

# Deaths in the UK show a large increase in 2018

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## Key Points

- Despite integration of health and social care in Scotland, deaths over time behave the same as in England
- Deaths in 2015 and 2018 show large step-like increases which seemingly correspond with previous immunization with a poorly matched influenza vaccine (coincidence???)
- The effect of previous high years in deaths upon hospital admissions has been extensively documented
- Studies purporting to show that austerity is the cause have seemingly omitted to locate conflicting evidence

A spate of recent studies purport to show that austerity in England has caused long-standing improvements in the mortality rate to effectively stall or even reverse (Fransham and Dorling 2017, Green et al 2017a,b, Hiam et al 2017a,b, 2018, Watkins et al 2018). These studies have been disputed in that life expectancy in the USA also declined in 2015 (Acciai and Firebaugh 2017), data at local authority level does not match with national trends, that trends for males and females are not consistent, and that data for deaths has shown curious on/off switching for many years, even prior to austerity (Jones 2015a, 2017d-g, 2018a-d). Also, because the on/off switching is not confined to calendar year start or end the use of such calendar year totals can be highly misleading (Jones 2017a, Jones 2018a).

While social care austerity has been a distinguishing feature for England, the governments in Scotland, Northern Ireland and Wales have sought to largely protect social care budgets. Hence according to the austerity hypothesis deaths in the devolved administrations should behave differently (Jones 2017g).

It has also been repeatedly pointed out that most of a person's entire use of acute inpatient services occurs in the last year (specifically six months) of life and that this is the principal cause of NHS deficits during a recurring series of years of unexplained higher deaths (Jones 2015b, 2016a,b, 2017c, Jones and Kellett 2018). Studies purporting to show that austerity is the cause of higher deaths, and hence higher mortality rates, have seemingly failed to locate these conflicting findings.

**Figure 1: Calendar year deaths in Scotland 1990 to 2018 (estimated)**

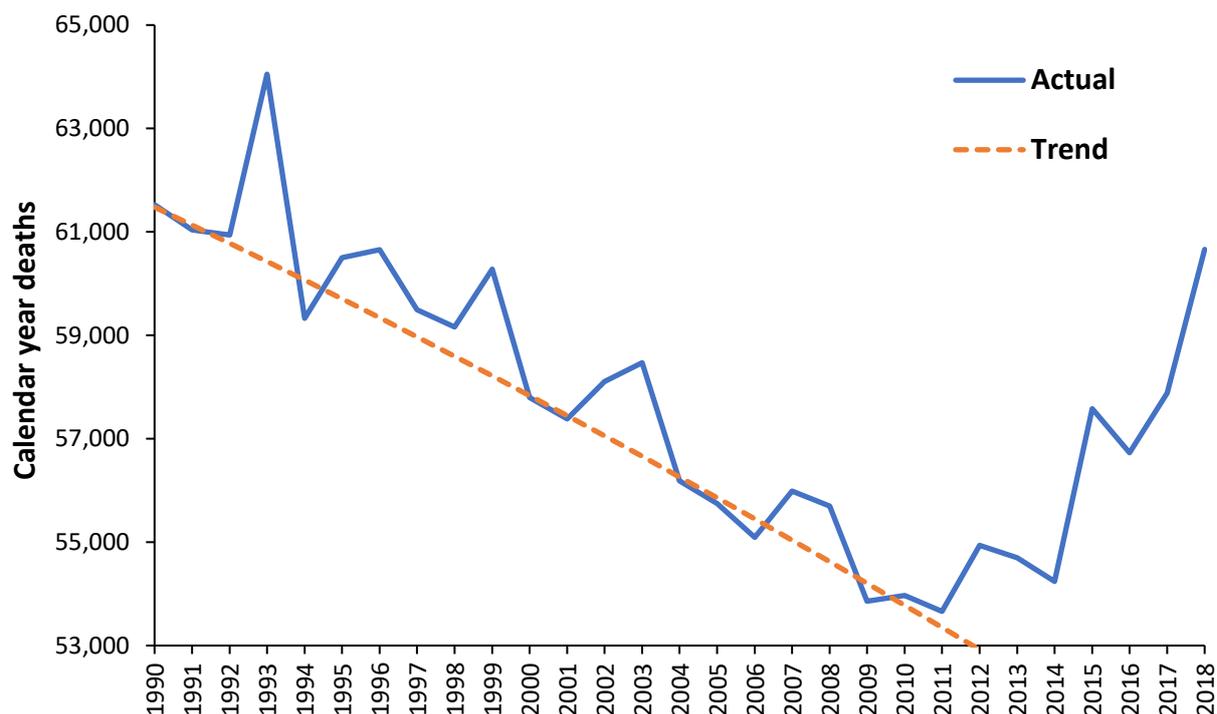


Figure 1 therefore shows the trend in annual deaths in Scotland from 1990 to 2018. Estimated deaths in 2018 is the **minimum case possible** estimate based on deaths in January to April in 2018 multiplied by the minimum ratio of the first four months to annual total over an 18-year period. The trend line is a polynomial regression ( $Y = a + bX + cX^2$ ) after excluding the high years of deaths in 1993, 1995-96, 1999, 2002-2003, 2007-2008 and 2012 onward. These years are statistically different from the regression line by 15-standard deviations in 1993, 9 in 1999 and 2012, 8 in 2003, and 5 in 1996 and 2008. These are all far beyond the Poisson 100% confidence interval for chance variation. This variation arises from a previously undocumented type of on/off switching which occurs at very small area level and is reminiscent of an infectious outbreak of a new type or kind of infectious agent (Jones 2017b). The event during 1993 showed age specificity and had a profound effect on medical and mental health admissions (Jones 2015b).

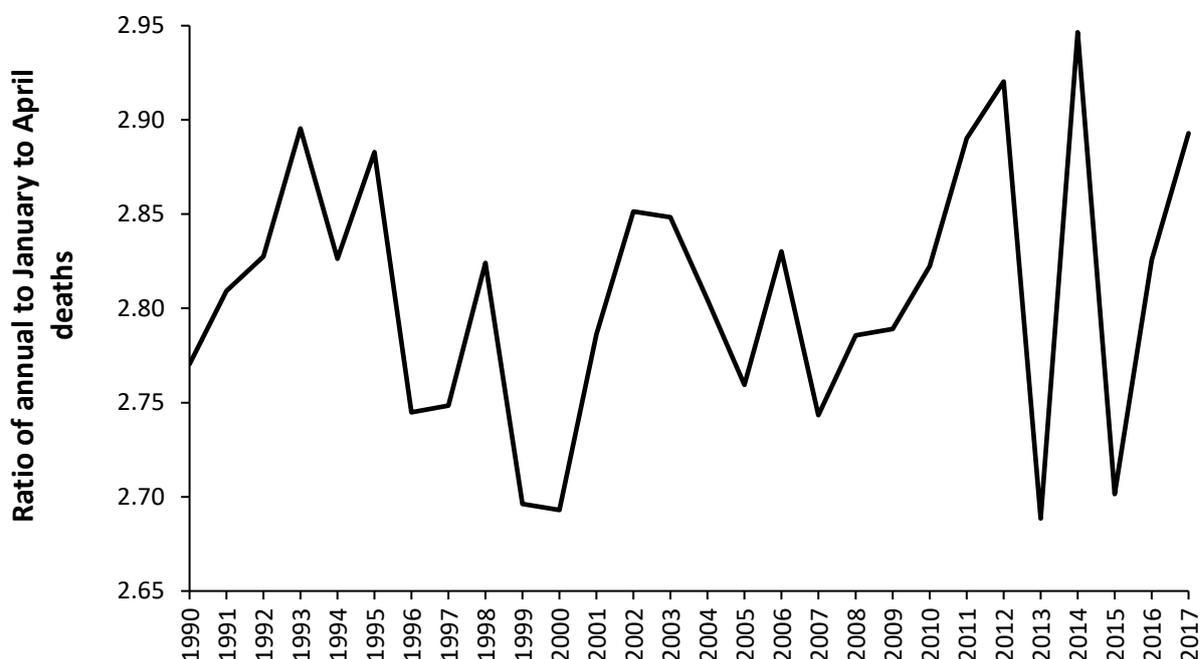
As in England, deaths reach a minimum in 2011 and the evidence for on/off switching continues unchanged into the austerity years.

Applying the same method to data for England shows an estimated 4.2% (+4.8% in Scotland) increase in deaths in 2018 compared to 2017, where 2017 showed maximum deaths since 2011 (Jones 2018c).

Figure 2 shows the ratio of annual deaths divided by the January to April sub-total which was used to estimate total deaths in 2018. As mentioned, the minimum for this ratio of 2.6885 which occurred in 2013 was used (maximum of 2.9464 occurred in 2014, while the median is 2.8158 which lies between 1991 and 2010). As in Scotland, the minimum for this ratio in England occurs in both 2013 and 2015 (data not shown). As can be seen, the maximum instability in this ratio coincidentally occurs after 2011, when austerity commenced (Elliott and Wintour 2010). This points to another mechanism at work other than simple austerity since austerity is unlikely to have a major and highly fluctuating impact on deaths in January to April compared to the rest of the calendar year (Jones

2017a). The ratio in Figure 2 is generally high in the years when outbreaks of a presumed new pathogen occur (Jones 2015c, 2016b, 2017c,b).

**Figure 2: Ratio of total annual versus January to April sub-total deaths**



Government agencies maintain a discrete silence despite these events apparently stretching back to the 1950's (Jones 2015a).

The basic message from this analysis is that Scotland, with its entirely different approach to austerity, behaves the same as the rest of the UK in terms of deaths and that the 2018/19 financial year is likely to be even worse for NHS cost pressures than any years before - across all parts of the UK. No one seems to want to point out that the problem has nothing to do with austerity or NHS inefficiency, and the NHS is being made to carry costs which are none of its making.

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