

## Main points

### Introduction

[Table 1](#) shows the annual totals for 1996 to 2018 along with the numbers for the quarters in which the deaths were registered.

Information about the three bases on which figures for MRSA deaths have been produced is given in a note which is available in the [Death Certificates and Coding the Causes of Death](#) section of this website.

### Deaths for which MRSA was the underlying cause

- In 2018, there were two deaths for which MRSA was the underlying cause, one fewer than in 2017. The previous five years have all also had very low numbers: there were 4 such deaths in 2013, 6 in 2014 and 2015, 1 in 2016 and 3 in 2017.
- Registrations of deaths for which MRSA was the underlying cause tended to increase, year by year (with a couple of exceptions), up to 2007, when there were 56 such deaths, then fell in most of the years thereafter to 4 in 2013. The latest five years' figures have been in the range from 1 (in 2016) to 6 (in 2014 and 2015), well below the level seen from 2000 to 2008 (between 35 and 56 each year). The small changes in recent years might represent 'random' year-to-year fluctuations (for more on which, please refer to the 'quarterly numbers' section, below).

### Deaths to which MRSA contributed, without being the underlying cause

- There were 22 deaths in 2018 for which MRSA was a contributory factor, compared with 11 in 2017 (an increase of 11). However, the 2017 figure was particularly low, falling from 30 in 2016. In 2018, MRSA was a contributory factor for fewer deaths than in all but one of the previous 22 years for which these figures are available. The other low annual totals were 11 such deaths in 2017, 25 in 2015, 28 in 1996, and 29 in 2014.
- The number of deaths for which MRSA was a contributory factor rose in every year up to 2005, when there were 174 such deaths, decreased slightly in 2006, rose again to 174 in 2007, and then fell quite sharply to 43 in 2011. The following four years showed a gradual decline from 43 in 2011 to 25 in 2015, followed by a slight rise to 30 in 2016 and a larger fall to 11 in 2017 before increasing to 22 in 2018..

## **Deaths for which MRSA was mentioned on the death certificate (either as the underlying cause or as a contributory factor)**

- In 2018, there was a total of 24 deaths for which MRSA was mentioned on the death certificate (either as the underlying cause of death or as a contributory factor), 10 more than in 2017. However, the 2017 figure was particularly low, falling from 31 in 2016. The 2018 figure is the second lowest number of such deaths in any of the previous 22 years for which these figures are available. The other lowest annual numbers have been 14 such deaths in 2017, 31 in 2015 and 2016, 34 in 1996, 35 in 2014 and 36 in 2013).
- The total number of deaths for which MRSA was mentioned (either as the underlying cause of death or as a contributory factor) rose in every year up to 2007, when there were 230 such deaths, then fell quite sharply to 62 in 2011 before declining further to 31 in 2015 and 2016 and to 14 in 2017 before increasing to 24 in 2018.

## **Quarterly numbers of deaths for which MRSA was mentioned on the death certificate (either as the underlying cause or as a contributory factor)**

- On a quarterly basis, the number of deaths for which MRSA was mentioned (either as the underlying cause of death or as a contributory factor) was highest at 81 in the first quarter of 2007. For the four-year period, 2013 to 2016, there were an average of about 9 such deaths per quarter, and the scale of the fluctuations around this is such that they could well be the result of “random” statistical quarter-to-quarter variability. For the eight quarters of 2017 and 2018 together, the average was around 5 per quarter.
- The highest quarterly figures since the middle of 2012 were 14 in the second quarter of 2015 and 12 in the first quarters of 2013 and 2018; the lowest were 0 in the third quarter of 2017, 1 in the fourth quarter of 2017 and 3 in both the second quarter of 2017 and fourth quarter of 2018. Such values are almost all within the 'likely range' that would be expected if the number of deaths represented the outcome of a 'Poisson process' with an underlying rate of nine per quarter. (In statistical terms, a 'Poisson process' is a process in which events occur at random, with the probability of an event occurring depending upon the underlying rate of occurrence - refer to the note 'Fluctuations in the numbers of deaths may be represented as the outcome of a Poisson process', which is available on the [Fluctuations in and possible unreliability of death statistics](#) page on this website.

## **MRSA deaths by NHS Board and by place of death**

- [Table 2](#) contains breakdowns by NHS Board of residence and Table 3 shows the place of death, where MRSA was the underlying cause of death.
- [Tables 4 and 5](#) contain similar breakdowns to Tables 2 and 3 respectively, for all deaths where MRSA was mentioned on the death certificate (either as the underlying cause or as a contributory factor).