

COVID-19 Wales Situational Report

COVID-19 Intelligence Cell:
02 December 2021

Health Protection Advisory Group:
03 December 2021

Data as at 02 December 2021 unless otherwise specified

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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 test positivity are generally decreasing across Wales. We will need to continue monitoring case rates and other key indicators in each nation carefully to better understand the impact of the new Omicron variant of concern.

The JBC consensus estimate of the reproduction number for Wales is between 0.8 and 1.0 and a halving time of 20 days to flat (as at 2 December 2021), while PHW's estimate is 0.95 with a halving time of 37 days (2 December 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 is generally fluctuating. As at 1 December 2021, there were 599 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed (-42 compared to previous week), of which 362 were confirmed. As at 1 December 2021, there were 44 compared patients with Suspected or Confirmed COVID-19 in critical care beds in Wales; 120 lower than the maximum COVID-19 position of approximately 164.

As at 29 November 2021, Wales has had 75,673 (+4,519) confirmed cases of the dominant Delta variant, and 8,495 (+1,360) confirmed cases of VUI-21OCT-01 (AY4.2). No other variants of concern were confirmed by genomic sequencing in Wales. *Source: PHW.* 32 Omicron cases have been confirmed in the UK. At this stage there is not enough intelligence to characterise immune escape, transmissibility and severity. A watching brief is being maintained, technical updates will be available from UKHSA website. *Source: UKHSA*

As at 30 November 2021, a total of 5,615,851 doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. 2,468,734 were first doses. 2,264,474 were second doses. 42,104 were booster doses. 840,539 were third dose primary course recommended for severely immunocompromised individuals. *Source: PHW*

Key indicators

All indicators are showing signs of decreases.

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

	Current value (27/11/21)	Change since previous week (20/11/21 – 27/11/21 unless stated otherwise)		
		Percentage change		Value change
Confirmed case rate (rolling 7 day sum per 100k)	462	-8%	↓	(-40)
Confirmed case rate for over 60s (rolling 7 day sum per 100k)	182	-20%	↓	(-46)
Test positivity (7 day RA)	16.8%	-7.8%	↓	(-1.4 percentage points)
Population estimated to have COVID-19 (prevalence) ¹	1.84%	-14%	↓	(-0.29 percentage points)
NHS COVID-19 Admissions ²	37	-26%	↓	(-13)
ONS deaths (7 day sum) ³	59	-27%	↓	(-22)
PHW deaths (7 day sum)	35	-33%	↓	(-17)

Footnotes

1. Latest Covid Infection Survey data is taken from 7 November 2021 to 13 November 2021.
2. Seven day rolling average to the current date of confirmed COVID-19 admissions.
3. Latest ONS deaths data is to 19 November 2021 (rather than 27 November 2021) for the current value. Data to 12 November 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 1.0 (reported 18 November 2021), with daily growth rate between –4% to 0%. Using PHW positive test data only (more timely data but limited by variation in testing), Rt is estimated to be 0.95 for Wales with a halving time of 37 days (2 December 2021). The central Rt estimate is highest for the Betsi Cadwaladr and Powys Health Boards at 1.0. *Source: JBC/PHW*

The 7-day cumulative case incidence in Wales is fluctuating at around 460-472 per 100,000 population.

Case incidence is increasing in 7 of the 22 local authorities. Case incidence is above 500 per 100,000 population for 4 local authorities. Local authorities with the highest case incidences are Gwynedd (870.3), Vale of Glamorgan (661.7) and the Isle of Anglesey (612.5) per 100,000 population, respectively.

Case incidence is increasing in all age groups, remaining highest in 10-19 year olds. Case incidence has decreased in most Local Health Boards over the past few days. Case incidence is highest in Betsi Cadwaladr University Health Board at 554.15 cases per 100,000 population as of 26 November 2021.

The second table below provides estimates of doubling and halving times based on PHW COVID-19 positive test data. 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 30 November 2021)

Local Authority	Number	% of All Wales Total	Case Incidence per 100,000	Change from previous week
Gwynedd	1084	7.3%	870.3	2% ↑
Vale of Glamorgan	884	5.9%	661.7	1% ↑
Isle of Anglesey	429	2.9%	612.5	35% ↑
Pembrokeshire	656	4.4%	521.4	-5% ↓
Flintshire	778	5.2%	498.4	1% ↑
Torfaen	460	3.1%	489.6	-5% ↓
Wrexham	663	4.5%	487.7	-16% ↓
Cardiff	1746	11.7%	475.9	-5% ↓
Newport	733	4.9%	473.9	4% ↑
Carmarthenshire	862	5.8%	456.6	-8% ↓
Powys	602	4.0%	454.6	-5% ↓
Monmouthshire	424	2.9%	448.3	-23% ↓
Denbighshire	416	2.8%	434.7	-10% ↓
Bridgend	637	4.3%	433.2	-0%
Blaenau Gwent	302	2.0%	432.3	2% ↑
Caerphilly	779	5.2%	430.2	-9% ↓
Conwy	500	3.4%	426.6	11% ↑
Merthyr Tydfil	257	1.7%	426.0	-20% ↓
Swansea	979	6.6%	396.4	-16% ↓
Rhondda Cynon Taf	955	6.4%	395.8	-12% ↓
Neath Port Talbot	520	3.5%	362.8	-23% ↓
Ceredigion	163	1.1%	224.2	-16% ↓
Unknown	47	0.3%	-	-19% ↓
Total	14876	100.00%	471.8	-6% ↓

Figure 1: Cases per 100k (PHW Data) (7 day rolling sum to 26th Nov)

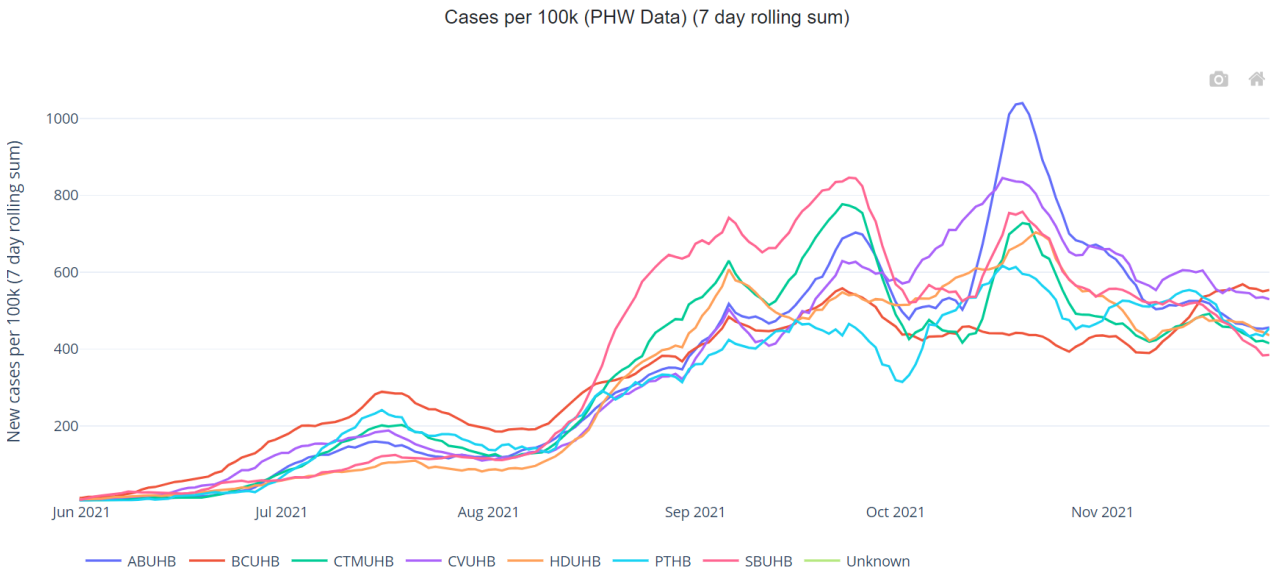


Figure 2: Cases per 100k by age (PHW Data) (7 day rolling sum to 30th Nov)

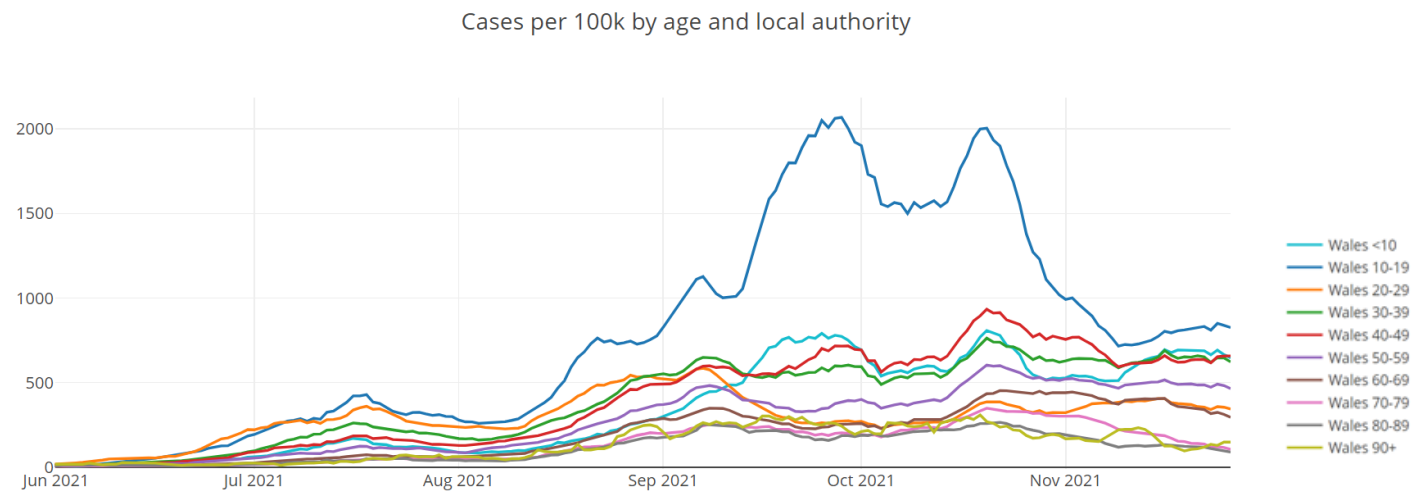


Table 2: Reproduction number and doubling time (PHW methodology) PHW data by Local Health Board (1st December 2021 estimate)

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)	0.95 (0.95 to 1.0)	0.9 (0.85 to 0.95)	0.95 (0.9 to 1.0)	1.0 (0.95 to 1.0)	0.95 (0.95 to 1.0)	0.95 (0.95 to 1.0)*	1.0 (0.95 to 1.1)*	0.95 (0.95 to 1.0)
Halving time (days)	37 (16 to -122)	18 (10 to 92)	31 (14 to -182)	44 (17 to -182)	55 (23 to -133)*	33 (15 to -298)*	46 (15 to -42)*	33.5 (13 to -53)

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, between early July 2021 and early November 2021, occupancy generally increased despite periods of stabilisation. Throughout November 2021, the number of hospitalisations has generally decreased and is currently at comparable levels to early April 2021.

Over the latest week, the number of beds occupied with COVID-19 related patients has decreased. This was due to a decrease in confirmed and recovering COVID-19 patients despite a slight increase in suspected COVID-19 patients. As 1 December 2021, there were 599 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed. This compares to 641 (42 fewer occupied beds) on 24 November 2021. Confirmed patients accounted for 362 of the total occupied beds.

There are 44 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales. This is 120 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 171, 19 more than the 152 baseline number of critical care beds available before the COVID-19 pandemic.

Non-COVID-19 urgent & emergency pressures continue to result in high levels of total hospital bed occupancy. Above seasonal prevalence of non-COVID 19 respiratory disease remains evident whilst the NHS also continues to try and recover from the considerable elective backlogs that have developed over the past 18 months. There is also a considerable staffing challenge across the health and care system, with staff sickness absence rates currently just over 2% higher than pre-covid rates, culminating in around 1200 delayed discharges for those who are medically fit, which continues to constrain flow throughout the whole health and care system resulting in 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 10th November to 23rd November 2021, IMTs reported 113 care homes in 'red' status (an ongoing outbreak/incident reported in last 7 days) last week, compared to 122 in the previous two week period.

Source: National SBAR.

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

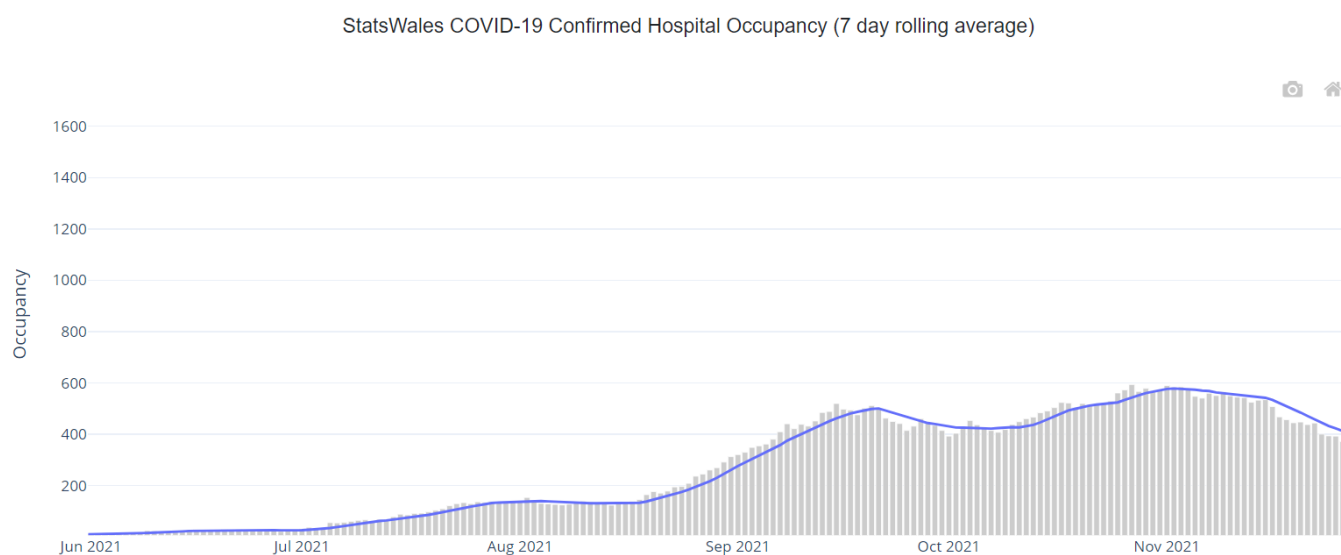


Figure 4: Overall invasive ventilated bed occupancy (7 day rolling average)

StatsWales Overall Invasive Ventilated Bed Occupancy (7 day rolling average)

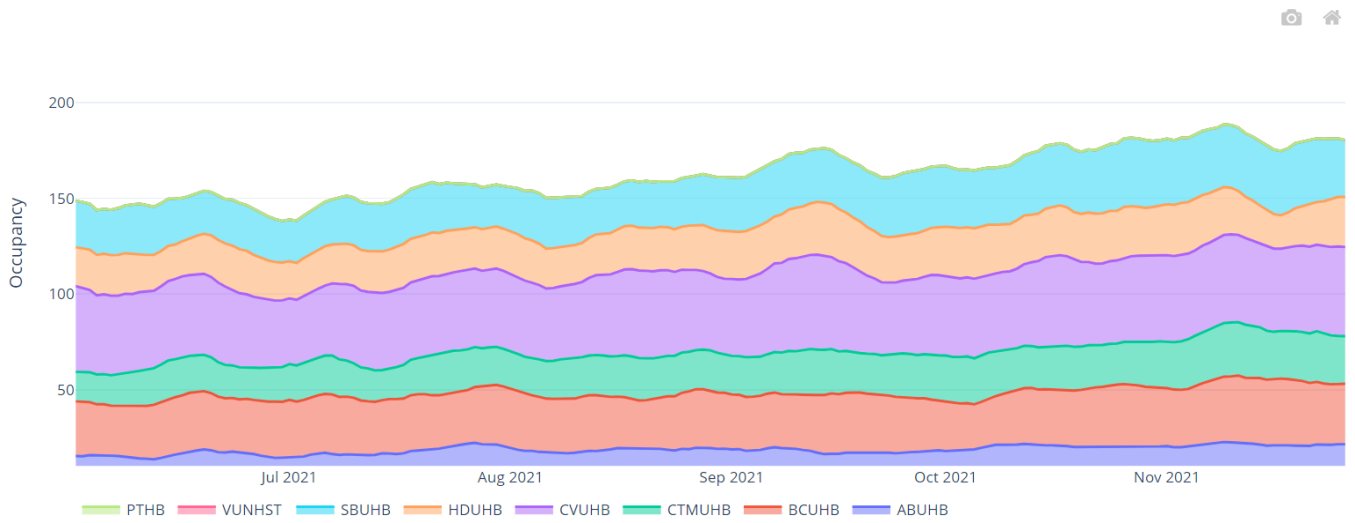


Figure 5: Hospital bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)

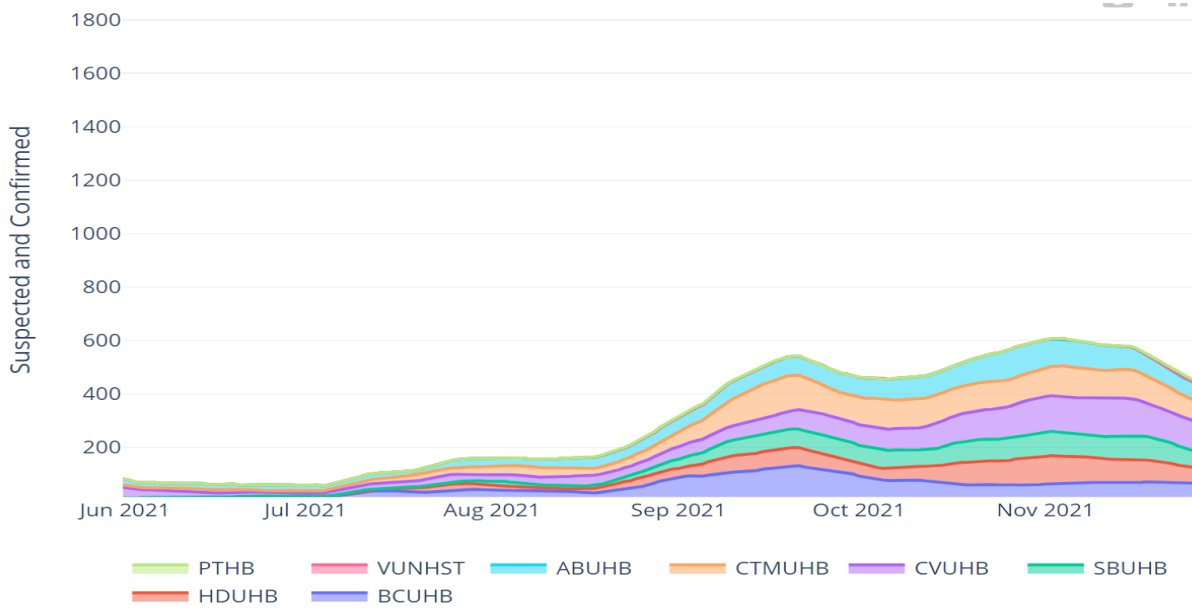
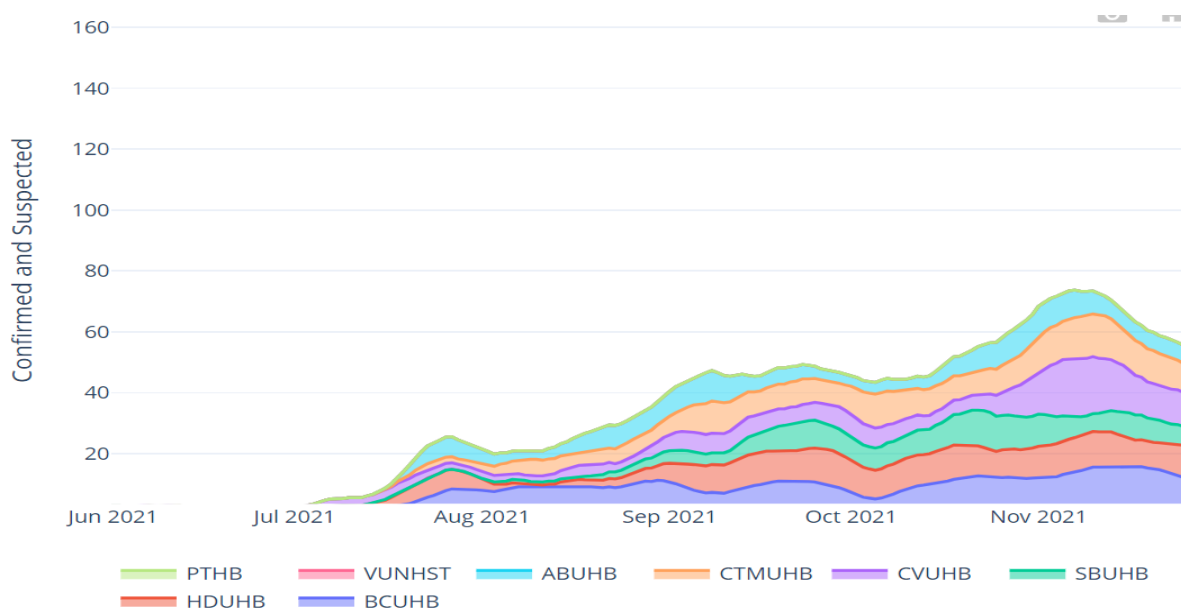


Figure 6: Invasive ventilated bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)



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

School attendance

For the week 22 –26 November an average of 87.1% of all pupils were present in school, down from 88.2% the week before. This data is provisional.

In the same time period 1.7% of pupils were absent due to a known C-19 related reason, with an average of 1.9% of all primary and 1.4% of all secondary pupils absent for this reason. **Source Stats Wales, Schools in Wales**

Schools, Childcare settings, Further Education (FE) Higher Education Institutions (HEIs)

From this week onwards updates on all educational settings have changed and include details of significant outbreaks and notable public health intelligence linked to these settings only.

There were no significant outbreaks/clusters or notable public health intelligence associated with childcare , FE and HE settings reported by IMTs.

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

Attendance of pupils by day, 6 September 2021 onwards

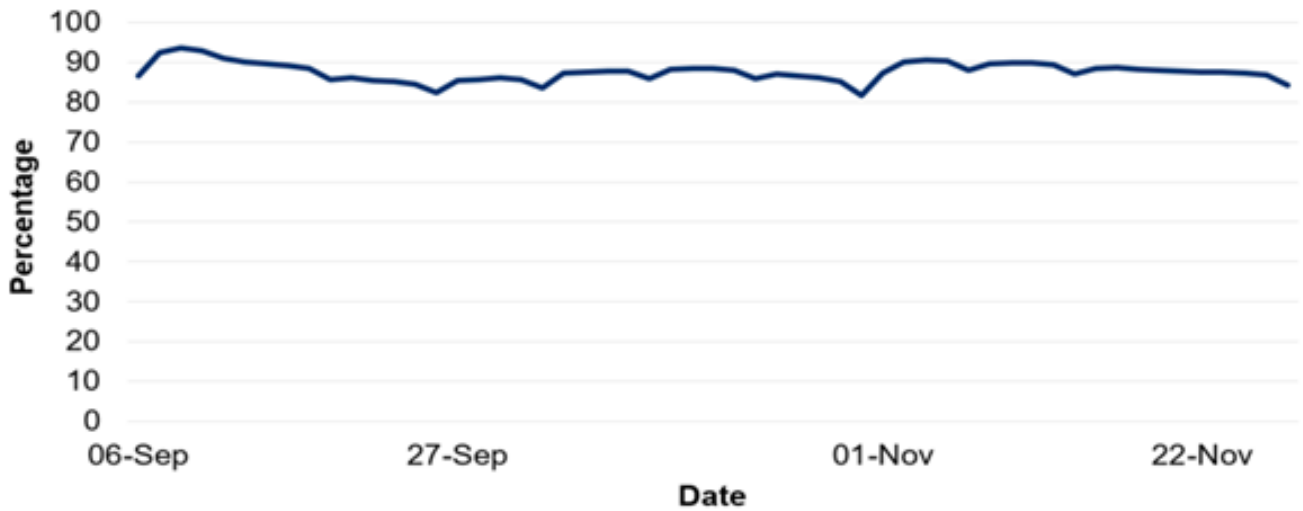


Figure 8: Percentage pupils by number of days missed due to COVID-19 related reason and all reasons, 12th Apr – 15th Oct

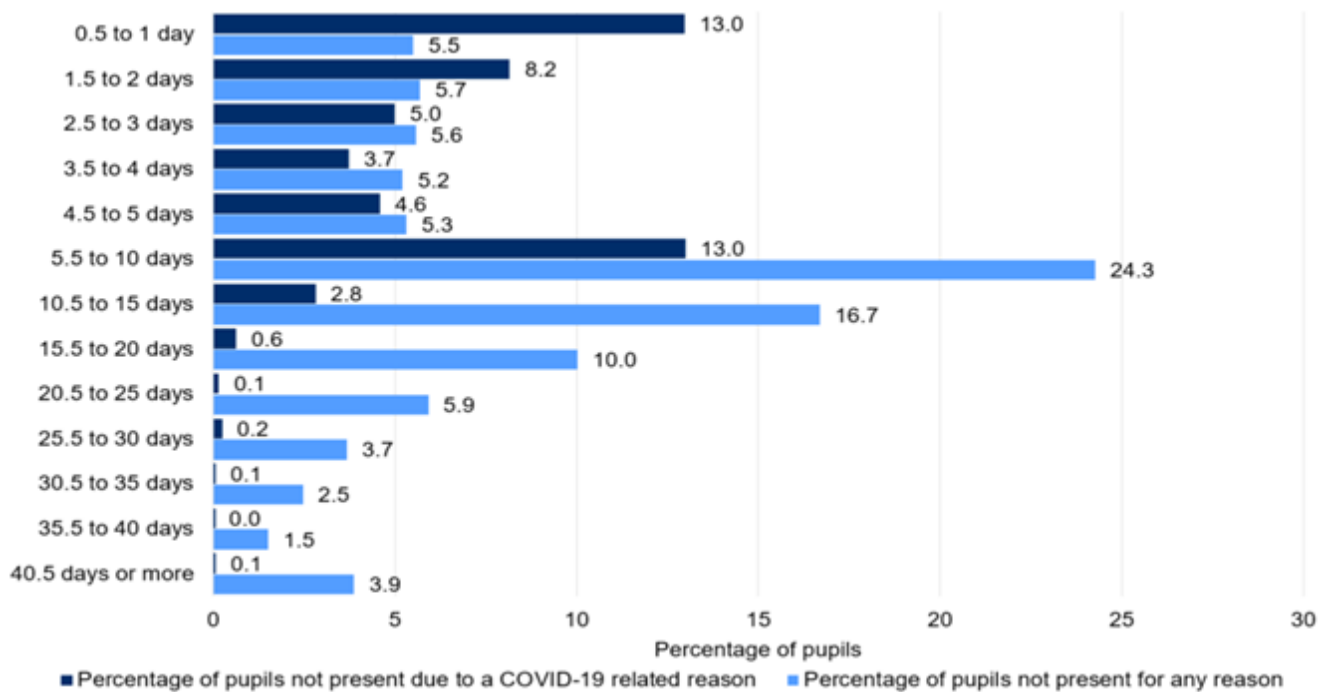


Figure 9: Absence due to COVID-19 by day and phase, 13th September – 15th October

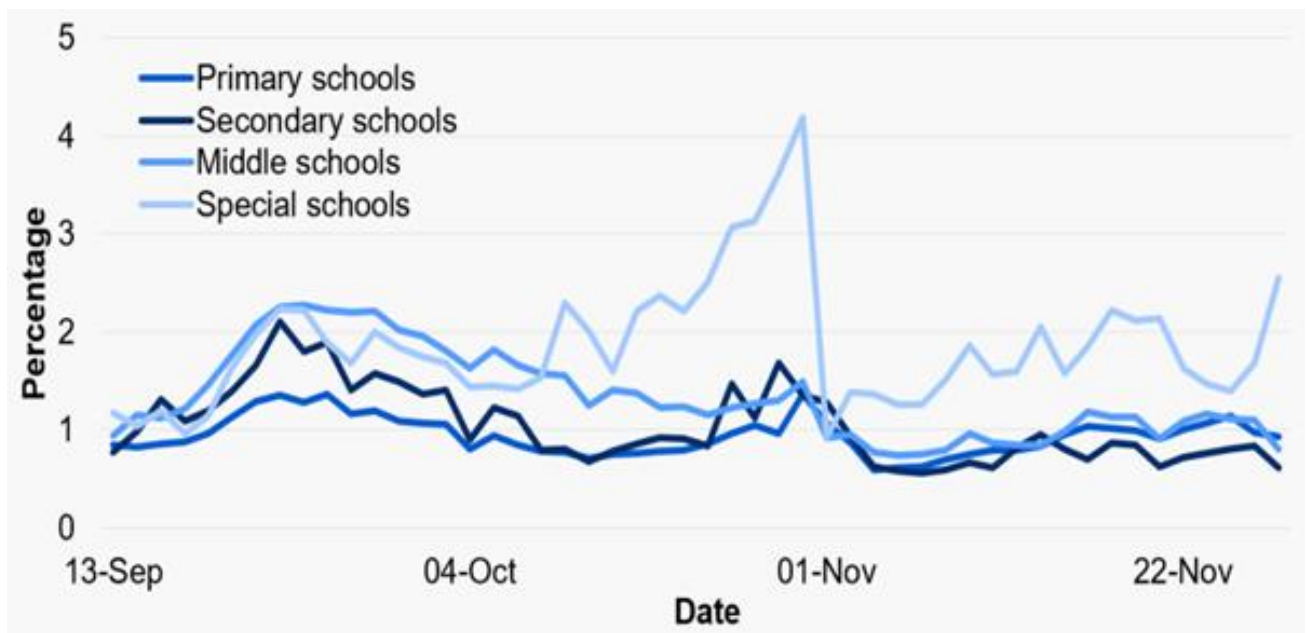


Figure 10: Weekly Covid-19 Incidence per 100k population in school aged children as at 1pm 20th October

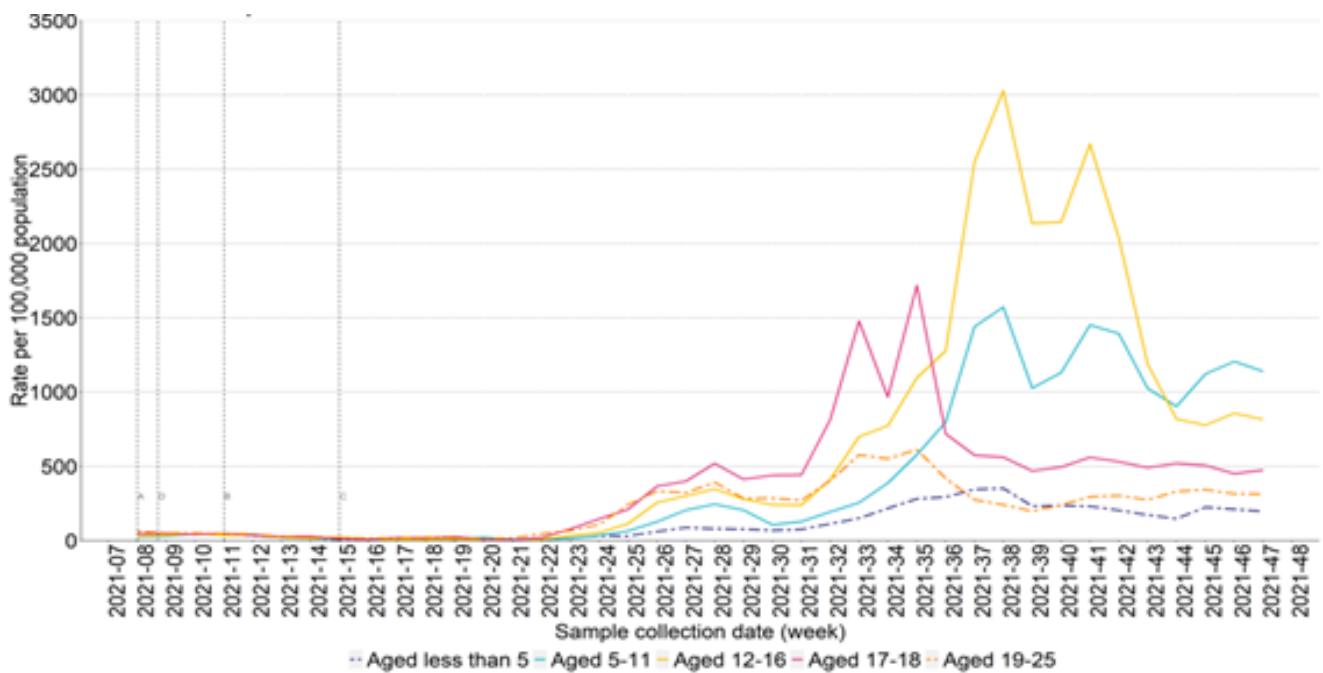
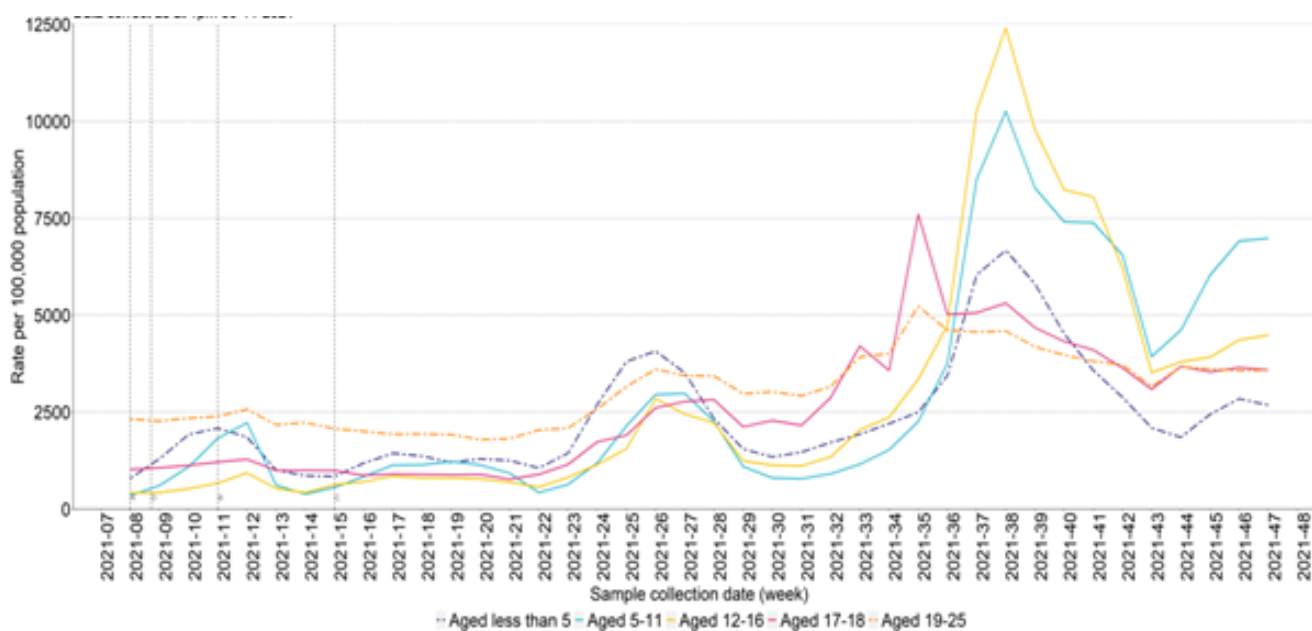


Figure 11: Weekly Testing Incidence per 100k population in school aged children as at 1pm 20th October



Wastewater Monitoring for Covid-19 (Pilot)

In the week ending 26 November 2021 the mean normalised COVID-19 signal continues to be stable and at lower levels than those observed since September. **The data suggests that the viral levels in the community are stabilising and not increasing.**

In South Wales, the wastewater signal has plateaued. This levelling off corresponds with a continued, gentle decline in reported COVID-19 cases across the South Wales catchments. In North Wales, the trend in the wastewater signal continues to be stable. Furthermore, North Wales' signal remains broadly aligned with the trends in reported COVID-19 cases in the region. Comparing this week (ending 26 Nov) with the last week, all sites in North Wales with available data observed a fall in their wastewater signal.

Sites on the watchlist (i.e., those displaying adverse changes in wastewater signal, a limited number of samples or emerging variants) include: Cwmbran, Gowerton, Newport, and all sites in North Wales except Bangor.

Wastewater signal is an 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 12: Monitored site map.



Figure 13: 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 14: 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.

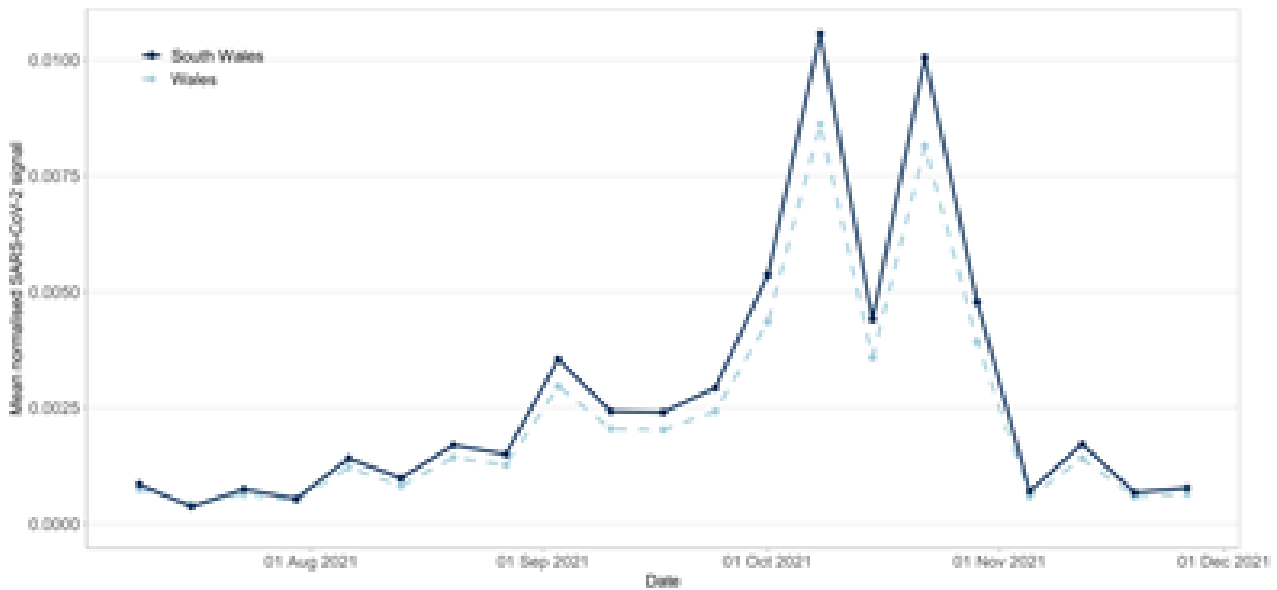
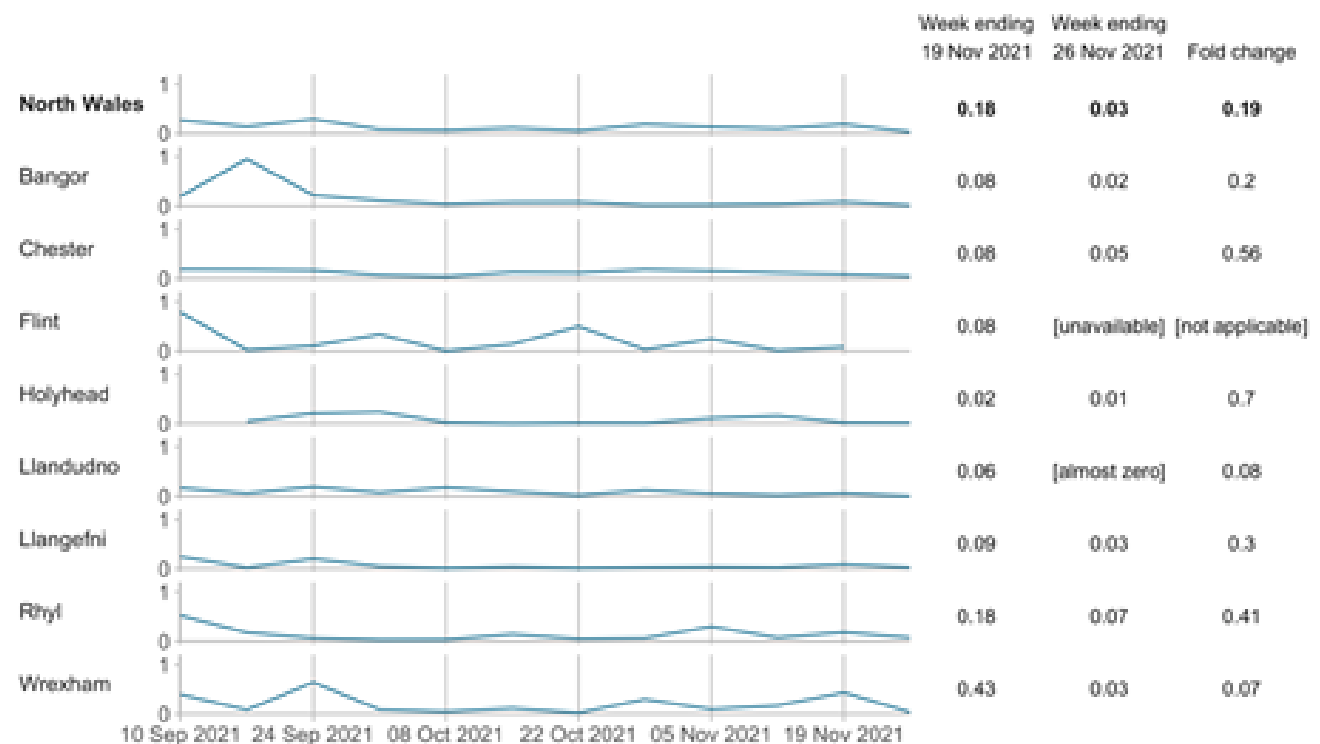
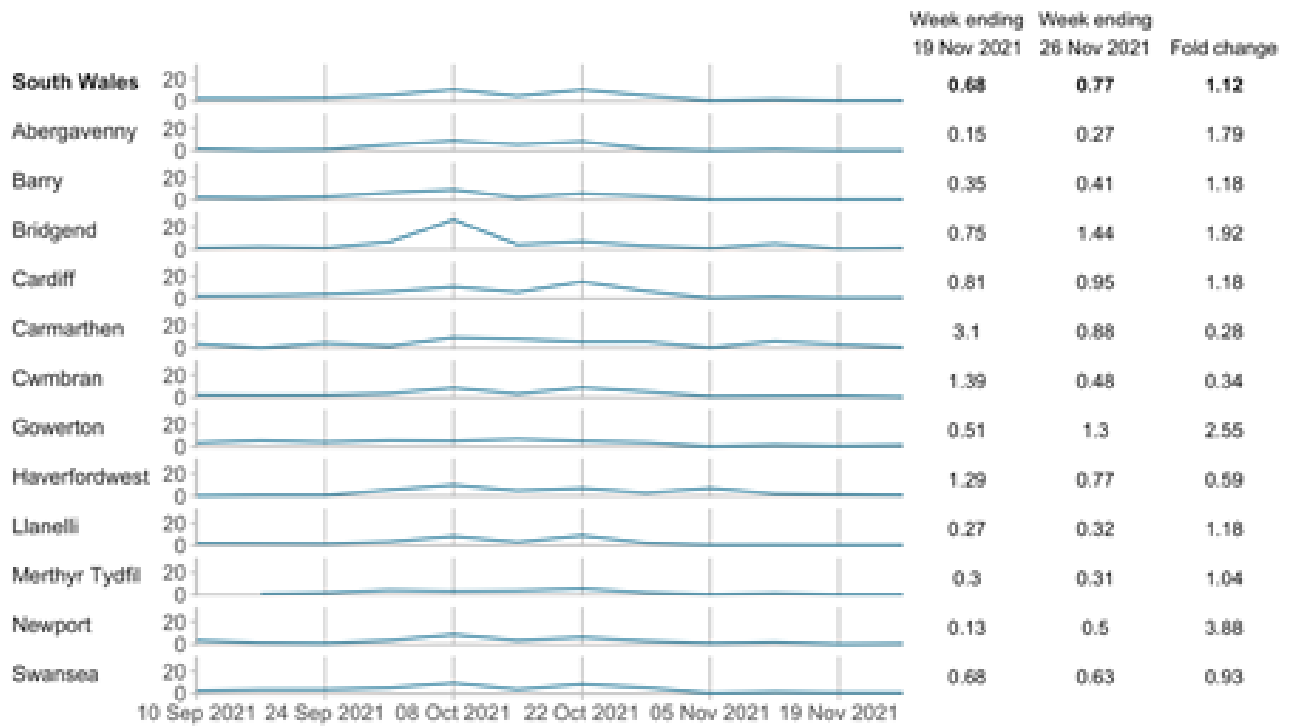


Figure 15: Fold Changes in mean normalised SARS-CoV-2, scaled for population.





What is the situation with arriving travellers?

To date, there have been 125 positive travellers (0.65% positivity), compared to 142 for the previous week (0.74% positivity) at time of reporting.

Travellers visiting Spain continue to provide the highest numbers testing positive on return, with 87 to date for the period, with a positivity rate of 1.37%. This has increased when comparing to the previous week, with 82 testing positive at a rate of 1.3% at time of reporting.

19,170 total arrivals for the week, compared to 19,199 for the previous week – a decrease of 0.2%.

10 African countries moved onto the red list for travel following the identification of Omicron. This means travellers from these destinations will not be permitted to enter Wales but must enter through a port of entry in England or Scotland and go into a managed quarantine facility for 10 days. They must also take post-arrival PCR tests on day 2 and day 8. Similar action is being taken across the UK.

Please note this week's report does not include data since the above countries were added to the red list between 26th and 28th November 2021.

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

Figure 16: Arriving Travellers Summary.



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

Figure 17: Positive travellers timeline



Figure 18: Positive travellers this week by country

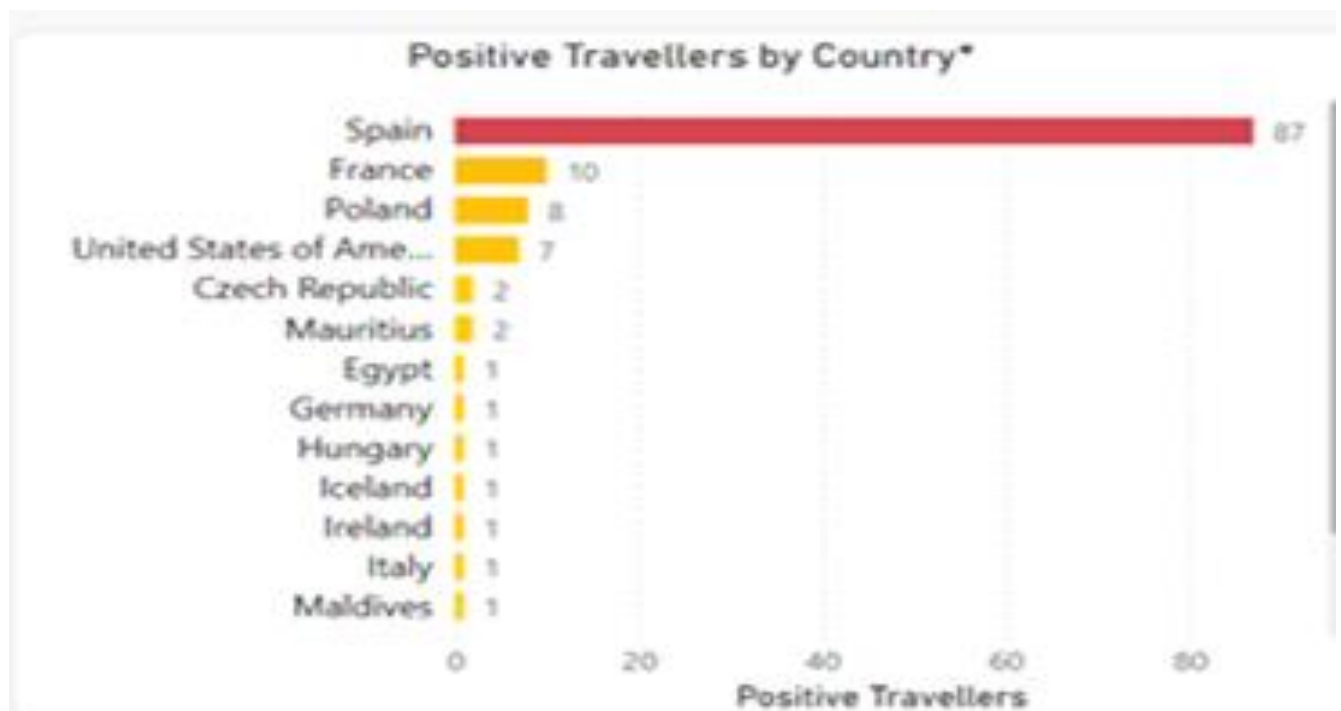
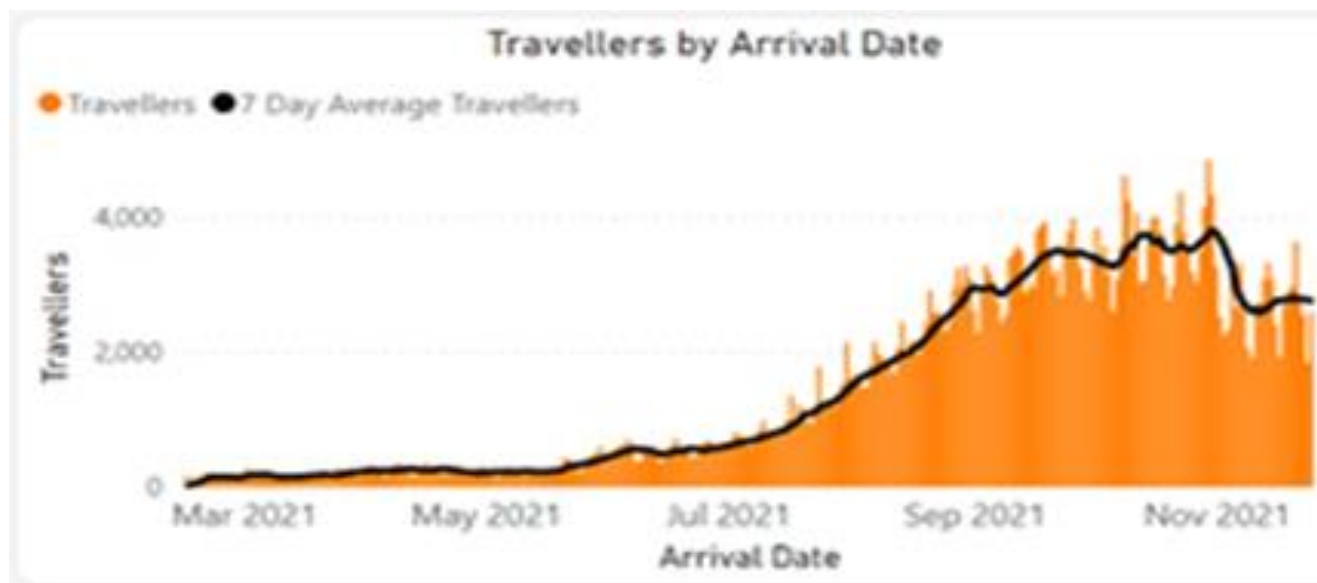


Figure 19: Arriving travellers timeline



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 an increase in only in 'Retail and recreation' and 'Residential (people spending time at home)' categories. There are decreases in all other categories that include 'Supermarkets and pharmacy', 'Public transport', Commutes and Workplaces in the latest week compared to the previous week.

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 19th to 22nd November for Wales shows the number of people only leaving home for essential trips has remained stable, and just over half of people report continuing to try to keep 2m away from others when out.

Coronavirus (Covid-19) Infection Survey results, 12 November

The percentage of people testing positive increased over the most recent week in England, Scotland and Northern Ireland, whilst the trend was uncertain in Wales.

ONS estimate that 64,100 people in Wales had COVID-19 (95% credible interval: 52,100 to 77,500), equating to around 1 in 45 people. This compares to around 1 in 60 people in England, around 1 in 45 in Northern Ireland and around 1 in 65 people in Scotland.

Source: Office for National Statistics COVID-19 Infection Survey

Figure 20: Mobility data by location of trip – Average of Welsh local authorities

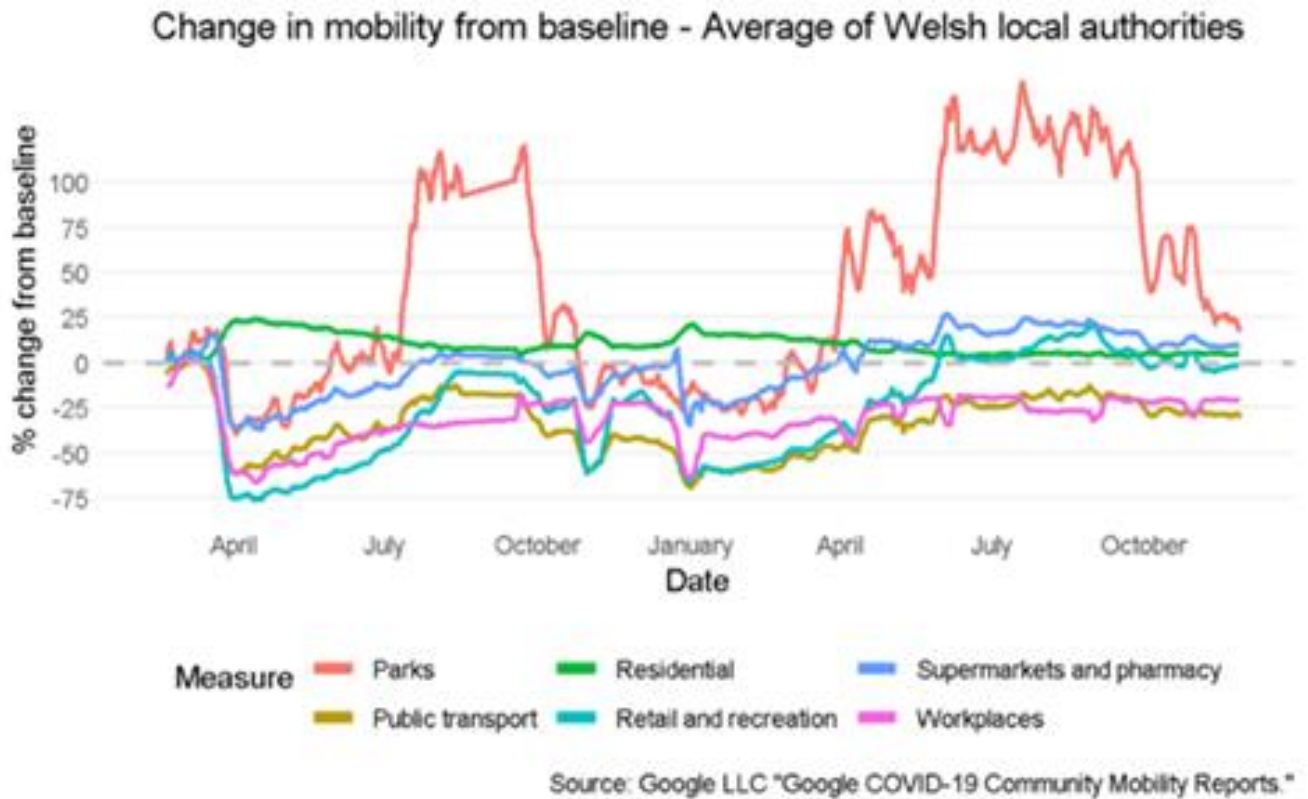
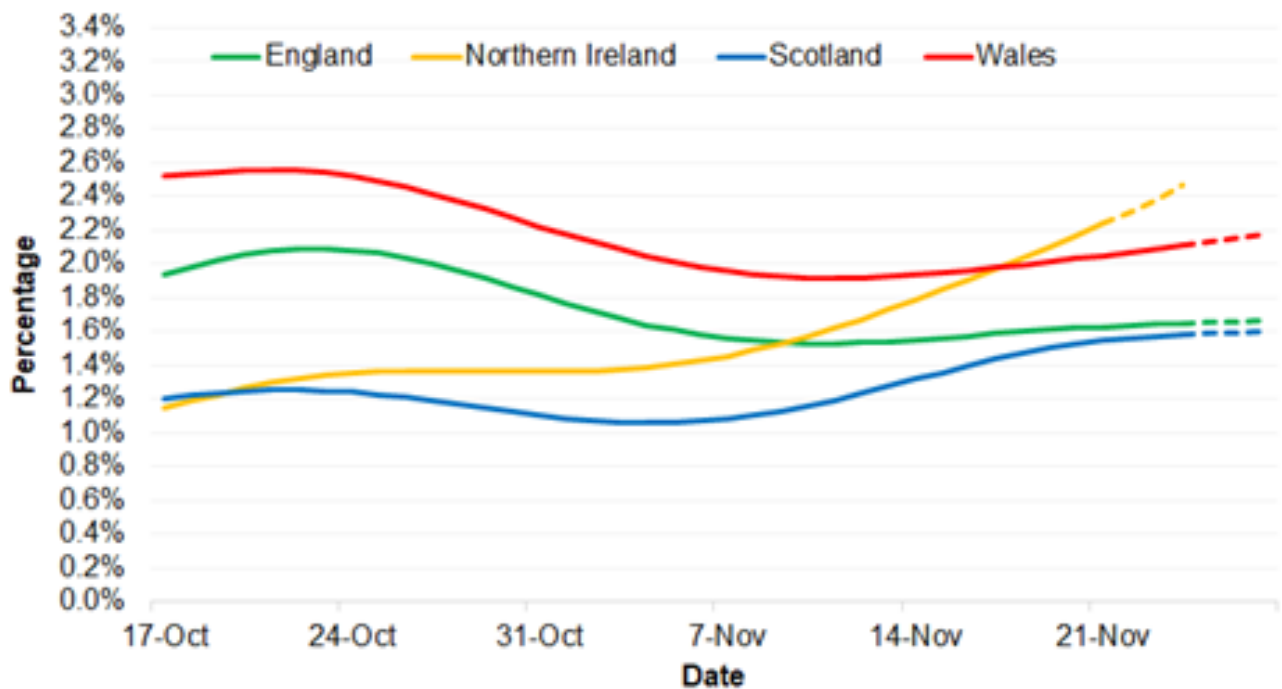


Figure 21: Positivity rates (%) across UK nations up to 4th November



Vaccine and Immunity Status

The COVID-19 vaccination rollout of first and second doses has slowed in Wales. As at 27 November 2021, 90% of people aged 12 and over had received at least one COVID-19 vaccine in Wales. Of people aged 12 and over, 7% had exactly one vaccine dose, 52% had exactly two doses, and 31% have also had a third dose or booster, so 83% have had at least 2 doses.

Between 1 November 2021 and 7 November 2021, the ONS COVID-19 Infection Survey estimated that 91.4% of the community population aged 16 and over in Wales tested positive for COVID-19 antibodies.

As at 27 November 2021, it is estimated that 99% of people aged 16 and over in Wales had some immunity against COVID-19 infection. The lower and higher estimates of immunity are 89% 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 99% 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.

The boosters administered in Wales closely follow the "2nd dose 7 months ago" line in the bottom left chart, although it has moved closer to "2nd dose 6 months ago" line in the past few weeks indicating faster booster rollout.

•
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 22: Vaccination and antibody status of individuals aged 16 and over in Wales

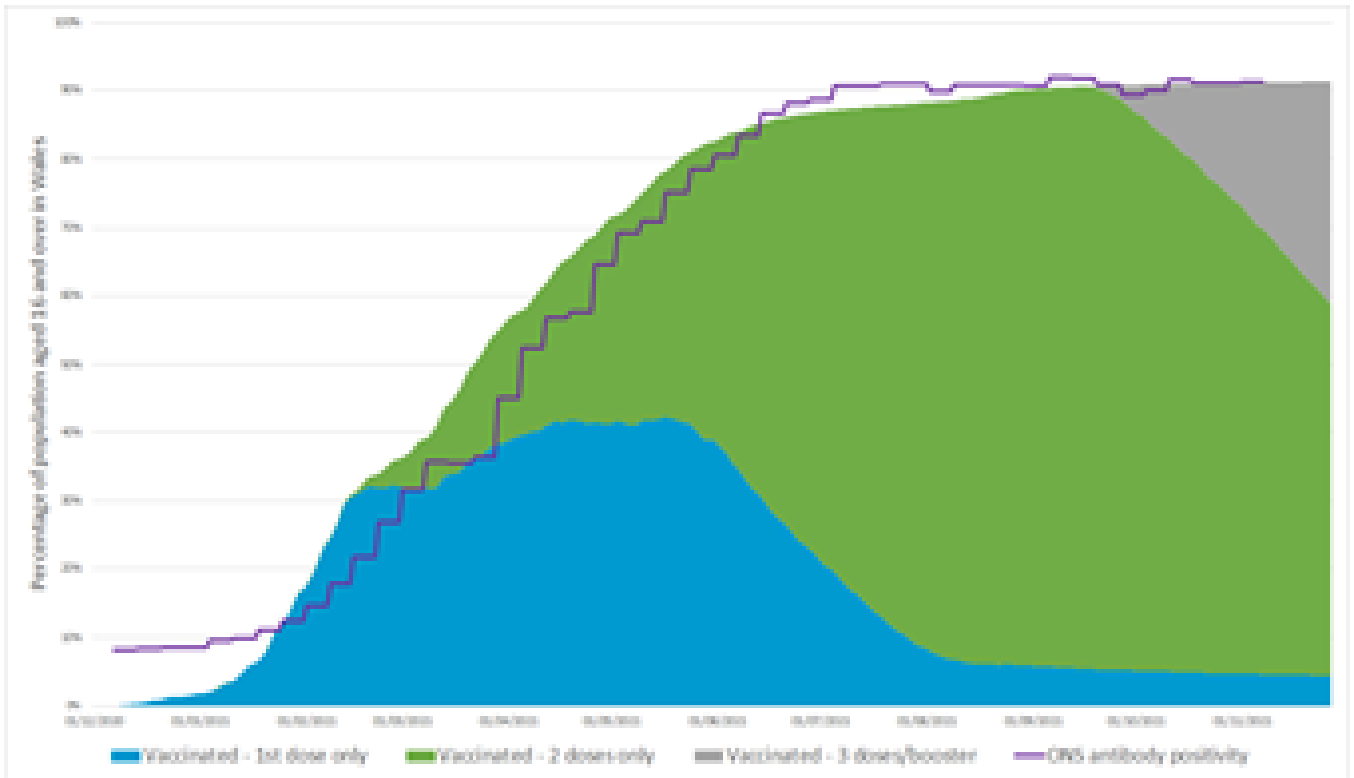
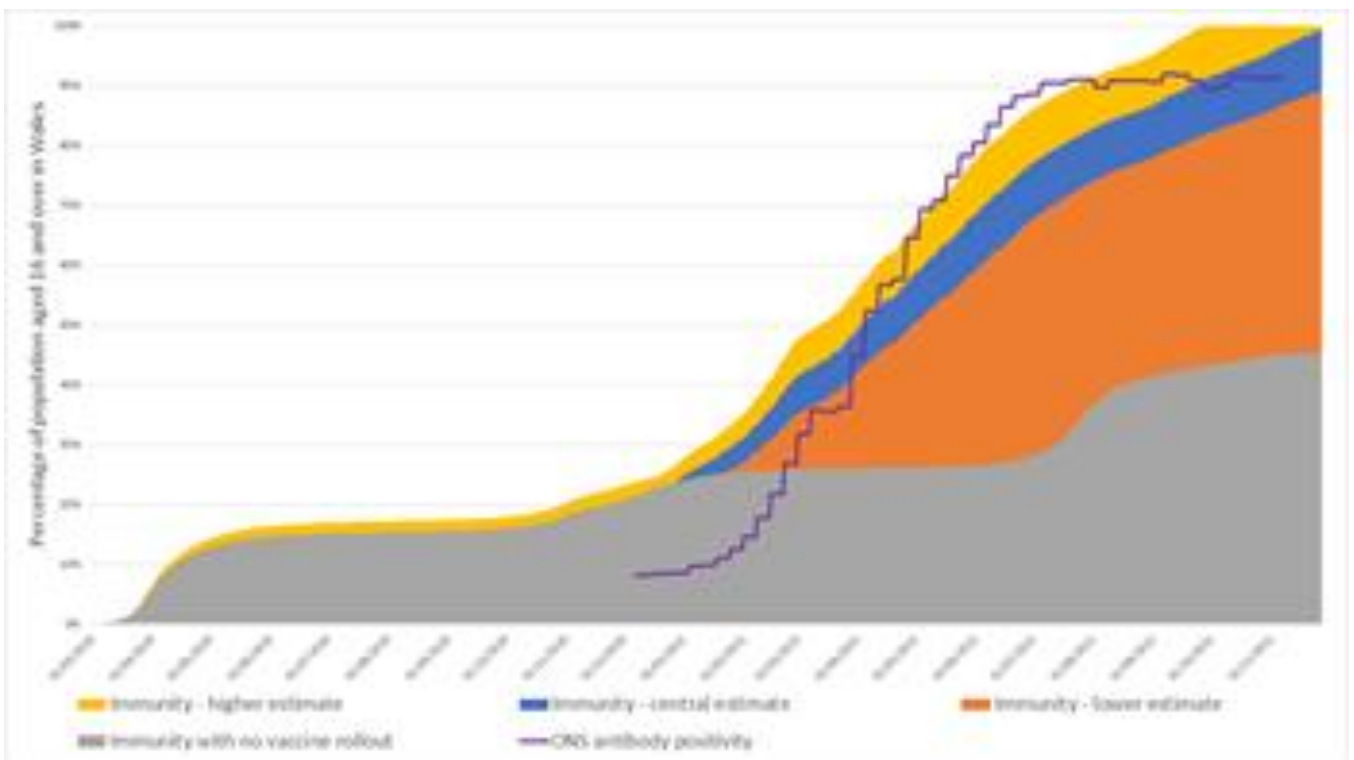


Figure 23: Immunity estimates and antibody status of individuals aged 16 and over in Wales



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 5 December – 11 December and 12 December – 18 December is above 80% for 1 of the 22 local authorities across both periods (Isle of Anglesey) and is above 80% for the first period in 1 other local authority (Gwynedd).** The figure illustrates the probability (between 0 – 100%) of incidence being greater than 500 per 100,000. *Source: Imperial College London*
- **Hospitalisations per day (bottom right) - projected to fall from around 30 to around 10 per day over the next three weeks (note confidence intervals).** Source: Modelled medium term projections, SAGE/SPI-M, 1 December
- **Number of deaths per day (bottom left) - due to an insufficient number of projections, SPI-M-O has been unable to produce consensus projections for deaths in Wales and Northern Ireland this week.**

These projections are based on current trends and will not fully reflect the impact of policy or behavioural changes over the past two or three weeks, nor the potential impact of the Omicron variant. These are not forecasts or predictions.

Figure 24: Probability of greater than 500 per 100,000 cases by local authority

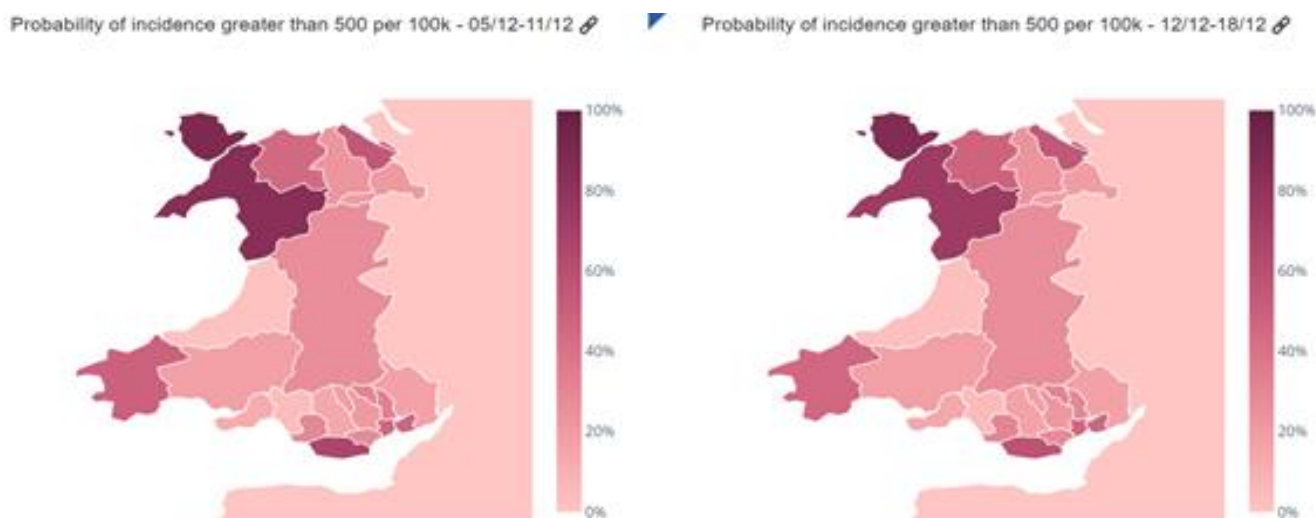
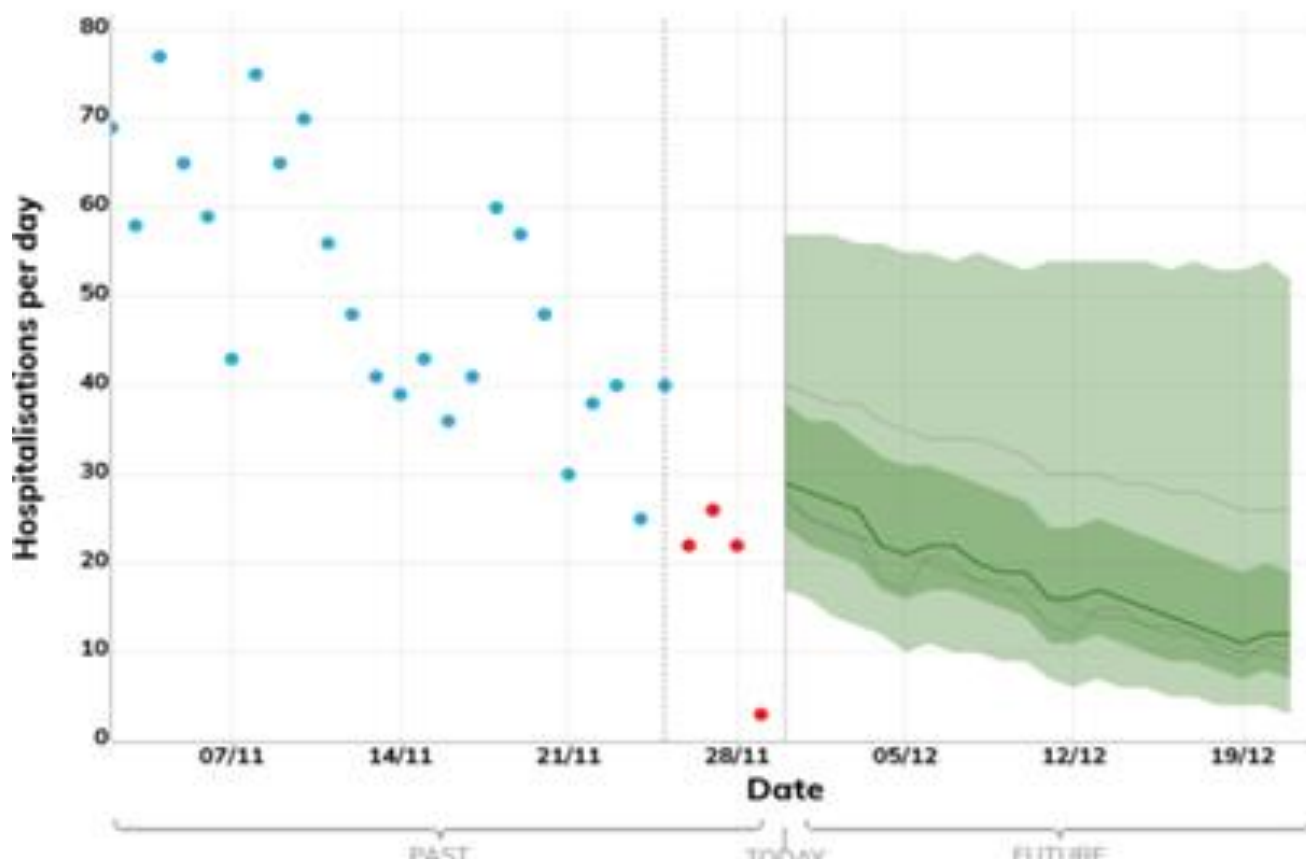


Figure 25: Number of new hospitalisations per day, Wales. As at SPI-M 1 December 2021



Number of deaths per day, Wales. As at SPI-M 1 December 2021

Due to an insufficient number of projections, SPI-M-O has been unable to produce consensus projections for deaths in Wales and Northern Ireland this week.

Area	Assessment
Transmission, incidence and prevalence	Overall cases of COVID-19 and test positivity rates are generally decreasing across Wales.
NHS Capacity	COVID-19 pressure on the NHS fluctuates. The number of hospitalisations has generally decreased throughout November and is currently at comparable levels to early April 2021. Non-COVID-19 urgent & emergency pressures continue to result in high levels of total hospital bed occupancy and combined with backlogs and staffing challenges, continues to constrain flow throughout the health and care system. There is the potential for significant harm in

Area	Assessment
	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 increased slightly in the last week.
Variants	Wales has had 75,673 (+4,519 compared to last week) confirmed cases of the dominant Delta variant, and 8,495 (+1,360 compared to last week) confirmed cases of AY4.2 VUI-21OCT-01. No other variants of concern were confirmed by genomic sequencing in Wales. Delta remains the dominant variant of COVID-19 in Wales. Omicron cases have been confirmed in the UK. At this stage there is not enough intelligence to characterise immune escape, transmissibility and severity.
Immunity and Vaccines	As at 30 November 2021, a total of 5,615,851 doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. <i>Source: PHW</i> 99% of those aged 16 and over in Wales were estimated to have some immunity against COVID-19 infection at 27 November 2021.
International	Arriving traveller numbers decreased this week. The proportion of travellers testing positive decreased, with numbers remained relatively low. Does not factor in Omicron

[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](#)