

Carterwood Research

COVID-19 care home impact by region

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Key findings

Significant variation in COVID-19 mortality rate by local authority and region

1. The overall average mortality rate per 1,000 occupied beds is 32 (3.15%) in England and Wales
2. Wales has three of the top five local authorities with lowest numbers of deaths per 1,000 occupied beds
3. The North East has highest numbers of deaths per 1,000 occupied beds
4. London affected in line with our expectations, but less severely than media portrayals

Impact of COVID-19 relative to number of cases

1. 8 local authorities had significantly more care home deaths than expected
2. 5 local authorities had significantly less care home deaths than expected

Mortality rate by local authority

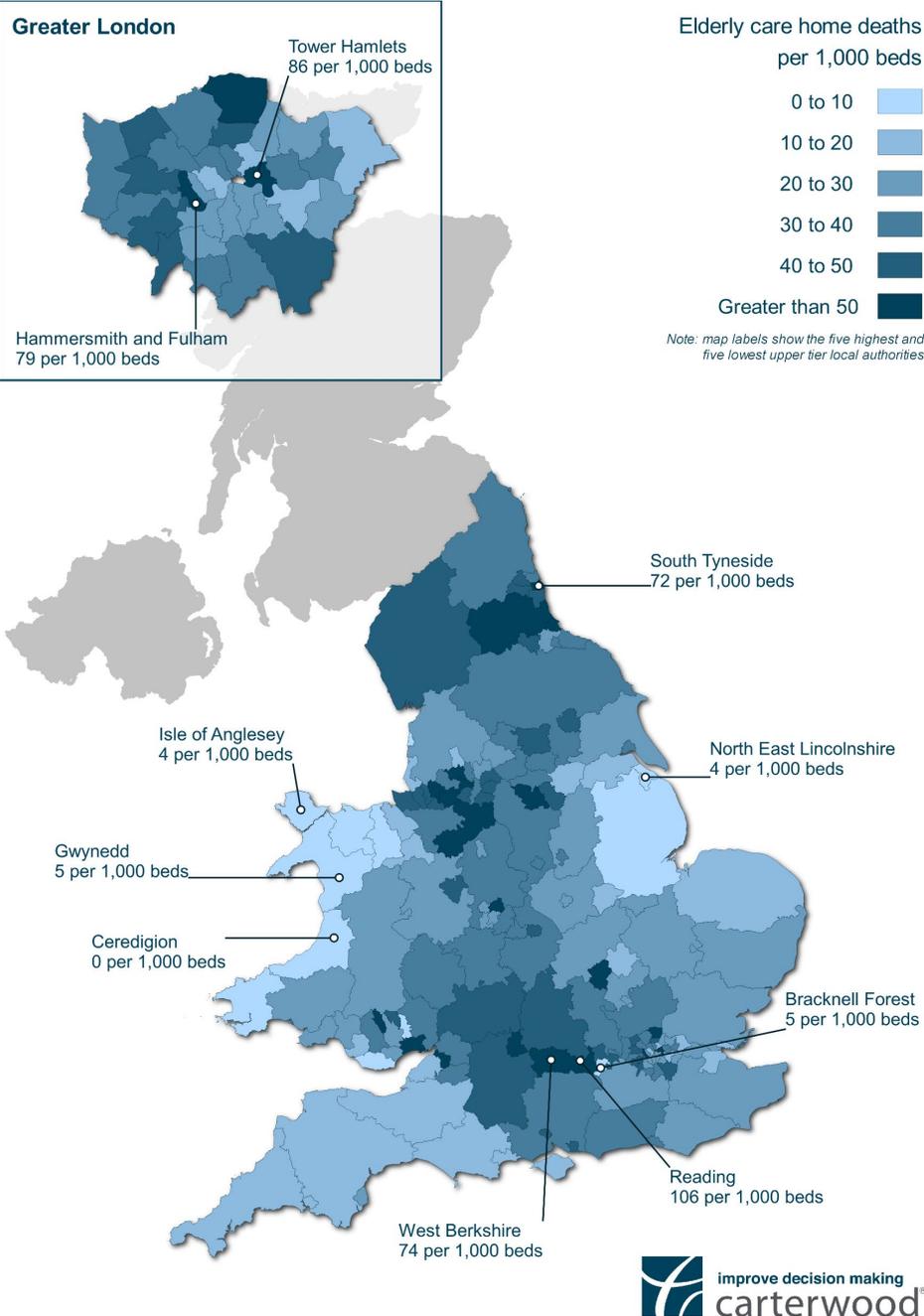
Of the 171 local authorities, 32 have significantly higher than average mortality rates and 30 have significantly lower than average mortality rates.

Highest mortality rates

Four of the five authorities with the highest number of deaths per 1,000 occupied beds are located in the South East or Greater London – Reading (106), Tower Hamlets (86), Hammersmith & Fulham (79) and Berkshire (74). South Tyneside in the North East had the 5th highest number of deaths per thousand (72).

Lowest mortality rates

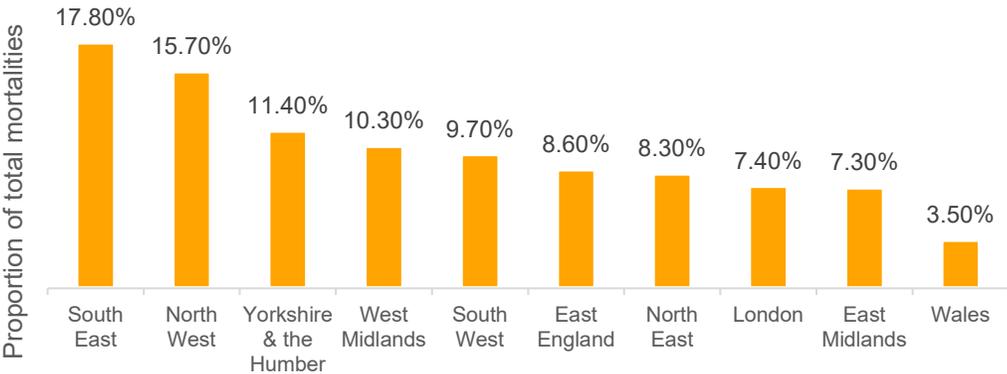
Of the five local authorities with the lowest numbers of deaths per 1,000 occupied beds, three are in Wales - Ceredigion (0), Anglesey (4) and Gwynedd (5). The other two are North East Lincolnshire (4) and Bracknell Forest (5).



COVID-19 care home mortalities by region

Proportion of COVID-19 care home mortalities

- The **South East** has the largest proportion (17.8%) of COVID-related care home mortalities
- **Wales** has the smallest proportion (3.5%) of COVID-related care home mortalities



Mortality rate per 1,000 beds

- The **North East** has the highest COVID-related care home mortality rate at 45 per 1,000 occupied beds
- **Wales** has the lowest COVID-related care home mortality rate at 20 per 1,000 occupied beds



Impact of COVID-19 relative to number of cases

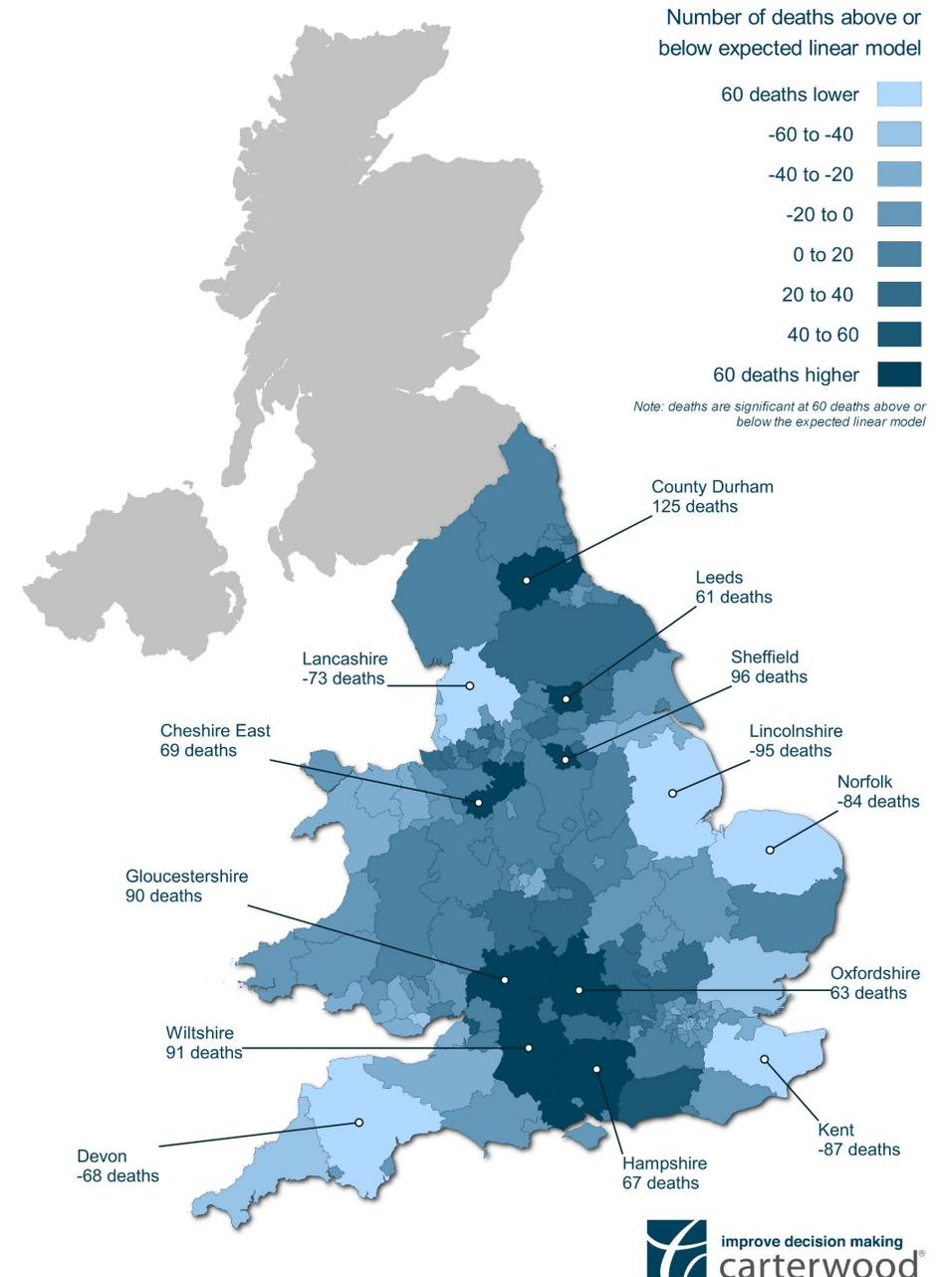
We developed a multiple linear regression model that calculated predicted deaths when the number of lab-confirmed cases of COVID-19 in the local population is taken into account. This enabled a comparison between this figure and the actual deaths reported, highlighting local authorities where care homes have experienced significantly higher or lower mortalities than we would expect.

Local authorities with higher than expected mortalities

Rank	Local authority	Number of deaths above model prediction
1	County Durham	+125
2	Sheffield	+96
3	Wiltshire	+91
4	Gloucestershire	+90
5	Cheshire East	+69
6	Hampshire	+67
7	Oxfordshire	+63
8	Leeds	+61

Local authorities with lower than expected mortalities

Rank	Local authority	Number of deaths above model prediction
1	Lincolnshire	-95
2	Kent	-87
3	Norfolk	-84
4	Lancashire	-73
5	Devon	-68



Factors affecting mortality rates

It's clear that a diverse range of factors affect the impact of COVID-19 on care homes in any given local authority. However, it is likely that the following factors, among others, played a part:

- the extent to which PPE was or was not available
- the numbers of residents transferring to care homes from hospital
- the rate at which operators isolated their homes and residents
- the sheer misfortune of having one person with COVID come into the home at a time when the impact of the virus was not well-understood and awareness nationally was low

High-level methodology

Three datasets have been used in this early stage of the analysis:

- The total number of elderly care home beds taken from the “A-Z elderly” schema maintained by Carterwood; Publicly available data from the Office for National Statistics on the number of deaths in care homes notified to the Care Quality Commission England. The data range used was from the 10 April 2020 to 29 May 2020 and was available at the upper tier local authority level with 149 areas;
- Publicly available data from the Welsh Government on the number of deaths in care homes notified to the Care Inspectorate Wales. The data range used was from the 10 April 2020 to 29 May 2020 and was available at local authority level with 22 areas;
- Cases of COVID-19 were collected from ONS for England and Public Health Wales. These are lab-confirmed positive cases of COVID-19 in the entire population and are aggregated to the upper local authority area. The data range was trimmed and matched to the range used for both the care home death datasets.

Assumptions:

- We assumed that care homes were operating at 87.3 per cent occupancy rates across England and Wales.
- The ONS data does not distinguish between age and local authority combined and so we applied a single national elderly-adjustment to both Wales and England.

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