

Statistical Note: Ambulance Quality Indicators (AQI)

The latest Systems Indicators for ambulance services in England showed that response times for all categories in February 2020 were longer than in January.

The latest Clinical Outcomes data show that for patients who had a return of spontaneous circulation after resuscitation from cardiac arrest, more of them received the appropriate care bundle.

1. Systems Indicators

1.1 Response times

The mean average C1 response time across England was 7 minutes 19 seconds in February, longer than the standard of 7 minutes.

The C1 90th centile response times averaged 12:53 across England in February, so the standard of 15 minutes was met.

For C1T (arrival of transporting vehicle, for C1 patients transported) the mean and 90th centile response times were 10:33 and 19:35 respectively, both 2% longer than in January.

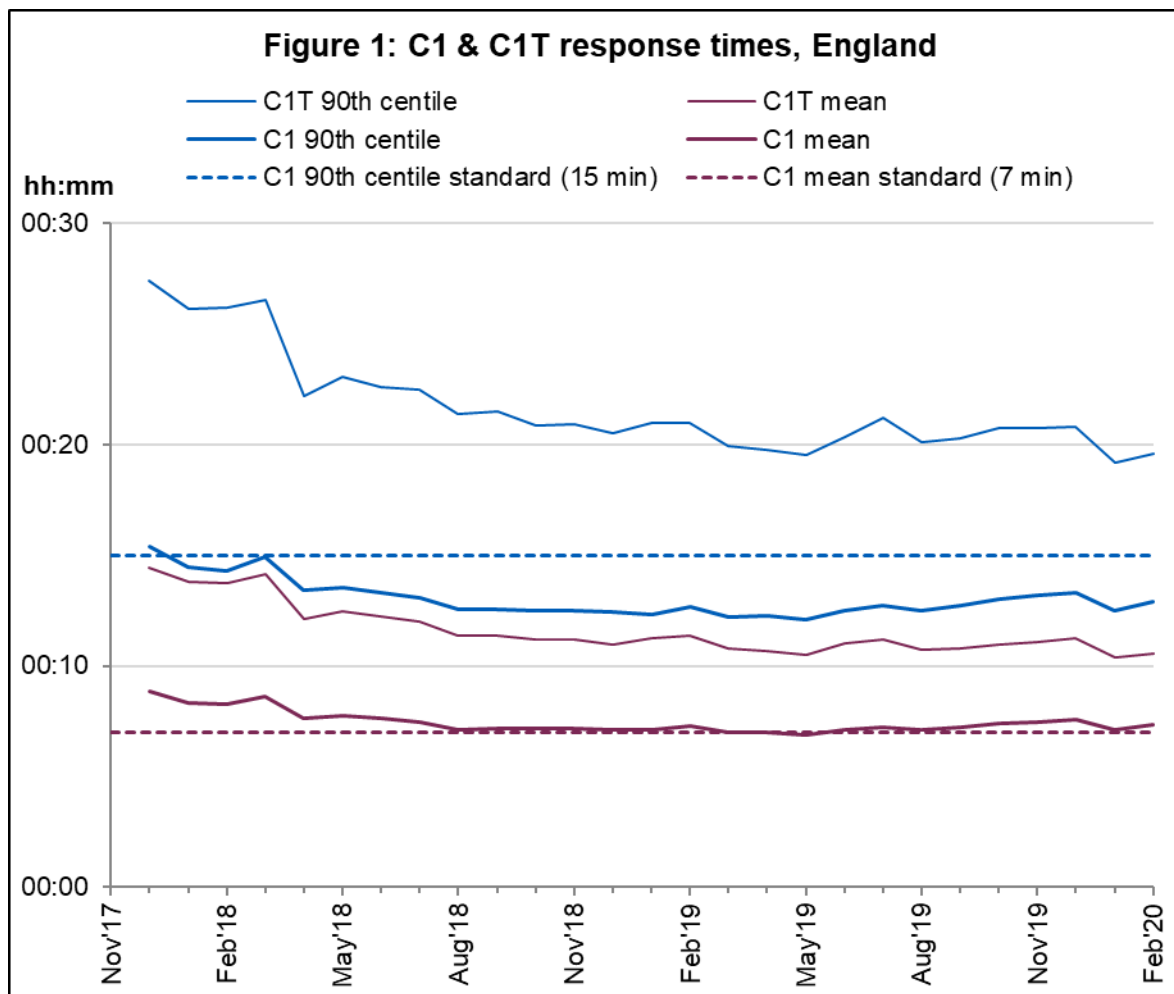
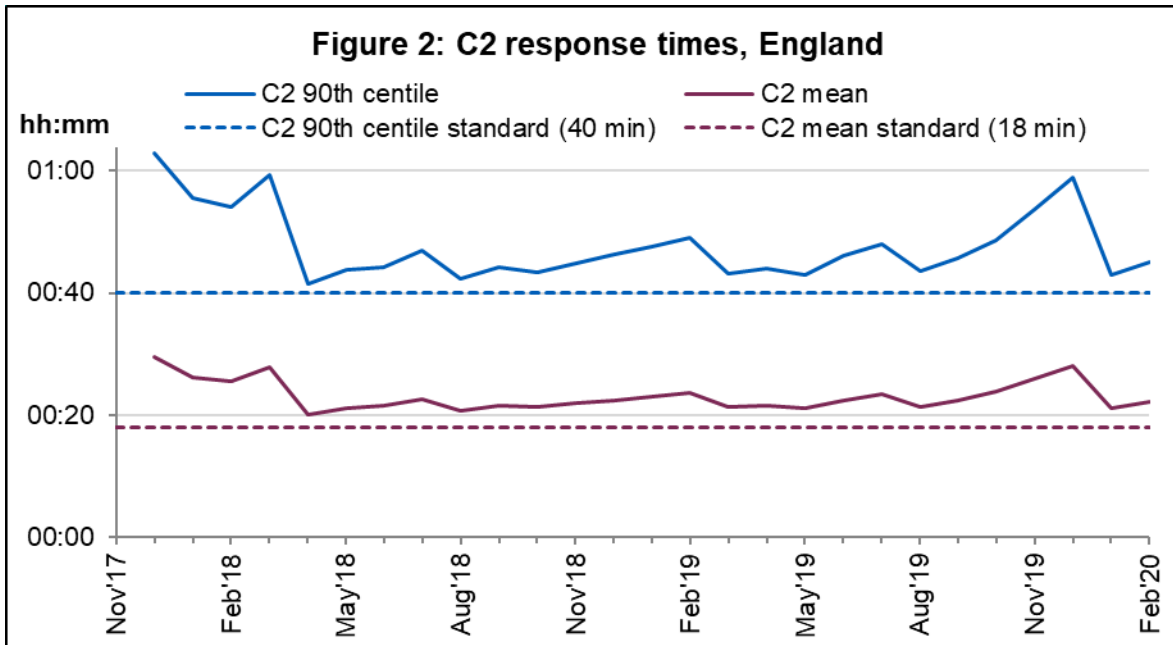
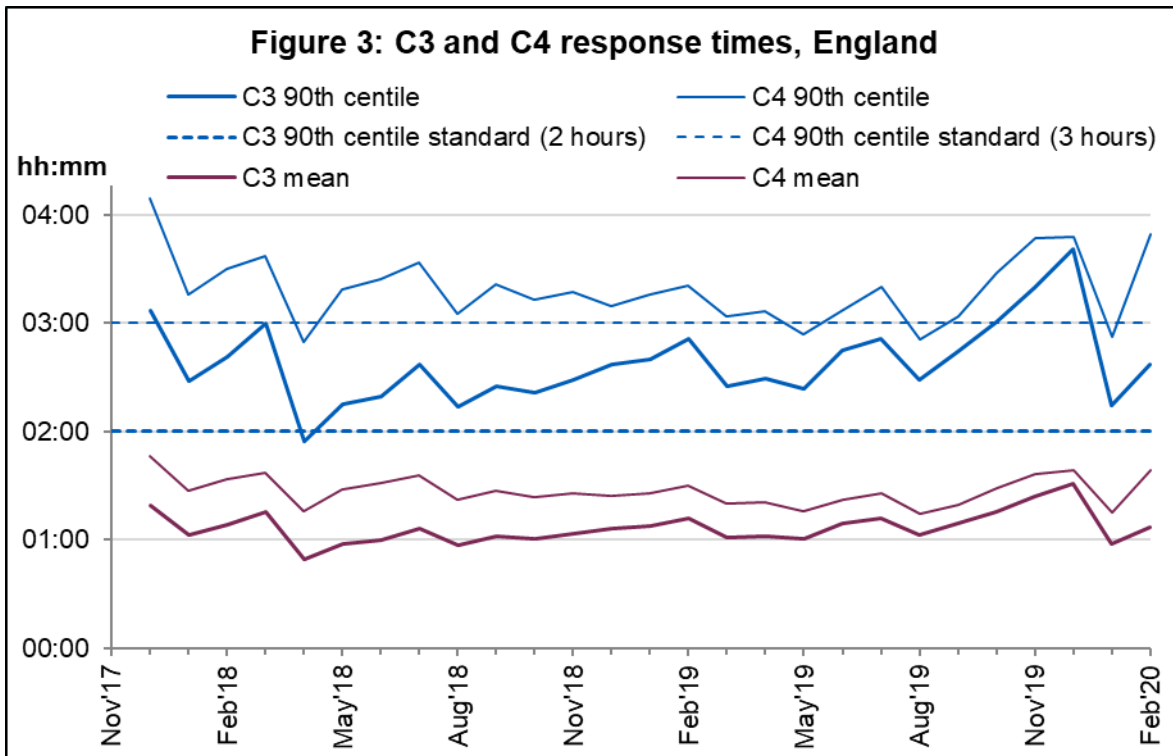


Figure 2 shows that the mean average response time for England, in February 2020, for all C2 incidents, was 22:07, and the C2 90th centiles averaged 45:07 across England. Both were 5% longer than in January.



In February, the England C3 mean average response time was 1:07:18, and the C3 90th centile times averaged 2:37:12. Both were 17% longer than in January.

The C4 mean average response time was 1:38:41 in February. The C4 90th centile times averaged 3:49:09, longer than the standard of three hours. Both averages were more than 30% longer than in January. (Figure 3).

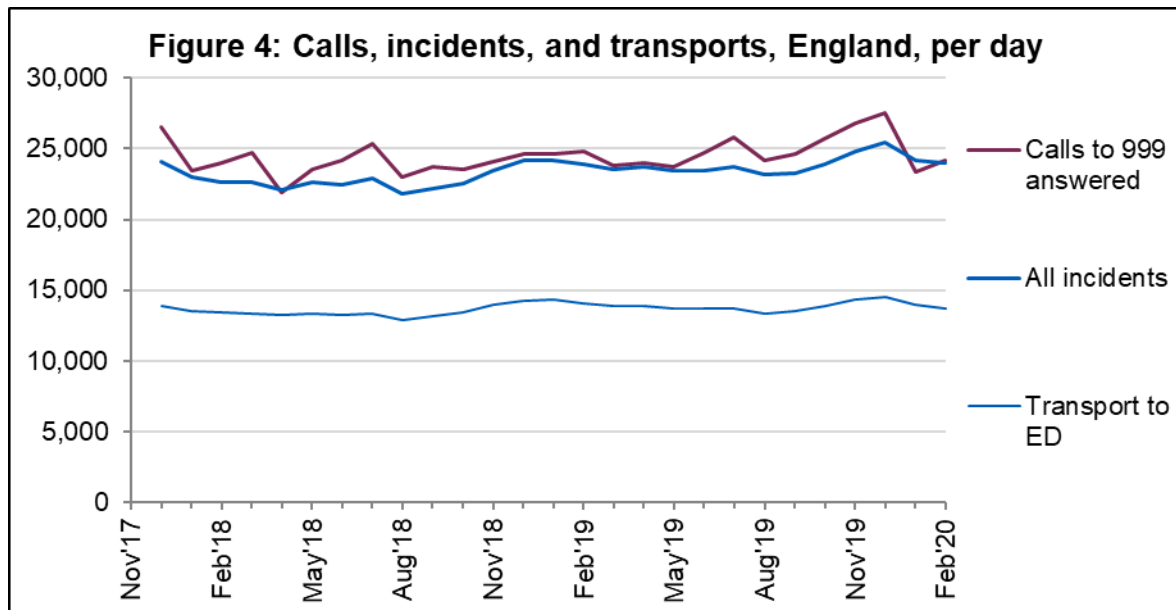


1.2 Other Systems Indicators

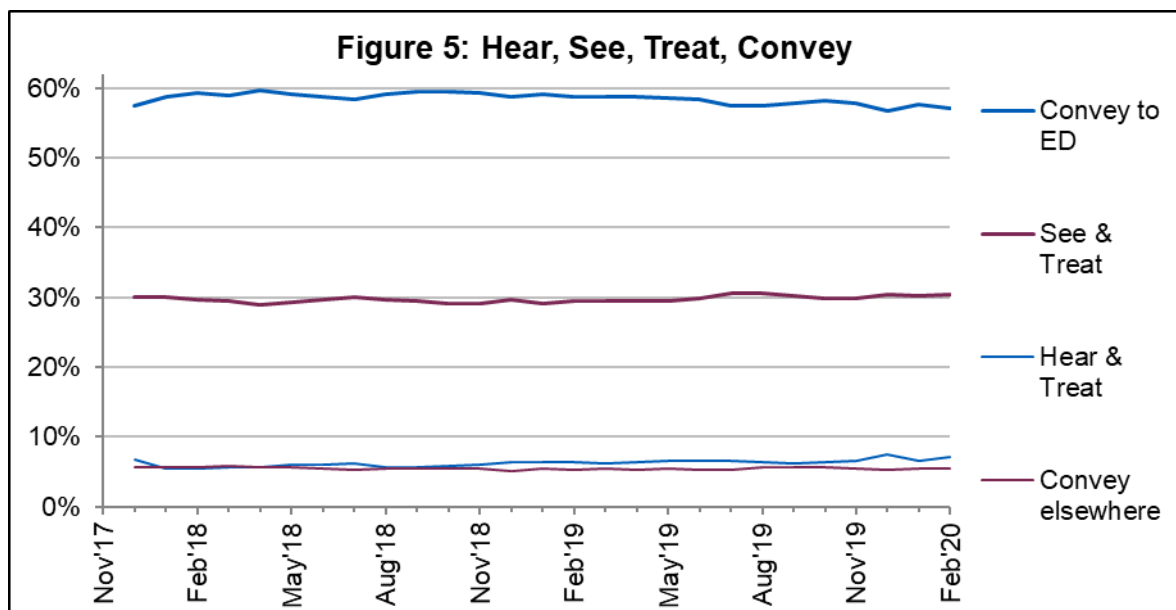
Across England, the mean average call answer time in February 2020 was 5 seconds, and the 90th centile times averaged 10 seconds.

Per day, there were (Figure 4):

- 24.1 thousand calls to 999 answered in February, a 3.3% increase on January;
- 24.0 thousand incidents that received a response (whether on the telephone or on the scene) from an ambulance service in February, 0.9% fewer than January;
- 13.7 thousand incidents where a patient was transported to an Emergency Department (ED) in February, 2.0% fewer than in January.



Incidents in February 2020 (Figure 5) comprised 57.1% where a patient was transported to an Emergency Department (ED), 5.5% with a patient transported elsewhere, 30.4% with a patient attended but not transported (see and treat), and 7.1% resolved on the telephone (hear and treat).



2. Clinical Outcomes

We continue to publish Clinical Outcomes data in spreadsheets each month; and (for England as a whole) we discuss data for each topic area in the month when we publish new bundle data for that topic. Today we describe the latest cardiac arrest (section 2.1) and STEMI (section 2.2) data, for October 2019.

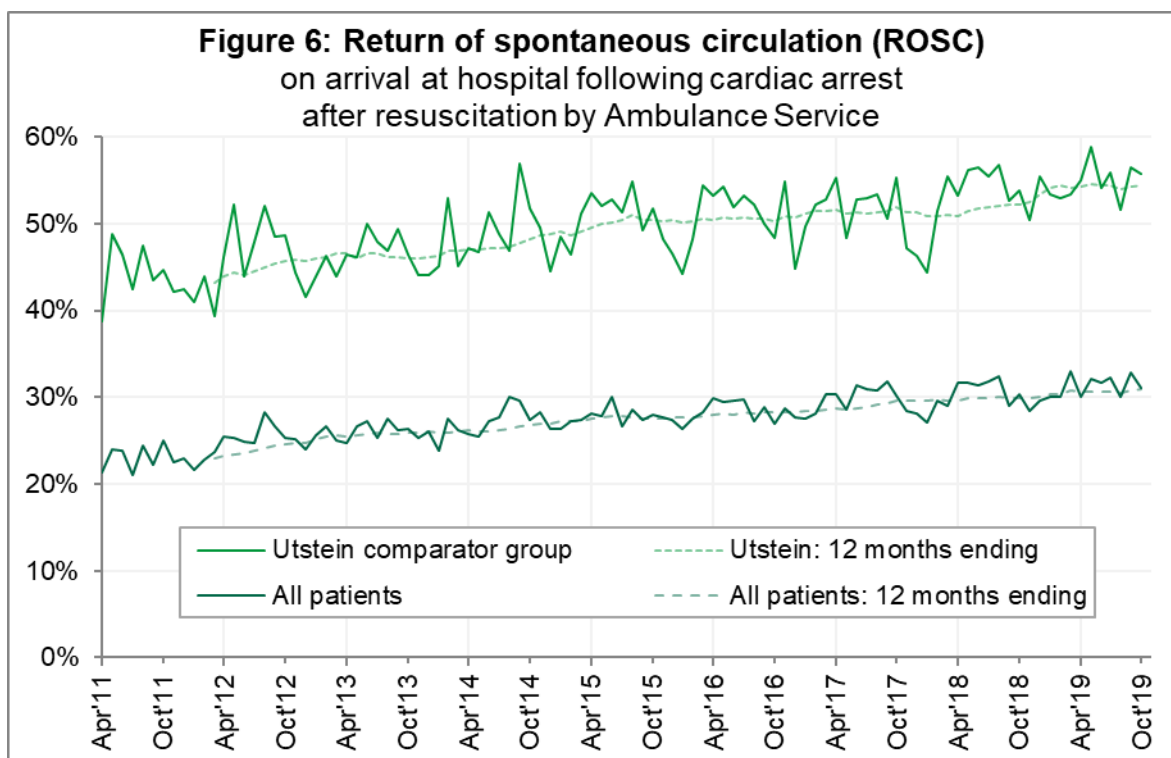
2.1 Cardiac arrest

Patients in cardiac arrest will typically have no pulse and will not be breathing. We show, of patients for whom resuscitation was commenced or continued by ambulance staff out of hospital, how many had return of spontaneous circulation (ROSC), with a pulse, on arrival at hospital (Figure 6), and how many survived to be discharged from hospital (Figure 7).

For all patients, in October 2019, at England level, ROSC (Figure 6) was 31%, the same as the proportion for the year ending September 2019.

The Utstein comparator group¹ comprises patients with an out-of-hospital cardiac arrest of presumed cardiac origin, where the arrest was bystander witnessed, and the initial rhythm was Ventricular Fibrillation or Ventricular Tachycardia. This group therefore have a better chance of survival.

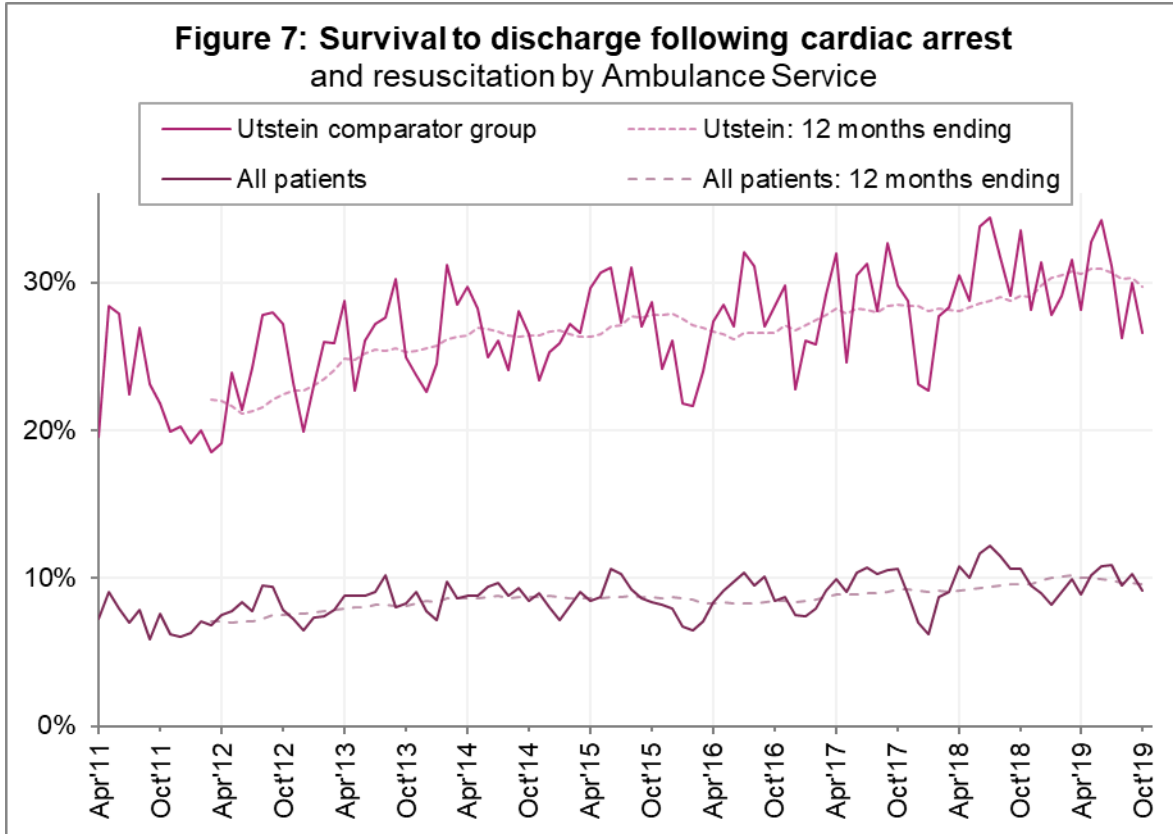
For the Utstein group, ROSC was 56%. This was not significantly² different to the average for the year ending September 2019 (54%).



¹ This definition was proposed at Utstein Abbey in Norway by an international group of cardiologists and other health professionals in 1990. <http://circ.ahajournals.org/content/110/21/3385>

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

Survival to discharge following cardiac arrest in October 2019 was 9% for all patients, and 27% for the Utstein group (Figure 7). Neither were significantly different to the averages for the year ending September 2019 (10% and 30% respectively).



For patients with ROSC in October 2019, 72% received the post-ROSC care bundle, the largest proportion of the seven months where these data have been collected.

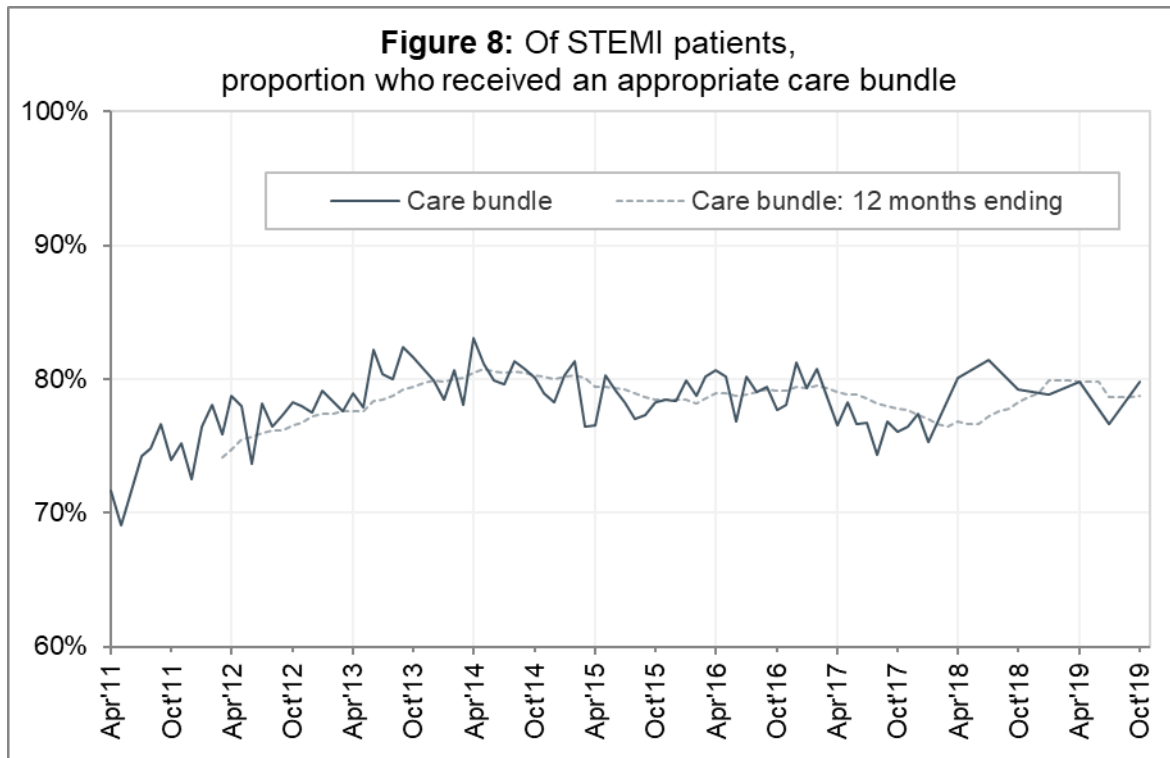
2.2 ST-segment elevation myocardial infarction (STEMI)

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, ambulance services measure 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 October 2019, for time from call to catheter insertion, the mean average was 2 hours 16 minutes, and the 90th centiles averaged 3 hours 3 minutes, both the longest since these measures were first collected for November 2017.

Figure 8 shows that of patients with an acute STEMI in England in October 2019, the proportion that received an appropriate care bundle was 80%, similar to the average for the year ending September 2019 (79%).



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 3.4 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

Ambulance handover delays of over 30 minutes at each Emergency Department are published by NHSEI during winter 2012-13, 2013-14, 2014-15, 2017-18, 2018-19, and 2019-20, at www.england.nhs.uk/statistics/statistical-work-areas/winter-daily-sitreps.

The Quality Statement described in section 3.1 includes information on:

- the “Ambulance Services” publications by 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:

Wales: <https://statswales.gov.wales/Catalogue/Health-and-Social-Care/NHS-Performance/Ambulance-Services>

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

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 mentioned in section 3.1, incidents resulting from a call to NHS 111 are included in all Systems Indicators the except call data items, A1 to A6 and A114.

3.4 Contact information

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

The person responsible for producing this publication is Ian Kay; Performance Analysis Team; Finance, Performance and Planning Directorate; NHS England and NHS Improvement; england.nhsdata@nhs.net; 0113 825 4606.

3.5 National Statistics

The UK 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.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.