

Excess deaths

Report for the City of London

Diana Divajeva | Principal Public Health Analyst
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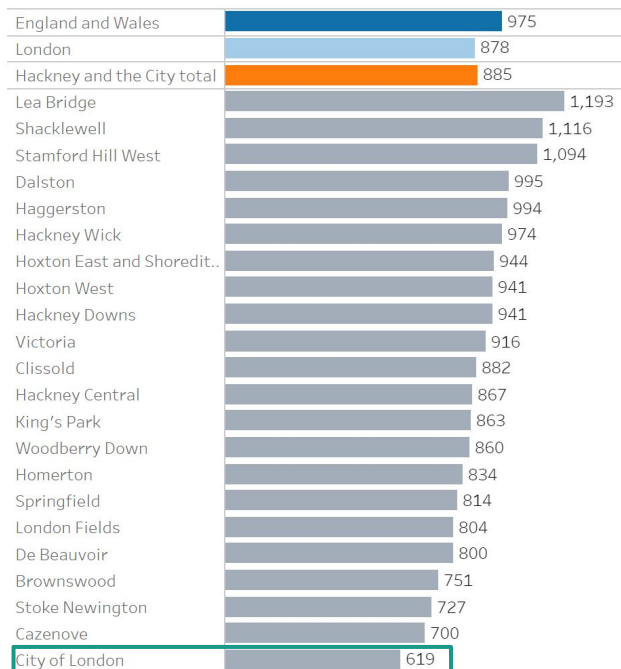


Outline of the presentation

- Mortality rates and the most common causes of death
- Seasonal variation in the number of deaths
- Socio-demographic and area characteristics associated with higher excess mortality from cold and heat
- City of London areas of potentially higher vulnerability
- Summary

Age-standardised mortality rates in the City of London are generally lower than in Hackney, London and England

Age-standardised mortality, all causes of death, rate per 100,000 population, 2015-2020



Source: NHS Digital, Primary Care Mortality Dataset

- Age-standardised mortality rate (ASMR) helps to compare and understand mortality patterns across areas with different population structures.
- The data from the past six years show that all-cause **ASMR in the City of London is consistently lower** than rates in Hackney and City combined, London and England averages.
- **Cancer was the most common underlying cause of death**, accounting for almost 30% of all deaths in the period between 2015 and 2022 quarter 2.

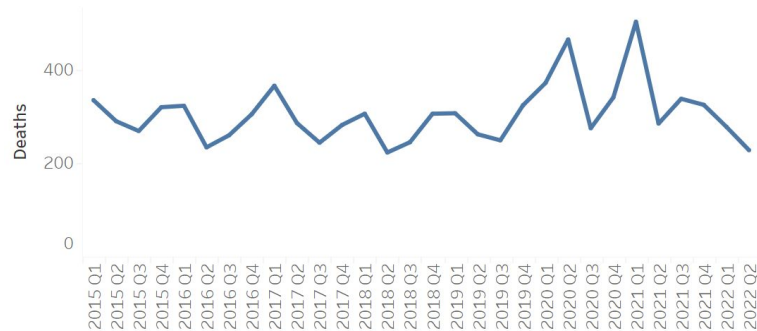
Proportion of deaths by cause, City of London, 2015 Q1 - 2022 Q2



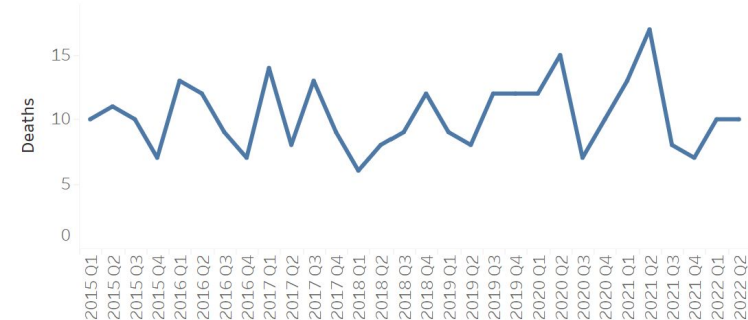
There is a seasonality in mortality patterns whereby more deaths tend to occur during winter season

- The seasonal variations in the number of deaths can be clearly seen in the top right chart (deaths in City and Hackney combined), whereby **more deaths occur during the cold weather season** (Q1 is January-March, Q2 - April-June and so on).
- **Due to the relatively small number** of residents - and, in turn, deaths - this **pattern is not as clear in the City of London** making it difficult to calculate excess winter deaths.
- Regardless the strength of evidence around seasonal variation in mortality, brought by the small numbers in the City of London, **the risk associated with cold weather remains.**

Variation in the number of deaths, all causes, City and Hackney



Variation in the number of deaths, all causes, City of London

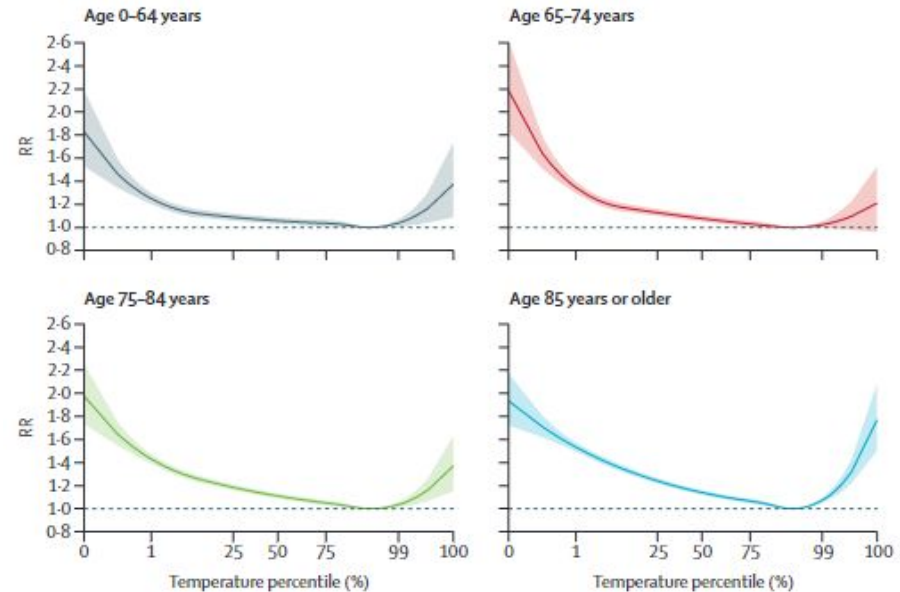


Source: NHS Digital, Primary Care Mortality Dataset. Please note: the two highest peaks in the charts correspond to COVID waves prior to mass vaccination campaign; overall mortality rates are now comparable to pre-pandemic rates.

The risk of dying, attributable to both cold and hot temperatures, varies by socio-demographic and area characteristics

- A recent study looking at the **characteristics of people and places in relation to mortality from heat and cold** found that:
 - Excess deaths from cold: were higher in more **deprived areas**;
 - Excess deaths from heat were related to deprivation to some degree but they were also higher in highly **urbanised areas**;
 - Risk of both heat and cold-related deaths increased with **age**.
- The chart on the right shows relative **risk of dying by age group versus temperature percentile**, where lower percentile means colder temperature.

Index of Multiple Deprivation 2019, quintiles by City of London LSOA

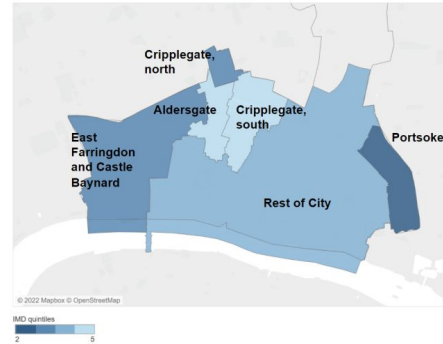


Source: [Gasparrini A, Masselot P, Scortichini M, et al. Small-area assessment of temperature-related mortality risks in England and Wales: a case time series analysis. Lancet Planet Health 2022; 6: e557-64.](#)

There are several areas of higher risk associated with excess deaths from cold or hot temperatures in the City of London

- The **most deprived** Lower Super Output Area (LSOA) in the City of London is **Portoken** (2nd quintile), following East Farringdon and Cripplegate North (3rd quintile).
- **Cripplegate North** is also one of the most densely populated areas and has a relatively large population over the age of 65.
- **Aldersgate and Cripplegate South** are the least deprived areas (5th quintile), but like Cripplegate North, they are relatively densely populated and have a relatively high number of residents over the age of 65.

Index of Multiple Deprivation 2019, quintiles by City of London LSOA



Population density by City of London LSOA, 2020



[Click here for the age profiles by City of London LSOA](#)

Sources: [ONS, Lower layer Super Output Area population density](#), [Ministry of Housing, Communities & Local Government, Indices of Deprivation 2019](#), ONS, mid-year population estimates 2021.

In summary

- The mortality rates in the City of London are lower compared with Hackney, London and England rates.
- It is difficult to calculate excess winter deaths from the existing City of London data due to the small numbers, resulting in less pronounced seasonal variations in mortality rates.
- Several characteristics are associated with excess winter mortality, including area deprivation and older age.
- With the high increase in the cost of living and energy prices, more deprived areas in the City might see rising excess winter deaths.
- Hot temperatures are also associated with excess mortality; age, deprivation as well as the level of urbanisation have an impact on the risk of death from heat.
- Currently, much more excess deaths occur during winter season (London annual average is around 5,800 deaths from cold versus around 170 deaths from heat), but with the changing climate the number of excess deaths in the summer months might increase in the coming years.
- It is important to understand the risk factors associated with excess mortality, because this knowledge can inform effective policies.