

Coronavirus (COVID-19): Discharges from hospitals to care home settings, 1 March 2020 to 31 May 2020

Background

During the first wave of the coronavirus (COVID-19) pandemic, there was considerable interest in the discharge from hospital of care home residents, with some media stories suggesting that discharges of patients from hospitals to care homes was a major factor of COVID-19 outbreaks in care homes.

In this paper we analyse 1,729 discharges to care home settings, which took place between 1 March 2020 and 31 May 2020; looking at how many were tested prior to discharge, and how many patients had subsequently died and were included in the Office for National Statistics (ONS) mortality dataset (by the point of data extraction on 30 June 2020). All sections, except for the final section relating to deaths of patients, refer to discharges rather than patients as an individual could have multiple admissions to and discharges from hospital within the time period considered. The section relating to deaths uses individual patients, and therefore only the most recent discharge prior to death is considered. The data has been provided by Digital Health and Care Wales (DHCW).

Summary of findings

The number of discharges to care homes roughly halved over the period 1 March 2020 to 31 May 2020, from 822 in March 2020 to 406 in May 2020. This is likely to reflect that during March 2020 discharges were unusually high as hospitals were preparing for the early impact of COVID-19 and trying to increase capacity.

The number of patients discharged with a test prior to discharge increased markedly over the period. The largest increase occurred in the week commencing 27 April 2020, this coincides with the **updated policy guidance** on discharging, published on 29 April 2020. The updated policy required all patients to test negative before discharge to care home settings.

Of the 81 discharged patients who by the point of data extraction on 30 June 2020 had died of COVID-19 related causes, 62 did not receive a test in hospital prior to discharge. 19 patients received a test in hospital at some point prior to discharge and of these, 5 patients had a positive result as their most recent result prior to discharge. The majority of those who did not receive a test were discharged in March 2020. From the week commencing 27 April 2020 all patients discharged who later died of COVID-19 causes had received a test prior to discharge.

Guidance on discharges to care home settings

During the timeframe covered in this paper testing policy and guidance for testing prior to discharge to care home settings in Wales changed.

- From 9 April 2020 Public Health Wales published 'Admission and Care of Residents during COVID-19 Incident in a Residential Care Setting in Wales (ver 1)'¹ which stated that a negative test is not required prior to the transfer/admission to care home. Guidance was available on the importance of discharge being based on clinical assessment and completed isolation period in the hospital along with further isolation on admission to the care home setting. It was not the case that discharge without any consideration was advised. The requirement for a negative test was in addition to rather than in place of control measures that are already in place.
- On 22 April 2020 a joint letter was issued from the Chief Medical Officer and the Deputy Director General of Health and Social Services to registered providers and responsible individuals of care homes. This confirmed testing would be undertaken before hospital discharge and guidance would be revised. The requirement for a negative test was in addition to the control measures already in place.
- On 24 April 2020 a joint letter was issued from the Chief Medical Officer and the Deputy Director General of Health and Social Services to Health Boards, Chief Executives, Medical directors and Directors of Public Health announcing the change in policy.
- The guidance was updated on 29 April 2020 and a **flow chart published**. After the guidance change, hospitals were required to ensure that all patients that were residents of care home settings tested negative for COVID-19 prior to discharge.

Public Health Wales in partnership with Swansea University published a paper looking at **risk factors for outbreaks of COVID-19 in care homes following hospital discharge**². They found that large care homes were at considerably greater risk of outbreaks throughout the pandemic. The exposure to discharge from hospital was not associated with a significant increase in risk after adjusting for care home size.

¹ This paper is no longer publicly available as it contains outdated information. The latest information is available at '**Guidance to Prevent COVID-19 and Manage Cases, Incidents & Outbreaks in Care Homes, Supported Living and Supported Accommodation Settings in Wales**'.

² Emmerson C, Adamson JP, Turner D, Gravenor MB, Salmon J, Cottrell S, Middleton V, Thomas B, Mason BW, Williams CJ. (2021). Risk factors for outbreaks of COVID-19 in care homes following hospital discharge: A national cohort analysis. *Influenza Other Respir Viruses*. 2021 Feb 6. doi: 10.1111/irv.12831. Epub ahead of print. PMID: 33547872.

Number of discharges to care home settings

Between 1 March 2020 and 31 May 2020 there were 1,729 discharges from hospital to care home settings. This is lower than for the same period in both 2019 (when there were 2,066 discharges) and 2018 (1,944 discharges).

When looking just at the month of March, discharges were higher in 2020 (822 discharges) than in both 2019 and 2018 (721 and 567 discharges respectively). However, there were fewer discharges during April and May for 2020 than for 2019 and 2018.

This is likely to reflect that during March 2020 hospitals were preparing for the early impact of COVID-19 and trying to increase capacity. As part of this they cancelled routine procedures and, if appropriate, were discharging patients back to their homes or care home settings.

Table 1: Discharges to care home settings, 1 March 2018 to 31 May 2020

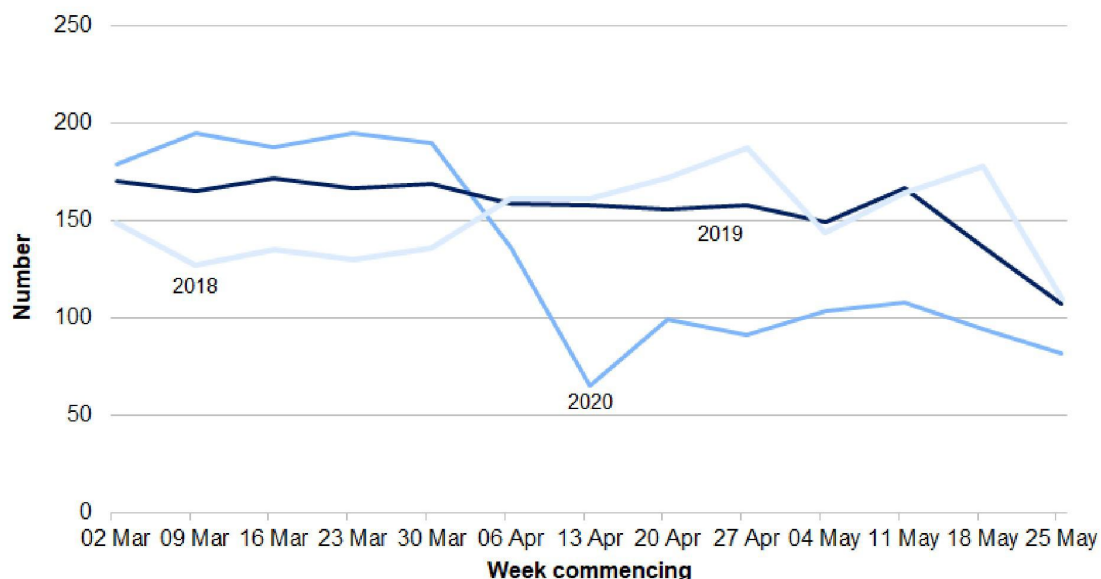
Year	March	April	May	Total
2018	567	672	705	1,944
2019	721	696	649	2,066
2020	822	501	406	1,729

Source: DHCW – Patient Episode Database for Wales (PEDW).

Notes

- 2018 and 2019 discharge data was extracted on 11 January 2021. Data for 2020 was extracted on the 30 June 2020 in line with the rest of the analysis.
- In a Written Question for answer by the Minister for Health and Social Services on 29 May 2020 (WQ80372) and 3 June 2020 (WQ80456) he stated there were 826 discharges in March 2020 and 502 in April 2020. The data for WQ80372 and WQ80456 was extracted on 28 May 2020. The data used for this release was extracted on 30 June 2020, and showed 822 discharges in March 2020, 501 in April 2020 and 406 in May 2020. This discrepancy is due to differing extraction dates and subsequent revisions made in the PEDW data set which is continuously updated.

Chart 1: Discharges each week to care home settings, March, April and May for 2018, 2019 and 2020

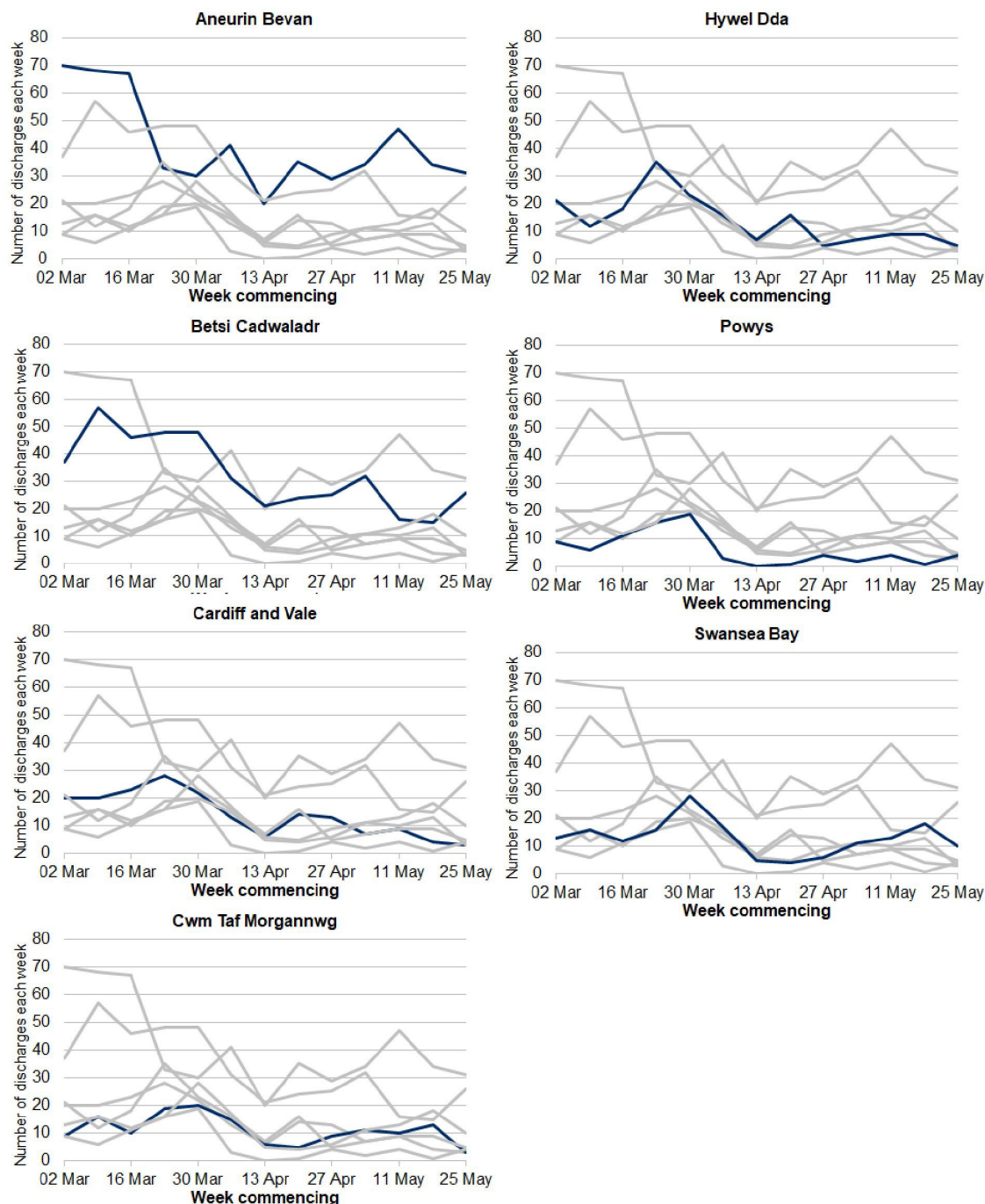


Source: DHCW - PEDW.

Notes

- For the purpose of this analysis the week commencing starts on a Monday. The dates in the x-axis show the dates for Mondays in 2020, while for other years the date will differ slightly. For example, in 2019 the first week of data shown is for the week commencing Monday 4 March and for 2018 the first week of data shown is for Monday 5 March.
- For 2019 and 2018 data, in order to contain a full 7 days, the week commencing 25 May contains the first few days of June 2020.

Chart 2: Discharges each week to care home settings, by local health board, 2 March 2020 to 31 May 2020



Source: DHCW - PEDW.

Notes

- The grey lines in these charts represent the other health boards for comparison.

Table 2: Discharges to care home settings, by health board, 1 March 2020 to 31 May 2020

Health Board	March	April	May
Aneurin Bevan	250	140	151
Betsi Cadwaladr	200	133	94
Cardiff and Vale	98	58	26
Cwm Taf Morgannwg	60	47	39
Hywel Dda	93	59	31
Powys	52	17	11
Swansea Bay	68	47	54
Velindre	1	0	0
Total	822	501	406

Source: DHCW - PEDW.

Notes

- In a Written Question for answer by the Minister for Health and Social Services on 29 May 2020 (WQ80372) and 3 June 2020 (WQ80456) he stated there were 826 discharges in March 2020 and 502 in April 2020. The data for WQ80372 and WQ80456 was extracted on 28 May 2020. The data used for this release was extracted on 30 June 2020, and showed 822 discharges in March 2020, 501 in April 2020 and 406 in May 2020. This discrepancy is due to differing extraction dates and subsequent revisions made in the PEDW data set which is continuously updated.

Across all health boards, as for Wales as a whole, the number of discharges was highest in March 2020, and then decreased in April and May 2020.

Discharges to care home settings, with and without a test in hospital

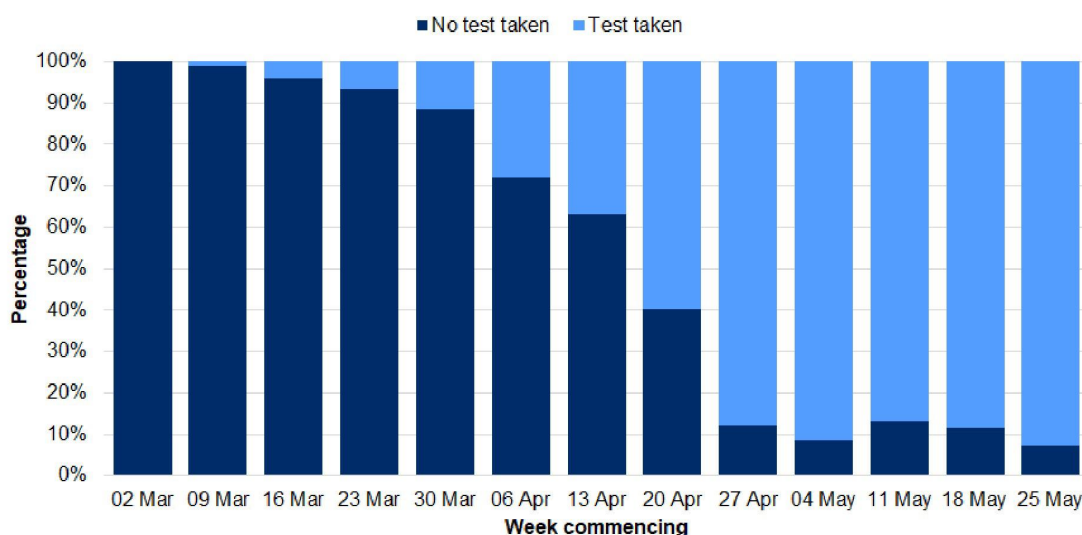
In the sections that follow, the test date is based on the test authorisation date. This is the date on which the patient received their test result.

From 1 March 2020 to 31 May 2020, there were 1,135 discharges from hospitals to care home settings where the patient was not tested for COVID-19 at any point during their spell in hospital prior to discharge (792 in March 2020, 300 in April 2020 and 43 in May 2020). At the start of March 2020, patients were not routinely tested prior to discharge. In the week commencing 2 March 2020, 0 out of 179 discharges were tested in hospital prior to discharge. By the week commencing 25 May 2020 93% of discharges (76 out of 82) were tested at some point during their spell in hospital and had received their result prior to discharge. Of the 6 that were not tested in hospital, 3 were tested prior to admission.

The largest increase in the number of discharges with a test prior to discharge occurred in the week commencing 27 April 2020, this coincides with the **updated policy guidance** on discharging published on 29 April 2020. The updated policy required all patients to test negative before discharge to care home settings.

During this timeframe, testing in the community in Wales was also increasing. For example, **data published by Public Health Wales** shows that in March 2020, 9,137 tests were carried out whereas in May 2020 65,909 were carried out. This may partly explain why more patients were tested prior to discharge during May 2020, as over time, more people in hospital may have had tests prior to going into hospital.

Chart 3: The proportion of discharges to care home settings where a test was taken in hospital prior to discharge, by week, 2 March 2020 to 31 May 2020



Source: DHCW - PEDW & Laboratory Information Management System (LIMS).

Notes

- Only complete weeks have been included in this analysis, therefore data for 1 March 2020 has been excluded.

Across all health boards, the proportion of discharges without a test fell from over 92% in March 2020 to below 30% in May 2020. In May, in Aneurin Bevan, Cardiff and Vale, and Hywel Dda more than 10% of their discharges hadn't been tested prior to discharge. Hywel Dda had the highest percentage (29%) of discharges without a test in hospital. Aneurin Bevan had the largest number of discharges with no test (26 out of 151), followed by Hywel Dda (9 out of 31), and Cardiff and Vale (3 out of 26). Due to the low number of total discharges for each health board, users should be careful when making inferences from percentage figures.

Table 3: Discharges without a test in hospital prior to discharge to care home settings, by health board, 1 March 2020 to 31 May 2020

Health boards	March		April (pre-guidance update)		April (post-guidance update) *		May	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Aneurin Bevan	232	93%	65	51%	3	23%	26	17%
Betsi Cadwaladr	200	100%	87	73%	0	.	2	2%
Cardiff and Vale	95	97%	29	58%	0	.	3	12%
Cwm Taf Morgannwg	59	98%	36	86%	0	.	1	3%
Hywel Dda	88	95%	36	63%	1	50%	9	29%
Powys	51	98%	11	73%	0	.	0	.
Swansea Bay	66	97%	32	68%	0	.	2	4%
Velindre	1	100%	0	.	0	.	0	.
Total	792	96%	296	65%	4	9%	43	11%

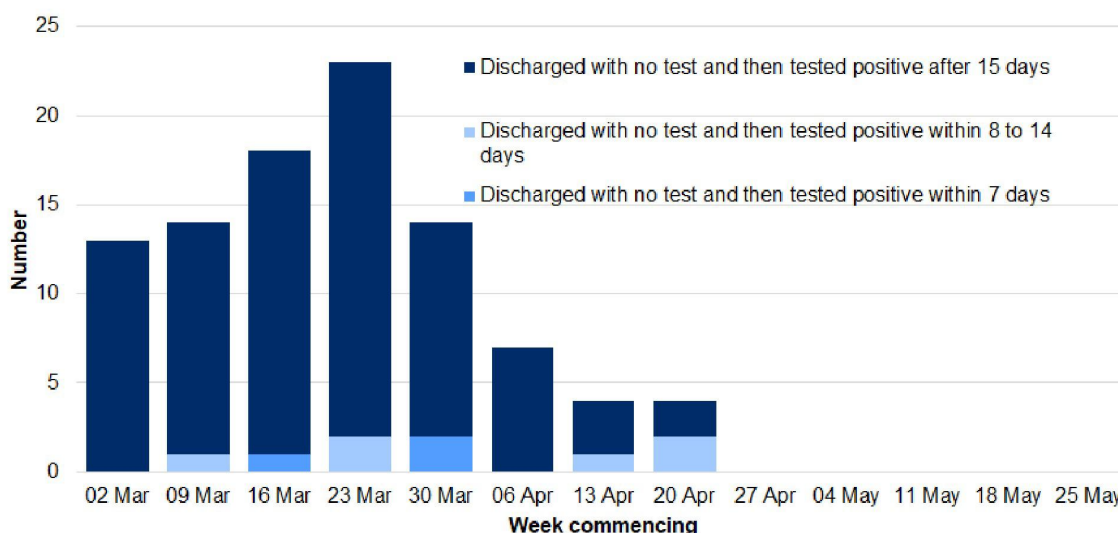
Source: DHCW - PEDW & LIMS.

Notes

- The number of discharges without a test is shown in the number column. The percentage is calculated by dividing the number without a test by total discharges.
- '*' Only two days of data are available after the scientific guidance changed from the 29 April 2020.
- '.' No discharges.

Of the discharges without a test taken, 9% (97 out of 1,135) tested positive at any point after discharge up until the point of the data extraction (30 June 2020). Of these, 9% (9 out of 97) tested positive within 14 days of discharge.

Chart 4: Discharges per week with no test taken in hospital prior to discharge that subsequently tested positive, 2 March 2020 to 31 May 2020



Source: DHCW - PEDW & LIMS.

Notes

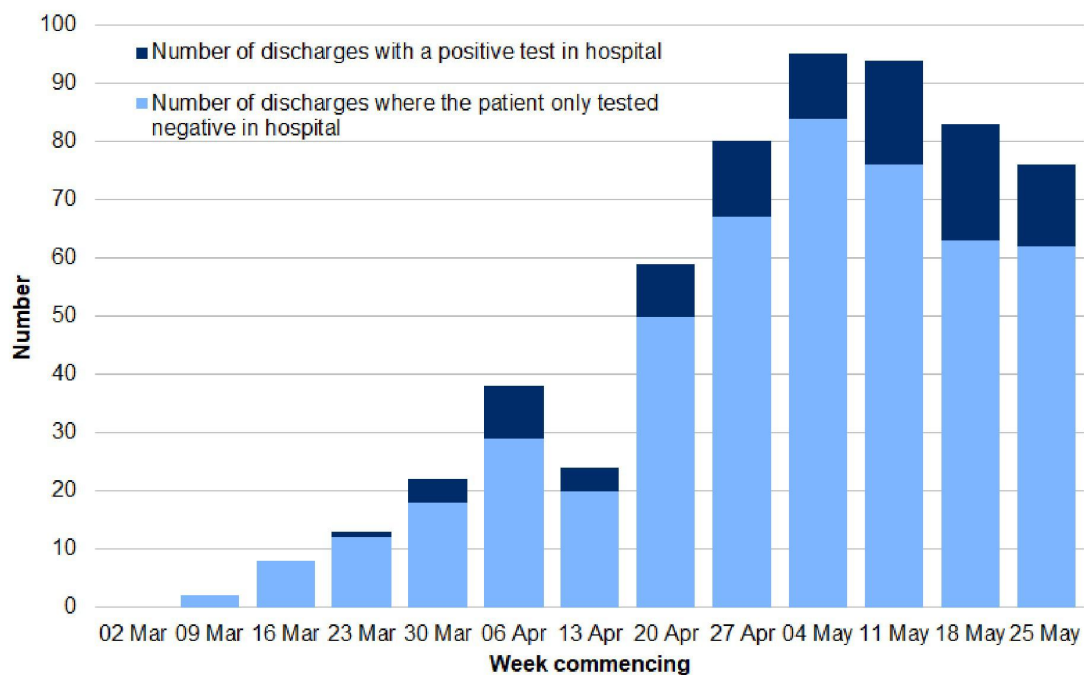
- Only complete weeks have been included in this analysis, this is why data for 1 March 2020 has been excluded.
- Due to a lag from data collection and processing there may have been discharges towards the end of the period where no test was taken in hospital prior to discharge but the patient subsequently tested positive that have not been counted at the time of data extraction on 30 June 2020. However, in these cases, anyone who tested positive after the date was extracted 30 June, would have already have been discharged from hospital for at least a month prior to testing positive.

Discharges to care home settings with a positive test received in hospital prior to discharge

From 1 March 2020 to 31 May 2020, 594 discharged patients were tested in hospital. This increased from 30 in March 2020 to 363 in May 2020. Of those tested in hospital, 17% (103 out of 594) received at least one positive test prior to discharge during their spell in hospital. Of those that tested positive, 32% (33 out of 103) received a positive result as their most recent result prior to discharge.

Of the 33 that received a positive result as their most recent result, 29 received their result prior to the change in guidance on the 29 April 2020. Of the 29 that received their result prior to the change in guidance, 9 had a positive result within 7 days of discharge.

Chart 5: Discharges per week with at least one test taken in hospital prior to discharge, 2 March 2020 to 31 May 2020



Source: DHCW - PEDW & LIMS.

Notes

- Only complete weeks have been included in this analysis, this is why data for 1 March 2020 has been excluded.

Table 4: Discharges with a positive test in hospital as the most recent result prior to discharge, by health board, 1 March 2020 to 31 May 2020

Health boards	March	April (pre-guidance update)	April (Post-guidance update) *	May
Aneurin Bevan	2	17	0	2
Betsi Cadwaladr	0	0	0	1
Cardiff and Vale	0	2	1	0
Cwm Taf Morgannwg	0	1	0	0
Hywel Dda	0	4	0	0
Powys	0	0	0	0
Swansea Bay	0	3	0	0
Velindre	0	0	0	0
Total	2	27	1	3

Source: DHCW - PEDW & LIMS.

Notes

- ‘*’ Only two days of data are available after the scientific guidance changed from the 29 April 2020.
- General testing in hospitals increased from March 2020 to May 2020 which will affect the number of positive tests.

Discharges to care home settings with a positive test received at any point prior to discharge

From 1 March 2020 to 31 May 2020, 637 patients were tested at any point prior to discharge. 26% (168 out of 637) received a positive result. This includes patients that were tested in hospital or at any point before admission. Of the patients who tested positive prior to discharge, 65% (110 out of 168) were discharged more than 15 days after receiving a positive test. Where there was a positive test within 7 days prior to discharge the majority occurred prior to the change in policy guidance on 29 April 2020 (1 discharge in March 2020, 11 in April 2020 and 4 in May 2020). While the number of discharges with a positive test prior to discharge increased from March 2020 to May 2020, Table 4 and Chart 6 show that the proportion of discharges with a positive test after 15 days increased reflecting a greater length of time between discharge and receiving a positive test. Furthermore, the higher number of discharges with a positive test prior to discharge could be partly a result of greater testing.

A test could have been authorised at any point prior to the discharge of the patient. For example, in hospital, in a previous hospital spell or before admission.

Table 5: Discharges with a positive test received at any point prior to discharge, 1 March 2020 to 31 May 2020

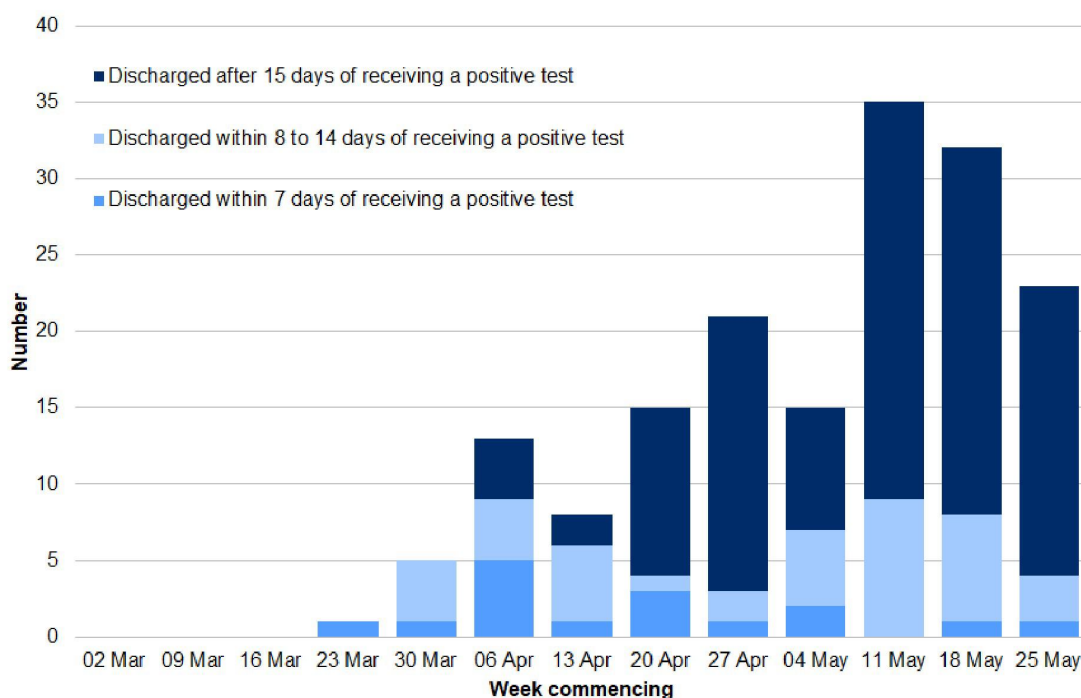
Measure	March	April	May
Discharges with a positive test within 7 days	1	11	4
Discharges with a positive test within 8-14 days	1	15	24
Discharges with a positive test 15+ days prior to discharge	0	32	80
Discharges with a positive test prior to discharge	2	58	108

Source: DHCW - PEDW & LIMS.

Notes

- Data here may differ from that previously published due to differences in methodology in counting patients with a positive test prior to discharge. In Written Question for Answer by Minister for Health and Social Services on 11 November 2020 (WQ81464), it was stated that 167 people were discharged with positive coronavirus tests from hospitals and 68% were discharged 15 days after receiving a positive test. The discrepancy is due to patients who received their result on the day of discharge were excluded from the analysis provided for the Written Question but are included here. The data used for WQ81464 was extracted on the 30 June 2020 in line with the rest of the analysis.

Chart 6: Discharges per week to care home settings with a positive test received at any point prior to discharge, 2 March 2020 to 31 May 2020



Source: DHCW - PEDW & LIMS.

Notes

- Only complete weeks have been included in this analysis, this is why data for 1 March 2020 has been excluded.

Patients discharged to care home settings that later died

The data set provided by DHCW only includes deaths that were registered and included in the ONS mortality data set by the point of data extraction on 30 June 2020 in line with the rest of the analysis. For this analysis only the date the patient was discharged is examined, as the date of death was not received by Welsh Government. The latest patient in this data set with a registered death certificate was discharged on 29 May 2020. Deaths are required by law to be registered within 5 days of occurrence unless there is to be a coroner's post mortem or an inquest. Furthermore, **ONS require additional time** to process and include the cause of death. The data passes through a number of processes before becoming usable for analysis (**ONS User guide to mortality statistics - Annex K flow chart of deaths process**). Therefore deaths included in this data set will be an undercount at the time the data was extracted due to these processes.

In this analysis, COVID-19 related deaths are those classified by DHCW as 'COVID-19-underlying' or 'COVID-19 – other causes'. 'COVID-19-underlying' means that COVID-19 was the underlying cause of death. 'COVID-19 – other causes' means COVID-19 was not the underlying cause but appeared on the death certificate. Medical practitioners are required to certify causes of death to the best of their knowledge and belief. The patient is only required to display symptoms typical of a COVID-19 infection for COVID-19 to be on the death certificate. A test result is not required. For further information on completing medical certificates please see ONS **'Guidance for doctors completing Medical Certificates of Cause of Death in England and Wales'**.

The following figures, tables and charts only captures patients discharged from a hospital into a care home setting who later died. Therefore not all deaths are counted that have occurred in care home settings.

The following analysis examines number of deaths of individual patients rather than discharges, to exclude re-admissions. Welsh Government did not receive the date of death. For patients who had multiple admission and discharge dates, the analysis was based on the latest discharge date for that patient. For example, if a patient was discharged on 1 March 2020, readmitted to hospital and discharged again on 1 April 2020, the discharge date of 1 April 2020 has been used.

360 patients who were discharged from hospital into a care home setting from 1 March 2020 to 31 May 2020 subsequently died (202 who had been discharged in March 2020, 108 in April 2020 and 50 in May 2020). Due to the time lag in death registration and data processing the number of patients discharged who later died, (especially for those discharged in May 2020), will be an undercount.

Of the patients discharged to a care home setting who later died, 23% (81 out of 360) died from a COVID-19 related cause ('COVID-19' - underlying' or 'COVID - other cause') and 78% (279 out of 360) from other causes according to the death certificate.

Table 6: Patients discharged to care home settings that later died from a COVID-19 related cause, by month of discharge and by health board, 1 March 2020 to 31 May 2020

Health boards	March		April		May	
	Number	Percentage	Number	Percentage	Number	Percentage
Aneurin Bevan	12	5%	7	5%	1	1%
Betsi Cadwaladr	8	4%	8	6%	3	3%
Cardiff and Vale	7	7%	3	5%	0	.
Cwm Taf Morgannwg	4	7%	3	6%	0	.
Hywel Dda	3	3%	3	5%	0	.
Powys	9	18%	1	6%	0	.
Swansea Bay	3	4%	5	11%	1	2%
Velindre	0	.	0	.	0	.
Total	46	6%	30	6%	5	1%

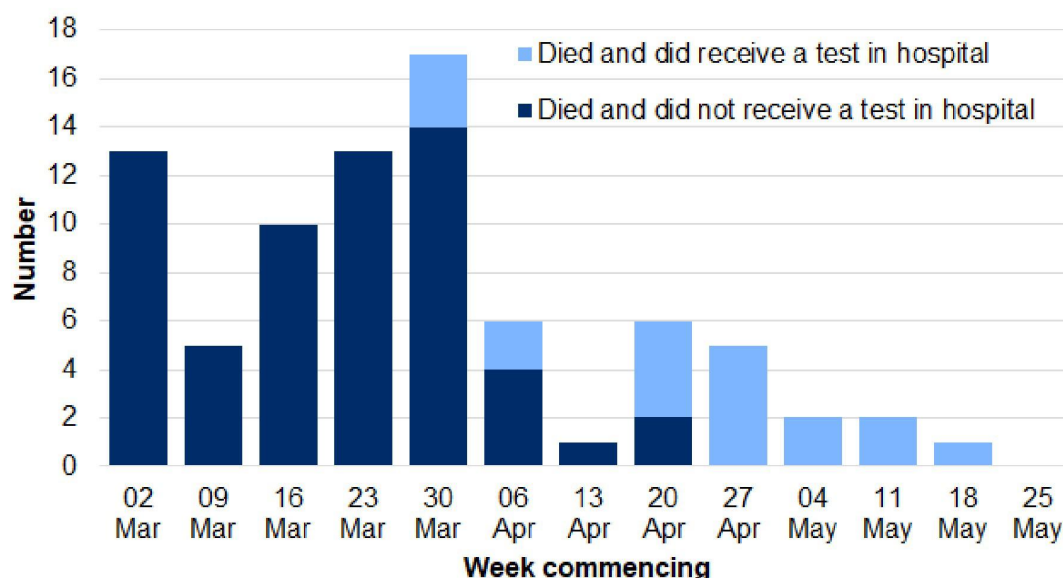
Source: DHCW & ONS - PEDW, LIMS & the ONS Mortality Data set.

Notes

- '.' Indicates no deaths recorded.
- Percentages are calculated from number of deaths due to a COVID-19 related cause divided by the number of discharges (excluding discharges where the patient was readmitted).

Of the patients that later died of COVID-19 related causes, 76% (62 out of 81) did not receive a test in hospital prior to discharge. This varied by week, with the majority of patients who died of a COVID-19 related cause who had not received a test before discharge, being discharged in March 2020. From the week commencing 27 April 2020 onwards, all patients discharged who subsequently died of a COVID-19 related cause had received a test before discharge.

Chart 7: Patients discharged to care home settings that later died from a COVID-19 related cause and whether they received a test in hospital, by week of discharge, 1 March 2020 to 31 May 2020



Source: DHCW & ONS - PEDW, LIMS & the ONS Mortality Data set.

Notes

- Only complete weeks have been included in this analysis, this is why data for 1 March 2020 has been excluded.
- Deaths for patients discharged in May 2020 will be lower due to lags in data processing and a reduced time interval between discharge and the date data was extracted.
- In a Written Question for answer by Minister for Health and Social Services on 23 November 2020 (WQ81560), he stated that of the 167 discharges, 21 individuals died and 14 individuals had received a negative result from their last coronavirus test prior to discharge. This differs to what is stated in this analysis due to differing methodologies and definitions. In the analysis provided for the Written Question, all deaths where the patient tested positive but did not necessarily die of a COVID-19 related cause were included. Furthermore, patients who received their result on the day of discharge were excluded from the analysis provided for the Written Question but are included here. The data used for WQ81560 was extracted on 30 June 2020.

Of the patients who later died from a COVID-19 related cause, 62% (50 out of 81) received a test at some point prior to death and 23% (19 out of 81) received a test in hospital. Of those that received a test in hospital 32% (6 out of 19) tested positive at some point during their hospital spell. 26% (5 out of 19) had a positive result as their most recent test prior to discharge.

Quality and methodology information

Annex

This paper provides a summary of the number of discharges to care home settings and the number of discharged patients that later died under various testing outcomes for the period 1 March 2020 to 31 May 2020.

The data set used for this analysis links three data sets taken from the following sources: the Patient Episode Database for Wales (PEDW), the Laboratory Information Management System for COVID-19 tests (LIMS) and a consolidated death file derived from the Master Patient Index and the Office for National Statistics' (ONS) **mortality data set**. PEDW was used for data relating to patient discharges from hospitals to care home settings. LIMS was used for data relating to COVID-19 tests. The consolidated death file was used for the number of discharges from hospital that subsequently died at the point of data extraction and the cause of death. DHCW linked data from these three sources into a single data set using the patient's unique NHS number. DHCW anonymised the data set prior to submission to Welsh Government for analysis. The data set was extracted and received by Welsh Government on 30 June 2020. Additional 2018 and 2019 discharge data was extracted on 11 January 2021 from PEDW for comparative purposes. Data used contains management information and is subject to revision. Therefore figures, charts and tables may differ from official statistics.

Discharges

This analysis is based on discharges and not individual patients. Therefore, if the same patient had multiple hospital spells and was discharged more than once they would be counted more than once in the analysis. This was done to capture patients who were re-admitted at a later date.

To carry out the analysis, a discharge key was created by combining an anonymised patient key with the patient's discharge date. For example, if a patient was re-admitted there would be at least two records for this patient with the same patient key but a different discharge key. However, the deaths analysis is based on patients, with those patients who had multiple discharges being counted based on their latest discharge date. The latest discharge data was used to ensure consistency between the discharge of the patient and their most recent test result.

Discharge destinations

The following discharge destinations have been counted as care home settings. Welsh Government cannot identify individual care home settings from this data set.

Value	Meaning
20	Permanent residence at nursing home, residential care home
21	Temporary residence at nursing home, residential care home
54	NHS run nursing home, group home or residential care home
65	Local Authority Part 3 residential accommodation i.e. where care is provided
85	Non-NHS (other than local authority) run residential care home
86	Non-NHS (other than local authority) run nursing home

All patients were discharged from Welsh hospitals. Due to how the data is processed Welsh Government are unable to determine whether patients were discharged to Welsh or English care home settings. For further information on testing arrangements prior to admission to a care home setting see **latest guidance from Public Health Wales**.

Deaths

Mortality data supplied by DHCW was generated using a consolidated death file derived from mortality data from the ONS and the Master Patient Index data set. ONS mortality data was required for the date and cause of death while the Master Patient Index was used to derive the date of death of patients that had not been included in the ONS mortality data set. DHCW allocated each record a death flag to indicate whether the patient had subsequently died by the point of data extraction. Welsh Government were not provided the date of death for the analysis. Therefore the analysis was unable to examine the length of time between a positive test, discharge and death. The consolidated death file was introduced to support the COVID-19 shielded patient list. COVID-19 related deaths are those classified by DHCW as 'COVID-underlying' or 'COVID-19 – other causes'. 'COVID-19-underlying' means that COVID-19 was the underlying cause of death. 'COVID-19 – other causes' means COVID-19 was not the underlying cause but appeared on the death certificate. Underlying cause of death is defined by the World Health Organisation as: (a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury.

The data set only captures patients who were discharged from a hospital into a care home setting and therefore will not capture all of the deaths that have occurred in care home settings. The Welsh Government publishes data every Tuesday on '**Notifications to Care Inspectorate Wales related to COVID-19 in adult care homes**', including comparative data for the past two years. This data provides a timely indication of trends for all deaths to care home residents in Wales, from COVID-19 or otherwise. The ONS also publishes **weekly provisional figures** of care home resident deaths registered in England and Wales.

ONS COVID-19 related deaths figures provide provisional counts of the number of deaths registered in Wales for which data are available, and the number of deaths for which the underlying cause was coded to respiratory diseases as defined by the World Health Organisation in '**International Statistical Classification of Diseases and Related Health Problems Tenth Revision (ICD-10)**'. From 31 March 2020 these figures also show the number of deaths involving coronavirus (COVID-19), based on any mention of COVID-19 on the death certificate.

For more information on the methodology and the timeliness of the mortality data please see the ONS '**User guide to mortality statistics**'.

For more information on mortality data quality, please see the ONS article '**Impact of registration delays on mortality statistics: 2016**' and for information on mortality data quality during the coronavirus (COVID-19) pandemic, see '**Quality of mortality data during the coronavirus pandemic, England and Wales: 2020**'.

Data set linking methodology

DHCW linked the discharge data taken from the Patient Episode Database for Wales to the testing data from the Laboratory Information Management System so that for each patient there was a record of every COVID-19 test they had taken that had been recorded by the point of data extraction on 30 June 2020. This allowed Welsh Government to examine at a patient level the specimen date of the test, authorisation date, test result, the order in which tests were taken and the number of days before or after discharge the test was authorised. For this analysis, the authorisation date of the test was used for all sections related to testing. The testing records were linked to a consolidated death file derived from the ONS mortality data set and the Master Patient Index data set. Patients that died were flagged and categorised by cause of death. The data sets were linked using the individual's NHS Patient Number, however, the NHS Patient Number was not received by Welsh Government. The data set received by Welsh Government was anonymised with possible identifiers removed. No constraints were placed on the dates of discharge, specimen and authorisation test date at the time of data extraction on the 30 June 2020.

Due to each data set having different processing cycles, some data sets are more up to date than others at the point of data extraction. For example, the ONS mortality data has a longer processing cycle than the Master Patient Index data set. This means that if someone was discharged on 29 May 2020 and died on the 10 June 2020 with their death registered by the 15 June 2020 then the discharge would have been included in the PEDW data set but not necessarily included in the consolidated death file. This would lead to an undercount in the deaths registered especially for May 2020.

Fields used in the analysis

PEDW and LIMS fields

Field	Meaning
PersonID	Anonymised unique patient key.
DischargeMonthName	The month in which the discharge took place.
ProviderOrganisationCurrent Name	Name of the local health board.
DischargeDestinationCode	The type of care home setting to which the patient was discharged to.
AdmissionDate	Date on which patient was admitted.
DischargeDate	Date on which patient was discharged.
SpecimenCollectedDate	Date on which specimen was collected.
AuthorisedDate	Date on which the test result was authorised.
COVID19TestResult	Whether the test result was positive, negative or in progress.

DHCW derived fields

Field	Meaning
TestOrder	The order of tests linked to each discharge. 1 is the most recent test.
TestTaken	The point at which the result was authorised in relation to the admission and discharge dates for the particular discharge.
DaysTestAfterDischarge	The number of days the specimen result was authorised in relation to the discharge date.
DaysDischargeAuthorised	The number of days the test result was authorised in relation to the discharge date.
DaysDischargeSpecimenCollected	The number of days the specimen was collected in relation to the discharge date.
DeathFlag	Identifies whether this person has died based on the latest available death data.
ONSCauseDeath	Identifies what the derived cause of death is in the consolidated death file.

Welsh Government derived fields

Field	Meaning
Patient-dischargeID	A unique number used to identify each discharge.
Readmissions	Identifies whether this person was readmitted to hospital.
TestInHospital	Identifies whether this person received a test in hospital.
DischargeGuidance29	Identifies whether the discharge came before or after the guidance change on the 29 th April 2020.
MostRecentTest	Identifies whether the COVID-19 test taken in hospital is the most recent test taken prior to discharge.

Accuracy

Data is management information, subject to revision and may differ from official statistics. Some of the analysis presented here will differ to what has previously been provided in response to Written Questions.

- In a Written Question for answer by the Minister for Health and Social Services on 29 May 2020 (WQ80372) and 3 June (WQ80456) he stated there were 826 discharges in March 2020 and 502 in April 2020. The data for WQ80372 and WQ80456 was extracted on 28 May 2020. The data used for this release was extracted on 30 June 2020, and showed 822 discharges in March 2020, 501 in April 2020 and 406 in May 2020. This discrepancy is due to differing extraction dates and subsequent revisions made in the PEDW data set which is continuously updated.
- Data here may differ from that previously published due to differences in methodology in counting patients with a positive test prior to discharge. In Written Question for answer by Minister for Health and Social Services on 11 November 2020 (WQ81464), it was stated that 167 people were discharged with positive coronavirus tests from hospitals and 68% were discharged 15 days after receiving a positive test. The discrepancy is due to patients who received their result on the day of discharge were excluded from the analysis provided for the Written Question but are included here. The data used for WQ81464 was extracted on the 30 June 2020.
- In a Written Question for answer by Minister for Health and Social Services on 23 November 2020 (WQ81560) he stated that of the 167 discharges, 21 individuals died and 14 individuals had received a negative result from their last coronavirus test prior to discharge. This differs to what is stated in this analysis due to differing methodologies and definitions. In the analysis provided for the Written Question, all deaths where the patient tested positive but did not necessarily die of a COVID-19 related cause were included. Furthermore, patients who received their result on the day of discharge were excluded from the analysis provided for the Written Question but are included here. The data used for WQ81560 was extracted on 30 June 2020 in line with the rest of the analysis.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural wellbeing of Wales. The Act puts in place seven wellbeing goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the wellbeing goals, and (b) lay a copy of the national indicators before Senedd Cymru. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the wellbeing goals and associated technical information is available in the **Well-being of Wales report**.

Further information on the **Well-being of Future Generations (Wales) Act 2015**.

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local wellbeing assessments and local wellbeing plans.

Further details

The document is available at: [<link to webpage>](#)

Next update

This is a bespoke piece of analysis and there are currently no plans to update it.

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to KAS.COVID19@gov.wales.

Contact details:

Statistician: Name Redacted

Telephone: Irrelevant & Sensitive

Email: KAS.COVID19@gov.wales

Media: Irrelevant & Sensitive

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