

## INTRODUCTION

Background: The proportion of deaths which occur in hospital in England has dropped from 57.9% in 2004 to 46.7% in 2015. However, hospital still remains an important place of death for almost half of all patients and of care in the last 90 days of life (L90D) for approximately 70%.

Aim: To examine the extent of geographical variation in patterns of hospitalisation between health administrative areas across England in L90D.

## METHODS

Methods: Information on all deaths in England (2015) were extracted from a national linked Hospital Episode Statistics (HES) – Office for National Statistics (ONS) Mortality database with their admission data. Four indicators for hospital admission were selected for the fourth coming England Atlas of Variation in End of Life Care. Summary statistics were calculated for each indicator for England and the 209 Clinical Commissioning Groups (CCG) – local health administrations. These were 1) % deaths with a hospital admission in L90D 2) % of hospital admissions ending in death of duration  $\geq 8$  days, 3) mean number of days (nights) spent in hospital during L90D and 4) % of deaths with  $\geq 3$  emergency admissions in L90D.

In addition trends in the median value for England and the degree of variation between CCG's were tested statistically for each of the four indicators for the time period 2007 – 2015.

## RESULTS

### Chart Key

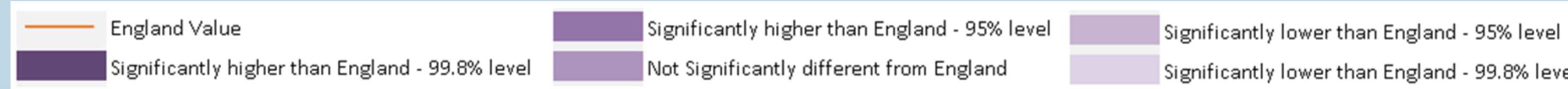
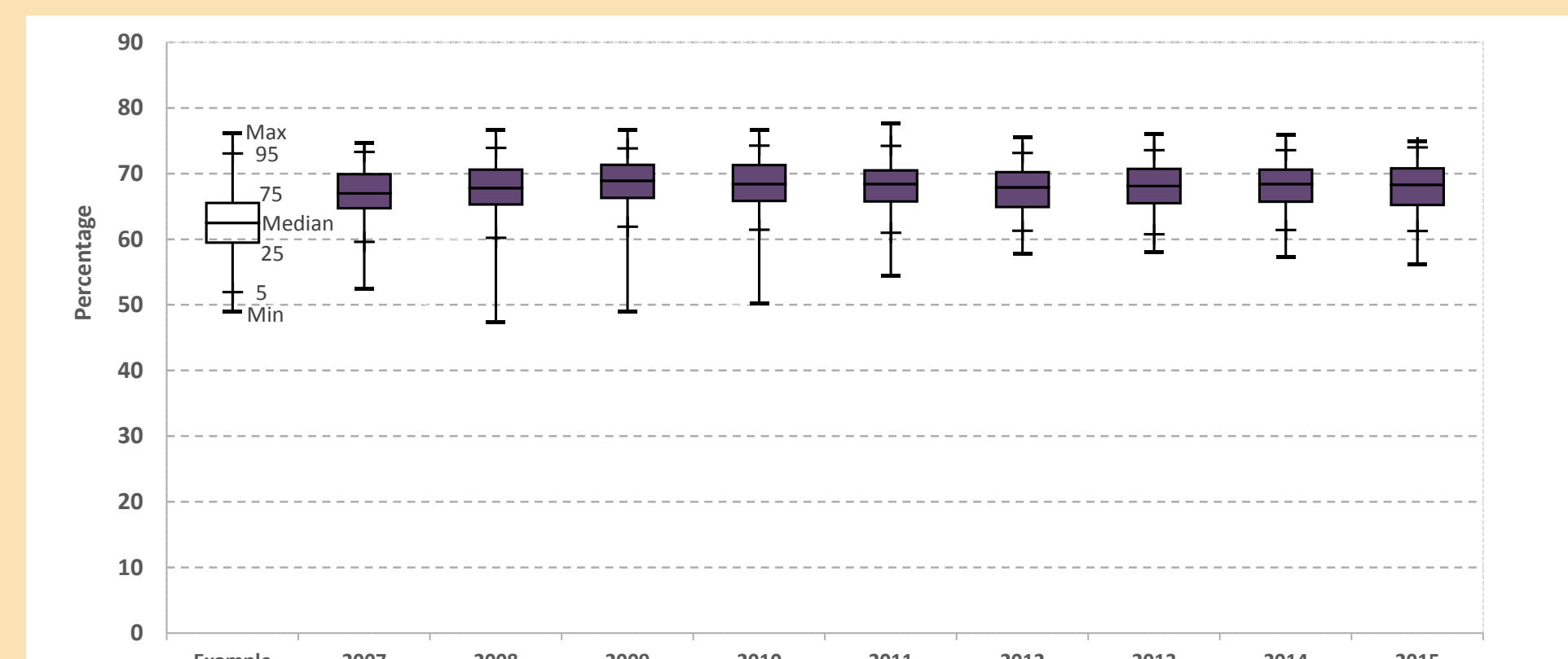


Figure 1a: Proportion of deaths with a hospital admission in final 90 days of life 2015 by CCG



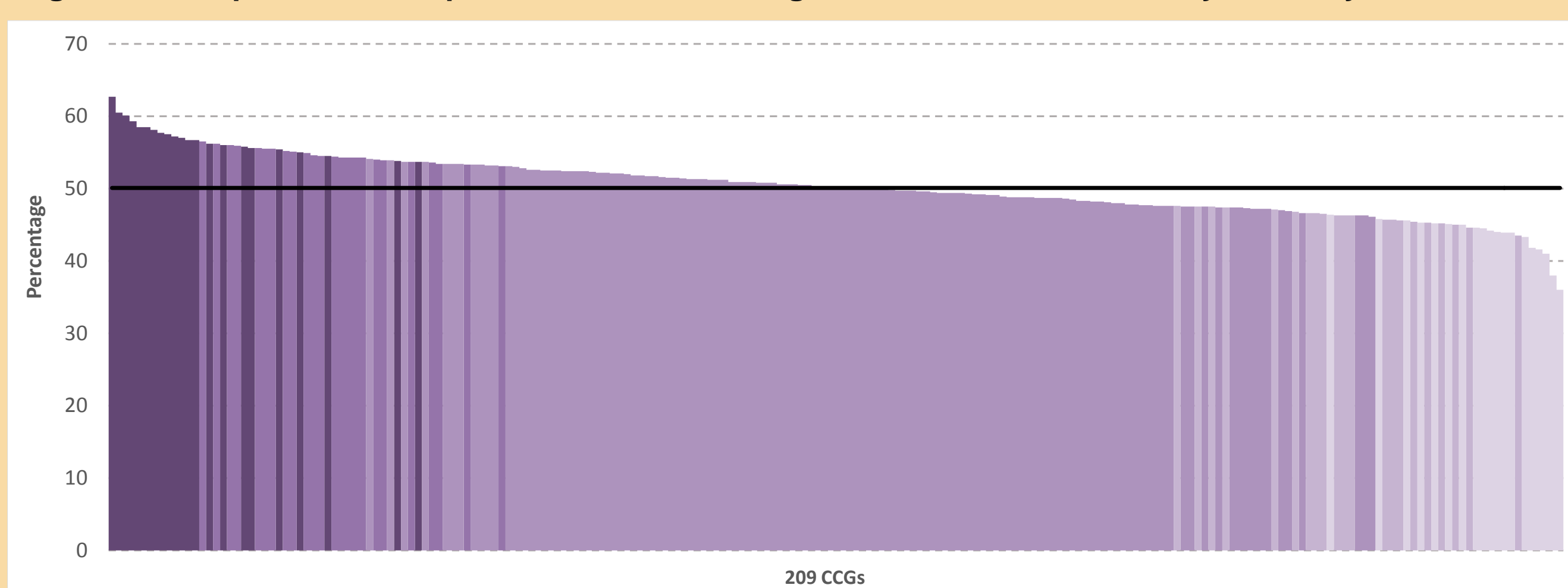
On average 67.9% of decedents in England had a hospital admission in L90D, the CCG values varied from 56.1 to 74.9%

Figure 1b: Trend in proportion of deaths with a hospital admission in final 90 days of life



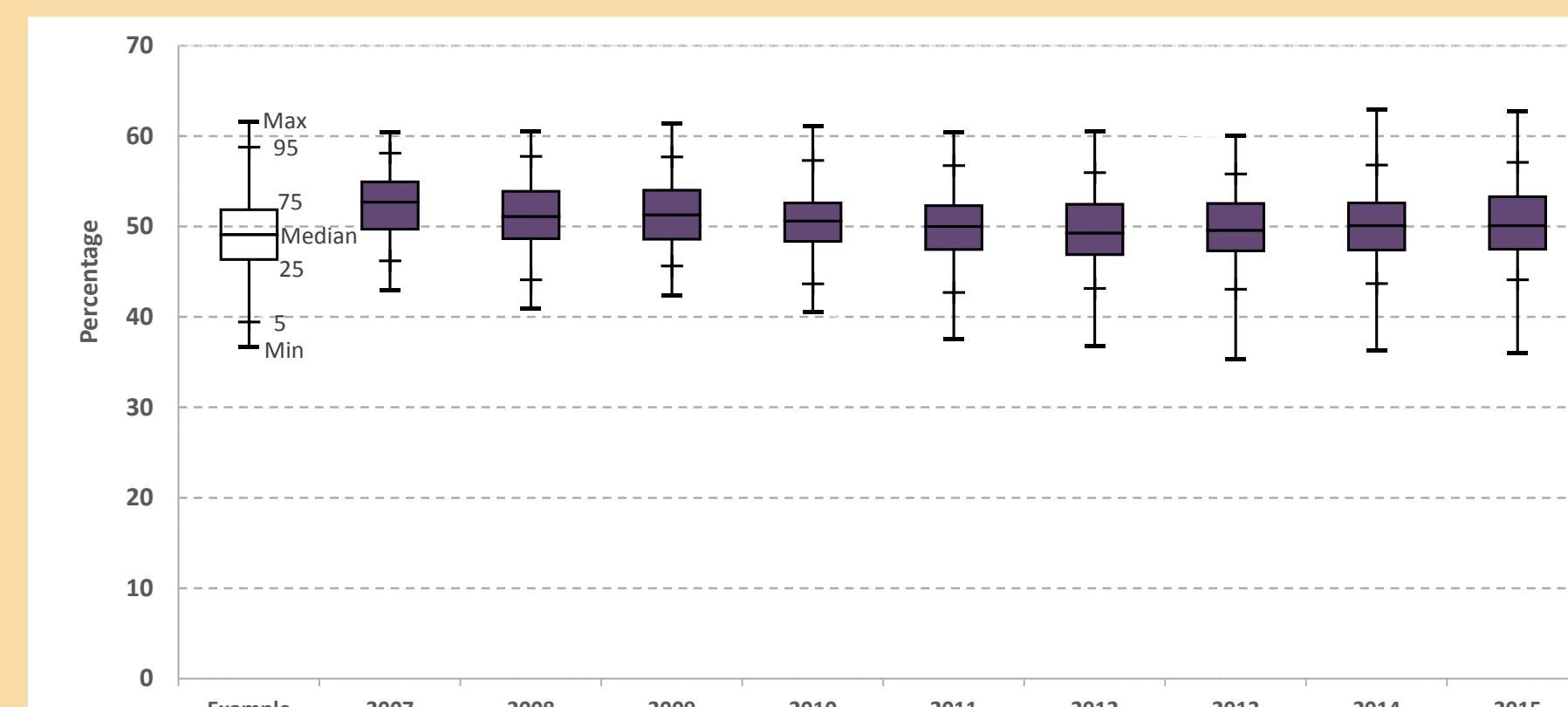
	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Max - Min (Range)	22.2	29.2	27.7	26.4	23.2	17.8	18.0	18.6	18.8	NARROWING Significant
95th - 5th Percentile	13.7	13.7	12.0	12.8	13.2	11.9	12.8	12.2	12.8	No significant change
75th - 25th Percentile	5.2	5.3	5.1	5.5	4.8	5.3	5.2	4.9	5.6	No significant change
Median	67.0	67.8	68.9	68.4	68.4	67.9	68.1	68.4	68.3	No significant change

Figure 2a: Proportion of hospital admissions ending in death of duration  $\geq 8$  days 2015 by CCG



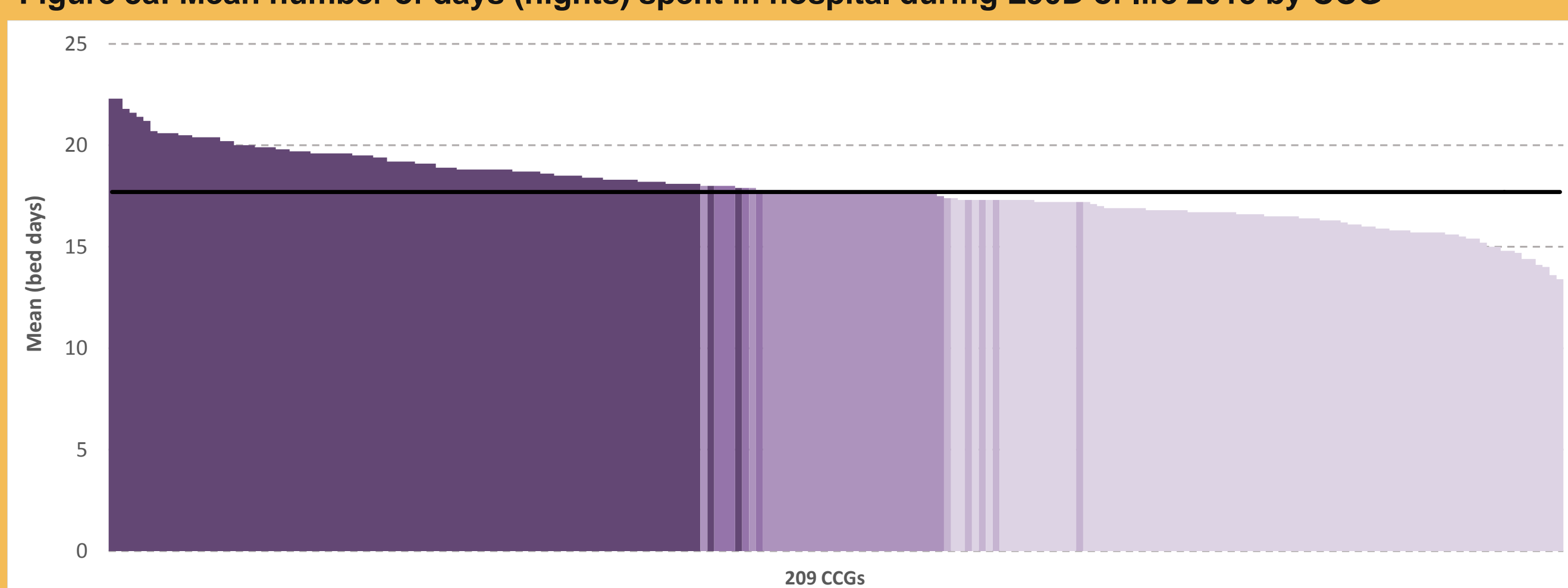
England average for % final hospital admissions  $\geq 8$  days ending in death was 50.4%, variation in CCG values 36.0 to 62.7%,

Figure 2b: Trend in proportion of hospital admissions ending in death of duration  $\geq 8$  days



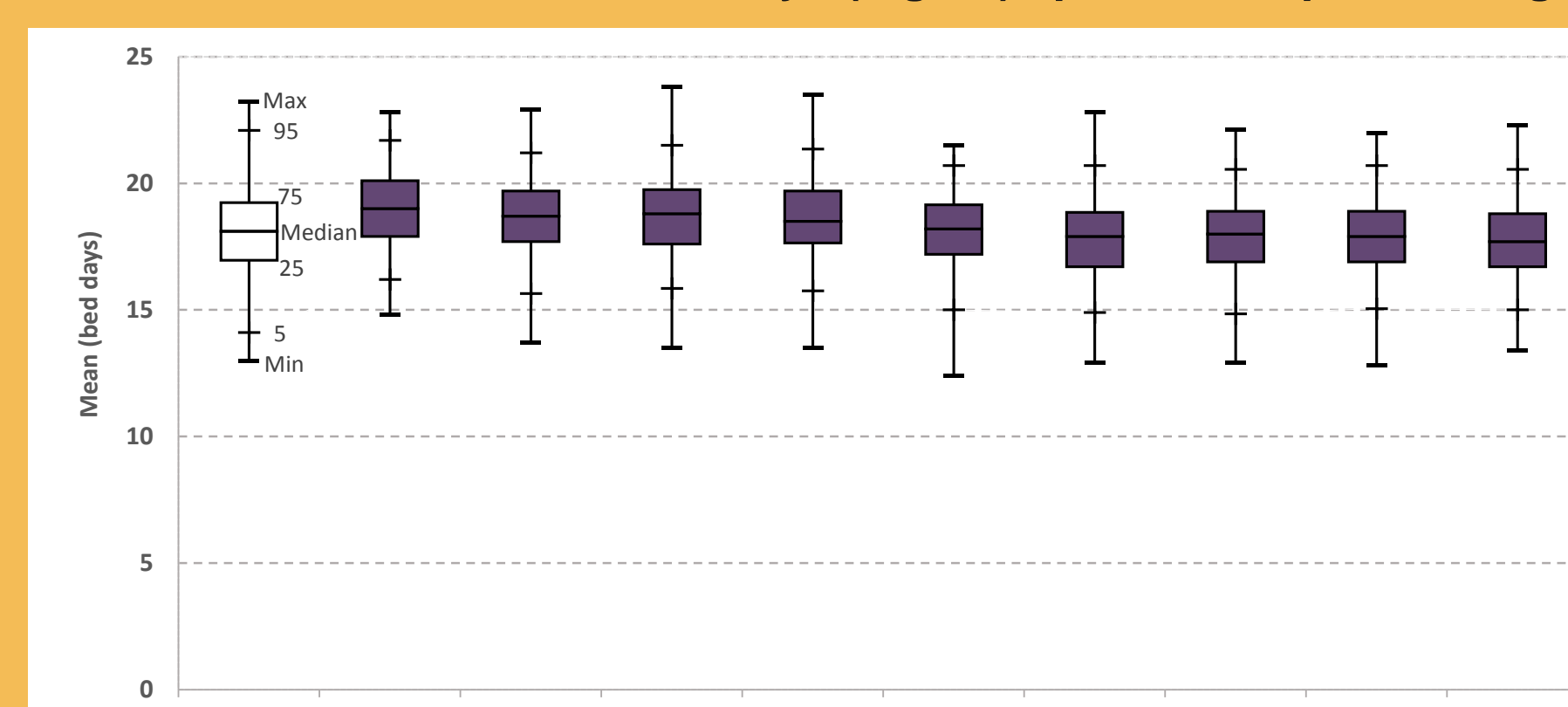
	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Max - Min (Range)	17.5	19.6	19.0	20.6	22.9	23.7	24.7	26.6	26.7	WIDENING Significant
95th - 5th Percentile	11.9	13.7	12.1	13.7	14.1	12.8	13.1	13.0	13.0	No significant change
75th - 25th Percentile	5.3	5.2	5.4	4.3	4.8	5.6	5.3	5.2	5.8	No significant change
Median	52.7	51.1	51.3	50.6	50.0	49.3	49.6	50.1	50.1	DECREASING Significant

Figure 3a: Mean number of days (nights) spent in hospital during L90D of life 2015 by CCG



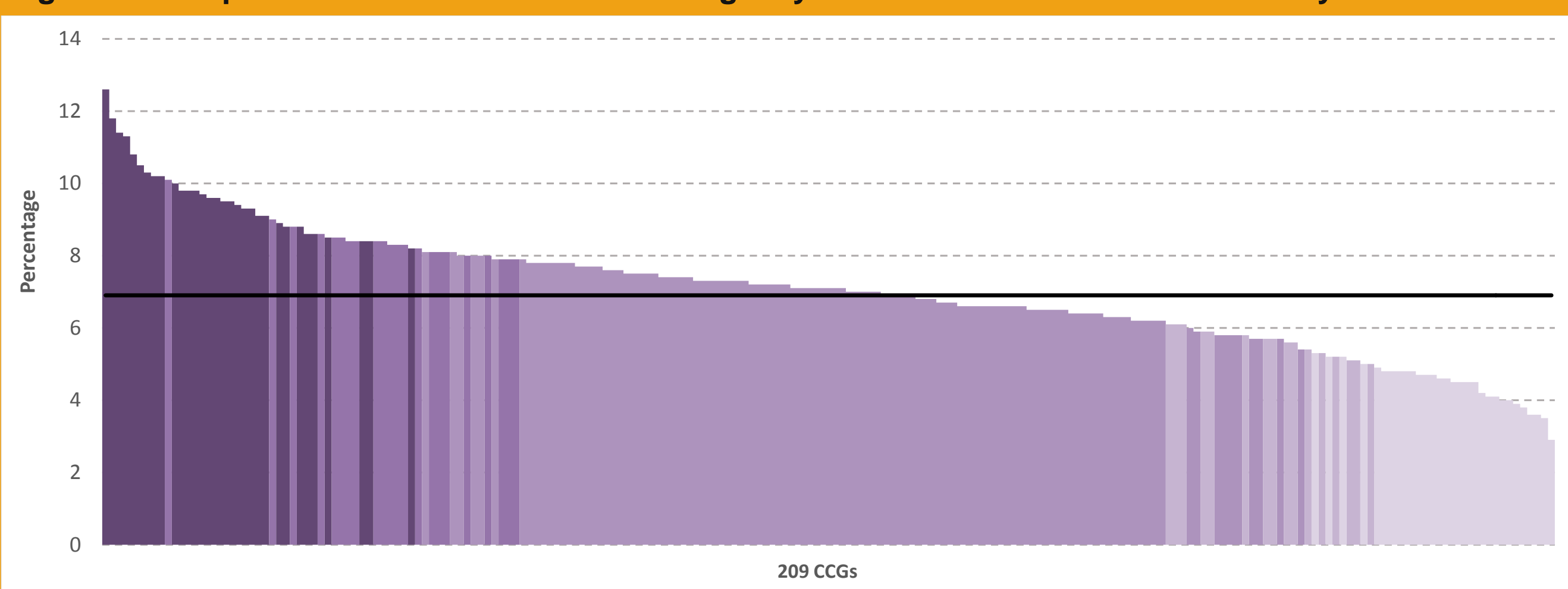
The average number of days spent in hospital in L90D in England was 17.8 with variation in CCG values of 13.4 to 22.3 days

Figure 3b: Trend in mean number of days (nights) spent in hospital during L90D of life



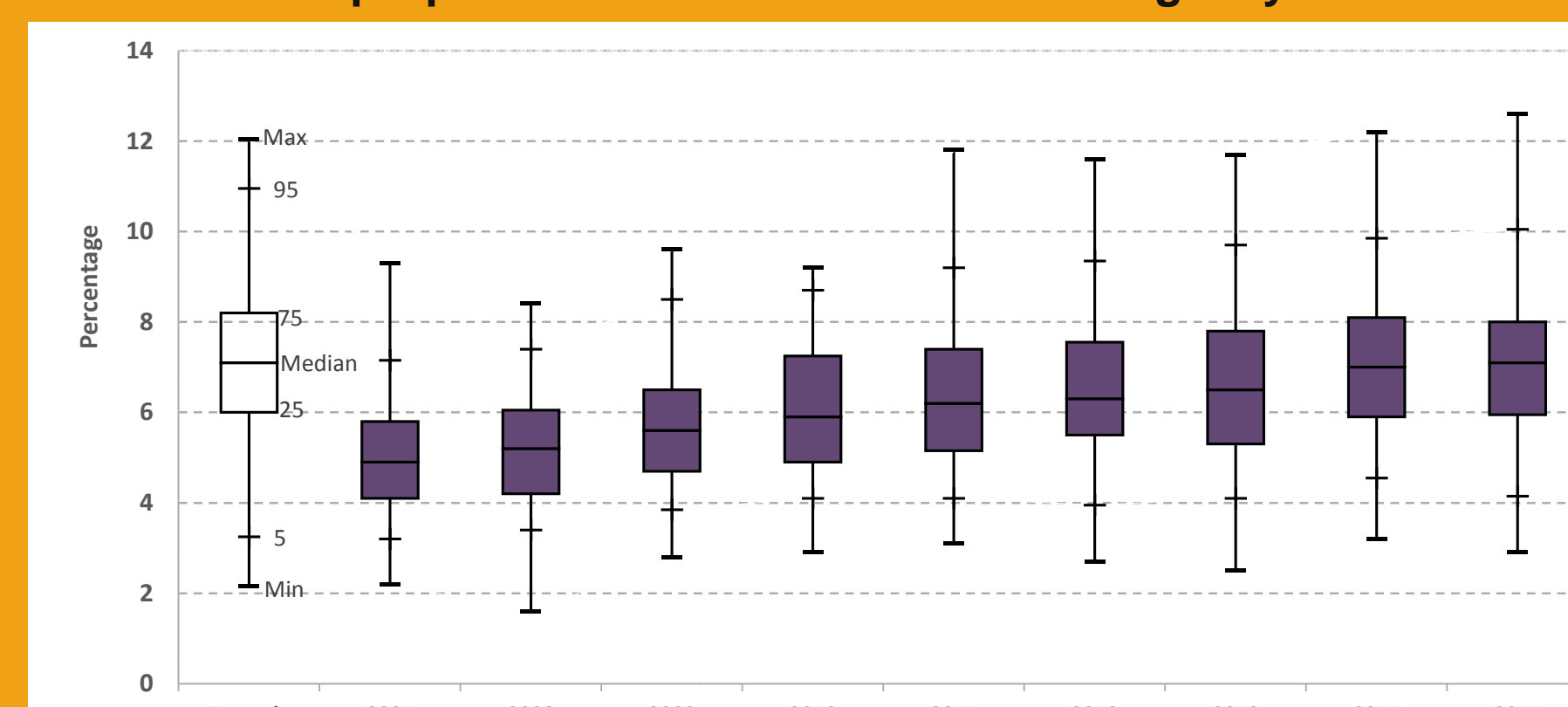
	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Max - Min (Range)	8.0	9.2	10.3	10.0	9.1	9.9	9.2	9.2	8.9	No significant change
95th - 5th Percentile	5.5	5.6	5.7	5.6	5.7	5.8	5.7	5.7	5.6	No significant change
75th - 25th Percentile	2.2	2.0	2.2	2.1	2.0	2.2	2.0	2.0	2.1	No significant change
Median	19.0	18.7	18.8	18.5	18.2	17.9	18.0	17.9	17.7	DECREASING Significant

Figure 4a: Proportion of deaths 3 or more emergency admissions in L90D of life 2015 by CCG



The England average proportion of deaths with three or more emergency admissions in final ninety days of life was 7.1 with a variation in CCG values of 2.9 to 12.6%

Figure 4b: Trend in proportion of deaths 3 or more emergency admissions in L90D of life.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Max - Min (Range)	7.1	6.8	6.8	6.3	8.7	8.9	9.2	9.0	9.7	WIDENING Significant
95th - 5th Percentile	4.0	4.0	4.7	4.6	5.1	5.4	5.6	5.3	5.9	WIDENING Significant
75th - 25th Percentile	1.7	1.9	1.8	2.4	2.3	2.1	2.5	2.2	2.1	No significant change
Median	4.9	5.2	5.6	5.9	6.2	6.3	6.5	7.0	7.1	INCREASING Significant

## DISCUSSION

Providing care at the end of life often involves the interaction of many different care agencies<sup>1</sup>. These indicators will help commissioners and providers to get a clearer picture of the end of life care needs of their local populations in particular hospital usage. There is wide variation this will support the planning and delivery of services and will support local drives towards improving end of life care.

## CONCLUSIONS

- Most patients would prefer to spend less time in hospital and there may also be opportunities for cost savings.
- Large geographical differences in hospital use in the last days of life are found and may reflect demographics and/or quality and level of community end of life care provision.
- Comparisons of services and funding in 'outlier' areas could reveal models of high quality care.

## ACKNOWLEDGEMENTS

NHS Digital: Hospital Episode Statistics; Office for National Statistics, UK: Mortality Data

## REFERENCES

1. <https://fingertips.phe.org.uk/profile/end-of-life>

## CONFLICTS OF INTEREST

None