



Short Communication

Changing suicide trends: A shift in regional disparities across the UK

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ABSTRACT

Background: In 2023, suicide rates in England & Wales reached their highest levels since 1999. Despite changes in legal definitions and registration methods impacting trends, this increase reflects growing individual suffering. International comparisons suggest that while the UK saw a 12 % rise in suicide rates between 1999 and 2020, many other European countries experienced significant declines.

Methods: We used publicly available data from the Office for National Statistics on suicide rates from 1981 to 2023, by sex and geographical region in England & Wales. We conducted descriptive and statistical analyses with the Joinpoint regression programme to identify significant discontinuities in trends in suicide rates.

Results: In 1981, London had the highest suicide rates, but by 2023, it reported the lowest for both sexes, with declines of 51 % for men and 69 % for women. In contrast, the North East and North West now have much higher rates, particularly in men. Several regions have seen little improvement.

Conclusions: There are substantial regional differences in suicide trends in England. These are consistent with known social and economic changes and point to a need for whole of government responses.

1. Introduction

The August 2024 Statistical Bulletin from the Office for National Statistics (ONS) opened with a stark warning. In 2023, suicide rates in England and Wales reached “the highest rate seen since 1999”.¹ For females, whose rates have consistently been much lower than males, one had to look back even further, to 1994, for a higher rate.¹

Inevitably, caution is needed. These data relate to year of registration, not of death, and recorded suicides increased in 2018 following a change in the legal definition. Yet, notwithstanding these caveats, these numbers testify to widespread suffering among those who die from suicide and those left behind.

International comparisons are problematic due to extensive missing data and, especially, differences in reporting, some of which are cultural. So, comparisons of levels should be avoided, but comparing trends over time between countries creates fewer such problems. Data reported to WHO show a 12 % increase between 1999 and 2020 in the United Kingdom (UK) but falls in almost all EU member states for which complete data are available. For example, Spain, Denmark, and Finland, respectively, saw falls of 4 %, 35 %, and 45 %.² The exceptions are Greece and The Netherlands, with 12 % and 4 % increases respectively. The European experience thus indicates that the UK has been, with

Greece (which also experienced deep austerity in the 2010s),³ an outlier over the past two decades (see Figure A in Appendix).⁴

As with all large countries, England has great geographical diversity. During the past few decades, some regions have suffered greatly from deindustrialisation, especially in the north, while London has prospered. Given the well-established association between suicides and economic conditions, we ask whether there are differences in suicide trends in English regions.

2. Methods

We carried out descriptive and statistical analyses of publicly available ONS data on deaths from suicide from 1981 to 2023 in England and Wales, by sex and geographical region. There is considerable year-to-year variation, so it is important not to focus unduly on individual years but to look for underlying trends. Consequently, we used the National Cancer Institute's Joinpoint programme to identify trends and significant discontinuities in them. Briefly, this takes trend data and fits the simplest joinpoint model that the data allow, starting with the minimum number of joinpoints, which is zero where the trend is a straight line, and tests whether adding more joinpoints results in statistically significant improvements in fit. This is achieved using a Monte

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Carlo permutation method. The user specifies the maximum number of joinpoints allowed; we selected four.

We used data on suicides from the ONS online resource by sex for all available years (1981–2023), and each standard region of England. We extracted the central estimates and upper and lower confidence limits, from which we calculated standard errors. We include key findings in the manuscript, with others in the Appendix.

3. Results

In 1981, the highest rates were in London, which remained in this top position for men until 1983 and for women until 1985. In 1981, the rate for men in London was 50 % higher than in the East Midlands, which had the lowest rate, with a similar gap for women between London and the West Midlands. Yet by 2023, London experienced the lowest rate for both sexes (consistently since 2019 for men and 2020 for women), with rates among men over twice as high in the North East than in London and, among women, almost three times as high in the North West. A closer inspection of the trends identified with Joinpoint shows that this reversal was largely due to fairly consistent declines throughout this period in London, of 51 % for men and 69 % for women, not seen elsewhere in the UK (Fig. 1). A few regions saw declines in the early 1990s but little subsequently, while several, including Wales, have seen no sustained improvement over the entire period. The recent worsening is concentrated in a few regions, especially the North East (Fig. 2) and North West (Fig. 3). As with the national data, these figures conceal differences that are only visible in more granular analyses. For example, some communities, such as certain coastal towns, have suffered even more.⁵

4. Discussion

In 1981, London had the highest rates for both men and women, but by 2023, it had the lowest rates, with declines of 51 % for men and 69 % for women. In contrast, regions like the North East and North West now have much higher rates, and some areas, such as coastal towns, have experienced even worse outcomes, reflecting uneven regional trends

across the UK. This short report has many limitations. For example, it does not look at changes by age. The ONS data on suicides by age band.¹ show a change in age distribution that requires further analysis. In brief, in the early 1980s, the highest rates were among those aged over 50. These rates fell from the late 1980s and have remained low, but the decline was slower among those aged over 80. By the beginning of the 1990s, the highest rates were among those in their 30s and 40s but, by the 2010s, the highest rates had shifted to those in their 40s and 50s. Suicides among those in their 20s and 30s peaked in the early 1990s. While we have not explored these data here, by publishing these regional analyses, we hope to prompt further research into these concerning trends.

Given what is already known about the risk factors for suicide, further research could include a more granular analysis, including characterisation of the socioeconomic situation of those dying from suicide. A more detailed analysis could also look at the impact of different policies that fall within the umbrella of austerity, such as benefit sanctions, reduction in community services, the so-called “bedroom tax” (where those in social housing had benefits reduced if they had a spare room),⁶ and cuts to support for families with more than two children.⁷ It could also look specifically at the impact of deindustrialisation and the scale and nature of new forms of work, including the impact of precarious employment, recognising the complex relationship with gender and education.⁸ Comparisons of what happened in Greece and the United Kingdom may be useful, given their shared experience of austerity following the 2008 global banking crisis, given that these two countries have both been economic and epidemiological outliers. Furthermore, future research could undertake focused comparisons of otherwise similar places that have fared better or worse, as well as detailed multimethod studies of places with common characteristics that have suffered the most, such as coastal towns.⁹ These studies could be complemented by research on investment in and delivery of mental health services, noting the marked increase in mental health problems since 2010 linked to austerity.^{10,11}

These changes occurred when the UK was experiencing remarkable social transformations, affecting the livelihoods of each region’s population. In the 1980s, the Midlands and North experienced large-scale

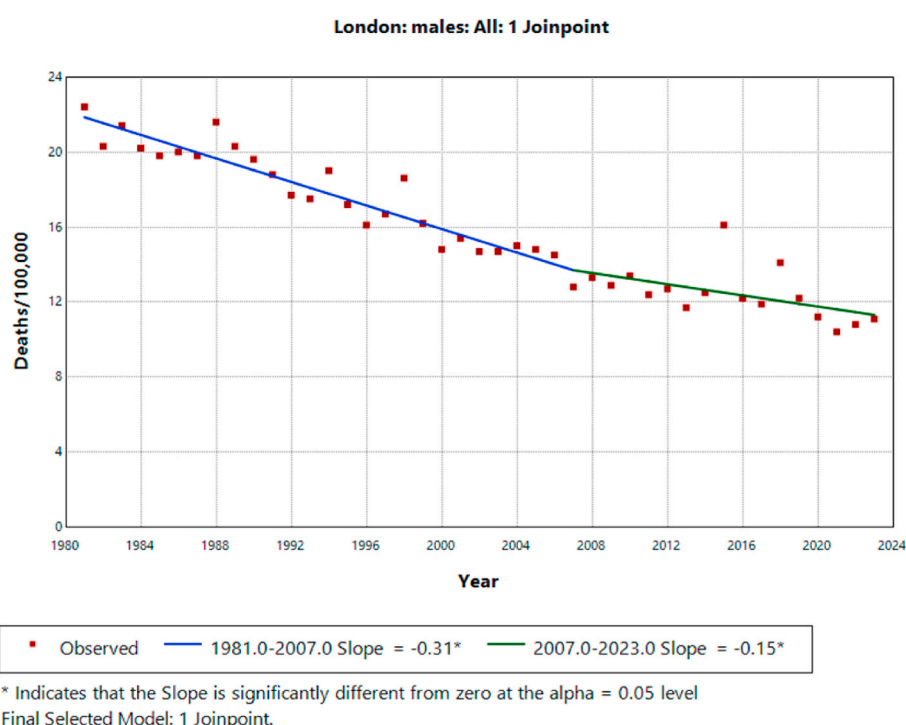


Fig. 1. Death rates from suicide of males in London, 1981–2023.

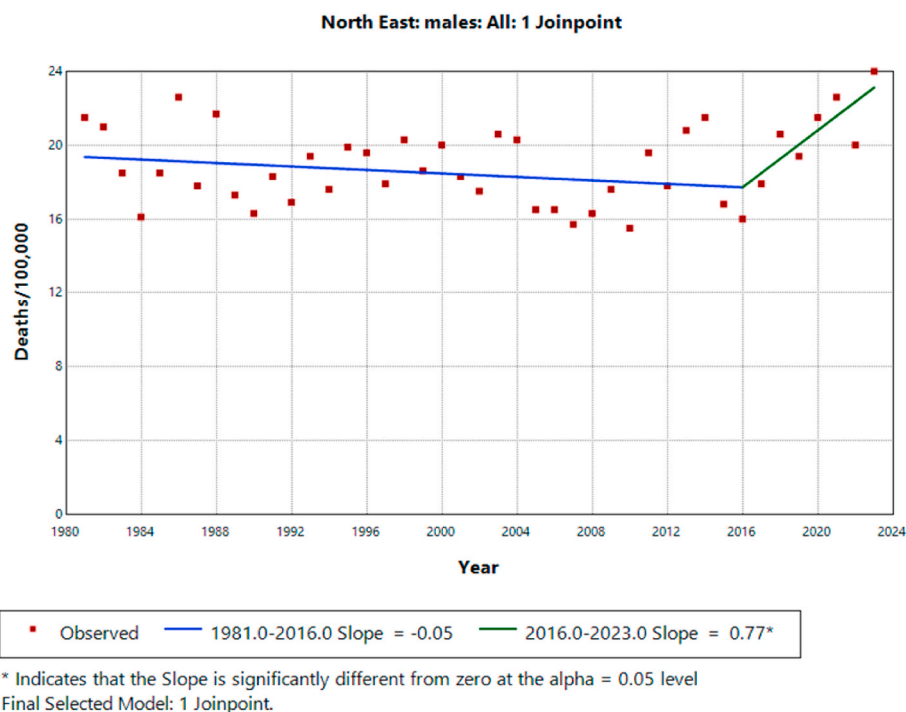


Fig. 2. Death rates from suicide for males, in the North East region, 1981–2021.

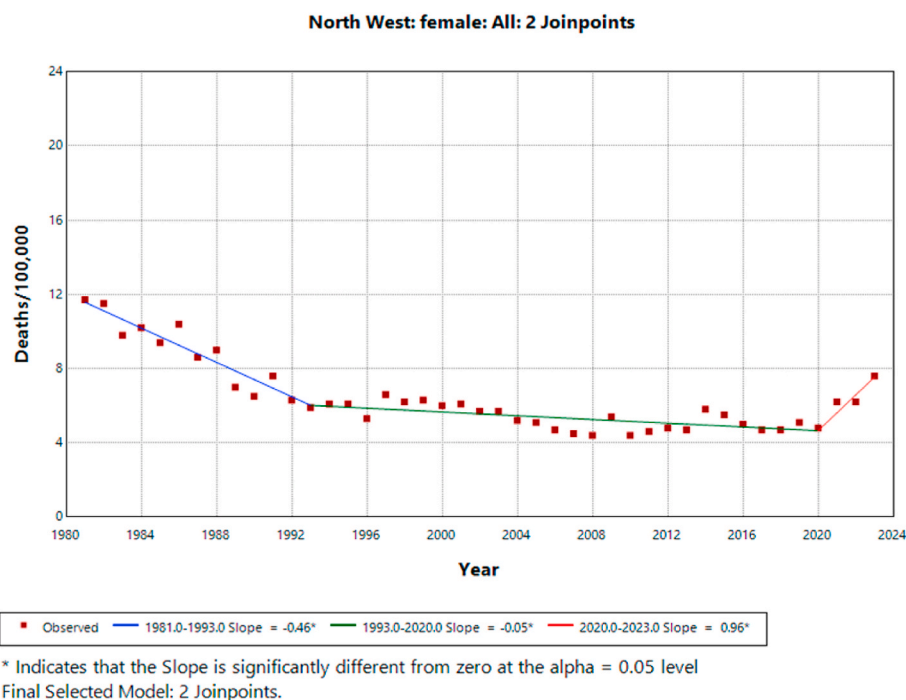


Fig. 3. Death rates from suicide for females, in the North West region, 1981–2021.

deindustrialisation, pre-dating rising “deaths of despair”, including suicides.¹² Meanwhile, the “Big Bang” that deregulated the financial sector injected vast sums into London’s economy, accompanied by extensive gentrification.¹³ Every census taken since 1981 has shown an ever-increasing proportion of the country’s university graduates living in London.

The global financial crisis was followed by austerity. Between 2007 and 2013 the suicide rate in England (all persons) increased from 9 to 10.6/100,000. Subsequently, wages, especially in the public sector,

have lagged behind inflation, and the current ‘real pay squeeze’ has lasted longer than any seen in the 20th century while benefits have been cut. For many people, life has become much harder, while support systems they once might have relied on, especially in health, education, and youth services, have struggled to provide support.

Taken together, these policies have exacerbated existing regional inequalities. Now, the United Kingdom has a larger economic gap between its capital and other large cities than in any comparable European country. These problems are well known, partly because they have

important political consequences. The percentage of those voting who chose Leave in the 2016 Brexit referendum was greatest in those places that had experienced the greatest increases in suicides and drug-related deaths in the preceding years, and which transferred their allegiance, albeit transiently, to the Conservatives in 2019.

Taken together, these findings raise important questions for the newly elected Labour government that has inherited a large “black hole” in the public finances.¹⁴ The regional differences highlight the importance of policies that achieve real “levelling up”, and not those pursued by recent Conservative governments where, as the Institute for Government has noted, “repeated central government failures have thwarted efforts to reduce regional inequalities”.¹⁵ The new government must also take forward the previous government’s 5-year suicide prevention strategy, where necessary, with additional funding that recognises how mental health services are now approaching collapse in many parts of the UK. As that strategy notes, action is needed in many sectors, addressing the social determinants of health.¹⁶ However, there is also a clear synergy with its commitment to promote economic well-being. While all European countries experience job losses during recessions, some, such as Sweden, have succeeded in breaking the link between unemployment and suicide.¹⁷ Others, such as Spain, historically did not. This difference has been explained, in part, by whether governments invested in measures that gave hope to those at risk of job loss, such as information, retraining, and support for those with disabilities. Even a relatively modest investment in these “active labour market” policies had a large impact.

Given the state of the public finances, there is a risk that the Labour government might emulate the Coalition government in 2010, imposing a new variant of austerity. History tells us that this would not only be bad for the economy but also for health.¹⁸

Author statements

Ethical approval

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Competing interests

None declared.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.puhe.2024.11.018>.

References

- Office for National Statistics. Suicides in England and Wales: 2023 registrations. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/suicidesintheunitedkingdom/2023#suicide-patterns-by-age>. Accessed September 3, 2024.
- WHO Regional Office Europe. European health information gateway. <https://gateway.euro.who.int/en/hfa-explorer/>. Accessed September 3, 2024.
- Kentikelenis A, Karanikolos M, Reeves A, McKee M, Stuckler D. Greece’s health crisis: from austerity to denialism. *Lancet*. Feb 22 2014;383(9918):748–753. [https://doi.org/10.1016/s0140-6736\(13\)62291-6](https://doi.org/10.1016/s0140-6736(13)62291-6).
- Eurostat. Suicide death rate by age group. <https://ec.europa.eu/eurostat/databrowser/view/tps00202/default/table?lang=en>. Accessed October 7, 2024.
- Whitty C. Chief Medical Officer’s annual report 2021: health in coastal communities. <https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2021-health-in-coastal-communities>. Accessed September 3, 2024.
- Kim C, Teo C, Nielsen A, Chum A. What are the mental health consequences of austerity measures in public housing? A quasi-experimental study. *J Epidemiol Community Health*. Jun 15 2022. <https://doi.org/10.1136/jech-2021-218324>.
- Barr B, Taylor-Robinson D, Scott-Samuel A, McKee M, Stuckler D. Suicides associated with the 2008–10 economic recession in England: time trend analysis. *BMJ*. Aug 13 2012;345, e5142. <https://doi.org/10.1136/bmj.e5142>.
- Nosrati E, Kang-Brown J, Ash M, McKee M, Marmot M, King LP. Economic decline, incarceration, and mortality from drug use disorders in the USA between 1983 and 2014: an observational analysis. *Lancet Public Health*. Jul 2019;4(7):e326–e333. [https://doi.org/10.1016/s2468-2667\(19\)30104-5](https://doi.org/10.1016/s2468-2667(19)30104-5).
- Whitty C. Chief medical officer’s annual report 2021 health in coastal communities – summary and recommendations. <https://assets.publishing.service.gov.uk/media/60f98769e90e0703ba3c9f25/cmo-annual-report-2021-health-in-coastal-communities-summary-and-recommendations-accessible.pdf>. Accessed November 16, 2024.
- Zhang A, Gagné T, Walsh D, Ciano A, Proto E, McCartney G. Trends in psychological distress in Great Britain, 1991–2019: evidence from three representative surveys. *J Epidemiol Community Health*. Jul 2023;77(7):468–473. <https://doi.org/10.1136/jech-2022-219660>.
- Barr B, Kinderman P, Whitehead M. Trends in mental health inequalities in England during a period of recession, austerity and welfare reform 2004 to 2013. *Soc Sci Med*. 2015;12/01/2015;147:324–331. <https://doi.org/10.1016/j.socscimed.2015.11.009>.
- Walsh D, McCartney G, Minton J, Parkinson J, Shipton D, Whyte B. Deaths from ‘diseases of despair’ in Britain: comparing suicide, alcohol-related and drug-related mortality for birth cohorts in Scotland, England and Wales, and selected cities. *J Epidemiol Community Health*. Dec 2021;75(12):1195–1201. <https://doi.org/10.1136/jech-2020-216220>.
- Dorling D. Chapter 25: changes in social inequality, 2001–2011. In: Stillwell J, ed. *The Routledge Handbook of Census Resources, Methods and Applications*. 2017: 334–348.
- Clegg A, Corlett A. The Living Standards Outlook 2024. Resolution Foundation. Accessed 3rd September, 2024. <https://www.resolutionfoundation.org/publications/the-living-standards-outlook-2024/>.
- McKee R, Pope T, Coggins M. ‘Levelling up’ from the centre: Six tests for a government serious about reducing regional inequalities. Institute for Government. Accessed 3rd September, 2024. <https://www.instituteforgovernment.org.uk/publication/levelling-up-from-centre>.
- Hiam L, Klaber B, Sowemimo A, Marmot M. NHS and the whole of society must act on social determinants of health for a healthier future. *BMJ*. 2024;385, e079389. <https://doi.org/10.1136/bmj-2024-079389>.
- Reeves A, McKee M, Gunnell D, et al. Economic shocks, resilience, and male suicides in the Great Recession: cross-national analysis of 20 EU countries. *Eur J Publ Health*. Jun 2015;25(3):404–409. <https://doi.org/10.1093/eurpub/cku168>.
- Karanikolos M, Mladovsky P, Cylus J, et al. Financial crisis, austerity, and health in Europe. *Lancet*. Apr 13 2013;381(9874):1323–1331. [https://doi.org/10.1016/s0140-6736\(13\)60102-6](https://doi.org/10.1016/s0140-6736(13)60102-6).