



OFFICIAL SENSITIVE

COVID-19 Wales Situational Report

COVID-19 Intelligence Cell

COVID-19 Intelligence Cell: 23 September 2021
Health Protection Advisory Group: 24 September 2021

Data as at 22 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 although the rate of growth has slowed compared to previous weeks and with test positivity continues to decrease for a third week. 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 0.8 and 1.0 and a doubling time of flat/ greater than 40 days (as at 22 September 2021), while PHW's estimate is around 1.1 with a doubling time of 45 days. (22 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 generally increasing in all health boards across Wales. As at 22 September 2021, there were 645 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed (-23 since previous week), of which 463 were confirmed. As at 22 Sep 2021, there are 49 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales; 115 lower than the maximum COVID-19 position of approximately 164.

As at 21 September 2021, Wales has had 29,912 confirmed cases of the dominant Delta variant (an increase of 5,344 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 21 September 2021, a total of 4,593,258 (+18,436) doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. Of this 2,382,032 (+12,311) were first doses and 2,211,226 (+6,125) were second doses. Source: PHW

Key indicators

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

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

	Current value (18/09/21)	Change since previous week (11/09/21 – 18/09/21 unless stated otherwise)	
		Percentage change	Value change
Confirmed case rate (rolling 7 day sum per 100k)	558	+13%	↑ (+63)
Confirmed case rate for over 60s (rolling 7 day sum per 100k)	242	-16%	↓ (-47)
Test positivity (7 day RA)	15.1%	-12%	↓ (-2.1 percentage points)
Population estimated to have COVID-19 (prevalence) ¹	1.62%	+5%	↑ (+0.08 percentage points)
NHS COVID-19 Admissions ²	47	-12%	↓ (-6)
ONS deaths (7 day sum) ³	53	+13%	↑ (+6)
PHW deaths (7 day sum)	62	+19%	↑ (+10)

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 admissions
3. Latest ONS deaths data is to 10 September 2021 (rather than 18 September 2021) for the current value. Data to 3 September 2021 is used for the change since previous week.

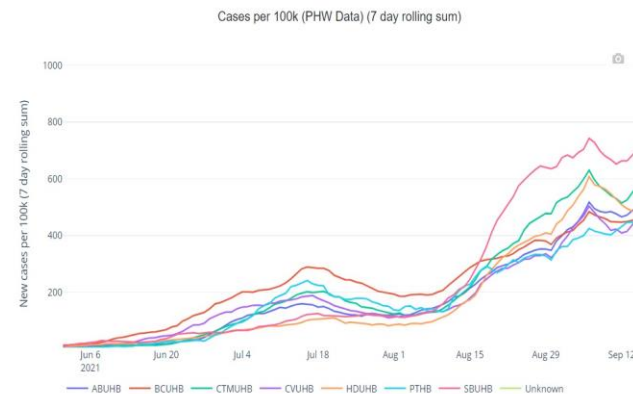
Data as at 12:00PM 22 September 2021 unless otherwise specified

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

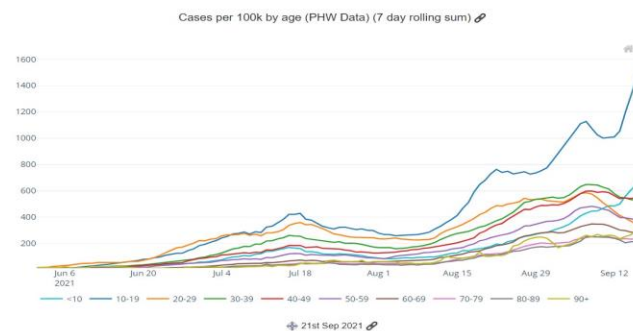
Cases per 100,000 population (7 day period ending 22 September 2021)

Local Authority	Health Board	Number	% of All Wales Total	Case Incidence per 100,000	Change from previous week
Neath Port Talbot	SBUHB	1237	7.1%	863.1	22% ↑
Merthyr Tydfil	CTMUHB	478	2.8%	792.4	12% ↑
Caerphilly	ABUHB	1278	7.4%	705.8	10% ↑
Rhondda Cynon Taf	CTMUHB	1697	9.8%	703.4	26% ↑
Swansea	SBUHB	1711	9.8%	692.7	8% ↑
Blaenau Gwent	ABUHB	452	2.6%	647.0	23% ↑
Vale of Glamorgan	CVUHB	854	4.9%	639.3	26% ↑
Cardiff	HDUHB	1180	6.8%	625.1	-13% ↓
Conwy	BCUHB	717	4.1%	611.8	19% ↑
Flintshire	BCUHB	817	4.7%	523.4	30% ↑
Denbighshire	BCUHB	500	2.9%	522.5	1% ↑
Torfaen	ABUHB	465	2.7%	494.9	7% ↑
Gwynedd	BCUHB	612	3.5%	491.3	7% ↑
Newport	ABUHB	735	4.2%	475.2	8% ↑
Powys	PTHB	610	3.5%	460.6	14% ↑
Bridgend	CTMUHB	652	3.8%	443.4	3% ↑
Cardiff	CVUHB	1616	9.3%	440.4	16% ↑
Isle of Anglesey	BCUHB	293	1.7%	418.3	-1% ↓
Wrexham	BCUHB	506	2.9%	372.2	-5% ↓
Ceredigion	HDUHB	270	1.6%	371.4	-19% ↓
Pembrokeshire	HDUHB	403	2.3%	320.3	-4% ↓
Monmouthshire	ABUHB	225	1.3%	237.9	3% ↑
Unknown	Unknown	63	0.4%	-	-19% ↓
Total	Total	17371	100.0%	551.0	10% ↑

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, as at 18 September 2021 the 7-day rolling incidence of COVID-19 cases has increased by 13% since last week, while test positivity has decreased by 12% (slide 2).

The JBC consensus Reproduction number (R_t) estimate for Wales is between 0.8 and 1.0 (reported 22 September 2021), with daily growth rate of between -2% and +1% and a doubling time that is flat. Using PHW positive test data only (more timely data but limited by variation in testing), R_t is estimated to be 1.1 for Wales (23 September 2021). The central R_t estimate is highest for Cwm Taff, Swansea Bay and Cardiff & Vale at 1.15. Source: JBC/PHW

7-day cumulative case incidence in Wales has increased by 10% to 551.0 per 100,000 population in the last week.

Case incidence is increasing in 17 of the 22 local authorities. Case incidence is above 500 per 100,000 population for eleven local authorities. Local authorities with the highest case incidences are Neath Port Talbot and Merthyr Tydfil at 863.1 and 792.4 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 (22 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
Rt (cases)	1.1 (1.1 to 1.1)	1.15 (1.1 to 1.15)	1.15 (1.15 to 1.2)	1.1 (1.1 to 1.15)	1.15 (1.15 to 1.2)	0.9 (0.85 to 0.95)*	1.1 (1.05 to 1.15)*	1.1 (1.05 to 1.1)
Doubling time (days)	44.8 (18.8 to -116.8)	35.4 (15 to -99.3)	28.8 (13.7 to -281)	36.9 (16.2 to -131.1)	28.5 (15.4 to 197.4)	HALVING 57.8 (19.2 to -56.8)*	31.8 (13.3 to -80.9)*	49.5 (19.8 to -98.4)

— 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 22 September 2021, there were 645 COVID-19 related patients (Suspected, Confirmed and Recovering) occupying a hospital bed. This compares to 668 (23 fewer occupied beds) on 15 September 2021. Confirmed patients accounted for 463 of the total occupied beds.

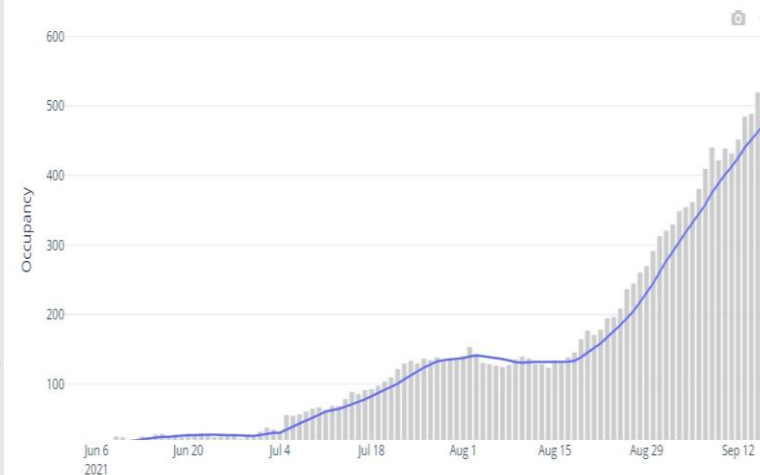
There are 49 patients with Suspected or Confirmed COVID-19 in critical care beds in Wales. This is 115 lower than the maximum COVID-19 position of approximately 164. The total number of patients in critical care for both COVID-19 and non-COVID-19 stands at 162, 10 more than the 152 baseline critical care beds available pre the COVID-19 pandemic.

Non-COVID-19 urgent & emergency demands are close to historic 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 13 September to 19 September 2021, IMTs reported 152 care homes in 'red' status (an ongoing outbreak/incident reported in last 7 days) last week, compared to 169 in the previous week. In the latest SBAR, one health board reports having no care homes in 'red' status. Source: National SBAR.

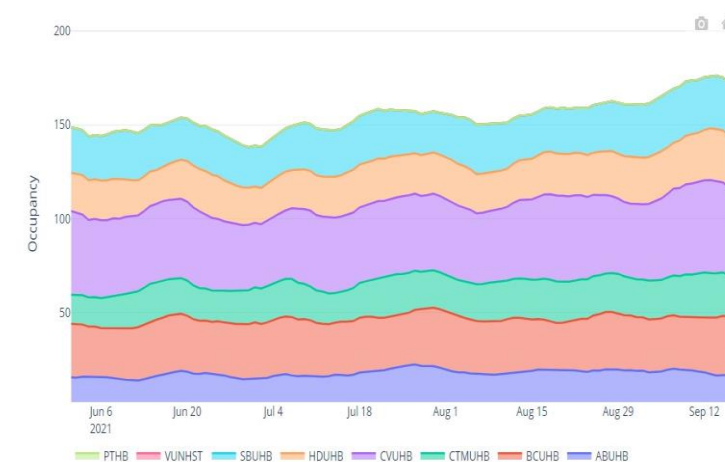
Covid-19 Confirmed Hospital occupancy (7 day rolling average)

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



Overall invasive ventilated bed occupancy (7 day rolling average)

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



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

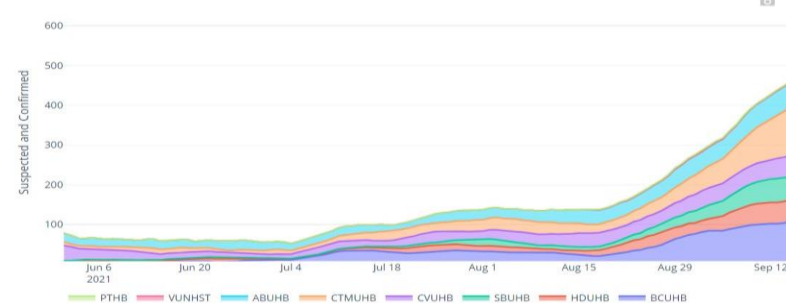
Number of adult care homes reporting an ongoing outbreak/incident in the last 7 days

Number of care homes in red status



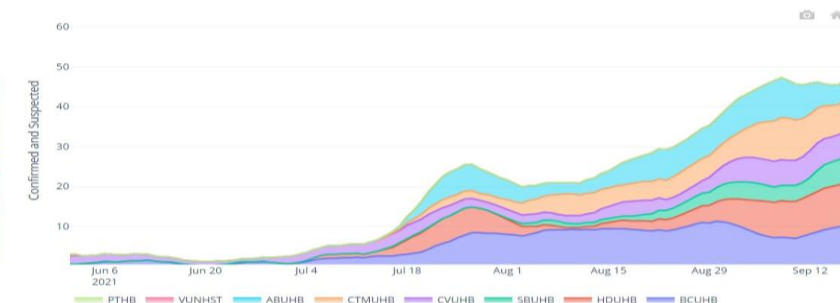
Hospital bed occupancy for suspected and confirmed COVID-19 positive patients (7 day rolling average)

StatsWales Hospital bed occupancy of 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)

StatsWales Invasive ventilated bed occupancy of 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

For the week 13-17 September an average of 89% of all pupils were present in school. This data is provisional and will be revised on 29 September when the number in attendance is expected to increase.

Schools

The latest National Situation Background Assessment Recommendation (NSBAR) for the week 13-19 September has reported 105* new clusters compared to 64 the previous week. 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 9** new and 9** ongoing clusters in childcare settings last week.

Further Education (FE) Higher Education Institutions (HEIs)

According to the latest SBAR there were 7** new and 13** ongoing clusters reported in FE last week; and 2** new and 1** ongoing cluster reported by one LA for HE. Cases and clusters are now beginning to be associated with HE although this varies regionally. *Source National SBAR*

**Figures do not include Cardiff & Vale, Conwy or Swansea LA.*

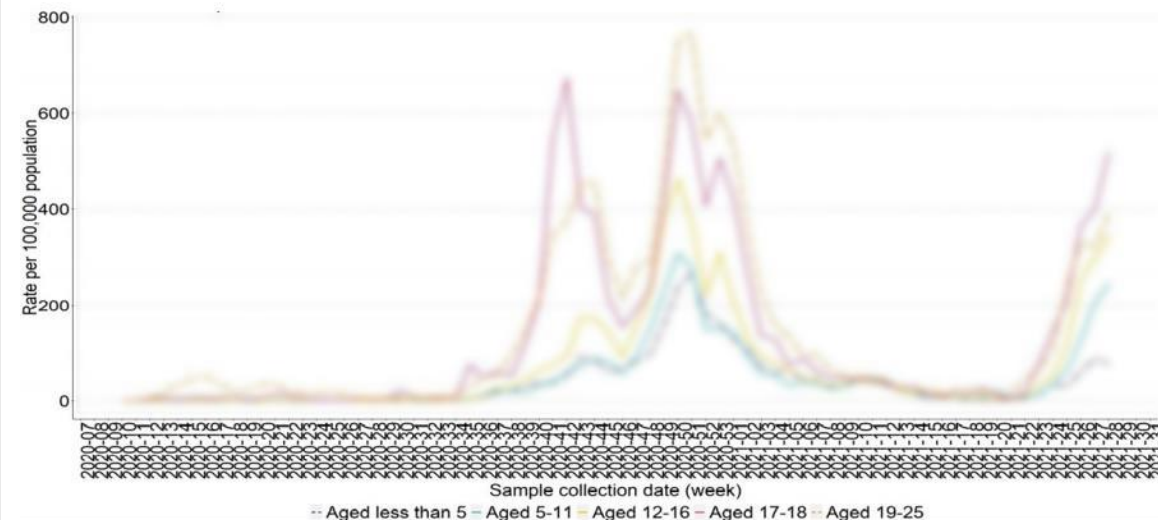
***Figures do not include Cardiff & Vale, Conwy.*

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.

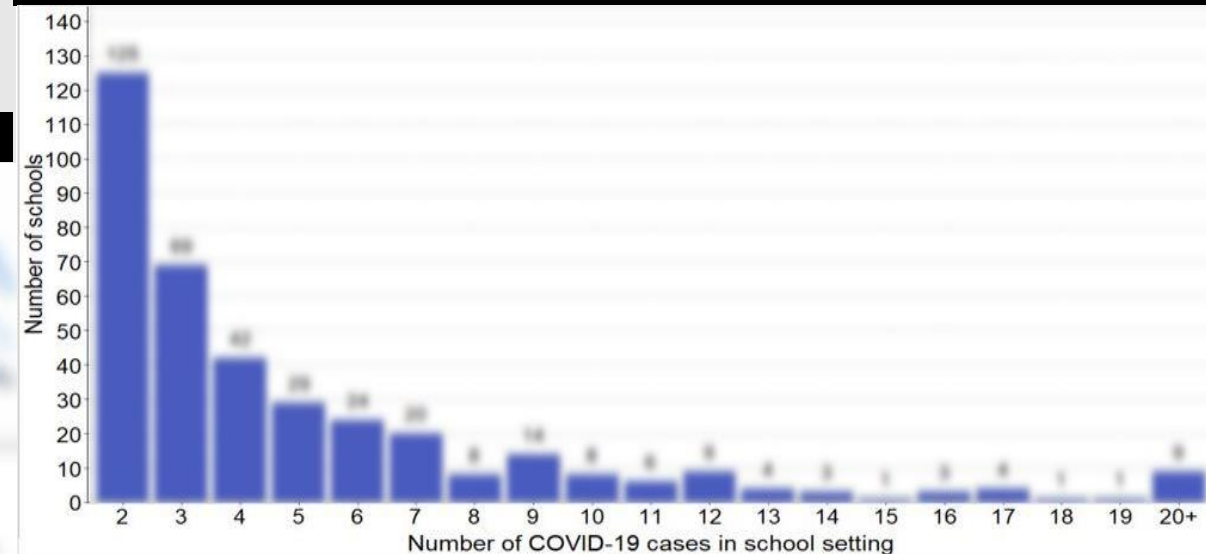
Data to be published w/c 20 Sep



Data yet to be published



Data yet to be published



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

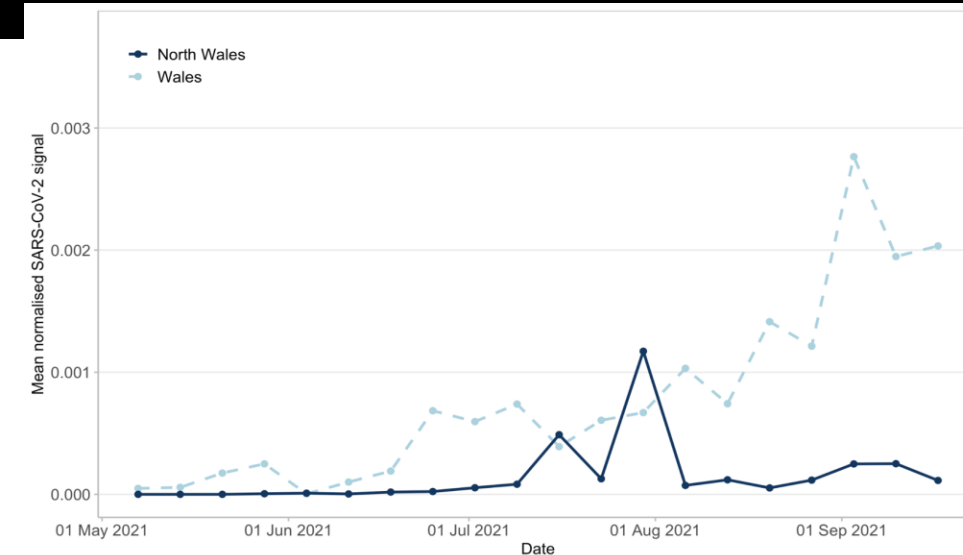
Mean normalised SARS-CoV-2 signal				Fold change
	04 Sep 2021 to 10 Sep 2021	11 Sep 2021 to 17 Sep 2021	Mean normalised SARS-CoV-2 signal	
North Wales	Bangor (Treborth)	1.99	9.51	4.79 ↑
	Chester	1.8	1.77	0.98
	Flint	7.89	0.25	0.03 ↓
	Holyhead	0	0.09	[n] ↑
	Llandudno (Ganol)	1.61	0.57	0.35 ↓
	Llangefni	1.94	0.29	0.15 ↓
	Rhyl (Kinnel Bay)	3.89	1.76	0.45 ↓
	Wrexham	3.15	0.81	0.26 ↓
South Wales	Abergavenny (Llanfoist)	16.55	4.23	0.26 ↓
	Barry (Cog Moors)	21.9	16.49	0.75 ↓
	Bridgend (Merthyr Mawr)	14.4	22.61	1.57 ↑
	Cardiff	25.07	29.23	1.17 ↑
	Cardiff	37.3	2.68	0.07 ↓
	Cwmbran (Ponthir)	21.2	18.84	0.89 ↓
	Haverfordwest (Merlin's Bridge)	0.27	6.18	23.24 ↑
	Llanelli	20.06	17.7	0.88 ↓
	Merthyr Tydfil (Cilfynydd)	[unavailable]	7.94	[unavailable]
	Newport	33.37	12.96	0.39 ↓
	Swansea (Gowerton)	33.24	53.09	1.6 ↑
	Swansea (Swansea Bay)	23.59	33.14	1.4 ↑

[n]: Fold change to or from zero cannot be presented numerically
 [unavailable]: Wastewater sample data not available

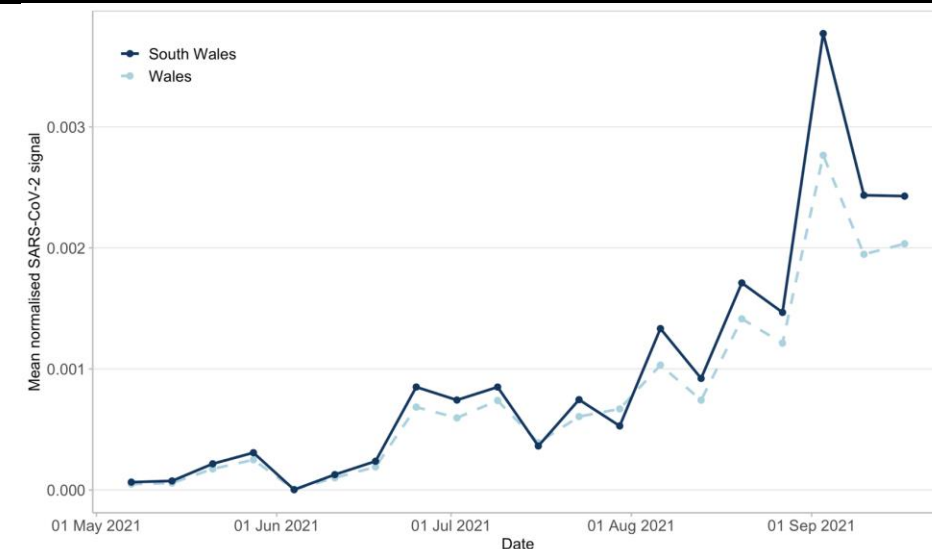
Contains OS data © Crown copyright and database right 2021



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 17 Sept 2021.



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 17 Sept 2021.



In the week ending 17 September 2021, the mean wastewater signal for Wales remains high, but is showing signs of stabilising.

The normalised wastewater SARS-CoV-2 signal at North Wales sites was slightly down last week and over the past 4 weeks, in line with total COVID-19 positive cases in the corresponding wastewater catchments. The wastewater SARS-CoV-2 signal across South Wales is higher but has stabilised since last week. The overall trend in the wastewater SARS-CoV-2 signal remains in line with the total COVID-19 positive cases reported for this area.

Surveillance of Merthyr Tydfil (Cilfynydd WwTW) began last week, analysis of early data (not included in this report) indicate that Merthyr Tydfil's wastewater signal is high but not out of line with other South Wales sites.

For this period, Bangor in North Wales and Cardiff, Swansea and Haverfordwest in South Wales are on the watchlist.

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.

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 38 positive travellers (0.17% positivity), compared to 45 for the previous week (0.22% positivity) at time of reporting.

Spain continues to provide the greatest number of arrivals, although the increase seen last week (12.8%) was lower than the overall increase in amber travellers. Greece (30.2%) and Portugal (24.6%) saw an increase in arrivals well above the overall average.

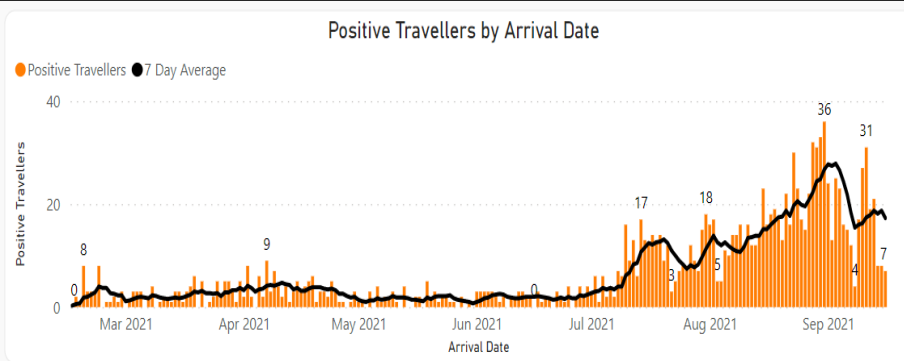
22,793 total arrivals for the week (20,121 last week; +13.3%), the highest number ever included in this report

- Red: 107 (128 last week)
- Amber: 18,771 (16,354 last week)
- Green: 3,915 (3,639 last week)

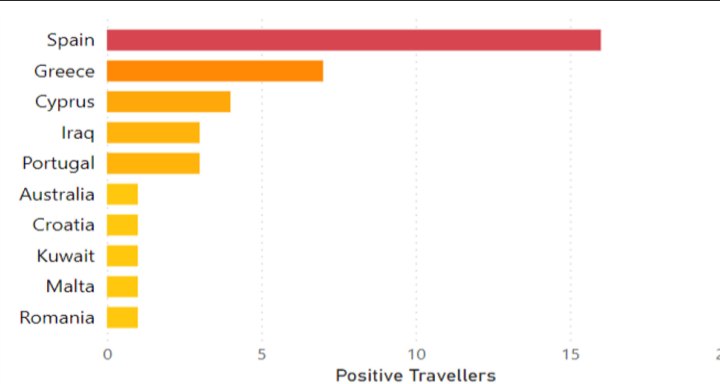
Date Source: Home Office Wales Travel Rules

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

Positive travellers timeline



Positive travellers this week by country



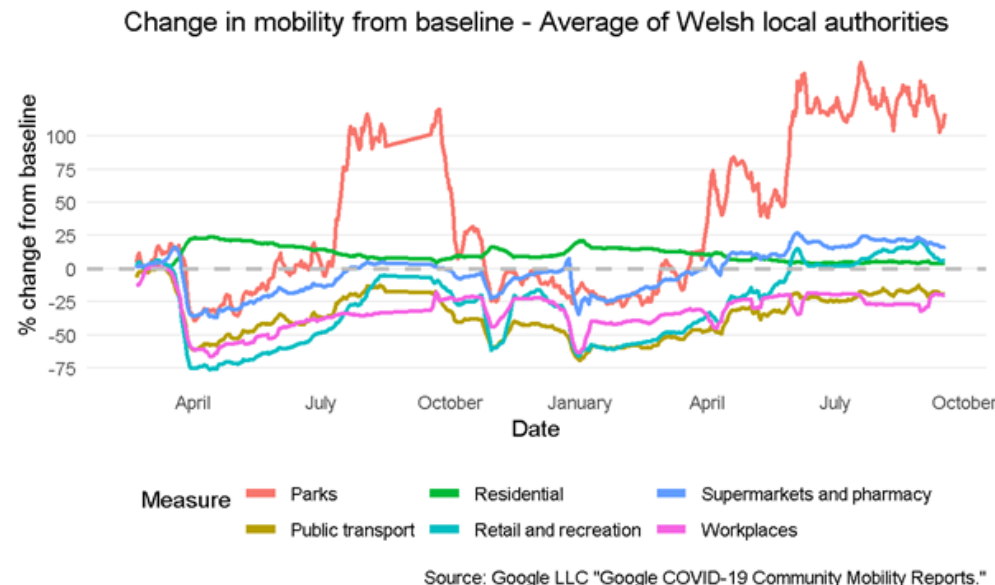
Arriving travellers timeline



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 small reductions in the latest week in most categories 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 as has the majority of people people maintaining 2m social distancing when out.

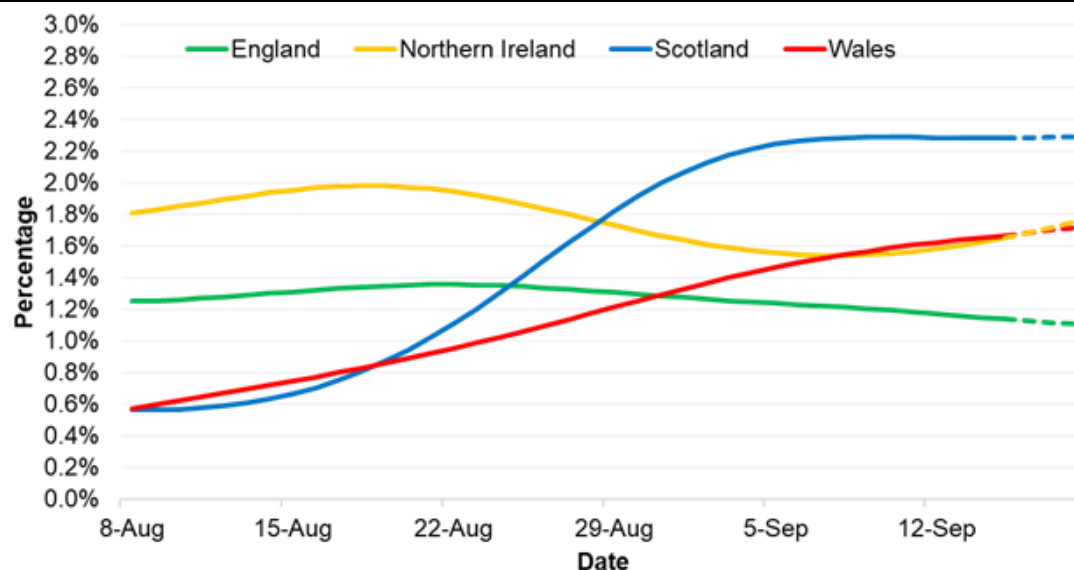
Coronavirus (Covid-19) Infection Survey results, 12 to 18 September

The percentage of people testing positive has increased in the most recent two weeks in Wales, but the trend is uncertain in the most recent week. In England, the percentage of people testing positive decreased in the most recent week. The trend was uncertain in Northern Ireland and appeared to have levelled off in the most recent week in Scotland.

It is estimated that an average of **50,700 people in Wales had COVID-19** (95% credible interval: 39,900 to 62,700), equating to around **1 in 60 people or 1.67% of the community population** (up from 1.62% last week). This compares to around 1 in 90 people in England, around 1 in 65 in Northern Ireland and around 1 in 45 people in Scotland.

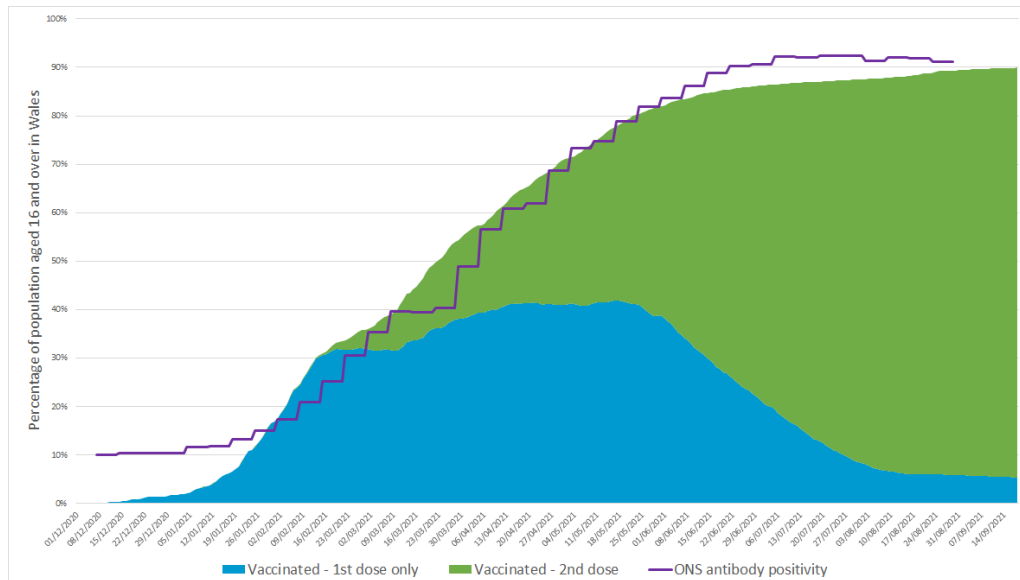
Source: *Office for National Statistics COVID-19 Infection Survey*

Positivity rates (%) across UK nations up to 18 September 2021

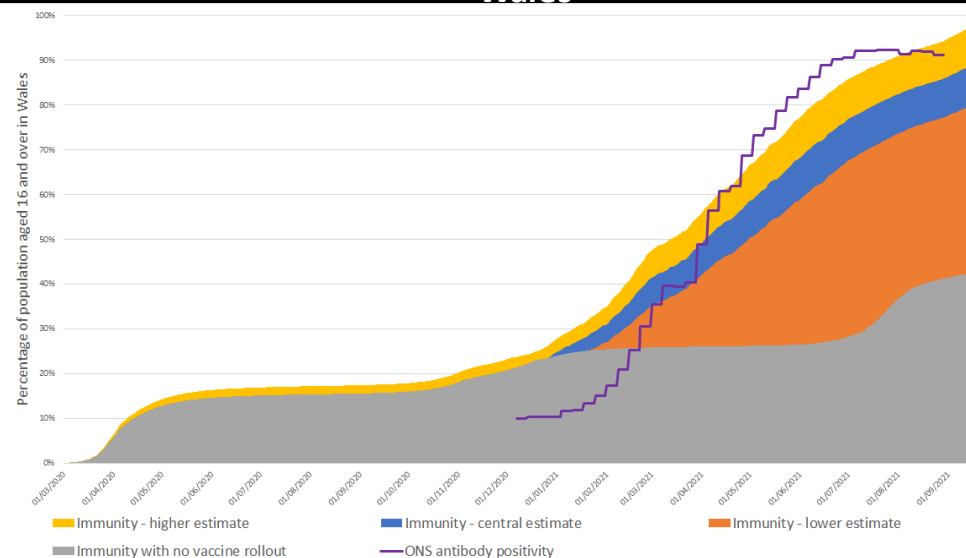


Slide 9. Vaccine and Immunity Status

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



Immunity estimates 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 18 September 2021, 90% 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 85% 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 18 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 43% 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 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

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.

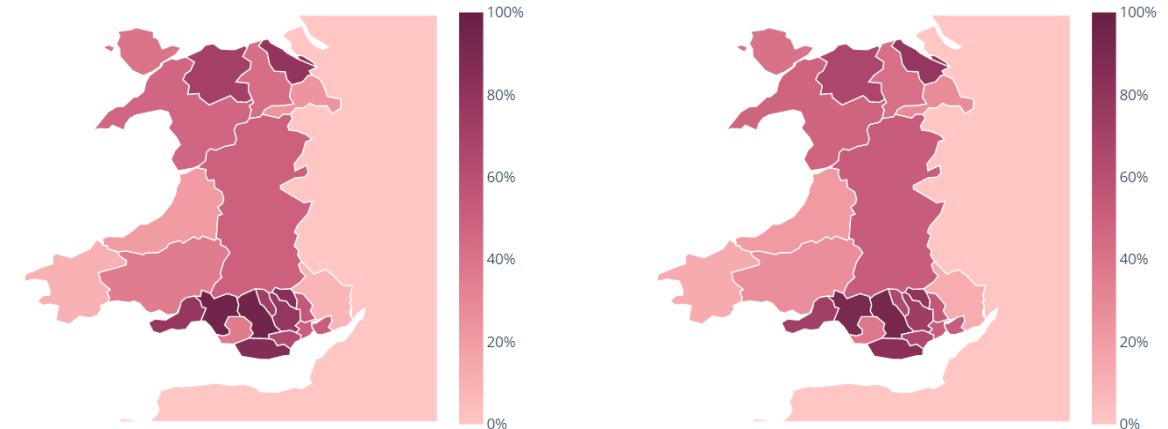
Slide 10. What does the situation look like going forward?

Based on the current rates observed with current restrictions:

- Cases (right)** – the probability of incidence reaching greater than 500 per 100,000 between 26 September and 9 October is at or above 80% for 6 of the 22 local authorities, Neath Port Talbot, Rhondda Cynon Taf, Vale of Glamorgan, Flintshire and Blaenau Gwent. 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 reduce from 7 deaths per day to around 5 over the next three weeks. *Source: Modelled medium term projections, SAGE/SPI-M, 21 September*
- Hospitalisations per day (bottom right)** – projected to decrease from just under 60 to just under 40 per day over the next three weeks. *Source: Modelled medium term projections, SAGE/SPI-M, 21 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.

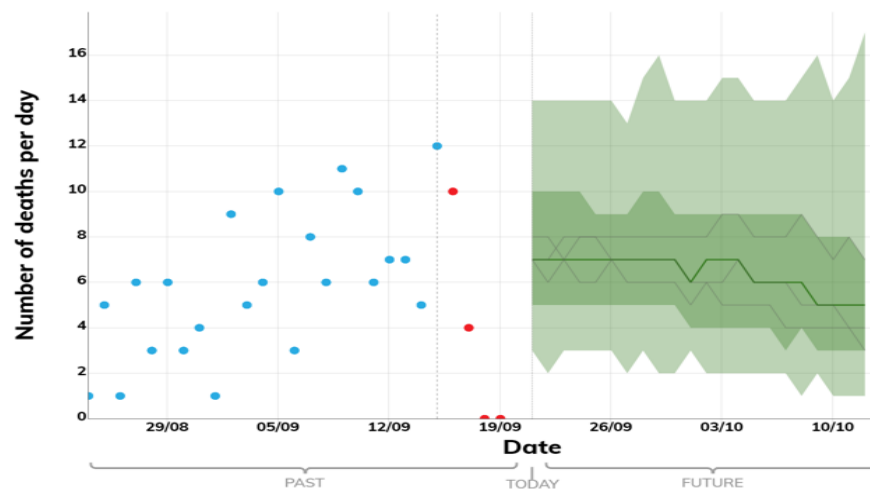
Probability of greater than 500 per 100,000 cases by local authority



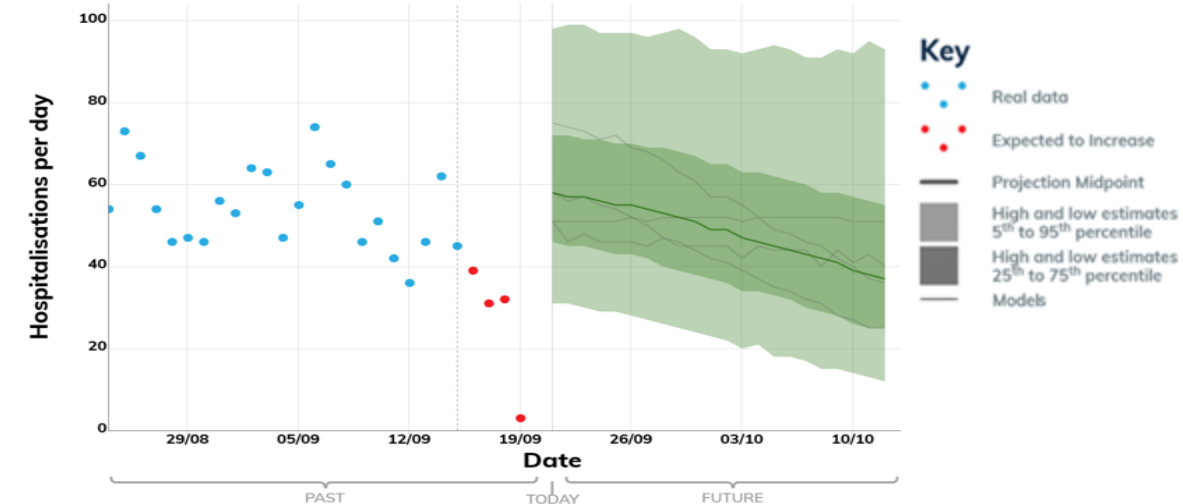
Time period: 26 Sept – 02 Oct

Time period: 3 Oct – 9 Oct

Number of deaths per day, Wales As at 21 September 2021



Number of new hospitalisations per day, Wales As at 21 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 29,912 confirmed cases of the dominant Delta variant (an increase of 5,344 from the previous week). Delta remains the dominant variant of COVID-19 in Wales.
Immunity and Vaccines	4,593,258 (+18,436) doses of COVID-19 vaccine were given in Wales and recorded in the COVID-19 Welsh Immunisation System. Of this 2,382,032 (+12,311) were first doses and 2,211,226 (+6,125) were second doses. 89% of those aged 16 and over in Wales were estimated to have some immunity against COVID-19 infection at 18 September 2021.
International	Arriving traveller numbers increased to the highest reported level to date. 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>