

## THINGS FALL APART: THE BRITISH HEALTH CRISIS, 2010-2020

*Things fall apart; the centre cannot hold;  
Mere anarchy is loosed upon the world,  
The blood-dimmed tide is loosed, and everywhere  
The ceremony of innocence is drowned;  
The best lack all conviction, while the worst  
Are full of passionate intensity.*

Yeats, 1920

### ABSTRACT

- **Background**  
*A very large number of studies have reported a stalling of health improvements in the UK since 2010*
- **Sources of data**  
*Almost all relevant data are produced by the Office for National Statistics and other national statistical agencies*
- **Areas of agreement**  
*There has been a dramatic slowdown in life expectancy and rise in infant mortality in the UK as a whole and England and Wales respectively*
- **Areas of controversy**  
*Many commentators are loath to describe the falls in life expectancy as actual falls or to ascribe blame to the political situation in the UK*
- **Growing points**  
*The UK may have become a sentinel state within Europe which illustrates the adverse effects of political disorganisation and disarray.*
- **Areas timely for developing research.**  
*The excuses politicians used as they tried to avoid responsibility for the multiple crises and their effects need to be better understood. Did politicians mislead or did they simply not understand?*

## INTRODUCTION

One hundred years ago, Yeats wrote that “Things fall apart” in his poem ‘The Second Coming’. Written in response to turmoil across Europe, including in his native Ireland, it has often been invoked in writings about societal decline. In 2016, it seemed particularly apt in the United Kingdom (UK) when, by a small majority, the British population opted for a future outside the European Union (EU), beginning a process that, so far, has created three years of political gridlock in which a barely functioning parliament has been unable to tackle mounting and increasingly severe social, economic, housing and health problems. An analysis published a few months after the referendum found that Yeats’s poem had been quoted more often in the first part of that year than in any of the previous 30.<sup>1</sup>

There is no doubt that the UK has faced many problems in recent years, including political crises and relative economic decline. But are things really falling apart? In this paper, we argue that there is considerable evidence that they are, with profound consequences for the future of the UK. Our assessment is based on an examination of what is happening to the health of the British population. Since the middle of the eighteenth century, the health of the British people has been improving. Yet in recent years infant mortality has risen overall (most markedly in England and Wales), life expectancy fell everywhere in 2015 and appears now to have stalled, health inequalities have widened, and access to healthcare has worsened. History tells us that this should be a matter of great concern. One of the first indicators that a state is failing has been stagnating or worsening health. In the early 1980s, few observers of the USSR believed that it was in decline,<sup>2</sup> but those who studied health data challenged this consensus when they found an unexpected rise in infant mortality.<sup>3</sup> In the 21<sup>st</sup> century, worsening health in the USA has been associated with a loss of faith in traditional institutions.<sup>4</sup>

In the remainder of this paper we review the evidence that causes us so much concern. An explanatory note is required. While aggregate data for the UK are supplied to international agencies, such as the World Health Organisation (WHO) and the Organisation for Economic Co-operation and Development (OECD), the more detailed data used in this paper are often published separately for England, Scotland, Wales, and Northern Ireland.

## A PICTURE OF HEALTH?

From the end of the Second World War, people living in industrialised countries enjoyed sustained and substantial health improvements. This changed in 2010. In some, the pace of improvement slowed markedly and, for certain groups, actually worsened. Several recent analyses have identified the UK as among the worst affected in major industrialised countries; only the USA had a worse record.<sup>5</sup> A very recent study comparing progress in life expectancy in the UK with 22 high income countries, found that while the figure for men in the UK tracked the median in the comparator countries between 1970 and 2010, females followed a similar trajectory but at a lower level, and both diverged downwards from 2011 onwards.<sup>6</sup> In other words, while health has suffered in many countries in recent years, the UK and the USA, both countries that experienced major political shocks in 2016, stand out from the rest.

## MARKERS OF POPULATION HEALTH

### INFANT MORTALITY

The Infant Mortality Rate (IMR) had been improving steadily in England and Wales until 2014, when it went into reverse (Figure 1). Using the most recent data, the Office for National Statistics (ONS) reported that it increased from 3.8 deaths per 1,000 live births in 2016 to 3.9 in 2017.<sup>7</sup> It had fallen to 3.6 in 2014. Annual fluctuations are expected but this is the first time in over a century that it has risen for 3 years in a row.<sup>8</sup> The ONS also reported that each of these annual rises has been statistically significant. Between 2014 and 2017 there were 570 more infant deaths than would have been expected given previous trends.<sup>9</sup>

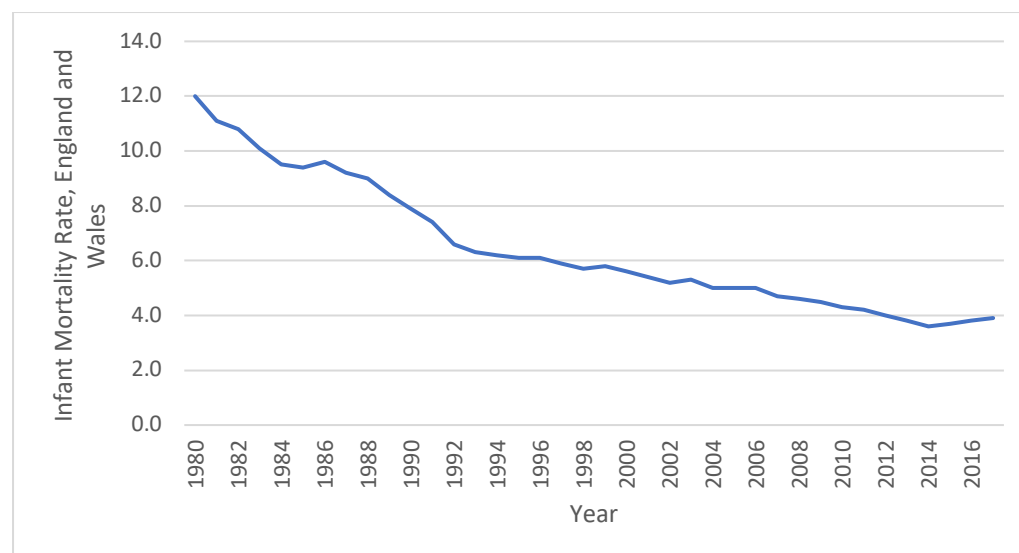


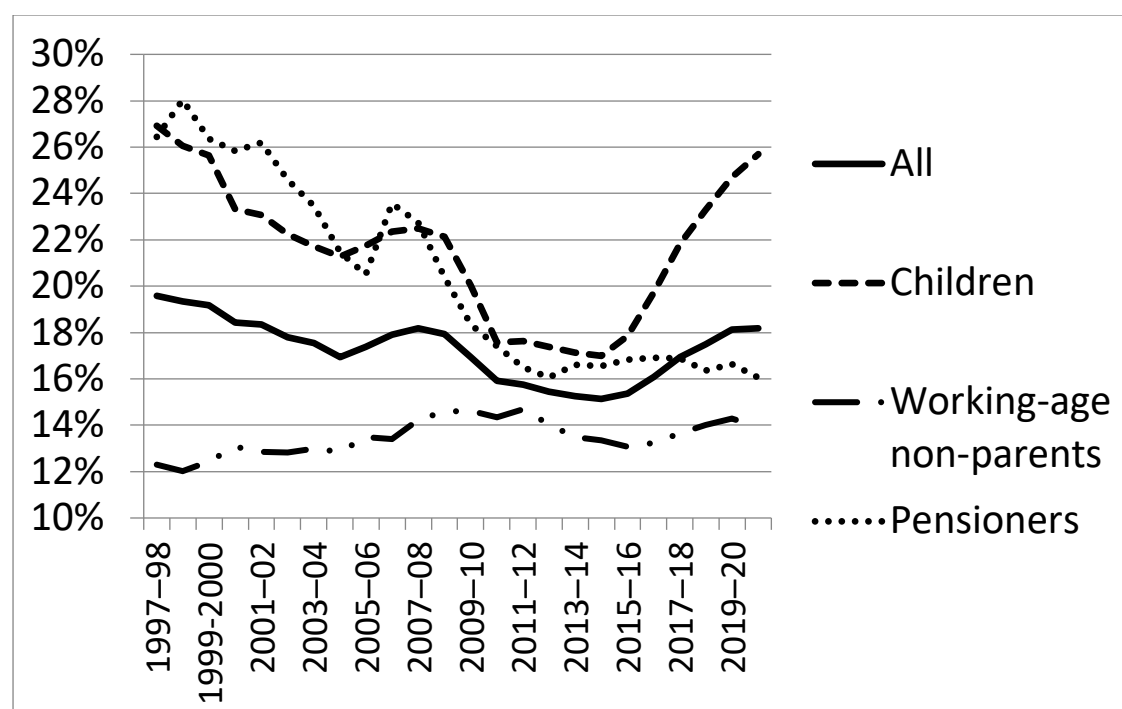
Figure 1: Infant mortality rate, England and Wales, 1980-2017. Source: ONS, Office for National Statistics. Child mortality (death cohort) tables in England and Wales 16 June 2019 2019.

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/childmortalitystatisticschildhoodinfantandperinatalchildhoodinfantandperinatalmortalityinenglandandwales> (accessed 10 December 2019).

A regional analysis is even more concerning as (with the exception of improvements in Scotland, see below) the rise in infant mortality has been higher in the poorer regions and countries of the UK. In the most deprived areas, babies were almost twice as likely to die within their first year of life (5.2 deaths per 1,000 live births) than those in the least deprived areas (2.7 deaths per 1,000 live births) <sup>10</sup>

Approximately one third of the increase in IMR is estimated to be attributable to child poverty.<sup>9</sup> Child poverty has risen markedly in the UK, with over 1 in 4 of all households with children expected to be in poverty by 2020. This is a reversal of the progress made before 2010, when just over 1 in 6 of such households experienced poverty, as assessed by the Institute for Fiscal Studies.<sup>11</sup> This is to a considerable extent a consequence of cuts or freezes in benefits and tax credits affecting households with children in England. In contrast, the Scottish government has concentrated on reducing child poverty rates and infant mortality there fell sharply after 2010. However, the Scottish population comprise only 8% of the population of the UK so this cannot compensate for the deterioration elsewhere in the UK.

Figure 2 Relative poverty rates by household types in the UK



Source: Browne, J. and Hood, A. (2016) Living Standards, Poverty and Inequality in the UK: 2015–16 to 2020–21, Report 114, London: Institute for Fiscal Studies, figure 3.9, <http://www.ifs.org.uk/publications/8171>

Note: Incomes measured before housing costs have been deducted. Relative poverty is below 60% of median household income in the current year. Pensioners are those aged 65 or over. Projection uses the IFS tax and benefit microsimulation model.

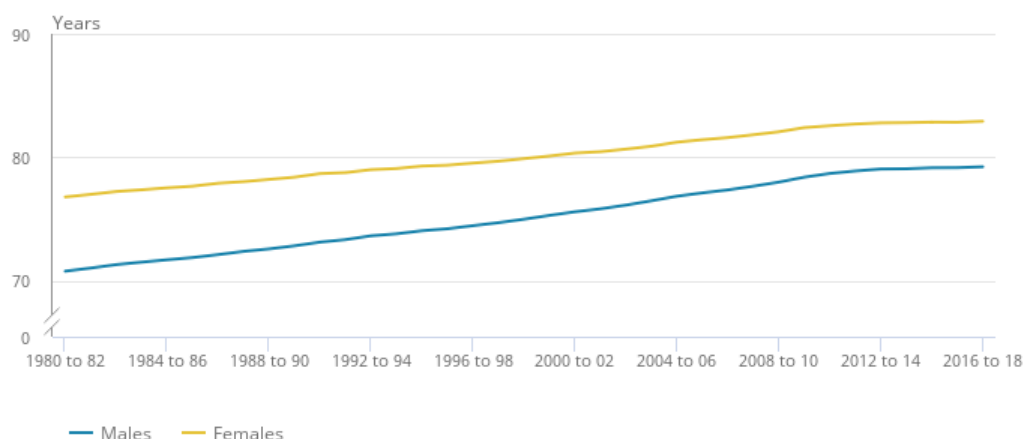
These developments mean that the UK as a whole now has one of the worst IMRs in Western Europe, falling behind the EU average of 3.6 per 1,000, and ranking 25<sup>th</sup> of the 42 countries with available data for 2017.<sup>12</sup> This is a marked change since 1990 when the UK had the seventh best neonatal mortality record in Europe and was even better before that.<sup>13</sup>

## **LIFE EXPECTANCY**

Life expectancy at a given age is one of the most widely used summary measures of population health. These data are published annually by ONS and recent trends in the UK have generated considerable controversy, initially as to whether the falls observed were only a transient phenomenon and, once it was clear that they were not, what the causes were. More detailed analyses reveal that life expectancy at aged 75 and 85 years for women and 85 years for men has actually declined,<sup>14</sup> as it has for women at birth in the most deprived areas of England and Wales.<sup>15</sup> Other analyses that examine the four countries separately show that life expectancy at birth has fallen for men and women in Scotland and Northern Ireland, and recent comparisons of 24 high income countries showed mean improvements in life expectancy in 2012–2016 were smallest among women (<2 weeks/year) in Northern Ireland, Iceland, England and Wales, and the USA and among men (<5 weeks/year) in Iceland, USA, England and Wales, and Scotland.<sup>16</sup> As table 1 in this paper shows life expectancy for the UK as a whole in 2018 remained below the level it had reached in 2014 for both men and women; but only by a few days for both. The falls before 2018 were much larger, with some recovery seen in 2018.

The latest national life tables, with data averaged over three years, show a very slight improvement when the year 2015 is not included, but the slowdown remains apparent (Figure 3),<sup>17</sup> and the data for individual years (Table 1) uses ONS data released in September 2019 that shows that for the UK as a whole life expectancy for both men and women in 2015, 2016, 2017 and 2018 was always below that reported in 2014.<sup>7</sup> A better comparison would be between what life expectancy should have been in 2018 if the historic trend prior to 2010 had continued, but as yet there is no widespread agreement on what that should have been. Figures for 2019 will be released by ONS in September 2020.

Figure 3: Life expectancy at birth for males and females, UK, between 1980 to 1982 and 2016 to 2018.



Source: ONS

Table 1: Life expectancy at birth for males and females, 2014 and 2018.

	Life Expectancy at birth				Change 2014-2018			
	2014		2018		Years		Days of life	
	Men	Women	Men	Women	Men	Women	Men	Women
England	79.51	83.23	79.55	83.20	0.04	-0.03	15	-11
Northern Ireland	78.61	82.38	78.84	82.44	0.23	0.06	84	22
Scotland	77.32	81.34	77.05	81.01	-0.27	-0.33	-99	-121
Wales	78.79	82.61	78.23	82.19	-0.56	-0.42	-205	-153
UK	79.25	82.99	79.24	82.93	-0.01	-0.06	-4	-22

Source:

ONS (2019) Single-year life tables, UK: 1980-2018, released 25 September 2019, for the UK and all its separate countries:

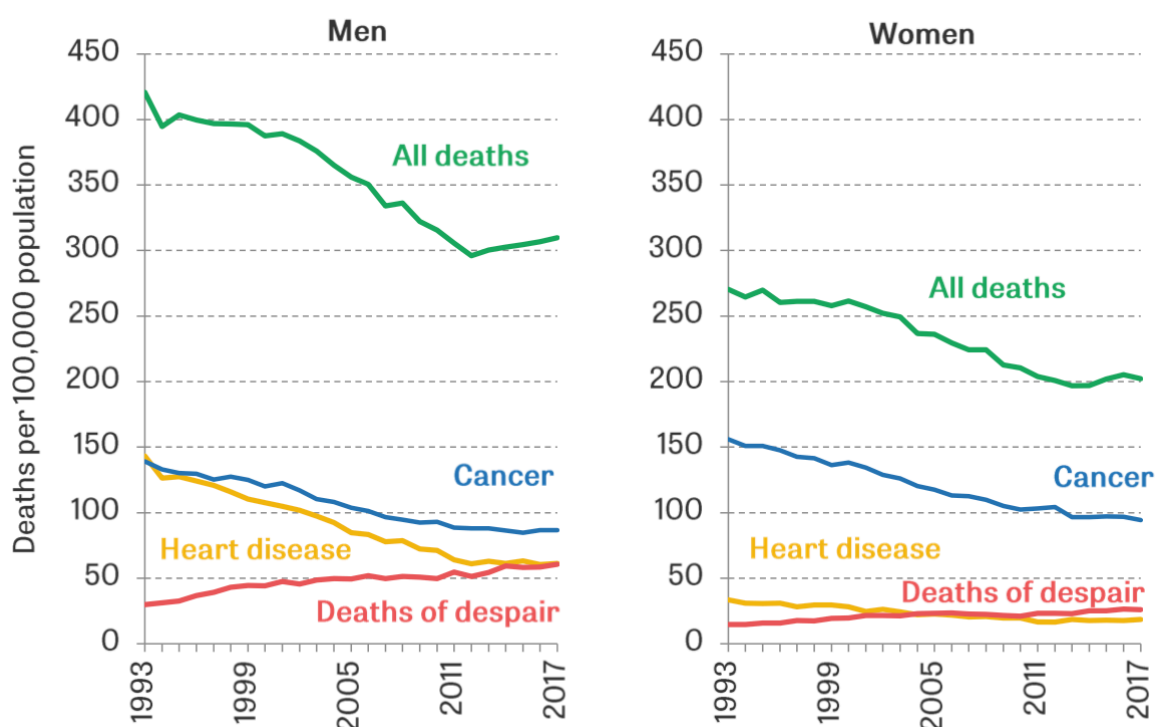
<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/datasets/singleyearlifetableuk1980to2018>

As with infant mortality, the UK has also fallen down the European rankings for life expectancy at birth for men and women combined from 13<sup>th</sup> place in 2009 to 19<sup>th</sup> in 2017.<sup>18</sup> The corresponding ranks for males were from 10<sup>th</sup> in 2009 to 14<sup>th</sup> in 2017, and for females from 21<sup>st</sup> to 22<sup>nd</sup>. Life expectancy at aged 65 years has fallen from 12<sup>th</sup> to 17<sup>th</sup>, males from 8<sup>th</sup> to 11<sup>th</sup>, and females from 17<sup>th</sup> to 21<sup>st</sup>. Hardly any of this fall in the ranking for the UK in life expectancy is due to the rise in infant mortality as, thankfully, infant mortality rates, although rising, remain low enough not to significantly influence overall life expectancy. The falls in UK life expectancy seen since 2014 for the population as a whole, and early for elderly women are almost entirely due to rising mortality rates in old age. However, rising mortality at younger adult ages from some causes has also played a part, as we now describe.

## DEATHS OF DESPAIR

Case and Deaton, writing about the USA, coined the term ‘deaths of despair’ due to drug and alcohol overdoses, suicides, and alcohol-related liver disease.<sup>19</sup> They described this phenomenon as ‘unique’ to the USA, offsetting reductions in deaths from other causes.<sup>19,20</sup> It is now apparent that the UK is also affected.<sup>21</sup> While deaths from cancer and heart disease in England have fallen between 1993 to 2017, deaths of despair have increased, contributing to a rise in all-cause mortality in those aged 45-54 years.

Figure 4: Middle-age mortality, aged 45-54, in England 1993-2017.



Source: Joyce and Xu 2019. Note: Authors' use ONS mortality data, and Case and Deaton's 2015 and 2017 classification of 'deaths of despair'

While it is difficult to ascertain the numbers of people who are homeless and ‘rough sleeping’ precisely, it is clear that deaths among them have risen substantially. According to the government’s own statistics, there has been a dramatic upsurge in rough sleeping since 2010: 4,677 people were found sleeping rough on a single night in autumn 2018, 2,909 (165%) more than autumn 2010.<sup>22</sup> An estimated 726 people who were homeless died in

2018—the highest year-to-year increase since the ONS time series began, a rise in one year of 22%.<sup>23</sup> Alarming, 2 in 5 of these deaths were due to drug poisoning (294 deaths), an increase of 55% since 2017. These figures are likely to be underestimates due to the narrow definition of homelessness and the existence of ‘hidden homelessness’.<sup>24</sup> Poor access to health care is also emerging as a major issue for people who often find themselves homeless, with a recent analysis of hospitalisation records finding that nearly 1 in 3 deaths of people who are homeless were due to causes amenable to timely, effective healthcare.<sup>25</sup> In more affluent English cities, such as Oxford, deaths occurring while homeless became the main reason why mortality rates were higher than the national average; deaths while homeless explained the majority of geographical variations in mortality in the city by 2016.<sup>26</sup> In one electoral ward in Oxford, 88% of all deaths in 2014-2016 at ages under 65 were of people who were homeless. This was the highest proportion since comparisons began in the 1990s and was the highest number of homeless deaths in Oxford ever recorded.

Finally, mortality rates have also risen among young people aged 20 to 24 years in the UK between 2013 and 2016.<sup>27</sup>

## HEALTH INEQUALITIES

*The UK is the world's fifth largest economy, it contains many areas of immense wealth... It thus seems patently unjust and contrary to British values that so many people are living in poverty*

- UN Special Rapporteur, Professor Philip Aston<sup>28</sup>

Health inequalities have widened in the UK. The gap in life expectancy between the most affluent and most deprived increased between 2001 and 2016, and since 2011, female life expectancy has not only stalled in many areas (and fallen in the UK overall) but has reversed in the 3 most deprived deciles.<sup>29</sup> Deaths from cardiovascular causes, alcohol and drug misuse among 25 to 44 year olds have risen in the north compared to the south.<sup>30</sup> However, within the south, deaths have risen in more deprived wards of otherwise affluent cities, as the example given for Oxford above illustrates where health inequalities within the city have widened considerably in recent years to reach their widest for at least thirty years.<sup>26</sup> The same is the case in London, Bristol and probably smaller southern English cities.



## **A VICIOUS CYCLE?**

Many aspects of the worsening health described above have been linked to austerity. Since 2010 funding for the NHS has failed to keep pace with demand, and fallen considerably behind previous levels, even when compared to the Conservative government of 1978-79 to 1996-97, and well below the average of the last 60 years.<sup>31</sup> The UK has also fallen behind on health care capital spending, resulting in a fall of 3% in its value from 2000 to 2017, while this has risen in most other European countries.<sup>32</sup>

While this has, ultimately, been a political choice, a country facing economic decline faces constraints on the choices it can make. There is now extensive evidence that improved health of individuals and populations contributed to economic growth, through mechanisms such as increased labour force participation and productivity.<sup>33</sup> Conversely, worse health risks creating a downward spiral. A recent WHO Health Equity status report notes how: '...a 50% reduction in inequities in life expectancy between social groups would provide monetized benefits to countries ranging from 0.3% to 4.3% of gross domestic product (GDP)'.<sup>34</sup>

There is also growing recognition that worsening health threatens social cohesion,<sup>4,35</sup> so the finding, from the European Quality of Life Surveys results where, in 2016, 29% of UK residents felt there was 'a lot of tension' between the poor and rich, compared to 17% in 2007 is especially concerning.<sup>36</sup>

## **A HOSTILE ENVIRONMENT**

There are widespread concerns that the political discourse in the UK since 2016 has undermined social cohesion, with large increases in reports of racially motivated incidents. One manifestation of this discourse is the way in which politicians have spoken about migrants. In 2011, future Prime Minister, then Home Secretary, Theresa May declared her plan to create a 'really hostile environment for illegal immigrants'.<sup>37</sup> At least since the early 1970s, mainstream politicians had avoided words such as these.

The growth of xenophobia has had consequences in many sectors, but the NHS has been especially affected, for example with increasing racial abuse directed at ethnic minority healthcare workers. It has impact especially severely on some patients seeking NHS secondary care, such as an undocumented migrant or a person who is homeless, who must

now pay upfront the full cost of their healthcare or face refusal of treatment if they cannot prove entitlement.<sup>38</sup> As a result, the NHS is now regressing in its commitment to Universal Health Coverage.<sup>39</sup>

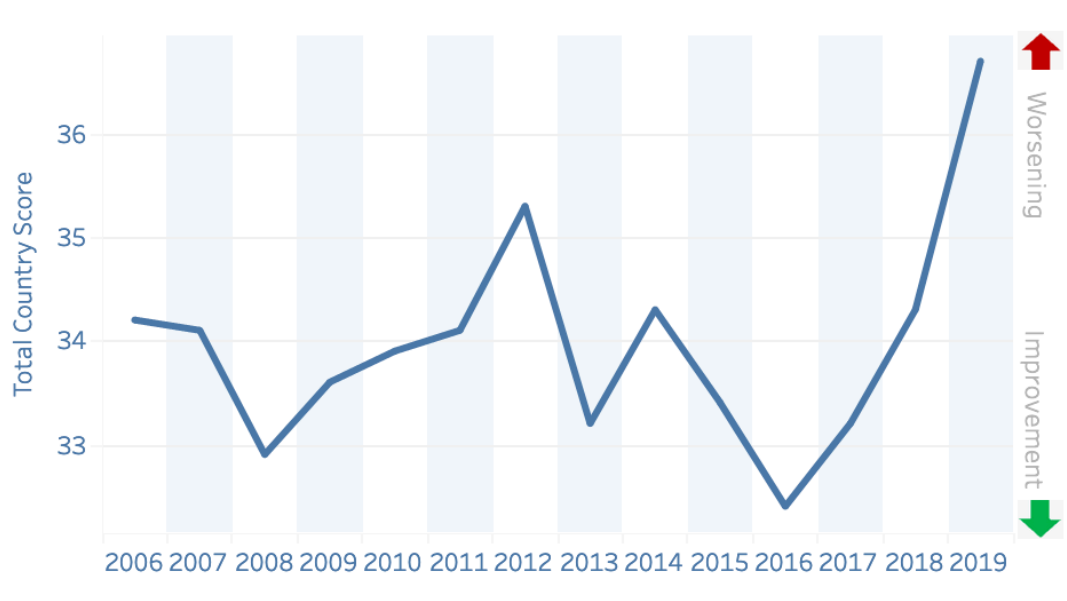
The negative consequences of these restrictive measures have been widely documented, from cancer patients refused treatment,<sup>40</sup> mothers going without antenatal care, the impact on healthcare workers themselves,<sup>41</sup> and the Windrush scandal, where people fully entitled to care, some who had worked many years in the NHS, lacked necessary documentation.<sup>42</sup> Although NHS England guidance is clear that anyone in England can register and consult with a GP without charge, research shows this is far from the case. The most recent data from the charity Doctors of the World UK found almost one fifth of attempts to register patients were wrongly refused, with lack of proof of ID or address the main reason.<sup>43</sup> Such barriers disproportionately affect vulnerable groups, and these findings are echoed by research exploring the experience of homeless people, some of whom are now being denied access to both primary care, and mainstream services.<sup>44</sup> Given one third of deaths among the UK homeless are could have been prevented with treatment,<sup>25</sup> these barriers to healthcare are extremely concerning.

## **DOES THE UK RISK BECOMING A FAILED STATE?**

If worsening health is an early sign of national decline and, ultimately, crisis, as it was in the USSR, then the UK has problems. Life expectancy is stagnating and, for some, worsening, infant deaths are rising, and the UK is joining the USA in experiencing an upsurge in 'deaths of despair'. And there are many other worrying signs. In 2016, the WHO declared the UK had eliminated measles but revoked this assessment in August 2019.<sup>45</sup> It is now clear that this is, in large part, a consequence of the ill-fated 2013 health system reorganisation in England, which fragmented public health capacity.

This bleak assessment is supported by the US research organisation Fund for Peace. Its Fragile States Index (FSI) calculates a score of fragility for all UN member countries with sufficient data.<sup>46</sup> In 2019, the UK was one of 5 countries of 178 that deteriorated most, along with Venezuela, Brazil, Nicaragua and Togo.<sup>46</sup> Figure 5 shows the UK trajectory since 2006—the higher the score, the more fragile the state, the score can rise to a maximum of 120 for a completely failed state.

Figure 5: Overall trend, UK, 2006-2019. Source: Fragile State Index



Prior to the May 2015 general election, when the Conservatives won an outright majority, Ipsos Mori reported the top 3 issues voters reported as influencing their voting decision were the NHS (47%), the economy (35%) and education (24%).<sup>47</sup> Asylum and immigration was 5<sup>th</sup> at 19%, and Europe/EU did not feature (at 7% it was just below their 8% cut-off line). A national poll taken just before the referendum on 23<sup>rd</sup> June 2016, put immigration as the main political issue, at 48%, now above NHS/hospitals/healthcare which had fallen in perceived importance to 37%.<sup>48</sup> These changes are captured in the index's marker of cohesion, entitled 'group grievance', which 'focuses on division and schisms between different groups in society', where the UK score increased from 4.1 (maximum 10, with 10 being worst) in 2010 to 6.4 in 2019. This indicator.

As we write, in November 2019, the UK once again faces a general election (its third in four years). This is taking place against a backdrop of a criminal investigation of 'Vote Leave', in which the Prime Minister played a major role, reports of suppression of a report describing Russian interference in UK politics, and concerns about whether electoral law is fit for purpose.<sup>49</sup> Given these concerns, the failing health outcomes, and deteriorating position internationally, at what point would the UK be considered a failed state?

## CONCLUSION

One of the primary responsibilities of a government is to protect its population, whether from external aggression or from disease. Since 2010, successive UK governments have clearly failed in their duty. As history shows, deteriorating health is often the first sign of an impending societal and political crisis. Indeed, this seems to be happening in front of our eyes even now, in the USA, where life expectancy declined in each of the 3 years after 2015.<sup>50</sup> Americans who felt 'left behind' have flocked to Donald Trump, providing a receptive audience for his attacks on the institutions of government.<sup>51</sup> Meanwhile, in the UK, newspapers pillory those same institutions, such as parliament and the judiciary, labelling them as "enemies of the people".<sup>52</sup>

Yet many of those who are most receptive to these messages are the victims of policies implemented by the politicians who espouse them. In 2018, the UN special rapporteur on extreme poverty concluded a visit to the UK by saying that "Poverty is a political choice" and that 'Austerity could easily have spared the poor, if the political will had existed to do so'.<sup>28,53</sup> Scotland chose to reduce child poverty and its infant mortality continues to fall, now to a level lower than in England or Wales.

The evidence we have reviewed has convinced us that things are indeed falling apart in the UK. But this is not inevitable. The government could act urgently if it wished to but it must first accept that there is a problem, then implement wide ranging changes to improve health, wealth, and social wellbeing for all, while never forgetting the lessons of history.

## REFERENCES

1. Ballard E. Terror, Brexit and U.S. Election Have Made 2016 the Year of Yeats. 2016. <https://www.wsj.com/articles/terror-brexit-and-u-s-election-have-made-2016-the-year-of-yeats-1471970174> (accessed 31st October 2019).
2. Aron L. Everything You Think You Know About the Collapse of the Soviet Union Is Wrong. 2019. <https://foreignpolicy.com/2011/06/20/everything-you-think-you-know-about-the-collapse-of-the-soviet-union-is-wrong/> (accessed 31st October 2019).
3. McKee M. Commentary: the health crisis in the USSR: looking behind the facade. *International journal of epidemiology* 2006; **35**(6): 1398-9.
4. Bor J. Diverging Life Expectancies and Voting Patterns in the 2016 US Presidential Election. *Am J Public Health* 2017; **107**(10): 1560-2.
5. Office for National Statistics. Changing trends in mortality: an international comparison: 2000 to 2016. 7 August 2018 2018. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/changingtrendsinmortalityaninternationalcomparison/2000to2016> (accessed 11 August 2018).
6. Leon DA, Jdanov DA, Shkolnikov VM. Trends in life expectancy and age-specific mortality in England and Wales, 1970–2016, in comparison with a set of 22 high-income countries: an analysis of vital statistics data. *The Lancet Public Health* 2019; **4**(11): e575-e82.
7. Office for National Statistics. Child and infant mortality in England and Wales: 2017. 17 June 2019 2019. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/childhoodinfantandperinatalmortalityinenglandandwales/2017> (accessed 2 October 2019).
8. Dorling D. Infant Mortality and Social Progress in Britain, 1905-2005. In: Garrett E, Galley C, Shelton N, Woods R, eds. *Infant Mortality: A Continuing Social Problem* A volume to mark the centenary of the 1906 publication of *Infant Mortality: A Social Problem* by George Newman. Aldershot: Ashgate; 2006: 223-8.
9. Taylor-Robinson D, Lai ETC, Wickham S, et al. Assessing the impact of rising child poverty on the unprecedented rise in infant mortality in England, 2000-2017: time trend analysis. *BMJ Open* 2019; **9**(10): e029424.
10. Taylor-Robinson DC, Lai ET, Whitehead M, Barr B. Child health unravelling in UK. *BMJ* 2019; **364**: l963.
11. Dorling D. Do we need economic inequality? 2018. <http://www.dannydorling.org/books/economicinequality/figures-and-tables/figure-7-2.html> (accessed 3 November 2019).
12. Eurostat. Infant mortality rates. 6 June 2019 2019. [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_minfind&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_minfind&lang=en) (accessed 2 October 2019).
13. Office for National Statistics. UK drops in European child mortality rankings. 2019. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/childhealth/articles/ukdropsineuropeanchildmortalityrankings/2017-10-13> (accessed 1st November 2019).
14. Hiam L, Harrison D, McKee M, Dorling D. Why is life expectancy in England and Wales 'stalling'? *Journal of epidemiology and community health* 2018; **72**(5): 404-8.
15. Office for National Statistics. Health state life expectancies by national deprivation deciles, England and Wales: 2015 to 2017. 27 March 2019 2019.

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthinequalities/bulletins/healthstatelifeexpectanciesbyindexofmultipledeprivationimd/2015to2017> (accessed 28 October 2019).

16. Fenton L, Minton J, Ramsay J, et al. Recent adverse mortality trends in Scotland: comparison with other high-income countries. *BMJ Open* 2019; **9**(10): e029936.

17. Office for National Statistics. Single-year life tables, UK: 1980 to 2018. 2019. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/datasets/singleyearlifetablesuk1980to2018> (accessed 1st November 2019).

18. Eurostat. Life expectancy by age and sex. 6 June 2019 2019. [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_mlexpec&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_mlexpec&lang=en) (accessed 28 October 2019).

19. Case A. DA. Mortality and Morbidity in the 21st Century Spring 2017 2017. [https://muse.jhu.edu/article/671752/pdf?casa\\_token=bhG\\_ucDpXQcAAAAA:V0KMLbgIjulqGNMedAEbKWe0EDxixZevy5LjZKylJu\\_DgDugqpbM9Avn9CMpO6GR8ZlvEFtL6hk](https://muse.jhu.edu/article/671752/pdf?casa_token=bhG_ucDpXQcAAAAA:V0KMLbgIjulqGNMedAEbKWe0EDxixZevy5LjZKylJu_DgDugqpbM9Avn9CMpO6GR8ZlvEFtL6hk) (accessed 28 October 2019).

20. Case A, Deaton A. Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences* 2015; **112**(49): 15078-83.

21. Joyce R. XX. Inequalities in the twenty-first century. 14 May 2019 2019. [https://www.ifs.org.uk/inequality/wp-content/uploads/2019/05/The-IFS-Deaton-Review-launch\\_final.pdf](https://www.ifs.org.uk/inequality/wp-content/uploads/2019/05/The-IFS-Deaton-Review-launch_final.pdf) (accessed 28 October 2019).

22. Ministry of Housing CLG. Rough Sleeping Statistics Autumn 2018, England (Revised). 25 February 2019 2019. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/781567/Rough\\_Sleeping\\_Statistics\\_2018\\_release.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/781567/Rough_Sleeping_Statistics_2018_release.pdf) (accessed 2 October 2019).

23. Office for National Statistics. Deaths of homeless people in England and Wales: 2018. 1 October 2019 2019. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsofhomelesspeopleinenglandandwales/2018> (accessed 2 October 2019).

24. Homeless Link. Hidden Homelessness. <https://www.homeless.org.uk/facts/homelessness-in-numbers/hidden-homelessness> (accessed 2 October 2019).

25. Aldridge R, Menezes D, Lewer D, et al. Causes of death among homeless people: a population-based cross-sectional study of linked hospitalisation and mortality data in England. [version 1; peer review: 2 approved]. *Wellcome Open Research* 2019; **4**(49).

26. Brimblecombe N, Green M, Dorling D. Who still dies young in a rich city? Revisiting the case of Oxford *The Geographical Journal* 2019; **(forthcoming)**.

27. Shah R HA, Cheung R. International comparisons of health and wellbeing in adolescence and early adulthood: The Nuffield Trust, 2019.

28. Aston P. Statement on Visit to the United Kingdom, by Professor Philip Alston, United Nations Special Rapporteur on extreme poverty and human rights. 2018. <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=23881&LangID=E> (accessed 23 November 2018).

29. Bennett JE, Pearson-Stuttard J, Kontis V, Capewell S, Wolfe I, Ezzati M. Contributions of diseases and injuries to widening life expectancy inequalities in England from 2001 to 2016: a population-based analysis of vital registration data. *The Lancet Public Health* 2018; **3**(12): e586-e97.

30. Kontopantelis E, Buchan I, Webb RT, Ashcroft DM, Mamas MA, Doran T. Disparities in mortality among 25–44-year-olds in England: a longitudinal, population-based study. *The Lancet Public Health* 2018; **3**(12): e567–e75.
31. Trigg N. 10 charts that show why the NHS is in trouble. 24 May 2018 2018. <https://www.bbc.com/news/health-42572110> (accessed 29 October 2019).
32. Kraindler J. GB. International comparisons of capital in health care: why is the UK falling behind? . 24 October 2019 2019. <https://www.health.org.uk/news-and-comment/blogs/international-comparisons-of-capital-in-health-care-why-is-the-uk-falling-behind> (accessed 29 October 2019).
33. Suhrcke M, McKee M, Stuckler D, Sauto Arce R, Tsovala S, Mortensen J. The contribution of health to the economy in the European Union. *Public Health* 2006; **120**(11): 994–1001.
34. World Health Organisation. Healthy, prosperous lives for all: the European Health Equity Status Report. 2019. <http://www.euro.who.int/en/publications/abstracts/health-equity-status-report-2019> (accessed 13 October 2019).
35. McKee M, Kluge H. Include, invest, innovate: health systems for prosperity and solidarity. *Journal of health services research & policy* 2018; **23**(4): 209–11.
36. Eurofound. European Quality of Life Survey,. 2016. <https://www.eurofound.europa.eu/data/european-quality-of-life-survey> (accessed 20 October 2019).
37. Travis A. Immigration bill: Theresa May defends plans to create 'hostile environment'. 10 October 2013 2013. <https://www.theguardian.com/politics/2013/oct/10/immigration-bill-theresa-may-hostile-environment> (accessed 9 March 2019).
38. Department of Health and Social Care. Guidance on implementing the overseas visitor charging regulations,. December 2018 2018. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/767905/guidance-on-implementing-the-overseas-visitor-charging-regulations.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/767905/guidance-on-implementing-the-overseas-visitor-charging-regulations.pdf) (accessed 17 October 2019).
39. Docs not Cops. British politicians' NHS hypocrisy laid bare today on the global stage. 23 September 2019 2019. <https://www.opendemocracy.net/en/ournhs/british-politicians-nhs-hypocrisy-laid-bare-today-global-stage/> (accessed 30 October 2019).
40. Hiam L. How the UK is denying life saving treatments due to immigration status. 10 June 2018 2018. <https://www.independent.co.uk/voices/kelemua-mulat-nhs-home-office-refugee-immigration-a8392161.html> (accessed 14 July 2018).
41. Maternity Action. Duty of care: The impact of midwives of NHS charging for maternity care. 2019. <https://maternityaction.org.uk/midwivesreport/> (accessed 17 October 2019).
42. McKee M. Lessons from the Windrush generation. *Bmj* 2018; **361**: k2017.
43. Doctors of the World UK. Registration Refused: Access to GP services for migrants in vulnerable circumstances. August 2019 2019. <https://www.doctorsoftheworld.org.uk/wp-content/uploads/2019/08/Reg-refused-research-briefing.pdf> (accessed 17 October 2019).
44. Gunner E, Chandan SK, Marwick S, et al. Provision and accessibility of primary healthcare services for people who are homeless: a qualitative study of patient perspectives in the UK. *Br J Gen Pract* 2019; **69**(685): e526–e36.

45. National Audit Office. Investigation into pre-school vaccinations. 25 October 2019 2019. <https://www.nao.org.uk/report/investigation-into-pre-school-vaccinations/> (accessed 28 October 2019).
46. The Fund for Peace. Fragile States Index. 2019. <https://fragilestatesindex.org/> (accessed 28 September 2019).
47. Ipsos Mori. NHS continues to be top issue for British voters. 20 April 2015 2015. <https://www.ipsos.com/ipsos-mori/en-uk/nhs-continues-be-top-issue-british-voters>.
48. Ipsos Mori. Concern about immigration rises as EU vote approaches. 23 June 2017 2016. <https://www.ipsos.com/ipsos-mori/en-uk/concern-about-immigration-rises-eu-vote-approaches> (accessed 22 September 2018).
49. Public Administration and Constitutional Affairs Committee. Electoral Law: The Urgent Need for Review (HC 244). 1 November 2019 2019. <https://publications.parliament.uk/pa/cm201920/cmselect/cmpubadm/244/244.pdf> (accessed 3 November 2019).
50. Arias E. XJ. United States Life Tables, 2017. 24 June 2019 2019. [https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68\\_07-508.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_07-508.pdf) (accessed 1 November 2019).
51. Monnat SM, Brown DL. More than a rural revolt: Landscapes of despair and the 2016 Presidential election. *Journal of Rural Studies* 2017; **55**: 227-36.
52. McKee M, Stuckler D. "Enemies of the People?" Public Health in the Era of Populist Politics Comment on "The Rise of Post-truth Populism in Pluralist Liberal Democracies: Challenges for Health Policy". *International journal of health policy and management* 2017; **6**(11): 669-72.
53. Lancet Public Health. Poverty is a political choice. *The Lancet Public Health* 2018; **3**(12): e555.