ystadegau ar gyfer cymru statistics for wales

Statistical First Release

Llywodraeth Cymru Welsh Government

Time Spent in NHS Wales Accident and Emergency Departments, 2016-17

5 April 2018
SFR 26/2018

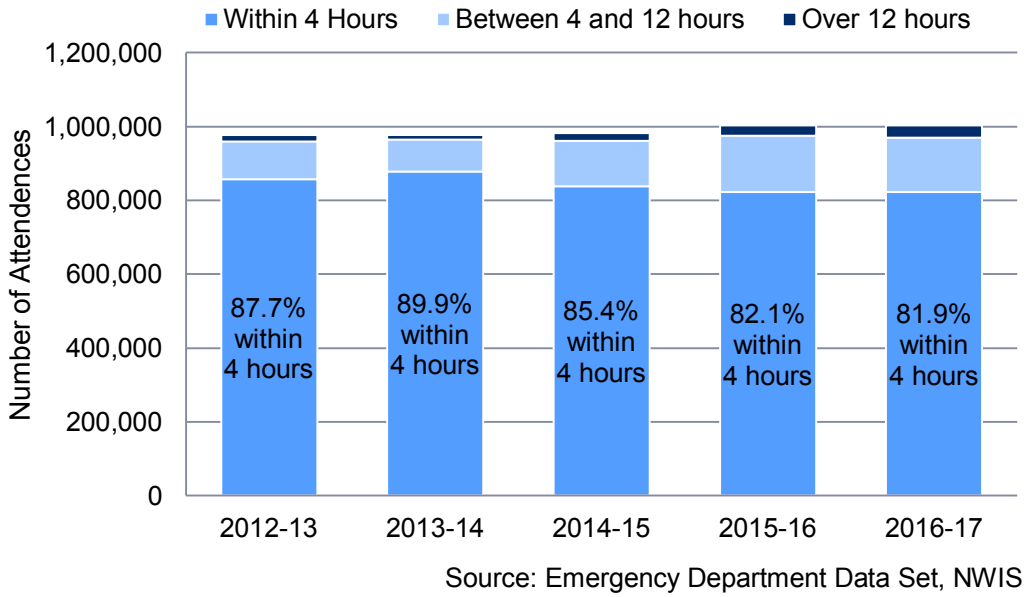
The NHS Outcomes Framework 2016-17, released in WHC (2016) was used to measure delivery throughout 2016-17. The targets relating to time spent in Accident and Emergency (A&E) departments are:

- 95 per cent of new patients should spend less than 4 hours in A&E departments from arrival until admission, transfer or discharge
- Eradication of 12 hour or more waits within A&E departments.

Key points

- There were 1,003,710 attendances to A&E departments, an average of 2,750 a day, 3 more a day than 2015-16.
- 81.9 per cent of patients spent less than 4 hours in A&E departments from arrival until admission, transfer or discharge. This is 0.2 percentage points less than in 2015-16.
- 33,834 patients spent longer than 12 hours in A&E departments, 5,818 more than the previous year.
- Patients over the age of 85 spent longer than average from arrival until admission, transfer or discharge.

Number of attendances over time and the percentage of patients spending less than 4 hours in A&E from arrival until admission transfer or discharge, 2012-13 to 2016-17



Source: Emergency Department Data Set, NWIS

About this release

This Statistical Release presents summary information on the reported percentage of patients spending less than 4 and 12 hours in all NHS A&E departments (major A&E departments and other A&E/Minor Injury Units) from arrival until admission, transfer or discharge.

This information is published monthly along with other key indicators as part of the NHS Activity and Performance Summary.

In this release

Statistician: Rebecca Armstrong ~ 0300 025 3633 ~ stats.healthinfo@gov.wales

Enquiries from the press: 0300 025 8099 Public enquiries : 0300 025 5050 Twitter: @statisticswales

Contents

Introduction

This is the first in a series of annual releases following on from our change from quarterly statistical releases. We now publish monthly updates with the latest available data for several health areas relating to waiting times, along with an interactive dashboard where people can see and use the data as they see fit. We're using this opportunity to have a more in-depth look at the data to bring as much context as possible to the underlying data.

The analysis focuses on Activity and Performance in the 2016-17 financial year but looks back over a longer time series to show long-term trends. We have also provided a context section to add value to some of the analysis.

Summary

Activity

- There was 1,003,710 attendances in 2016-17 – this was 1,164 more than 2015-16 (0.1 per cent) and 15,257 more than 5 years ago (2011-12) (1.5 per cent).
- This is the equivalent to 2,750 attendances a day in 2016-17, 3 (0.1 per cent) more than the previous year and 42 more a day than 5 year years ago (2.0 per cent).
- Activity is seasonal – there are more attendances in the summer months with the most daily attendances in May 2016 (2,917) and the least in December 2016 (2,521).
- The Local Health Board with the highest total attendances in 2016-17 was Betsi Cadwaladr University and Powys Teaching had the least, although Powys has no Major Accident and Emergency Departments. In contrast, the Local Health Board with the highest daily rate of attendances compared to their population is Cwm Taf University.

Performance

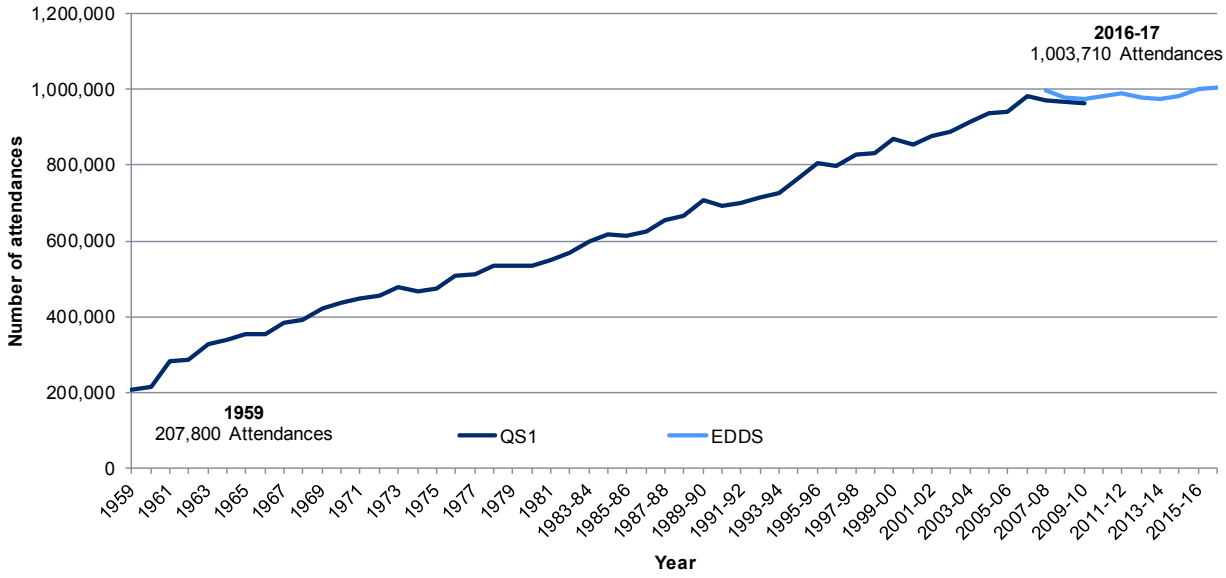
- Performance (percentage of patients spending less than 4 hours) in 2016-17 was 81.9 per cent, this was 0.2 percentage points lower than 2015-16 and 7.1 per cent lower than 5 years ago (2011-12)
- There were 33,834 waits over 12 hours in 2016-17; this is 5,818 more than 2015-16 and 22,332 more than its introduction in 2013-14.
- The highest overall performance was in Powys Teaching health board, with 99.8% of patients seen within 4 hours in 2016-17, this health board doesn't have a major department. The highest performance of a health board with a major department was at Hywel Dda (84.9 per cent).

Context

- Median waiting times improved this year compared to last year for Hywel Dda, Cardiff and Vale and Abertawe Bro Morgannwg health boards.
- Ambulance arrivals are more likely to result in admission.
- Older people tend to wait longer in A&E and have a greater spread of waiting times compared to younger people. This is probably due to older people being more likely to be admitted.

Section 1: Activity

Chart 1: Number of A&E attendances by year, 1959 onwards[1]



Source: QS1 and Emergency Department Data Set, NWIS

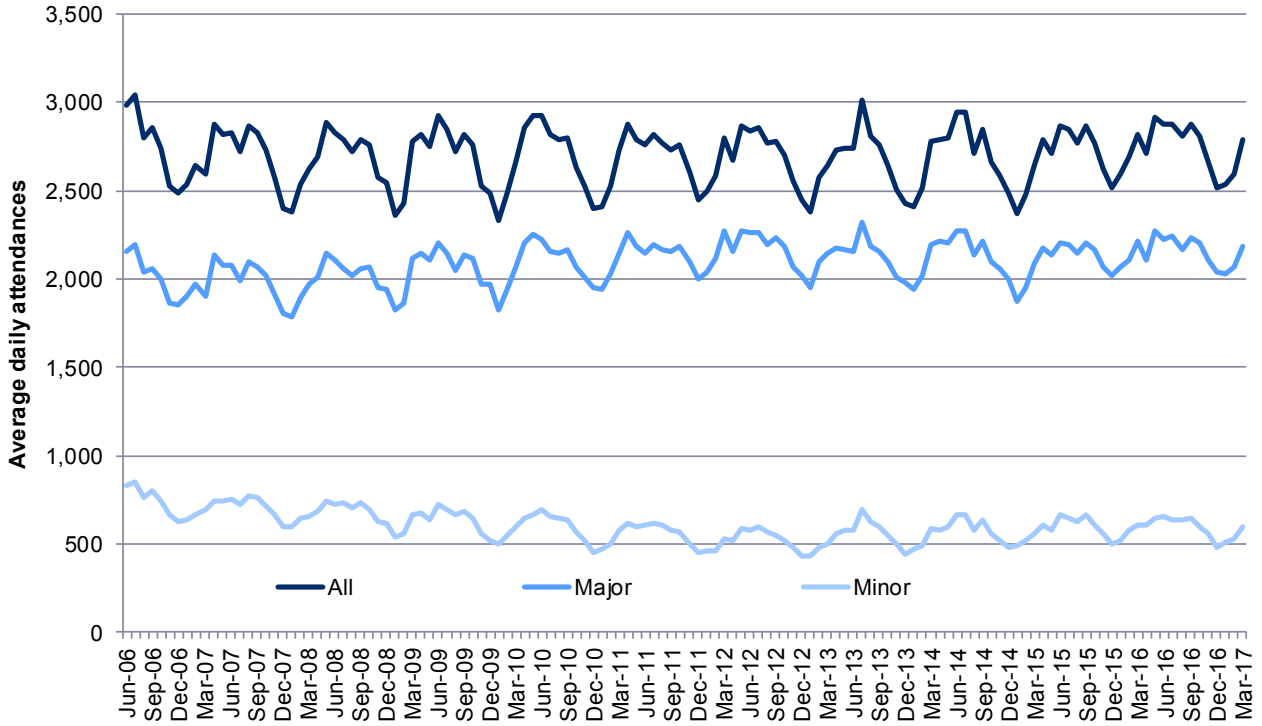
[1] From 1959 data was collected by calendar year, from 1983-84 it was then collected by financial year

A&E attendances data has been published since 2006 but we can look back further by using the QUEST1(QS1) return. The QS1 return collected aggregate data on patient throughput and bed utilisation at NHS hospitals, clinics and units in Wales.

Chart 1 shows the total number of new attendances at accident and emergency departments in Wales from 1959 onwards.

- The numbers of attendances to A&E have grown almost 5 fold in the period covered by the chart, from around 200,000 in 1959 to about a million attendances for 2016-17.
- Although there has been a steady increase, the number of new annual attendances has been fairly stable since 2006-07.

Chart 2: Rates of daily attendances in accident and emergency departments, split by major and minor departments, June 2006[(a)] onwards



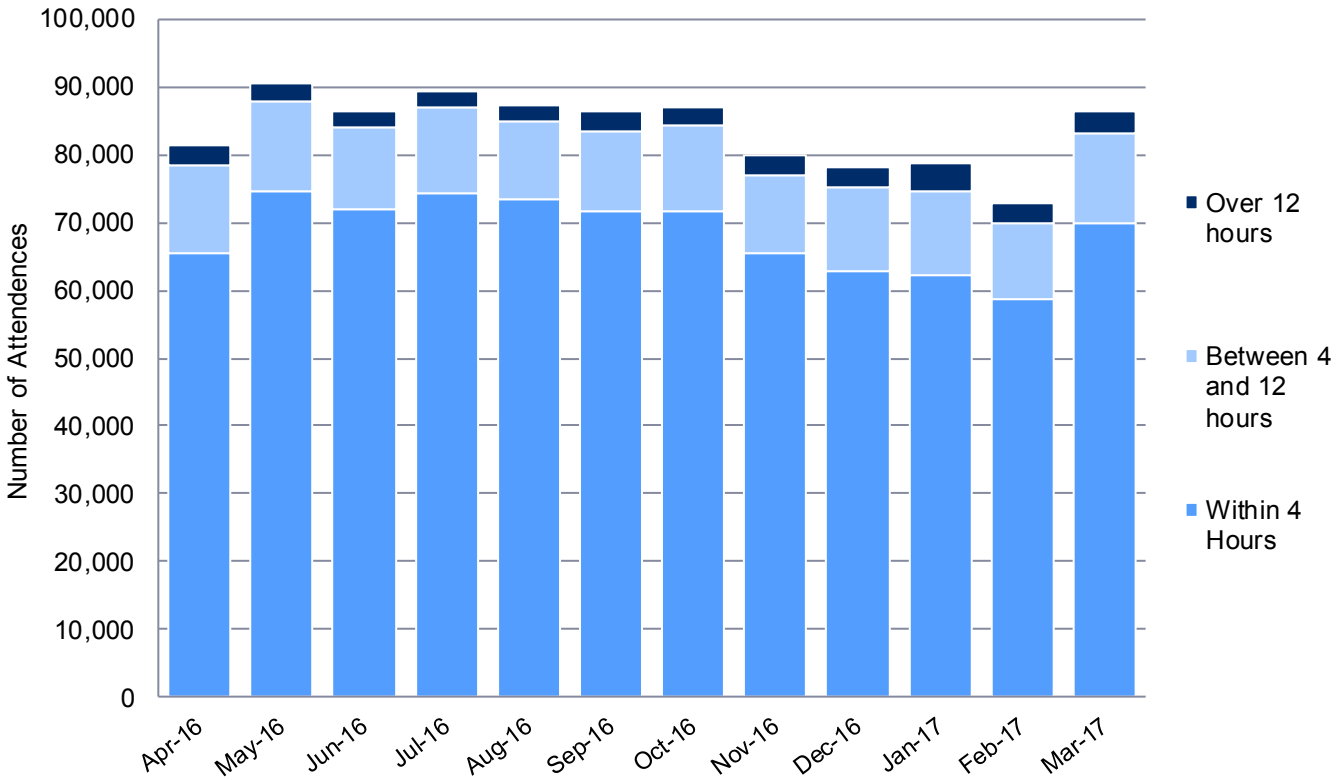
Source: SITREPS, Emergency Department Data Set, NWIS

(a) From June 2006 to March 2010 Accident and Emergency data was collected from weekly submissions to SITREPS, between April 2010 to March 2012, Major departments submitted monthly data to the EDDS and Minor data still came from SITREPS. From April 2012 onwards all data comes from EDDS.

Chart 2 shows the rate of daily attendances by month for major and minor accident and emergency departments in Wales from June 2006 onwards.

- In the period covered by the chart the rates of daily attendances have been stable for both types of A&E departments with most in major A&E departments.
- There is strong seasonality affecting all types of accident and emergency departments, there are higher rates of attendances in summer months.

Chart 3: Total attendances grouped by time-bands and split by month, 2016-17

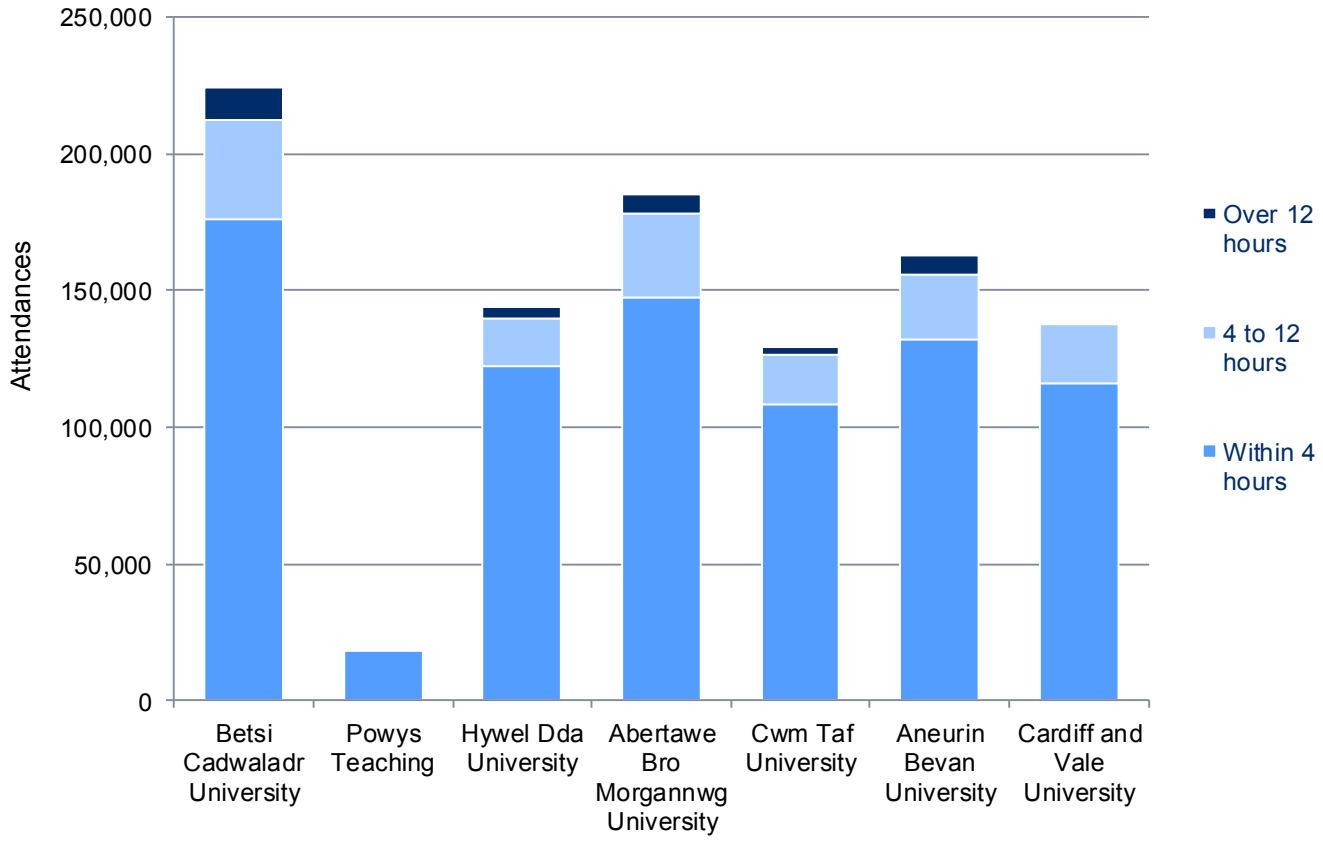


Source: Emergency Department Data Set, NWIS

Chart 3 is a stacked bar chart with the total attendances for each month through 2016-17, banded into those waiting less than 4 hours, between 4 and 12 hours or over 12 hours.

- There are more attendances in the summer months, and there is a higher proportion of those spending four hours or less in A&E departments.
- Although higher in the summer, the number of attendances each month is fairly constant at between 70,000 and 90,000

Chart 4: Total attendances and waiting time bands by local health board, 2016-17



Source: Emergency Department Data Set, NWIS

Chart 4 shows total attendances by health board and the proportions of which that were within the 4 hour target, over 4 hours but less than 12 hours and over 12 hours.

- Betsi Cadwaladr had the most attendances throughout 2016-17, with a total of 224,122 attendances, this was followed by Abertawe Bro Morgannwg University who had 185,499 attendances. These were the two health boards with the lowest proportion of patients waiting less than 4 hours (79.5 per cent for ABMU, 78.7 per cent for Betsi Cadwaladr).
- Powys teaching health board had the lowest number of attendances, with a total of 18,577 attendances. The health board also had the greatest proportion of waits less than 4 hours, 99.8 per cent of attendances being less than 4 hours. Please note Powys Teaching Health Board is the only health board in Wales without a major accident and emergency department.

Table 1: Rate of daily attendances per 10,000 population, by local health board and month, 2016-17

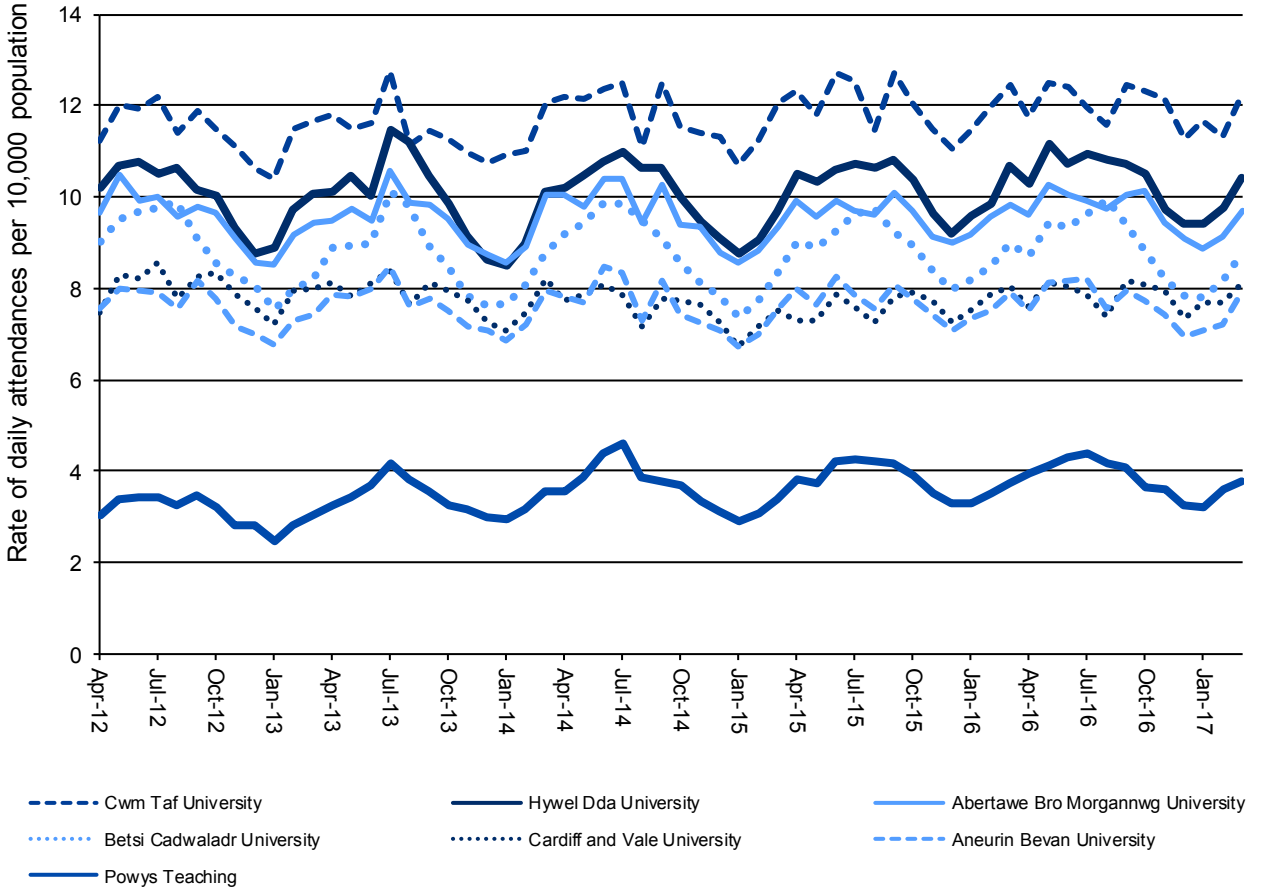
	Betsi Cadwaladr University	Powys Teaching	Hywel Dda University	Abertawe Bro Morgannwg University	Cwm Taf University	Aneurin Bevan University	Cardiff and Vale University	Wales
								
Apr-16	8.7	4.0	10.3	9.5	11.7	7.5	7.5	8.7
May-16	9.4	4.1	11.1	10.2	12.4	8.1	8.0	9.4
Jun-16	9.3	4.3	10.7	10.0	12.3	8.1	8.0	9.2
Jul-16	9.6	4.4	10.9	9.8	11.9	8.2	7.8	9.3
Aug-16	9.9	4.2	10.8	9.7	11.5	7.5	7.3	9.0
Sep-16	9.4	4.1	10.7	10.0	12.4	7.9	8.1	9.2
Oct-16	8.8	3.7	10.5	10.1	12.3	7.7	8.0	9.0
Nov-16	8.2	3.6	9.7	9.4	12.1	7.4	7.9	8.6
Dec-16	7.8	3.3	9.4	9.0	11.2	6.9	7.3	8.1
Jan-17	7.8	3.2	9.4	8.8	11.6	7.0	7.6	8.2
Feb-17	8.2	3.6	9.7	9.1	11.3	7.2	7.6	8.3
Mar-17	8.7	3.8	10.4	9.6	12.2	7.9	8.0	8.9
2016-17	**8.8**	**3.9**	**10.3**	**9.6**	**11.9**	**7.6**	**7.8**	**8.8**

Source: Emergency Department Data Set, NWIS

Table 1 shows the rate of attendances in each health board, as well as all-Wales rate for each month in 2016-17.

- Hywel Dda University and Cwm Taf University have the highest rates of attendances per 10,000 population, above the average for the rate in Wales.
- Powys teaching has the lowest rate of attendances, approximately half the rate of all-Wales, however this health board only has minor injury units and no major departments for accident and emergency services so its residents attend A&E in neighbouring health boards.
- The resident population for each health board has been used to calculate the rates here and it does not take into account patients travelling to hospitals outside their resident area. For example patients who live in Powys could go to a major hospital in a number of other health boards.
- The higher rate of attendance at Hywel Dda and Aneurin Bevan is partly due to attendances from Powys residents (12.3 per cent and 13.9 per cent of each health boards total attendees respectively).

Chart 5: Rate of daily attendances per 10,000 population, by local health board, April 2012 onwards



Source: Emergency Department Data Set, NWIS

Chart 5 shows the rate of daily attendances per 10,000 population for each of the local health boards in Wales from April 2012 onwards.

- The rate of daily attendances is lower in Powys than all other health boards by a considerable amount.
- The rate of daily attendances is then fairly similar for the health boards which have major departments; the highest rate of daily attendances is seen at Cwm Taf.

Section 2: Performance

Chart 6: Percentage of patients seen within 4 hours at A&E departments, by financial year, 2012-13 onwards

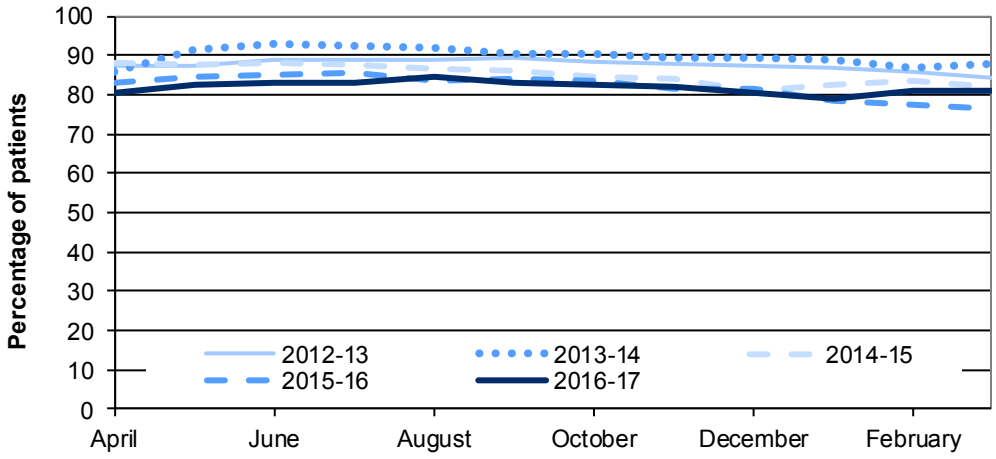
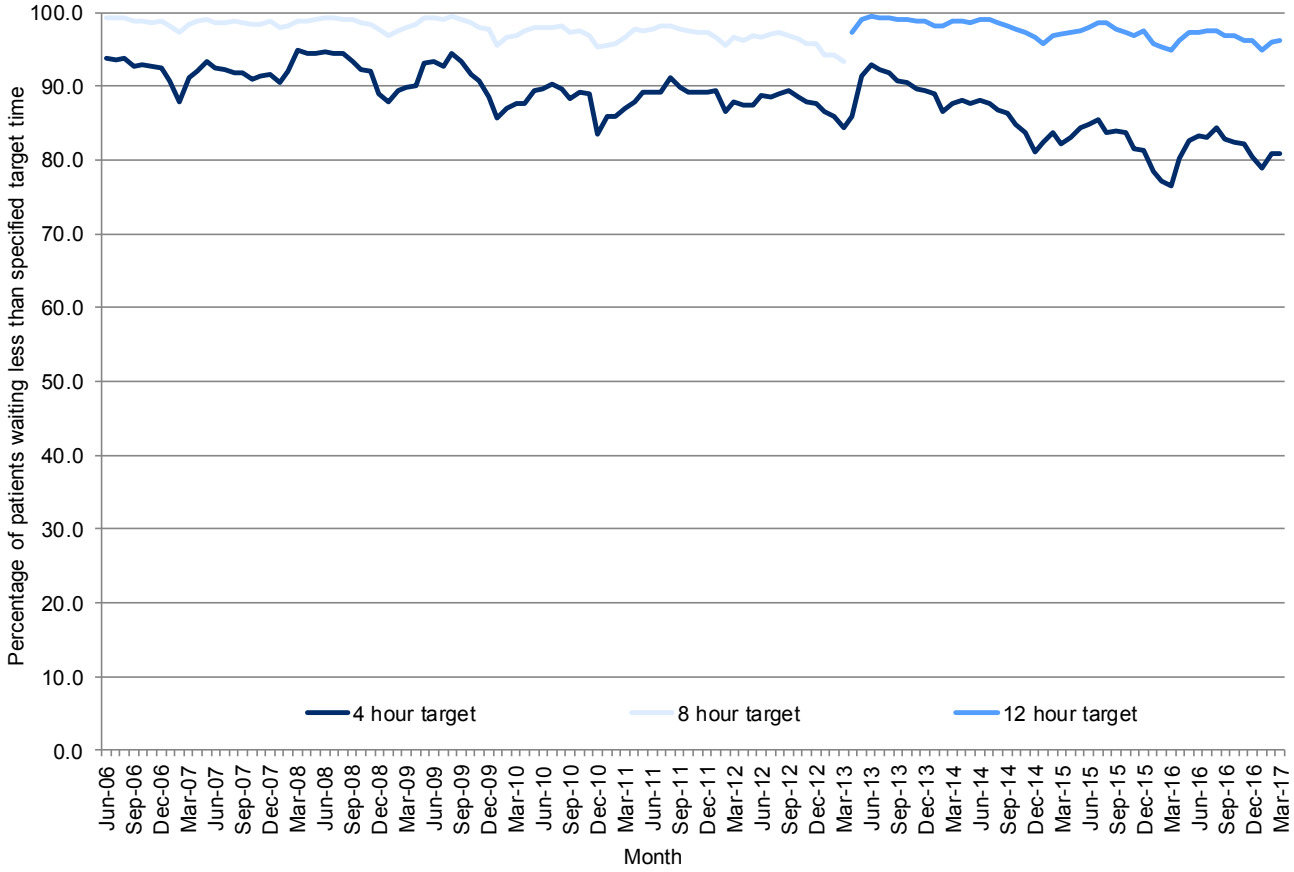


Chart 6 shows the percentage of patients waiting less than 4 hours in A&E by financial year, from 2012-13 onwards.

- The percentage of patients waiting less than 4 hours has steadily declined over the last 5 years.
- The highest percentage of patients being seen in less than 4 hours was in 2013-14, the lowest percentage was seen in 2016-17.

Chart 7: Performance against specified targets[a], by month, June 2006 to March 2017



Source: Emergency Department Data Set, NWIS

(a) The 12 hour target replaced the 8 hour target in 2013.

Chart 7 shows the performance of accident and emergency departments in Wales against the targets that have been in place over the period.

- Performance against all targets has steadily been declining over time. Performance is seasonal, with performance closer to target in the summer months.
- Performance against the 4 hour target was lowest in March 2016 (76.5 per cent seen in less than 4 hours), and highest in March 2008 (94.8 per cent seen in less than 4 hours)
- Generally, around 95 per cent of patients were seen and left A&E within 12 hours.

Table 2: Total attendances, percentage waiting less than 4 hours and patients who had waited for more than 12 hours in accident and emergency departments, by month, 2016-17

	Total number of attendances			Percentage of patients spending less than 4 hours			Number of patients spending longer than 12 hours		
	Major	Minor	All	Major	Minor	All	Major	Minor	All
April 16	63,143	18,201	81,344	75.2	98.0	80.3	3,021	23	3,044
May16	70,422	20,011	90,433	78.1	98.6	82.6	2,449	5	2,454
June 16	66,751	19,590	86,341	78.8	98.7	83.3	2,286	7	2,293
July 16	69,527	19,764	89,291	78.7	98.7	83.2	2,269	7	2,276
August 16	67,289	19,833	87,122	80.0	99.2	84.4	2,090	14	2,104
September 16	66,895	19,420	86,315	78.2	99.0	82.9	2,738	8	2,746
October 16	68,498	18,482	86,980	77.9	98.8	82.4	2,758	8	2,766
November 16	63,282	16,623	79,905	77.7	98.9	82.1	2,949	1	2,950
December 16	63,227	14,921	78,148	75.9	99.3	80.4	2,970	2	2,972
January 17	63,004	15,720	78,724	74.1	98.9	79.0	4,048	18	4,066
February 17	57,850	14,902	72,752	76.2	98.9	80.9	2,969	3	2,972
March 17	67,745	18,610	86,355	76.3	98.1	81.0	3,181	10	3,191
2016-17	**787,633**	**216,077**	**1,003,710**	**77.3**	**98.7**	**81.9**	**33,728**	**106**	**33,834**

Source: Emergency Department Data Set, NWIS

Table 2 shows the total attendances to major and minor accident and emergency departments in Wales, as well as the performance against the 4 hour and 12 hour targets.

- The highest total number of attendances experienced in a month through 2016-17 was in May 2016, with 90,433 total attendances, the lowest number of attendances was in February 2017 with 72,752 attendances.
- Performance against the 4 hour target varied throughout the year, from a low of 79.0 per cent in January 2017, the best performance was seen in August 2016 with 84.4 per cent of patients waiting less than 4 hours.
- Performance against the 12 hour target varied throughout the year, between a low of 2,104 patients waiting in excess of 12 hours in August 2016, and a high of 4,066 patients waiting more than 12 hours in January 2017.
- Performance is better in minor injury units compared to the major departments, however they have fewer attendances.

Table 3: Percentage of patients being treated within specified times, by health board, 2016-17

Note that this breakdown of data is not available for all hospitals so figures quoted here for 4 and 12 hour performance will not necessarily match other published figures. This is shown for context only.

	Percentage of patients who were in A&E departments for less than											
Local Health Board	1 hour	2 hours	3 hours	4 hours	5 hours	6 hours	7 hours	8 hours	9 hours	10 hours	11 hours	12 hours
Betsi Cadwaladr University	22.2	43.3	59.6	76.5	80.3	84.3	87.3	89.6	91.3	92.6	93.5	94.3
Powys Teaching	74.7	96.1	99.2	99.8	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0
Hywel Dda University	18.9	47.5	68.1	84.6	88.0	91.0	92.9	94.3	95.2	95.8	96.3	96.8
ABMU (a)	27.8	49.2	64.1	79.5	83.4	86.9	89.7	91.7	93.3	94.5	95.4	96.2
Cwm Taf University	27.3	50.4	67.7	83.9	87.9	91.2	93.4	94.9	95.9	96.6	97.1	97.5
Aneurin Bevan University	14.1	37.2	59.0	81.4	84.7	88.0	90.4	92.2	93.5	94.5	95.2	95.9
Cardiff and Vale University	27.1	48.3	66.3	83.7	88.3	91.6	93.9	95.5	96.7	97.6	98.4	99.5
Wales	**23.8**	**46.7**	**64.4**	**81.5**	**85.2**	**88.6**	**91.1**	**92.8**	**94.1**	**95.1**	**95.9**	**96.5**

Source: Emergency Department Data Set, NWIS

(a) Abertawe Bro Morgannwg University.

Table 3 shows the performance against different lengths of time spent in A&E and percentage of patients being treated within each time by health board, up to 12 hours.

- Powys is the best performing health board, having all patients being seen within 7 hours, the only health board which had no breaches of the 12 hour target; however this health board only has minor departments – which have fewer attendances.
- Betsi Cadwaladr University Health Board has the highest proportion of patients waiting excess of 12 hours, 5.7 per cent of patients who attend accident and emergency for this health board, this is compared to only 0.5 per cent of patients waiting excess of 12 hours at Cardiff and Vale University health board, the best performance against the 12 hour target for a health board with a major department.

Section 3: Context

Table 4: Annual median time spent in A&E by local health board and financial year, 2012-13 onwards

	Betsi Cadwaladr University	Powys Teaching	Hywel Dda University	Abertawe Bro Morgannwg University	Cardiff and Vale University	Cwm Taf University	Aneurin Bevan University	**Wales**
								
2012-13	01:50	00:30	01:56	02:15	01:39	01:57	02:21	**01:57**
2013-14	01:51	00:33	01:49	02:08	01:38	01:40	02:21	**01:53**
2014-15	02:13	00:34	02:09	02:04	01:59	01:42	02:23	**02:04**
2015-16	02:19	00:35	02:12	02:06	02:09	01:49	02:28	**02:09**
2016-17	02:22	00:36	02:05	02:02	02:05	01:58	02:33	**02:09**

Source: Emergency Department Data Set, NWIS

Table 4 shows the annual medians for each local health board and each financial year from 2012-13 onwards.

- The median time spent in A&E has increased in the majority of health boards in 2016-17 compared to 2012-13, the exception being Abertawe Bro Morgannwg University.
- The median time spent in A&E for Wales has remained stable in 2016-17, staying the same as 2015-16 at 2 hours and 9 minutes, an increase of only 12 minutes when compared to 2012-13.
- There's a reduction in median times for three health boards compared to last year, these are Hywel Dda University, Abertawe Bro Morgannwg University and Cardiff and Vale University. All other health boards increased their median time in 2016-17.
- Charts 9 and 10 below show the mean and median times for each health board for the latest financial year.

Chart 8: Mean time spent in A&E departments, 2016-17

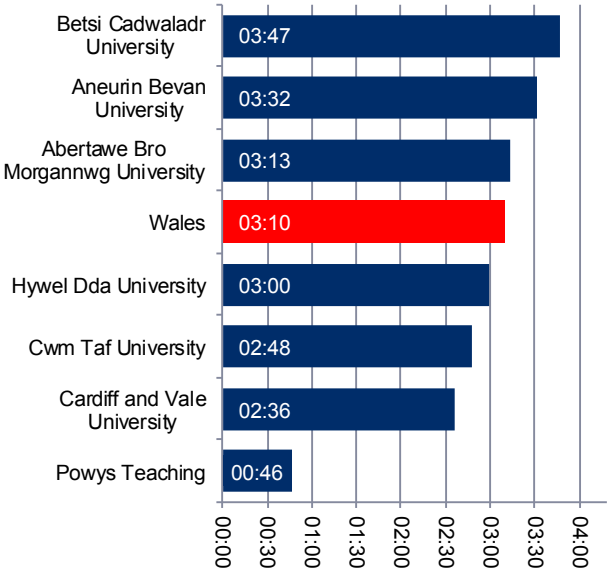
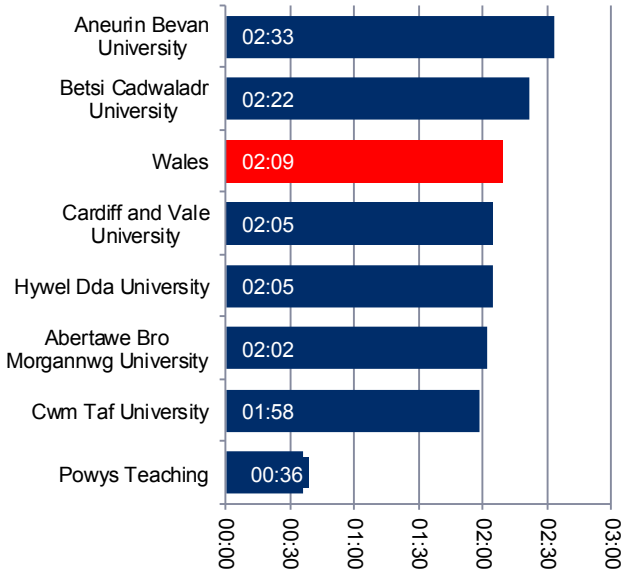
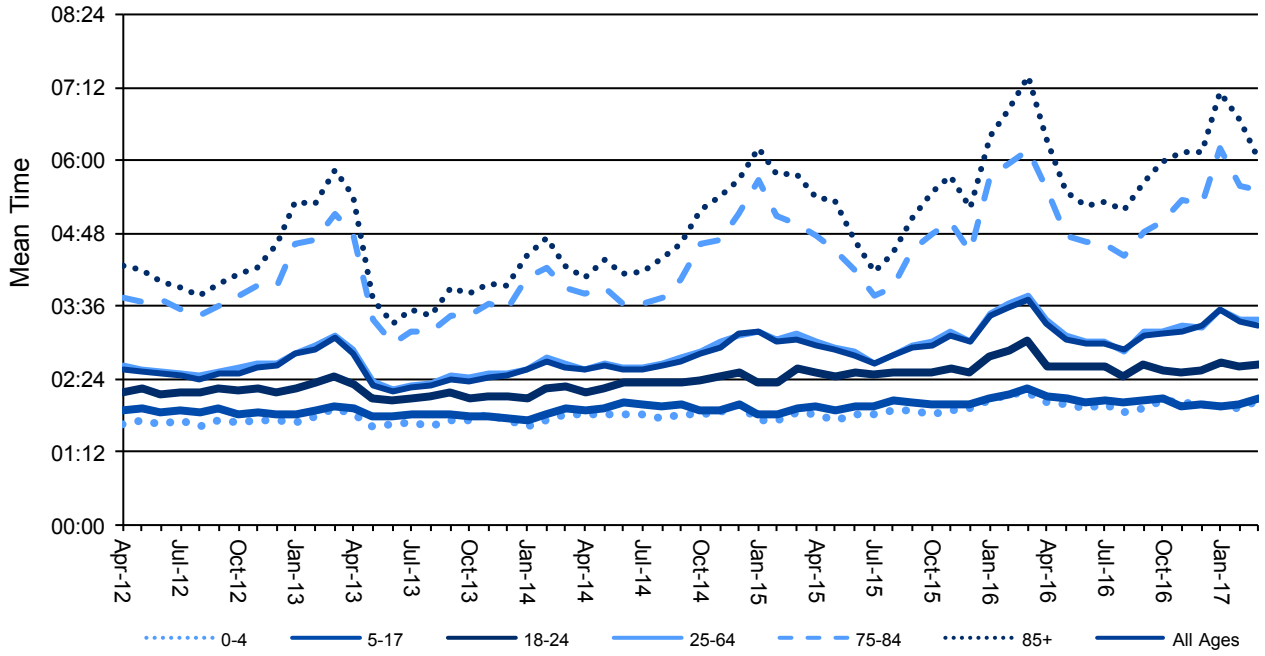


Chart 9: Median time spent in A&E departments, 2016-17



Charts 8 and 9 show the mean and median time spent in A&E departments by Local Health Board. The mean time is generally higher than the median as it is skewed by very long waits. For example, Aneurin Bevan University has the longest median but Betsi Cadwaladr has the longest mean. This is due to Betsi Cadwaladr having a higher proportion of longer waits than Aneurin Bevan

Chart 10: Mean time spent in A&E by month and age-group, April 2012 onwards

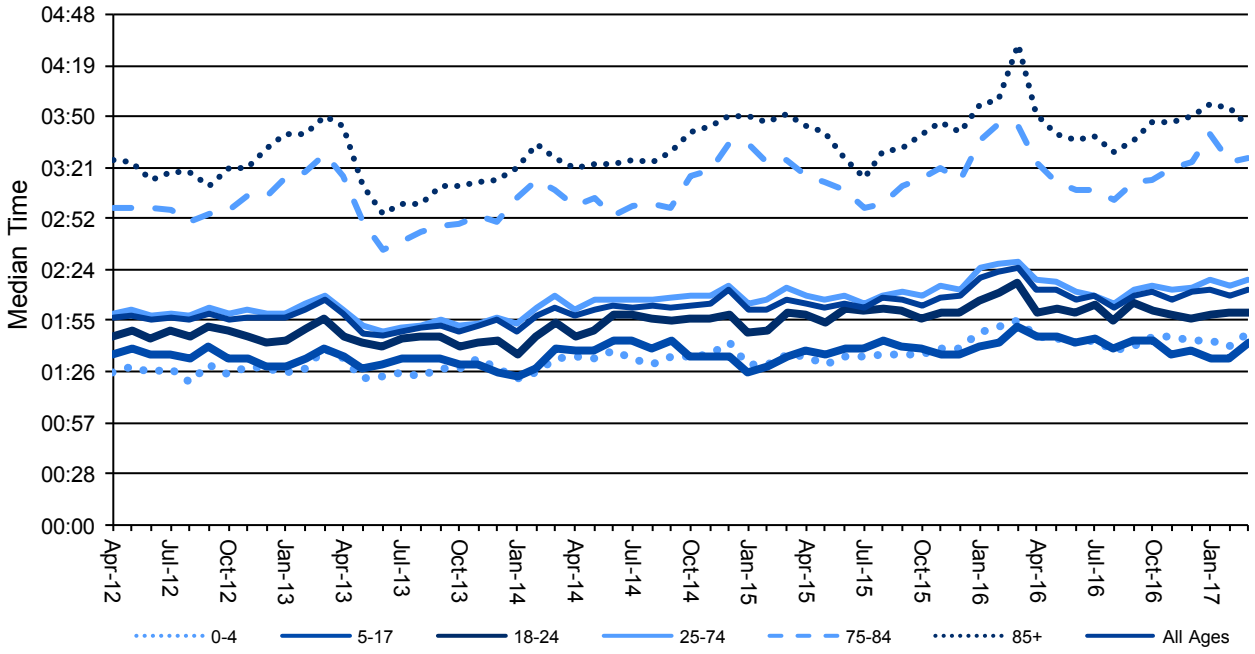


Source: Emergency Department Data Set, NWIS

Chart 10 shows the mean time spent in A&E for each month since April 2012, split by age-bands.

- There is seasonality within the mean time spent at A&E, especially for the two elder groups (75-84 and over 85).
- The older age groups have generally longer waits than the younger age groups; this is likely because the older age groups tend to have greater clinical needs than younger groups and are more likely to be admitted.
- Mean times are generally increasing for all age groups, but to a greater extent for the older age groups and this has become more pronounced overtime, for example the peak in 2012-13 occurred in March 2013, the mean time spent in A&E by over 85s at this point was 5 hours and 49 minutes, in 2016-17 the peak occurred in January 2017 and was 7 hours and 6 minutes, an increase of 1 hour and 17 minutes.

Chart 11: Median time spent in A&E by month and age-group, April 2012 onwards

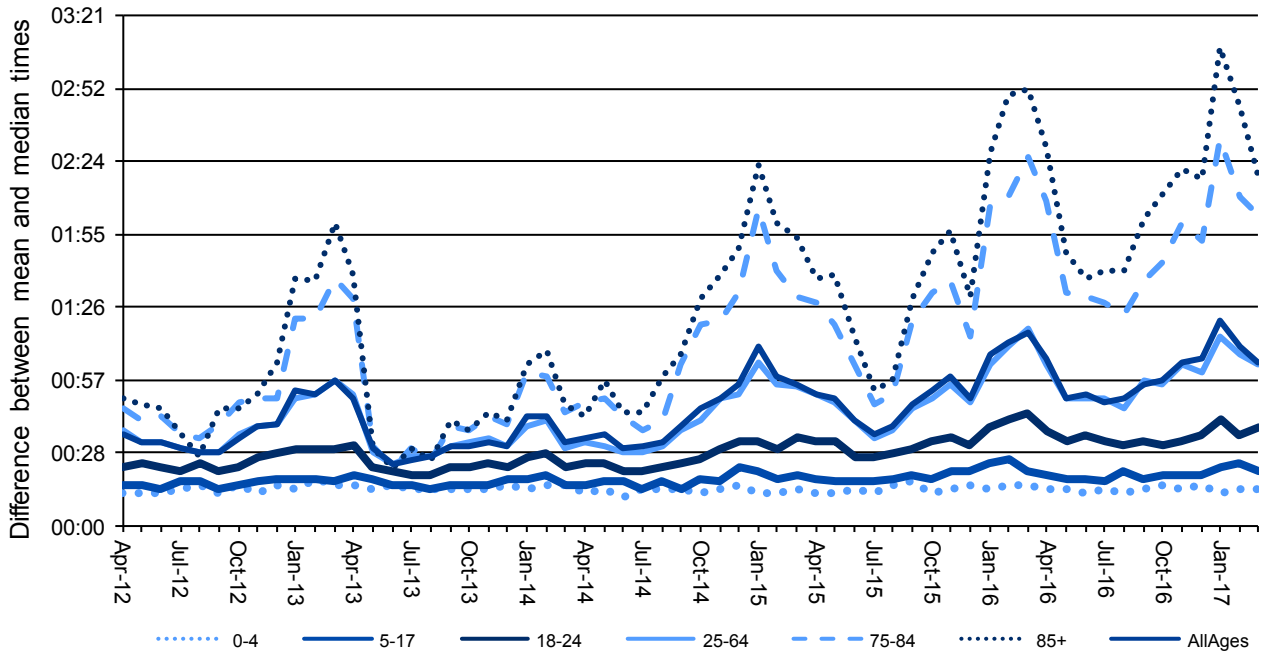


Source: Emergency Department Data Set, NWIS

Chart 11 shows the median time spent at A&E for each age group on a monthly basis.

- There is still seasonality with the medians however these are less pronounced than with the means.
- The older age groups (75 – 84 and over 85) have generally higher median waits than younger age groups.
- The median values are generally lower than the mean values; this is because the medians are less susceptible to the longest waits.

Chart 12: Difference between mean and median wait times, by month and age-group, April 2012 onwards

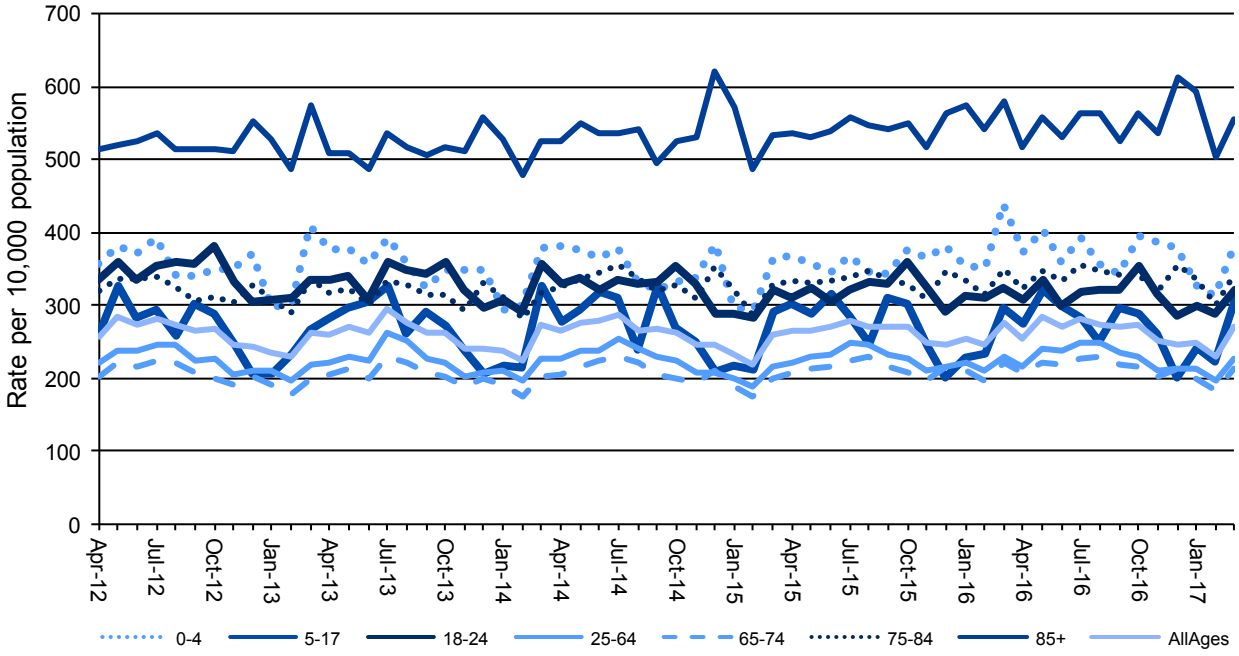


Source: Emergency Department Data Set, NWIS

Chart 12 shows the difference between the mean and median value for each month, by age-groups from April 2012 onwards.

- In general, the difference between the mean and median is higher for the older age groups. This suggests that the spread in the time spent in A&E is larger for these groups than younger age groups. Also, the difference tends to peak in the winter months before declining throughout the year. During these months the spread of the time spent in A&E is larger than at other times of the year. This could be due to a proportion of older patients, with increased clinical complexities in the winter and needing to be admitted, who spend longer in A&E, and therefore result in a larger mean time.
- Conversely, there is little difference between the mean and median for the 0-4 and 5-17 age groups and also little variation over the months, which suggests that the spread of time spent in A&E is much smaller and also similar throughout each month of the year.

Chart 13: Rate of daily attendances by age-group per 10,000 population, April 2012 onwards

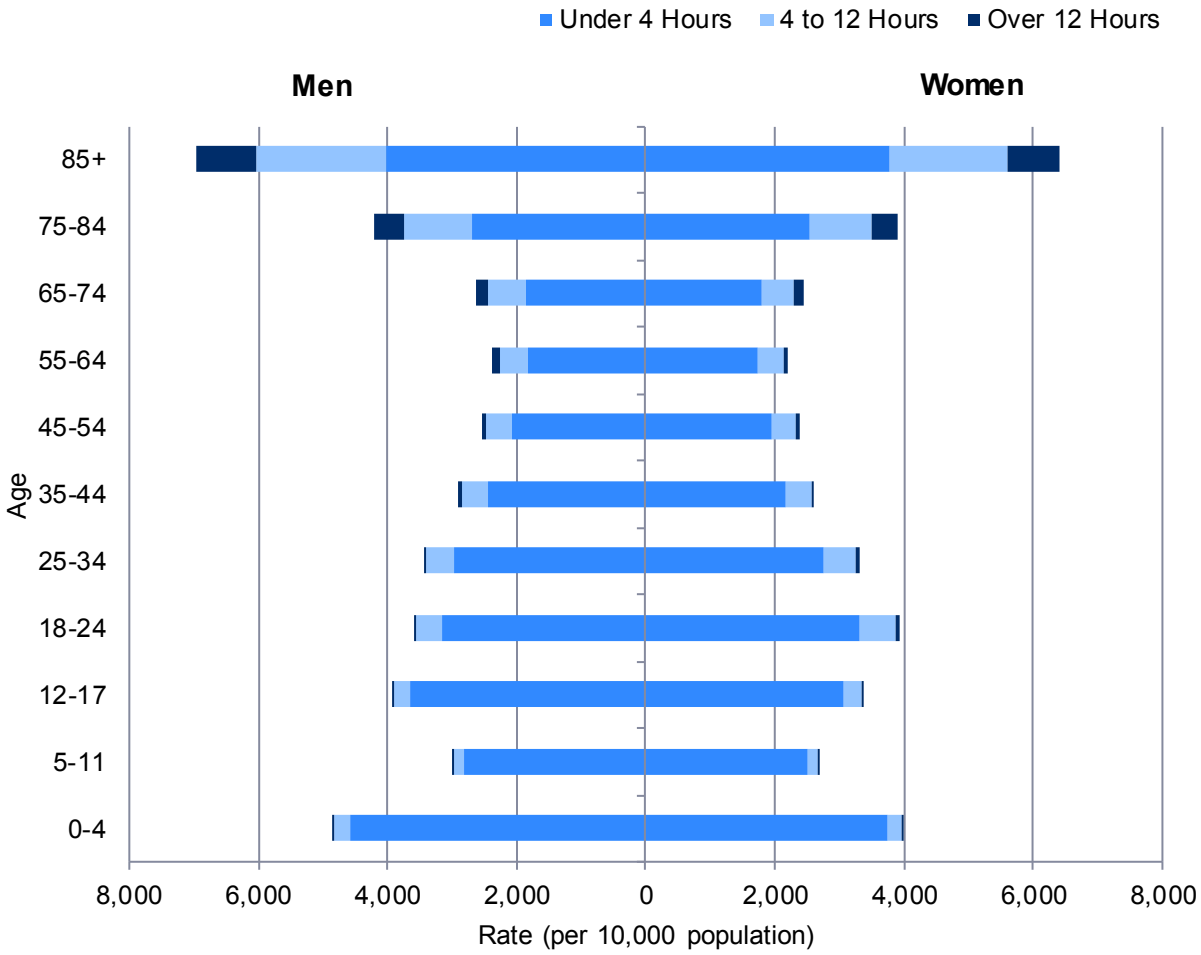


Source: Emergency Department Data Set, NWIS

Chart 13 shows the rate of daily attendances by age-group per 10,000 population since April 2012.

- The rate of daily attendances is similar for all of the younger age groups, generally between 20 and 40 attendances per 1,000 people in these age groups.
- The rate of daily attendances then peaks for the eldest age group of people aged over 85, which typically sees rates between 50 and 60 per 1,000 people.

Chart 14: Age pyramid by age groups and gender, rates of attendance per 10,000 population, 2016-17

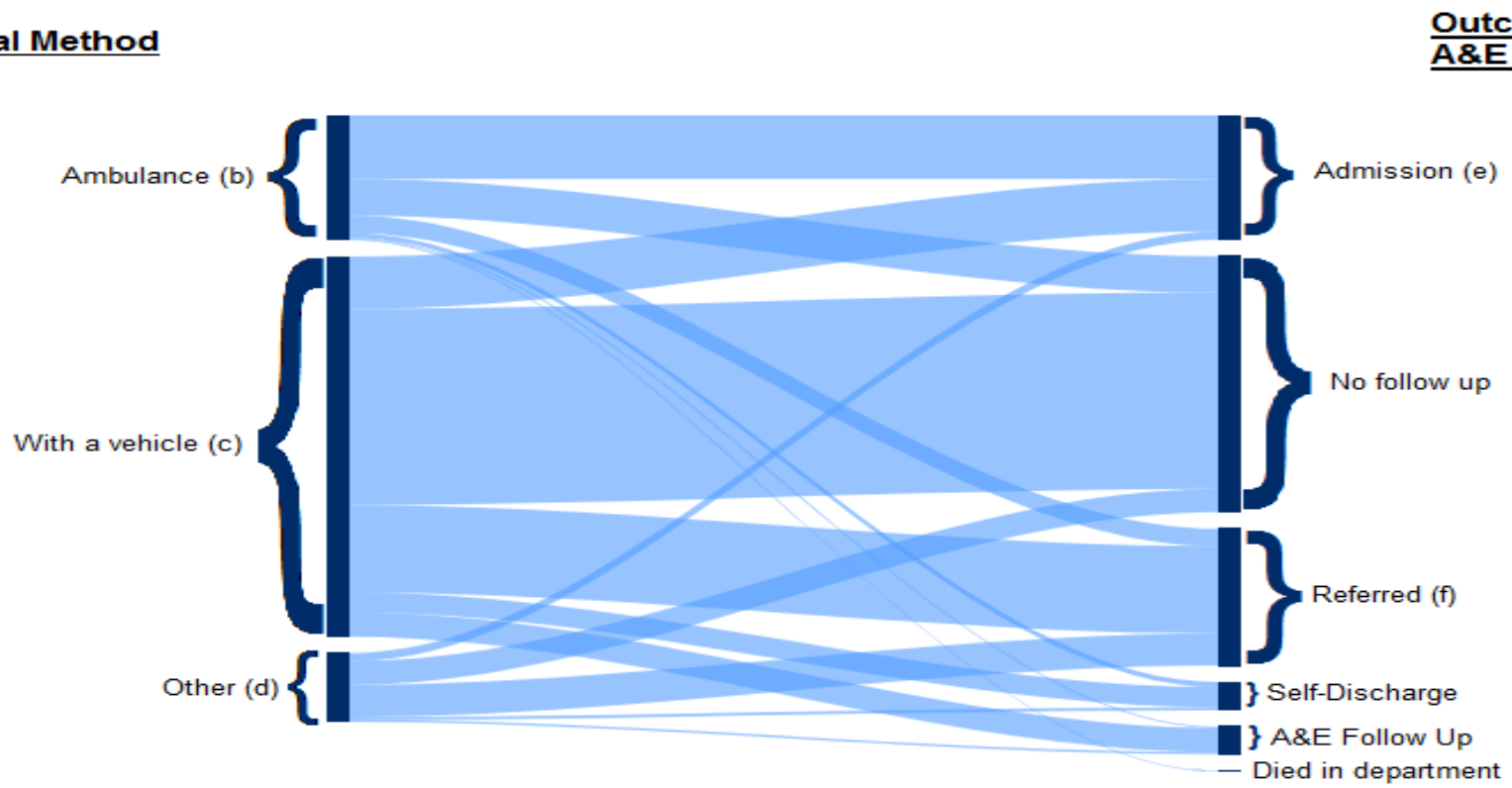


Source: Emergency Department Data Set, NWIS

Chart 14 shows the rates of attendances per 10,000 population for selected age groups and split by gender for 2016-17.

- Rates of attendance are lowest between the ages of 45 and 64.
- The highest rates are in the youngest (0 to 4 years old) and oldest (over 85 years old) age groups.
- After a dip in the 5 to 11 age group, the total rate of attendance increases for age groups 12 – 17 and 18 - 24 and then steadily decreases in each group until pensionable age. It then increases again and patients over the age of 85 have the highest rate of attendances overall, and the highest proportion of longer waits, for both genders.
- Focusing on people under the age of 65, but older than 4, there is a peak for younger males between the ages of 12-17, whilst for younger females the peak occurs at 18 – 24.

Chart 15: Sankey diagram, link between arrival method and outcome from A&E visit, 2016-17 (a)



Source: Emergency Department Data Set, NWIS

(a) Visits with invalid or unknown times, arrival method and outcomes have been excluded.

(b) Contains Ambulance and Air Ambulance

(c) Contains people who arrived with their own private motorised vehicle or using public transport, please see Table 4 for more detail.

(d) Contains people who arrived by private non-motorised vehicles, walking, by police car or by other means, please see Table 4 for more detail.

(e) Contains people who were admitted to either the same hospital, being transferred to another hospital within the health board or being admitted to another health board entirely, please see Table 4 for more detail.

(f) Referrals can be to a GP, other HCP or outpatients, please see Table 4 for more detail.

Table 5: Number of patients arriving by different means and outcome from each arrival method, 2016-17

	Outcome from A&E Visit												
Arrival Method	**Admission (e)**				**A&E follow up**	**No follow up**	**Referred (f)**				**Self-Discharge**	**Died in department**	
	Admitted - Same hospital	Admitted - Different Hospital	Transferred to other LHB	**Total Admissions**	**A&E follow up**	**No follow up**	Referred - GP	Referred - Other HCP	Referred - Outpatients	**Total Referred**	**Self-Discharge**	**Died in department**	**Total**
Ambulance (b)	**105,211**	**2,089**	**1,212**	**108,512**	**2,121**	**62,043**	**23,254**	**1,196**	**5,337**	**29,787**	**8,422**	**1,498**	**212,383**
With a vehicle (c)	**82,059**	**2,996**	**4,315**	**89,370**	**41,433**	**334,847**	**81,241**	**11,011**	**56,532**	**148,784**	**34,381**	**37**	**648,852**
Private Motorised Vehicle	81,252	2,974	4,287	88,513	41,058	331,758	79,922	10,909	55,645	146,476	33,858	37	641,700
Public Transport	807	22	28	857	375	3,089	1,319	102	887	2,308	523	0	7,152
Other (d)	**12,414**	**1,294**	**278**	**13,986**	**3,392**	**40,190**	**47,173**	**1,164**	**6,343**	**54,680**	**4,908**	**11**	**117,167**
Police Car	654	157	47	858	128	2,191	600	74	261	935	992	0	5,104
Other	9,400	1,089	*	10,647	2,819	26,724	45,109	874	5,491	51,474	2,806	*	94,477
Walked	2,360	48	*	2,481	445	11,275	1,464	216	591	2,271	1,110	*	17,586
Total	**199,684**	**6,379**	**5,805**	**211,868**	**46,946**	**437,080**	**151,668**	**13,371**	**68,212**	**233,251**	**47,711**	**1,546**	**978,402**

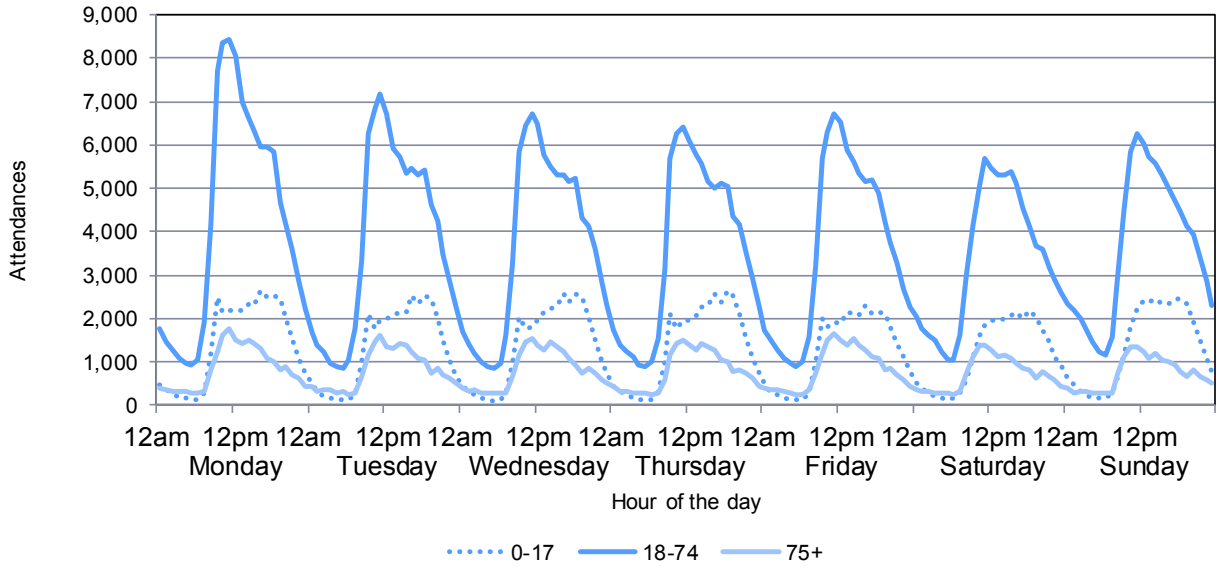
Source: Emergency Department Data Set, NWIS

*Value suppressed due to small numbers

Chart 15 is a Sankey diagram; it shows the relationship between how people arrive at A&E and the outcome from their visit, the figures used for chart 15 are detailed in Table 5. Chart 15 and Table 5 show that:

- People who arrive by ambulance have a much higher likelihood of being admitted to hospital. 51.1 per cent of people who arrive by ambulance end up being admitted, this is compared to 13.8 per cent for people who arrived using a vehicle.
- People who arrive with the use of a vehicle are the most likely to leave A&E without the need of any type of follow up appointment, 51.6 per cent of people who arrive with a vehicle leave without follow up, this is compared to 29.2 per cent of people who arrive by ambulance.
- Of those who self-discharge there's a higher proportion from people who arrived with a vehicle, making up 72.1 per cent of all self-discharges, this is compared to 10.3 who arrived by other means and 17.7 per cent who required an ambulance to arrive.

Chart 16: Attendance rate per 10,000 population by time of day and age band, 2016-17

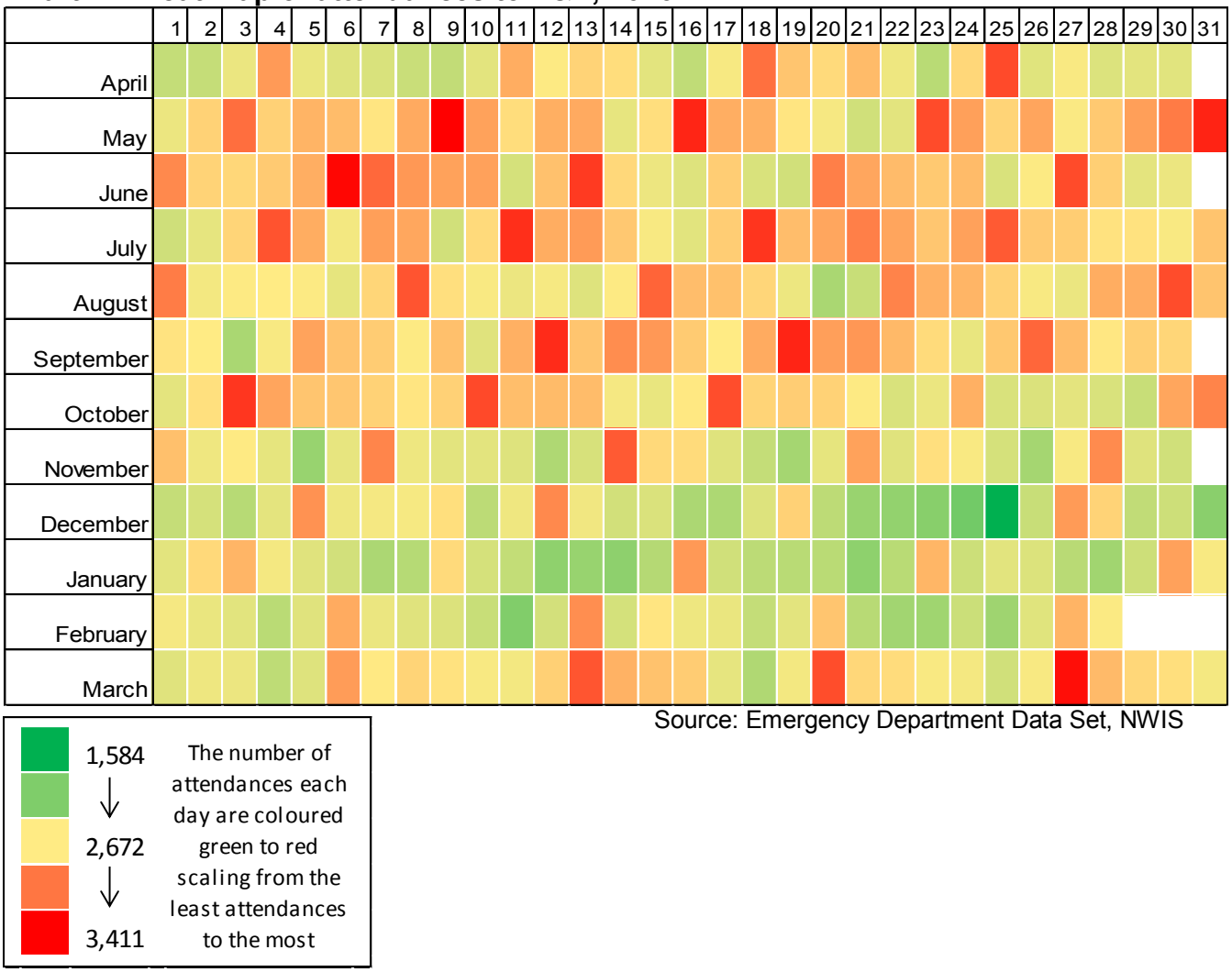


Source: Emergency Department Data Set, NWIS

Chart 16 shows the attendances by time of day and age bands for 2016-17.

- There is a peak in attendances each day during daylight hours for all groups, the numbers then decline each night before the following morning.
- The most common time to arrive at A&E for adults (aged 18 to 74) is midday; the most common day is Monday, becoming less common throughout the week.
- In the younger age group (under 17) attendances have a less pronounced spike in day time but peak in the night time hours during the week (less so at the weekend).
- The attendances for the over 75s also peak at around midday and are more commonly at the beginning of the week rather than the weekend.

Chart 17: Heat map of attendances to A&E, 2016-17

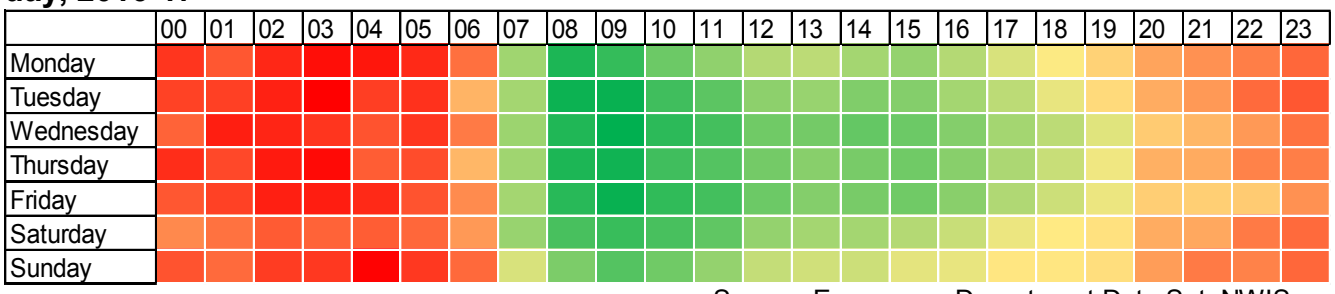


Source: Emergency Department Data Set, NWIS

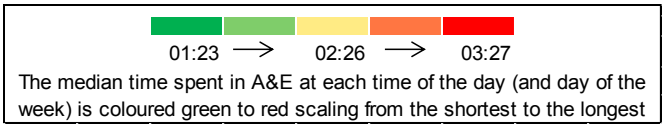
Chart 17 is a heat map of the daily attendances to accident and emergency departments in Wales throughout 2016-17. The redder the square means the higher the number of attendances for that day, the more green the fewer attendances on that day.

- The busiest day for those arriving in accident and emergency departments in Wales for 2016-17 was on the 9th of May.
- The quietest day for those arriving in accident and emergency departments in Wales for 2016-17 was Christmas day.

Chart 18: Heat map of median wait at A&E departments by day of week and time of day, 2016-17

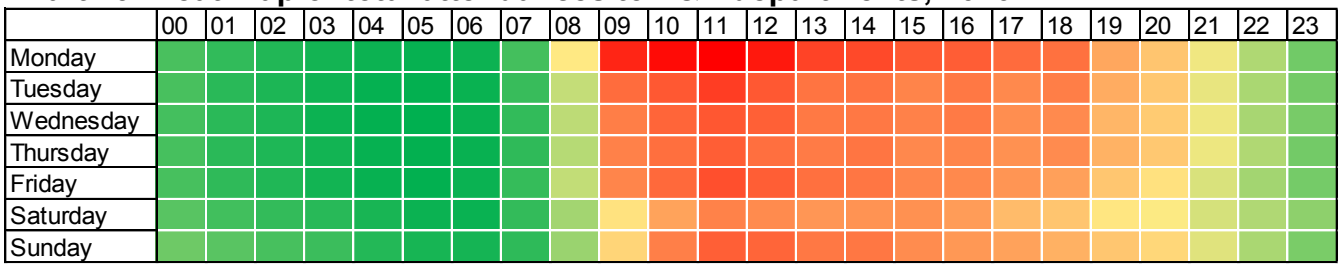


Source: Emergency Department Data Set, NWIS

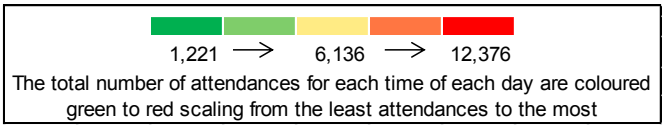


The median time spent in A&E at each time of the day (and day of the week) is coloured green to red scaling from the shortest to the longest

Chart 19: Heat map of total attendances to A&E departments, 2016-17



Source: Emergency Department Data Set, NWIS



The total number of attendances for each time of each day are coloured green to red scaling from the least attendances to the most

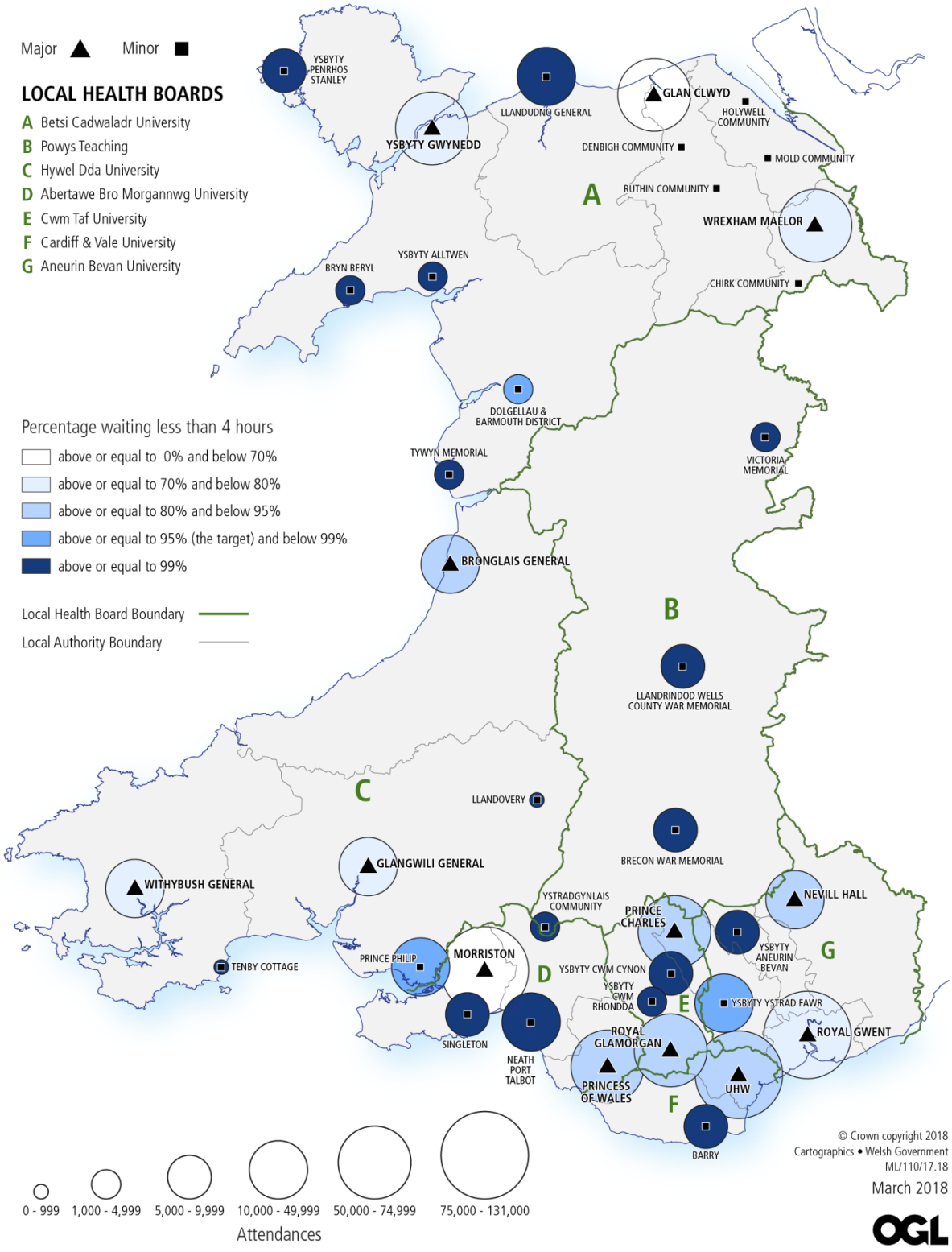
Chart 18 is a heat map of median time spent in A&E based on the day of the week and the time of the day of arrival; redder values mean longer waits than greener ones.

- The shortest waits are during daylight hours, the longest waits are during the night time.

Chart 19 is a heat map of the total attendances to A&E based on the day of the week and time of day of arrival, the redder the value means the more attendances, greener means fewer.

- The most arrivals to A&E occur on Monday morning between 9am – 12 noon.
- More people arrive to A&E during daylight hours, fewer people arrive at night.

Map 1: The number of attendances and performance of Major and Minor Accident and Emergency departments, 2016-17



Source: Emergency Department Data Set, NWIS

Map 1 is a map of Wales, with all A&E departments shown alongside their total attendances for 2016-17 and their performance. The size of the circles is related to the number of attendances, whilst the shade of blue indicates performance. Major departments are annotated with a triangle, whilst minor departments are squares.

- Major A&E departments have far more attendances than minor departments.
- Minor departments have better performance, but have fewer attendances.
- There are greater numbers of A&E departments to the south-east, but this is a more densely populated region of Wales.

Key quality information

Relevance

Targets for 2016-17

In March 2016, the Welsh Government published the Outcomes Framework, which outlines the A&E standards and targets for 2016-17. The targets are as follows:

- 95 per cent of patients spending less than 4 hours in A&E departments from arrival until admission, transfer or discharge
- the eradication of 12 hours or over waits from arrival until admission, transfer or discharge.

Accuracy

Revisions and resubmissions

The data in this release uses the same data set as the monthly data published by NHS Wales Informatics Service (NWIS). Data is unlikely to be revised for 2016-17 but if it is, it will be done on StatsWales at the time of the publication of the monthly release.

On a monthly basis, LHBs can resubmit data to NWIS if they have carried further validation during the month and they need to revise their data. In 2013, we looked at the size and impact of the resubmissions for the data. The impact of the changes tend to be minimal, accounting for less than one percentage point change against the 4 hour target for 'A&E departments'.

Data quality

This data has been provided by NHS Wales Informatics Service from the Emergency Department Data Set (EDDS). This is a rich source of patient level data on attendances at emergency care facilities in Wales that tends mainly to be used for the performance targets.

Patient level data is collected in EDDS for all 'major accident and emergency departments'. However, for 'other accident and emergency departments/minor injury units', patient level data has only been collected in EDDS since 1 April 2012 for the majority of these units. For those 'other accident and emergency departments/minor injury units' who are currently unable to provide an EDDS extract, an aggregate spreadsheet is submitted that contains basic data for the targets.

In this release, we have concentrated mainly on 4 and 12 hour performance data. However, we have included tables and charts using additional data items from EDDS, where it is felt that the quality is sufficient for publishing. Some 'other accident and emergency departments/minor injury units' do not submit detailed patient level data to EDDS, these account for around 2 per cent of attendances. From our November 2015 quarterly release we started publishing data for all A&E departments for the entire release, rather than using only data relating to 'major accident and emergency departments' for certain sections. This will be continued in these annual updates unless stated in the Major and Minor department breakdown charts and tables.

For those data items where there are unknowns or missing data, these have been excluded from the analysis. For the purposes of the age breakdowns in this release, any patients who are aged greater than or equal to 125 are categorised as unknown (in-line with the NHS Wales data dictionary). We value feedback from users on additional analyses, and contact details are at the end of this release.

Cardiff & Vale data

Figures submitted by Cardiff and Vale University Health Board include time spent by patients in assessment units. According to national standards, assessment unit activity should be reported in the Admitted Patient Care (APC) data set. Therefore, figures for Cardiff and Vale will not be directly comparable with other health boards.

The Barry Hospital closed for refurbishment on 14th March 2015 and re-opened on 18th of May. Therefore, figures (in this release and on StatsWales) for March and May 2015 reflect this and April's figures on StatsWales are represented with a 0.

Publishing hospital level mean and median

The **median** time is the middle time when all attendances at A&E departments are ordered from shortest time spent to the longest time spent, so half of all patients wait this time or less. It is commonly used in preference to the mean as it is less susceptible to extreme values than the mean.

The **mean** time is the total time spent for all attendances at A&E departments divided by the number of attendances. The mean is more likely to be affected by patients waiting longer from arrival until admission, transfer or discharge.

We publish mean and median time spent in A&E at a hospital level on our StatsWales data service. As the mean value can be affected by very long attendances, following an audit of records showing long attendances at A&E, we have decided to apply trim points to the data and have excluded records at a hospital, LHB and Wales level where the attendance is over 72 hours. Since April 2012, 119 records have been excluded in total – this is less than 0.01 per cent of attendances. 65 of those are from Betsi Cadwaladr University Health Board, with a further 20 from Abertawe Bro Morgannwg University Health Board. The rest of the records are spread across the remaining health boards.

Timeliness and punctuality

All outputs adhere to the Code of Practice by pre-announcing the date of publication through the Upcoming Calendar web pages. Furthermore, should the need arise to postpone an output this would follow the Welsh Government's Revisions, Errors and Postponements arrangements.

We publish data as soon as practical after the relevant time period. Data for the end of month position for Accident and Emergency department attendances and performance is published within the month after the reference date in our NHS Activity and Performance Summary and on StatsWales. This allows for the significant validation by local health boards, NWIS and the Health Statistics and Analysis Unit. The data is then summarised and built on in this annual release.

During October to December 2012, we consulted on the content and timing of official statistics on health. We wanted to know if the pilot of the earlier publication of the management information supporting the official statistics on 'Time Spent in NHS Wales A&E Departments' caused the users of our statistics any problems. The responses from the consultation were published in April 2013. See the quality report for more details.

Accessibility and clarity

Additional tables are available on the Welsh Government's interactive data dissemination service StatsWales. This includes data on performance against the targets by local health boards and major hospitals in Wales. See the quality report for more details.

Comparability and coherence

Figures produced for Wales, Scotland and Northern Ireland are National Statistics.
All four UK countries publish information on the time spent in Accident and Emergency (A&E), though this can be labelled under Emergency Department (as in Scotland) or Emergency Care (as in Northern Ireland). The published statistics are not exactly comparable because: they were designed to monitor targets which have developed separately within each country; the provision and classification of unscheduled care services varies across the UK; the systems which collect the data are different. See the quality report for more details.

Change to exclusions from A&E waiting times statistics for January 2013 data onwards

For **data relating to periods prior to January 2013**, the following patients were excluded from the A&E waiting times statistics:

- known planned follow ups (i.e. Attendance Category = 2 in the Emergency Department Data Set);
- attendances where the patient was dead on arrival (i.e. Outcome of Attendance = 11 or Attendance Group = 30);
- attendances where the calculated wait results in a blank, negative or invalid value; and
- attendances where the calculated time was >= 24 hours.

For **data relating to January 2013 onwards**, attendances where the calculated time was >= 24 hours are **included**, thus leaving the following patients excluded from the A&E waiting times statistics:

- known planned follow ups (i.e. Attendance Category = 2 in the Emergency Department Data Set);
- attendances where the patient was dead on arrival (i.e. Outcome of Attendance = 11 or Attendance Group = 30); and
- attendances where the calculated wait results in a blank, negative or invalid value.

The impact of this change is expected to be minimal, with the number of attendances rising slightly and performance likely to fall slightly each month since January 2013, due to those attendances greater than or equal to 24 hours being included. As the data for January 2013 onwards is not directly comparable with data for previous months, a break has been inserted into all the relevant tables and charts to indicate the date of these changes.

Public Sector Strike - 10 May 2012 and Doctors' Strikes – 21 June 2012

Although A&E services were not forecast to be affected by the public sector strike on 10 May 2012 and doctors' strikes on 21 June 2012, this may have had a very slight impact on performance for those days.

Links to other data sets on unscheduled care

The A&E waiting times data is related to a range of other data sets collected and published around unscheduled care – these should also be considered to give more of an overall picture.

Statistics on the Ambulance Services are collected by the Welsh Ambulance Services Trust (WAST) and published monthly by Welsh Government. Number of emergency calls to WAST and percentage of red calls that arrived at the scene of an incident within 8 minutes show the demand on the service and also performance of the ambulance service in relation to the 8 minute target respectively. Wider statistics considering minute by minute performance are also published on StatsWales.

Statistics on the census of Delayed Transfers of Care in Welsh NHS hospitals are published quarterly (with a monthly headline and StatsWales updates) by Welsh Government and demonstrate the interface between health and social care. A delayed transfer of care is experienced by an inpatient in a hospital, who is ready to move on to the next stage of care but prevented from doing so for one or more reasons. Timely transfer and discharge arrangements are important in ensuring that the NHS effectively manages emergency pressures.

Statistics on Emergency Admissions to hospital are published annually on a financial year basis by NHS Wales Informatics Service from the Patient Episode Database for Wales (PEDW).

Statistics on NHS Direct Wales are collected by the Welsh Ambulance Services Trust (WAST) and published quarterly by Welsh Government. NHS Direct Wales operates a 24-hour help line staffed by nurses offering confidential advice about health, illness and the number of calls show demand on the service.

National Statistics status

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being 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 Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the well-being 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 well-being assessments and local well-being plans.

Further details

The document is available at:
http://gov.wales/statistics-and-research/time-spent-nhs-accident-emergency-departments/?lang=en

Next update

2017-18 summary data will be published in March 2019 (Provisional). Monthly updates of key indicators will continue to be published as soon as they are available in the NHS Activity and Performance Summary along with StatsWales tables.

We want your feedback

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

Open Government Licence