



# COVID-19 Wales Situational Report

## COVID-19 Intelligence Cell

COVID-19 Intelligence Cell: 16 September 2021  
Health Protection Advisory Group: 17 September 2021

Data as at 15 September 2021 unless otherwise specified

# Slide 2. COVID-19 Situation Report Summary

## Key points to note

Wales moved to [Alert Level 0](#) on 7 August 2021.

**Overall cases of COVID-19 remains high across Wales, with test positivity continuing to decrease for a second week.** The rate of growth has decreased over the past few weeks, with doubling time increasing from 8.6 days on 24 Aug 2021, to 24.0 days on 5 Sep 2021. However, this has reduced to 18.9 days on 7 Sep 2021. We will need to monitor case rates and other key indicators in each nation carefully to better understand the impact of easements of restrictions and return of schools.

**The JBC consensus estimate of the reproduction number for Wales is between 1.0 and 1.2 (as at 15 September 2021), while PHW's estimate is around 1.0 (15 September 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*

**Hospital bed and ICU occupancy has been general increasing in all health boards across Wales.** As at 15 September 2021, there were 668 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed (+115 since previous week), of which 520 were confirmed. There are 47 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales; 117 lower than the maximum COVID-19 position of approximately 164.

**As at 14 September 2021, Wales has had 24,568 confirmed cases of the dominant Delta variant (an increase of 3,283 from the previous week), and 12,468 cases of Alpha variant (an increase of 2 from the previous week).** No other variants of concern were confirmed by genomic sequencing in Wales. Data regarding vaccine status of cases and hospitalisations is currently being amended by Public Health Wales and so is not available. *Source: PHW*

**As at 10pm 15 September 2021, a total of 4,574,822 (+17,124) doses of COVID-19 vaccine were given in Wales** and recorded in the COVID-19 Welsh Immunisation System. Of this 2,369,721 (+6,098) were first doses and 2,205,101 (+21,445) were second doses. *Source: PHW*

## Key indicators

Several key indicators have increased since the previous week, but case rate and test positivity are showing early signs of decreases.

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

	Current value (11/09/21)	Change since previous week (04/09/21 – 11/09/21 unless stated otherwise)	
		Percentage change	Value change
Confirmed case rate (rolling 7 day sum per 100k)	489	-3%	↓ (-13)
Confirmed case rate for over 60s (rolling 7 day sum per 100k)	289	+19%	↑ (+46)
Test positivity (7 day RA)	17.0%	-11%	↓ (-2.1 percentage points)
Population estimated to have COVID-19 (prevalence) <sup>1</sup>	1.62%	+5%	↑ (+0.08 percentage points)
NHS COVID-19 Admissions <sup>2</sup>	49	+12%	↑ (+5)
ONS deaths (7 day sum) <sup>3</sup>	39	+95%	↑ (+19)
PHW deaths (7 day sum)	48	+41%	↑ (+14)

## Footnotes

1. Latest Covid Infection Survey data is taken from 05 September 2021 to 11 September 2021.
2. Seven day rolling average to the current date of confirmed COVID-19 patients – does not include COVID-19 suspected or recovering.
3. Latest ONS deaths data is to 3 September 2021 (rather than 11 September 2021) for the current value. Data to 27 August 2021 is used for the change since previous week.

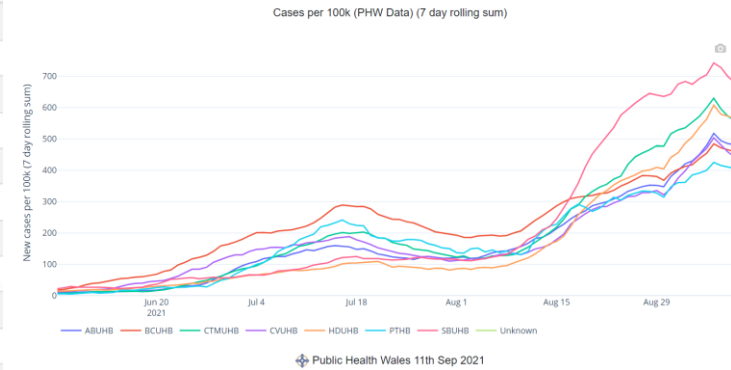
*Data as at 12:00PM 15 September 2021 unless otherwise specified*

# Slide 3. What is the current status of the epidemic?

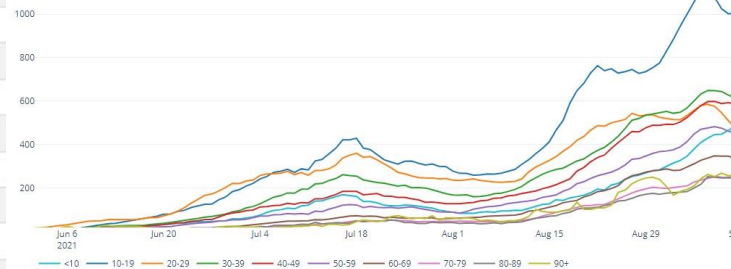
Cases per 100,000 population (7 day period ending 15 September 2021)

Local Authority	Health Board	Number	% of All Wales Total	Case Incidence per 100,000	Change from previous week
Neath Port Talbot	SBUHB	1019	6.5%	711.0	6% ↑
Carmarthenshire	HDUHB	1333	8.6%	706.1	10% ↑
Merthyr Tydfil	CTMUHB	418	2.7%	692.9	-14% ↓
Caerphilly	ABUHB	1155	7.4%	637.9	14% ↑
Swansea	SBUHB	1514	9.7%	613.0	-13% ↓
Rhondda Cynon Taf	CTMUHB	1318	8.5%	546.3	-8% ↓
Blaenau Gwent	ABUHB	372	2.4%	532.5	27% ↑
Conwy	BCUHB	621	4.0%	529.8	-3% ↓
Vale of Glamorgan	CVUHB	698	4.5%	522.5	9% ↑
Denbighshire	BCUHB	495	3.2%	517.3	-3% ↓
Torfaen	ABUHB	438	2.8%	466.2	27% ↑
Gwynedd	BCUHB	563	3.6%	452.0	1% ↑
Ceredigion	HDUHB	315	2.0%	433.3	4% ↑
Isle of Anglesey	BCUHB	303	1.9%	432.6	10% ↑
Bridgend	CTMUHB	623	4.0%	423.7	-2% ↓
Newport	ABUHB	649	4.2%	419.6	-10% ↓
Powys	PTHB	552	3.5%	416.8	7% ↑
Filintshire	BCUHB	612	3.9%	392.1	0% ↑
Wrexham	BCUHB	525	3.4%	386.2	13% ↑
Cardiff	CVUHB	1398	9.0%	381.0	-12% ↓
Pembrokeshire	HDUHB	384	2.5%	305.2	-31% ↓
Monmouthshire	ABUHB	200	1.3%	211.4	-31% ↓
Unknown	Unknown	80	0.5%	-	27% ↑
Total	Total	15585	100.0%	494.3	-2% ↓

Cases per 100k (PHW Data) (7 day rolling sum to 11th September)



Cases per 100k by age (PHW Data) (7 day rolling sum to 12th September)



At a Wales level, on 15 September 2021, the 7-day rolling incidence of COVID-19 cases has decreased slightly since last week as has the percentage of people testing positive for COVID-19 (slide 2).

The JBC consensus Reproduction number ( $R_t$ ) estimate for Wales is between 1.0 and 1.2 (reported 15 September 2021), with daily growth rate of between -1% and +3% and a doubling time between flat and 29 days. Using PHW positive test data only (more timely data but limited by variation in testing),  $R_t$  is estimated to be 1.0 for Wales (15 September 2021). The central  $R_t$  estimate is highest for Aneurin Bevan at 1.1. Source: JBC/PHW

7-day cumulative case incidence in Wales has decreased slightly by 2% to 494.3 per 100,000 population in the last week.

Case incidence is increasing in 10 of the 22 local authorities. Case incidence is above 500 per 100,000 population for ten local authorities. Local authorities with the highest case incidences are Neath Port Talbot and Carmarthenshire at 711.0 and 706.1 per 100,000 population, respectively.

Case incidence is highest in those aged 10-19 at over 1,000 per 100,000 population. Case incidence has started to decrease in most age groups over the past few days. Case incidence is highest for the Swansea Bay local health board but decreased for most health boards in the last week.

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 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.

Data as at 12:00PM 15 September 2021 unless otherwise specified

Reproduction number and doubling time (PHW methodology)  
PHW data by Local Health Board (15 September 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
<b><math>R_t</math> (cases)</b>	1.0 (1.0 to 1.0)	0.97 (0.94 to 1.0)	0.95 (0.9 to 1.0)	1.1 (1.05 to 1.1)	0.96 (0.93 to 1.0)	1.0 (1.0 to 1.1)*	1.0 (1.0 to 1.1)	1.0 (1.0 to 1.1)
<b>Doubling time (days)</b>	36.3 (13.5 to -53.5)	71.4 (16.9 to -32.2)	62.5 (16 to -32.8)	22.3 (10.7 to -263.5)	29.6 (10.8 to -40)	29.3 (11.9 to -64.6)*	24.3 (10.3 to -66.0)*	33.1 (13.0 to -60.4)

Wales <10  
Wales 10-19  
Wales 20-29  
Wales 30-39  
Wales 40-49  
Wales 50-59  
Wales 60-69  
Wales 70-79  
Wales 80-89  
Wales 90+

# Slide 4. What is the situation with the NHS and social care?

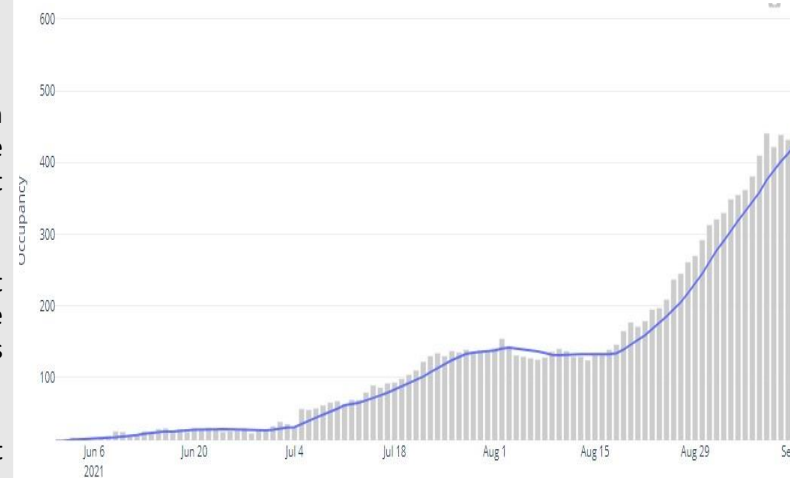
From early July 2021, COVID-19 pressure on the NHS has been generally increasing. As at 15 September 2021, there were 668 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed. This compares to 553 (115 more occupied beds) on 8 September 2021. Confirmed patients accounted for 520 of the total occupied beds.

There are 47 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales. This is 117 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 174, 22 more than the historic maximum critical care capacity of approximately 152.

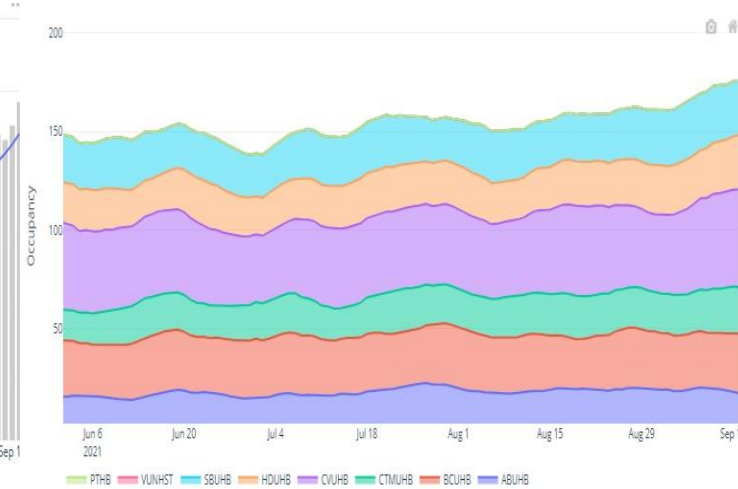
Non-COVID-19 urgent & emergency demands are close to historically high levels, whilst the NHS also continues to try and recover with the considerable backlogs that have developed over the past 18 months. There is also a considerable staffing challenge across the whole health and care system, culminating in a lack of flow through the system.

In the latest National Situation Background Assessment Recommendation (SBAR) report covering the week of 6 September 2021 to 12 September 2021, IMTs reported 169 care homes in 'red' status (an ongoing outbreak/incident reported in last 7 days) last week, which is a significant increase compared to previous weeks (83 in the last available SBAR covering 9 August 2021 to 15 August 2021). In the latest SBAR, one health board reports having no care homes in 'red' status. Source: National SBAR.

**Covid-19 Confirmed Hospital occupancy  
(7 day rolling average)**

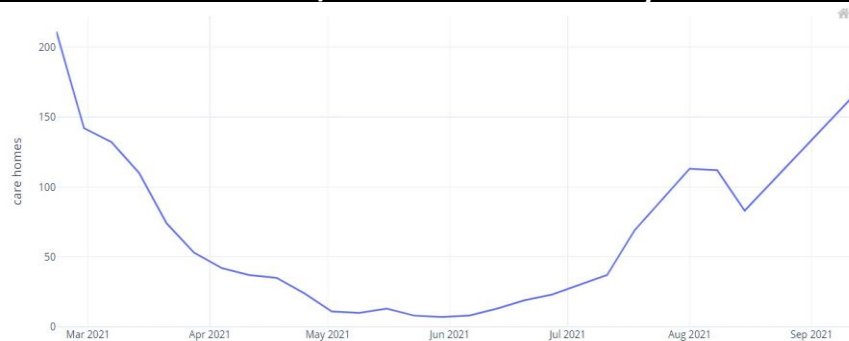


**Overall invasive ventilated bed occupancy  
(7 day rolling average)**

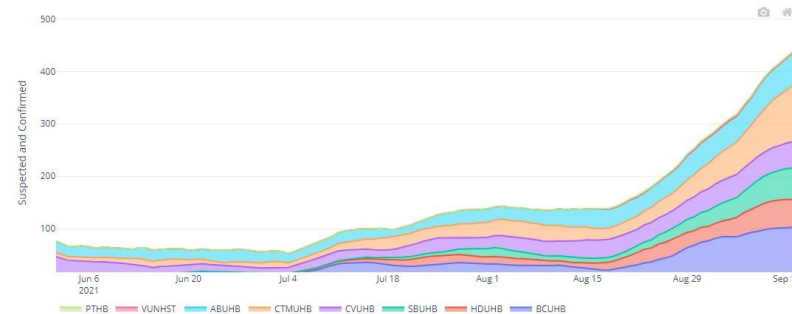


Data as at 12:00PM 15 September 2021 unless otherwise specified

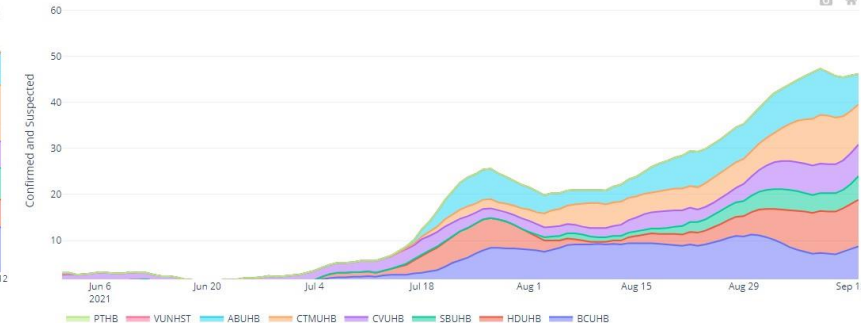
**Number of adult care homes reporting an ongoing outbreak/incident in the last 7 days**



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



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





# Slide 5. What is the situation with education, children and young adults?

## School attendance

The 2021/22 academic year began on 1 September 2021 with the majority of schools undertaking INSET days. This headline presents data from 6 –10 September when an average of 94% of all pupils were present in school. The data is provisional and will be revised on 22 September when the numbers are expected to increase.

## Schools

The latest National Situation Background Assessment Recommendation (NSBAR) for the week 6-12 September has reported 64\* new clusters attached to schools. As community transmission is currently widespread it isn't clear at this stage whether the clusters are associated with social interaction outside the school setting, household transmission and extra-curricular activities or transmission in the school setting.

## Childcare settings

The latest NSBAR reported 6\* new and 15\* ongoing clusters in childcare settings last week.

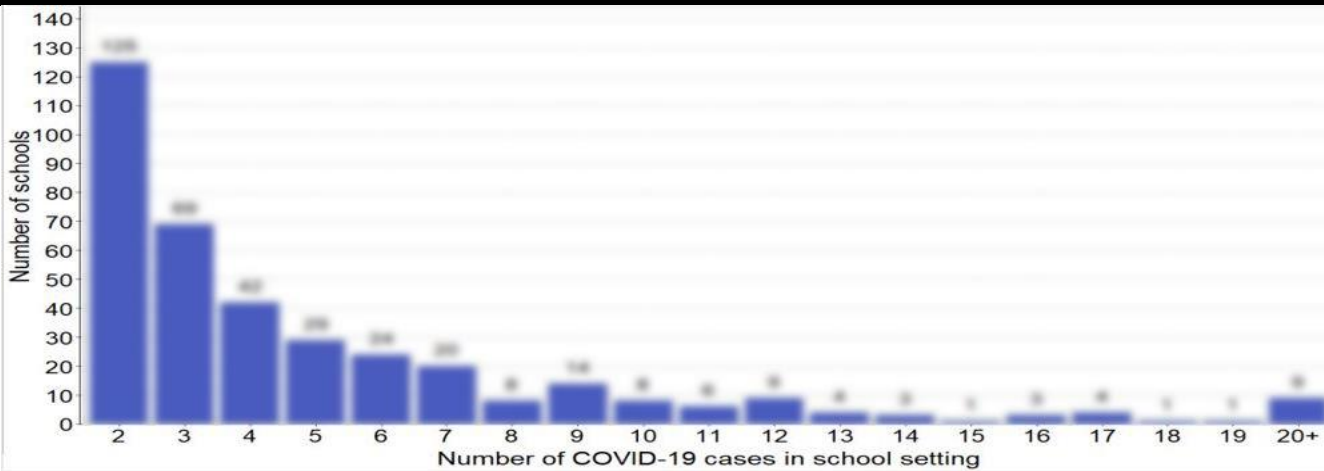
## Further Education (FE) and Higher Education Institutions (HEIs)

The latest NSBAR reported 1\* new and 1\* ongoing cluster reported relating to FE and 1\* new and 11\* ongoing clusters relating to HE settings last week, reported by 1 health board.

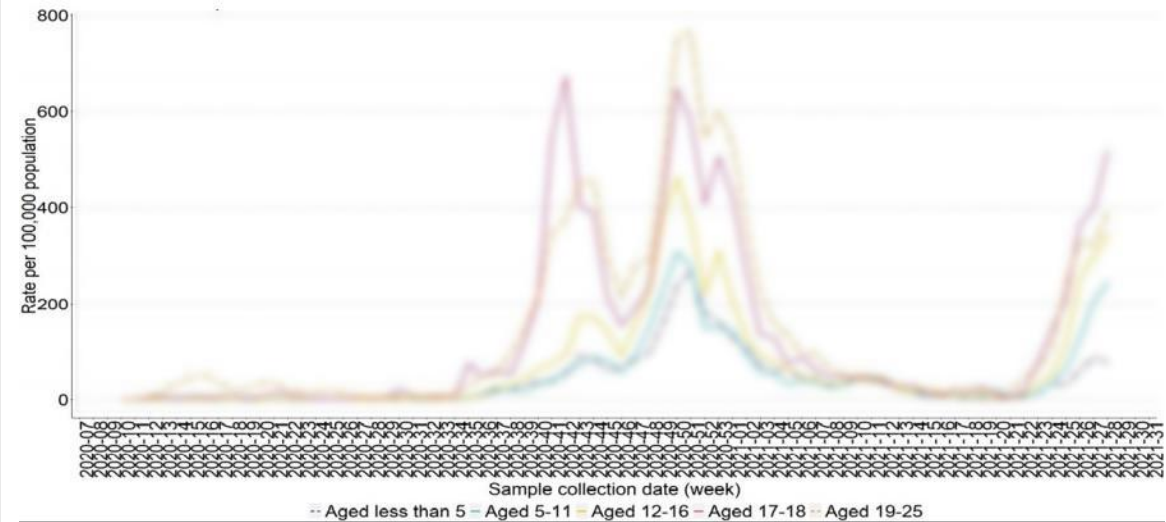
**Source National SBAR** \*These figures does not include data from Cwm Taf Morgannwg

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.

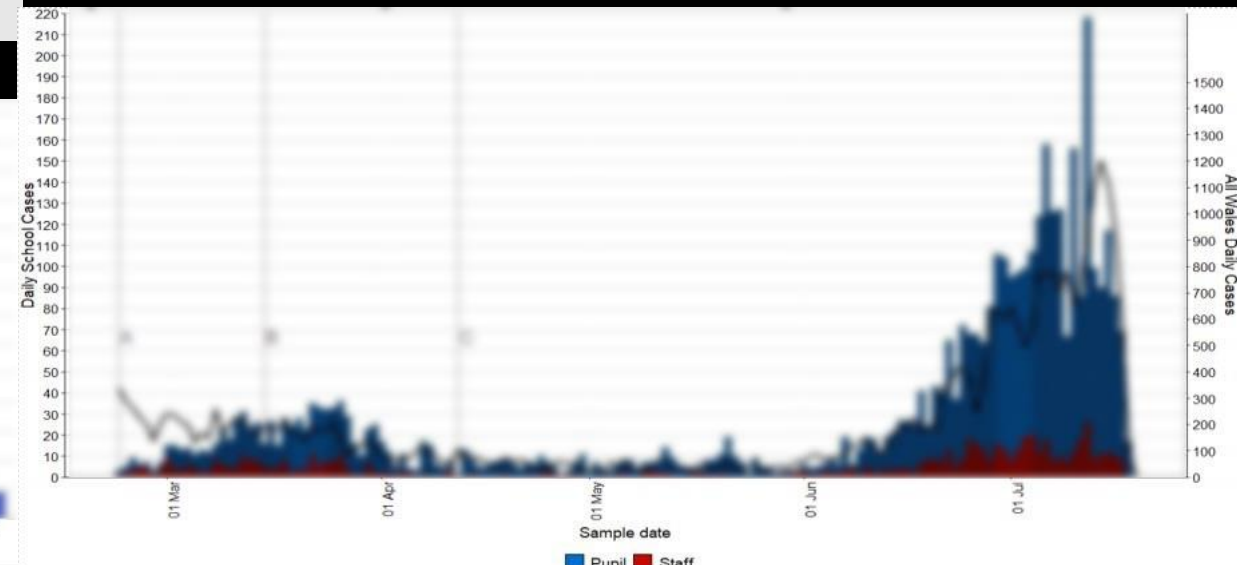
Data to be published w/c 20 Sep



Data to be published w/c 20 Sep



Data to be published w/c 20 Sep



# Slide 6. Wastewater Monitoring for Covid-19 (Pilot)

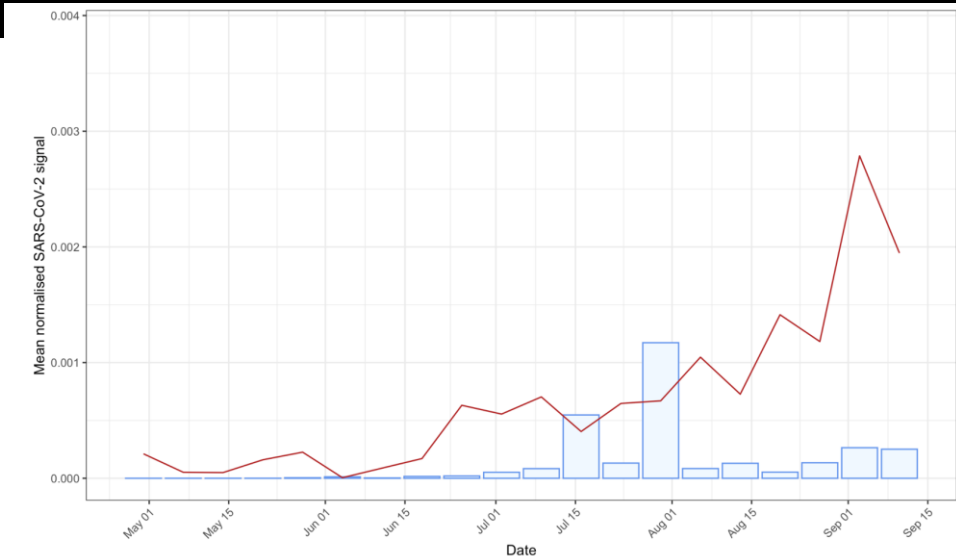
Changes in mean normalised SARS-CoV-2 signal by catchment. Means taken over each of the last two weeks for each catchment; third column shows the fold change in these means. Colours and arrows indicate direction of change

Mean normalised SARS-CoV-2 signal				Fold change
		28 Aug 2021 to 03 Sep 2021	04 Sep 2021 to 10 Sep 2021	Mean normalised SARS-CoV-2 signal
North Wales	Bangor (Treborth)	4.78	1.99	0.42 ↓
	Chester	1.28	1.8	1.41 ↑
	Flint	♣	7.89	♣
	Holyhead	0.02	0	♣ ↓
	Llandudno (Ganol)	0.84	1.61	1.91 ↑
	Llangefni	0.77	1.94	2.52 ↑
	Rhyl (Kinnel Bay)	2.78	3.89	1.4 ↑
	Wrexham	3.56	3.15	0.89 ↓
South Wales	Abergavenny (Llanfoist)	26.38	16.55	0.63 ↓
	Barry (Cog Moors)	51.06	21.9	0.43 ↓
	Bridgend (Merthyr Mawr)	19.91	14.4	0.72 ↓
	Cardiff	36.69	25.07	0.68 ↓
	Carmarthen (Parc Y Splotts)	2.89	37.3	12.91 ↑
	Cwmbran (Ponther)	70.06	21.2	0.3 ↓
	Haverfordwest (Merlin's Bridge)	3.68	0.27	0.07 ↓
	Llanelli	23.05	20.06	0.87 ↓
	Newport	3.23	33.37	10.34 ↑
	Swansea (Gowerton)	60.44	33.24	0.55 ↓
	Swansea (Swansea Bay)	38.7	23.59	0.61 ↓

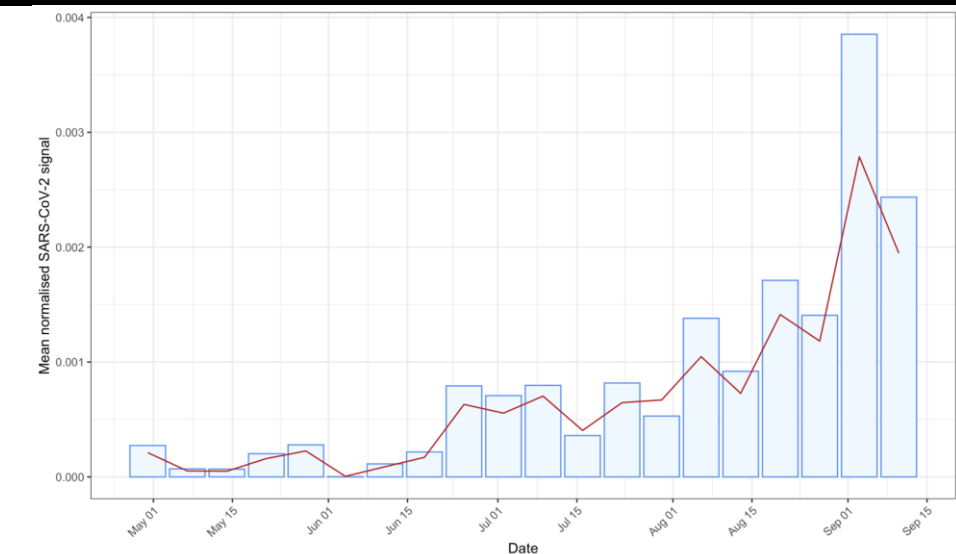
♣: Fold change to or from zero cannot be presented numerically  
♣: Wastewater sample data not available



Weekly comparison of North and all-Wales mean normalised SARS-CoV-2 signal. All-Wales mean signal (red line) and North Wales mean signal (blue bars). Data to 10 September 2021



Weekly comparison of South and all-Wales mean normalised SARS-CoV-2 signal. All-Wales mean signal (red line) and South Wales mean signal (blue bars). Data to 10 September 2021



**In the week ending 10 September 2021, the mean wastewater signal for Wales has slightly decreased, however, the 4 week trend in the wastewater SARS-CoV-2 signal continues to indicate an increase in prevalence.**

The wastewater SARS-CoV-2 signal across South Wales decreased last week following a substantial increase the week before; however, the trend in the wastewater SARS-CoV-2 signal remains in line with the total COVID-19 positive cases reported for this area, which continues to increase.

**Wastewater signal is a relatively 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.**

**For this period, Llandudno, Llangefni and Rhyl in North Wales and Newport and Carmarthen in South Wales are on the watchlist.**

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. Wastewater data analysis and reporting is still in a pilot stage and should not be relied upon in isolation.

# Slide 7. What is the situation with arriving travellers?



There have been 45 positive travellers (0.22% positivity), compared to 93 for the previous week (0.45% positivity) at time of reporting.

Spain continues to see the highest numbers of arrivals testing positive on return, with 16 to date for the period, with a positivity rate of 0.28% - this has decreased when comparing to the previous week with 32 testing positive at a rate of 0.51% at time of reporting.

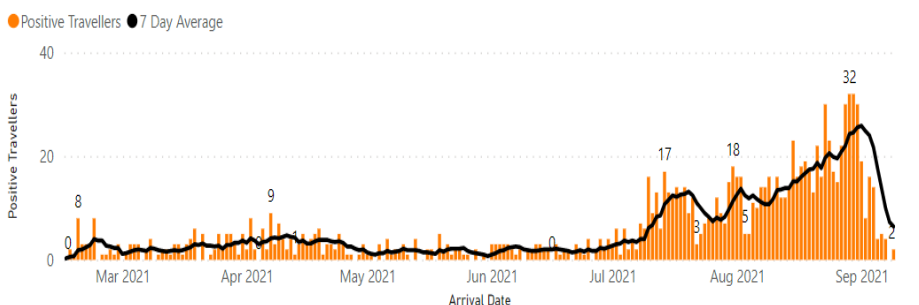
**20,121 total arrivals for the week (20,451 last week; -1.6%)**

- Red: 128 (148 last week)
- Amber: 16,354 (17,243 last week)
- Green: 3,639 (3,060 last week)

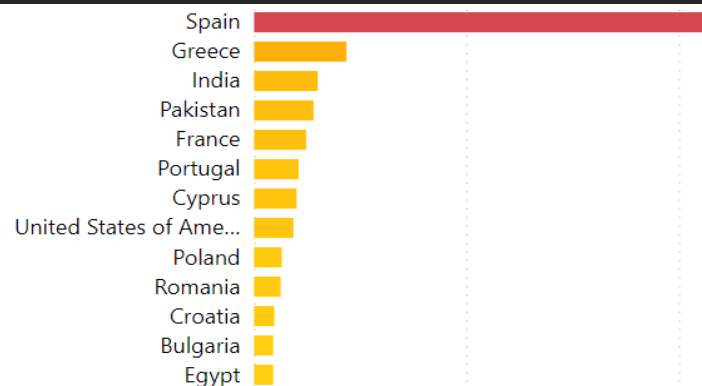
Date Source: Home Office [Wales Travel Rules](#)

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

## Positive travellers timeline



## Positive travellers this week by country



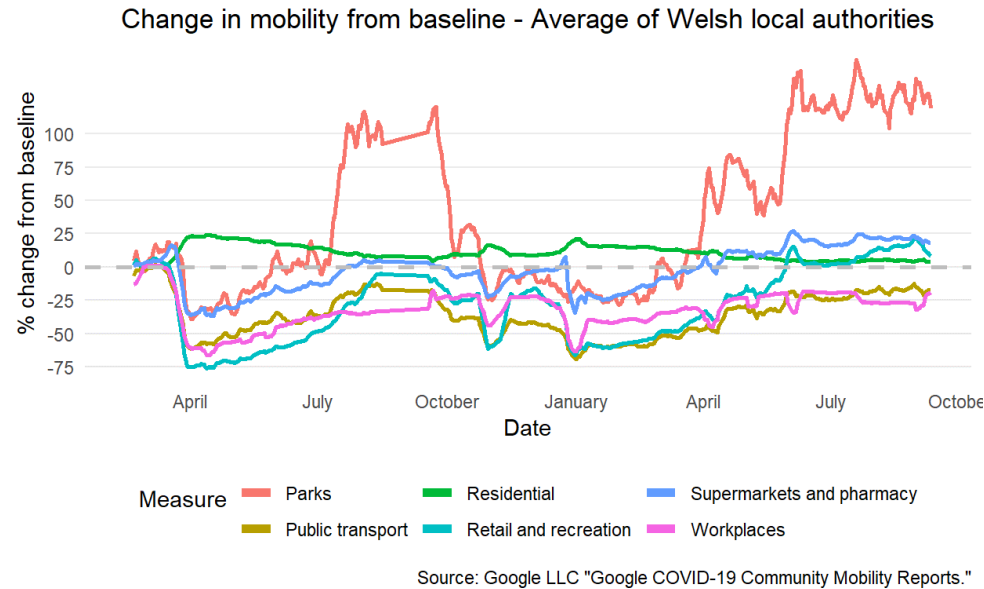
## Arriving travellers timeline



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 traveler total, but excluded from the Green/Amber/Red positive traveller breakdown totals for personal identifiable information purposes.

# Slide 8. Mobility data and UK Comparison

## Mobility data by location of trip – Average of Welsh local authorities



The latest mobility data shows further decreases in the latest week in most categories (with increases in workplaces) 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 27 August – 30 August for Wales shows the number of people only leaving home for essential trips has remained stable with the last survey wave, along with the number of people maintaining 2m social distancing.

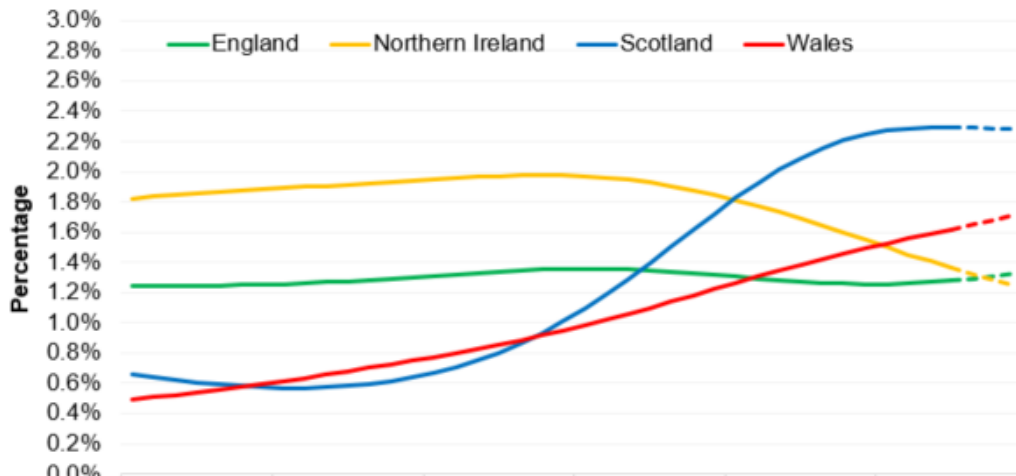
## Coronavirus (Covid-19) Infection Survey results, 5 to 11 September

The percentage of people testing positive remains high in the most recent week in England, and the trend is uncertain. In Scotland and Wales the percentage of people testing positive increased in the most recent week, whilst there was a decrease in Northern Ireland.

It is estimated that an average of **49,100 people in Wales had COVID-19** (95% credible interval: 38,500 to 61,000), equating to around **1 in 60 people or 1.62% of the community population** (up from 0.92% last week). This compares to around 1 in 80 people in England, around 1 in 75 in Northern Ireland and around 1 in 45 people in Scotland.

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

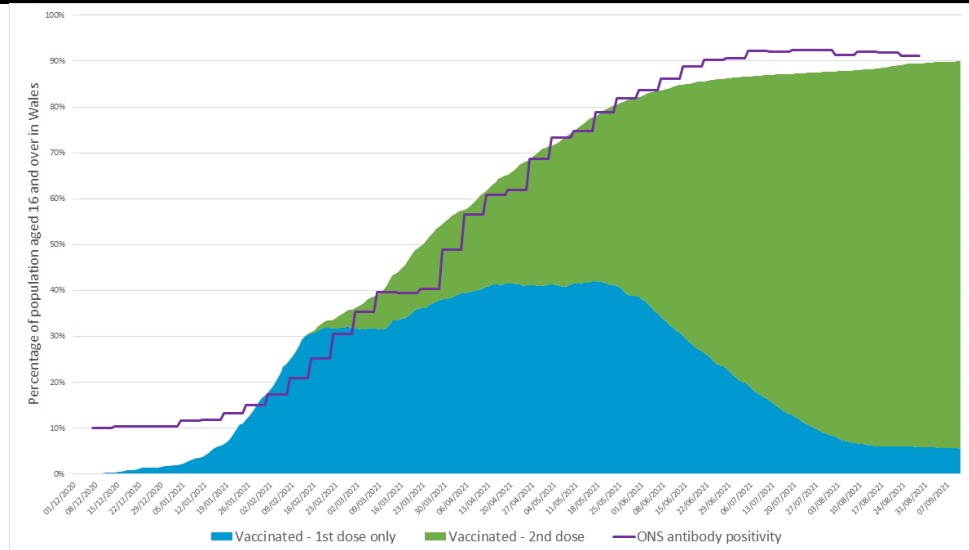
## Positivity rates (%) across UK nations up to 11 September 2021





# Slide 9. Vaccine and Immunity Status

## Vaccination and antibody status of individuals aged 16 and over in Wales



The COVID-19 vaccination rollout of first and second doses has slowed in Wales. As at 11 September 2021, 90% of people aged 16 and over had received at least one COVID-19 vaccine dose in Wales. 6% of people aged 16 and over had exactly one vaccine dose and 84% 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 11 September 2021, it is estimated that 89% of people aged 16 and over in Wales had some immunity against COVID-19 infection. The lower and higher estimates of immunity are 80% and 98% of people aged 16 and over in Wales. If no vaccines had been administered, it is estimated that 42% 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.<sup>1</sup> Note that the immunity estimate of 89% 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:

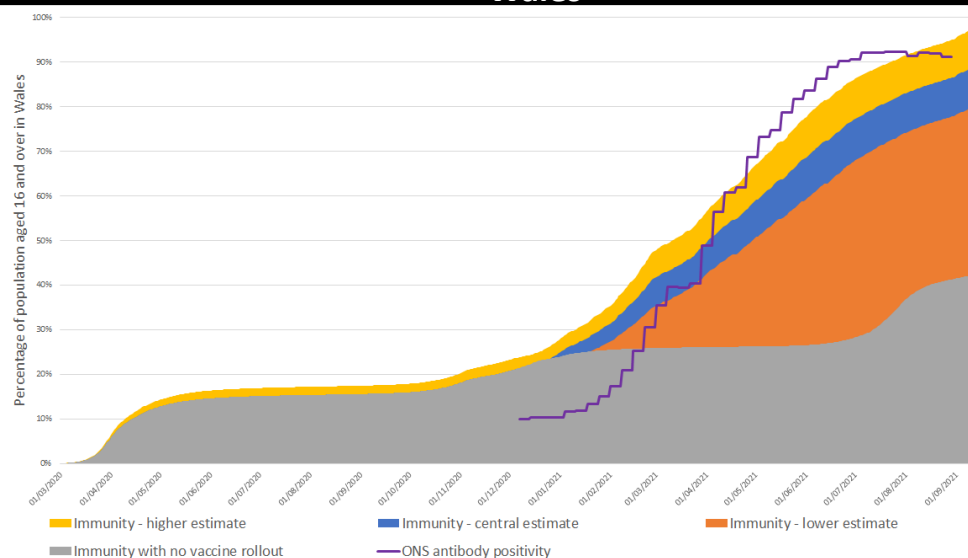
- ONS antibody estimates are based on study participants who have volunteered for the study and estimates are extrapolated.
- ONS estimates are based on the 16+ community population, which excludes people in care homes or hospitals. Immunity estimates are based on the whole 16+ Wales population.
- While 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

<sup>1</sup> 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.

## Immunity estimates and antibody status of individuals aged 16 and over in Wales



# Slide 10. 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 19 September and 2 October is above 80% for 2 of the 22 local authorities, Carmarthenshire and Caerphilly. The figure illustrates the probability (between 0 – 100%) of incidence being greater than 500 per 100,000. *Source: Imperial College London*
- **Deaths per day (bottom left)** – projected to remain stable at around 7-8 per day over the next three weeks. *Source: Modelled medium term projections, SAGE/SPI-M, 14 September*
- **Hospitalisations per day (bottom right)** – projected to increase to around 70 per day before reducing steadily to just under 60 per day over the next three weeks. *Source: Modelled medium term projections, SAGE/SPI-M, 14 September*

These projections are based on current trends and will not fully reflect the impact of policy or behavioural changes over the past two to three weeks. The projections include the impact of vaccines, but cannot capture any future increases in transmission resulting from new variants. They are not forecasts or predictions.

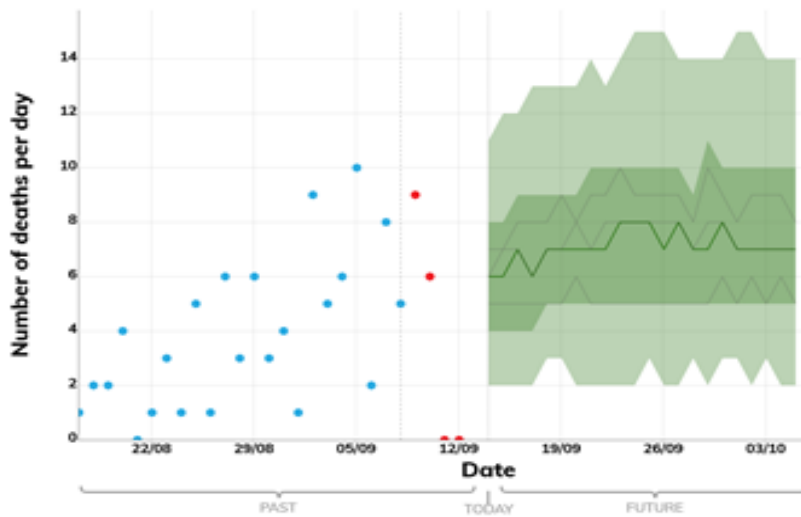
## Probability of greater than 500 per 100,000 cases by local authority



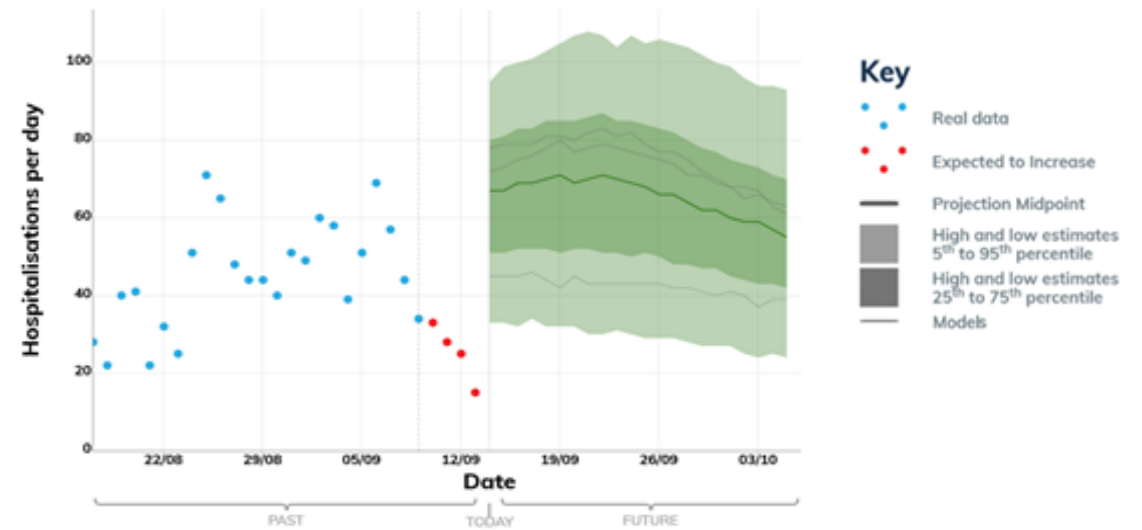
Time period: 19 Sept – 25 Sept

Time period: 26 Sept – 02 Oct

## Number of deaths per day, Wales As at 14 September 2021



## Number of new hospitalisations per day, Wales As at 14 September 2021



# Slide 11. Key risks and sources

Key risks	
Area	Assessment
Transmission, incidence and prevalence	Overall transmission of COVID-19 has increased across Wales, while test positivity and growth have decreased.
NHS Capacity	From early-July 2021, COVID-19 pressure on the NHS is generally increasing.
Mortality	Low, but slowly rising number of daily deaths in the most recent week.
Variants	Wales has had 24,568 confirmed cases of the dominant Delta variant (an increase of 3,283 from the previous week), and 12,468 cases of Alpha variant (an increase of 2 from the previous week. Delta remains the dominant variant of COVID-19 in Wales.
Immunity and Vaccines	<b>4,574,822 (+17,124) doses of COVID-19 vaccine were given in Wales</b> and recorded in the COVID-19 Welsh Immunisation System. Of this 2,369,721 (+6,098) were first doses and 2,205,101 (+21,445) were second doses. 89% of those aged 16 and over in Wales were estimated to have some immunity against COVID-19 infection at 11 September 2021.
International	Arriving traveller numbers remain stable, slightly lower than last week. However, the proportion of travellers testing positive is relatively low.

## Key Sources for this update

Technical Advisory Cell brief:

<https://gov.wales/advice-coronavirus-technical-advisory-cell>

COVID Infection Survey results:

<https://gov.wales/coronavirus-covid-19-infection-survey>

Public Health Wales:

<https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary>

Hospital occupancy:

<https://gov.wales/nhs-beds-admissions-and-hospitalisations-during-coronavirus-covid-19-pandemic>

Higher Education:

<https://gov.wales/positive-coronavirus-cases-reported-higher-education-institutions-wales-27-september-2020-onwards>

School attendance:

<https://gov.wales/pupils-present-maintained-schools>

Public Health England VoC Technical Briefing:

<https://www.gov.uk/government/publications/investigation-of-novel-sars-cov-2-variant-variant-of-concern-20201201>