National Audit Office

Report
by the Comptroller
and Auditor General

NHS England

NHS Ambulance Services

Key facts

£1.78bn

the cost of urgent and emergency ambulance services provided by NHS ambulance trusts in England, in 2015-16

10.7m

calls and NHS 111 transfers to the ambulance service in England, in 2015-16

6.6m

incidents resulting in a face-to-face attendance by the ambulance service in England, in 2015-16

72.5%	of the most serious (Red 1) calls responded to within 8 minutes in 2015-16, against a target of 75%
10.4 percentage points	difference between the proportion of Red 1 calls responded to within 8 minutes, at the best- and worst-performing trusts in England in 2015-16
5.2%	average annual growth rate in demand (calls and NHS 111 transfers) for ambulance services since 2011-12
500,000	ambulance hours lost due to delayed transfers of care at hospitals in 2015-16
52%	of patients taken by ambulance to hospital who were then admitted in 2015-16, compared with 48% in 2007-08
4% to 46%	variation in the percentage of incidents in which an ambulance was deployed and later stood down, across trusts in 2015-16

Summary

1   In England, 10 regionally based ambulance trusts provide urgent and emergency healthcare, with separate arrangements for the Isle of Wight. Trusts may also provide a range of other services, such as patient transport and NHS 111. In 2015-16, these services cost about £2.2 billion, of which £1.78 billion was for urgent and emergency services. In 2015-16, the ambulance service received 9.4 million urgent or emergency calls and 1.3 million transfers from NHS 111, which together resulted in 6.6 million face-to-face attendances.
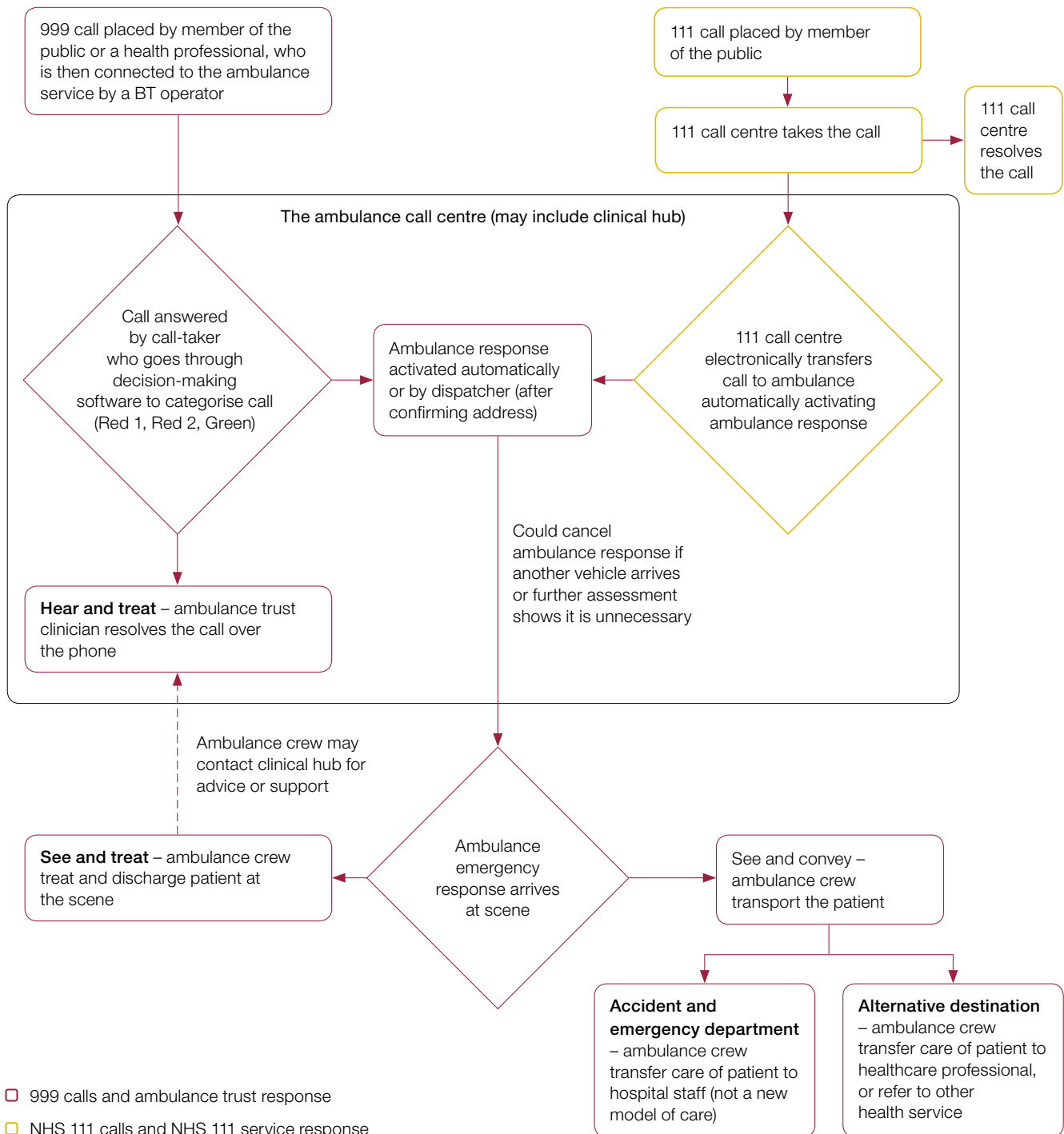
2   Since April 2011, performance of all ambulance trusts in England has been measured against 11 ambulance quality indicators, with seven ambulance systems indicators (such as response times) and four clinical outcome indicators (broken down into eight measures). Since July 2012, ambulance responses have been split into the following categories:

- Red calls – where the patient's condition is considered to be life-threatening. Red 1 calls are the most time-critical, and cover cardiac arrest patients who are not breathing and do not have a pulse, and other severe conditions such as airway obstruction. Red 2 calls are serious but less immediately time-critical, and cover conditions such as stroke and heart attack. For Red 1 and Red 2 calls, the ambulance service has a target of an emergency response arriving at the scene within 8 minutes in 75% of cases. If onward transport is required, a vehicle capable of conveying the patient should arrive at the scene within 19 minutes in 95% of cases.

- Green calls – where the patient's condition is considered not to be life-threatening. Ambulance trusts split these calls into different categories depending on the seriousness of the condition. Locally agreed targets are in place for these calls.

3   In 2013, NHS England launched the Urgent and Emergency Care Review. This ongoing review aims to address concerns that accident and emergency departments and ambulance services are under intense, growing and unsustainable pressure. It has set out NHS England's ambition for urgent and emergency care to be provided as 'close to home' as possible. The ambulance service has a pivotal role to play in the performance of the entire urgent and emergency care system, as a conduit to other services and helping patients access the facilities they need close to their home. For ambulances, this means utilising new models of care rather than taking patients to hospital. The new models of care are: resolving calls over the phone by providing advice to callers (known as 'hear and treat'); treating patients at the scene (known as 'see and treat'); and taking patients to non-hospital destinations (**Figure 1** overleaf). Our previous report on ambulance services, published in 2011, highlighted the potential financial benefits to both ambulance trusts and the wider NHS of increasing the use of new models of care.[1]

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1   Comptroller and Auditor General, *Transforming NHS ambulance services*, Session 2010–2012, HC 1086, National Audit Office, June 2011.

Figure 1

Stages of an ambulance response, including NHS 111 activity

999 call placed by member of the public or a health professional, who is then connected to the ambulance service by a BT operator

111 call placed by member of the public

111 call centre takes the call

111 call centre resolves the call

The ambulance call centre (may include clinical hub)

Call answered by call-taker who goes through decision-making software to categorise call (Red 1, Red 2, Green)

Ambulance response activated automatically or by dispatcher (after confirming address)

111 call centre electronically transfers call to ambulance automatically activating ambulance response

Could cancel ambulance response if another vehicle arrives or further assessment shows it is unnecessary

Hear and treat – ambulance trust clinician resolves the call over the phone

Ambulance crew may contact clinical hub for advice or support

See and treat – ambulance crew treat and discharge patient at the scene

Ambulance emergency response arrives at scene

See and convey – ambulance crew transport the patient

Accident and emergency department – ambulance crew transfer care of patient to hospital staff (not a new model of care)

Alternative destination – ambulance crew transfer care of patient to healthcare professional, or refer to other health service

☐ 999 calls and ambulance trust response

☐ NHS 111 calls and NHS 111 service response

Note

1   111 is the NHS non-emergency number.

Source: National Audit Office data

4   Our report provides an update on our 2011 report, *Transforming NHS ambulance services*. In particular, it examines:

●   the challenges facing the ambulance service in England (Part One);

●   the performance of the ambulance service since we last reported (Part Two); and

●   the extent to which the ambulance service is maximising its impact and supporting the challenges facing the wider health system (Part Three).

5   This report does not cover non-urgent patient transport services (for example, transport to outpatient appointments), NHS 111 services (apart from their impact on urgent and emergency ambulance services), air ambulance services or ambulance services in the Isle of Wight (unless stated). The Committee of Public Accounts took evidence on our previous report in 2011. We assess progress against the Committee's recommendations in Appendix One. We set out our audit approach in Appendix Two and our evidence base in Appendix Three.

Key findings

6   **Demand for ambulance services continues to grow rapidly.** Between 2009-10 and 2015-16, the number of ambulance calls and NHS 111 transfers increased from 7.9 million to 10.7 million, an average year-on-year increase of 5.2%. Contributing factors to this rising demand may include: increasing numbers of elderly patients with multiple conditions; an increasing number of alcohol- and mental health-driven issues; the availability of primary care services in the community and how patients seek help. However, there is limited evidence of what works in managing these demand factors (paragraphs 1.10 and 1.11).

7   **Increased funding for urgent and emergency activity has not matched rising demand, and future settlements are likely to be tougher.** Between 2011-12 and 2015-16, income for ambulance trusts' urgent and emergency care activity increased by 16% from £1.53 billion to £1.78 billion. Over this period, activity (ambulance calls and NHS 111 transfers) rose by 30%. Commissioners have warned that, given current financial challenges in the wider health service, future funding settlements are likely to be tighter (paragraph 1.12).

8   **Ambulance trusts face resourcing challenges that are limiting their ability to meet rising demand.** Most trusts are struggling to recruit the staff they need and then retain them. The reasons people cite for leaving are varied and include pay and reward, and the stressful nature of the job. In 2015, ambulance trusts had a paramedic vacancy rate of 10%. Health Education England has set up a programme to train more paramedics and to upskill current ambulance staff but trusts and other stakeholders are concerned that this will not be enough to meet rising demand and fully implement new models of care (paragraphs 1.17 to 1.19).

9 **In 2015-16, approximately 500,000 ambulance hours were lost due to turnaround at accident and emergency departments taking more than 30 minutes, which equates to 41,000 12-hour ambulance shifts.** Transferring the care of a patient from an ambulance to an accident and emergency department is expected to take no longer than 15 minutes, with a further 15 minutes for ambulance crews to make their vehicle ready for the next call. Each failure to meet this standard results in a poor experience for the patient and a delay in an ambulance crew being available for a new emergency call. Since our previous report, the percentage of transfers meeting this expectation has decreased. In 2015-16, only 58% of hospital transfers met the 15-minute expectation and only 65% of ambulance crews were then ready for another call within 15 minutes, with wide variation across ambulance trusts and, more significantly, across individual hospitals (paragraphs 1.22 to 1.24).

10 **Ambulance trusts have made progress in delivering new models of care but barriers are hindering wider adoption.** Internal barriers include having enough paramedics to fully implement the new models, and external barriers include the availability of other local services to which patients can be directed or conveyed. In 2015-16, 10% of calls were resolved over the telephone and 38% of face-to-face incidents were resolved without the need to transport to hospital, compared with 5% and 34% respectively in 2011-12. Progress would be greater, however, if the barriers were removed. In 2015-16, treating more patients using new models avoided potential costs to ambulance trusts of around £74 million, and avoided the costs to hospitals associated with attendances at accident and emergency departments of around £63 million, compared with the costs of how these calls would have been handled in 2011-12 (paragraphs 2.2, 2.3, 3.4, 3.6 and 3.8).

11 **Ambulance trusts are struggling to meet response time targets although clinical outcomes for some patients are improving.** Performance against the response time targets is getting worse. In 2015-16, only one trust (West Midlands) met the three targets (**Figure 2**). Nationally, outcomes for patients have improved for five of the eight outcomes measured (for example, the percentage of cardiac arrest patients who had a return of spontaneous circulation on arrival at hospital following treatment from the ambulance service). However, outcomes performance cannot be compared across trusts because data are not collected consistently (paragraphs 2.7, 2.8 and 2.10).

12 **Important factors other than response times require attention when managing ambulance service performance.** The Department of Health introduced a range of indicators designed to encourage a broader, outcome-led performance regime in 2011. However, there is general consensus that commissioners, regulators and providers still place too much focus on meeting response times. The majority of patients currently coded as Red 2 do not derive clinical benefit from the arrival of an ambulance resource within 8 minutes. Despite this, the Red 2 target has led to a range of operational behaviours that undermine the efficiency of the ambulance service, such as dispatching resources before it has been determined what the problem is, and whether an ambulance is required; and dispatching multiple ambulance vehicles to the same patient and then standing down the vehicles least likely to arrive first. NHS England has established the Ambulance Response Programme, which aims to address some of these issues (paragraphs 3.4 and 3.5).

Figure 2
Ambulance trusts achieving response time targets

The number of trusts achieving the targets has fallen since 2012-13

Response time targets	2012-13	2013-14	2014-15	2015-16
Red 1 calls: an emergency response arriving at the scene within 8 minutes in 75% of cases	5	7	4	1
Red 2 calls: an emergency response arriving at the scene within 8 minutes in 75% of cases	9	6	0	1
Red 1 and 2 calls: where onward transport is required, a vehicle capable of conveying the patient arriving at the scene within 19 minutes in 95% of cases	8	8	4	1

Note
1 Data for 2012-13 are from June 2012 to March 2013.

Source: National Audit Office analysis of NHS England and NHS Digital data

13 The use of different operating frameworks across ambulance trusts is contributing to variations in performance. NHS England has put in place an urgent and emergency care strategy that aims to integrate all urgent and emergency care services and provide care closer to home. The extent to which ambulance trusts have taken up this strategy varies across trusts. Each trust has developed its own operating framework which is contributing to variations and inefficiencies in performance. Key operating framework variables include workforce mix, fleet mix and estate. For example, in 2015-16, the proportion of incidents where one or more vehicles were stood down after mobilisation varied from 4% to 46%; the cost per call (the total urgent and emergency care income divided by the number of calls received) varied from £139 to £272; and the proportion of calls handled over the phone varied from 5% to 15%. In addition, ambulance services are not commissioned consistently across England, with differences in how they are funded and what they are funded for. Many of the factors contributing to these variations are within the control of ambulance trusts or the wider health system (paragraphs 1.6, 1.15, 2.6, 3.2 to 3.6 and 3.12).

14 Ambulance trusts are working within an increasingly complex health system. The 10 ambulance trusts are finding it challenging to engage with the wider health sector due to the growing number of stakeholders that trusts are required to work with. The wider system does not always make good use of the ambulance services' experience or recognise the impact that changes to other local services have on ambulance services. NHS England has produced guidance to support the development of local Sustainability and Transformation Plans. These plans set out how local services will change and improve over the next five years, to meet rising demand within the resources available. However, it remains unclear how NHS England's aim for integrated urgent and emergency care systems will be achieved through these plans. Ambulance trusts are collaborating with each other and with the wider urgent and emergency care system to improve services and make efficiency savings, but collaboration is generally piecemeal. Collaboration between emergency services is taking place locally, but currently there is no national-level monitoring and evaluation of which initiatives could be successfully transferred to other locations is limited (paragraphs 3.11 to 3.15 and 3.18 to 3.20).

Conclusion on value for money

15 Ambulance services are finding it increasingly difficult to cope with rising demand for urgent and emergency services. Introducing new models of care has helped but there are signs of stress, including worsening performance against response time targets. We have also seen limited improvement since our last report with continuing variations in operational and financial performance. Ambulance services are facing significant challenges and it does not help that most are struggling to recruit the staff they need and then retain them.

16 Ambulance services are a vital part of the health service but much of their ability to work better depends on other parts of the health system. Until clinical commissioning groups see ambulance services as an integral part of that system it is difficult to see how they will become sustainable and secure consistent value for money across the country. Introducing a standard operating framework and consistent commissioning arrangements may help but our work raises serious questions about the place of ambulance services in the health system and their ability to operate effectively.

Recommendations

a **NHS England, NHS Improvement and ambulance trusts in England should work together to define the optimal operating framework for an ambulance trust, allowing some flexibility to tailor responses in urban and rural areas.** This should include identifying the optimal rate for new models of care. Once the framework is developed, NHS Improvement should require ambulance trusts to justify variations from it if their performance and management of costs fall below acceptable levels. Ambulance commissioners should take a consistent approach to commissioning ambulance services, based on the framework. As part of a standard operating framework, trusts should develop and report consistent metrics on efficiency, including staff utilisation.

b   In updating how ambulance trust performance is measured, NHS England and NHS Digital should consider how performance for all patients can be made transparent. For example by:

- more closely defining key metrics, such as clinical outcomes and resolving calls over the phone, in order to improve comparisons and to enable these metrics to be used to improve services;

- publishing performance for Green calls as well as Red calls; and

- introducing a requirement for trusts to report and publish 'tail breaches' – incidents where an ambulance fails to reach a patient for a length of time well in excess of the target.

c   In order to tackle rising delays in transfers of patient care at hospital:

- **NHS Improvement should publish transfer times for all ambulance trusts and hospitals.** These should include the number and proportion of incidents not meeting the 15-minute targets, and the total hours lost due to both hospital transfer and post-transfer preparation of ambulances.

- **NHS England and clinical commissioning groups should work together to adopt a nationally consistent approach to incentivising acute hospital trusts to reduce turnaround delays at hospitals.**

d   **NHS England and NHS Improvement should ensure that clinical commissioning groups assess and understand what is preventing ambulance trusts from maximising new models of care** (such as availability of other local services to which patients can be directed or conveyed) and address barriers across their local area through contractual levers and planning guidance. Clinical commissioning groups should also ensure that engagement with ambulance services takes place on all changes to local health service provision so that any negative impact or conflicting demands can be assessed and mitigated.

e   **NHS England should clarify how its national strategy, set out in the Urgent and Emergency Care Review, will be achieved through local Sustainability and Transformation Plans.**