Decarbonising NHS Travel & Transport

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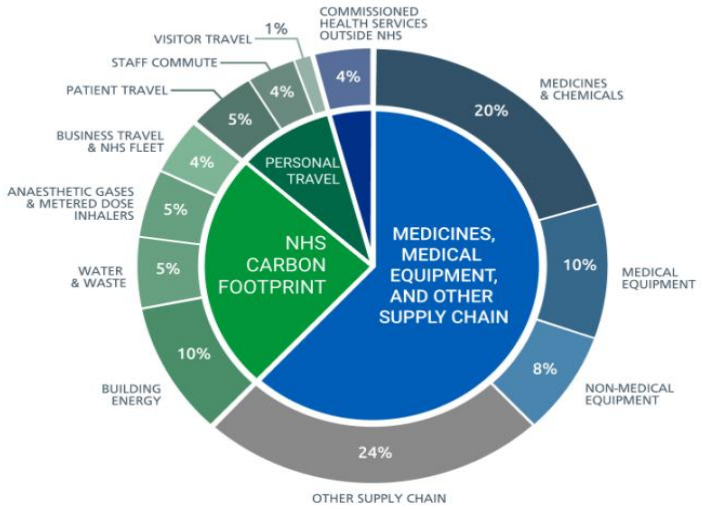
Why Focus on NHS Travel & Transport?

- **Climate Change:** Travel and Transport accounts for c.14% of the NHS's total (scope 1-3) emissions
- **Air Quality:** Travel and Transport is a major source of air pollution. Air pollution accounts for one in twenty deaths in the UK.
- **Cost savings:** EVs offer considerable overall cost savings to the NHS over ICE alternatives right now.
- **Access to Care:** The NHS needs to help improve sustainable transport options for large parts of the UK population to support access to care.



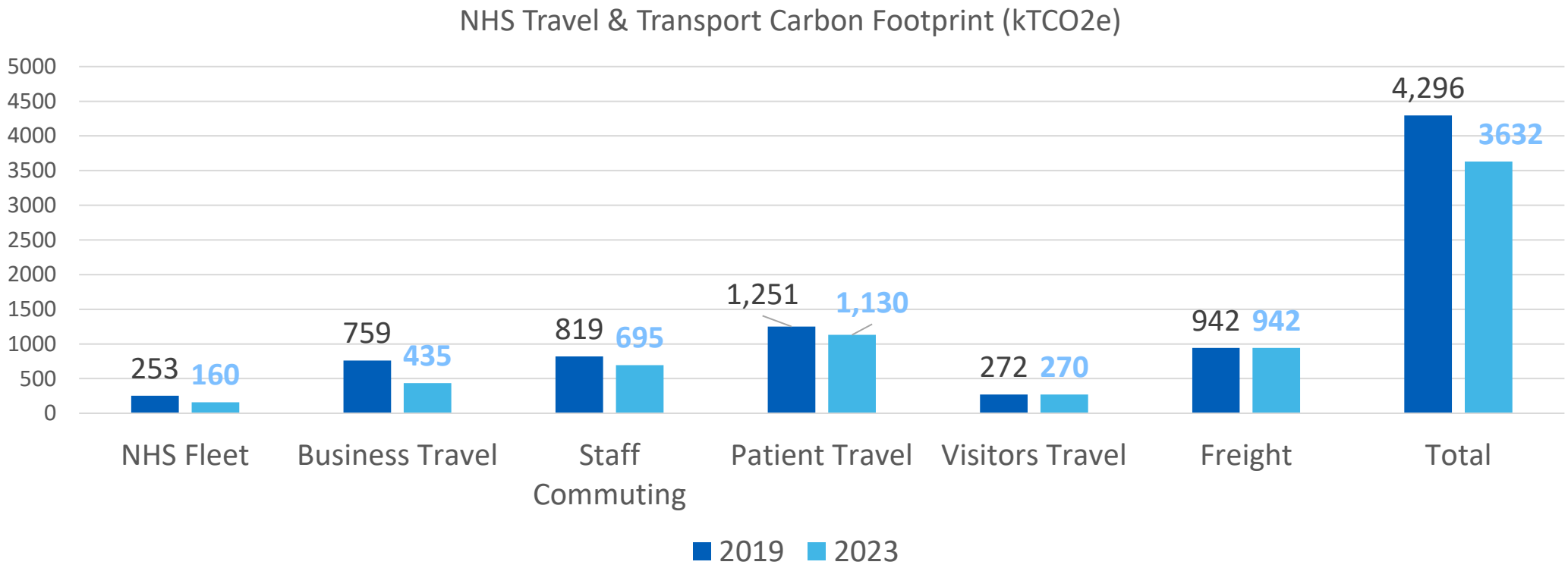
The poorest households are more than four times as likely to have no access to a car as the wealthiest

Percentage of households without access to a car by net equivalised household income quintile, UK, 2011–12 to 2021–22

The Health Foundation © 2024

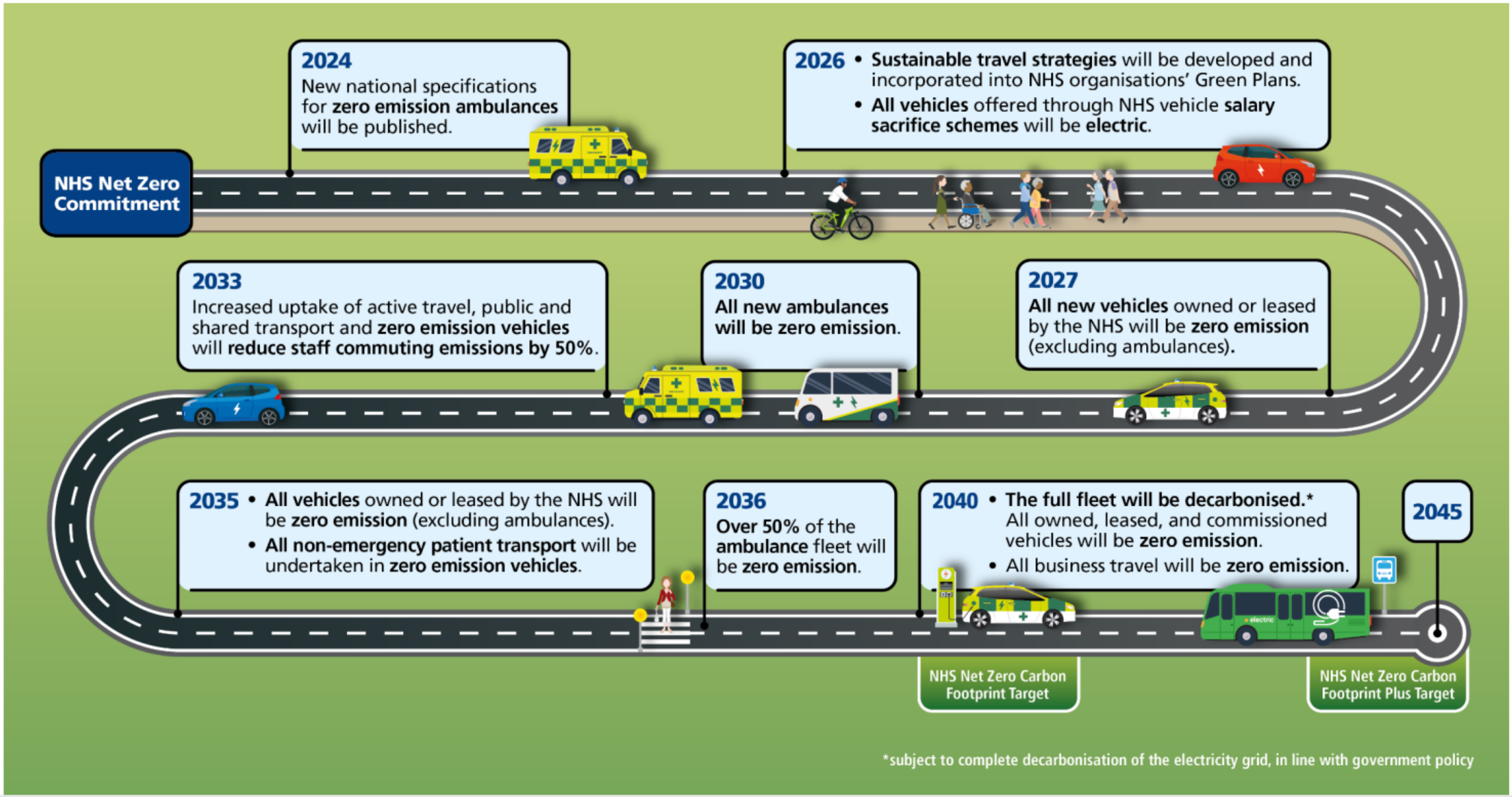
Source: Health Foundation analysis of University of Essex - Institute for Social and Economic Research, Understanding Society, UK, 2011–12 to 2021–22. • 2020-21 refers to the years 2020 and 2021, not the financial year 2020/21.

The NHS Travel & Transport Carbon Footprint

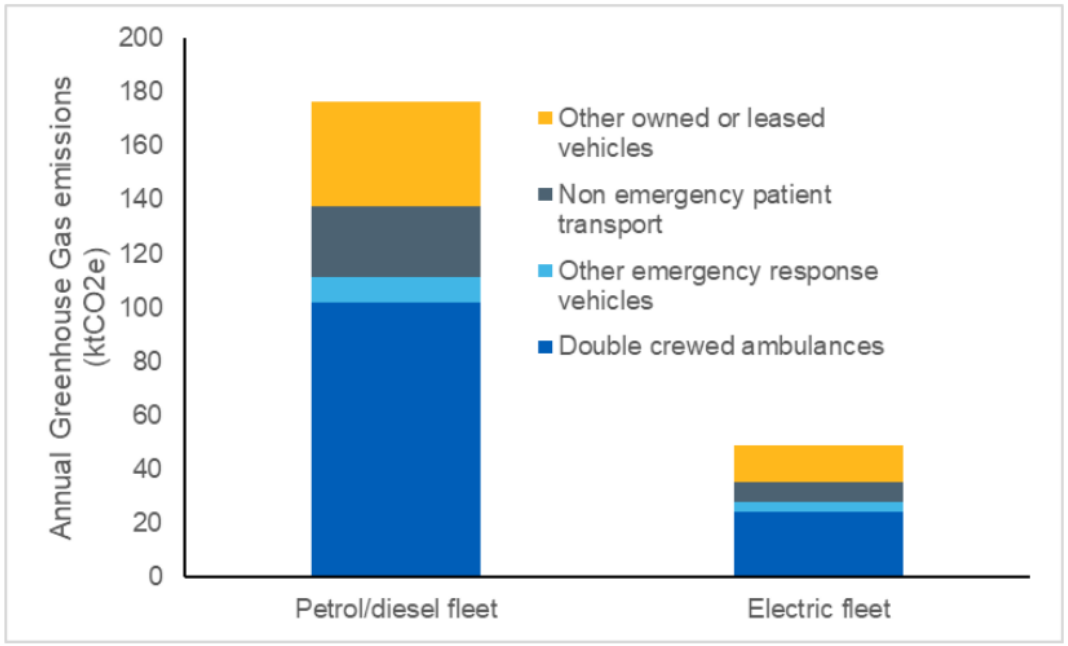


- 15.5% reduction in calculated travel and transport carbon footprint since 2019.
- This is a combination of genuine improvements and more accurate data collection and modelling.
- We will need to accelerate this pace of improvement significantly over the next 20 years.

Net Zero Travel & Transport Strategy Roadmap



NZTT Strategy – Quantifiable Benefits

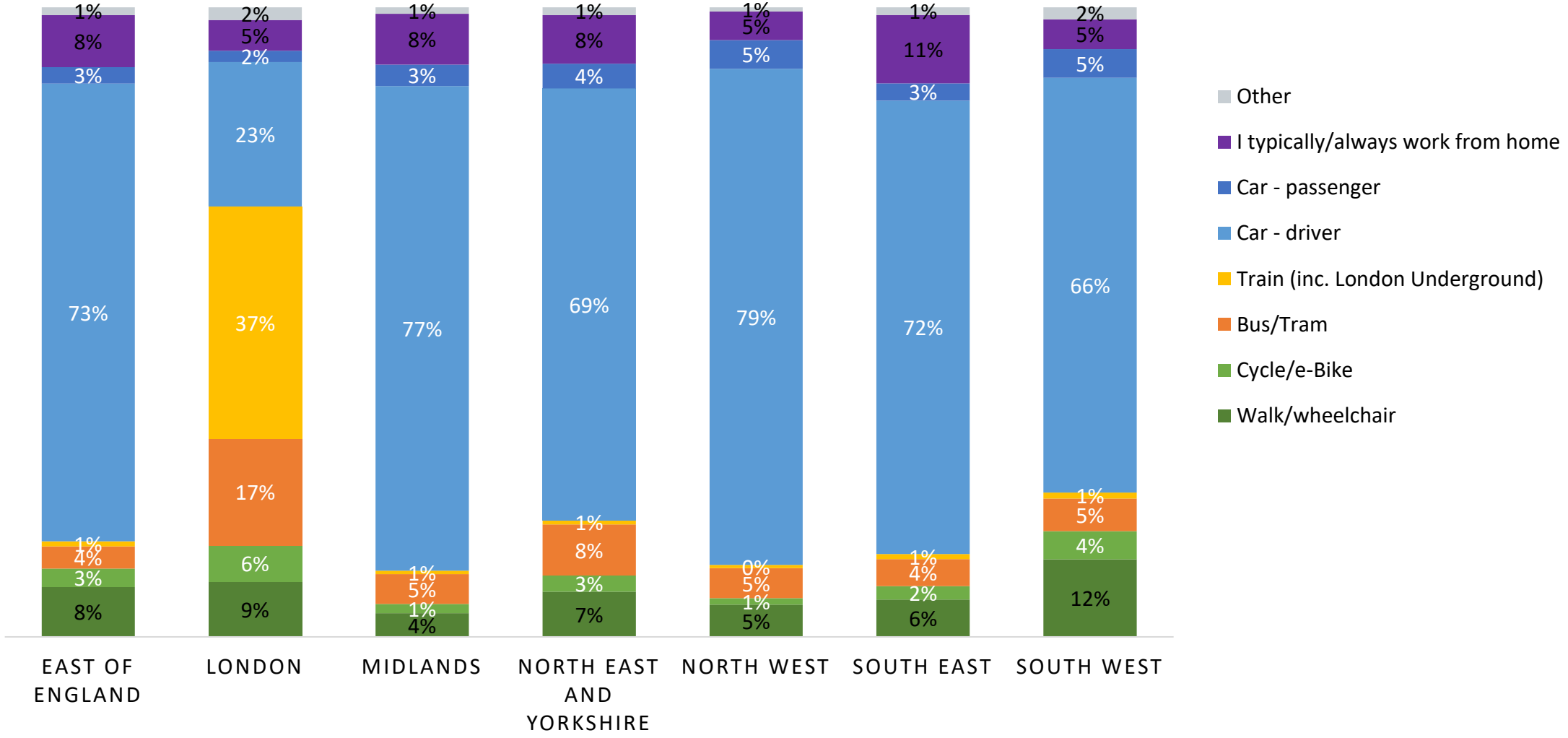


	Annual health benefits (£m)	Annual societal benefits (£m)	Annual direct NHS savings (£m)
NHS fleet and business travel	2.1	77.6	59.0
Modal shift	38.3	112.7	0.0
Electrification of personal vehicles	1.3	45.2	0.0
Total	**£41.7m**	**£235.5m**	**£59.0m**

- Annual carbon emissions reduced by 70% (on current national grid composition).
- As the grid decarbonises, emissions reductions will increase.
- Exhaust air pollution will decrease simultaneously.

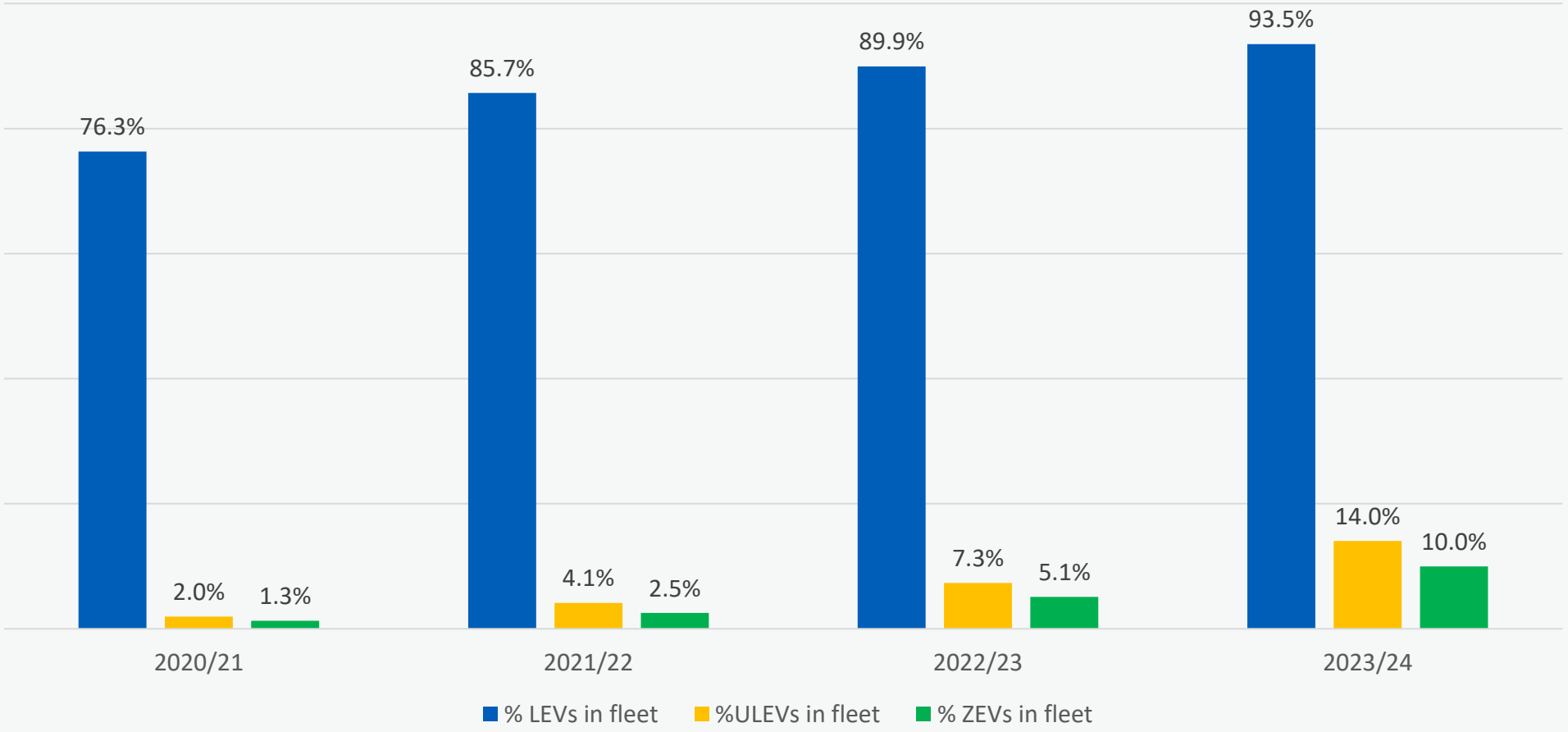
- A fully electrified NHS fleet will require one-off direct investment of c.£100m in NHS EV charging infrastructure.
- This would yield up to £59m per annum in fuel and maintenance savings (HMT Green Book prices)
- If the NZTT strategy was delivered in full, it could also generate over £270m per annum in monetised societal benefits (e.g. improved population health, fewer road accidents, etc.) – according to DfT and DEFRA data models.

NHS Staff Commuting Modes - 2023



Data Source: NHS People Pulse Survey (April 2023) n = 31,117

Recent Changes in NHS Fleet Composition



The proportion of the NHS fleet that is zero emission has doubled each year since 2020/21

Salary Sacrifice Schemes

- These schemes offer NHS employees the chance to lease a new car from their gross salary.
- Most NHS trusts and ICBs have such schemes set up already.
- The vehicles can be used for NHS Business Travel, commuting and personal use.
- NHS England is asking all Trusts and ICBs to limit their schemes to just ZEV & ULEVs by the end of 2026

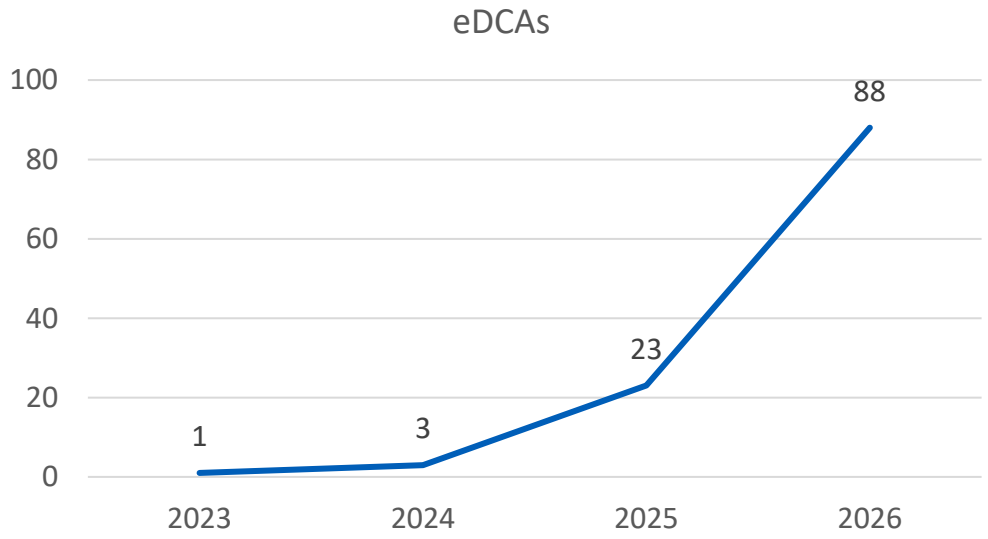
Region	Trusts	ICBs	Total
London	20	3	23
Midlands	15	3	18
South West	8	2	10
South East	6	2	8
East of England	5	1	6
North West	4	1	5
North East & Yorkshire	1	1	2
Total	**59**	**13**	**72**

Model	List Price	2026/27 BIK	2027/28 BIK	2028/29 BIK	Total over 3 years	List price + 3-year BIK
Kia Nero EV	£37,325	£298	£372	£ 372	£1,042	£38,367
Kia Nero PHEV	£33,525	£704	£774	£ 774	£2,252	£35,777
Kia Nero Hybrid	£29,865	£1,553	£1,615	£1,615	£4,783	£34,648
Kia Sportage (ICE)	£29,575	£2,070	£2,070	£2,070	£6,210	£35,785

Electrifying Emergency Ambulances

Decarbonisation challenges

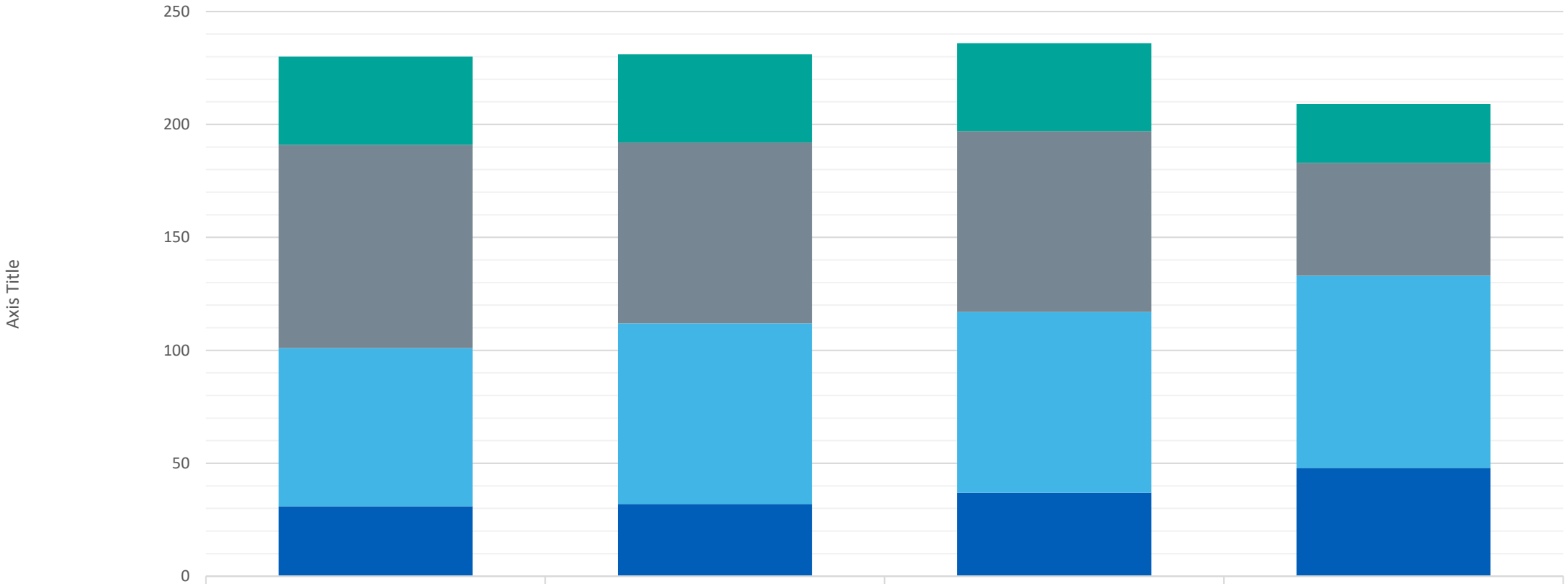
- Heavy, specialist vehicles
- Need to power equipment within ambulance
- Broad geographical spread
- Need to be ready instantly for next call
- etc.



- World First: Emergency ambulance built on an EV chassis (68 KW battery)
- Capable of doing c.110 miles on a single charge.
- Suitable to replace over 90% of the existing diesel ambulance fleet.
- These ambulances would need to charge for as little as 30-45 minutes per 12-hour shift.

Total Cost of Ownership Analysis

Analysis based on seven-year vehicle lifecycle and 29,000 miles per annum



	Van	Box 1	Box 2	BEV
Maintenance (£k)	39	39	39	26
Fuel (£k)	90	80	80	50
Conversion (£k)	70	80	80	85
Purchase (£k)	31	32	37	48

Building EV recharging infrastructure

1. Calculate electrical energy used between every stop at an ambulance station or main hospital

2. Calculate how quickly that DCA would need to charge to reach **100% SOC** in the time it was stopped there

3. Consider multiple DCAs needing to charge at those locations simultaneously but at varying speeds & durations

- A fully electric ambulance fleet will need EV charging infrastructure at all ambulance stations and type-1 EDs.
- NHS England have worked with expert partner Cenex to quantify the requirement at each location.
- Each electric ambulance would need to recharge for as little at 30 minutes per 12-hour shift.
- Most hospitals would need between 0.1 and 0.8 MW electrical capacity for ambulance charging.
- Total costs of chargers and installation estimated at £75m across England.

What roles do we need healthcare leaders to play?

- Each trust and ICB to develop sustainable travel plan by the end of 2026 – in line with detailed NHS England guidance.
- Limit salary sacrifice schemes to ZEVs and ULEVs by the end of 2026.
- Only purchase or lease fully electric vehicles for their own fleet from 01/01/2028.
- When planning large electrical infrastructure projects (NEEF, Solar, PSDS, rebuilds, etc.), liaise with your local ambulance trust early to accommodate their EV charging needs, where possible.