

Operational productivity and performance in English NHS Ambulance Trusts: Unwarranted variations

Implementing the Carter recommendations...

Mark Gough, Senior Ambulance Lead, NHS Improvement

Where did we start? June 2017 – report commissioned



Sept 2018

Publication of Lord Carter's report on NHS ambulance services' operational efficiency which will help improve how these critical services are delivered for patients and save the NHS £500m.



An ambulance is NOT a taxi to A&E...

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27 September 2018

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QUALITY AND PERFORMANCE

Carter sets out £500m emergency care efficiency opportunity

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Paramedics treating patients at the scene could save the NHS £300 million a year, according to new report

'An ambulance is NOT a taxi to A&E': Report calls for paramedics to treat more patients roadside to save the NHS £300 million each year

- Lord Carter of Coles led the review, which examined 10 ambulance trusts
- The Labour peer said the move could alleviate pressure on UK hospitals
- 'Too many are being unnecessarily taken to A&E by ambulances,' he said
- The report calls for ministers to invest in up to 3,300 new ambulances

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ITV REPORT 26 September 2018 at 11:50pm

Ambulance 'not a taxi to A&E', says report

Key themes

-Struck by the dedication of all those working in the ambulance service.
- **Tackling avoidable conveyances** to hospital, particularly for elderly patients, supports delivery of care closer to home, reduces unnecessary pressures on our A&Es and wards and could release capacity equivalent to **£300 million in the acute sector**.
- *Being taken to hospital in an ambulance is not always in the best interests of the patient and is sometimes expressly against their wishes or their agreed care plan.*
- *If all trusts implement the practice of the best, the scope for greater productivity is around **£200 million by 2021**.*

- **Staff....** Levels of sickness and engagement across ambulance staff are some of the most problematic in the NHS and should be addressed culturally....staff need greater clinical and managerial support to ensure they feel confident in treating a patient over the phone or on scene and are supported by effective rotas which match supply to patient demand.
- **The digital ambulance service...** Ambulance services have been at the forefront of technological innovation for many years but there needs to be renewed emphasis in this area.
- **Effective fleet management...** It is simply unacceptable that trusts purchase different ambulances and stock them with different equipment and medicines.



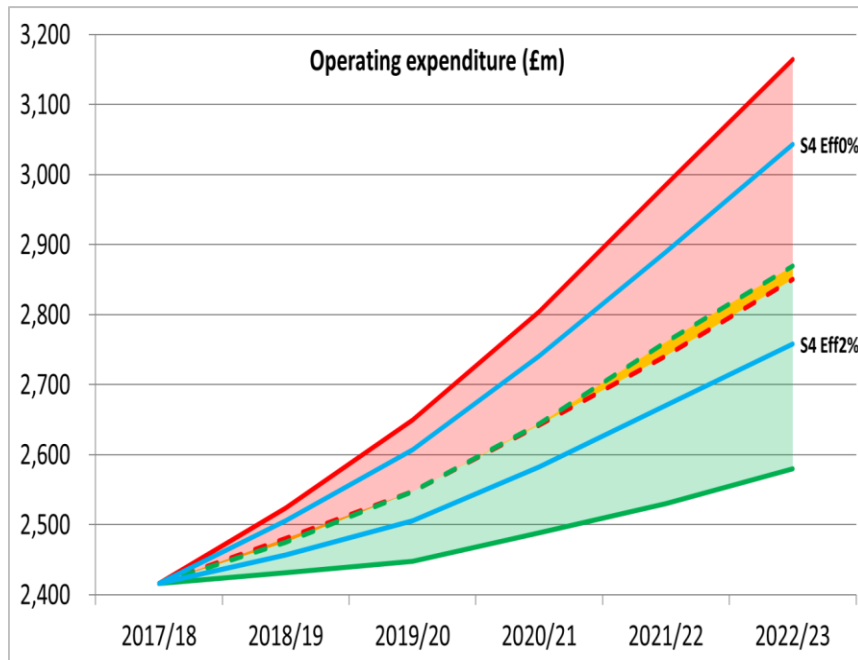
Today...

- Sustainability and productivity
- Work so far
- Variation
- Tools:
 - The Model Ambulance
 - Standardisation
 - Developing utilisation
- Q&A

The sector...

Sustainability

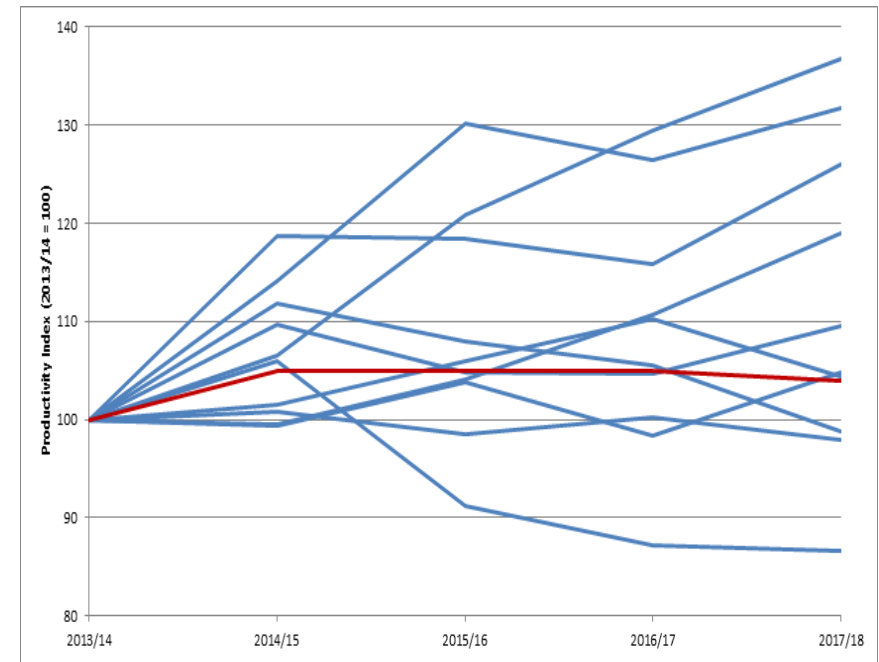
- Operating expenditure forecasts based on a range of activity scenarios with no efficiency (red fan) and 2% efficiency (green fan).



- Substantial savings if channel shift away from conveyances continues
- Channel shift can offset the effects of overall activity growth

Productivity

- Our analysis shows that overall productivity has increased but the divergence between trusts is also increasing



- The higher performing trusts also have the best response rates

Shifting the dial...



Capital: £87m awarded in 2017/18:

- * £27.4m – Fleet
- * £59.6m - Make Ready - Estates



COLLABORATION – Working closely with ambulance alliances including the Northern Ambulance Alliance (NAA), LAS & SCAS partnership, and alliance between WMAS, SWAST and SECamb



DATA & BENCHMARKING – The **Model Ambulance Portal** launched in September 2018 with over 350 metrics. Feedback visits to all ambulance trusts carried out - improvements included in a portal relaunch



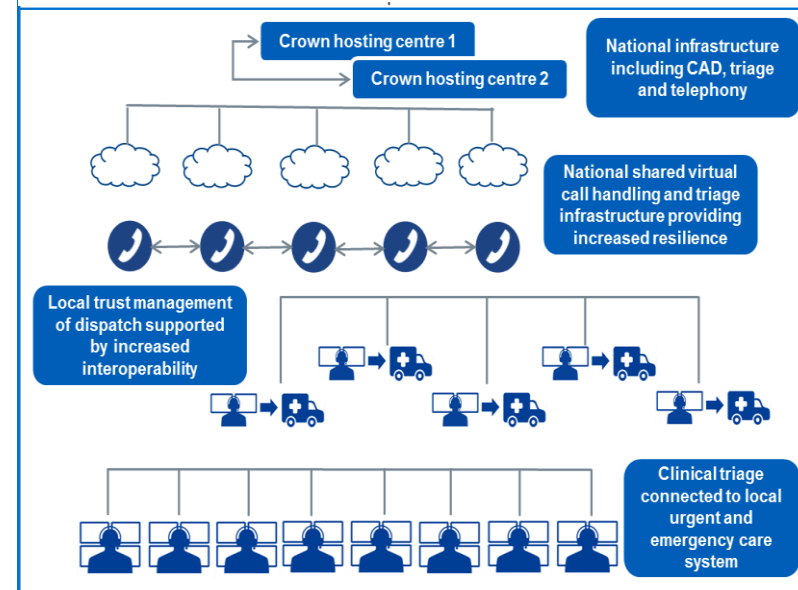
MAKE READY & ESTATES - Capital allocated to develop vehicle preparation systems to improve staff and resource availability, and estates reconfiguration



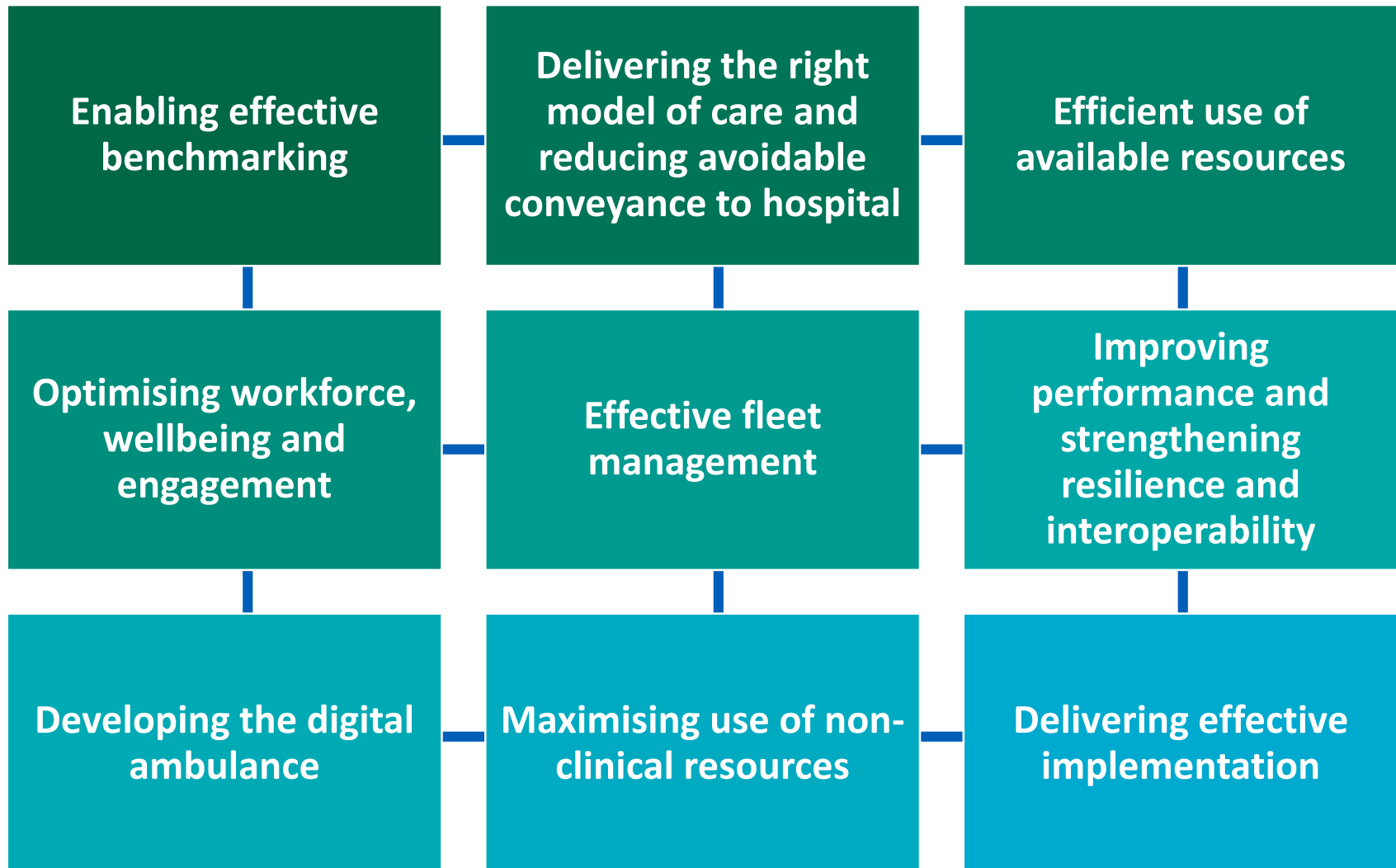
CONTROL ROOM INFRASTRUCTURE: Interoperability and resilience enhanced through computer aided dispatch (CAD) links. National disaster recovery standards being developed



FLEET - **Single specification for ambulances.** A national vehicle procurement model to be developed to reduce whole life cost for ambulance fleet



The nine key recommendations...



Understanding the variation...



“We have been working on the concept of the model hospital. My vision is for trust boards to have a suite of ‘killer efficiency metrics’ at their fingertips that not only helps them track performance, but also allows them to dive deeper into the cost drivers that are impacting their performance – all through a single portal that allows day-to-day comparison with their peers. I recognise this is no mean task and will undoubtedly take time to mature and become part of the fabric of performance improvement across the NHS, but we have to get started now.”

Lord Carter, October 2015

Model Ambulance Portal...



**Model
Hospital**

The Model Hospital supports the NHS to provide the best patient care in the most efficient way.

This free digital tool from NHS Improvement enables trusts to compare their productivity and identify opportunities to improve. It is currently available to all NHS provider trusts.

Register

Login

Get help and further information [↗](#)

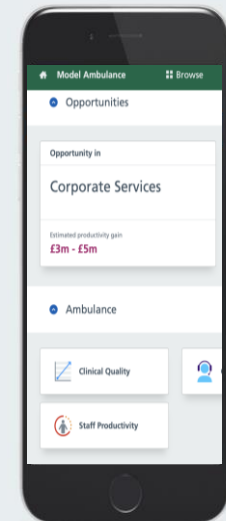
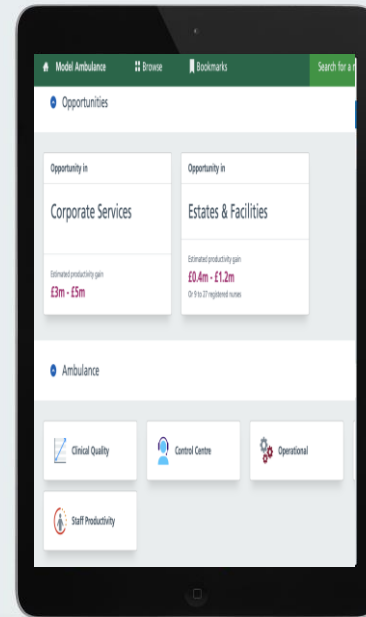
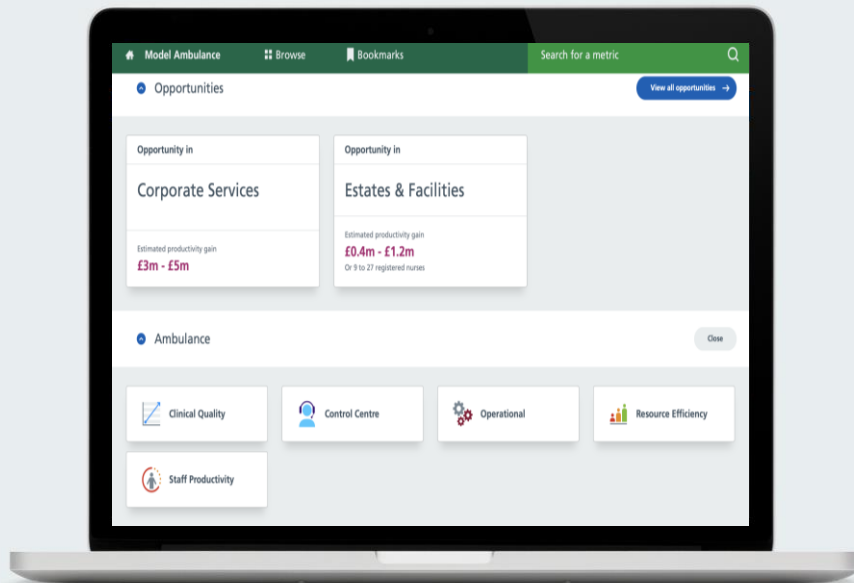
[*https://model.nhs.uk*](https://model.nhs.uk)



Model Ambulance Portal...

Desktop Homepage

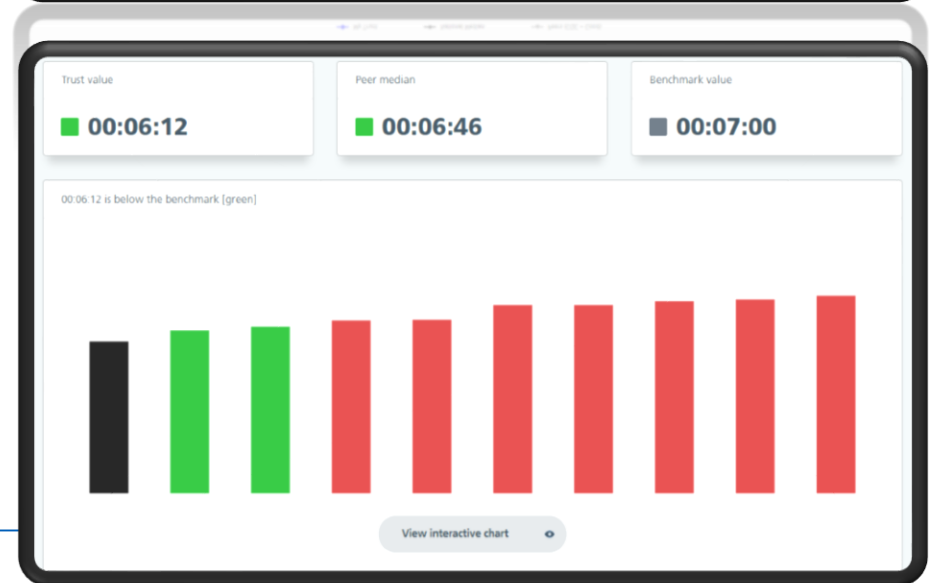
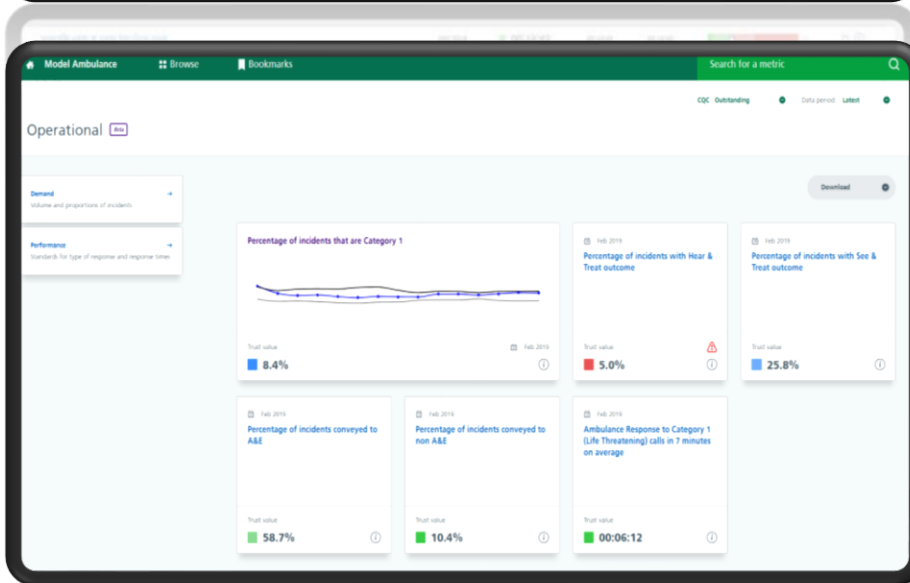
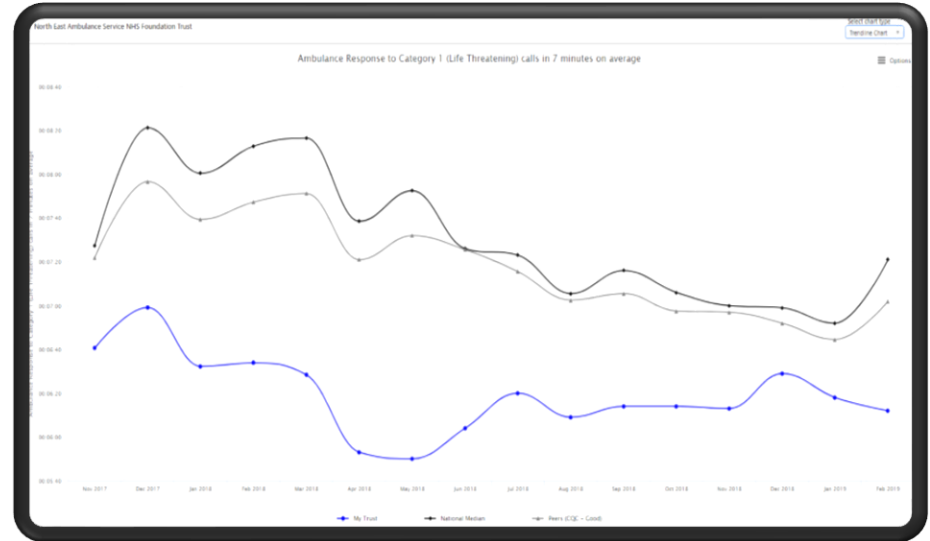
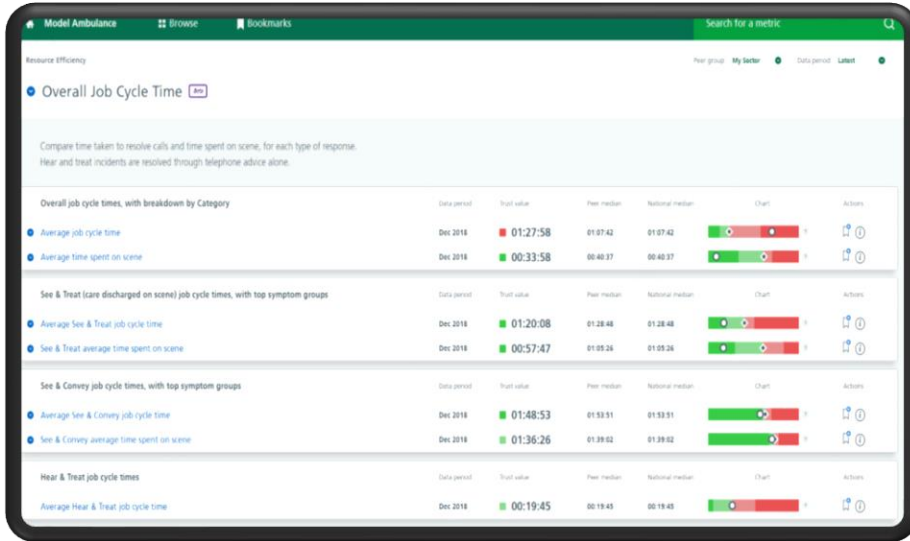
Mobile and tablet friendly design



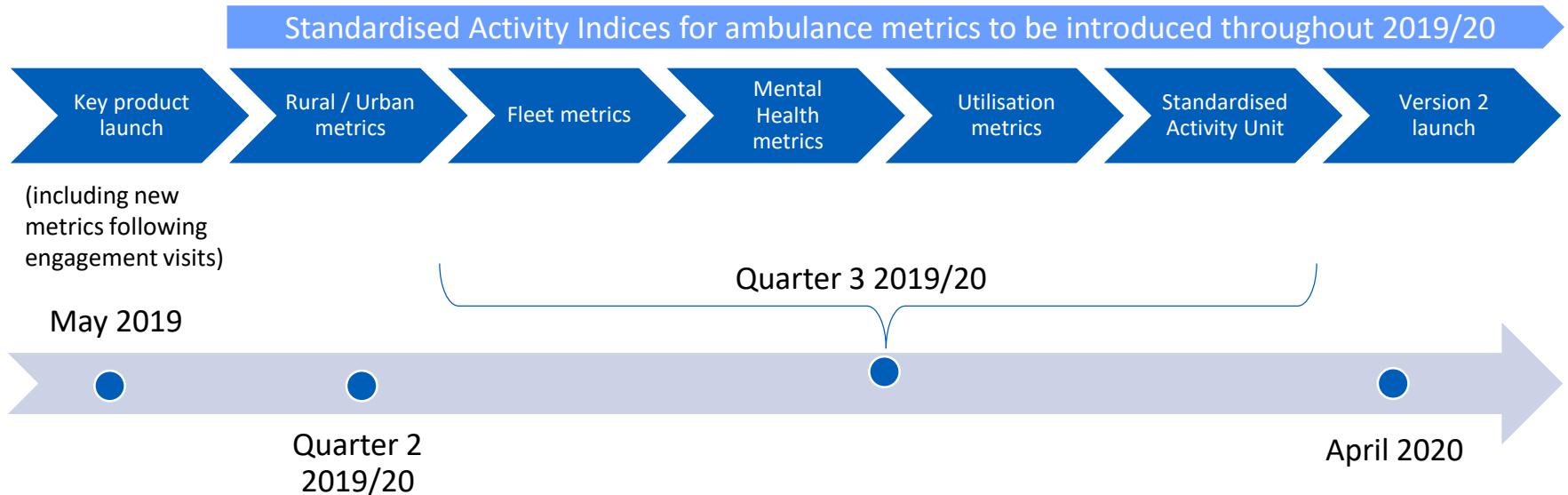
Model Ambulance Portal...

The screenshot displays the Model Ambulance Portal interface. At the top, there is a green navigation bar with the following elements: a home icon, the text 'Model Ambulance', a 'Browse' icon, a 'Bookmarks' icon, a search bar containing the text 'Search for a metric', and a magnifying glass icon. Below the navigation bar, the main content area is organized into sections. The first section is 'Opportunities', which includes a 'View all opportunities' button with a right-pointing arrow. The second section is 'Ambulance', which contains five metric cards: 'Clinical Quality' (with a line graph icon), 'Control Centre' (with a person and headset icon), 'Operational' (with a gear icon), 'Resource Efficiency' (with a bar chart icon), and 'Staff Productivity' (with a person and gear icon). The third section is 'Board-Level Oversight', which contains five metric cards: 'Finance & Use of Resources' (with a calendar icon), 'Leadership & Improvement' (with a group of people icon), 'Operational Performance' (with a clock icon), 'Operational Productivity' (with a gear icon), and 'Quality of Care' (with a heart and hands icon). The fourth section is 'Corporate Services'. Each section has a 'Close' button in the top right corner. The interface is clean and modern, with a light blue and white color scheme.

Model Ambulance Portal...



The plan...



Minor changes, national policy and Model Ambulance portal developments will continue across the financial year

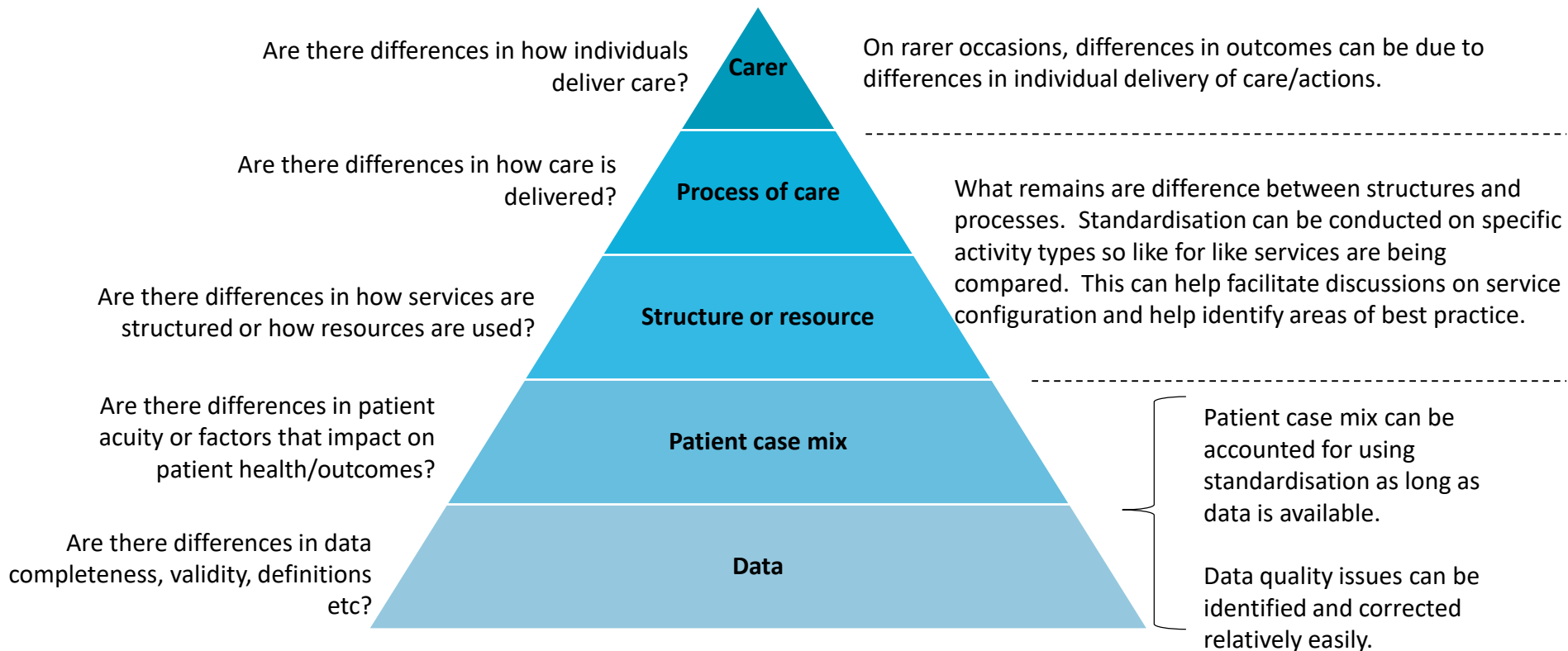
A standardised index...

How can I fairly compare metrics across Ambulance Trusts given that they have different population profiles and geographical characteristics?

- *Weighted Activity*
- *Productivity / Utilisation*

Understanding variation...

There may be many reasons that explain why Ambulance Trusts differ from one another. It is possible to account for differences by factoring them into the analysis of data. The pyramid model of investigation illustrates the possible causes of variation (read from data upwards)

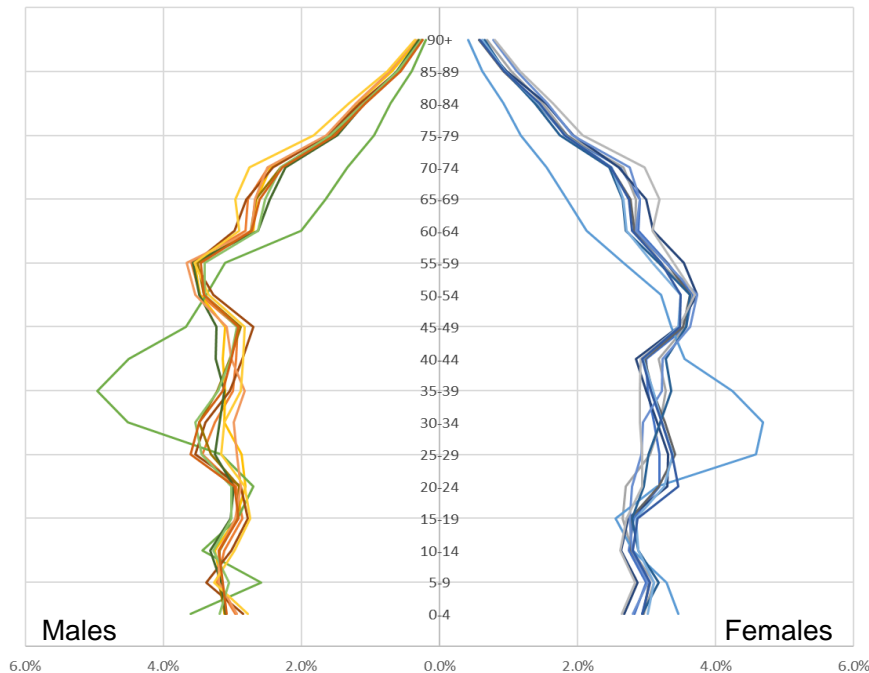


Adapted from - Mohammed, Mohammed A et al. "An investigation into general practitioners associated with high patient mortality flagged up through the Shipman inquiry: retrospective analysis of routine data" BMJ (Clinical research ed.) vol. 328,7454 (2004): 1474-7.

Confounders...

Population by quinary age band & gender

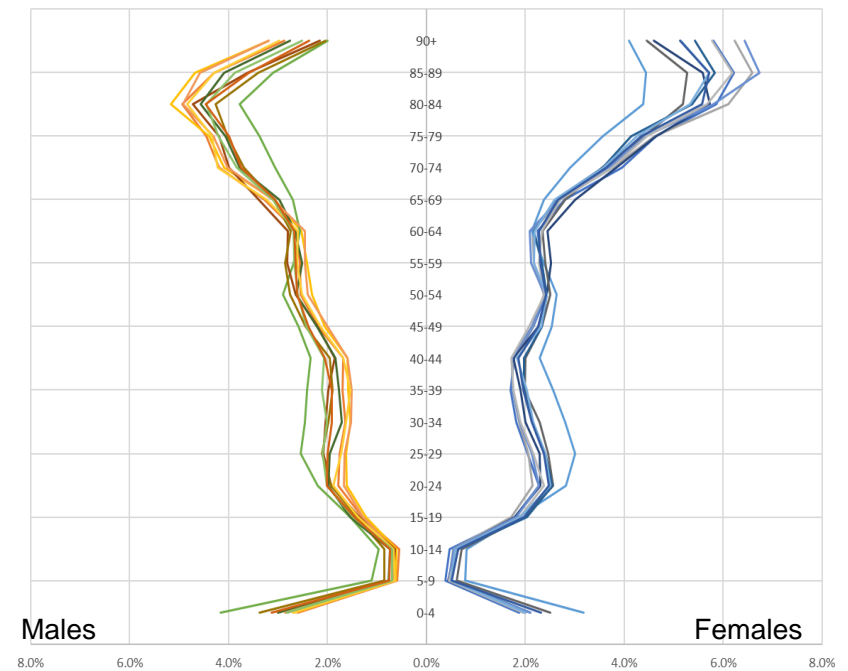
Ambulance Catchment Population (est.2017) Age & Gender Profiles



- All regions except London have similar age and gender population profiles
- London population is younger in general
- There is some variation between regions across the younger to middle age bands and less so at age band from 75 and above

A&E conveyances by quinary age band & gender

A&E See & Convey 2017/18 Age & Gender Profiles

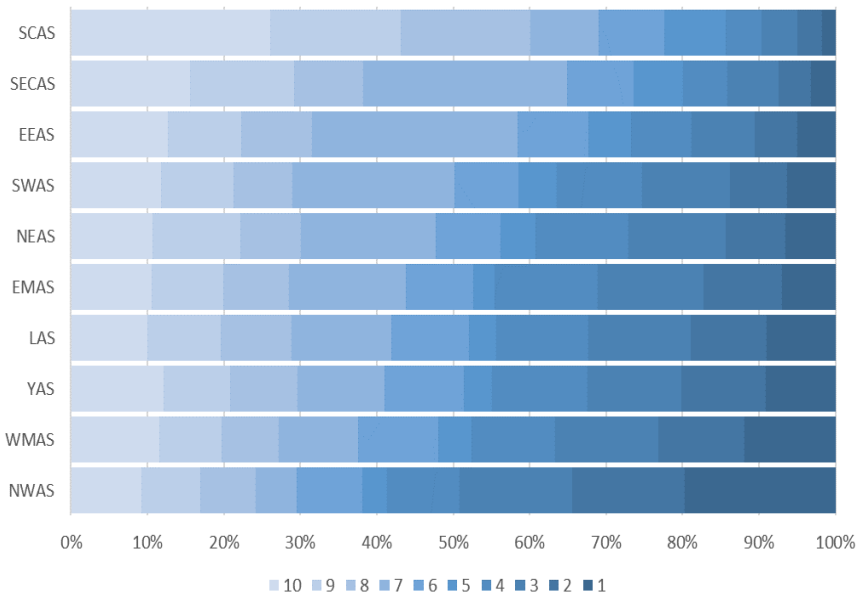


- The age profile of patient being conveyed to A&E differ to the populations being served
- Service utilisation is highest amongst the younger and older population

Confounders...

Population by Index of Multiple Deprivation

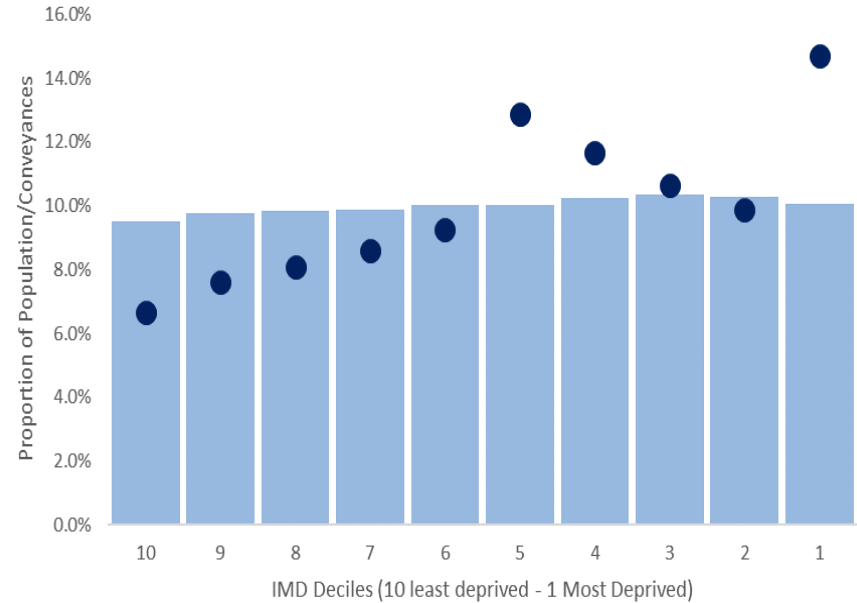
Population Proportion Split by IMD Decile - 10 (least deprived) & 1 (most deprived)



- 20%-35% of of populations across the North West, West Midlands and Yorkshire reside amongst the most deprived regions of England
- Approx. 50% of South Coast population reside in the least deprived regions of England

A&E conveyances vs. Population

Population vs. Conveyance by IMD15

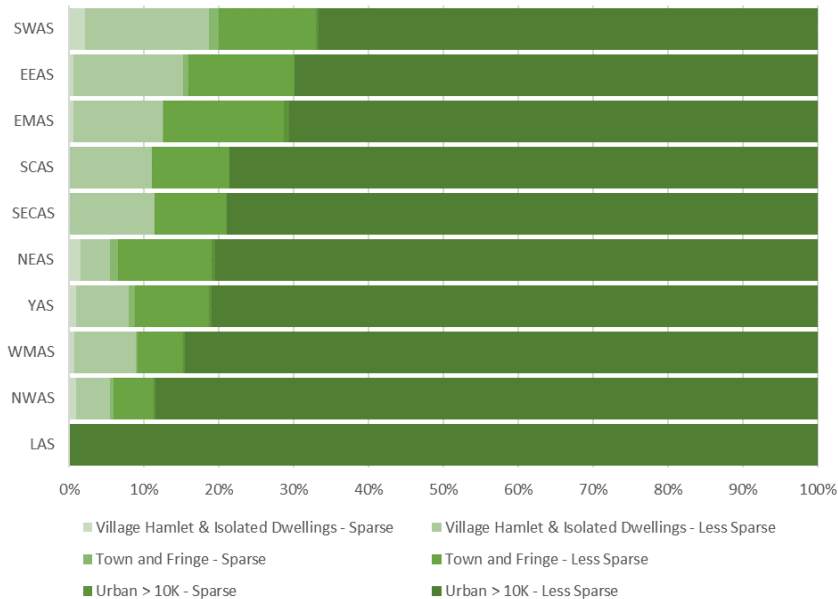


- A higher proportion of patients residing in the most deprived deciles of England are conveyed to A&E in comparison to other deciles and in relation to population size

Confounders...

Population by Rural Urban Classification

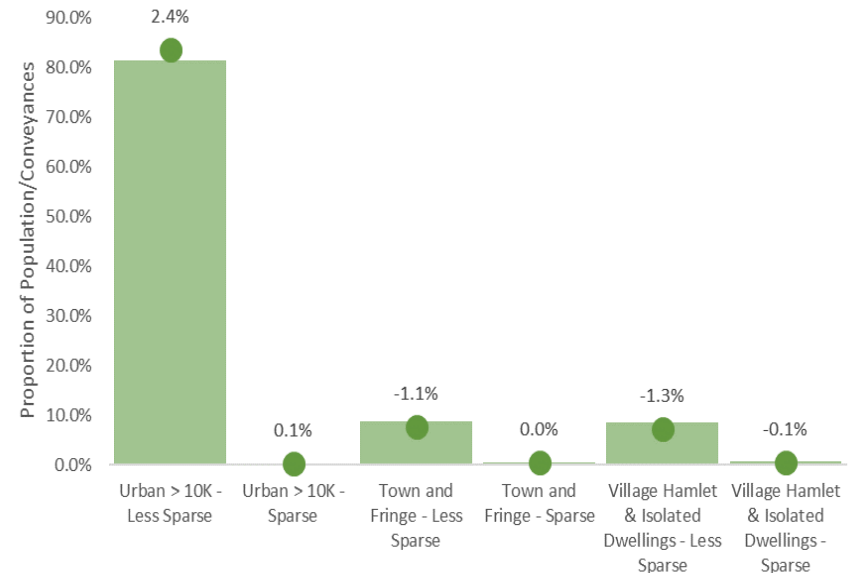
Ambulance Catchment Population Rural Urban Classification



- The entire population of London is predominantly classed as urban (less sparse and sparse).
- The 2001 version of the rural-urban classification indicator has been used to be consistent with Hospital Episode Statistics (HES).

A&E conveyances vs. Population

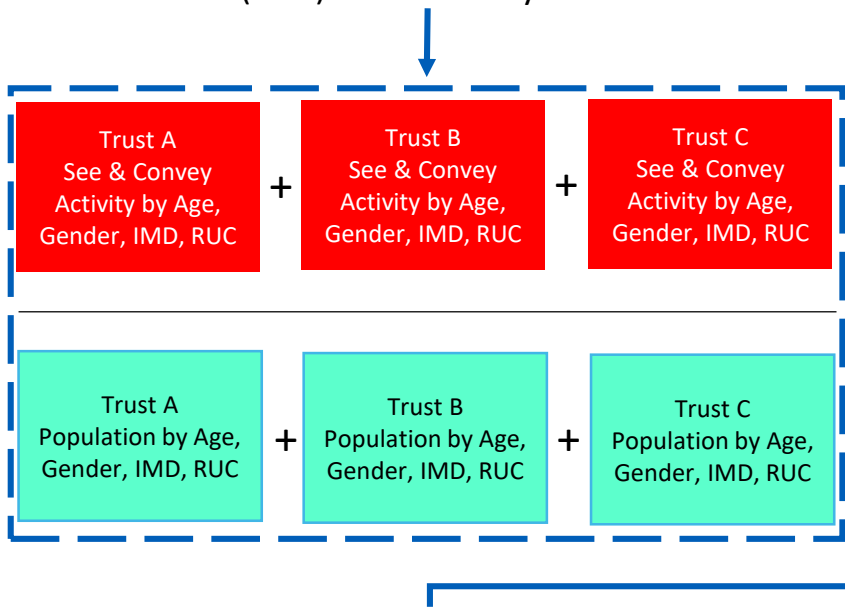
Population vs. Conveyance by RUC01



- A higher proportion of patients residing in the most urban areas of England are conveyed to A&E in comparison to other areas and the population.
- This is evident urban areas that are less sparse where the 80% of the population reside where 82.4% of conveyances are from.

Standardisation...

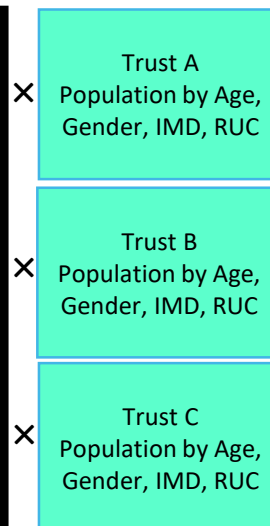
1. Add up activity and populations for all Trusts by age, gender, deprivation (IMD) and rural-urban classification (RUC) and divide by one another



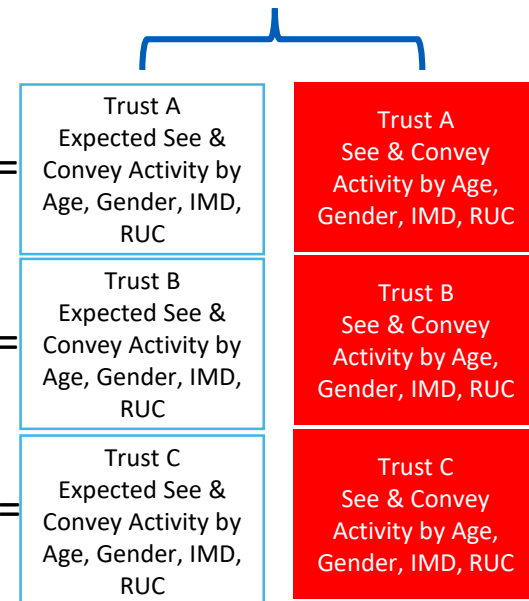
2. Results in national activity rates for each combination of age, gender, IMD & RUC



3. Apply national activity rates to each Trust population



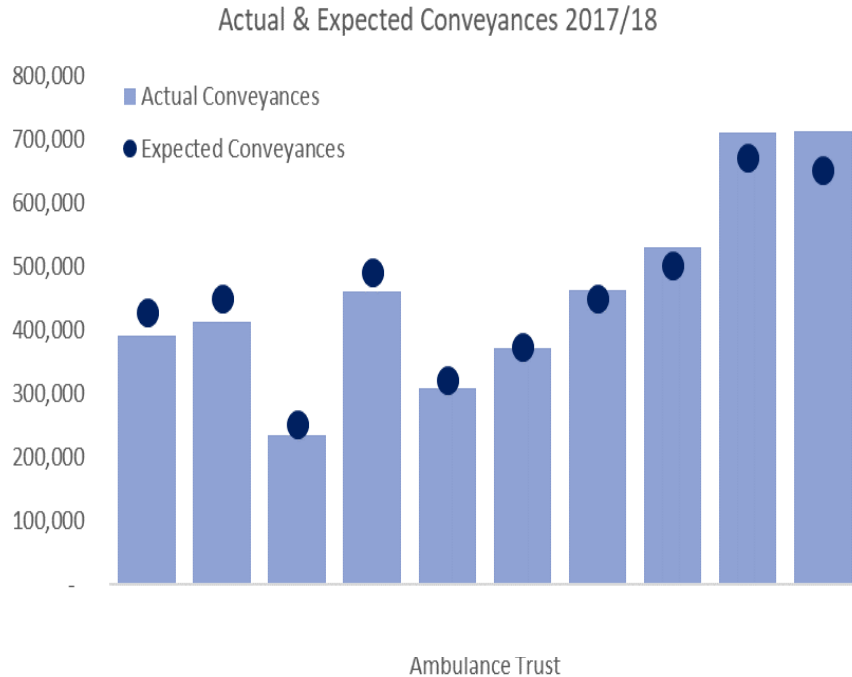
5. Divide actual activity by 'expected' activity to obtain the index



4. Results in 'expected' activity for each Trust

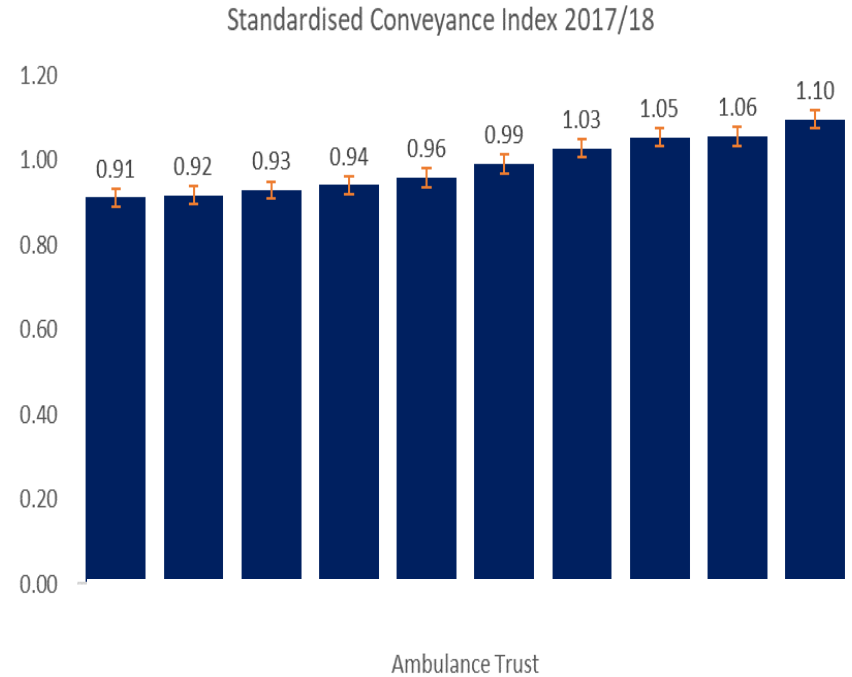
Conveyance index...

Conveyances for each Ambulance Trust

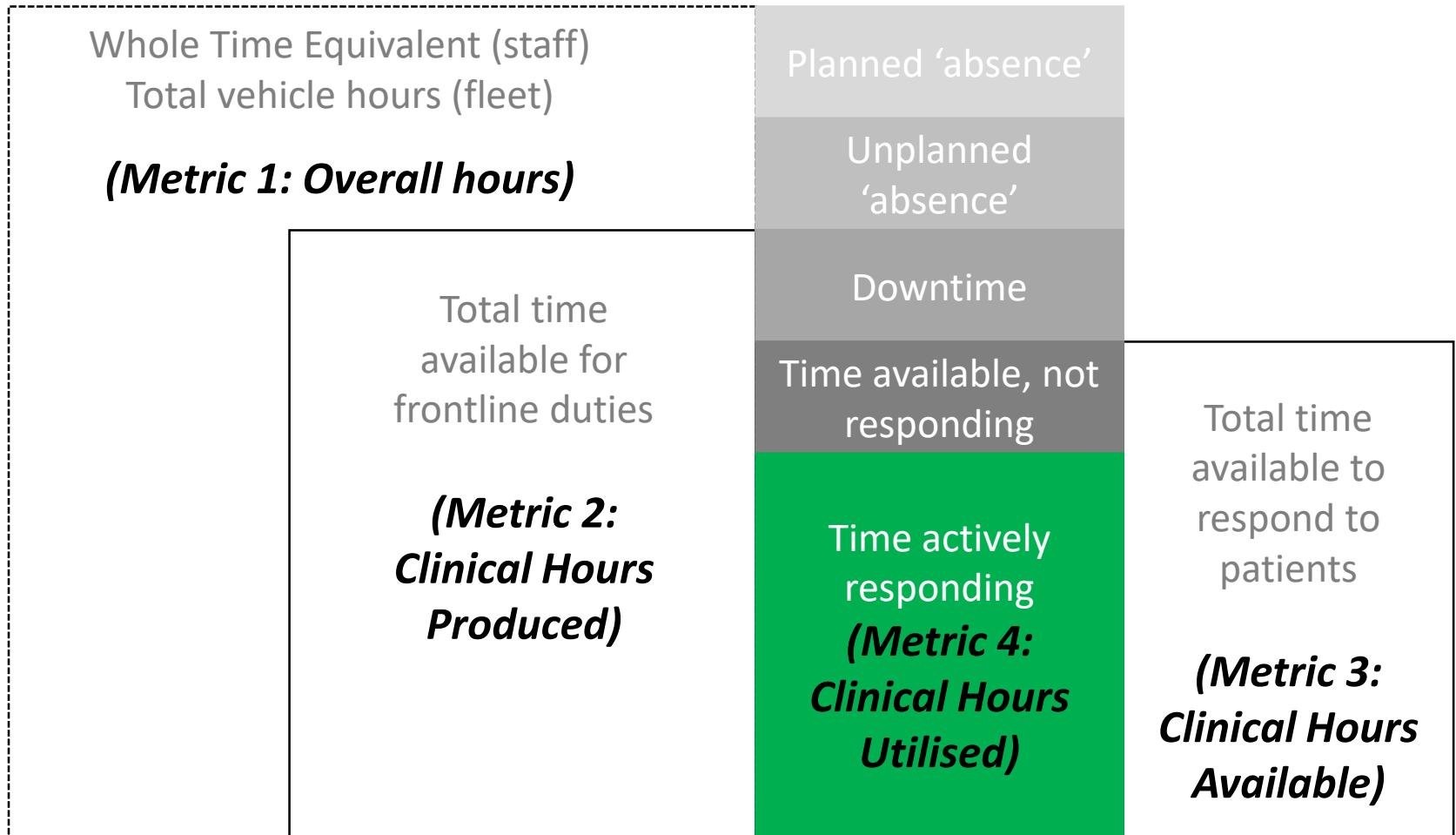


- Based on the age, gender, deprivation and rural-urban classification of their respective catchment population

Trust standardised index



Productivity & Utilisation...



Trust Ambassador Programme...

- Recently launched our Model Ambulance Trust Ambassador Programme and are looking for staff within ambulance trusts to join this national network
- Model Ambulance Trust Ambassadors are **trained local experts** who will:
 - **Benefit** from exclusive previews and learning opportunities within the Model Ambulance;
 - **Help shape and influence** the Model Ambulance as a trusted local expert for your organisation, with knowledge of local context and practices;
 - **Champion** the Model Ambulance within your trust. Acting as a key contact for your organisation, sharing the latest developments and supporting colleagues to actively use the tool;
- **Network** nationally with other Model Ambulance Trust Ambassadors sharing ideas, best practice and learning between trusts
- **To sign up** to the programme or to find out more please contact tickets@nhsi.uservice.com



Model Ambulance

Useful links...



Register at:
<https://model.nhs.uk>



Feedback at:
<http://feedback.model.nhs.uk>
or at
tickets@nhsi.uservice.com



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