

Statistical Note: Ambulance Quality Indicators (AQI)

In August 2024, the Category 1 and 2 average response times for England were each the shortest for at least three years.

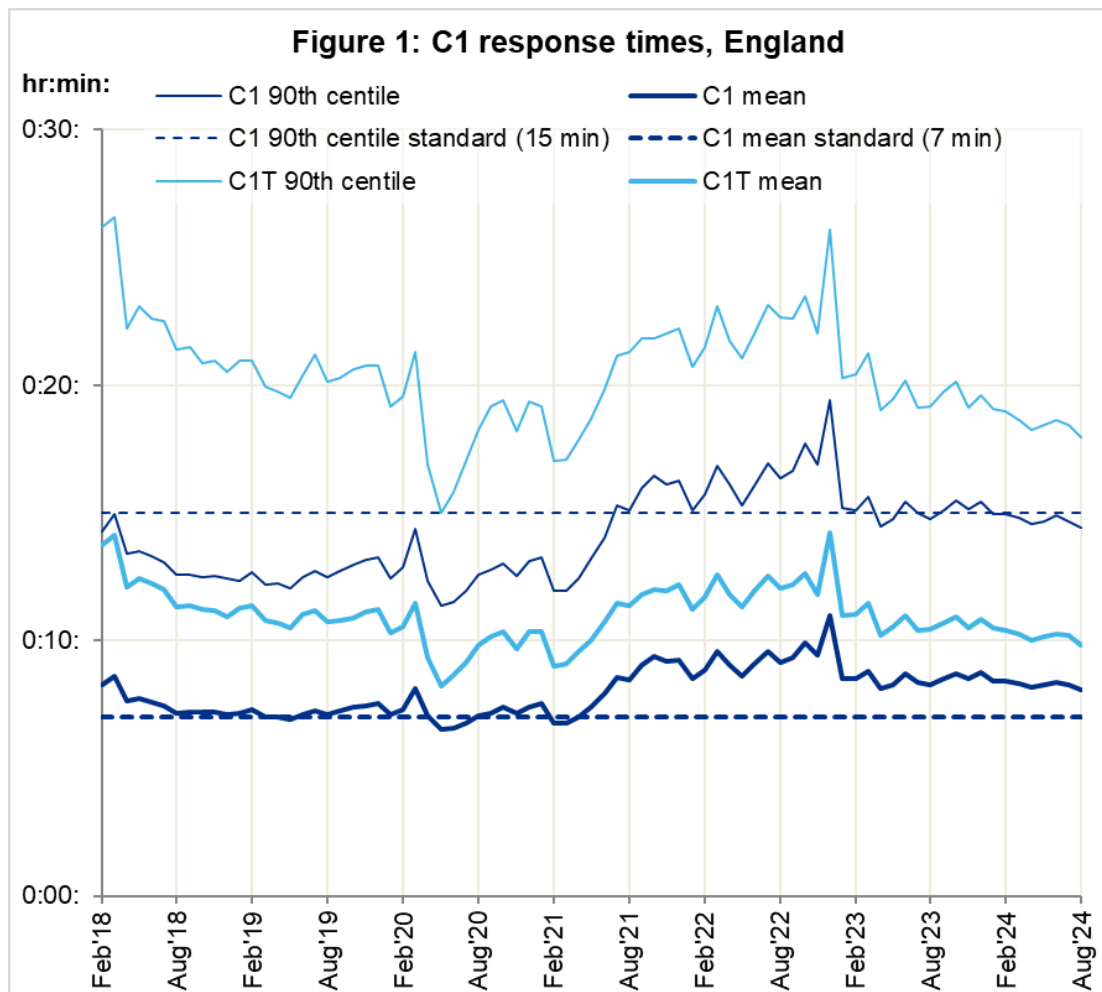
Survival for 30 days after cardiac arrest and resuscitation by an Ambulance Service was greater in 2023/24 than in 2022/23.

1. Ambulance Systems Indicators (AmbSYS)

1.1 Response times

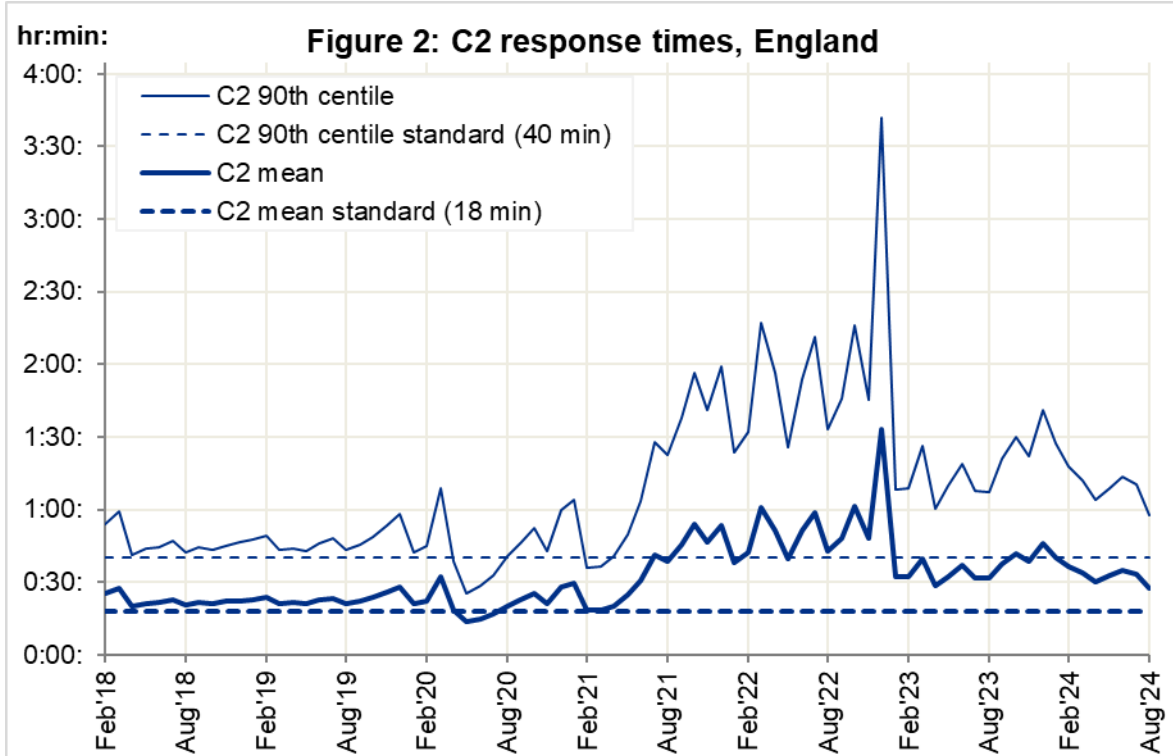
For C1 for England, the mean average response time in August 2024 of 8:03 and the 90th centile of 14:25 were the shortest since June 2021, meeting the 90th centile standard of 15 minutes, but not the average standard¹ of 7 minutes.

For C1T (time to the arrival of the transporting vehicle for C1 incidents), the average was 9:48, and the 90th centile was 17:58 (Figure 1).

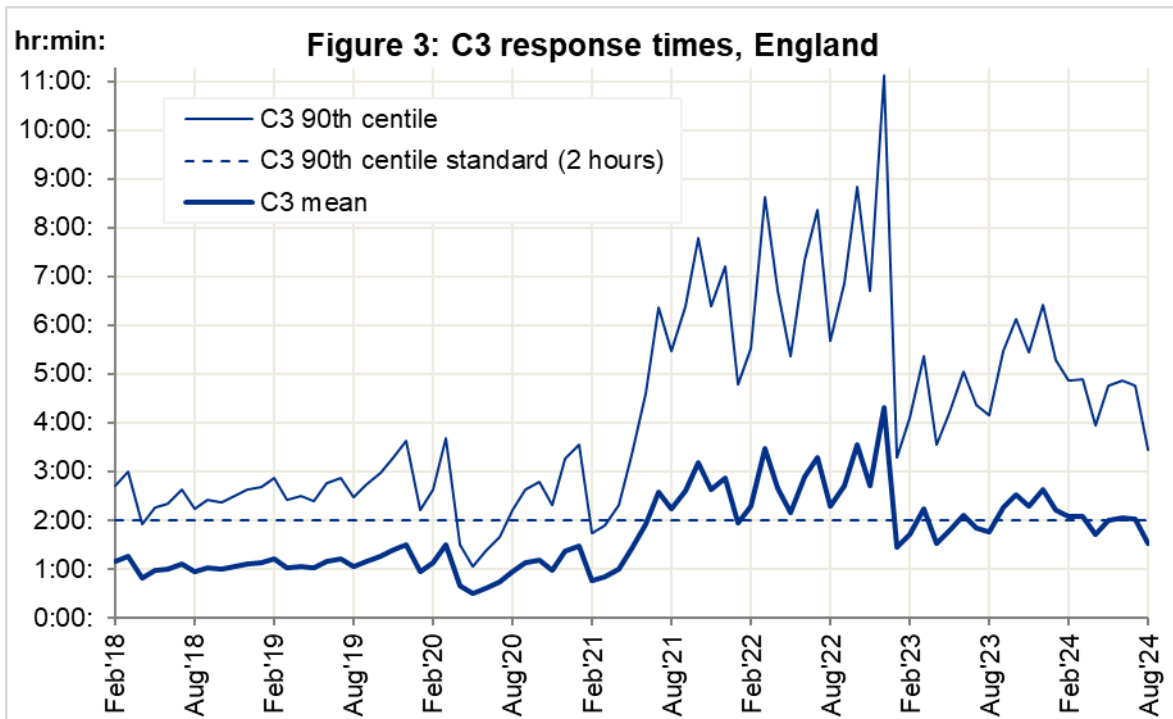


¹ Standards in the NHS Constitution Handbook: www.gov.uk/government/publications/supplements-to-the-nhs-constitution-for-england/the-handbook-to-the-nhs-constitution-for-england

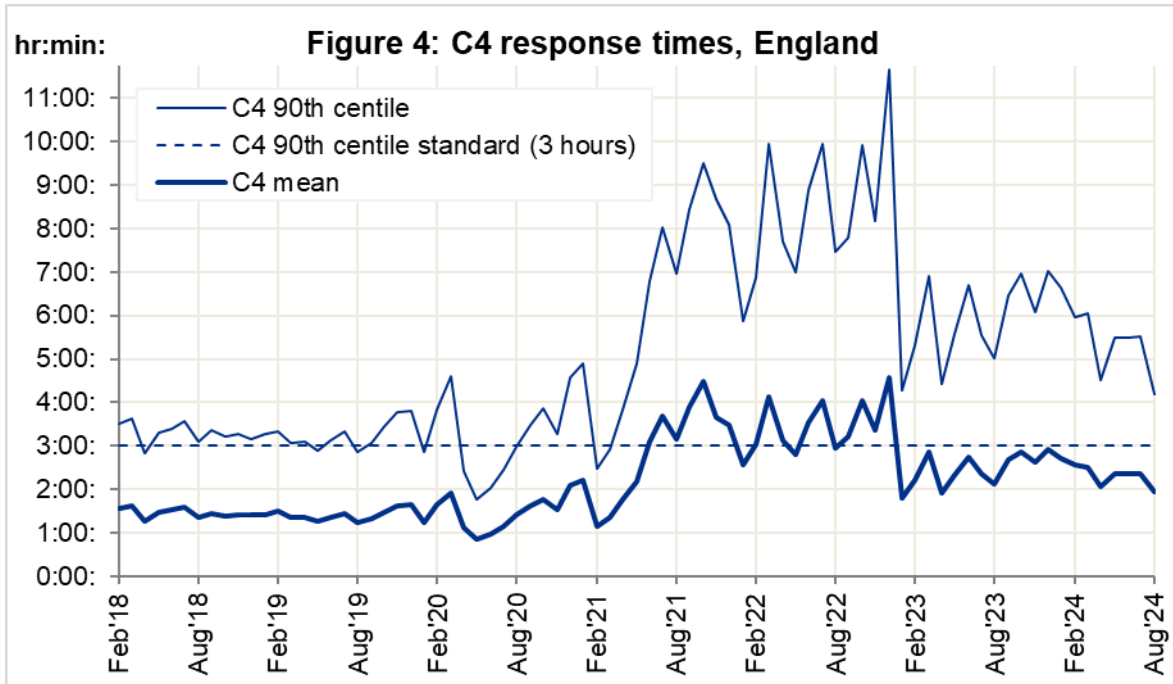
For England in August 2024, C2 had an average of 27:25 and a 90th centile of 57:28, each the shortest since May 2021, although still longer than the respective standards of 18 and 40 minutes. (Figure 2)



For England in August 2024, the C3 average was 1:30:33 and the 90th centile 3:26:16 (Figure 3). Each were, with the exception of January 2023, the shortest since May 2021.

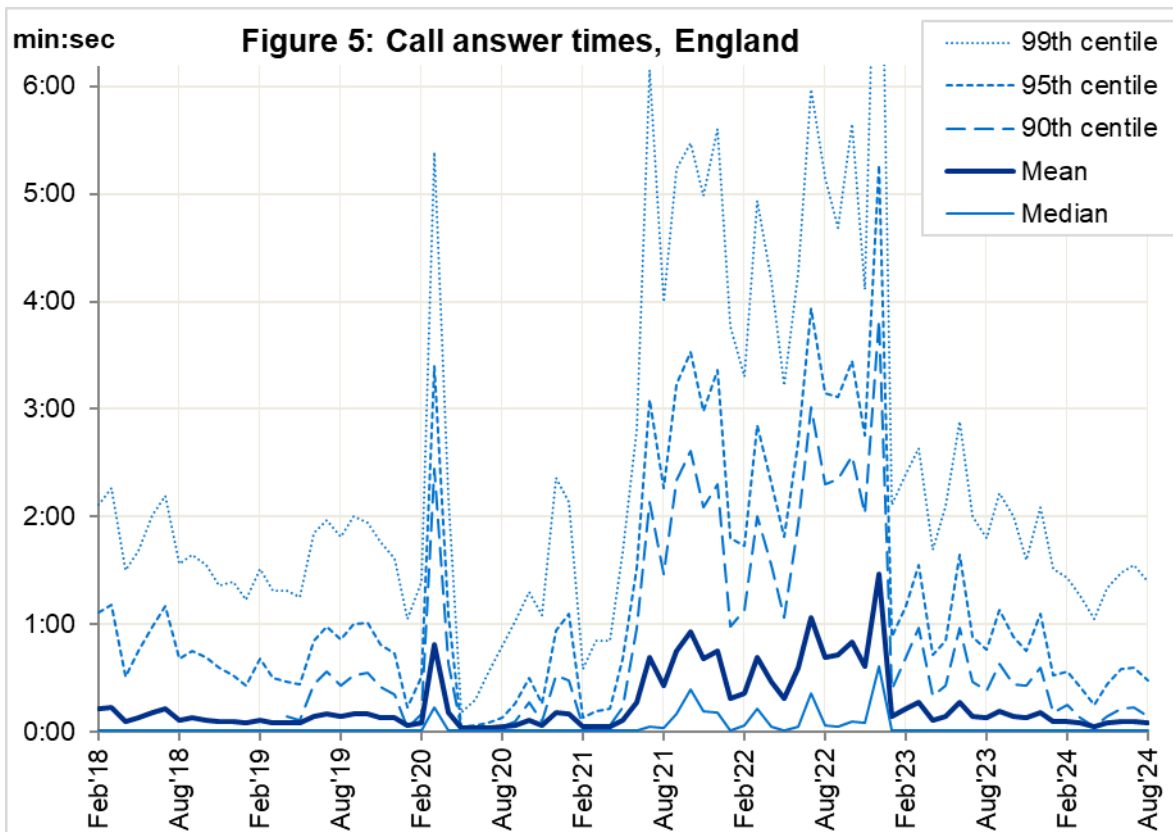


The latest England C4 average was 1:56:10 with a 90th centile of 4:11:05 (Figure 4).



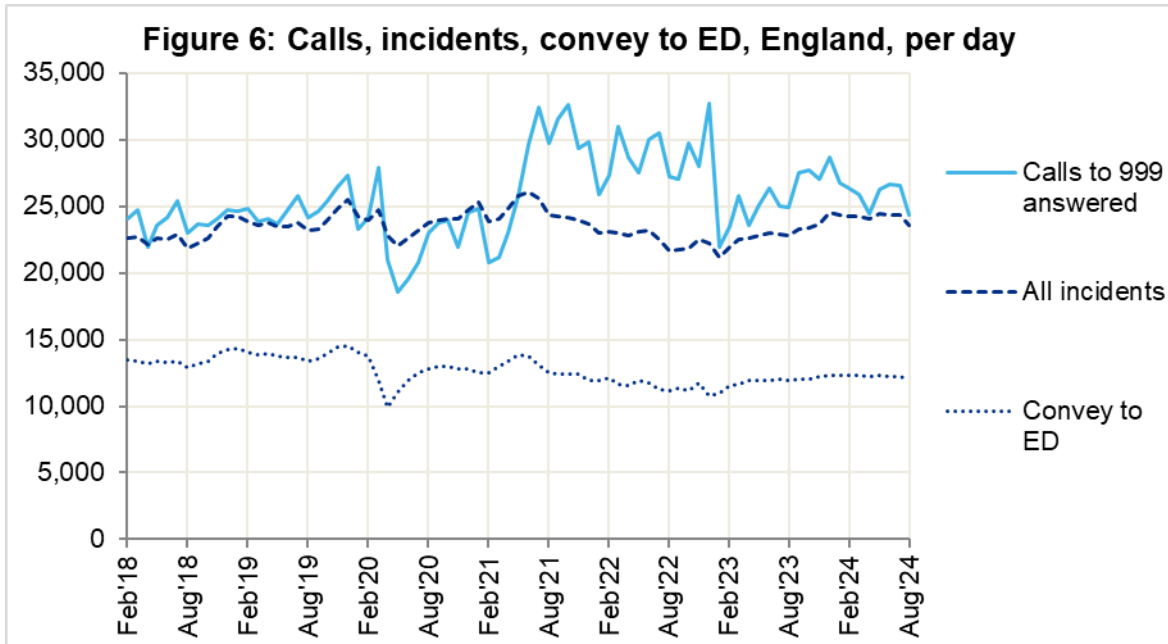
1.2 Other Systems Indicators

The average 999 call answer time in August 2024 was 5 seconds. In the previous 36 months, only in April 2024 was it shorter. (Figure 5)

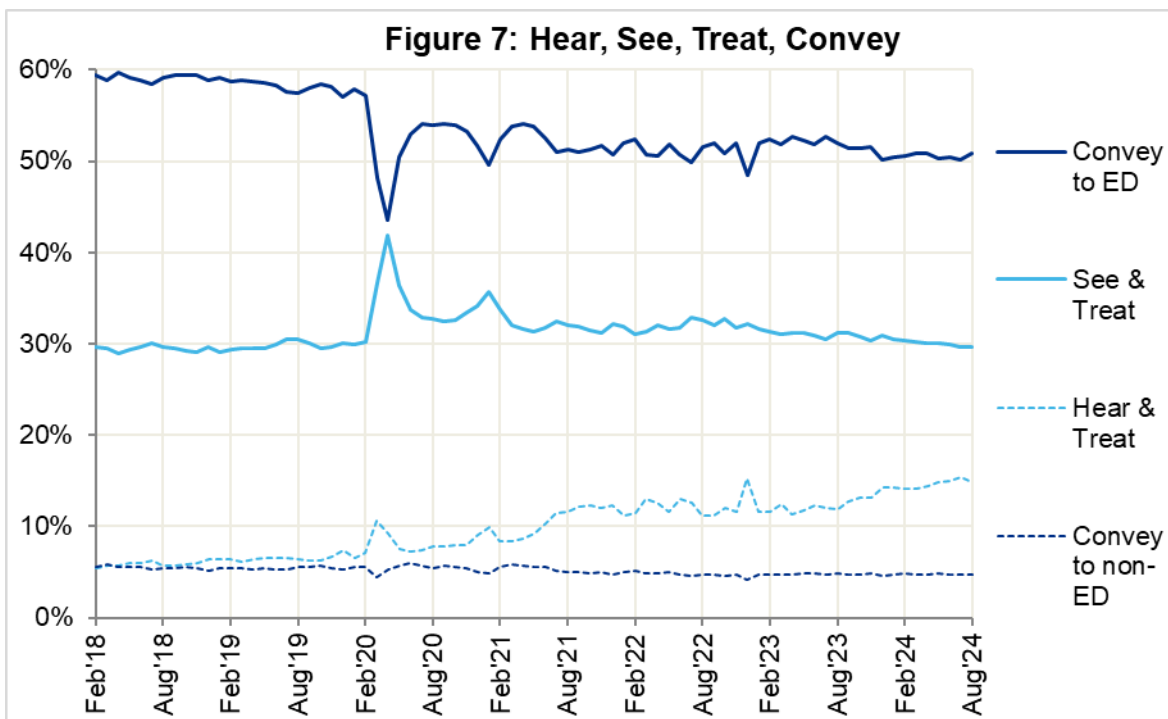


In August 2024, 754,495 calls to 999 were answered. This was 24.3 thousand per day, the fewest since April 2023.

There were 730,669 incidents in England in August 2024, of which 371,492 had conveyance to ED. Per day, these were 23.6 and 12.0 thousand, each the fewest in 2024 so far. (Figure 6).



In England in August 2024, 29.6% of incidents were resolved on scene (See & Treat), the least since October 2019. Other incidents in August 2024 comprised 14.8% resolved on the telephone (Hear & Treat), 50.8% with conveyance to an Emergency Department (ED), and 4.8% with conveyance to non-ED. (Figure 7)



2. Ambulance Clinical Outcomes (AmbCO)

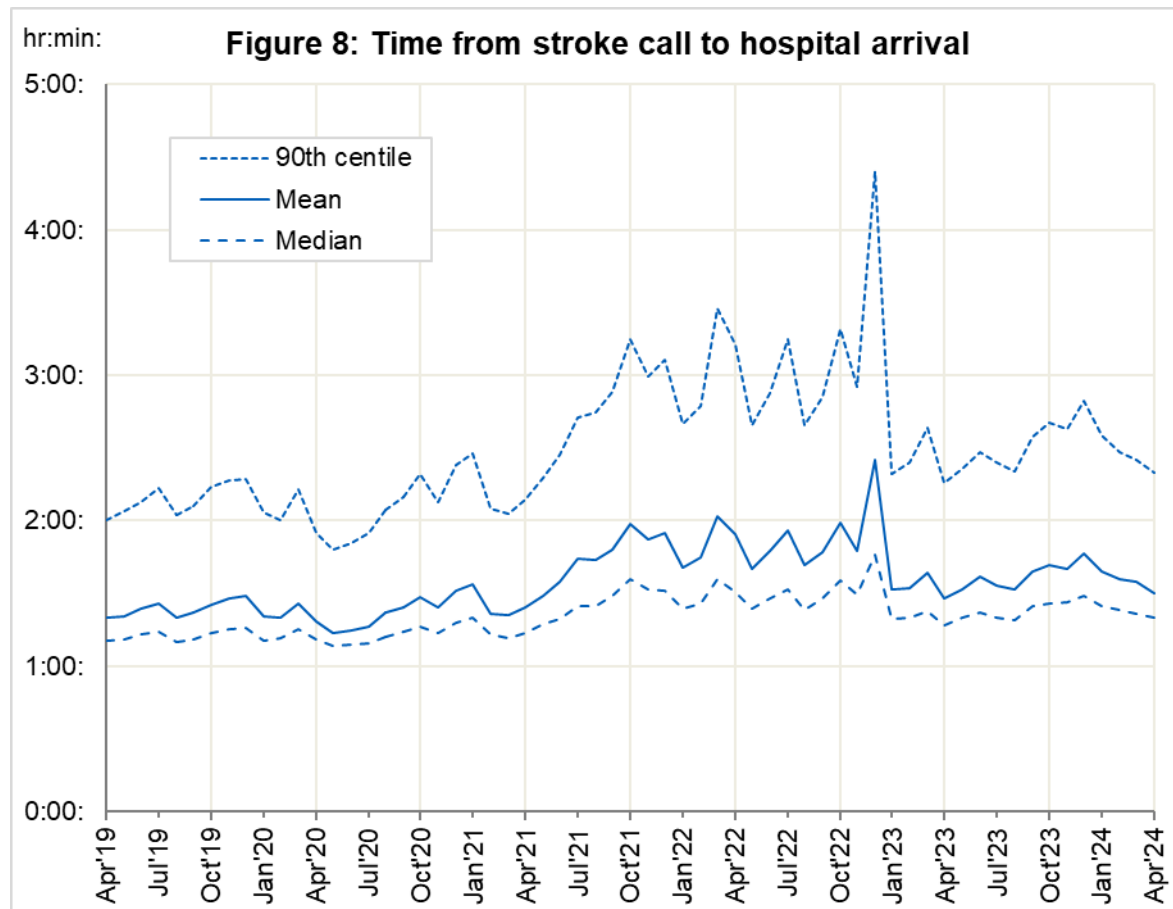
We continue to summarise data in these Statistical Notes for each topic when we publish care bundle data for that topic, so today’s commentary includes data on ST-segment elevation myocardial infarction (STEMI), a type of heart attack.

As described in our 11 July 2024 Statistical Note, we have changed when we collect data on the care bundle provided post-ROSC (Return of spontaneous circulation) on scene. We used to collect those data items for every April, July, October, and January, but for financial year 2024-25 onwards we collect them one month later.

Today, alongside AmbCO data for April 2024, we are publishing revisions from March 2023 to March 2024 inclusive, and we summarise below the effects on stroke data. Revisions include cardiac arrest data for April 2023 for South Central Ambulance Service, and 1 September to 10 October 2023 for South Western, that was previously missing following a cyber-attack last summer, so we are also summarising cardiac arrest data now, rather than next month.

2.1 Stroke time to hospital and clinical intervention

The average time from 999 call until arrival at hospital for ambulance patients in England who had a stroke was 1 hour 30 minutes in April 2024 (Figure 8, middle line). This was the shortest since May 2021 apart from April 2023.



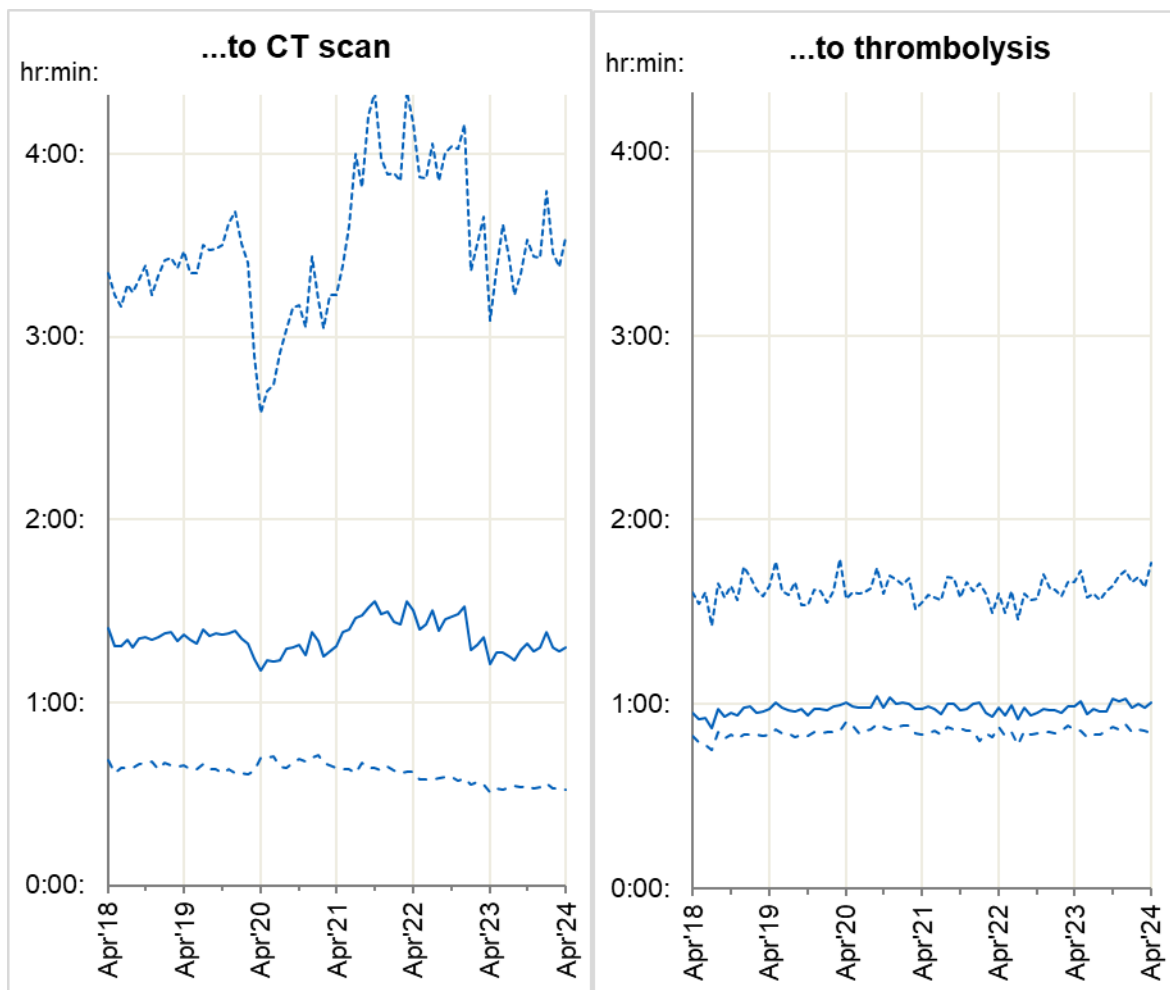
Revisions to these times to hospital arrival for England were all one minute or less.

There have been no revisions to times from hospital arrival to CT scan or thrombolysis for stroke.

The median time to CT scan was 31 minutes in April 2024; only April 2023 was less than 31 minutes in the last six years. The mean (1:18) and 90th centile (3:32) were also shorter than in all months of 2022.

In contrast the 90th centile time to thrombolysis in April 2024, 1:45, was the longest since March 2020.

Figure 9: Time from hospital arrival for stroke...



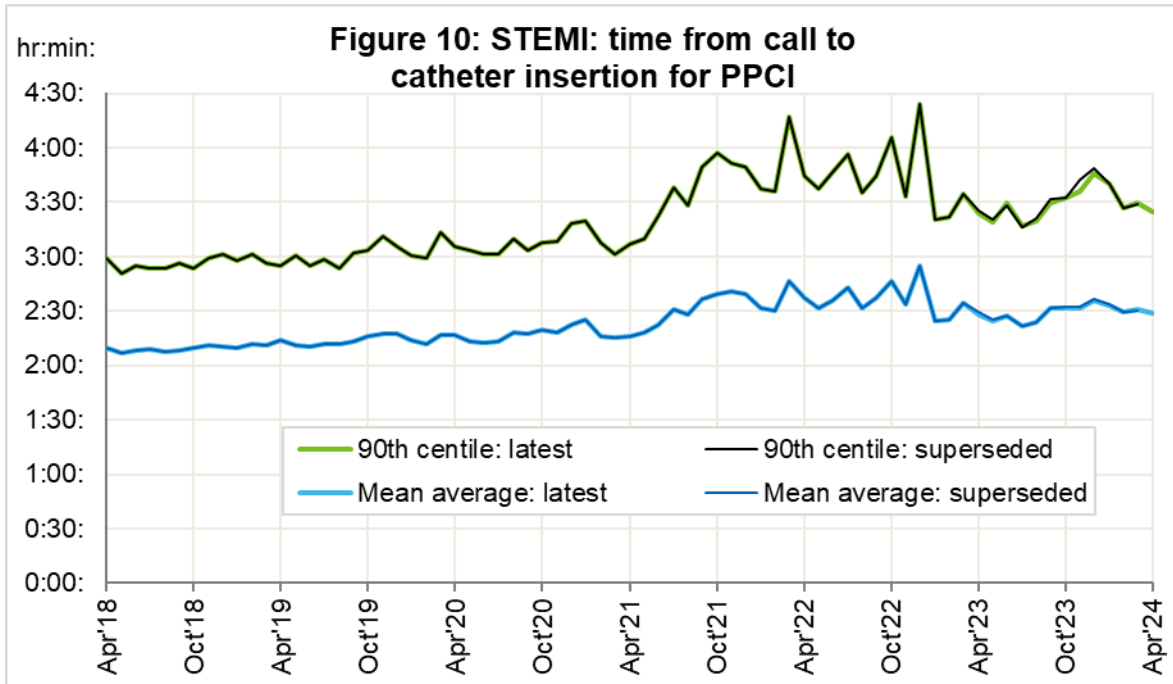
2.2 STEMI

STEMI is a type of heart attack, determined by an electrocardiogram (ECG) test. Early access to reperfusion, where blocked arteries are opened to re-establish blood flow, and other assessment and care interventions, are associated with reductions in STEMI mortality and morbidity.

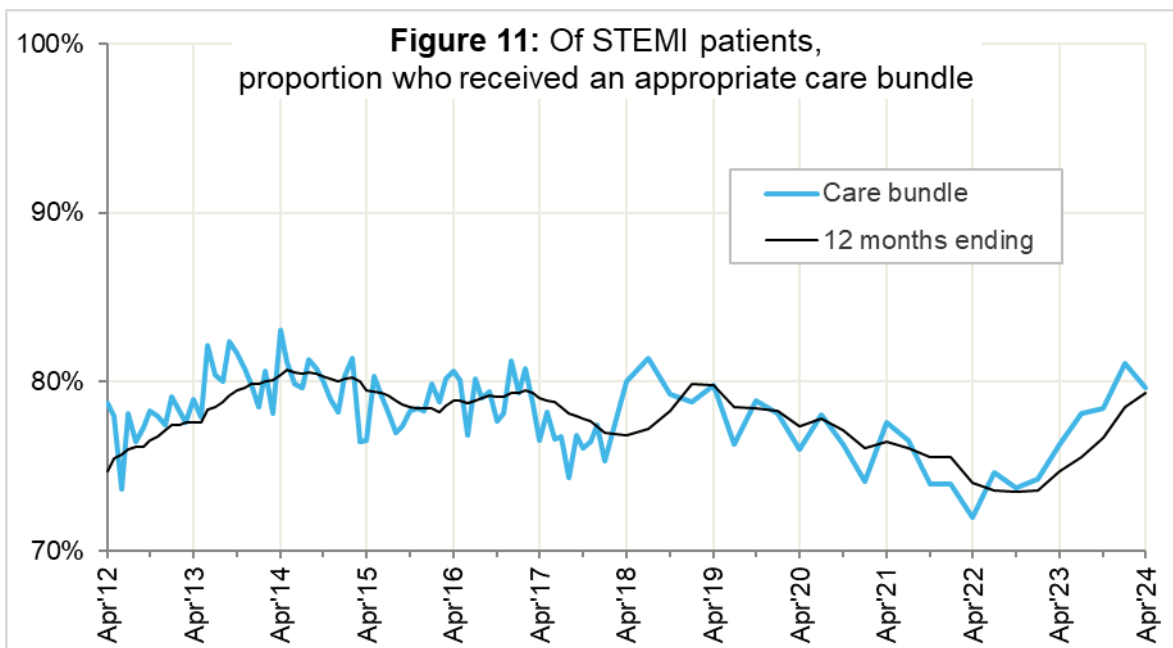
For STEMI patients, the Myocardial Ischaemia National Audit Project (MINAP) collects the time from ambulance call to insertion of a catheter for primary percutaneous coronary intervention (PPCI): inflation of a balloon inside a blood vessel to restore blood flow to the heart.

In England in April 2024, the mean average time from 999 call to catheter insertion was 2 hours 29 minutes, and the 90th centile was 3:24 (Figure 10), both the shortest since August 2023.

For England, revisions to these average times were at most one minute, but the 90th centile for November 2023 was revised from 3:42 to 3:35.



In England, of 1,763 patients with an acute STEMI in April 2024, 80% (1,404) received an appropriate care bundle (Figure 11), similar to the average for 2023/24 (79%). The January 2024 proportion has been revised from 80.2% to 81.1%; the next largest revision was merely from 78.6% to 78.5% for October 2023.

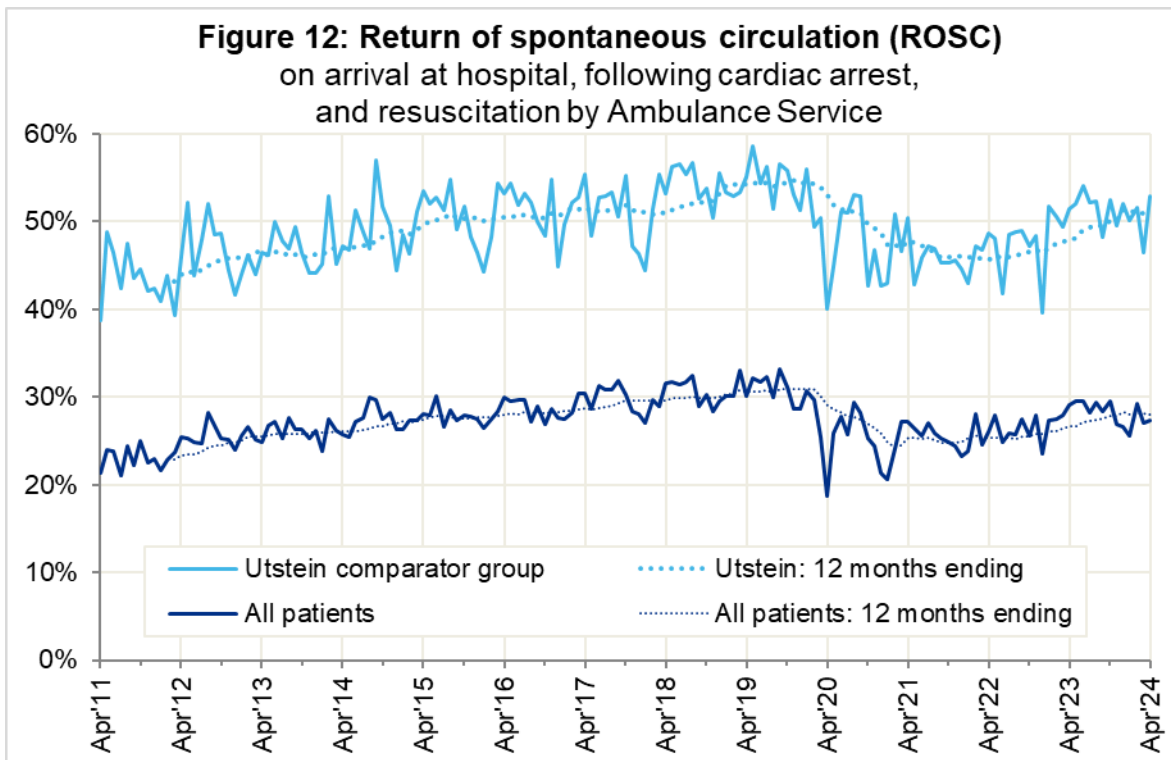


2.3 Cardiac arrest: ROSC on arrival at hospital (Figure 12)

In England, 2,618 patients had resuscitation by an ambulance service with a known outcome after cardiac arrest in April 2024, of which 715 (27%) had ROSC on arrival at hospital, not significantly² different to the 2023/24 average (28%).

The Utstein comparator group comprises patients with an out-of-hospital cardiac arrest of presumed cardiac origin, where the initial rhythm was Ventricular Fibrillation or Ventricular Tachycardia, and the arrest was bystander witnessed. This group therefore have a better chance of survival.

In April 2024, of the 2,618 cardiac arrest patients, 419 met these criteria, of which 222 (53%) had ROSC on arrival at hospital, also not significantly different to the average for 2023/24 (51%).

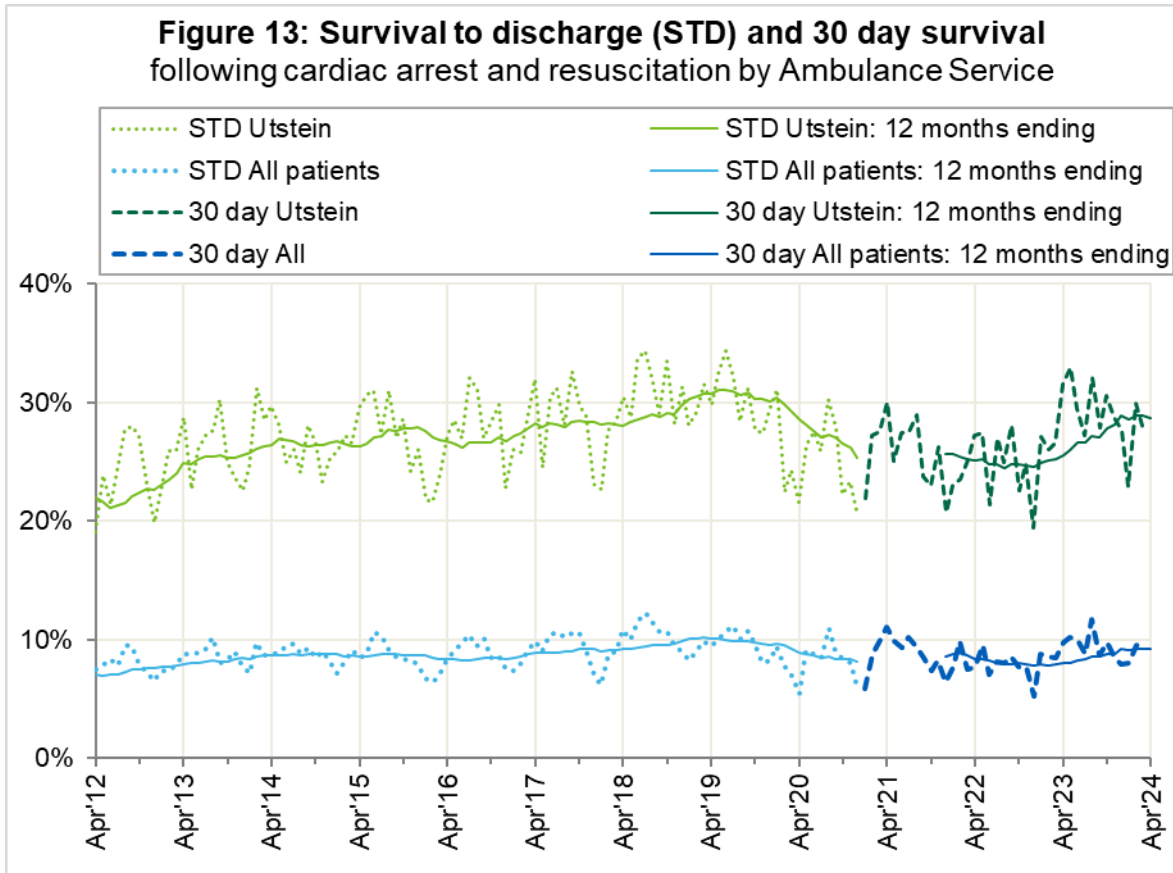


2.4 Survival following cardiac arrest (Figure 13)

For the 2,600 resuscitated cardiac arrest patients in England in April 2024 where survival at 30 days is known, 260 (10.0%) survived, similar to the 9.2% for 2023/24, and more than the 7.9% in 2022/23. For the Utstein group, 132 of 408 (32%) survived for 30 days, also not significantly different to 2023/24 (29%).

It would be difficult to make out on Figures 12 and 13 the difference caused by revisions, but the largest change at England level for ROSC was from 49.8% to 48.2% for the Utstein cohort in September 2023, and the largest change for survival from 32.2% to 31.5% for survival for the Utstein cohort for April 2023.

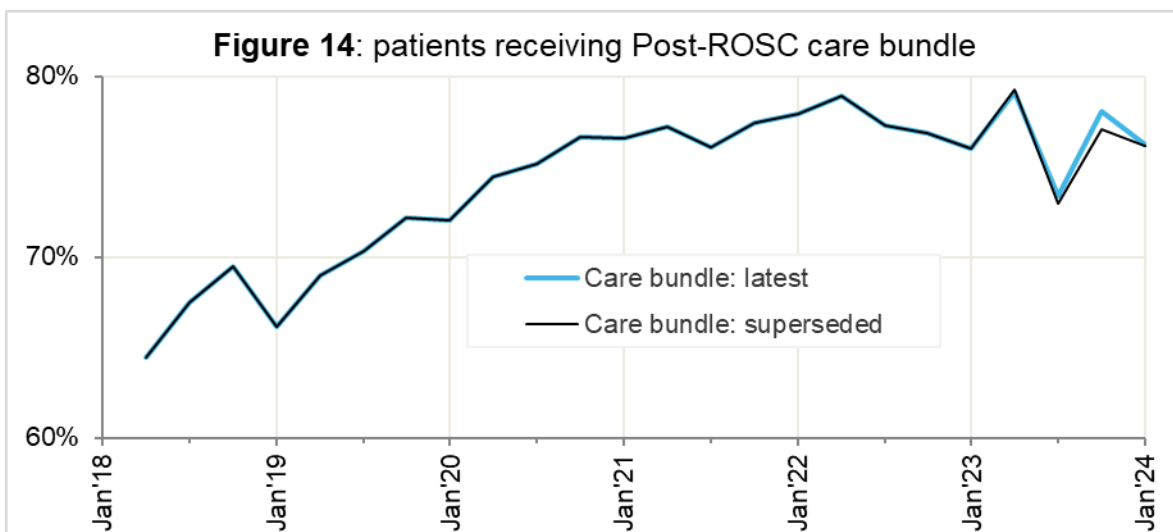
² Calculated using Student's t-test with 95% significance.



2.5 Cardiac arrest care bundle

For cardiac arrest patients resuscitated by an ambulance service in England who had ROSC on scene (not necessarily on arrival at hospital), we have no data beyond those for January 2024 published three months ago, but we do have revised or previously-missing data from four trusts.

For England, the largest revision to the proportion who received the appropriate care bundle was for October 2023, from 77.0% to 78.1%. (Figure 14)



3. Further information on AQI

3.1 The AQI landing page and Quality Statement

www.england.nhs.uk/statistics/statistical-work-areas/ambulance-quality-indicators, or <http://bit.ly/NHSAQI>, is the AQI landing page, and it holds:

- a Quality Statement for these statistics, which includes information on relevance, accuracy, timeliness, coherence, and user engagement;
- the specification guidance documents for those who supply the data;
- timetables for data collection and publication;
- time series spreadsheets and csv files from April 2011 up to the latest month;
- links to individual web pages for each financial year;
- contact details for the responsible statistician (also in section 3.5 below).

Publication dates are also at

www.gov.uk/government/statistics/announcements?keywords=ambulance.

The web pages for each financial year hold:

- separate spreadsheets of each month's data;
- this Statistical Note, and equivalent versions from previous months;
- the list of people with pre-release access to the data.

3.2 Related statistics

NHS England publishes C2 response times for each Integrated Care Board (ICB) from April 2023 monthly at www.england.nhs.uk/statistics/statistical-work-areas/ambulance-quality-indicators/ambulance-management-information, and ambulance handover data by acute trust from October 2023 on the same page.

Handover data during winter from 2017-18 for individual days are available from www.england.nhs.uk/statistics/statistical-work-areas/uec-sitrep.

The Quality Statement described in section 3.1 includes information on:

- the “Ambulance Services” publications by what became NHS Digital <https://digital.nhs.uk/data-and-information/publications/statistical/ambulance-services>, with data from before 2000, to 2014-15;
- a dashboard with an alternative layout for AQI data up to April 2016;
- the comparability of data for other countries of the UK:

Scotland: See Quality Improvement Indicators (QII) documents at www.scottishambulance.com/TheService/BoardPapers.aspx

Wales: <https://easc.nhs.wales/asi>

Northern Ireland: www.health-ni.gov.uk/articles/emergency-care-and-ambulance-statistics

3.3 AQI Scope

The AQI include calls made by dialling either the usual UK-wide number 999 or its international equivalent 112.

As described in the specification guidance in section 3.1, incidents resulting from a call to NHS 111 are included in all AmbSYS indicators, except the counts of 999 calls (indicators A1, A124, and A125) and call answer times (A2 to A6 and A114).

3.4 Centiles

The centile data for England in this document, also published in spreadsheets alongside this document, are not precise centiles calculated from national record-level data. Instead, they are the centiles calculated from each individual trust's record-level data, weighted by their incident count, and averaged across England. So, if England only had two trusts, with centiles of 7:10 and 7:40, and the former had twice as many incidents as the latter, the England centile would be 7:20.

3.5 Contact information

Media: NHS England Media team, nhsengland.media@nhs.net, 0113 825 0958.

The person responsible for producing this publication is Ian Kay, Operational Insights, Transformation Directorate, NHS England, 07918 336050, england.nhsdata@nhs.net.

3.6 Accredited official statistics

These official statistics were independently reviewed by the Office for Statistics Regulation in May 2015. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled “accredited official statistics”.