NHS Improvement

National ambulance vehicle specification for English NHS ambulance trusts: consultation response

March 2019

We support providers to give patients safe, high quality, compassionate care within local health systems that are financially sustainable.

Contents

Introduction

Purpose

1. This document summarises the feedback NHS Improvement received in response to the consultation on the national ambulance vehicle specification for English NHS ambulance trusts and, after considering this, how we have revised the specification.

2. The specification will be mandated through the NHS Standard Contract for ambulance services from 2019/20.

Context

3. Lord Carter's 2018 review, *Operational productivity and performance in English NHS ambulance trusts: unwarranted variations*, found significant unwarranted variation in the national ambulance fleet and a lack of innovation at scale.

4. His review concluded that the sector could benefit significantly from adopting a standard vehicle specification and procuring vehicles through a single channel. These actions would drive innovation on a national scale in partnership across the sector, and with suppliers and other expert groups.

5. Between 14 December 2018 and 1 February 2019 the high-level standard emergency double-crewed ambulance (DCA) specification to be adopted by all English NHS ambulance trusts was subject to public consultation.

6. We received 390 responses:

Ambulance trust	Members of the public	National bodies	Potential suppliers	Other	Total
357	10	6	6	11	390

7. We would like to thank everyone who responded.

Outcome

8. After considering the consultation feedback, the proposed specification has been revised as follows:

   - Requirements have been added to the base vehicle specification, including side air bags, and a minimum and maximum range is now given for relevant areas. This is to foster competition in the market.
   - Vehicles must be latex free.
   - Specific reference is made to the requirement for either a self-loading stretcher, a patient-loading ramp and associated winch, or a tail lift system.

9. After considering the consultation feedback and revised specification, alongside the wider deliverables of the programme of work and the national strategic benefit they will deliver, NHS Improvement's Executive Director of Operational Productivity approved the specification.

10. From 1 April 2019, all English NHS ambulance trusts will be required to comply with the national ambulance vehicle specification for all new orders of standard emergency DCAs, unless in advance they have written confirmation from NHS Improvement and NHS England that the specification need not apply for a specific order. Factors that we would consider in deciding whether to approve a derogation from the national specification include, but are not limited to, prior contractual commitments and proposals to purchase vehicles in order to pilot, test and evidence innovation that is not provided for by the standard specification. All such requests will be considered on a case by case basis.

11. Some responses included recommendations for innovation over the medium to longer term across each of the areas of feedback. We will consider respondents' recommendations for future development of the national ambulance vehicle specification in later iterations of the specification. As the ability to innovate is a key driver of national standardisation, the specification will be reviewed at regular intervals.

Consultation feedback and response

Approach

1. As the consultation relied heavily on qualitative feedback, we have identified the common themes emerging for each area, and present these alongside our considered response.

2. An understanding of the sector position regarding DCA types is needed to consider the feedback and associated responses. From the November 2017 data collection that informed Lord Carter's review, the number and proportion of box and van DCAs as well as of trusts which operate predominantly with each of these vehicle types are:

	Trusts		Vehicles	
	Number	%	Number	%
Box type	6	60%	2,067	64%
Van type	4	40%	1,178	36%
Total	**10**	**100%**	**3,245**	**100%**

3. Note that the specification does not refer to any make or model of base vehicle. In fact, while there are two main suppliers, the specification and associated national procurement is designed to open up the market and to stimulate competition.

4. In the consultation feedback one or other of the current suppliers was commonly referred to as a proxy for the type of vehicle it supplies. The nature of this feedback was considered in so far as it was relevant to the specification, e.g. the available space in a van compared to a box. However, as we do not presume or predetermine which supplier(s) will be successful post tender, views on the merits of individual suppliers that did not relate to the specification were not considered.

5. One respondent submitted additional analysis for consideration by NHS Improvement, predominantly related to Lord Carter's 2018 review. The analysis was reviewed as part of considering responses to the consultation.

Patient welfare

6. The consultation sought feedback on whether the specification provides a safe and effective environment for patients to receive the best care possible.

7. Themes in the feedback were:

   - insufficient space in a van conversion
   - ability to provide care to all patient cohorts and the ability of patients to access the vehicle without impacting their independence.

8. The most common concern – by a considerable margin – was the smaller clinical space in a van-based DCA than a box-based DCA, and particularly whether this compromises the provision of 360-degree care to a patient or patient management by a multidisciplinary team, as well as the restrictive nature of the space.

9. Providing enough space to give a patient the best care possible while having the range of equipment in close proximity on a vehicle that is not so large as to make it difficult to negotiate gridlocked traffic or country roads is a challenge. As shown above, in 2017 four of the 10 English NHS ambulance trusts are predominantly van based and 36% of all DCAs are van conversions. Another trust moved from box to van conversions for its 2018/19 investment round.

10. A review of clinical quality indicators for 2017/18 suggests that quality of care is broadly similar between trusts that are predominantly van based and box based:

	Van based	Box based
Return of spontaneous circulation	29.2%	29.6%
Cardiac arrest survival to discharge	9.0%	9.6%
ST-elevation myocardial infarction care bundle	78.6%	77.3%

Stroke diagnostic care bundle	96.4%	97.3%

11. In addition, a review of patient safety incidents reported to the National Reporting and Learning System in 2018 found that predominantly box-based trusts reported almost twice as many incidents as predominantly van-based trusts:

	Van based	Box based
Patient safety incidents per 1,000 incidents	1.2	2.3

12. Many respondents referred positively to the van-based DCA, stating that its overall functionality enabled them to provide high quality care.

13. In addition to feedback on space, especially in relation to seriously ill patients, respondents raised concerns about the ability to transport patients in wheelchairs or for frail, elderly or reduced mobility patients to access the vehicle without assistance. These concerns related to both box and van-based vehicles and will be considered in future design developments.

Usability

14. The consultation sought feedback on whether the specification provides cab and patient areas that are easy for ambulance crews to use.

15. Themes in the feedback were:

- insufficient space, including for personal belongings
- the benefits of an automatic gearbox.

16. The challenge of providing adequate clinical space is considered above.

17. Many respondents referred to the need for adequate space to keep personal belongings, such as food, and personal protective equipment (PPE). While the cab area will be part of the base vehicle design, the specification does include a floor-mounted console for storage between the driver and passenger seats.

In terms of PPE, Crews in the predominantly van-based trusts will be carrying PPE, suggesting adequate space for this is available.

18. Several respondents referred to the need for an automatic gearbox. While most of these came from one trust, this was not a single-trust theme. The specification provides scope for the type of gearbox to be determined at trust level.

Design

19. The consultation sought feedback on whether the specification allows trusts to design the patient area in the way that works best for them and their staff, and supports delivery of the best care possible. Specific reference was made to features such as layout, working space and position, infection prevention and control (IPC), cabinetry, seating and stretcher provision, and reachability of equipment.

20. Themes in the feedback were:

    - ergonomics, including space, equipment storage and general layout
    - stretcher position and patient access/loading
    - clear focus on IPC.

21. The challenge of providing adequate space is considered above. Responses about other ergonomic factors were variable, but allowing individual trusts to tailor the detailed design to the particular equipment they carry and their clinical practices was consistently endorsed. Reference was made to the need to standardise clinical practices and equipment to achieve a fully standardised, detailed DCA specification.

22. Opinions conflicted on whether a ramp and winch system or a tail lift or a self-loading stretcher gave best patient access/loading, as well on having a side step. The specification has been revised to allow trusts to choose their access system and whether or not to have a side step.

23. Many respondents recognised the specification's focus on IPC. In response to feedback, the specification now requires a latex-free environment, amended from the previous best endeavours approach.

Staff welfare

24. The consultation sought feedback on whether the specification provides a safe and effective environment for ambulance crews, supporting their health and safety at work.

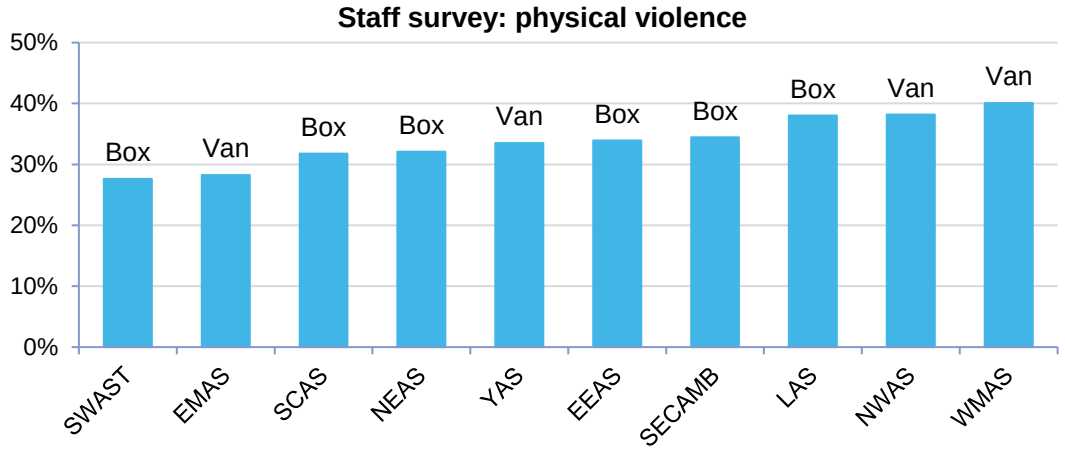
25. Themes in the feedback were:

- challenges of providing adequate space and staff comfort
- staff safety and security
- risk of musculoskeletal (MSK) injuries.

26. The challenge of providing adequate space is considered above. Responses compared the overall comfort and features of the two current vehicle types, some favouring one design and some the other. Many of the comments related to a make and model of base vehicle. As previously mentioned, where relevant to the specification these comments have been considered, but not those about the merits of individual suppliers.

27. In terms of staff safety and security, the improved internal and external CCTV requirement, the voice communication system and the recording capability were positively received, although some were concerned these features would damage staff morale. Staff at one trust were concerned that there is no longer a door between the saloon and cab area. This was not a prevalent concern at other trusts and, overall, the improved technology mitigates the risk to patient/staff welfare. A slide opening window remains between the cab and saloon for communication.

28. From the NHS Staff Survey 2017, the percentage of ambulance staff experiencing physical violence from patients, relatives or the public suggests incidents of physical violence is broadly similar across predominantly van-based and box-based trusts. There does not appear to be a correlation between the type of vehicle used and an increased prevalence of violent incidents.



29. Several respondents commented that ambulance crews on a van-based DCA are more likely to suffer an MSK injury, increasing associated sickness absence. Opinions diverged on whether a ramp and winch or tail lift patient-loading system was better at protecting staff against such injury, with some respondents submitting evidence to support their views. As stated above, the specification has been amended to allow trusts to choose their access system.

30. Data from the national NHS Electronic Staff Record from August 2017 to July 2018 suggests instances of sickness absence for MSK reasons are broadly similar between trust predominantly operating van-based and box-based DCAs.

	S11 Back problems	S12 Other MSK	Total MSK
Box-based trusts	6.8%	7.3%	14.1%
Van-based trusts	7.2%	7.7%	14.7%

Acceptability

31. The consultation sought feedback on whether the specification provides a vehicle that is operationally fit for purpose.

32. Many of the themes have already been captured above. Common additional views were:

- geographical differences across the country mean a standard vehicle is not appropriate
- questioning of the need to change when all trusts have worked tirelessly, in partnership with their staff, to design a vehicle that works for them
- no vehicle currently in use is perfect, and any specification needs to consider the increasing scope of paramedicine and the ageing population with complex needs.

33. Geographical differences do challenge standardisation. However, the four trusts predominantly using DCAs that are very similar to the national specification cover areas across the breadth of the Office of National Statistics' Rural Urban Classification, indicating that van conversions are already in use across the full spectrum of urban and rural areas around the country. As the sector considers the appropriateness of different operating models in different geographies, the fleet design and/or mix of vehicles may need to change and with it the standard specification.

34. In his review Lord Carter clearly articulates why a standard specification is needed. This is supported in principle by the Association of Ambulance Chief Executives and the College of Paramedics and Unison has committed to work in partnership with NHS Improvement at a national level.

35. The increasing scope of paramedicine, wider integrated care agenda and need for digital integration all require innovation on a national scale with collaboration across trusts and suppliers. This specification is not intended to be finite but a first iteration to provide a consistent base from which to innovate, further and faster.

Vehicle manufacturers

36. The consultation sought feedback on whether the specification provides any significant benefits or challenges for vehicle manufacturers.

37. Prominent themes in the feedback were:

- economies of scale and improved planning
- product development and innovation
- risks from awarding contracts to a single supplier.

38. We acknowledge that publishing a standard specification will not deliver the identified benefits on its own. A national, co-ordinated approach to procurement and subsequent relationships with suppliers is vital if economies of scale are to crystallise. A clear and smooth order book that is planned in advance would greatly benefit suppliers and in turn reduce uncertainty at individual trust level, as well as bringing financial savings. This was echoed in feedback from base vehicle suppliers at an engagement event held by NHS Improvement on 17 December 2018.

39. Respondents suggested that economies of scale not only bring down the initial pricing, but also reduce ongoing parts and maintenance costs. Furthermore, they noted that a single specification would similarly help product development and innovation on a national scale. The strong view was that a single specification now and in the future should never compromise safety and quality.

40. Respondents cautioned against a single specification leading to a single supplier because this would risk future price increases and a single point of failure from mass product recall or production capacity challenges. These concerns will be considered in the development of a procurement strategy and any subsequent procurement activity.

41. Respondents noted that the requirement for a seven-year warranty may well be unrealistic or prohibitively expensive. The minimum requirement has now been reduced to five years.

Vehicle converters

42. The consultation sought feedback on whether the specification provides any significant benefits or challenges for vehicle converters.

43. The prominent themes are very similar to those from the vehicle manufacturers:

- risk of monopolising the industry, increasing cost and reducing quality
- capacity of converters
- improved supply chain.

44. The development of a national procurement strategy to deliver best value from the standard specification is vital. To mitigate the risks highlighted, the aim will be to foster competition within the converter market and drive innovation. Such an approach will guard against increasing costs and reducing quality, while ensuring there is sufficient capacity.

45. At NHS Improvement's 17 December 2018 engagement event, converters stated that a common specification with a clear and smooth order book that is planned in advance would enable them not only to become more efficient but also to increase value from their supply chain.

46. Converters also raised the challenge of fostering innovation in a multi-year agreement, but were confident it could be achieved with a co-ordinated and collaborative approach.

47. Respondents also raised challenges in the medium to longer term relating to the weight of vehicles (eg to meet emissions standards and introduction of electric vehicle technology). NHS Improvement recognises that weight reduction is a key priority for the ambulance service and will consider this as part of future design developments.

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