

Statistical bulletin

Deaths involving MRSA in Wales: 2013

Deaths where Meticillin-resistant Staphylococcus aureus (MRSA) was mentioned on the death certificate by sex, age group and whether the death occurred in hospital or elsewhere.



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1. Key points

- The number of death certificates mentioning Meticillin-resistant Staphylococcus aureus (MRSA) fell by 34% on the previous year, from 29 in 2012 to 19 in 2013
- Of the 19 death certificates mentioning MRSA, 9 (47%) also identified this germ as the underlying cause of death
- Deaths involving MRSA have fallen to date since peaking in 2005. In 2013, the age-standardised rate for deaths mentioning MRSA was 6.3 per million population compared with 40.2 per million in 2005
- In the period 2009–13, deaths involving MRSA accounted for 0.1% of all deaths and 0.2% of all deaths in NHS hospitals

2. Summary

Meticillin-resistant Staphylococcus aureus (MRSA) is a type of Staphylococcus bacteria that is resistant to antibiotics known as beta-lactams. Staphylococcus aureus (*S. aureus*) bacteria can cause mild to life threatening disease if there is an opportunity for it to enter the body through broken skin or a procedure requiring the use of an invasive medical device.

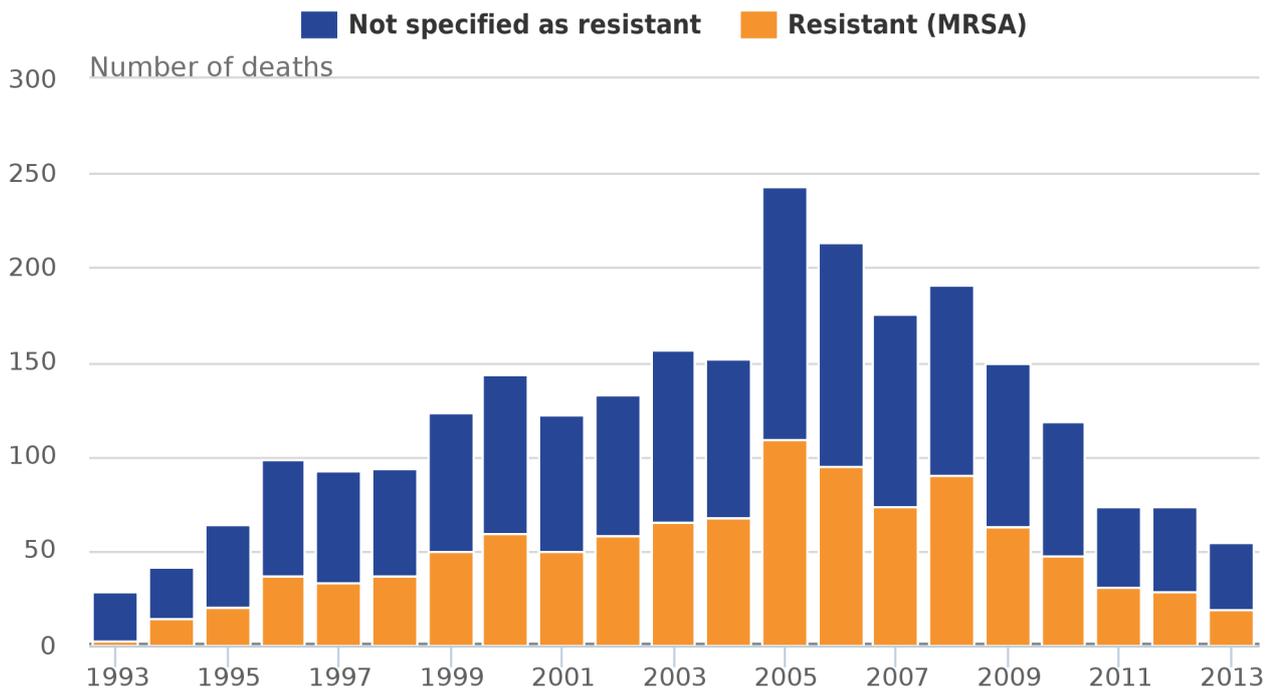
This bulletin presents the latest figures for deaths where MRSA was mentioned or identified as the underlying cause of death on death certificates. Figures are presented for Wales and are broken down by sex, age group and place of death. Comparisons are made between data for 2013 and previously published data from 1993 onwards. Information is given about the context and use of the statistics, and the methods used to produce them.

Figures are based on deaths registered in each calendar year rather than those occurring in each year. Since the majority of deaths involving MRSA registered in 2013 also occurred in the same year, registration delays are unlikely to have an impact on the findings. Please see the section on registration delays for further information.

Two important changes have been made to ONS's reporting of MRSA deaths. First, the scope of the annual bulletin has been reduced. Beginning with 2013 data, the bulletin will cover only Wales rather than England and Wales, with production costs being jointly funded by Public Health Wales NHS Trust and the Welsh Government. This follows the response to [ONS's Consultation on proposed cuts](#) to a number of statistical outputs, required as ONS funding has been reduced. The second change is methodological in nature and involves the use of the recently implemented 2013 European Standard Population (2013 ESP) in calculating age-standardised rates. This new standard population replaces the 1976 ESP which no longer reflects the age distribution of the population in Europe. Historical data from 1993 onwards have been rebased on the 2013 ESP. Further information on this change is available in the 'Methodological changes' section.

Figure 1: Number of death certificates mentioning *Staphylococcus aureus*: by meticillin resistance, Wales, deaths registered in 1993–2013

Wales



Source: Office for National Statistics

Notes:

1. Figures exclude deaths of non-residents
2. Figures are for deaths registered in each calendar year

3. Methodological changes affecting age-standardised rates

The ESP is an artificial population structure used to weight mortality or incidence data to produce age-standardised rates. Eurostat, the statistical office of the European Union, decided at the end of 2012 to bring this population structure up to date.

The ESP has become an accepted methodological standard in health statistics in the UK and the rest of Europe, and is used in the calculation of age-standardised rates by ONS, other government departments, the NHS and academic health researchers. The ESP used in the previous publications of MRSA statistics was first introduced in 1976 but is no longer representative of the age-structure of the population of European Union Member States. Due to this, [Eurostat implemented a new version of the ESP in 2013](#). In addition, ONS, on behalf of the Government Statistical Service, has carried out a [public consultation on how to implement the new ESP in the UK \(552 Kb Word document\)](#).

The 2013 ESP takes into account changes in the EU population, providing a more current, methodologically sound and widely acceptable basis for calculating age-standardised rates ([Eurostat, 2013](#)). The 1976 and 2013 ESPs differ in two ways. First, the 2013 ESP gives the populations in older age groups greater weighting than the 1976 ESP. Second, the age distribution of the 1976 ESP has an upper limit of 85 years and over, while the 2013 ESP is further disaggregated to include age groups 85-89, 90-94 and 95+.

An [ONS report examining the impact of the change in ESP on mortality data](#) showed that sex-specific rates, for causes where deaths predominantly occur at older ages, are significantly higher under the 2013 ESP compared with the 1976 ESP. This is because the larger number of older people in the 2013 ESP exerts more influence on

these rates than the 1976 ESP. Since deaths involving MRSA occur mainly at older ages, the rates presented here are greater in magnitude than those previously published using the 1976 ESP for the same periods. However, the difference between death rates based on the old and new ESP is purely methodological and does not indicate an actual increase in the previously published numbers of deaths or death rates.

4. Background

S. aureus is a common type of bacteria found on the skin and in the nostrils of about a third of healthy people without it causing any harm ([HPA, 2010](#)).

Most strains of *S. aureus* are sensitive to the more commonly used antibiotics and the infections they cause can be effectively treated. However, some strains have developed resistance to these antibiotics and often require different types of antibiotics to treat them. Most *S. aureus* strains first developed resistance to penicillin in the 1950s, and chemists developed an antibiotic called methicillin that was not destroyed by the penicillin-resistant bacteria. However, resistant strains began to appear soon after the introduction of methicillin and these strains spread rapidly during the 1990s. MRSA refers to *S. aureus* bacteria that are resistant to antibiotics known as beta-lactams. This group of antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin.

MRSA can cause mild to life-threatening conditions if there is an opportunity for it to enter the body through broken skin or medical procedures using an invasive medical device ([HPA, 2013](#)). These include skin and wound infections, infected eczema, abscesses or joint infections and pneumonia, infections of the heart valves (endocarditis), bacteraemia (blood stream infection) and food poisoning.

In the community, the majority of MRSA infections are skin infections while in healthcare settings MRSA causes life-threatening bloodstream infections, pneumonia and surgical site infections ([CDC, 2014](#)).

The concern about MRSA is partly because it shows a higher degree of drug resistance than other types of *S. aureus* and also because it has become particularly associated with hospital acquired infections ([Public Health Wales, 2011](#)). There is also growing concern about community-acquired MRSA in some parts of the world, with studies ([Herold et al. 1998](#); [Salmenlinna S, Lytikäinen O and Vuopio-Varkila J, 2002](#)) suggesting that this type of MRSA can be found in otherwise healthy people with no previous contact with healthcare facilities or hospitalised persons.

5. Use of MRSA data

Incidence and mortality data for *S. aureus* and MRSA infections in Wales are primarily used by Public Health Wales to highlight the burden of MRSA and to monitor and evaluate intervention programs aimed at reducing it. They are also used by local health boards (LHBs) and individual healthcare establishments.

In Wales, surveillance of MRSA bloodstream infections is managed by the Welsh Healthcare Associated Infection Programme (WHAIP), which is part of Public Health Wales. In recent years the number of cases in Wales has decreased. For example, the number of MRSA bloodstream infections fell by 11% from 203 in 2011 to 180 in 2012 ([Public Health Wales, 2014](#)).

Deaths involving *S. aureus* and MRSA statistics have been produced by ONS for each year since 1993. Figures for recent years show a large decrease in the number and age-standardised rate of deaths involving *S. aureus* and MRSA. This trend is consistent with the decreases in the incidence data reported by Public Health Wales. The decreases may be partially due to interventions which are targeted at improving hospital-based infection control practices. However, the Welsh surveillance report only focuses on bloodstream infections and not other types of infections associated with MRSA. Conversely, the figures presented in this report are for deaths from all MRSA related infections.

6. Results - number of deaths where S.aureus or MRSA were mentioned on the death certificate

Tables within this bulletin contain data for the latest five-year period for ease of presentation. However, time trends are examined from 1993 onwards.

In 2013, there were 36 deaths mentioning S. aureus (including those resistant to meticillin), an 18% decrease on the previous year at 44. Similarly, the number of deaths mentioning MRSA fell by 34% from 29 in 2012 to 19 in 2013. The number of deaths involving MRSA and S. aureus increased gradually between 1993, when records began, and 2005 when they peaked. The numbers have since fallen to date.

In 2013, MRSA accounted for 53% of all S. aureus mentions compared with only 7% in 1993. However, MRSA deaths as a proportion of all S. aureus deaths have fluctuated substantially over time, peaking at 89% in 2008.

While S. aureus and MRSA infections may contribute to a death, sometimes they are also directly responsible for causing it. In 2013, of the 36 death certificates mentioning S. aureus, 13 (36%) also said it was the underlying cause of death. For MRSA, 9 out of the 19 (47%) death certificates mentioning this germ also recorded it as the underlying cause of death.

Table 1: Number of deaths where Staphylococcus aureus or MRSA was mentioned on the death certificate, Wales, deaths registered in 2009–2013

	Numbers				
	2009	2010	2011	2012	2013
Mentions					
Staphylococcus aureus	87	72	43	44	36
MRSA	63	47	31	29	19
Percentage of S. aureus mentions that were MRSA	72	65	72	66	53
Underlying cause					
Staphylococcus aureus	19	20	13	6	13
MRSA	14	14	8	5	9
Percentage of mentions selected as underlying cause					
Staphylococcus aureus	22	28	30	14	36
MRSA	22	30	26	17	47

Source: Office for National Statistics

Notes:

1. Figures exclude deaths of non-residents
2. Figures are for deaths registered in each calendar year
3. In 2013 the average number of days between date of death and death registration was three days for MRSA

7. Results - age-specific mortality rate for deaths mentioning S. aureus and MRSA

In each year, the number of death certificates mentioning S. aureus and MRSA, broken down by sex and age group is small and therefore subject to a high degree of random variation. To minimise the effect of this variation

on the sex and age-specific rates, data from a five-year period (2009 to 2013) were pooled to ensure robust conclusions could be drawn.

In the period 2009–13, the age-specific rate for deaths mentioning *S. aureus* and MRSA increased with age and was higher for males than females.

For males, the age-specific rate for deaths mentioning *S. aureus* was lowest among those under 55 years of age (3.4 mentions per million population) and highest among those aged 85 years and over (381 per million population). For females, the figures for these two age groups stood at 1.5 and 145 mentions per million population respectively. For MRSA, the comparable figures among these age groups were 1.9 and 282 per million for males and 0.8 and 94 per million for females.

As expected, the age-specific rates for MRSA mentions were lower than those for *S. aureus* across all age groups. This is because MRSA is a subset of *S. aureus*, with fewer deaths resulting from it. Conversely, for both sexes the relative difference between the age-specific rates for those less than 55 years and those aged 85 years and over was notably greater for MRSA. This disparity suggests that compared with *S. aureus*, MRSA deaths were relatively more concentrated among those in the oldest age group.

The age-specific rate for mentions of MRSA among males aged 85 years and over was 149 times greater than the rate for males under 55 years (282 compared with 1.9 per million population). A similar pattern was observed for females. However, the relative difference between these two age groups was smaller than for males (see Table 2).

Sick people in healthcare facilities are at increased risk of contracting MRSA. Older people are particularly vulnerable because they are likely to have relatively weaker immune systems compared with younger people and to have other underlying problems. The trends observed in age-specific MRSA death rates are therefore expected.

Table 2: Age-specific mortality rates for deaths mentioning *Staphylococcus aureus* and MRSA by age group, Wales, deaths registered in 2009–2013

Type	Age group	Rate per million population					
		Male			Female		
		Rate	Lower 95% Confidence interval	Upper 95% Confidence interval	Rate	Lower 95% Confidence interval	Upper 95% Confidence interval
MRSA	Under 55	1.9	0.9	3.5	0.8	0.2	2.0
	55-64	8.4	3.6	16.6	6.1	2.2	13.3
	65-74	32.2	20.6	47.9	10.1	4.4	19.9
	75-84	99.2	71.2	134.6	56.5	38.1	80.7
	85 and over	281.6	195.0	393.6	94.2	60.4	140.2
S. aureus	Under 55	3.4	2.0	5.4	1.5	0.7	3.0
	55-64	10.5	5.0	19.3	11.2	5.6	20.0
	65-74	48.3	33.8	66.9	18.9	10.6	31.2
	75-84	140.4	106.6	181.5	81.0	58.6	109.1
	85 and over	381.0	279.0	508.3	145.3	102.3	200.2

Source: Office for National Statistics

Notes:

1. Figures exclude deaths of non-residents
2. Figures are for deaths registered in each calendar year in the period
3. Rates per million population
4. In 2013 the average number of days between date of death and death registration was three days for MRSA

8. Results - age-standardised rates for deaths mentioning S. aureus or MRSA

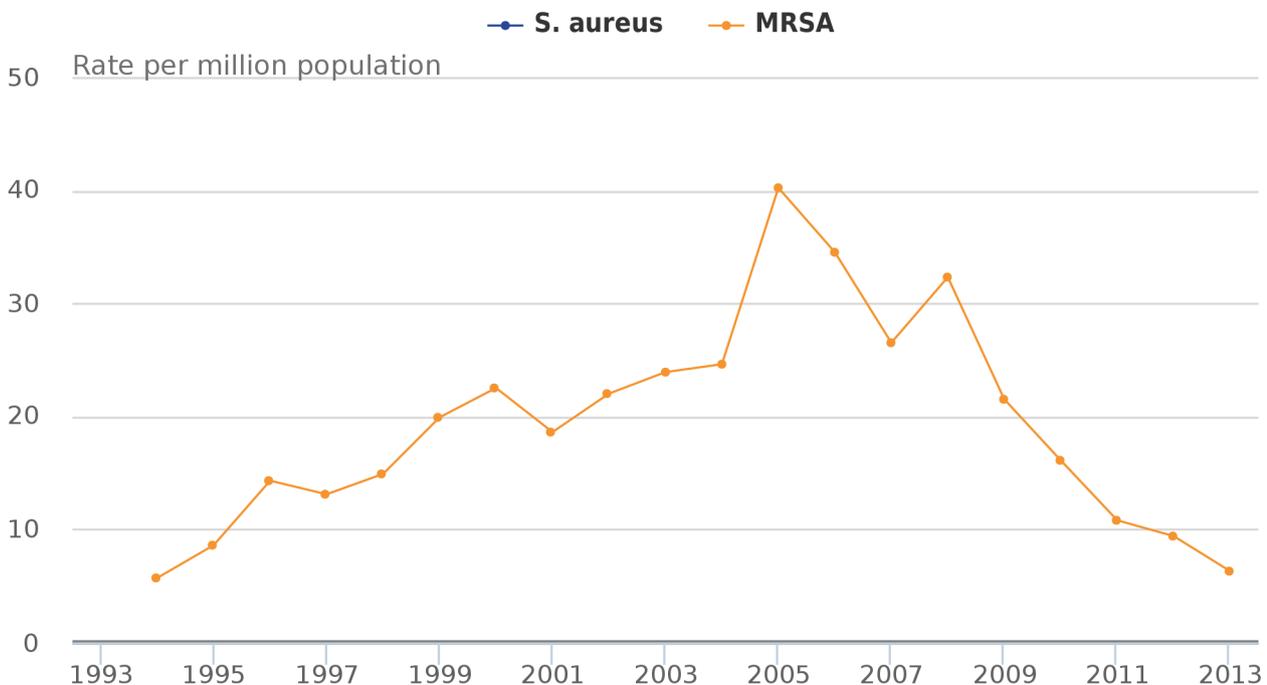
The age-standardised rates here are for all persons (males and females combined). This is because the number of deaths in each year since the 2005 peak has fallen to the extent that there are no longer sufficient deaths to calculate robust sex-specific age-standardised rates for individual years.

There has been a steady decline in the age-standardised rate for deaths mentioning S. aureus and MRSA since 2005 when the rates peaked. This decline tends to mask the annual fluctuation in rates between 1993 and 2013. This period was characterised by an initial increase in rates up to 2005 when they peaked, before falling to date. For the third year running, the latest rate for mentions of S. aureus was not significantly different from the rate in 1993. The age-standardised rate for deaths mentioning S. aureus rose from 11.1 per million population in 1993 to 49.7 per million population in 2005 but has since fallen to 12.0 per million in 2013.

For MRSA, the rate rose from 5.7 to 40.2 per million population between 1994 and 2005, but has since fallen to 6.3 per million in 2013. The MRSA death rate for 1993 was not calculated because the number of deaths was too small.

Figure 2: Age-standardised mortality rates for deaths mentioning Staphylococcus aureus and MRSA, Wales, deaths registered in 1993–2013

Wales



Source: Office for National Statistics

Notes:

1. Figures exclude deaths of non-residents

2. Figures are for deaths registered in each calendar year
3. Rates per million population standardised to the 2013 European Standard Population
4. Rates based on small number of deaths (10 to 19) may not be reliable and must be interpreted with caution. Such rates are presented in italics
5. Rates based on fewer than 10 deaths are not presented and are denoted by ".."

Table 3: Age-standardised mortality rates for deaths mentioning Staphylococcus aureus and MRSA, Wales, deaths registered in 2009–2013

	Rate per million population				
	2009	2010	2011	2012	2013
Staphylococcus aureus	29.6	24.6	15.0	14.4	12.0
MRSA	21.5	16.1	10.8	9.4	6.3

Source: Office for National Statistics

Notes:

1. Figures exclude deaths of non-residents
2. Figures are for deaths registered in each calendar year
3. Rates per million population, standardised to the 2013 European Standard Population
4. In 2013 the average number of days between date of death and death registration was three days for MRSA
5. Rates based on small number of deaths (10 to 19) may not be reliable and must be interpreted with caution. Such rates are presented in italics

9. Place of death

In the period 2009–13, deaths involving *S. aureus* accounted for 0.2% and MRSA for 0.1% of all deaths registered in Wales.

A breakdown by place of death shows that 95% of deaths involving *S. aureus* and 94% of deaths involving MRSA in Wales occurred in NHS hospitals. These figures represent 0.3% and 0.2% of all deaths in NHS hospitals respectively.

As the majority of deaths in Wales occur in NHS hospitals, it is expected that the proportions of deaths involving *S. aureus* and MRSA in these establishments would be higher than those in other establishment types.

In general, care homes had the second highest number and percentage of all deaths involving *S. aureus* and MRSA. All of these deaths occurred in care homes not administered by local authorities. In addition, in this establishment type, MRSA was the underlying cause of death for all death certificates mentioning *S. aureus*.

An estimated 2.8% of *S. aureus* and 4.2% of MRSA deaths occurred in non-local authority care homes. Conversely, there were no deaths involving *S. aureus* and MRSA in local authority care homes.

10. Methods

Data source

The information used in this bulletin is based on the details collected when deaths are certified and registered. All deaths are coded by ONS according to the International Classification of Diseases (ICD) produced by the World Health Organisation (WHO).

Since 1993, ONS has stored the text of death certificates on a database, along with all the ICD coding related to causes identified on the death certificate. The Tenth Revision of ICD (ICD-10) has been used to code deaths in Wales since 2001.

Approach used in selecting deaths

The text on death certificates was used in combination with ICD-10 codes to identify those mentioning *S. aureus* and MRSA in a two-step process.

A number of infections are specifically related to *S. aureus* or other staphylococcal species. First, all deaths were extracted where any of these infections was mentioned on the death certificate. These deaths were extracted using the ICD-10 codes given in Box 1 in the Reference table. The text of these death certificates was then searched, both electronically and manually, to identify *S. aureus* and MRSA.

Conversely, some infections have different causative organisms and may be caused by *Staphylococcus* species or other pathogens. Second, all deaths were extracted where these non-specific infections were mentioned on the death certificate. The codes used to identify these infections are given in Box 2 in the Reference table. The text of these death certificates was then searched manually to identify *S. aureus* and MRSA.

Deaths with an underlying cause of *S. aureus* were identified by selecting those deaths with a mention of *S. aureus* that also had one of the infections listed in Box 1 or Box 2 as the underlying cause. The same procedure was followed in order to identify deaths with MRSA as the underlying cause.

Since 1986, ONS has used the internationally recommended death certificate for neonatal deaths (infants under 28 days old). This certificate was only designed to record all conditions found at death. This means that neonates cannot be assigned an underlying cause of death. However, as the data were based on deaths where *S. aureus* and MRSA were mentioned on the death certificate, neonates have been included. Neonatal deaths were extracted in the same way as described above.

Modifications to standard error and confidence interval calculations

The mortality data in this release are not subject to sampling variation as they were not drawn from a sample. Nevertheless, they may be affected by random variation, particularly where the number of deaths or probability of dying is small. To help assess the variability in the rates, they have been presented alongside 95% confidence intervals (CI's).

Traditionally, a normal approximation method is used to calculate confidence intervals on the assumption that MRSA deaths are normally distributed. However, the annual number of deaths involving MRSA is relatively small (usually fewer than 100), and may be assumed to follow a Poisson probability distribution. In such cases, it is more appropriate to use the confidence limit factors from a Poisson distribution table to calculate the confidence intervals instead of a normal approximation method.

For age-standardised rates, the method used in calculating confidence intervals for rates based on fewer than 100 deaths was proposed by [Dobson et al., \(1991\)](#) as described in [APHO, \(2008\)](#). For age-specific rates, the exact Poisson limit factors for the age-specific number of deaths was used to calculate 95% CI's where there were fewer than 100 deaths in a particular age group.

Conversely, for both age-standardised and age-specific rates, normal approximation methods were used to calculate 95% CI's where there were 100 or more deaths.

To provide a measure of the stability and reliability of the age-standardised rates, relative standard errors have also been provided (see reference table). The relative standard error (RSE) is calculated as the standard error of a rate divided by the value of the rate itself, expressed as a percentage. The higher the RSE, the more unstable and less reliable rates are.

Full details of all the methodological changes in this bulletin will be published in the [Quality and Methodology information note for 'Deaths involving MRSA' \(210.8 Kb Pdf\)](#) at a later date.

Registration delays

The information used to produce mortality statistics is based on the details collected when deaths are certified and registered. In Wales, deaths should be registered within five days of the death occurring, but there are some situations which result in the registration of the death being delayed. Deaths considered unexpected, accidental or suspicious will be referred to a coroner who may order a post-mortem or carry out a full inquest to ascertain the reasons for the death.

Statistics on deaths involving MRSA and *S. aureus* are presented based on the number of deaths registered in each calendar year, rather than the number of deaths that occurred in that year. This method is used because there is a requirement for consistent and timely data, despite a potential limitation in data quality if registrations are delayed.

In 2013, the average (median) registration period for deaths mentioning MRSA and *S. aureus* and where both were identified as the underlying cause of death was three days. The majority of deaths mentioning MRSA and those identifying it as the underlying cause were registered within five days (74% and 78% respectively), while 84% and 89% were registered within 30 days.

Of the 19 deaths registered in 2013 where MRSA was mentioned on the death certificate, 17 (89%) also occurred in the same year. Similarly, 8 out of the 9 (89%) deaths registered with MRSA as the underlying cause also occurred in 2013.

Since the majority of deaths registered in 2013 involving MRSA also occurred in the same year, registration delays are likely to have no impact on the trends reported in this bulletin.

11. Results on the Office for National Statistics website

Figures for deaths involving *S. aureus* and MRSA from 1993 to 2013 can be found in the reference table on the ONS website. This [Excel workbook \(116 Kb Excel sheet\)](#) contains the number of deaths in each year, age-standardised rates and breakdown by place of death.

12. References

- Association of Public Health Observatories (2008). [Technical Briefing 3: Commonly Used Public Health Statistics and their Confidence Intervals](#). [accessed 21 July 2014].
- Centre for Disease Control and Prevention (2014). [MRSA Infections](#) [accessed 7 August 2014].
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- Salmenlinna S, Lyytikäinen O, and Vuopio-Varkila J (2002) [Community-acquired Methicillin-Resistant Staphylococcus aureus, Finland](#). *Emerging Infectious Disease Journal* [e-journal], 8(6), June [accessed 13 July 2014].

13. Background notes

1. Figures are for deaths registered in each calendar year while rates are based on mid-year population estimates as the denominator.
2. Information about the underlying mortality data, including details on how the data are collected and coded, is available in the [mortality metadata \(2.7 Mb Pdf\)](#) .
3. The number of deaths due to MRSA is difficult to estimate. Trends in mortality are usually monitored using the underlying cause of death (the disease which initiated the train of events leading directly to death). However, MRSA (and other healthcare associated infections) are often not the underlying cause of death. Those who die with MRSA are usually patients who were already very ill, and it is their existing illness which is often given as the underlying cause of death. There is an interest in the number of deaths where MRSA contributed to the death – only conditions which contribute directly to the death should be recorded on the death certificate. Results presented in this bulletin identify deaths where the underlying cause was MRSA and also where MRSA was mentioned as the underlying cause or as a contributory factor in the death.
4. Although MRSA is commonly referred to as a healthcare associated infection, it is not possible to state from the information on a death certificate where the infection was acquired, nor can assumptions be made about quality of care. People are often transferred between hospitals, care homes and other establishments, and may acquire infections in a different place from where they died.
5. Guidance on death certification, with specific reference to healthcare associated infections, was issued to doctors in May 2005 (revised in 2010) ([ONS, 2010b](#)). This was followed by a message from the Chief Medical Officer to all doctors reminding them of their responsibilities with respect to death certification and drawing their attention to the guidance ([DH, 2005](#)).

6. There are two types of rates reported in this bulletin; age-specific and age-standardised. Age-specific rates may be calculated for given age groups and are defined as the number of deaths in the age group per million (or thousand) population in the same age group. While these rates can be compared between times, places, and sub-populations, the tables containing them are usually large and may be difficult to assimilate. In addition, where there are very few deaths these rates will be imprecise and may be difficult to interpret. Age-standardised rates make allowances for differences in the age structure of the population, over time and between sexes. The rates presented here have been age-standardised using the [direct method of standardisation \(93.5 Kb Excel sheet\)](#). The age-standardised rate for a particular disease is that which would have occurred if the observed age-specific rates for the disease had applied in a given standard population. In this bulletin, the European standard population has been used. This is a hypothetical population standard, which is the same for both males and females, allowing standardised rates to be compared over time and between sexes.
7. The European standard population (ESP) used by ONS to calculate age-standardised rates was developed in 1976. In 2012, Eurostat, the statistical institute of the European Union, brought this population structure up to date. ONS, on behalf of the Government Statistical Service as a whole, has carried out a public [consultation on how to implement the change in ESP in the UK](#). Following this, ONS has published a series of [reports on the impact of the ESP change on mortality statistics](#) and a timetable for the implementation of the new standard population in relevant publications.
8. Age-specific rates were not calculated where there were fewer than three deaths in a cell. Similarly, age-standardised rates were not calculated where there were fewer than 10 deaths in a year. These rates are denoted by '••'. It is ONS practice not to calculate these rates, as rates based on such low numbers are susceptible to inaccurate interpretation. Age-standardised rates which were calculated from 10-19 deaths are italicised in order to warn users that their reliability as a measure may be affected by the small number of events.
9. In this bulletin, a difference which is described as 'statistically significant' has been assessed using confidence intervals. Confidence intervals (CIs) are a measure of the statistical precision of an estimate and show the range of uncertainty around it. Calculations based on small numbers of events are often subject to random fluctuations. Significance is assigned on the basis of non-overlapping CIs. While more formalised and accurate methods of significance testing are available, the non-overlapping CI method is used because it is simple to calculate and easily understood. As a general rule, if the confidence interval around an estimate overlaps with the interval around another, there is no significant difference between the two estimates.
10. Special extracts and tabulations of deaths involving MRSA data for Wales are available to order for a charge (subject to legal frameworks, disclosure control, resources and agreement of costs, where appropriate). Requests or enquiries should be made to:

Mortality Analysis Team, Life Events and Population Sources Division Office for National Statistics
Government Buildings Cardiff Road Newport Gwent NP10 8XG

Tel: +44 (0)1633 456491 Email: mortality@ons.gsi.gov.uk
11. The ONS charging policy is available on the ONS website
12. We welcome feedback on the content, format and relevance of this release. Please send feedback to the postal or email address above.
13. The policy governing the release of new data is available from the Media Relations Office.
14. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.
15. Summary Quality Reports are overview notes which pull together key qualitative information on the various dimensions of quality as well as providing a summary of methods used to compile the output. Updated editions from April 2011 are published as [Quality and Methodology Information notes](#).
16. ONS produces statistics for MRSA for Wales. The [National Records of Scotland](#) produces statistics for Scotland, and the [Northern Ireland Statistics and Research Agency](#) produces statistics for Northern Ireland.

17. A list of the names of those given pre-publication access to the statistics and written commentary is available in the [pre-release access list for deaths involving MRSA](#). The rules and principles which govern pre-release access are featured within the [Pre-release Access to Official Statistics Order 2008](#).
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19. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk