

COVID-19 Wales Situational Report

COVID-19 Intelligence Cell:
21 October 2021

Health Protection Advisory Group:
22 October 2021

Data as at 20 October 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 rates have increased across Wales, compared to last week. 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 0.9 and 1.1 and a doubling time of flat (as at 21 October 2021), while PHW's estimate is 1.15 with a doubling time of 20 days (21 October 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 20 October 2021, there were 726 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed (+78 compared to previous week), of which 520 were confirmed. As at 20 Oct 2021, there were 53 compared patients with Suspected or Confirmed COVID-19 in critical care beds in Wales; 111 lower than the maximum COVID-19 position of approximately 164. Non-COVID-19 urgent & emergency pressure is currently comparable to that we would experience at the height of winter.








As at 19 October 2021, Wales has had 50,649 confirmed cases of the dominant Delta variant (an increase of 6,560 from the previous week). No other variants of concern were confirmed by genomic sequencing in Wales. Source: PHW

As at 10pm 12 October 2021, a total of 4,654,507 (+19,492) doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. Of this, 2,418,115 (+14,904) were first doses and 2,236,392 (+4,588) were second doses. 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 (16/10/21)	Change since previous week (09/10/21 – 16/10/21 unless stated otherwise)	
		Percentage change	Value change
Confirmed case rate (rolling 7 day sum per 100k)	649	+22% 	(+116)
Confirmed case rate for over 60s (rolling 7 day sum per 100k)	295	+19% 	(+47)
Test positivity (7 day RA)	22%	+24.7% 	(+4.4 percentage points)
Population estimated to have COVID-19 (prevalence) ¹	2.31%	+6% 	(+0.13 percentage points)
NHS COVID-19 Admissions ²	57	+8% 	(+4)
ONS deaths (7 day sum) ³	57	-34% 	(-30)
PHW deaths (7 day sum)	63	+37% 	(+17)

Footnotes

1. Latest Covid Infection Survey data is taken from 10 October 2021 to 16 October 2021.
2. Seven day rolling average to the current date of confirmed COVID-19 admissions
3. Latest ONS deaths data is to 8 October 2021 (rather than 16 October 2021) for the current value. Data to 1 October 2021 is used for the change since previous week.

Data as at 12:00PM 20 October 2021 unless otherwise specified.

What is the current status of the epidemic?

The JBC consensus Reproduction number (R_t) estimate for Wales is between 0.9 and 1.1 (reported 21 October 2021), with daily growth rate of a flat doubling time.

Using PHW positive test data only (more timely data but limited by variation in testing), R_t is estimated to be 1.15 for Wales with a doubling time of 20 days (20 October 2021). The central R_t estimate is highest for the Aneurin Bevan Health Board at 1.4. *Source:*

JBC/PHW

The 7-day cumulative case incidence in Wales has increased by 22% to 651.9 per 100,000 population.

Case incidence is increasing in 17 of the 22 local authorities. Case incidence is above 500 per 100,000 population for 16 local authorities. Local authorities with the highest case incidences are Blaenau Gwent (1046.3), Torfaen (940.8), and Caerphilly (874.2) per 100,000 population, respectively.

Case incidence is increasing in all age groups, remaining highest in 10-19. Case incidence has increased in most Local Health Boards over the past few days. Case incidence is highest in Aneurin Bevan Health Board at 797 cases per 100,000 population as at 15 October 2021. There has been a significant increase in the case rate in the Aneurin Bevan LHB in the past 5 days to 15 October from 526 per 100,000 to 750 per 100,000.

Table 2 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 showing 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 R_t and halving times will be unstable when incidence is low.

Table 1: Cases per 100,000 population (7 day period ending 20 October 2021)

Local Authority	Number	% of All Wales Total	Case Incidence per 100,000	Incidence threshold reached	Change from previous week
Blaenau Gwent	731	3.60%	1046.3	50 or higher	177% ↑
Torfaen	884	4.30%	940.8	50 or higher	29% ↑
Caerphilly	1583	7.70%	874.2	50 or higher	44% ↑
Neath Port Talbot	1220	5.90%	851.3	50 or higher	55% ↑
Vale of Glamorgan	1101	5.40%	824.2	50 or higher	15% ↑
Cardiff	2938	14.30%	800.8	50 or higher	14% ↑
Pembrokeshire	955	4.60%	759	50 or higher	29% ↑
Newport	1121	5.50%	724.7	50 or higher	62% ↑
Monmouthshire	657	3.20%	694.6	50 or higher	61% ↑
Rhondda Cynon Taf	1583	7.70%	656.1	50 or higher	34% ↑
Merthyr Tydfil	387	1.90%	641.5	50 or higher	80% ↑
Denbighshire	585	2.80%	611.3	50 or higher	13% ↑
Carmarthenshire	1144	5.60%	606	50 or higher	-4% ↓
Powys	786	3.80%	593.5	50 or higher	20% ↑
Swansea	1356	6.60%	549	50 or higher	1% ↑
Isle of Anglesey	367	1.80%	524	50 or higher	5% ↑
Bridgend	724	3.50%	492.4	50 or higher	23% ↑
Gwynedd	557	2.70%	447.2	50 or higher	7% ↑
Conwy	463	2.30%	395	50 or higher	-7% ↓
Wrexham	523	2.50%	384.7	50 or higher	-5% ↓
Flintshire	579	2.80%	370.9	50 or higher	-11% ↓
Ceredigion	257	1.30%	353.5	50 or higher	-9% ↓
Unknown	52	0.30%	-		-15% ↓
Total	20553	100.00%	651.9	50 or higher	22% ↑

Figure 1: Cases per 100k (PHW Data) (7 day rolling sum to 20th Oct)

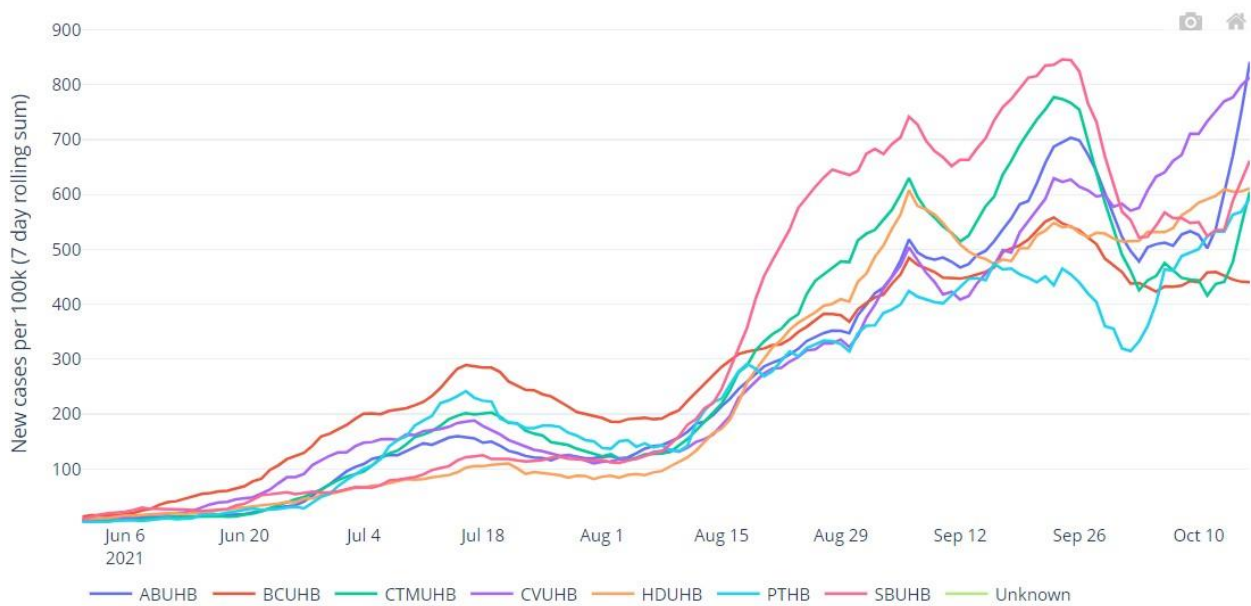


Figure 2: Cases per 100k by age (PHW Data) (7 day rolling sum to 20th Oct)

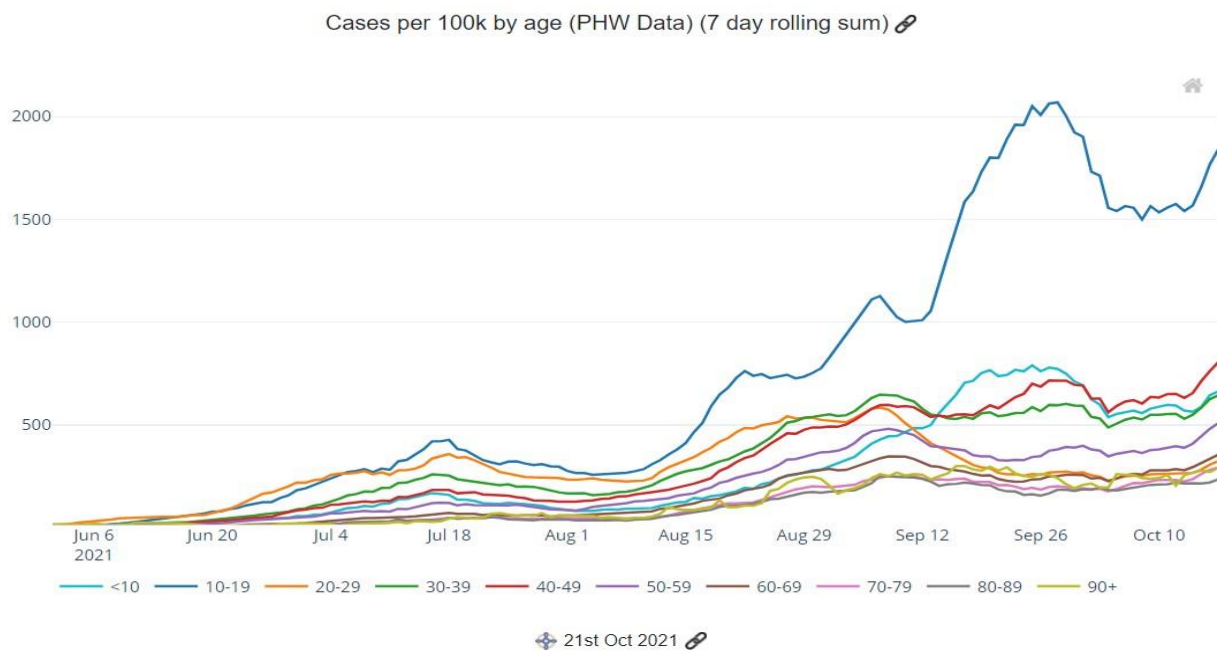


Table 2: Reproduction number and doubling time (PHW methodology) PHW data by Local Health Board (20 October 2021 estimate)

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)	1.15 (1.15 to 1.15)	1.15 (1.1 to 1.2)	1.25 (1.2 to 1.3)	1.4 (1.4 to 1.45)	1.1 (1.05 to 1.15)	1.05 (1.0 to 1.05)*	1.1 (1.05 to 1.2)*	1.0 (0.95 to 1.0)
Doubling time (days)	20 (11 to 126)	27 (11 to – 52)	18 (8 to – 91)	12 (7 to 37)	18 (9 to 317)	41 (18 to – 167)*	20 (9 to – 122)*	70 (17 to –34)

What is the situation with the NHS and social care?

From early July 2021 to mid-September 2021, COVID-19 pressure on the NHS generally increased. Over the latest week, after a period of stabilisation, **the number of beds occupied with confirmed and recovering COVID-19 patients has generally increased whilst the number of suspected COVID-19 patients fluctuates.** As at 20 October 2021, there were 726 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed. This compares to 648 (78 more occupied beds) on 13 October 2021. Confirmed patients accounted for 520 of the total occupied beds.

There are 53 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales. This is 111 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 176, 24 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 11 October to 17 October 2021, IMTs reported 86 care homes in 'red' status (an ongoing outbreak/incident reported in last 7 days) last week, compared to 131 in

the previous week. 1 health board reports having no care homes in 'red' status. Source: National SBAR.

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

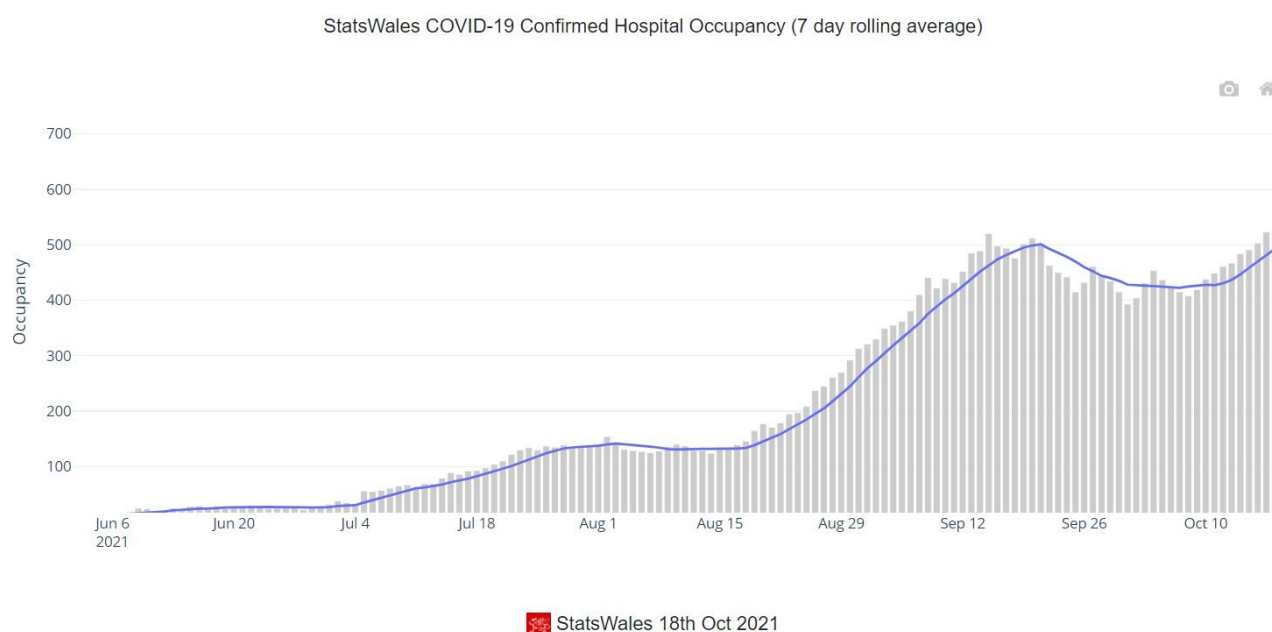


Figure 4: Overall invasive ventilated bed occupancy (7 day rolling average)

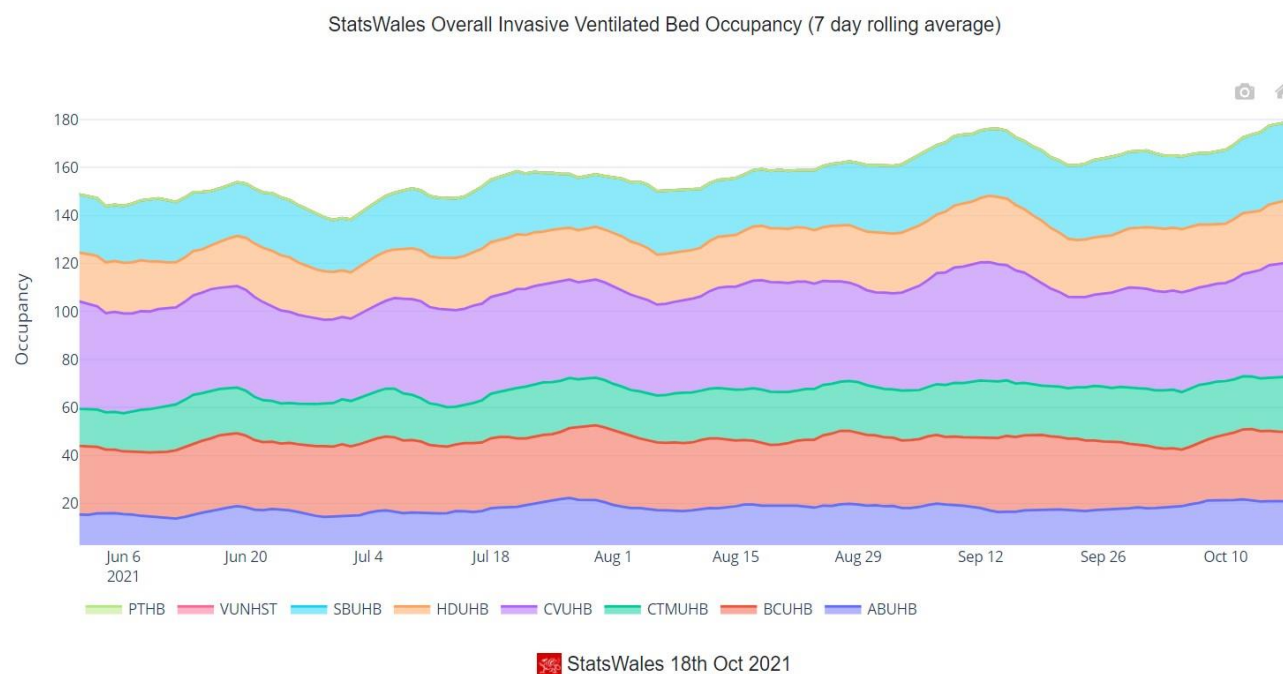


Figure 5: Number of adult care homes reporting an ongoing outbreak / incident in the last 7 days

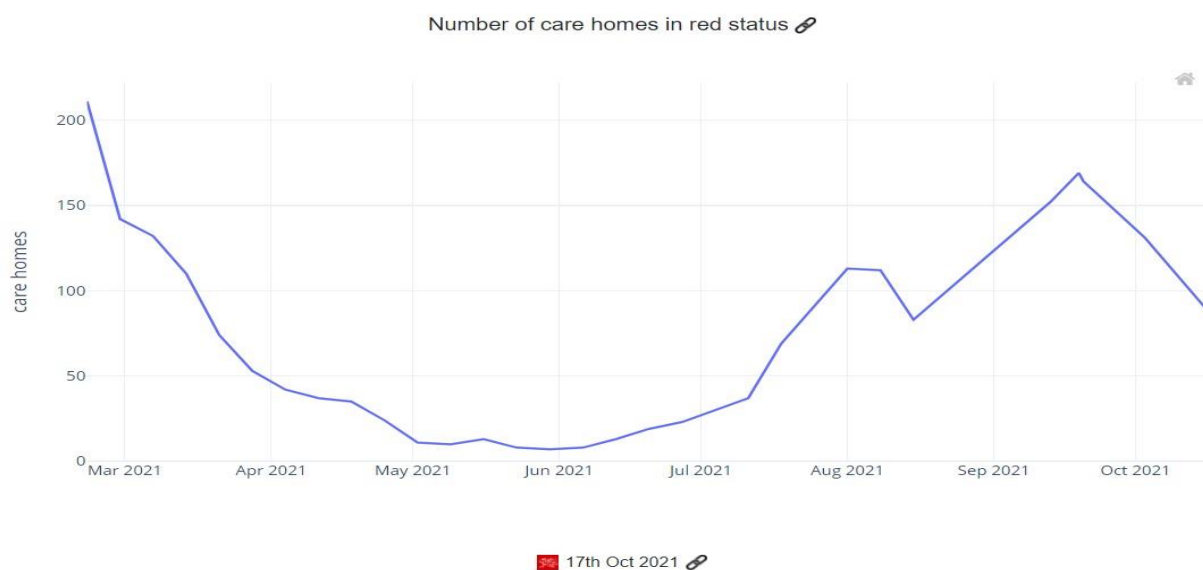


Figure 6: Hospital bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)

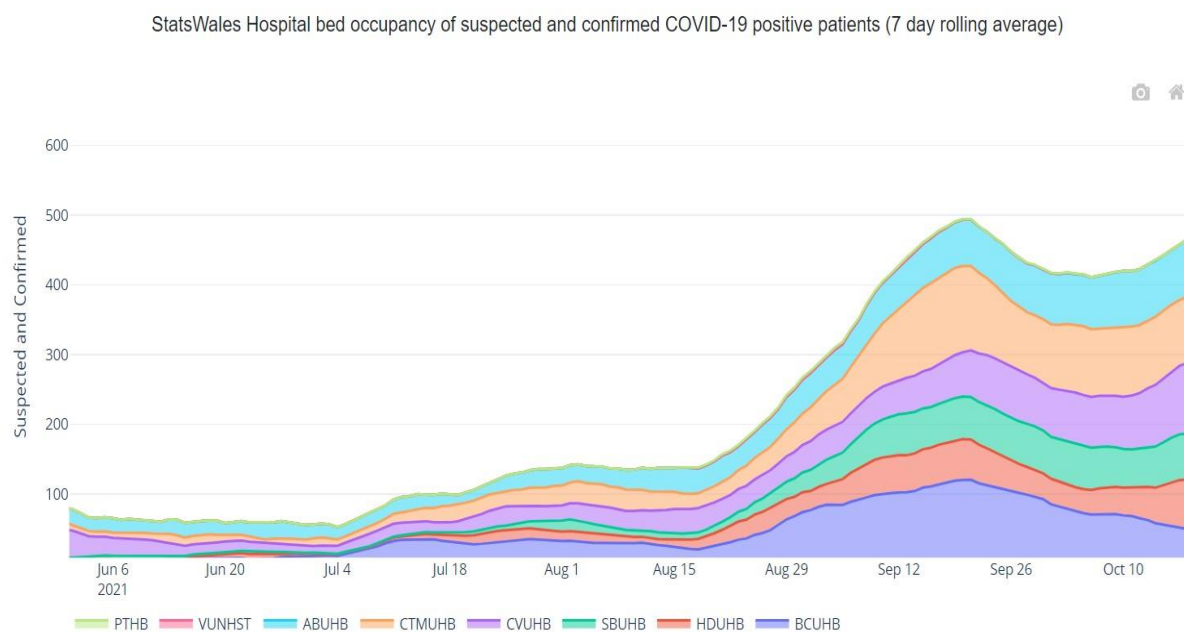
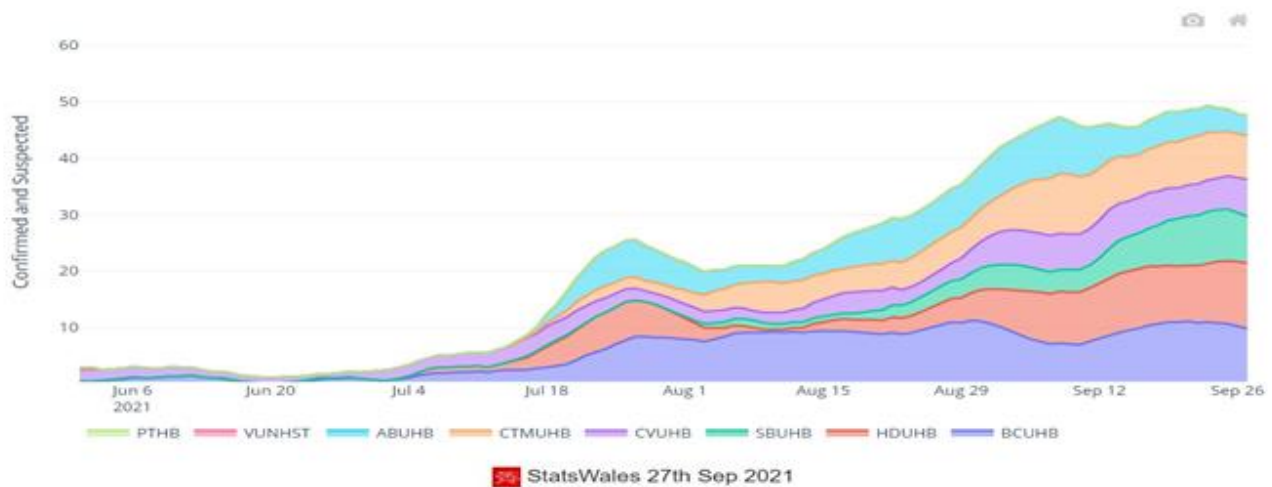


Figure 7: Invasive ventilated bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)



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

School attendance

For the week 11 October - 15 October an average of 88% of all pupils were present in school, up from 87.3% the week before. This data is provisional.

In the same time period 1.5% of pupils were absent due to a known C-19 related reason, with an average of 1.4% of all primary and 1.6% of all secondary pupils absent for this reason. **Source Stats Wales, Schools in Wales**

Schools

The latest National Situation Background Assessment Recommendation (NSBAR) for the week 11 –17 October has reported 50* new clusters compared to 25 the previous week. IMTs reiterate difficulties in capturing reliable data on the number of school related clusters. It is likely that cluster numbers are higher than those reported. Community transmission remains widespread so whilst there is some evidence of in-school transmission, the majority are still likely associated with social interaction outside the school setting, household transmission and extra-curricular activities.

Childcare settings

The latest NSBAR reported nothing significant for this sector, with no new and 17* ongoing clusters in childcare settings last week.

Further Education (FE) Higher Education Institutions (HEIs)

According to the latest SBAR there were no new and 4* ongoing clusters reported in FE last week compared with no cases the previous week. In HE there were no new and 1* ongoing cluster reported last week compared to 2 new and 12 ongoing clusters the previous week. *Source National SBAR*

**Figures do not include data from 2 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

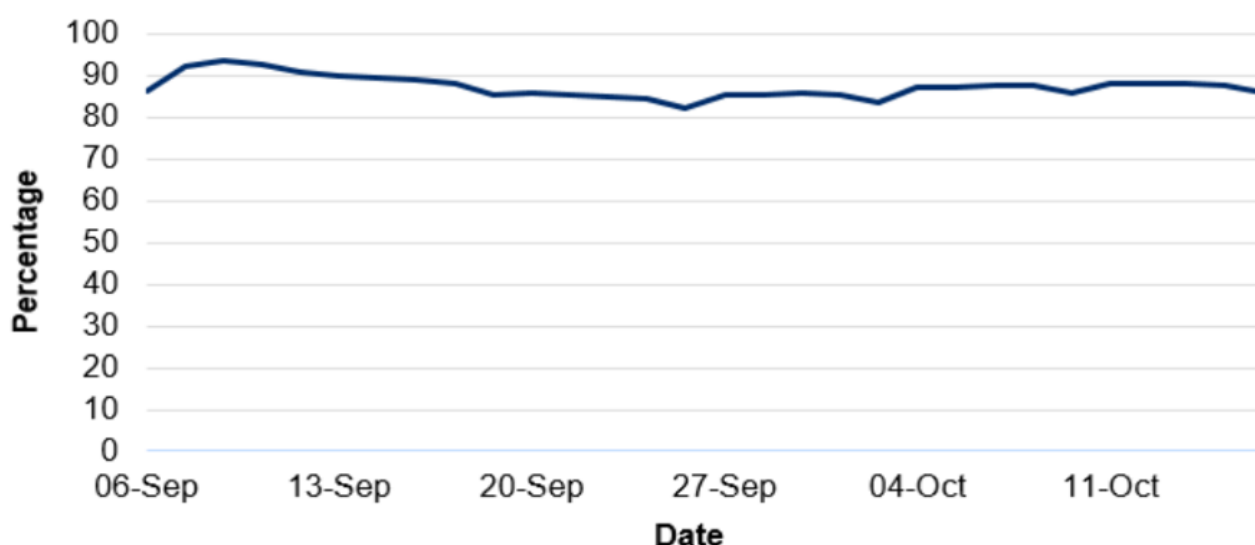


Figure 9: Percentage pupils by number of days missed due to COVID-19 related reason and all reasons, 12th Apr – 15th Oct

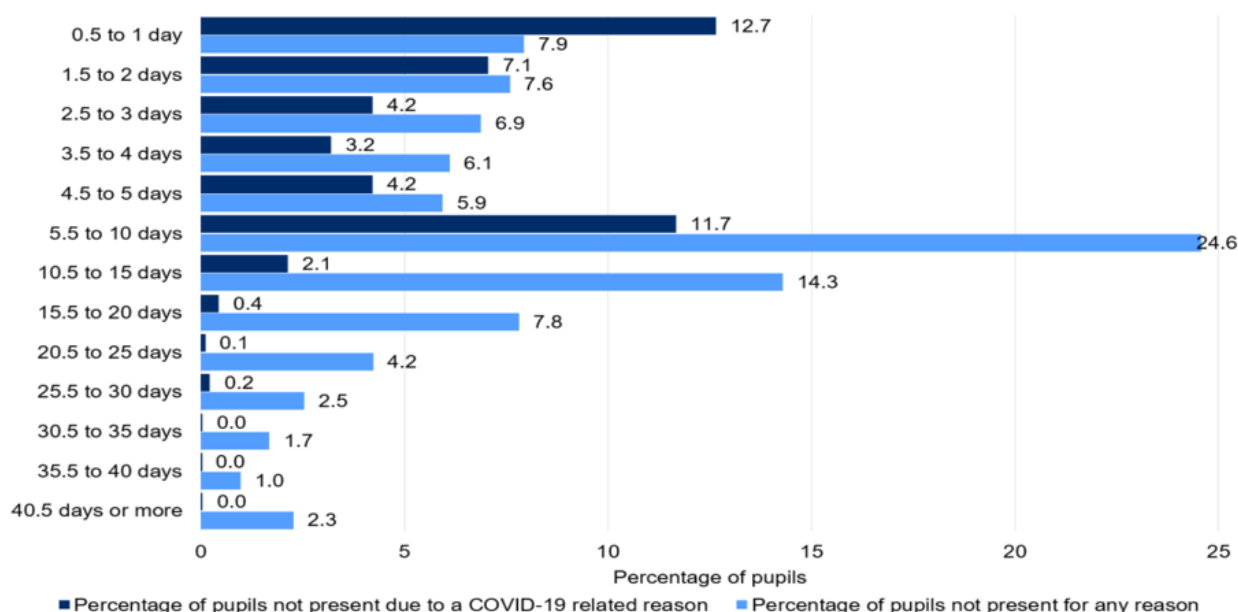


Figure 10: Absence due to COVID-19 by day and phase, 13th September – 15th October

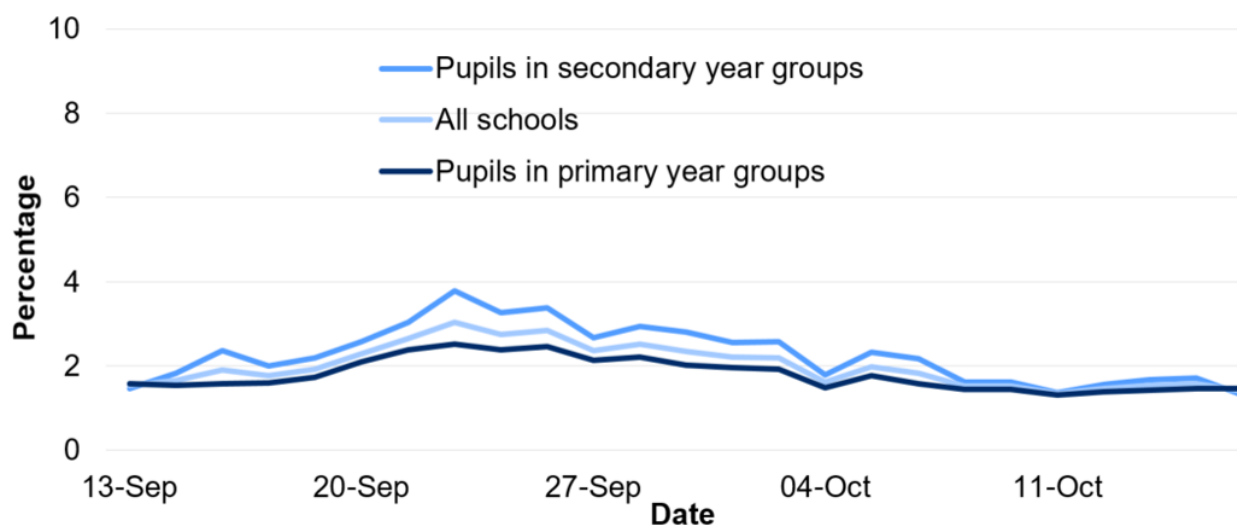


Figure 11: Weekly Covid-19 Incidence per 100k population in school aged children as at 1pm 20th October

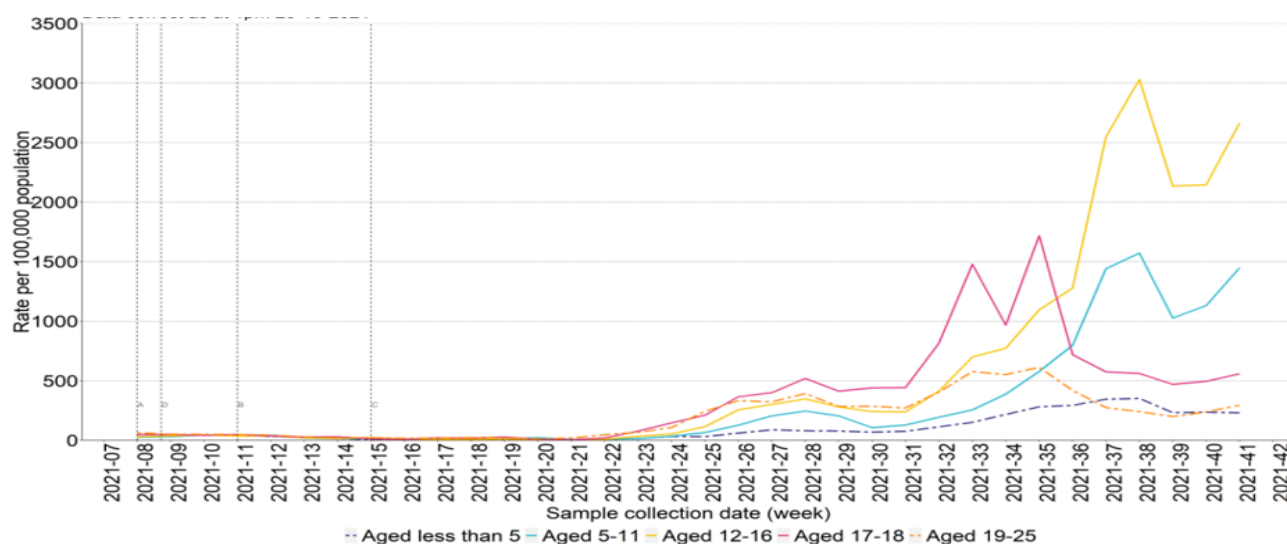
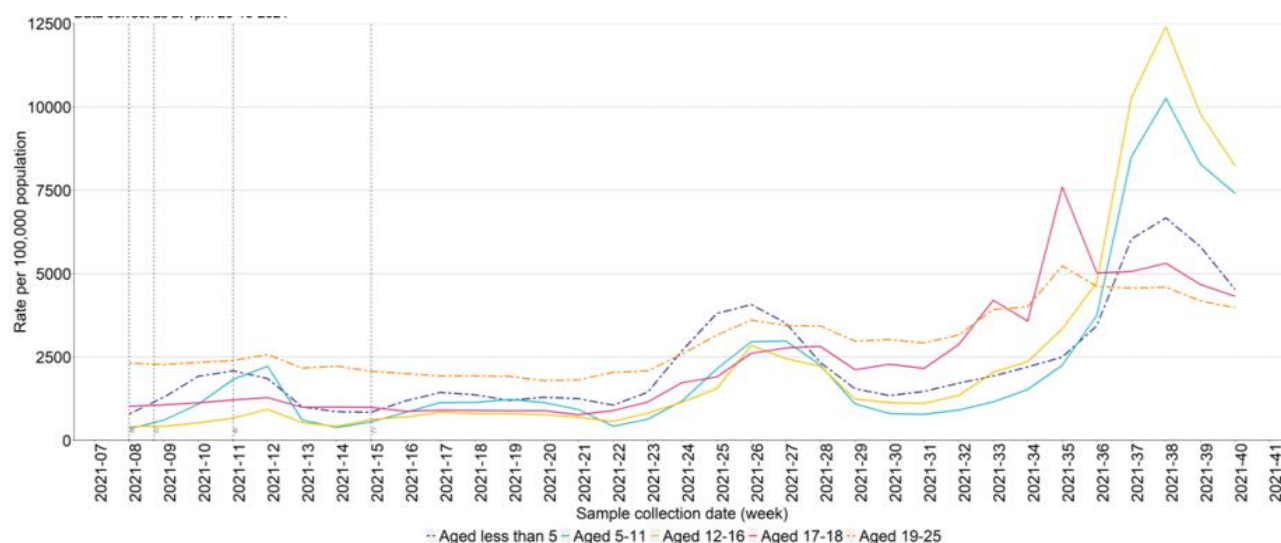


Figure 12: Weekly Testing Incidence per 100k population in school aged children as at 1pm 20th October



Wastewater Monitoring for Covid-19 (Pilot)

In the week ending 15 October 2021 the mean wastewater signal for Wales remains high but there are early signs of stabilisation across South Wales. The sharp fall observed in the population-weighted mean must be treated with caution.

The South Wales trend over the last few weeks indicated a peak in the population-weighted mean wastewater signal. The most-recent week's decline is due to a decrease in wastewater signal within the Cardiff catchment, which serves around one third of the monitored population in Wales. Other sites across South Wales have also seen a decline in wastewater signal during this period. The trend in normalised wastewater SARS-CoV-2 signal over the past 3-4 weeks has stayed fairly stable across North Wales WwTW sites with a modest increase in signal being reported this week.

Sites on the watchlist (those with a marked increase in wastewater signal or divergence from PHW reported COVID-19 case data) include most of the sites across Wales with the exception of Llandudno, Barry and Llanelli.

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.



Table 3: Changes in mean normalised SARS-CoV-2 signal by catchment. Means taken over each of the last two weeks for each catchment; third column shows the fold change in these means. Colours and arrows indicate direction of change.

		Mean normalised SARS-CoV-2 signal		Fold change	
		02 Oct 2021 to 08 Oct 2021	09 Oct 2021 to 15 Oct 2021	Mean normalised SARS-CoV-2 signal	Trend
North Wales	Bangor (Treborrh)	0.4	0.8	1.9	↑
	Chester	0.4	1.2	3.1	↑
	Flint	0.0	1.4	33.0	↑
	Holyhead	0.1	0.0	0.0	↓
	Llandudno (Ganol)	1.7	0.9	0.5	↓
	Llangefni	0.1	0.4	3.1	↑
	Rhyl (Kinmel Bay)	0.3	1.4	4.1	↑
	Wrexham	0.4	0.9	2.0	↑
South Wales	Abergavenny (Llanfoist)	87.2	54.2	0.6	↓
	Bridgend (Merthyr Mawr)	92.0	20.5	0.2	↓
	Cardiff	210.9	42.8	0.2	↓
	Carmarthen (Parc Y Splotts)	105.3	58.5	0.6	↓
	Cowbridge (Cog Moors)	91.3	62.5	0.7	↓
	Cwmbran (Ponthir)	84.9	31.0	0.4	↓
	Haverfordwest (Merlin's Bridge)	39.7	68.0	1.7	↑
	Llanelli	100.2	47.5	0.5	↓
	Merthyr Tydfil (Cilfynydd)	81.7	28.9	0.4	↓
	Newport	90.5	37.1	0.4	↓
	Swansea (Gowerton)	83.7	32.7	0.4	↓
	Swansea (Swansea Bay)	92.1	34.2	0.4	↓

b: Samples not available

Fold change calculated as the ratio between the measurement from the most-recent week (B) and that of the preceding week (A), i.e. B/A.

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.

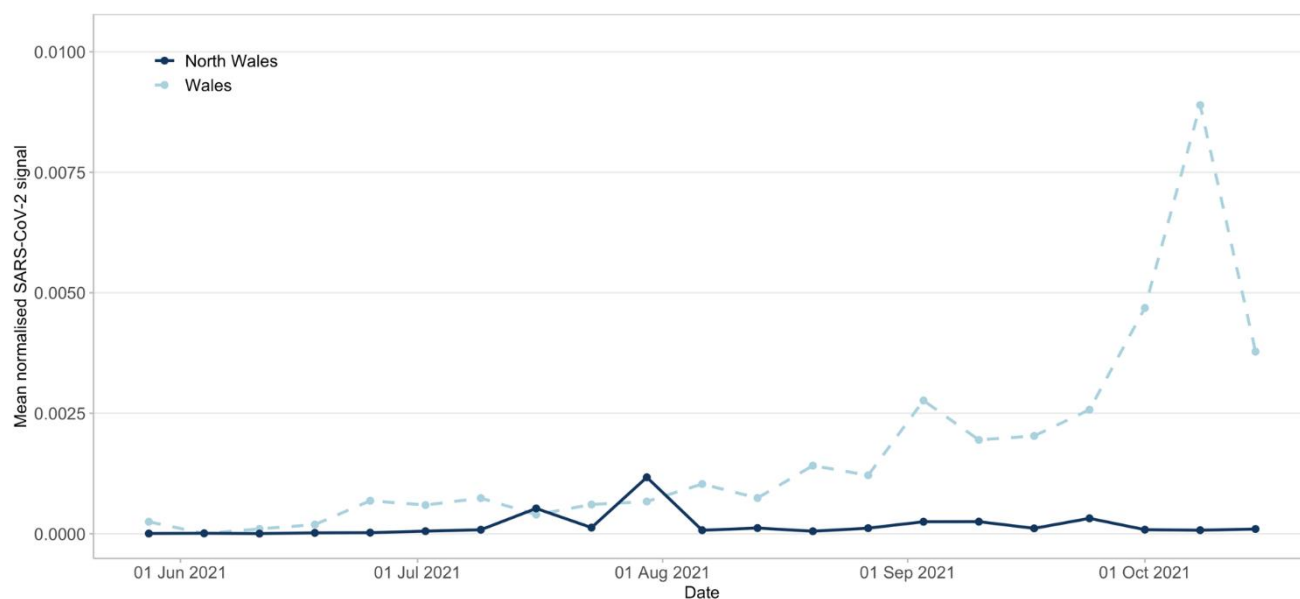
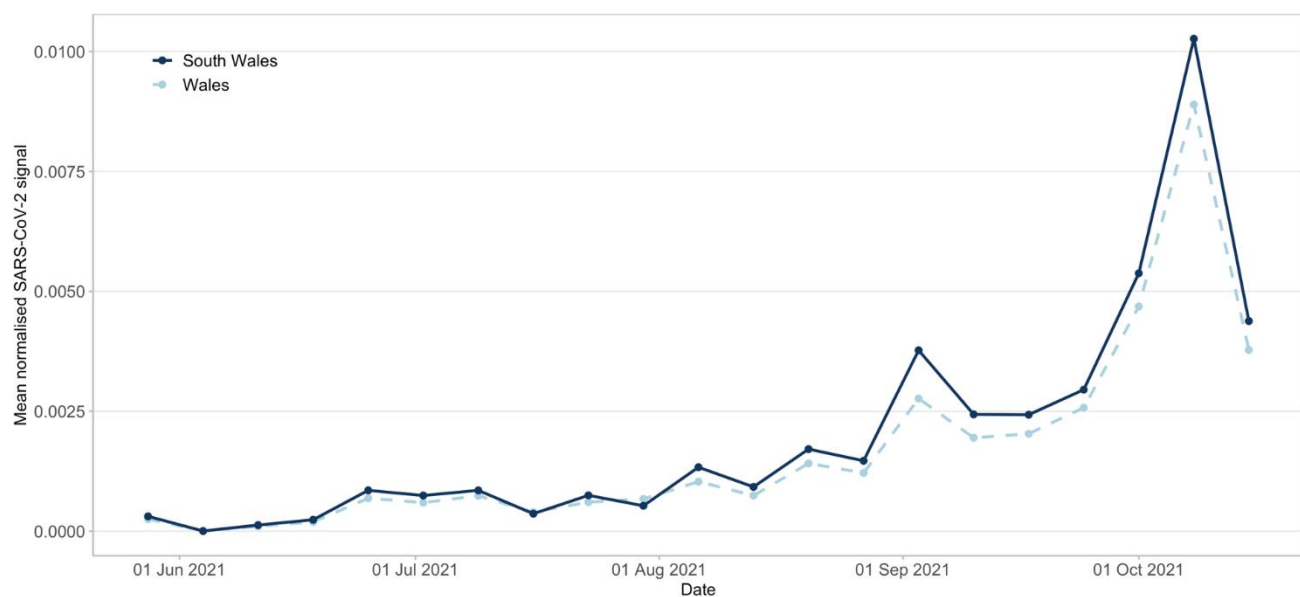


Figure 125: Weekly comparison of South and all-Wales mean normalised SARS-CoV-2 signal. All-Wales mean signal (dashed line) and South Wales mean signal (solid line). Data to 15 Oct 2021.



What is the situation with arriving travellers?

To date, there have been 126 positive travellers (0.48% positivity), compared to 65 for the previous week (0.28% positivity) at time of reporting.

Spain continues to provide the greatest number of travellers – there was an increase of 6.9% compared to the previous week. There were also increases seen in travellers from Portugal (+34.3%), Germany (24.6%), Netherlands (62.6%), and Estonia (710 arrivals) following an international football match in midweek.

25,985 total arrivals for the week (22,924 last week; +13.4%)

- Red: 18 (30 last week)
- Amber/Rest of world: 25,967 (22,894 last week)

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

Figure 136: Arriving Travellers Summary Data to 14Oct 2021.



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

Figure 147: Positive travellers timeline



Figure 18: Positive travellers this week by country

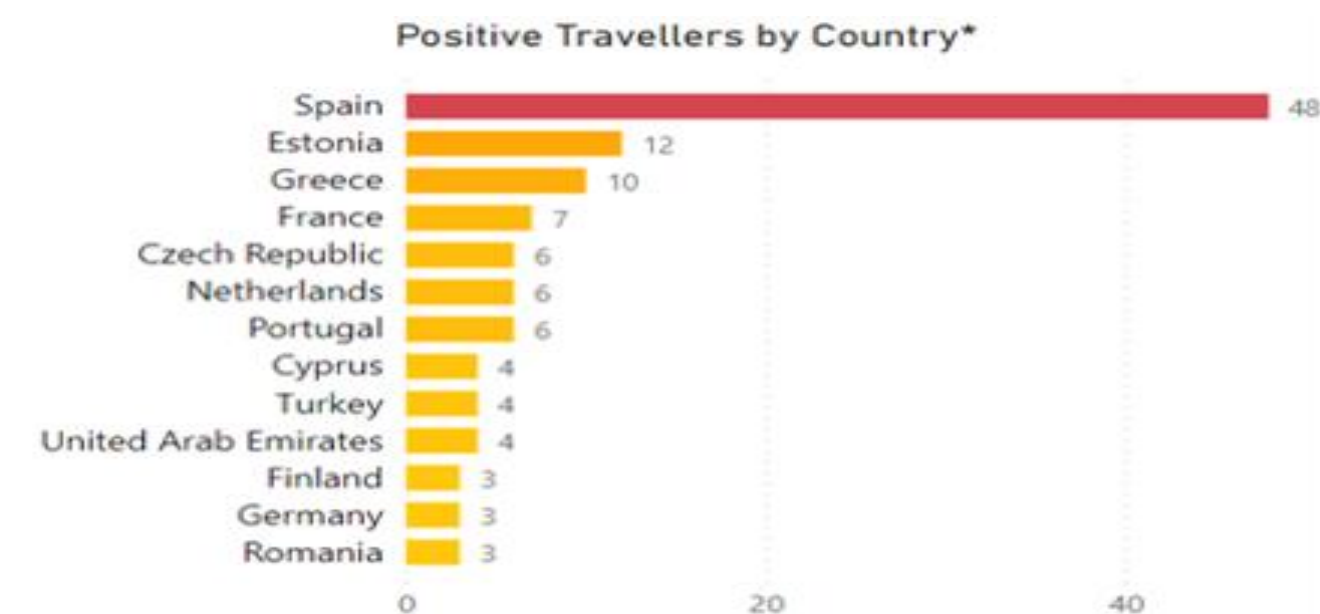
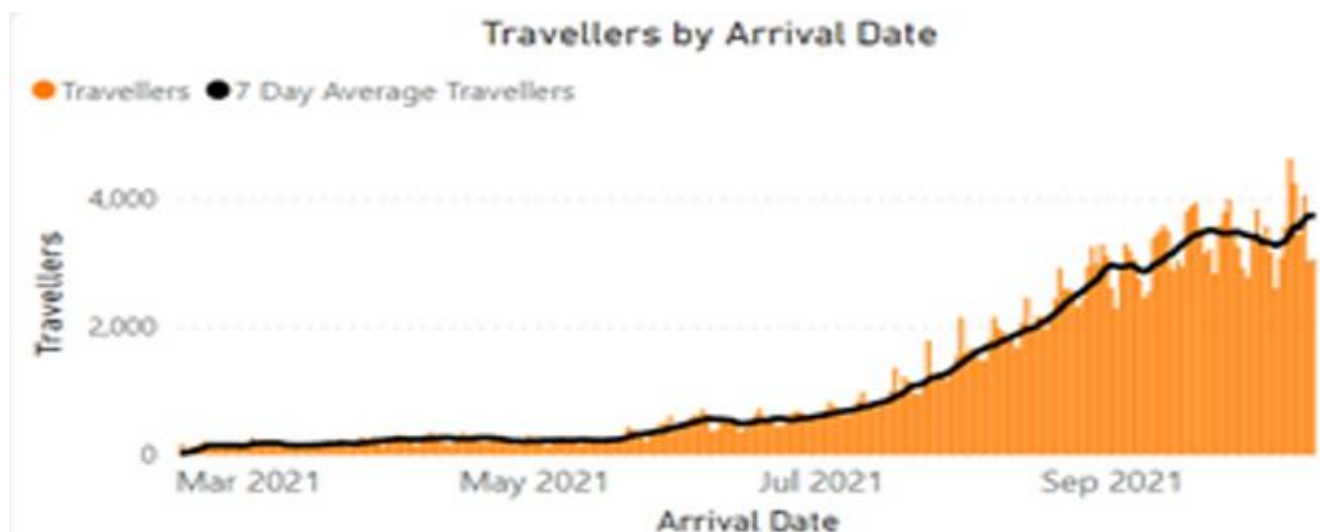


Figure 19: Arriving travellers timeline



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 mobility for parks, supermarkets & pharmacy, public transport and retail and recreation in the latest week compared to the previous week. However Residential variable has registered a decrease in mobility compared to 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 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 England and over the most recent two weeks in Wales. In Scotland, the percentage of people testing positive decreased in the most recent week, whilst there was a decrease over the most recent two weeks in Northern Ireland.

ONS estimate that 70,300 people in Wales had COVID-19 (95% credible interval: 57,800 to 84,400), equating to around 1 in 45 people. This compares to around 1 in 55 people in England, around 1 in 130 in Northern Ireland and around 1 in 90 people in Scotland.

Source: [Office for National Statistics COVID-19 Infection Survey](#)

Figure 15: Mobility data by location of trip – Average of Welsh local authorities

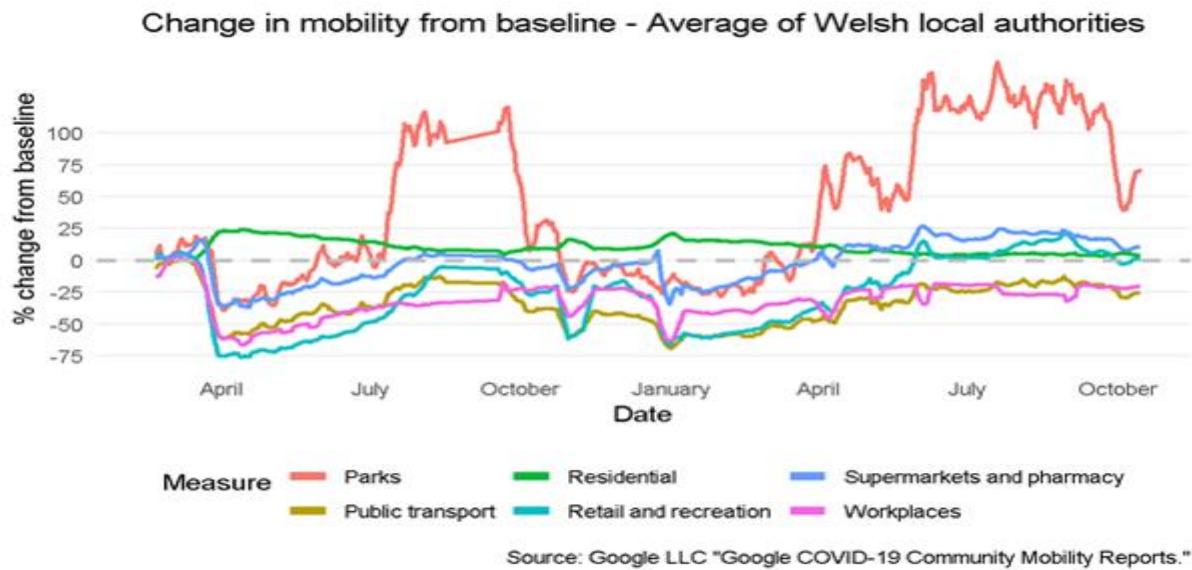
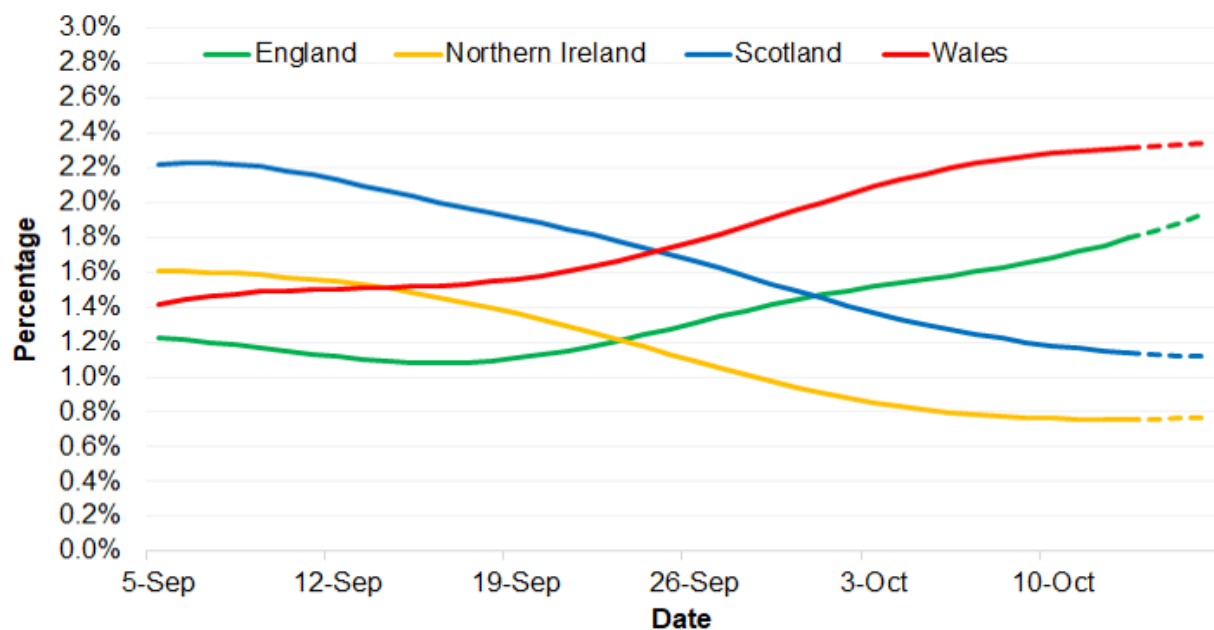


Figure 16: Positivity rates (%) across UK nations up to 29 September



Vaccine and Immunity Status

The COVID-19 vaccination rollout of first and second doses has slowed in Wales. As at 2 October 2021, 91% of people aged 16 and over had received at least one COVID-19 vaccine dose in Wales. 5% of people aged 16 and over had exactly one vaccine dose and 86% were fully vaccinated.

Between 23 and 29 August 2021, the ONS COVID-19 Infection Survey estimated that 91.2% of the community population aged 16 and over in Wales tested positive for COVID-19 antibodies.

As at 16 October 2021, it is estimated that 91% of people aged 16 and over in Wales had some immunity against COVID-19 infection. The lower and higher estimates of immunity are 82% and 100% of people aged 16 and over in Wales. If no vaccines had been administered, it is estimated that 44% of people aged 16 and over would be immune.

It is currently estimated that over 80% (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 account for waning immunity.

Figure 17: Vaccination and antibody status of individuals aged 16 and over in Wales

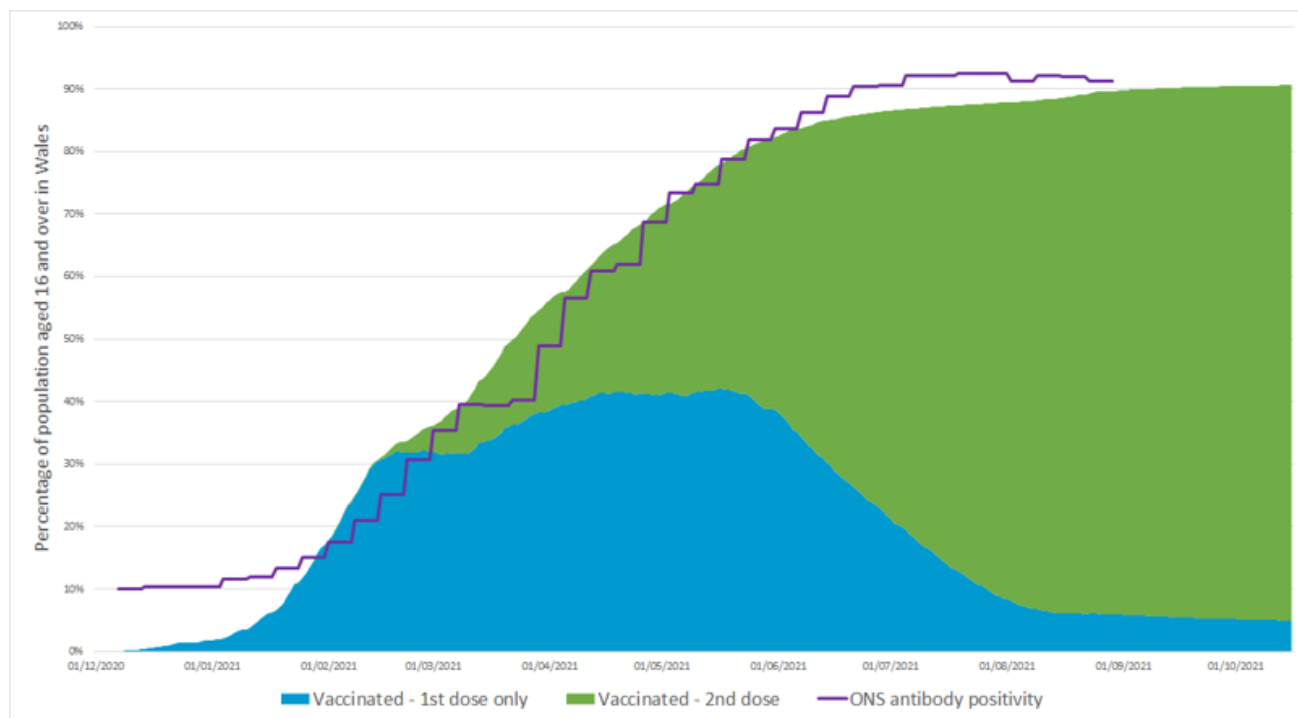
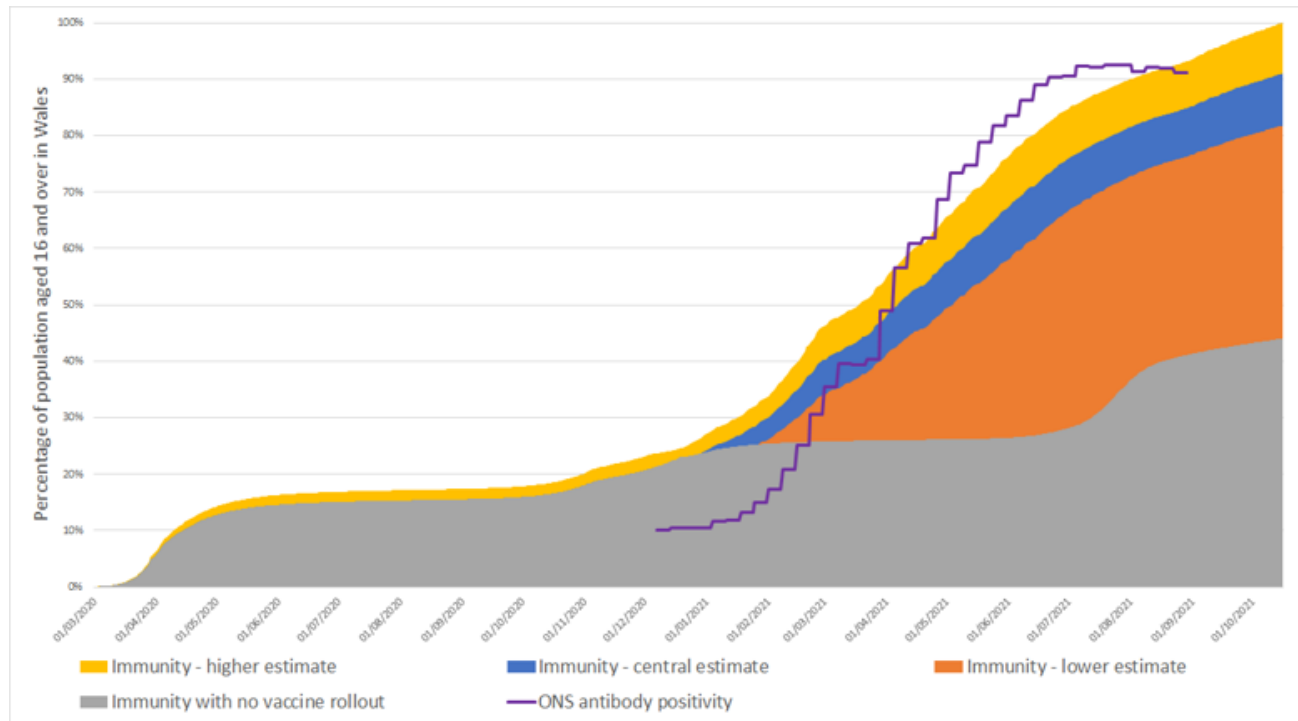


Figure 18: Immunity estimates and antibody status of individuals aged 16 and over in Wales



What does the situation look like going forward?

Based on the current rates observed with current restrictions:

- **Cases** – the probability of incidence reaching greater than 500 per 100,000 between 24 - 30 October and 31 October – 6 November is at or above 80% for 9 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

UKHSA estimates that 43,000 people may have been given incorrect PCR test results between 2nd September and 17th October, mostly in the South West of England. As a result, the recent trajectory of the epidemic is less clear and the uncertainty around SPI-M-O's medium-term projections is larger than usual.

- **Deaths per day** – projected to reduce over the next three weeks. Source: Modelled medium term projections, *SAGE/SPI-M, 20th October*
- **Hospitalisations per day** - projected to reduce over the next three weeks. Source: Modelled medium term projections, *SAGE/SPI-M, 20th October*

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

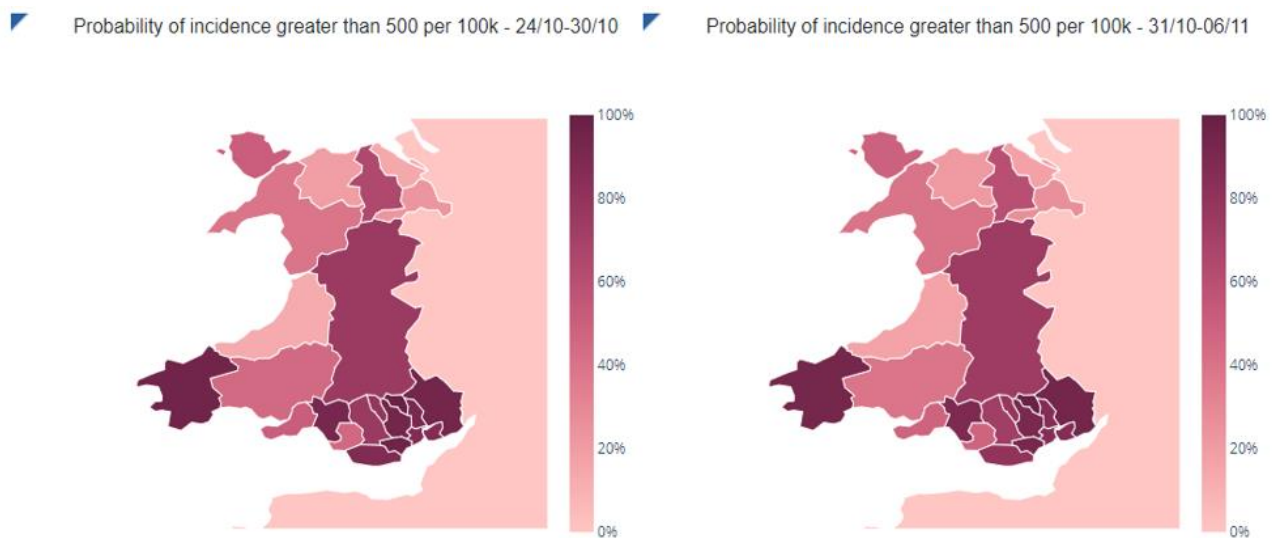


Figure 29 - Imperial College London 18th Oct 2021

Figure 30 - Imperial College London 18th Oct 2021

Figure 205: Number of deaths per day, Wales - as at 27 September 2021

WALES

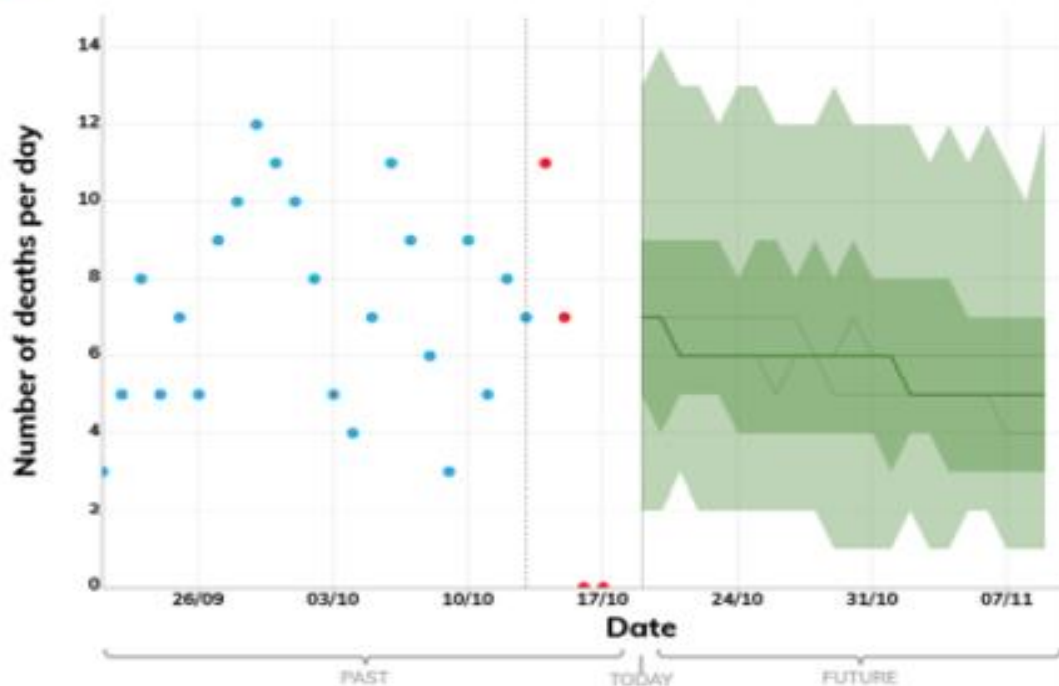
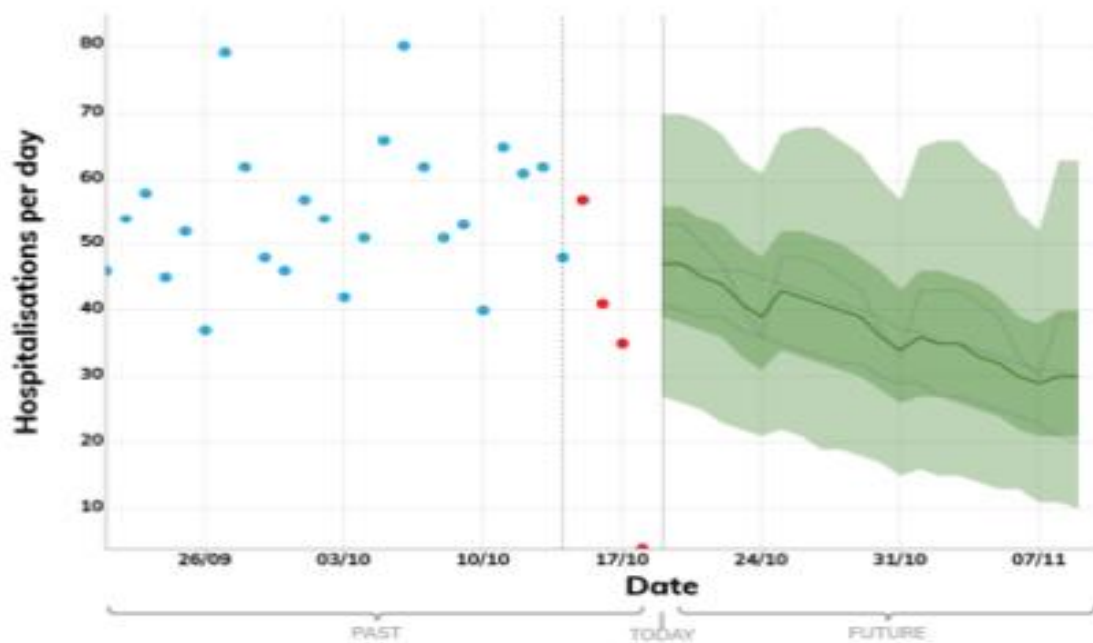


Figure 216: Number of new hospitalisations per day, Wales - as at 27 September 2021

WALES



Key risks and sources

Key risks

Area	Assessment
Area	Assessment
Transmission, incidence and prevalence	Overall cases of COVID-19 and test positivity rates have increased 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 remain low and stable in the last week.
Variants	Wales has had 50,649 confirmed cases of the dominant Delta variant (an increase of 6,560 from the previous week). Delta remains the dominant variant of COVID-19 in Wales.
Immunity and Vaccines	4,654,507 (+19,492) doses of COVID-19 vaccine have been given in Wales and recorded in the COVID-19 Welsh Immunisation System. 91% of those aged 16 and over in Wales were estimated to have some immunity against COVID-19 infection at 2nd October 2021.

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](#)