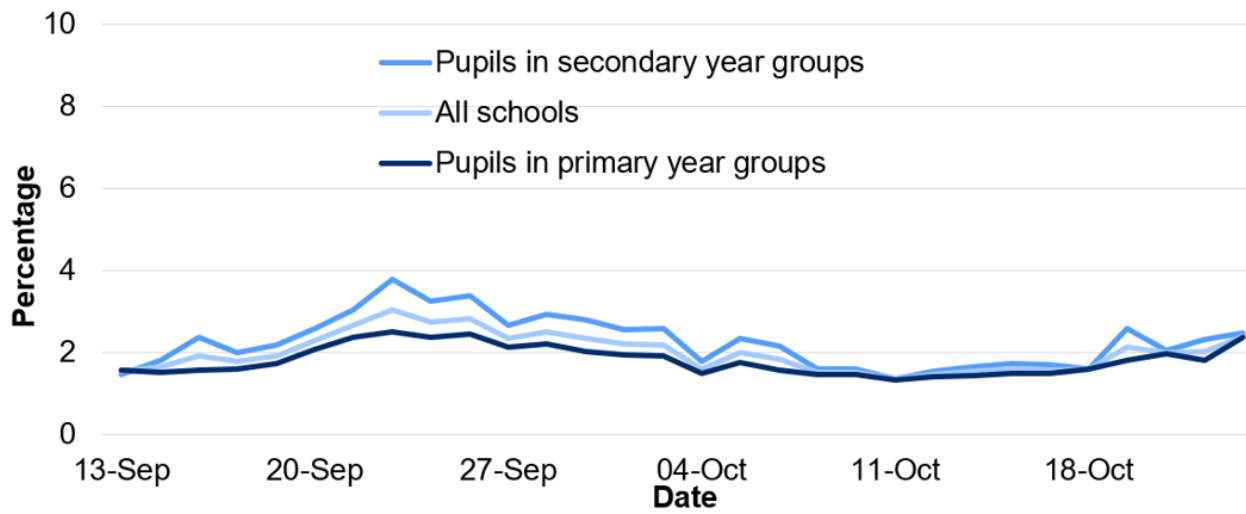


Figure 11: Weekly Covid-19 Incidence per 100k population in school aged children as at 1pm 20th October

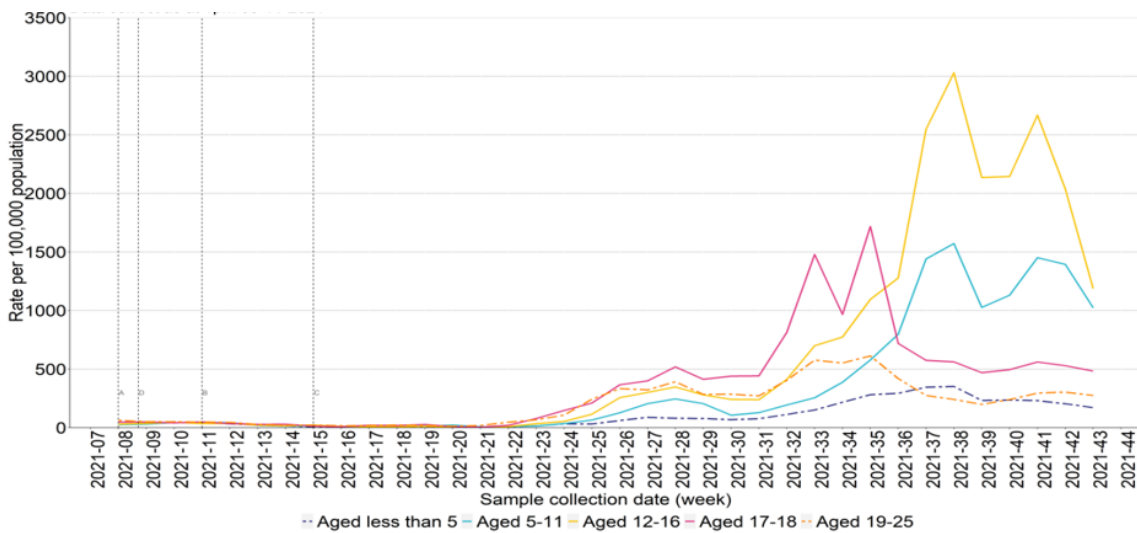
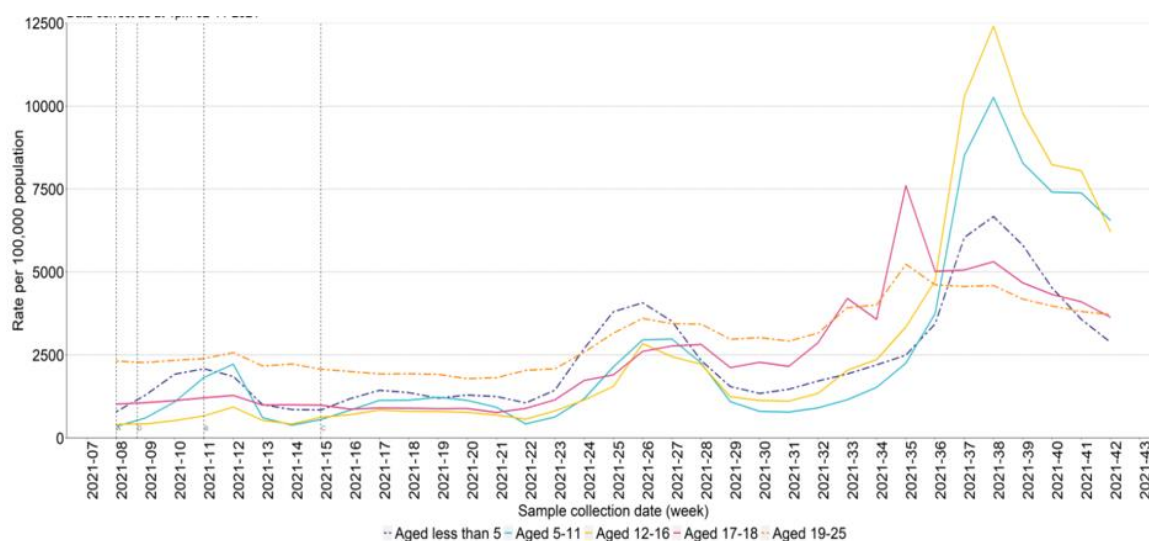


Figure 12: Weekly Testing Incidence per 100k population in school aged children as at 1pm 20th October



Wastewater Monitoring for Covid-19 (Pilot)

In the week ending 29 October 2021 the mean wastewater signal for Wales is high but remains variable. Significant flow events in the South Wales sewer networks are driving the variability in the signal.

The South Wales normalised SARS-CoV-2 wastewater signals trend data are currently difficult to interpret in terms of the COVID-19 cases for the associated wastewater catchment populations. However, levels of both remain relatively high by comparison with the summer months. Comparing this week (ending 29 Oct 2021) with the week before, most sites in South Wales showed a decrease in normalised SARS-CoV-2 wastewater signal. The normalised SARS-CoV-2 wastewater signal across North Wales sites remain at relatively low levels, consistent with case data

Sites on the watchlist (those with a marked increase in wastewater signal or divergence from PHW reported COVID-19 case data) still include most of the sites across South Wales, along with Wrexham in North Wales.

Wastewater signal is a very unbiased indicator because it is not dependent on testing policy and behaviour. The characteristics of the individual sewerage systems could have an impact on the signal being seen. Positive case data and wastewater signal can differ as wastewater can give an indication of the prevalence of Covid-19 in asymptomatic groups not subject to PCR testing, as well as other sources of SARS-CoV-2 infection. Wastewater SARS-CoV-2 signal data below limit of detection recorded as zero. The wastewater data for individual WwTW sites, normalised and unnormalised are inherently noisy.

Figure 103: Monitored site map.



Contains OS data © Crown copyright and database right 2021

Figure 114: Weekly comparison of North and all-Wales mean normalised SARS-CoV-2 signal. All-Wales mean signal (dashed line) and South Wales mean signal (solid line). Data to 15 Oct 2021.

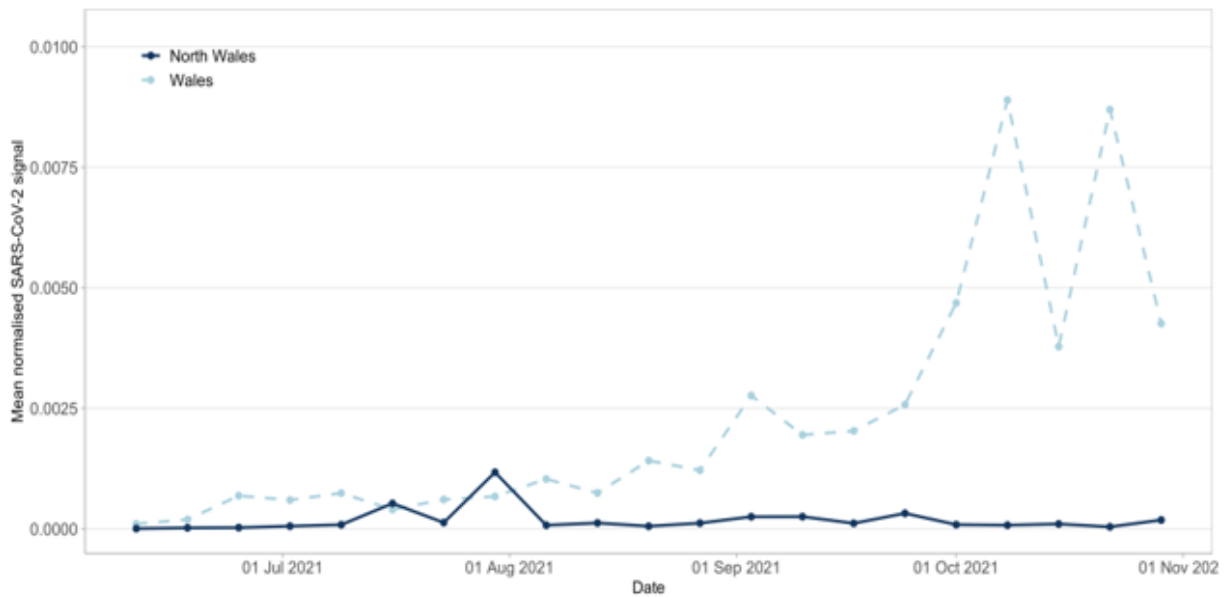
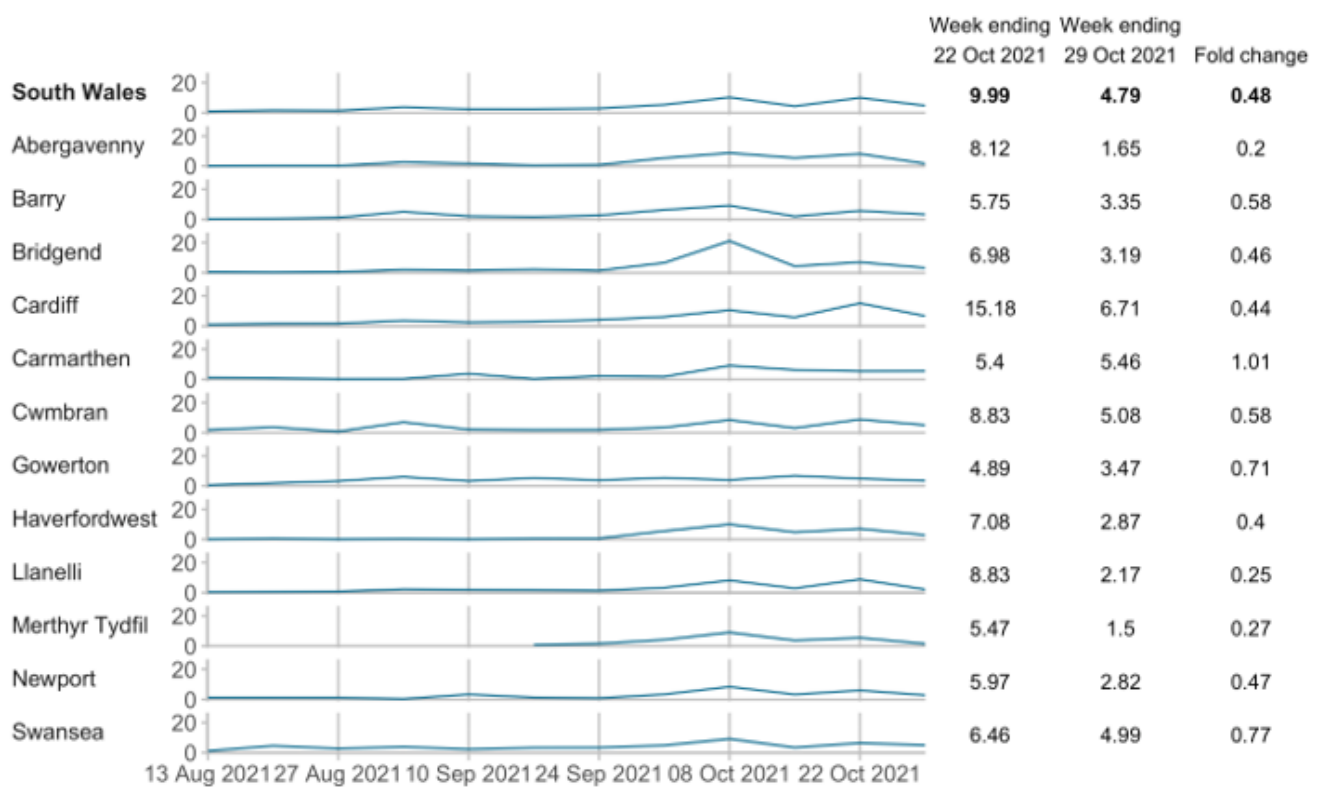
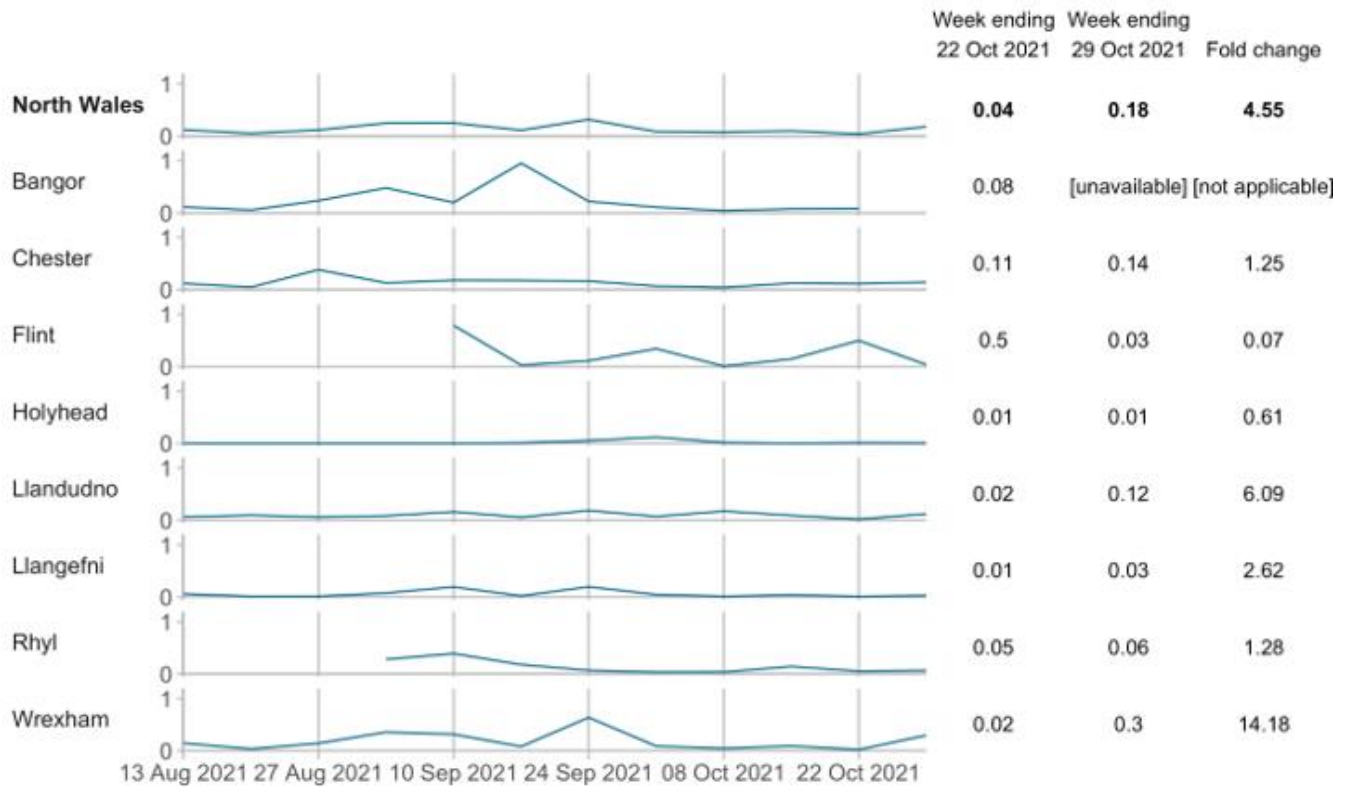


Figure 125: Weekly comparison of South and all-Wales mean normalised SARS-CoV-2 signal. All-Wales mean signal (dashed line) and South Wales mean signal (solid line). Data to 29 Oct 2021.



Figure 136: Fold Changes in mean normalised SARS-CoV-2, scaled for population.



What is the situation with arriving travellers?

To date, there have been 119 positive travellers (0.47% positivity), compared to 130 for the previous week (0.54% positivity) at time of reporting.

Spain continues to provide the greatest number of travellers – there was an increase of 1% compared to the previous week. There were also increases seen in travellers from France (26.2%), Germany (16.6%), Turkey (12.6%) and Portugal (7.9%)

25,277 total arrivals for the week (24,295 last week; +4%)

- Red: 0 (4 last week)
- Rest of world: 25,277

Date Source: Home Office [Wales Travel Rules](#)

Figure 147: Arriving Travellers Summary Data to 28Oct 2021.



Note: Travellers may have travelled through more than one country on their journey.

Figure 158: Positive travellers timeline

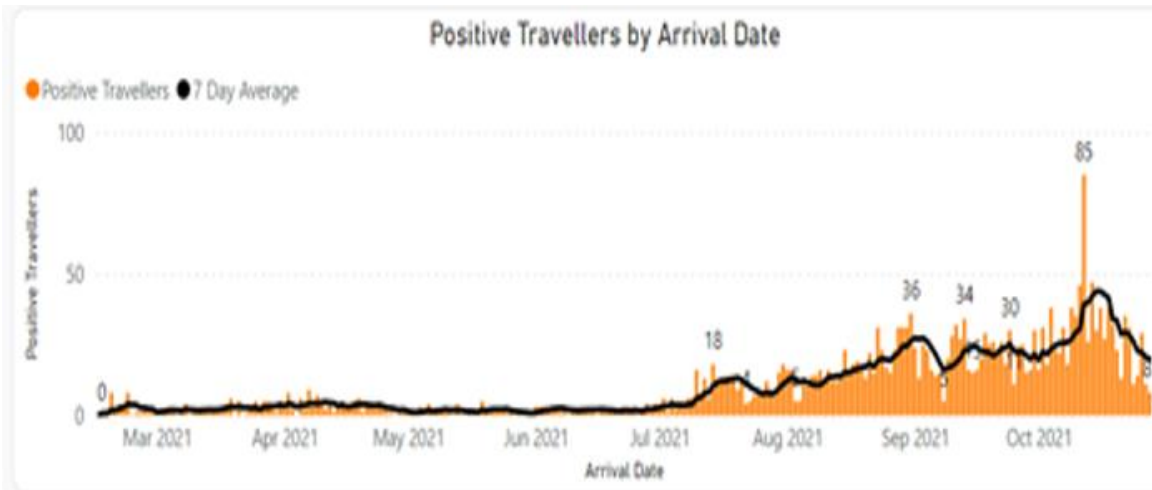


Figure 19: Positive travellers this week by country

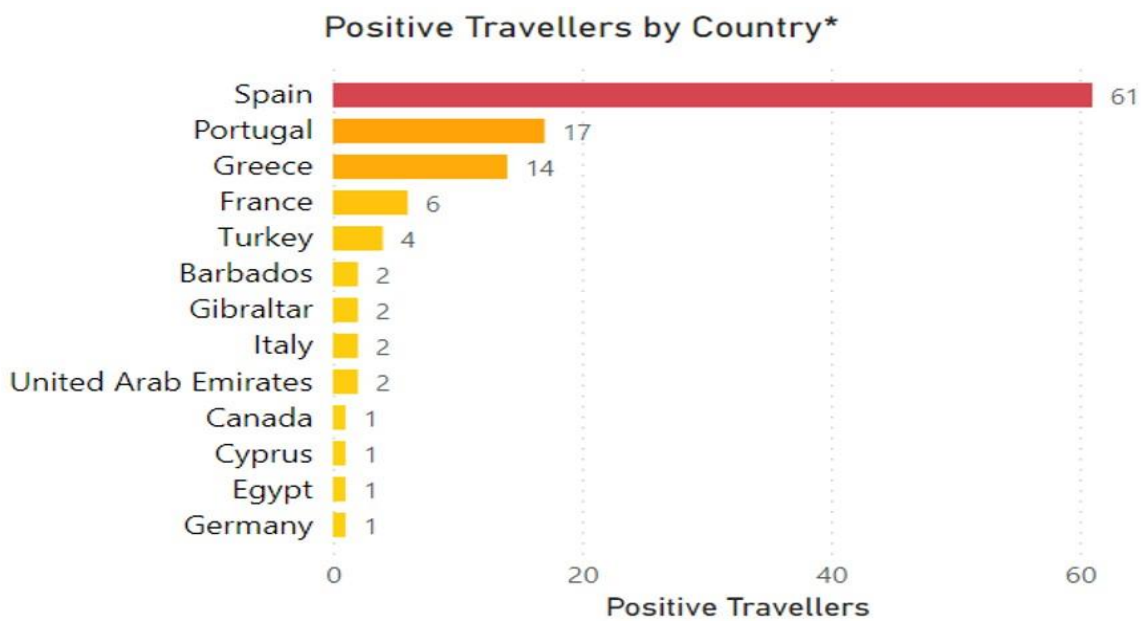
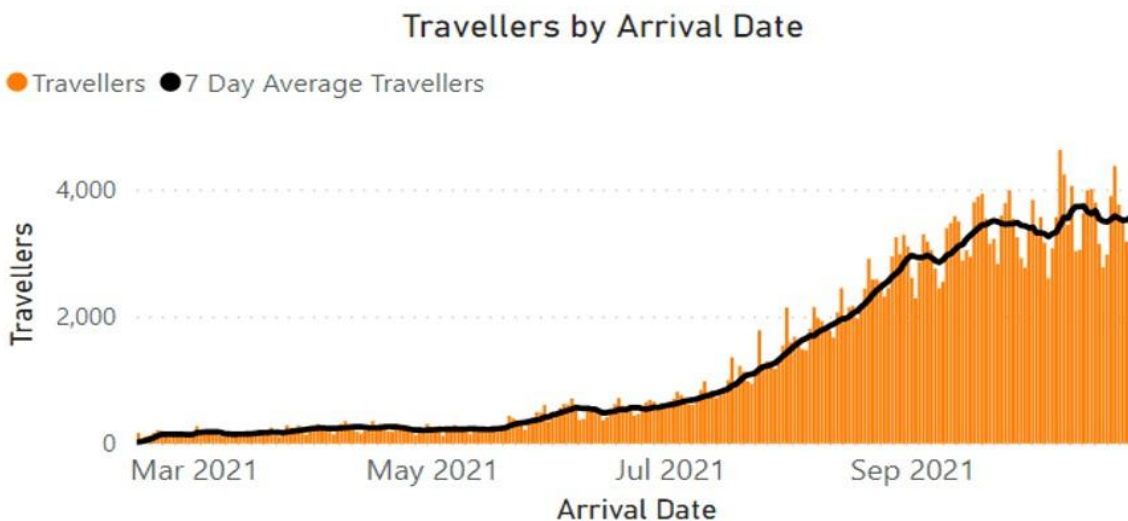


Figure 20: Arriving travellers timeline



Please note that the data provided by the Home Office is derived from Passenger Locator Forms (PLF) which are self-completed by travellers. As such, data may contain inaccuracies. Due to the limitations associated with data capture and legislation, some minor discrepancies may be present in the data. Countries with 10 or less travellers have been included in the overall positive traveller total, but excluded from the Green/Amber/Red positive traveller breakdown totals for personal identifiable information purposes.

Mobility data and UK Comparison

The latest mobility data shows reductions in workplaces and commutes categories, whilst there were increases in 'retail and recreation' and 'public transport' in the latest week compared to the previous week. There was marginal increases in residential (people spending time at home).

The baseline for much of the data is during January to February 2020 and changes are relative to that period. It is not possible to determine if mobility is higher/lower than would have been expected prior to the pandemic as data for 2019 or earlier years is not published.

The **most recent IPSOS MORI data** for the period 8th to 11th October for Wales shows the number of people only leaving home for essential trips has remained stable, and around half of people report continuing to try to keep 2m away from others when out.

Coronavirus (Covid-19) Infection Survey results, 10 October

The percentage of people testing positive increased over the most recent week in Northern Ireland and over the most recent two weeks in England. In Wales and Scotland the trend is uncertain in the most recent week.

ONS estimate that 72,700 people in Wales had COVID-19 (95% credible interval: 64,300 to 92,400), equating to around 1 in 40 people. This compares to around 1 in 50 people in England, around 1 in 65 in Northern Ireland and around 1 in 80 people in Scotland.

Source: Office for National Statistics COVID-19 Infection Survey

Figure 16 Mobility data by location of trip – Average of Welsh local authorities

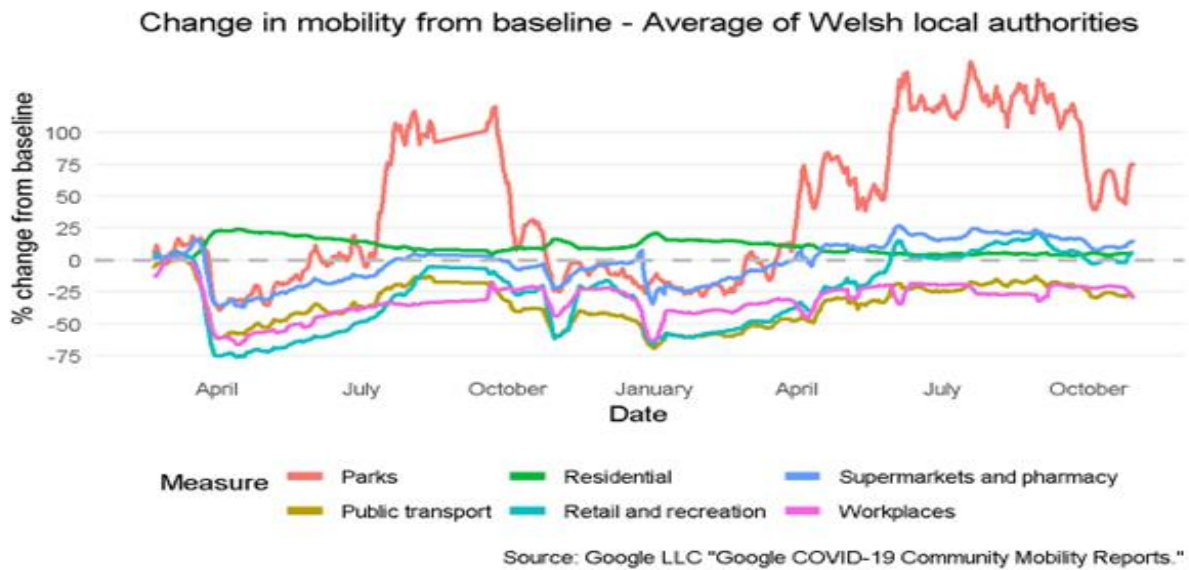
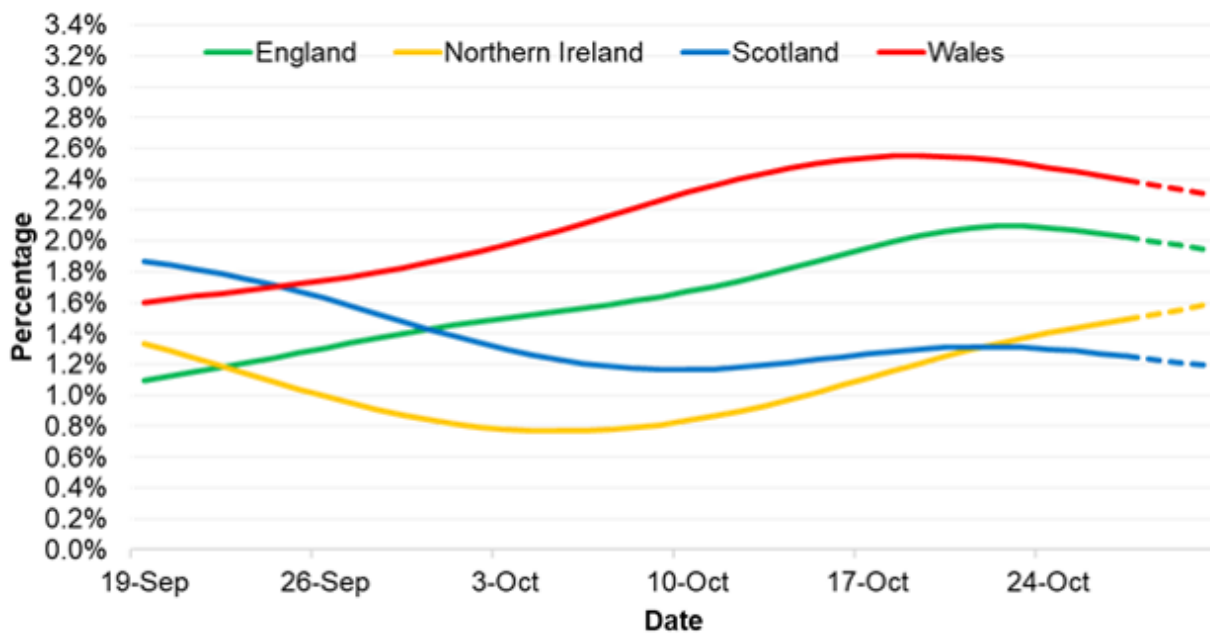


Figure 17: Positivity rates (%) across UK nations up to 4th November



Vaccine and Immunity Status

The COVID-19 vaccination rollout of first and second doses has slowed in Wales. As at 30 October 2021, 91% of people aged 16 and over had received at least one COVID-19 vaccine dose in Wales. Of people aged 16 and over, 5% had exactly one vaccine dose, 69% had exactly two doses, and 17% have also had a third dose or booster, so 86% have had at least 2 doses.

Between 27 September 2021 and 3 October 2021, the ONS COVID-19 Infection Survey estimated that 90% of the community population aged 16 and over in Wales tested positive for COVID-19 antibodies.

As at 30 October 2021, it is estimated that 96% of people aged 16 and over in Wales had some immunity against COVID-19 infection. The lower and higher estimates of immunity are 86% and 100% of people aged 16 and over in Wales. If no vaccines had been administered, it is estimated that 45% of people aged 16 and over would be immune.

It is currently estimated that over 80% (but may be closer to 90%) of the population, spread evenly across Wales, must be immune to COVID-19 before population immunity effects would be observed.¹ Note that the immunity estimate of 91% is for individuals aged 16 and over, not the total Wales population, and varies across age groups.

Differences between antibody presence and immunity estimates include:

- ONS antibody estimates are based on study participants who have volunteered for the study and estimates are extrapolated.
- ONS estimates are based on the 16+ community population, which excludes people in care homes or hospitals. Immunity estimates are based on the whole 16+ Wales population.
- While antibody protection doesn't equal immunity from infection, it does give a useful indication of the level of protection from infection in the Welsh population.
- Antibody estimates use 2019 mid-year population estimates while the immunity estimates use 2020 mid-year estimates.

Source: ONS COVID-19 Infection Survey, PHW, SPI-M, Swansea University modelling

¹ TAG advice on the Delta variant, published 18 June 2021

Note: The lower, central and higher immunity estimates use cautious, central and optimistic vaccine efficacy from SAGE (27/08/21) and immunity-following-natural-infection assumptions, and do not yet account for waning immunity or any additional immunity gained from a third dose or booster.

Figure 18: Vaccination and antibody status of individuals aged 16 and over in Wales

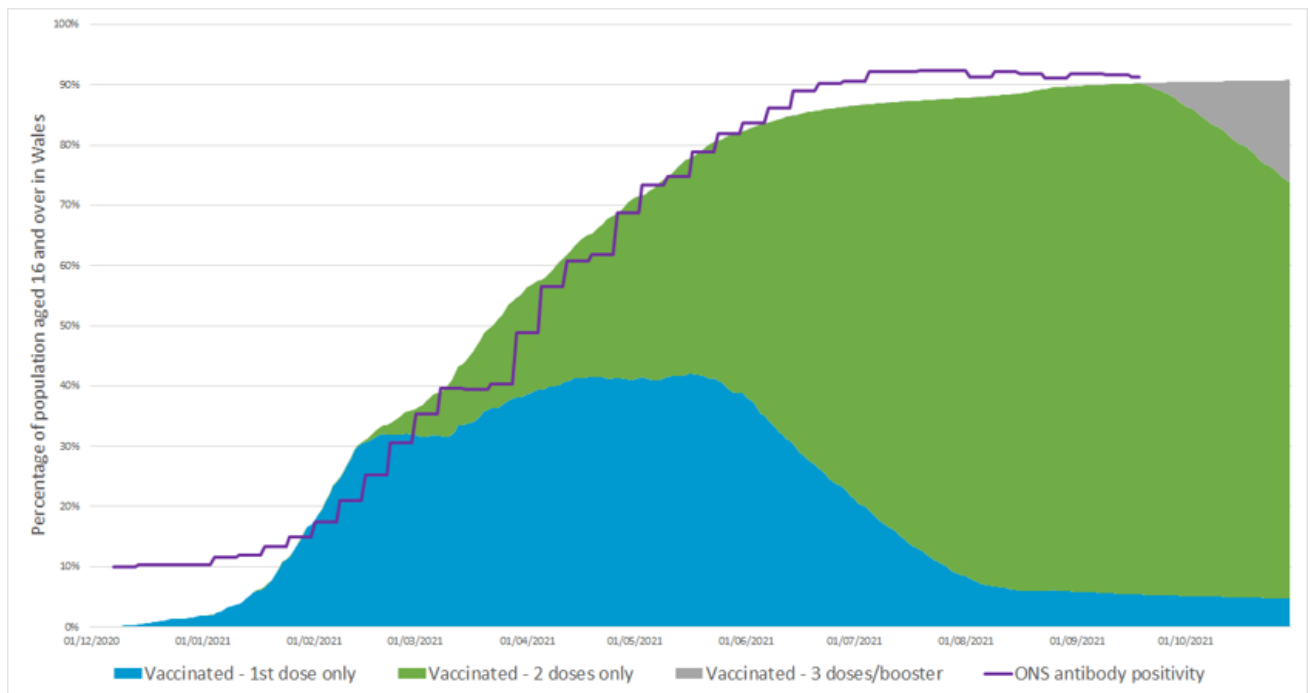
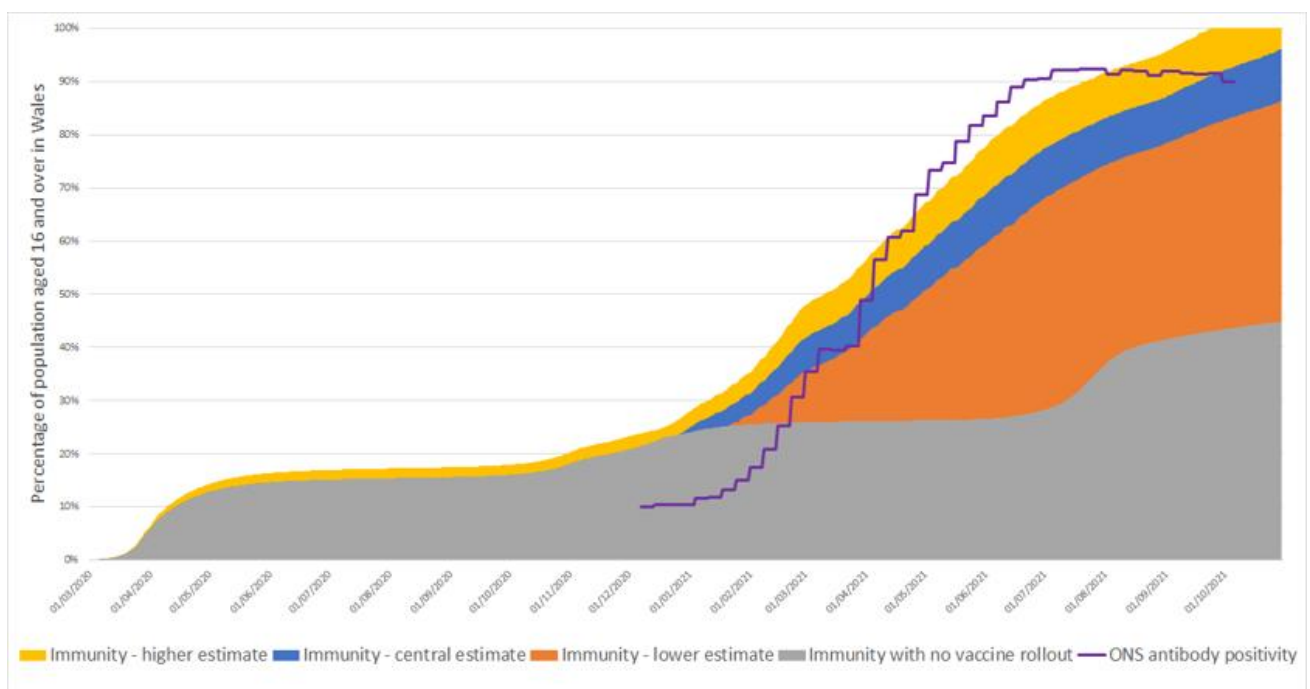


Figure 19: Immunity estimates and antibody status of individuals aged 16 and over in Wales



What does the situation look like going forward?

Based on the current rates observed with current restrictions:

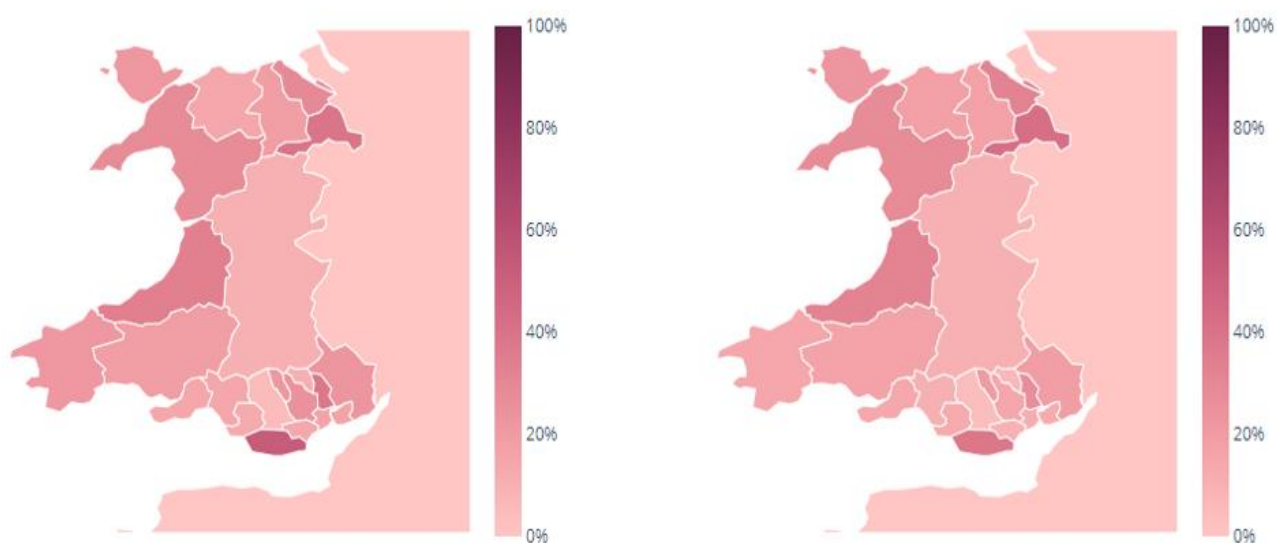
- **Cases (right) – the probability of incidence reaching greater than 500 per 100,000 between 07 – 13 November and 14 – 20 November is at or above 80% for 0 of the 22 local authorities across both periods.** The figure illustrates the probability (between 0 – 100%) of incidence being greater than 500 per 100,000. *Source: Imperial College London*

There was an insufficient number of models this week, we're unable to produce a reliable set of projections this week. We are hoping that we will be able to produce a new set of consensus projections next week. Source: SPI-M

These projections include the potential impact of vaccines to be given over the next three weeks.

Projections do not include the effects of any future policy or behavioural changes.

Figure 20: Probability of greater than 500 per 100,000 cases by local authority



Key risks and sources

Key risks

Area	Assessment
Transmission, incidence and prevalence	Overall cases of COVID-19 and test positivity rates have decreased across Wales, compared to last week.
NHS Capacity	NHS continues to try and recover from the considerable backlogs that have developed over the past 18 months, alongside a considerable staffing challenge. There is potential for significant harm in the community (and our hospitals) for people with non-COVID illnesses or injuries, which may exceed the direct harm from COVID-19.
Mortality	Number of daily deaths has decreased slightly in the last week.
Variants	Wales has had 55,966 (+1,211) confirmed cases of the dominant Delta variant, and 3,714 (+3,714) confirmed cases of VUI-21OCT-01 (AY4.2). Delta remains the dominant variant of COVID-19 in Wales.
Immunity and Vaccines	<p>As at 3 November 2021, a total of 5,194,869 doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. Note this large increase represents several weeks of third dose/ booster vaccine rollout which have only recently been published. <i>Source: PHW</i></p> <p>96% of those aged 16 and over in Wales were estimated to have some immunity against COVID-19 infection at 16th October 2021.</p>

Key Sources for this update

[Technical Advisory Cell brief | GOV.WALES](#)

[COVID Infection Survey results | GOV.WALES](#)

[Rapid COVID-19 virology | Public Health Wales](#)

[Hospital occupancy | GOV.WALES](#)

[Higher Education | GOV.WALES](#)

[School attendance | GOV.WALES](#)

[Variants of Concern Technical Briefing | Public Health England](#)