Statistical Note: Ambulance Quality Indicators (AQI)

In England, as the COVID-19 pandemic continued in November 2020, the number of ambulance calls, and incidents, decreased per day for the first time in six months. In all categories, response times also decreased, also for the first time in six months.

The latest (July 2020) proportion of patients given the appropriate care bundle by Ambulance Services after a particular kind of heart attack is the same as the average proportion for 2019-20.

1. Systems Indicators

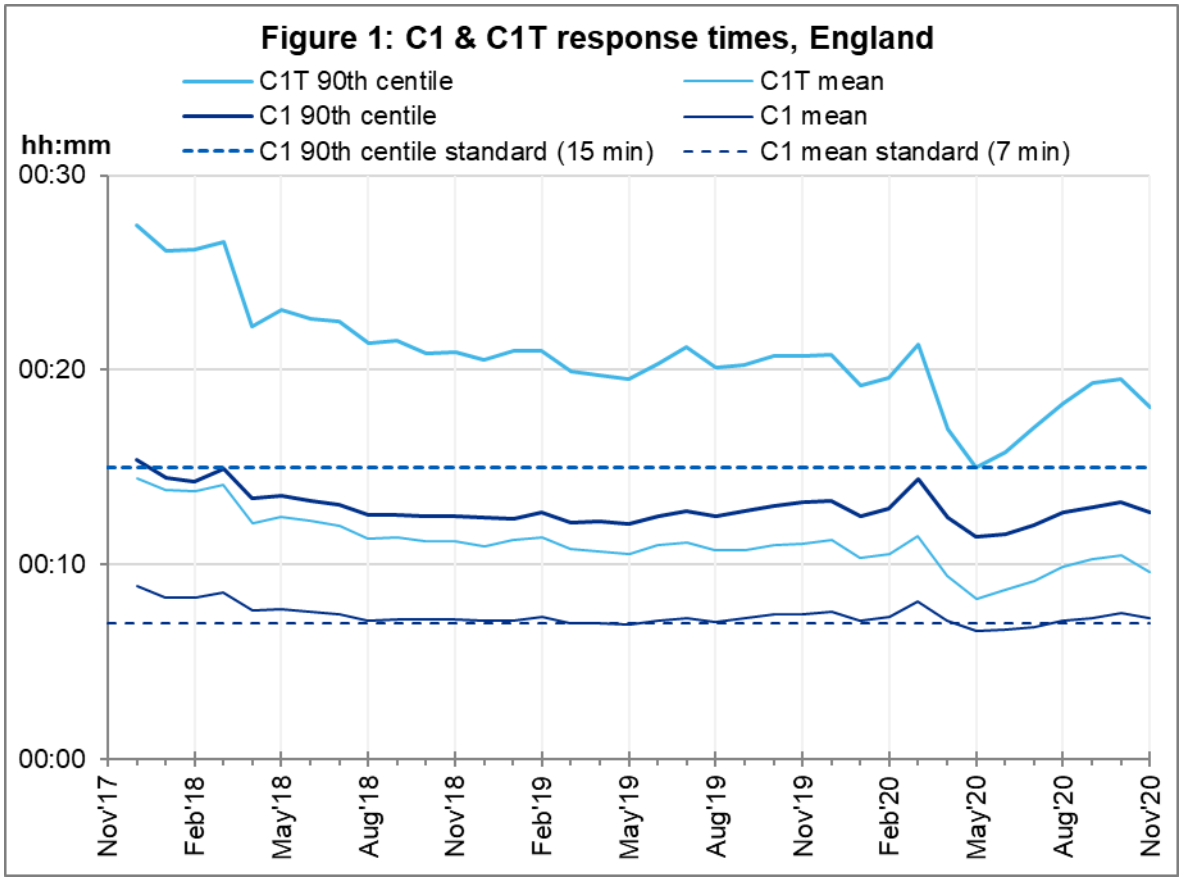
1.1 Response times

In November 2020, the mean average C1 response time England was 7 minutes 14 seconds, so the 7-minute standard was not met; but the C1 90th centile response times averaged 12:42 across England, so the 15-minute standard was met. [1]

For C1T (response times for arrival of transporting vehicle, for C1 patients transported), the mean was 9:36, and the 90th centiles averaged 18:04.

All four of these measures have decreased from the previous month (October 2020).

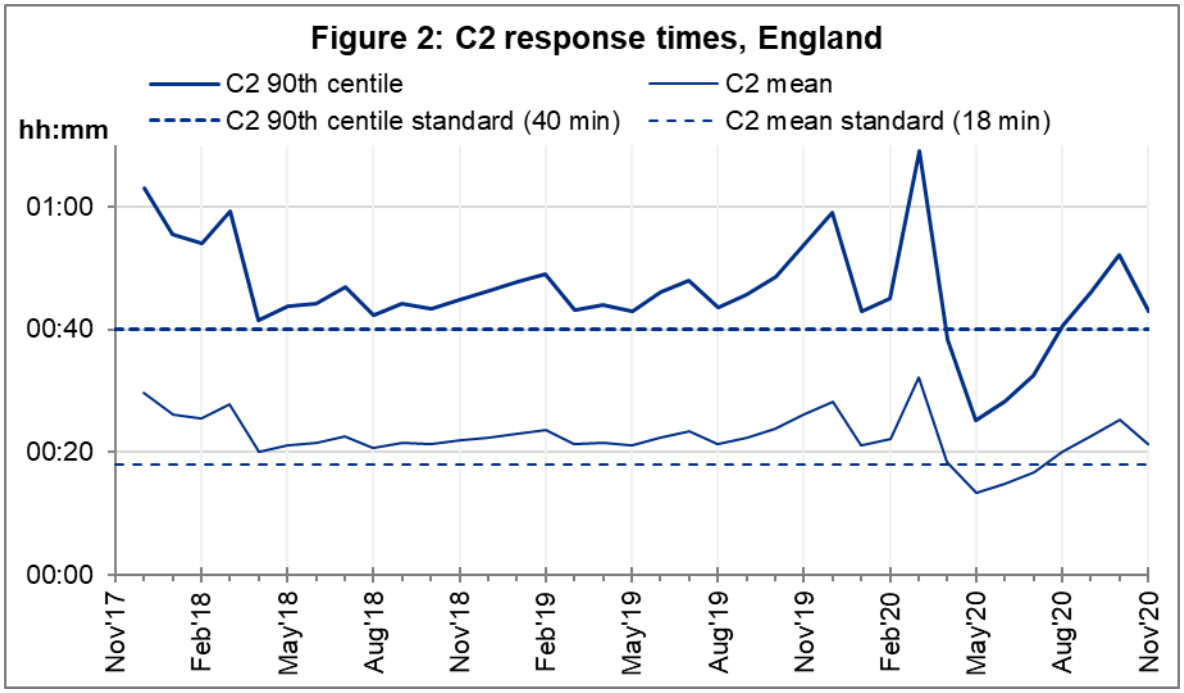
Figure 1: C1 & C1T response times, England



[1] Standards for Ambulance Services: www.gov.uk/government/publications/supplements-to-the-nhs-constitution-for-england/the-handbook-to-the-nhs-constitution-for-england

For C2 in November 2020, the mean average response time was 21:16 for England, and the 90th centiles averaged 42:50 across England (Figure 2).

Figure 2: C2 response times, England

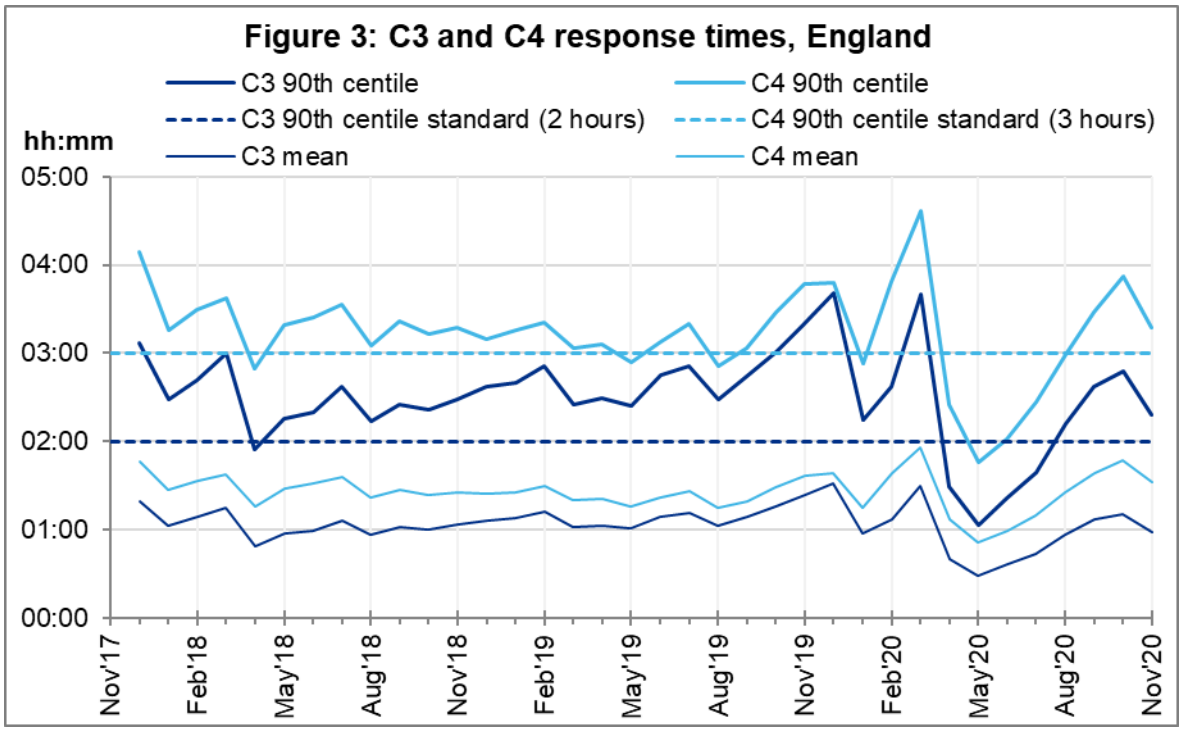


For C3 in November, the mean average response time was 58:31. The C3 90th centile times averaged 2:18:33, so the two-hour standard was not met (Figure 3).

For C4 in November, the mean average response time was 1:32:40. The C4 90th centile times averaged 3:17:09, so the three-hour standard was not met (Figure 3).

In all four categories, response times in November 2020 were longer than in April-August 2020, but shorter than in September and October 2020.

Figure 3: C3 and C4 response times, England



1.2 Other Systems Indicators

The 95th and 99th centile call answer times across England averaged 16 and 65 seconds respectively in November 2020, decreasing for the first time since April 2020 and remaining less than the averages for 2018-19 and 2019-20.

In November 2020, per day, there were (Figure 4):

- 21.9 thousand calls to 999 answered, 8.4% less than in October;
- 24.0 thousand incidents that received a response (whether on the telephone or on the scene) from an ambulance service, 0.1% less than in October;
- 12.8 thousand incidents where a patient was transported to an Emergency Department (ED), 1.4% less than in October.

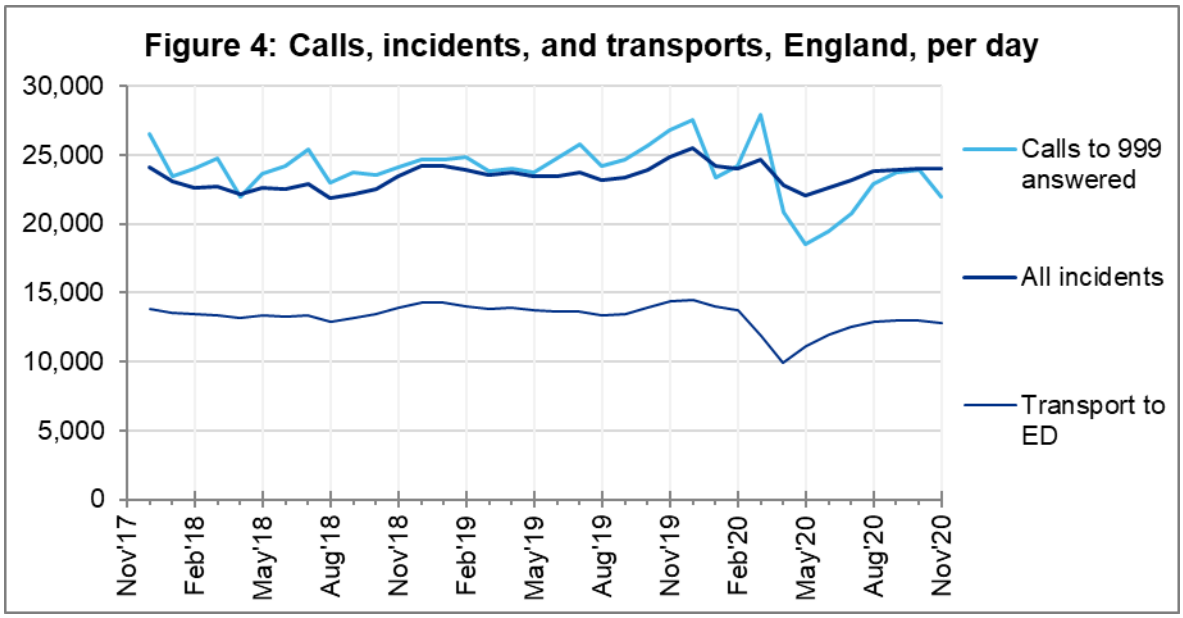
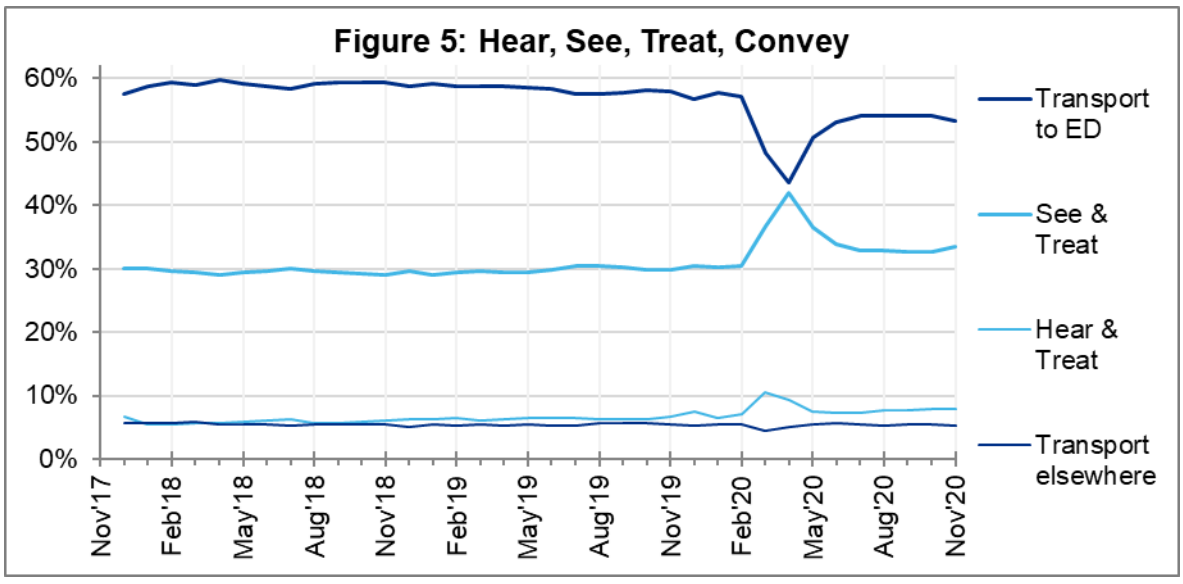


Figure 5 shows that in November 2020, 7.9% of incidents were resolved on the telephone (Hear & Treat), 33.5% were closed at the scene (See & Treat), 53.3% featured transport to ED, and 5.3% featured transport to non-ED. All these proportions changed by less than one percentage point from October.



2. Ambulance Clinical Outcomes (AmbCO)

As announced at www.england.nhs.uk/statistics/covid-19-and-the-production-of-statistics and in our previous Statistical Notes, we did not collect AmbCO data for our May, June, or July 2020 publications. Our next three publications contained data for December 2019, January 2020, and February 2020 respectively. We then returned to the original schedule with June 2020 data in last month's publication, July 2020 data today, and August 2020 data in our next publication on 14 January 2021, when we will also complete the time series, by publishing data for March to May 2020.

We continue to publish bundle data according to the following timetable:

- Jan, Apr, Jul, Oct data include care bundles for return of spontaneous circulation (ROSC) after cardiac arrest; and for ST-elevation myocardial infarction (STEMI, a type of heart attack);
- Feb, May, Aug, Nov data include diagnostic bundle for stroke;
- Mar, Jun, Sep, Dec data include care bundle for sepsis incidents.

The latest AmbCO data in today's publication is for July 2020, so today we describe data for cardiac arrest and STEMI.

Also, today we publish revisions from November 2018 to February 2020 inclusive.

For stroke data, revisions affect all months July 2019 to February 2020 inclusive. For sepsis data, the only revisions are for London (LAS) and North West (NWAS) Ambulance Services for September and December 2019. We will add more detail on stroke and sepsis data in our 14 January and 11 February Statistical Notes.

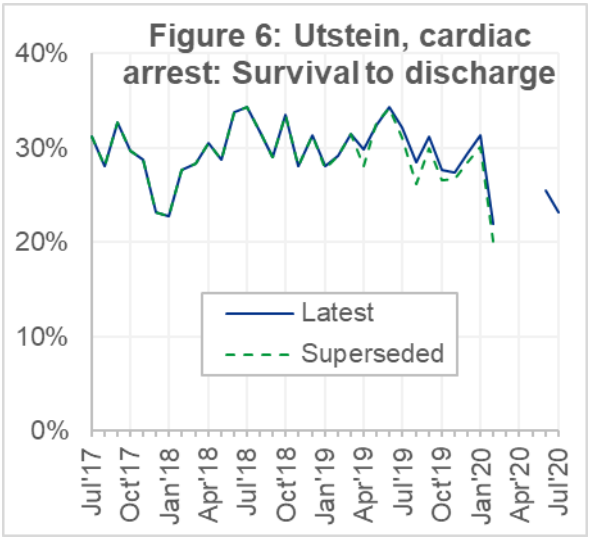
2.1 Cardiac arrest

Item R0n is the count of all cardiac arrest incidents, including where resuscitation was not worthwhile. This item has the largest revisions, mainly for West Midlands (WMAS), but also for NWAS, South East Coast (SECAmb) and Yorkshire (YAS).

At England level, for all cardiac arrest incidents, revisions to monthly ROSC and survival to discharge from hospital rates were all less than one percentage point.

A minority of cardiac arrests meet the Utstein criteria, one of which is witness by a bystander. Because there are fewer of these, the ROSC and survival rates are more volatile. For these, the largest change at England level was to the August 2019 survival rate (Figure 6), revised from 26.2% to 28.5%.

The latest (July 2020) Utstein survival to discharge proportion is 23.1%.



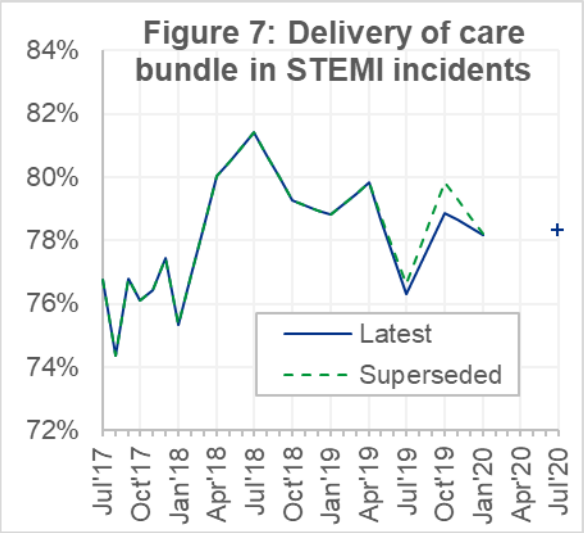
For delivery of the appropriate care bundle after ROSC, the largest change at England level was for July 2019, revised from 69.9% to 70.3%. The latest proportion for delivery of this care bundle is 73.8% for July 2020.

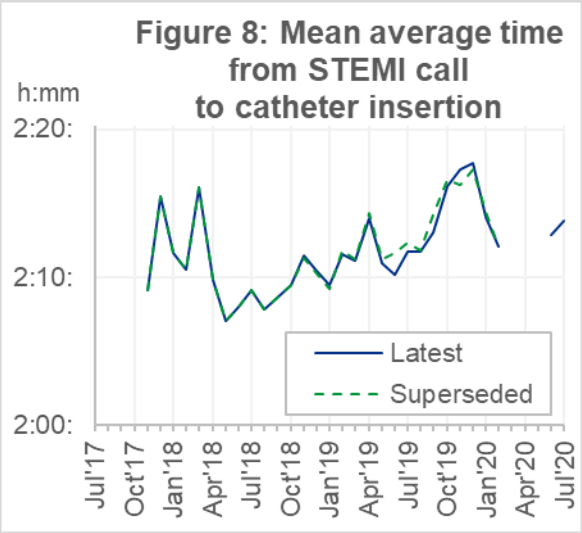
2.2 STEMI

For delivery of care bundle to STEMI patients, the largest revision was for October 2019, from 79.8% to 78.9%. The latest proportion for delivery of this care bundle, for July 2020, is 78.3% (Figure 7), the same as the (revised) average for 2019-20.

For the time from a STEMI ambulance call until the patient has a catheter inserted in hospital, the latest mean average time for England in July 2020 is 2 hours 13 minutes (Figure 8), and the latest 90th centile is 3 hours 5 minutes.

Revisions to the monthly England times from STEMI ambulance call to catheter insertion in hospital are all two minutes or less, both for mean averages (Figure 8) and 90th centiles. Revisions to the counts of such patients, however, exceed +100 for each of July to November 2019.





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 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.

3.3 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

3.4 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.

4. Correction

This version of this document was published on 14 January 2021, to replace the original from 10 December 2020. It contains corrections to typographical errors on page 2, and to the rounding of the figures in the bullets on page 3.