Statistical Note: Ambulance Quality Indicators (AQI)

The average ambulance response time in October 2022 for Categories 1-3 appear the longest since the categories were introduced nationally in 2017, although the comparison is complicated because London data are unavailable for October 2022.

Our last data for sepsis show little change in June 2022 in the proportion of patients who received the appropriate care bundle.

1.   Ambulance Systems Indicators (AmbSYS)
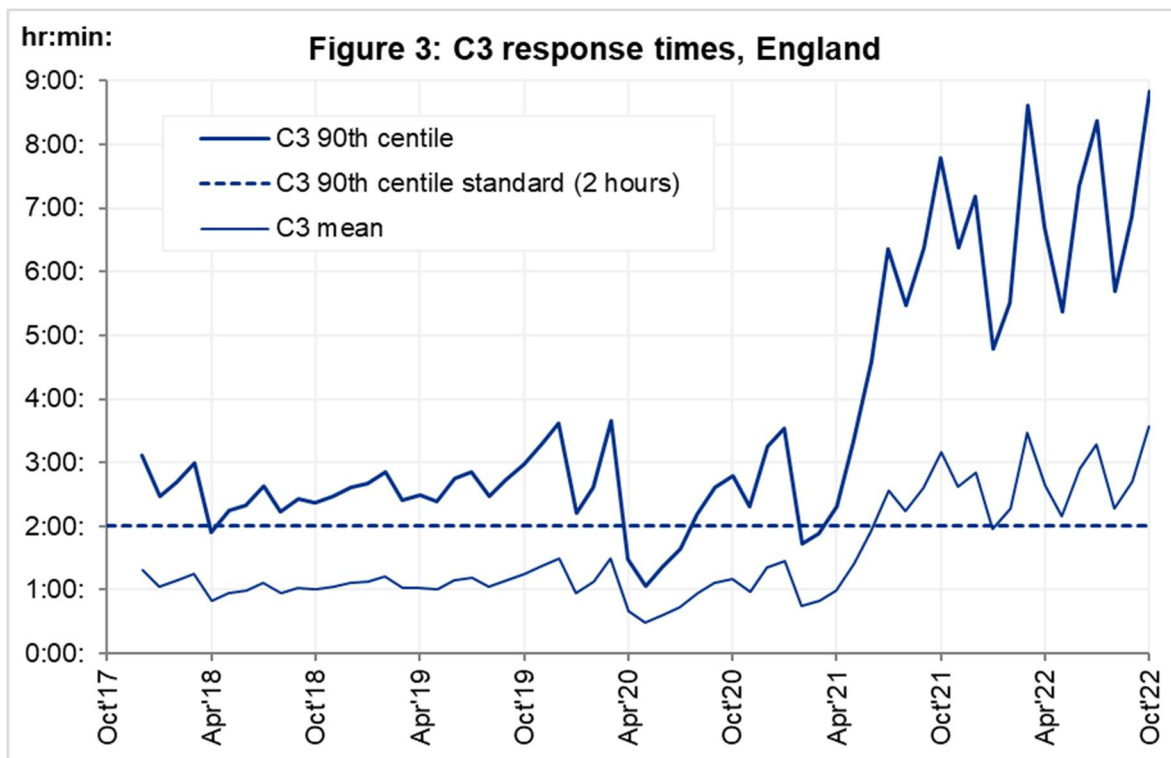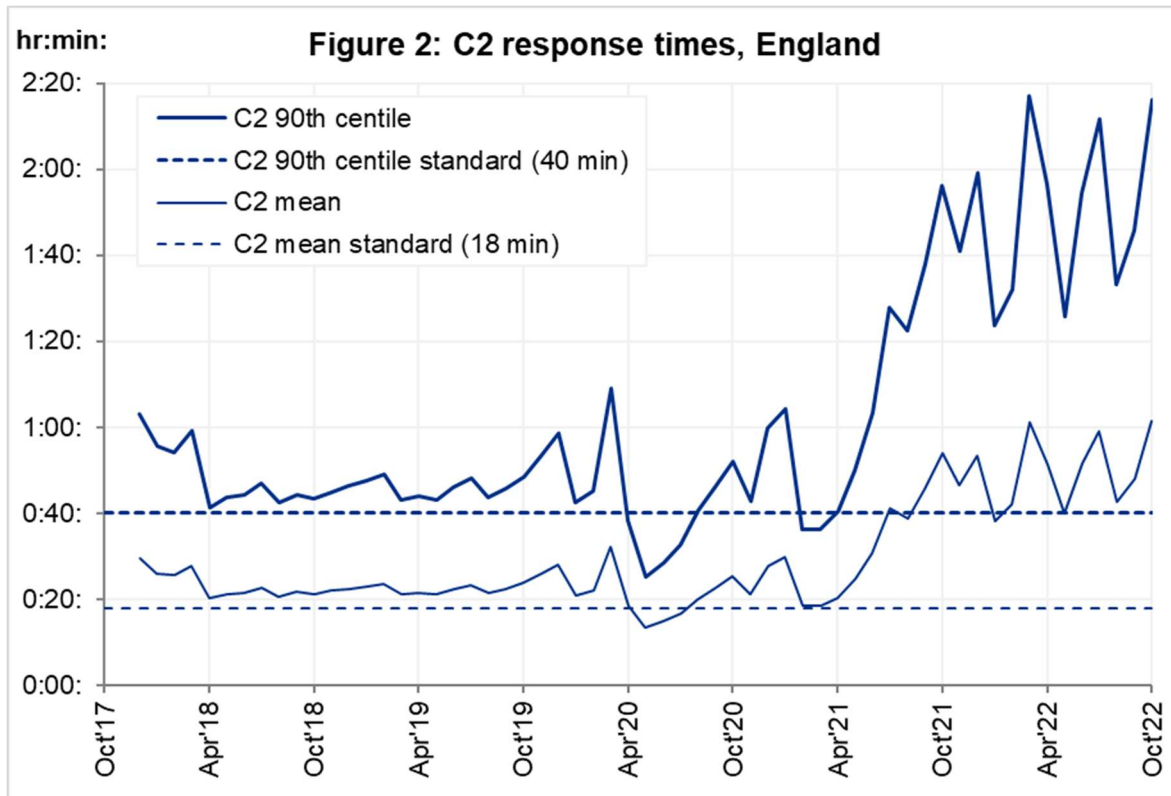
1.1   Response times

In October 2022, the mean average response time for the most urgent Category, C1, for England excluding London, was 9 minutes 56 seconds, and the 90th centile was 17:42 (Figure 1), so clearly longer than the 7-minute mean and the 15-minute 90th centile standards[1]. A comparison also excluding London from earlier data shows the October 2022 C1 average of 9:56 was slightly shorter than in March 2022.

The mean average for C1T (time to the arrival of the transporting vehicle for C1 incidents) was 12:37, and the 90th centile was 23:28.


Figure 1: C1 response times, England

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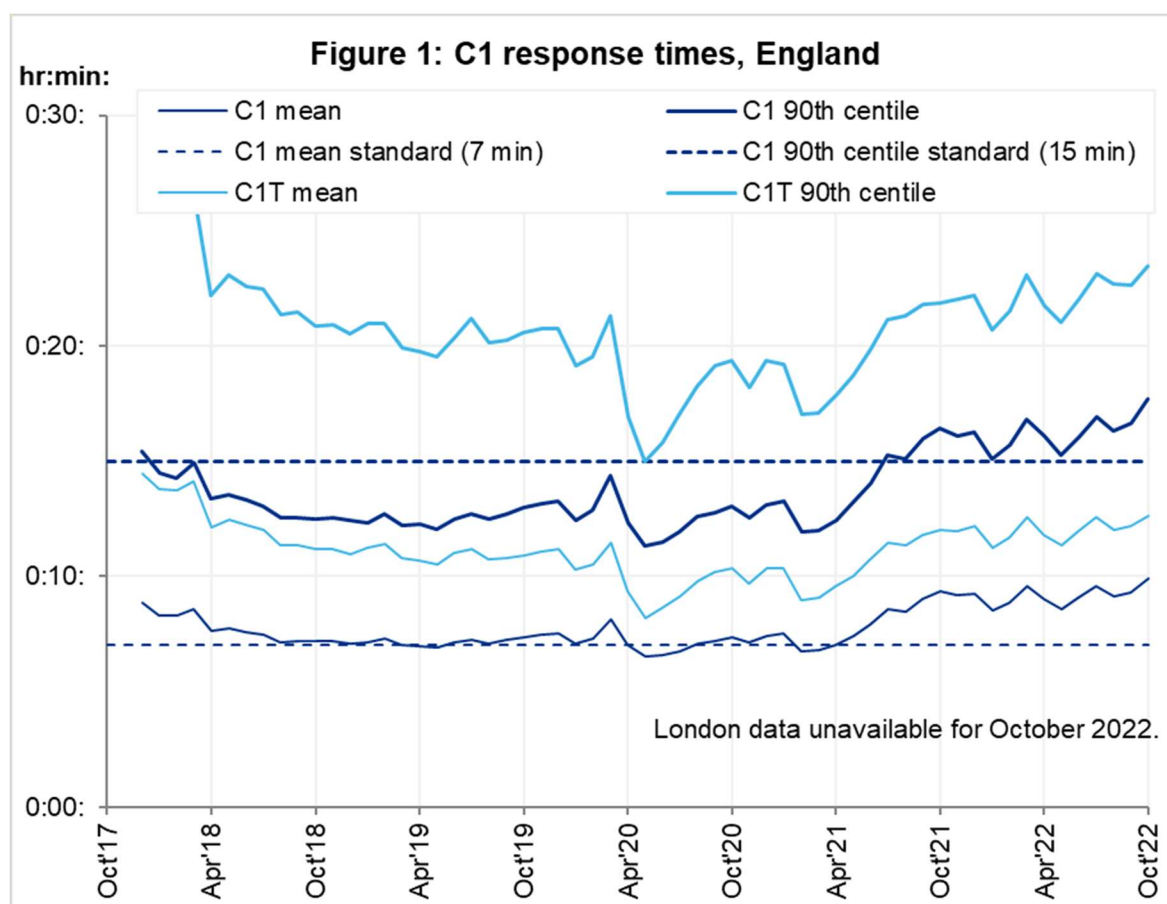
[1] Standards in the NHS Constitution Handbook: www.gov.uk/government/publications/supplements-to-the-nhs-constitution-for-england/the-handbook-to-the-nhs-constitution-for-england

The C2 mean response time in October 2022 for England excluding London 1:01:19, and the 90th centile was 2:16:11 (Figure 2) and the C3 mean response time was 3:34:34, and the 90th centile was 8:49:35 (Figure 3), all clearly longer than in the vast majority of previous months.


Figure 2: C2 response times, England

Figure 3: C3 response times, England

The C4 mean average response time in October 2022 for England excluding London was 4:01:52, and the 90th centile was 9:54:11 (Figure 4).

Figure 4: C4 response times, England
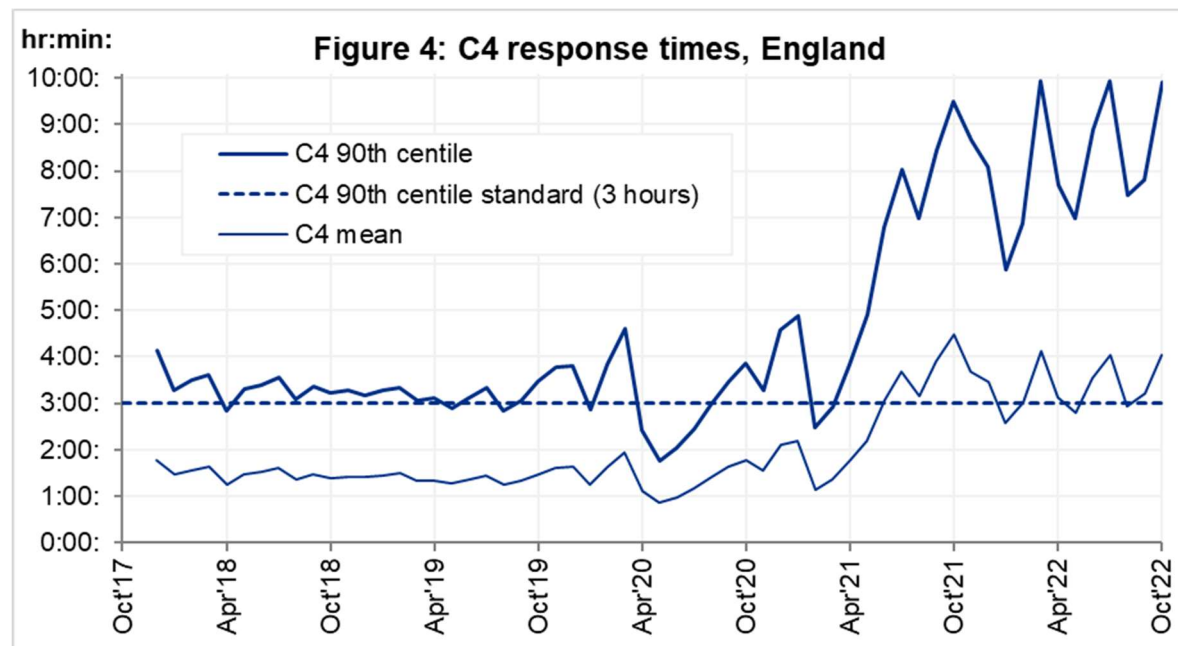
1.2 Other Systems Indicators

Call answer times and counts of calls and incidents are available for London in October 2022, so this section uses data for all England.

The average call answer time in October 2022 was 48 seconds, the longest except for October 2021 and July 2022.

Figure 5: Call answer times, England
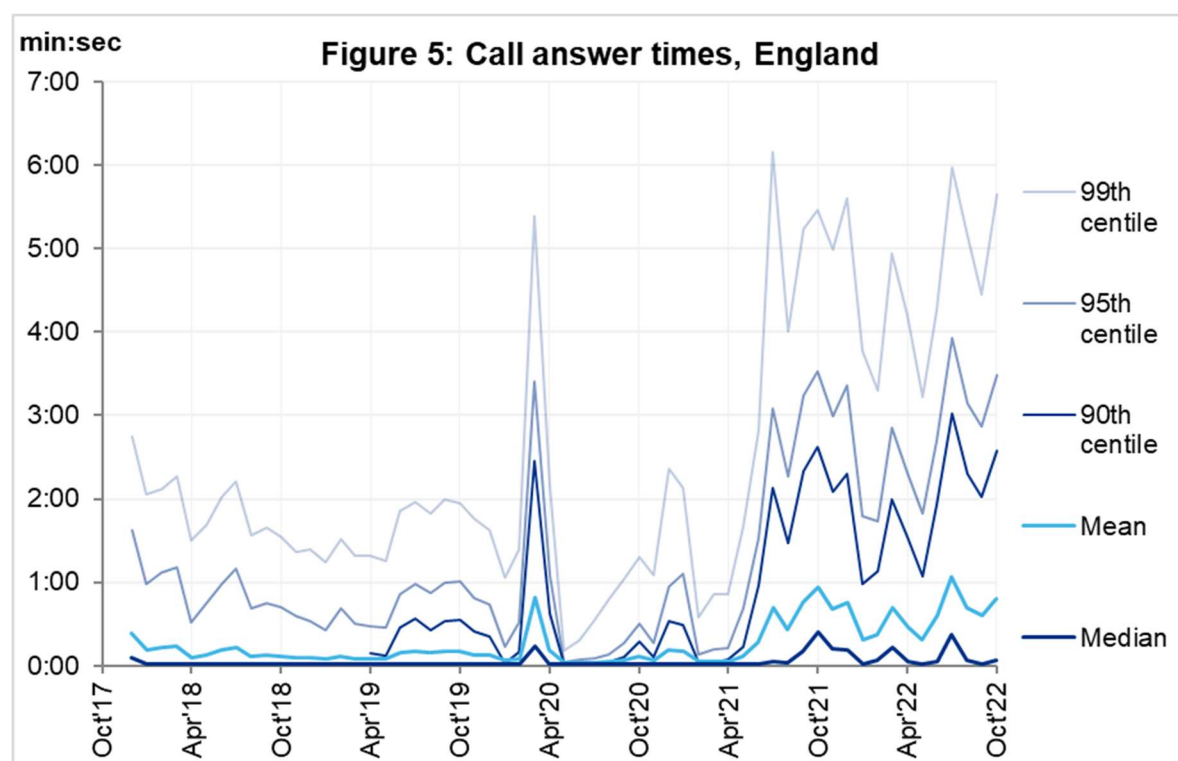
In October 2022, 991,682 calls to 999 were answered in England, or 31,990 per day, which was more than in all previous months except for July and October 2021.

The numbers of incidents per day (21,820) and incidents with conveyance to ED per day (11,104) in October 2022 were fewer than in all months from June 2020 to July 2022 inclusive.

Figure 6: Calls, incidents, convey to ED, England, per day

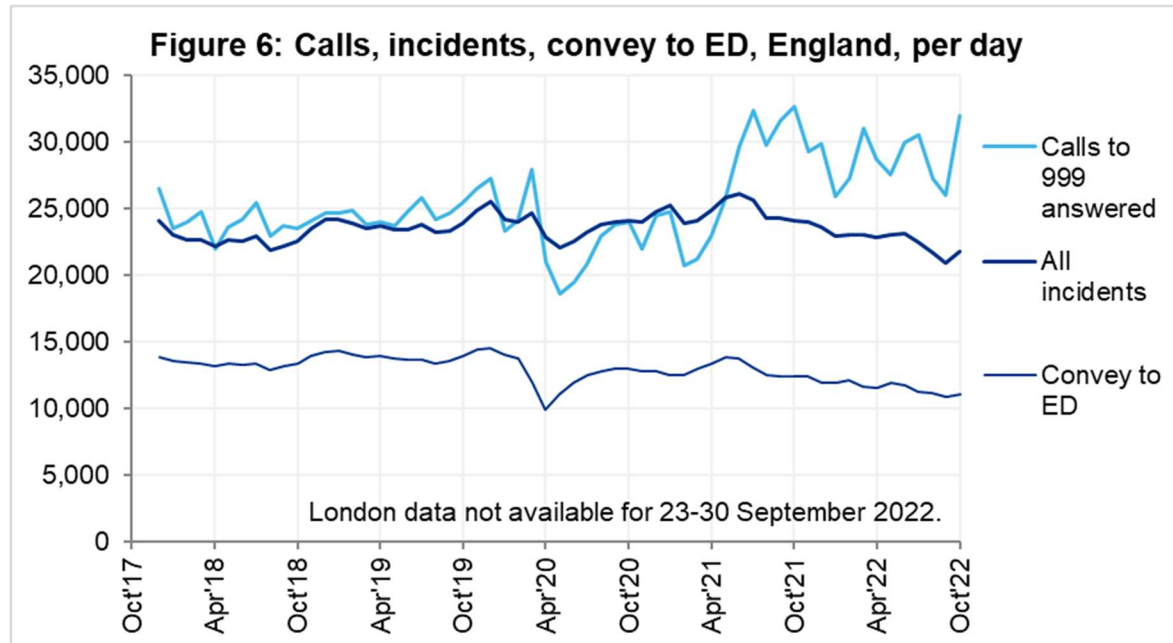London data not available for 23-30 September 2022.

Figure 7 shows that in October 2022, 12% of incidents were resolved on the telephone (Hear & Treat) and 33% were resolved on the scene (See & Treat), leaving 51% of incidents with conveyance to ED and 5% with conveyance to non-ED.

For 2022-23 so far (April to October), these proportions are the same, except for See & Treat which was 32%.

Figure 7: Hear, See, Treat, Convey
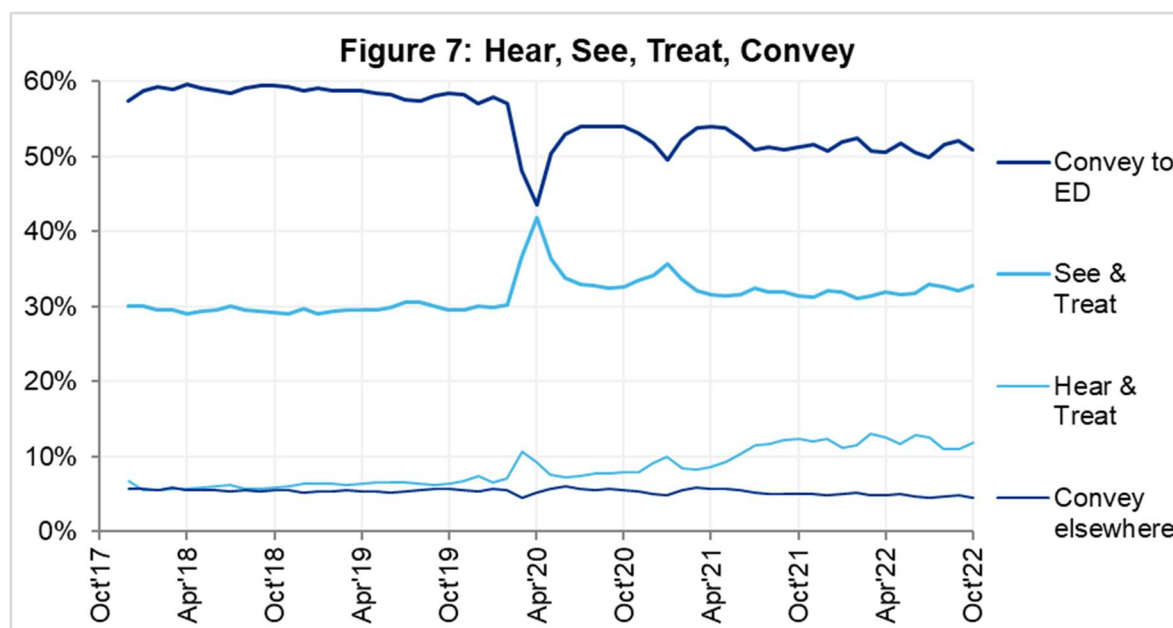
2. Ambulance Clinical Outcomes (AmbCO)

In recent Statistical Notes, we have summarised data for STEMI (a type of heart attack) and cardiac arrest when we publish January, April, July, or October data; stroke data in the following month; and sepsis data in the month after that. However, this is the last month in which we collect and publish the sepsis indicators, which we plan to replace in 2023 with indicators on ambulance incidents involving patients who have fallen and are unable to get up.

2.1 Stroke data

Sepsis is a time-critical condition. Early recognition and management of sepsis in the pre-hospital setting can reduce mortality and improve the health and well-being of patients. Making a diagnosis quickly and ensuring early transport of a patient to an appropriate Emergency Department capable of providing further tests, treatment, and care (including appropriate antibiotics for those who are eligible) represents a standard of ambulance care.

In June 2022, of patients with suspected sepsis and a NEWS2 (National Early Warning Score 2) of 7 or more, the proportion who received the sepsis care bundle was 84% (Figure 8), practically the same as the average for 2021-22.

The revised data we published on 13 October means that the proportion for December 2021 was 87%, not 86% as originally published.

Figure 7: Proportion receiving sepsis care bundle
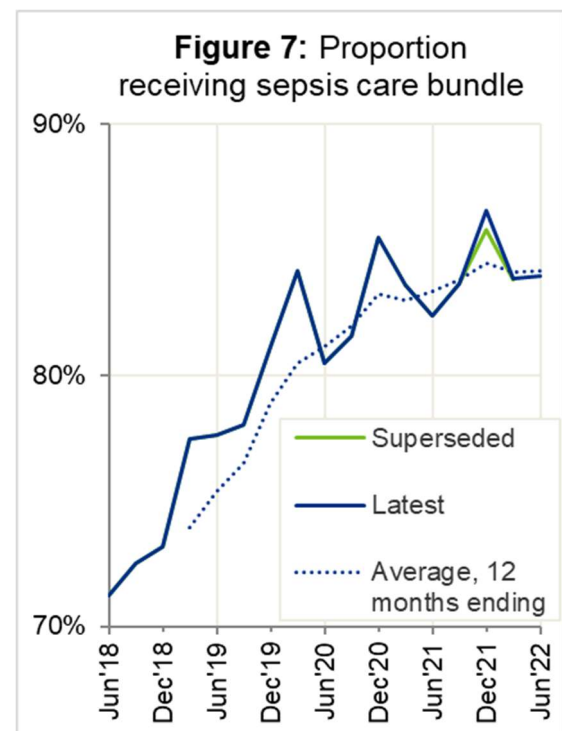
3. Further information on AQI

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   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 the call indicators, A1 to A6 and A114.

3.3   Related statistics

NHSEI publishes ambulance handover delays at Emergency Departments of over 30 minutes during winter 2012-13 to 2014-15 and winter 2017-18 to 2021-22 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://easc.nhs.wales/asi
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

3.4   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: 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 (NHSEI); england.nhsdata@nhs.net; 0113 825 4606.

3.6 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.