

Staphylococcus aureus bacteraemia: England and Wales, 2001

Key points

Voluntary reporting scheme

- In 2001, 12 631 reports of *S. aureus* were received from laboratories in England and Wales.
- Ten per cent of reports lacked information on methicillin susceptibility, compared to 15% in 2000.
- The West Midlands, South West, and Wales all achieved 100% completeness of methicillin susceptibility information for at least one quarter of 2001.
- Resistance was recorded in 42% of the *S. aureus* bacteraemia isolates for which methicillin susceptibility was reported, the same as in 2000.

Mandatory reporting scheme

- Methicillin resistant *Staphylococcus aureus* (MRSA) rates reported for April to December 2001 under the Department of Health mandatory surveillance scheme were similar to those reported for the first six months.
- The reduced confidence intervals for these rates have resulted in clearer rankings for the regions and the emergence of groups of trusts with higher rates.

Comparison of the voluntary and mandatory reporting schemes

- Comparison of the two surveillance schemes has shown that reporting in some regions under the voluntary scheme is reasonably complete.
- The difference between the schemes in the proportion of *S. aureus* bacteraemias due to MRSA was no more than 5% for any region. For England as a whole, there was only 1% difference in the results produced under the two schemes (41% and 40% for the voluntary and mandatory schemes respectively).

Introduction

This report contains data on *Staphylococcus aureus* bacteraemias in England and Wales for the year 2001. As well as reporting the routine bacteraemia results for all of 2001, it also contains the second complete set of published results from the Department of Health mandatory

surveillance scheme¹, covering the three quarters from April to December 2001. In a new initiative, the data from the CDSC voluntary reporting scheme is compared with that of the mandatory scheme. By publishing both reports together it should be possible to combine their advantages: the comprehensive nature of the mandatory reporting, and the continuity and longer-term trends of the voluntary

Figure 1 *Staphylococcus aureus* bacteraemia reports and methicillin susceptibility (% resistance), England and Wales: 2001

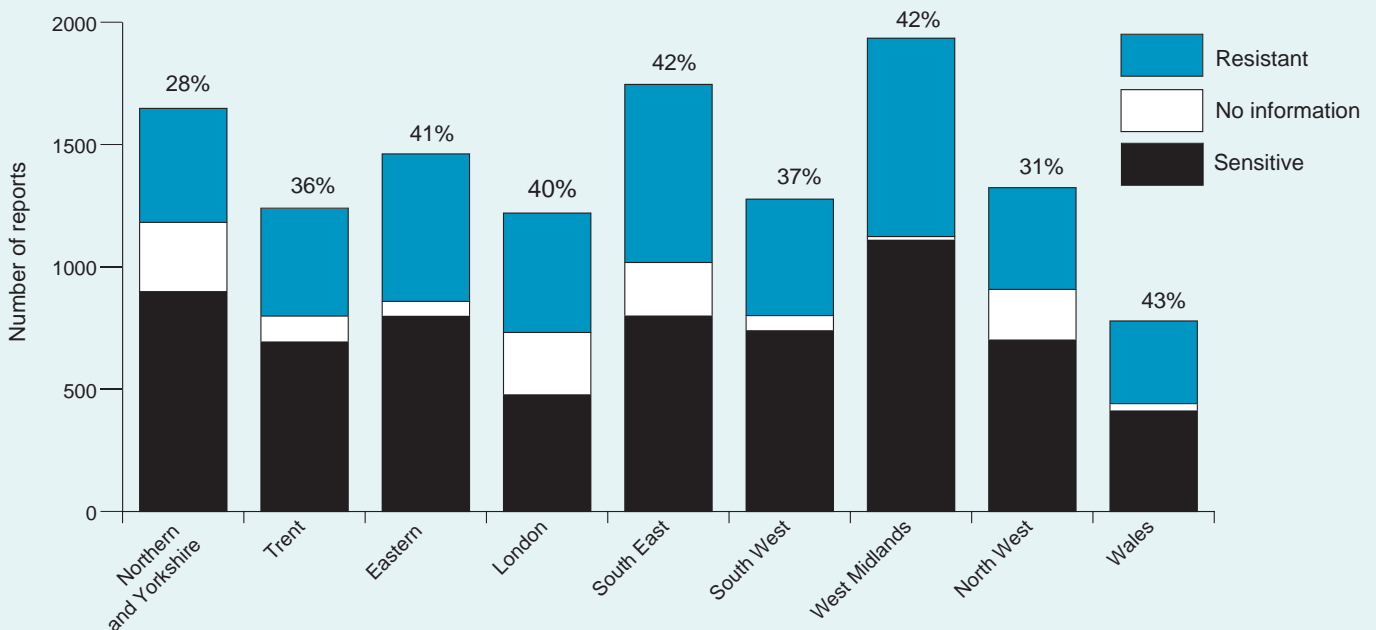


Table 1 *Staphylococcus aureus* bacteraemia reports and methicillin susceptibility data*, England and Wales: 2001

	Resistant (%)	Sensitive (%)	No information (%)	Total
Northern and Yorkshire	466 28	899 55	283 17	1648
Trent	441 36	693 56	106 9	1240
Eastern	603 41	798 55	61 4	1462
London	488 40	477 39	255 21	1220
South East	728 42	799 46	219 13	1746
South West	476 37	739 58	62 5	1277
West Midlands	811 42	1109 57	15 1	1935
North West	416 31	701 53	207 16	1324
Wales	338 43	411 53	30 4	779
England and Wales	4767 38	6626 52	1238 10	12631

* provisional data

scheme. Eventually, it is hoped that these comparisons will inform the transition to disaggregate mandatory reporting.

Staphylococcus aureus bacteraemia, voluntary laboratory reporting: England and Wales, January to December 2001

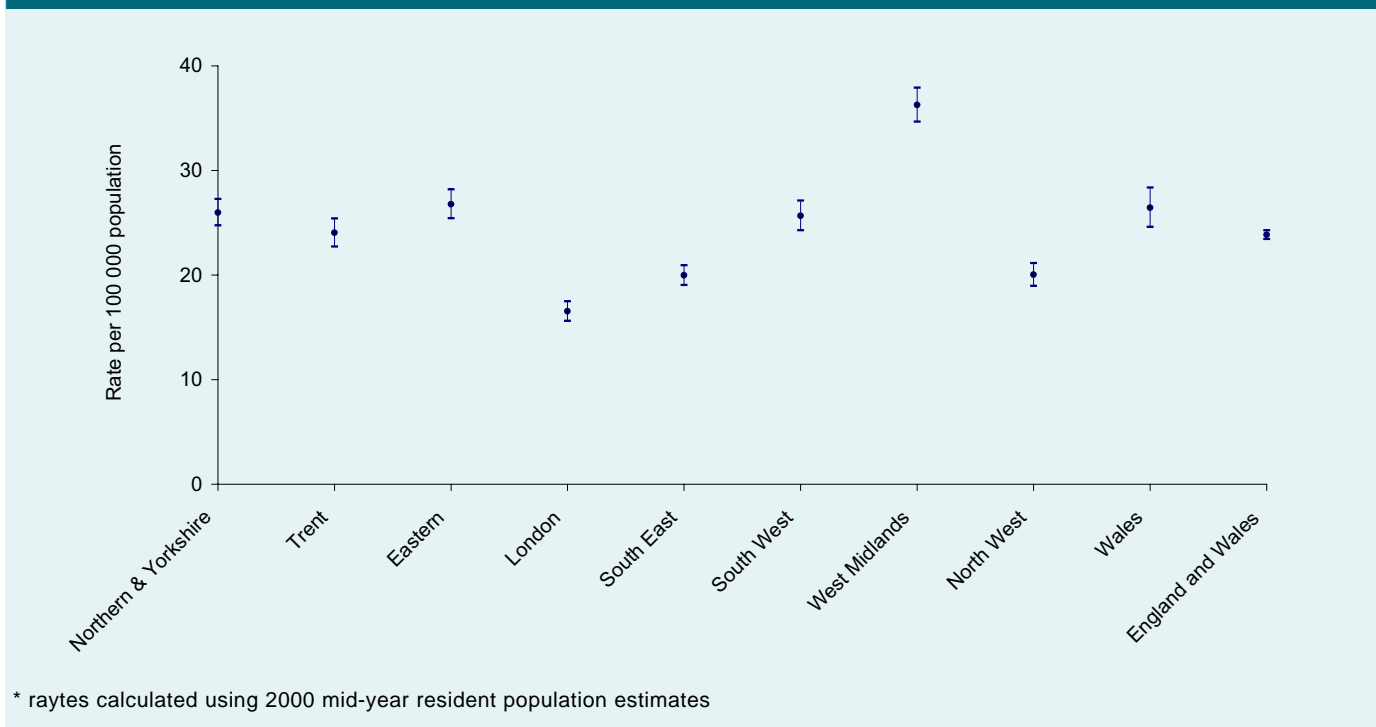
In 2001, the PHLS Communicable Disease Surveillance Centre received 12 631 reports of *Staphylococcus aureus* bacteraemias (figure 1, table 1) from laboratories in the eight English health regions and Wales. This is an increase of 1469 on the 2000 total², and is accompanied by an increase in the overall annual reporting rate from 21 to 24 per 100 000 population (figure 2). Reporting rates ranged from 17/100 000 in London to 36/100 000 in the West Midlands. The reporting rate fell slightly (by 1 to 3/100 000) in Trent, London, and Wales, but improved in all other regions. In particular, Northern and Yorkshire increased

its reporting rate from 17 to 26/100 000 population.

In all regions, the percentage of reports without information on methicillin (flucloxacillin) susceptibility decreased when compared to 2000 figures except for the South East, which remained the same (figure 3). Only 10% of reports for the year 2001 were lacking information on methicillin susceptibility (table 1), compared with 15% in 2000. The greatest fall was seen in Northern and Yorkshire, from 31% to 17% of reports. The West Midlands had the best result for the year – only 1% of all reports returned during 2001 did not contain susceptibility information despite this region returning more reports than any other. Three regions achieved 100% completeness of methicillin susceptibility data for at least one quarter of 2001: the West Midlands, the South West, and Wales.

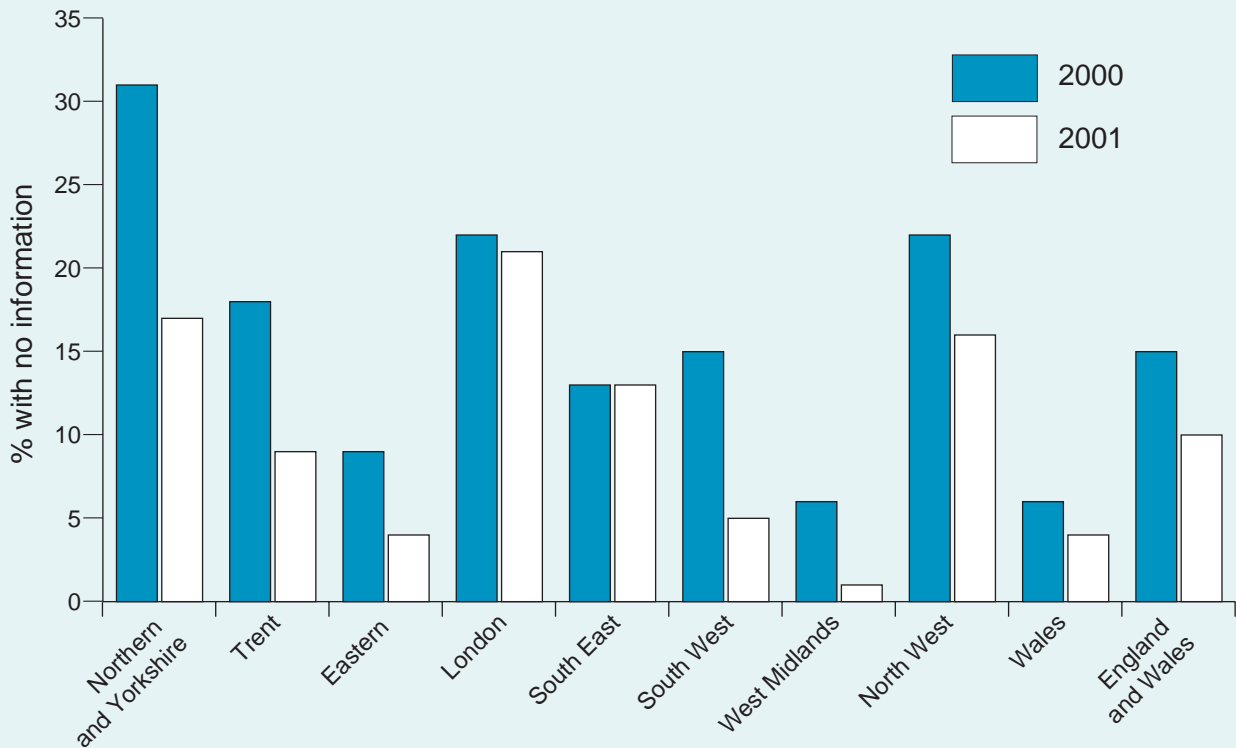
Of the 11 393 *S. aureus* bacteraemia isolates for which methicillin susceptibility was reported, 42% showed

Figure 2 *Staphylococcus aureus* bacteraemia reporting rates, with 95% confidence intervals, England and Wales: 2001



* rates calculated using 2000 mid-year resident population estimates

Figure 3 Percentage of reports without methicillin susceptibility information, English health regions and Wales: 2000 and 2001

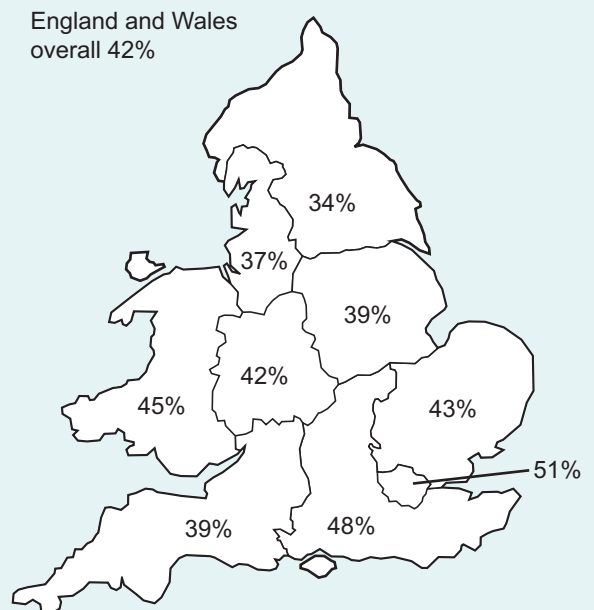


resistance to methicillin (figure 4), a figure that has not changed from 2000. This compares favourably with the 5% increase seen between 1999 and 2000². Reported methicillin resistant *Staphylococcus aureus* (MRSA) ranged from 34% of isolates containing information on methicillin susceptibilities in Northern and Yorkshire, to 51% in London. Four regions (Trent, Eastern, London, and North West) showed a small increase in percentage of resistant isolates (1% to 5%); three regions had a small decrease of 1% to 3% (South West, West Midlands, and Wales), and one region (Northern and Yorkshire) experienced a large fall – only 34% of isolates were resistant in 2001, compared to 44% in 2000. This may be associated with the improvements in reporting in that region and suggests that previous laboratory reporting was biased towards MRSA.

The Department of Health’s mandatory MRSA bacteraemia surveillance scheme in acute NHS Trusts in England: April to December 2001

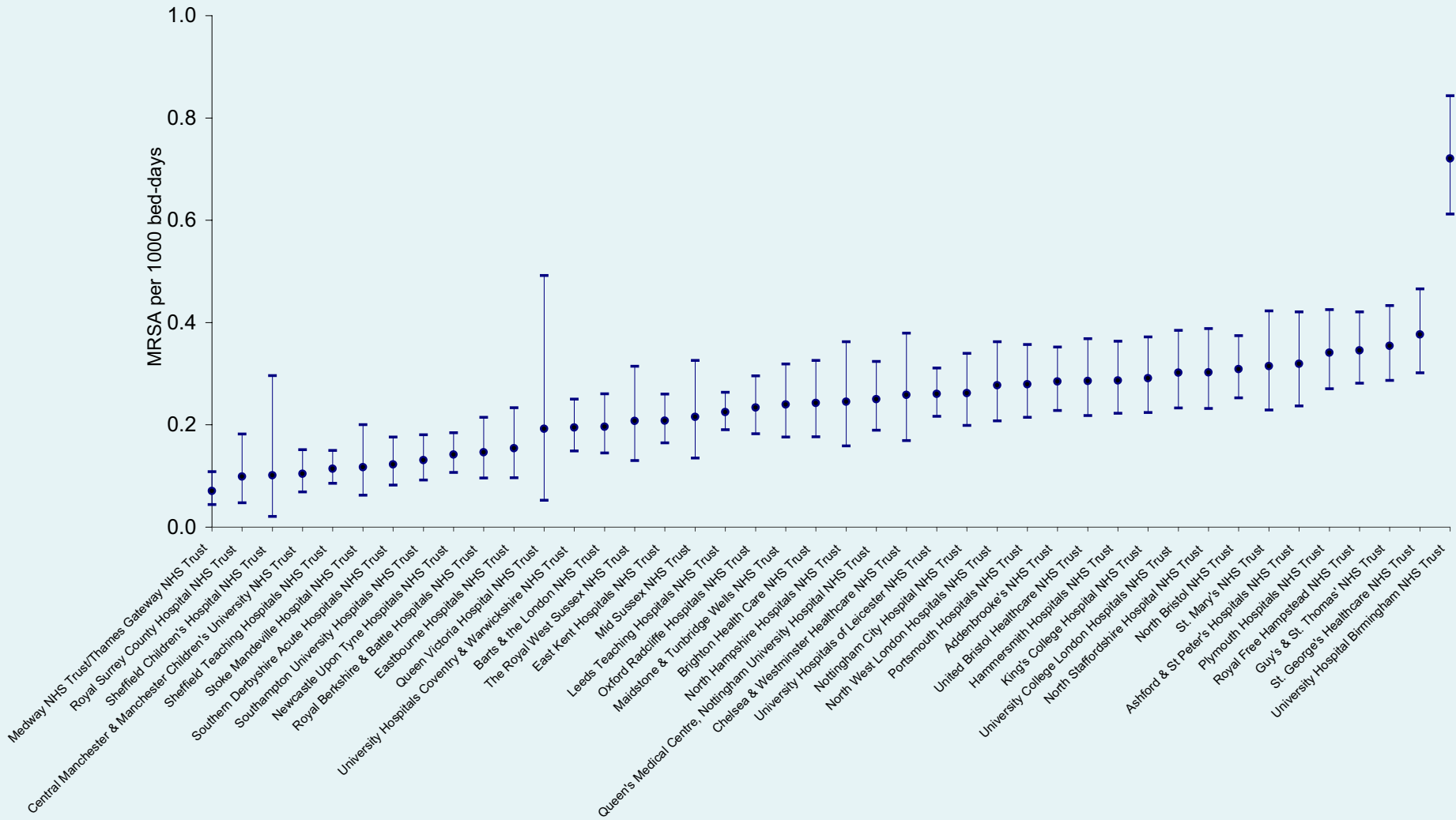
This is the third time that data from the Department of Health’s mandatory MRSA bacteraemia surveillance scheme have been published^{1,3}, and it covers the first three quarters of the scheme, from 1 April to 31 December 2001. Readers should consult the previous report¹ (which carries the results of the first two quarters of the scheme, from April to September 2001) for details of the methods, data collection, and analyses. The points raised in that report concerning the care that should be taken in interpreting the data are also still very relevant. In particular, it should be remembered that these figures only refer to a relatively short period in time, and that the first full year of this

Figure 4 Methicillin resistance in *S. aureus* bacteraemia reports – MRSA as a percentage of isolates the susceptibilities for which were reported, England and Wales: 2001*



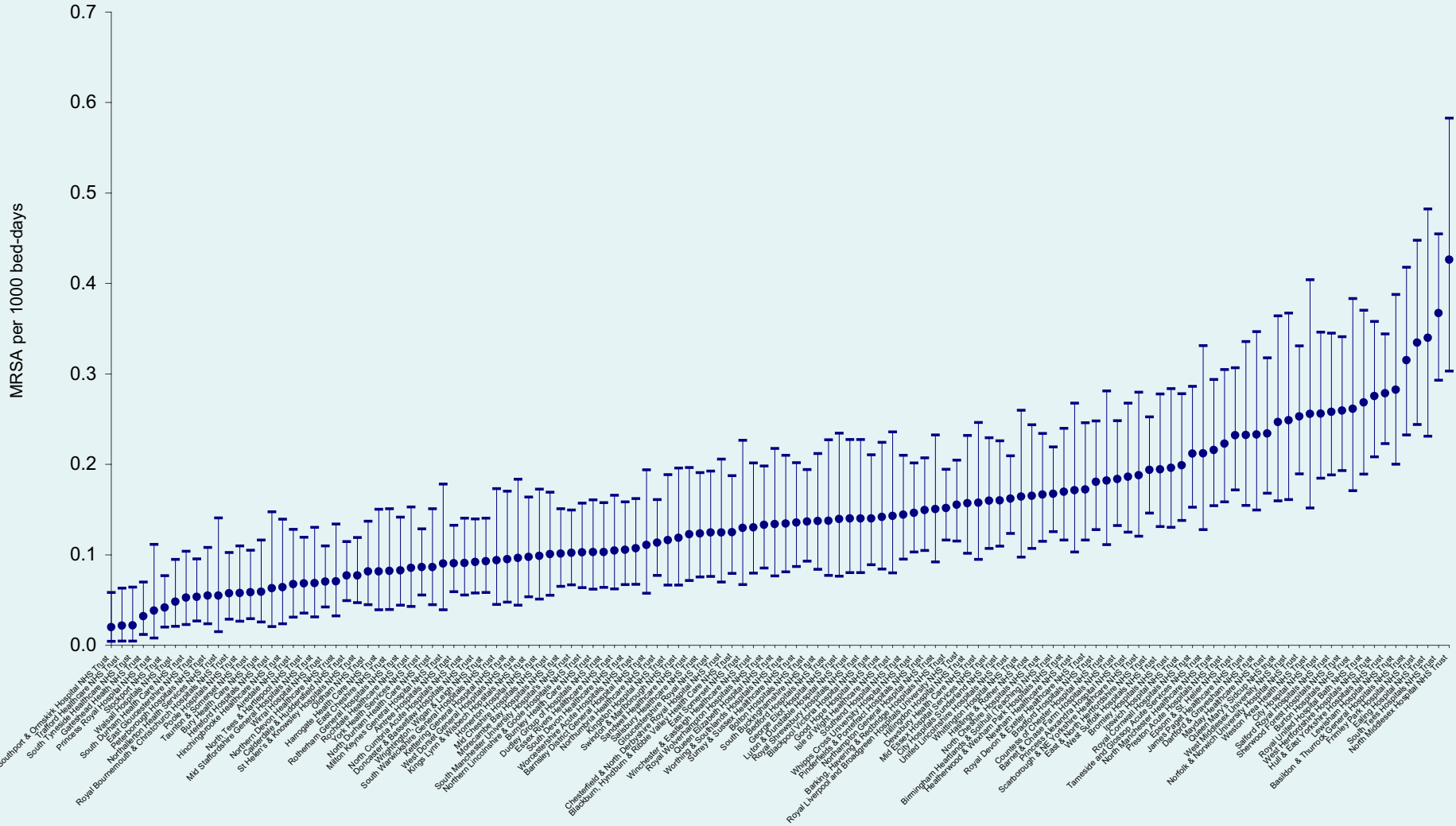
* provisional data

Figure 5 MRSA bacteraemia rates* with 95% confidence intervals, in specialist trusts: April to December 2001



* based on average daily number of occupied beds (all wards) in 2000/1

Figure 6 MRSA bacteraemia rates* with 95% confidence intervals, in general acute trusts: April to December 2001



* based on average daily number of occupied beds (all wards) in 2000/1

mandatory scheme has yet to be completed.

As before, the rates for each acute Trust were calculated on the basis of the Trust's activity using data on bed occupancy (from KH03 figures). Trust MRSA bacteraemia rates for the period April to December 2001 ranged from 0 to 0.72/1000 occupied bed-days, compared to 0 to 0.69 for April to September. As before, the acute NHS Trusts were divided up into three categories to facilitate comparison of similar institutions. The MRSA bacteraemia rates of specialist Trusts ranged from 0.07 to 0.72/1000 bed-days (figure 5), the general acute Trusts from 0.02 to 0.43 (figure 6), and the single speciality Trusts from 0 to 0.18 (figure 7). These ranges are very similar to the data from the first two quarters of the scheme, confirming that the specialist Trusts tend to have higher rates and the single speciality Trusts lower rates. For example, the four Trusts that reported no MRSA (figure 7) were all single speciality Trusts.

The MRSA rates for the regions were similar for April to December as they were for the first two quarters of the scheme, with only minor changes. London still had the highest bacteraemia rate at 0.23/1000 bed-days, and the North West the least at 0.11/1000 bed-days (table 2, figure 8). Unlike the earlier results, the confidence intervals of the highest and lowest ranked regions (London and the North West) did not overlap with any other regions.

Within each region, most Trusts had a similar rate when compared to the earlier results and had only changed their ranking by a few places (if at all); this was particularly noticeable at the extremes of high or low rates (figures 9 to 16, tables 3 to 10). The Northern and Yorkshire results

(table 6, figure 12) are a particularly good example. A few Trusts, for example, Queen Victoria Hospital NHS Trust in the South East region, and the Royal Liverpool Children's NHS Trust in the North West region, had a larger fluctuation in their rate and rankings, but in both these cases the confidence intervals were very wide, reflecting the small number of infections.

In general the confidence intervals decreased with the addition of the data for the third quarter, and in some regions it is possible to see groupings starting to emerge as Trusts begin to 'clump' together. For example, in the Trent region (table 9, figure 15) the four Trusts with the highest MRSA rate per 1000 bed-days (three of which are specialist Trusts) have noticeably higher rates than the other Trusts in the region, with only a very small overlap in confidence intervals with any of the other Trusts. It is anticipated that these trends will become clearer as further data are collected.

Comparison of voluntary and mandatory reporting schemes

In order to compare the results of the voluntary and mandatory MRSA bacteraemia reporting schemes, only data from the period April to December 2001 for the English health regions (*ie* excluding Wales) were selected from the voluntary reports database. Although only data from acute Trusts are reported under the mandatory scheme, unlike voluntary laboratory reporting which includes diagnoses made in all healthcare settings, the results of the two schemes should be comparable, as the

Figure 7 MRSA bacteraemia rates* with 95% confidence intervals, in single speciality trusts: April to December 2001

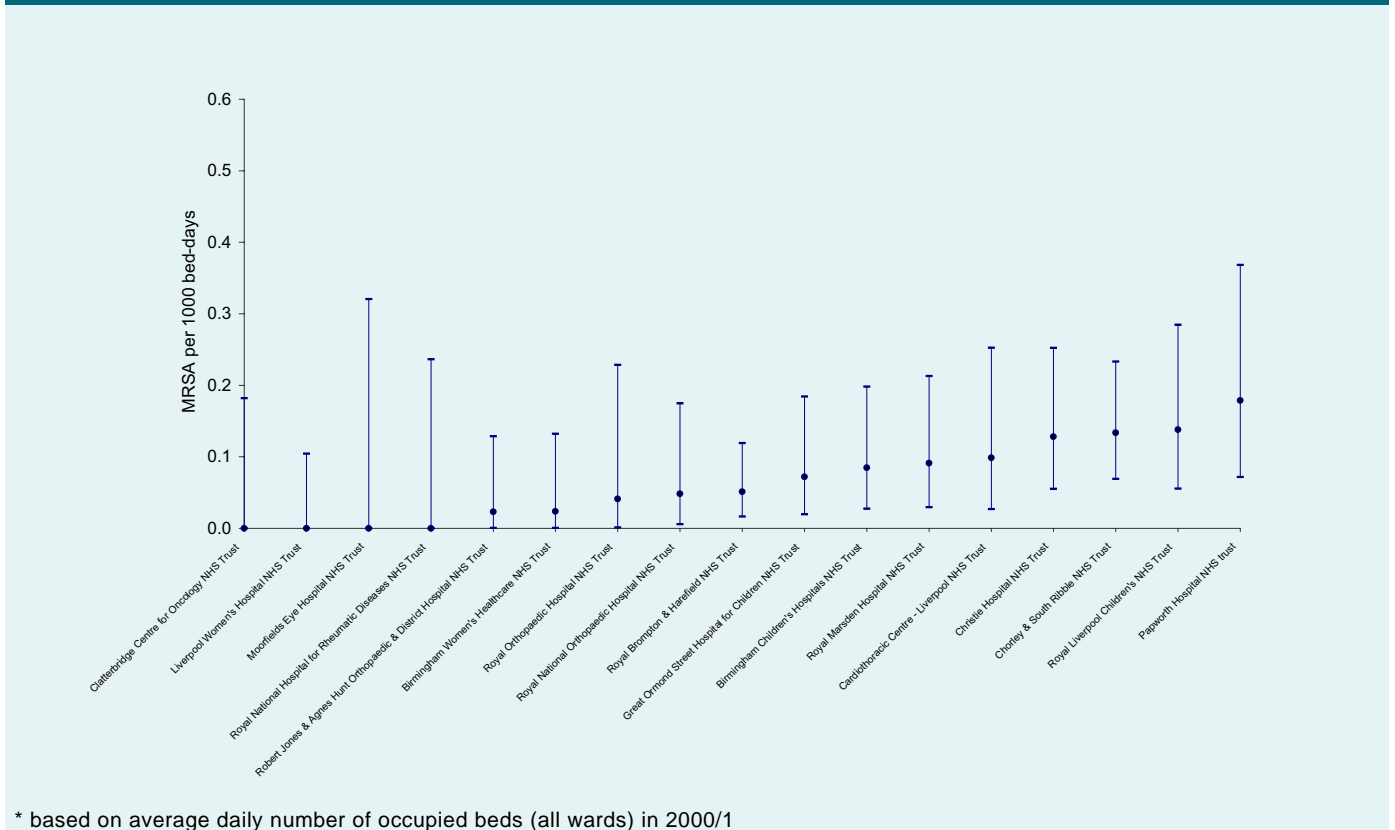
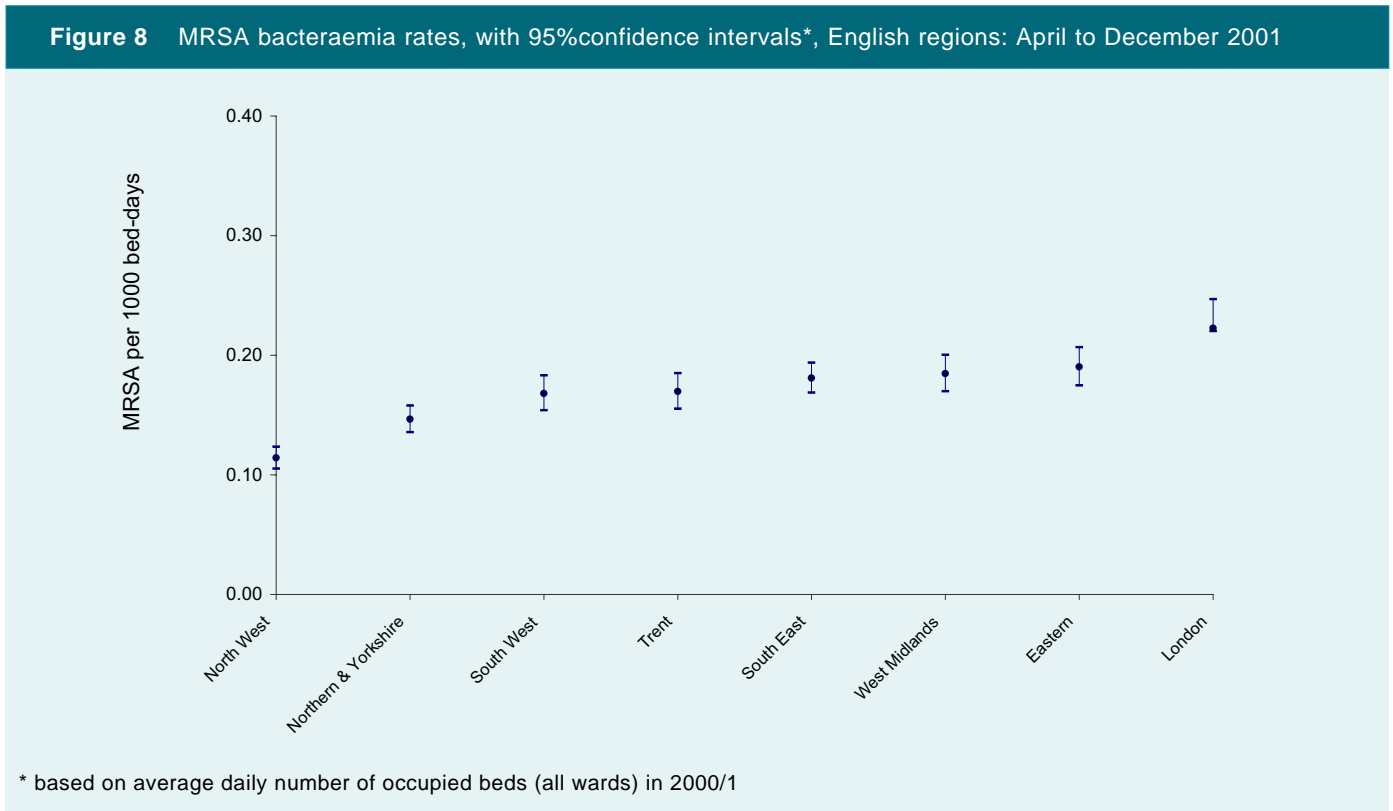


Table 2 MRSA bacteraemia rates by acute NHS Trust, England: April to December, 2001

Region Name	Lower 95% CI	Upper 95% CI	MRSA per 1000 bed-days*	National ranking
Northern and Yorkshire	0.14	0.16	0.15	7
Trent	0.16	0.18	0.17	5
Eastern	0.17	0.21	0.19	2
London	0.22	0.25	0.23	1
South East	0.17	0.19	0.18	4
South West	0.15	0.18	0.17	6
West Midlands	0.17	0.20	0.18	3
North West	0.11	0.12	0.11	8
England Total	0.17	0.18	0.17	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 8 MRSA bacteraemia rates, with 95% confidence intervals*, English regions: April to December 2001



* based on average daily number of occupied beds (all wards) in 2000/1

vast majority of bacteraemias are diagnosed in hospital.

For the April to December time period, 8925 *S. aureus* bacteraemia reports were received under the voluntary scheme, compared with 13 695 for the mandatory (figure 17). The number of voluntary reports is 65% of the number of mandatory reports for this period. MRSA accounted for 37% of *S. aureus* reports in the voluntary scheme (although 9% of reports did not contain methicillin susceptibility information) and 40% in the mandatory scheme.

Regional variations in the numbers of bacteraemia reports received under the two different schemes were wide (figure 18), with London having the greatest difference and the West Midlands the least. In the West Midlands the number of reports received under the voluntary scheme actually slightly exceed the number reported under the mandatory scheme.

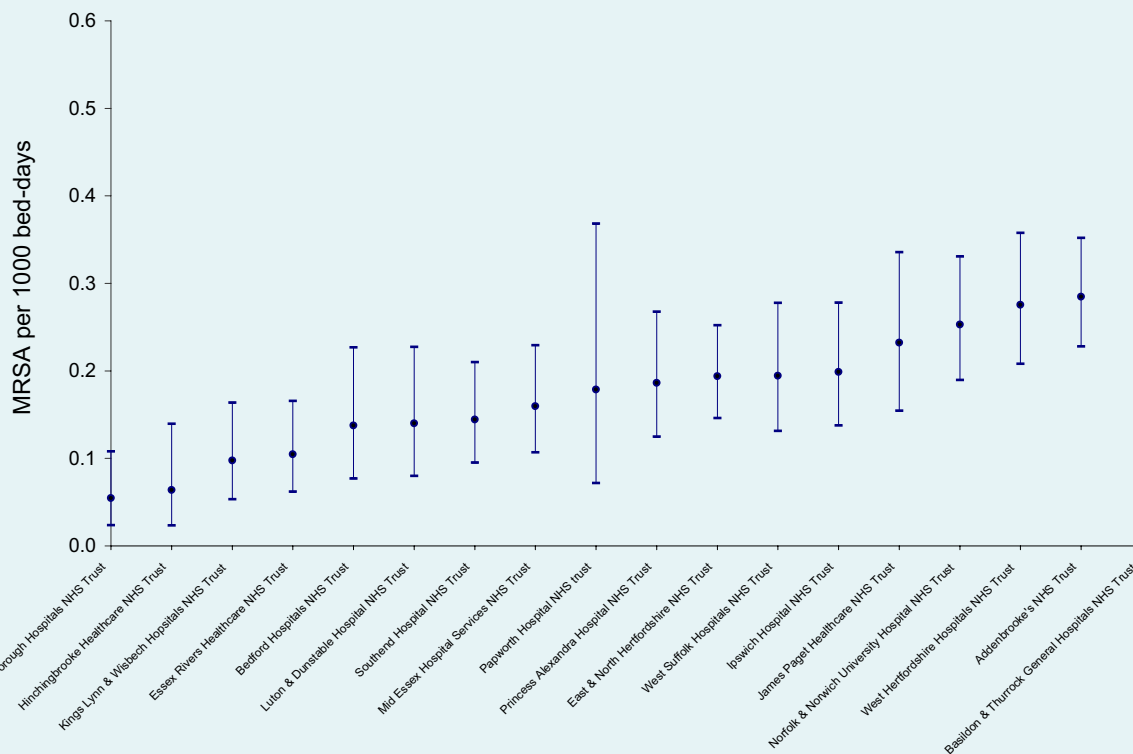
In general, the regions with poorer results under the

voluntary scheme (both in terms of the number of reports received and the proportion lacking susceptibility information) tended to have greater disparity between the proportions of bacteraemias caused by MRSA in the two surveillance schemes (figure 19). In no region, however, was the difference between the percentages of methicillin resistant reports from the two schemes more than 5%. Despite the differences in regional reporting, MRSA bacteraemias as a percentage of *S. aureus* isolates containing susceptibility information in England as a whole only differ by 1%, being 41% under the voluntary scheme and 40% for the mandatory surveillance scheme in this nine month period.

Conclusion

The voluntary reports to CDSC of *S. aureus* bacteraemia for 2001 have shown an increase in the numbers of reports

Figure 9 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, Eastern region: April to December 2001



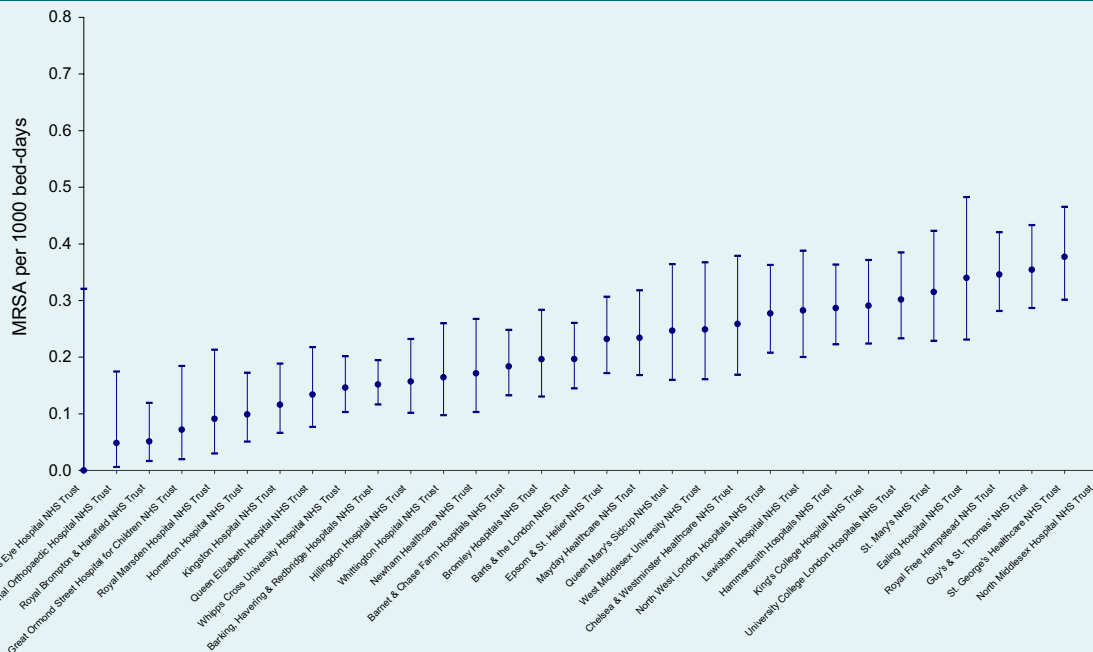
* based on average daily number of occupied beds (all wards) in 2000/1

Table 3 MRSA bacteraemia rates by acute NHS Trust, Eastern region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category
Addenbrooke's NHS Trust	specialist	0.28	14
Addenbrooke's NHS Trust	specialist	0.28	14
Basildon & Thurrock General Hospitals NHS Trust	general acute	0.32	5
Bedford Hospitals NHS Trust	general acute	0.14	59
East & North Hertfordshire NHS Trust	general acute	0.19	29
Essex Rivers Healthcare NHS Trust	general acute	0.10	79
Hinchingbrooke Healthcare NHS Trust	general acute	0.06	110
Ipswich Hospital NHS Trust	general acute	0.20	26
James Paget Healthcare NHS Trust	general acute	0.23	20
Kings Lynn & Wisbech Hospitals NHS Trust	general acute	0.10	87
Luton & Dunstable Hospital NHS Trust	general acute	0.14	56
Mid Essex Hospital Services NHS Trust	general acute	0.16	44
Norfolk & Norwich University Hospital NHS Trust	general acute	0.25	15
Papworth Hospital NHS Trust	single specialty	0.18	1
Peterborough Hospitals NHS Trust	general acute	0.05	117
Princess Alexandra Hospital NHS Trust	general acute	0.19	31
Southend Hospital NHS Trust	general acute	0.14	52
West Hertfordshire Hospitals NHS Trust	general acute	0.28	8
West Suffolk Hospitals NHS Trust	general acute	0.19	28
Eastern Region Total		0.19	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 10 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, London region: April to December 2001



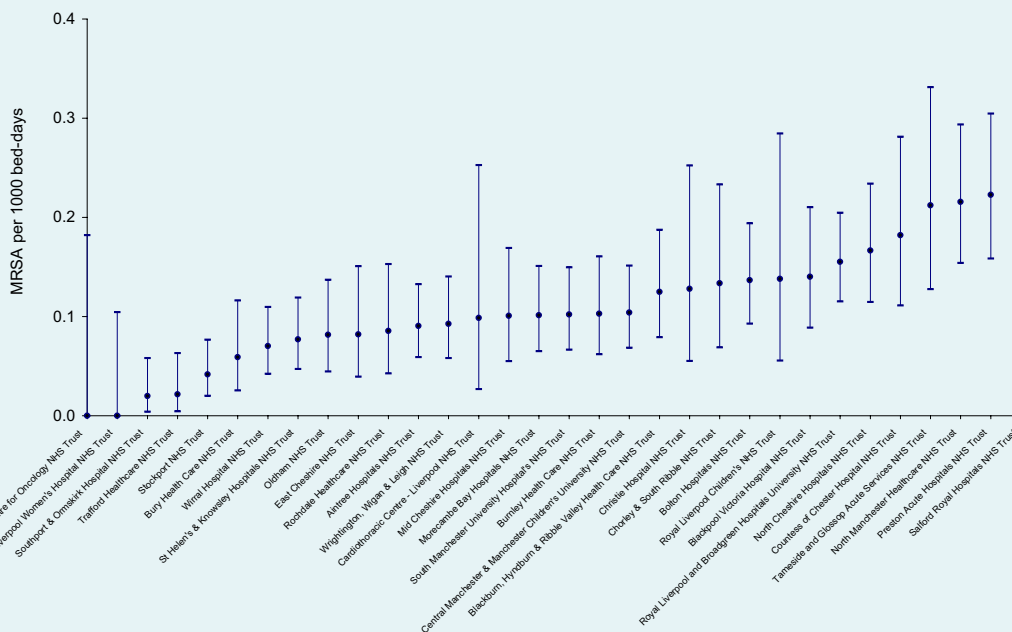
* based on average daily number of occupied beds (all wards) in 2000/1

Table 4 MRSA bacteraemia rates by acute NHS Trust, London region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category
Barking, Havering & Redbridge Hospitals NHS Trust	general acute	0.15	48
Barnet & Chase Farm Hospitals NHS Trust	general acute	0.18	32
Barts & the London NHS Trust	specialist	0.20	29
Bromley Hospitals NHS Trust	general acute	0.20	27
Chelsea & Westminster Healthcare NHS Trust	specialist	0.26	19
Ealing Hospital NHS Trust	general acute	0.34	3
Epsom & St. Helier NHS Trust	general acute	0.23	21
Great Ormond Street Hospital for Children NHS Trust	single specialty	0.07	8
Guy's & St. Thomas' NHS Trust	specialist	0.35	3
Hammersmith Hospitals NHS Trust	specialist	0.29	12
Hillingdon Hospital NHS Trust	general acute	0.16	46
Homerton Hospital NHS Trust	general acute	0.10	86
King's College Hospital NHS Trust	specialist	0.29	11
Kingston Hospital NHS Trust	general acute	0.12	74
Lewisham Hospital NHS Trust	general acute	0.28	6
Mayday Healthcare NHS Trust	general acute	0.23	18
Moorfields Eye Hospital NHS Trust	single specialty	0.00	14
Newham Healthcare NHS Trust	general acute	0.17	36
North Middlesex Hospital NHS Trust	general acute	0.43	1
North West London Hospitals NHS Trust	specialist	0.28	16
Queen Elizabeth Hospital NHS Trust	general acute	0.13	64
Queen Mary's Sidcup NHS trust	general acute	0.25	17
Royal Brompton & Harefield NHS Trust	single specialty	0.05	9
Royal Free Hampstead NHS Trust	specialist	0.35	4
Royal Marsden Hospital NHS Trust	single specialty	0.09	6
Royal National Orthopaedic Hospital NHS Trust	single specialty	0.05	10
St. George's Healthcare NHS Trust	specialist	0.38	2
St. Mary's NHS Trust	specialist	0.31	7
University College London Hospitals NHS Trust	specialist	0.30	10
West Middlesex University NHS Trust	general acute	0.25	16
Whipps Cross University Hospital NHS Trust	general acute	0.15	51
Whittington Hospital NHS Trust	general acute	0.16	41
London Region Total		0.23	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 11 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, North West region: April to December 2001



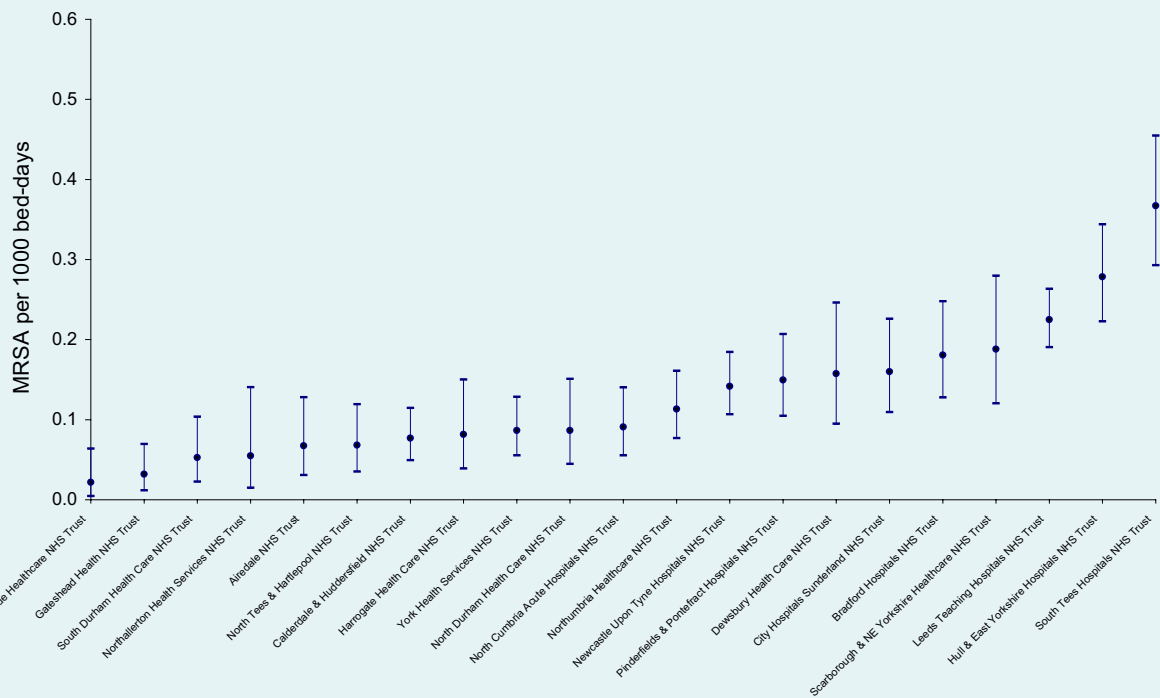
* based on average daily number of occupied beds (all wards) in 2000/1

Table 5 MRSA bacteraemia rates by acute NHS Trust, North West region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category†
Aintree Hospitals NHS Trust	general acute	0.09	94
Blackburn, Hyndburn & Ribble Valley Health Care NHS Trust	general acute	0.12	68
Blackpool Victoria Hospital NHS Trust	general acute	0.14	55
Bolton Hospitals NHS Trust	general acute	0.14	61
Burnley Health Care NHS Trust	general acute	0.10	81
Bury Health Care NHS Trust	general acute	0.06	112
Cardiothoracic Centre - Liverpool NHS Trust	single specialty	0.10	5
Central Manchester & Manchester Children's University NHS Trust	specialist	0.10	39
Chorley & South Ribble NHS Trust	single specialty	0.13	3
Christie Hospital NHS Trust	single specialty	0.13	4
Clatterbridge Centre for Oncology NHS Trust	single specialty	0.00	14
Countess of Chester Hospital NHS Trust	general acute	0.18	33
East Cheshire NHS Trust	general acute	0.08	100
Liverpool Women's Hospital NHS Trust	single specialty	0.00	14
Mid Cheshire Hospitals NHS Trust	general acute	0.10	85
Morecambe Bay Hospitals NHS Trust	general acute	0.10	84
North Cheshire Hospitals NHS Trust	general acute	0.17	39
North Manchester Healthcare NHS Trust	general acute	0.22	23
Oldham NHS Trust	general acute	0.08	102
Preston Acute Hospitals NHS Trust	general acute	0.22	22
Rochdale Healthcare NHS Trust	general acute	0.09	98
Royal Liverpool and Broadgreen Hospitals University NHS Trust	general acute	0.16	47
Royal Liverpool Children's NHS Trust	single specialty	0.14	2
Salford Royal Hospitals NHS Trust	general acute	0.26	12
South Manchester University Hospital's NHS Trust	general acute	0.10	83
Southport & Ormskirk Hospital NHS Trust	general acute	0.02	126
St Helen's & Knowsley Hospitals NHS Trust	general acute	0.08	103
Stockport NHS Trust	general acute	0.04	121
Tameside and Glossop Acute Services NHS Trust	general acute	0.21	24
Trafford Healthcare NHS Trust	general acute	0.02	125
Wirral Hospital NHS Trust	general acute	0.07	106
Wrightington, Wigan & Leigh NHS Trust	general acute	0.09	91
North West Region Total		0.11	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 12 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, Northern and Yorkshire region: April to December 2001



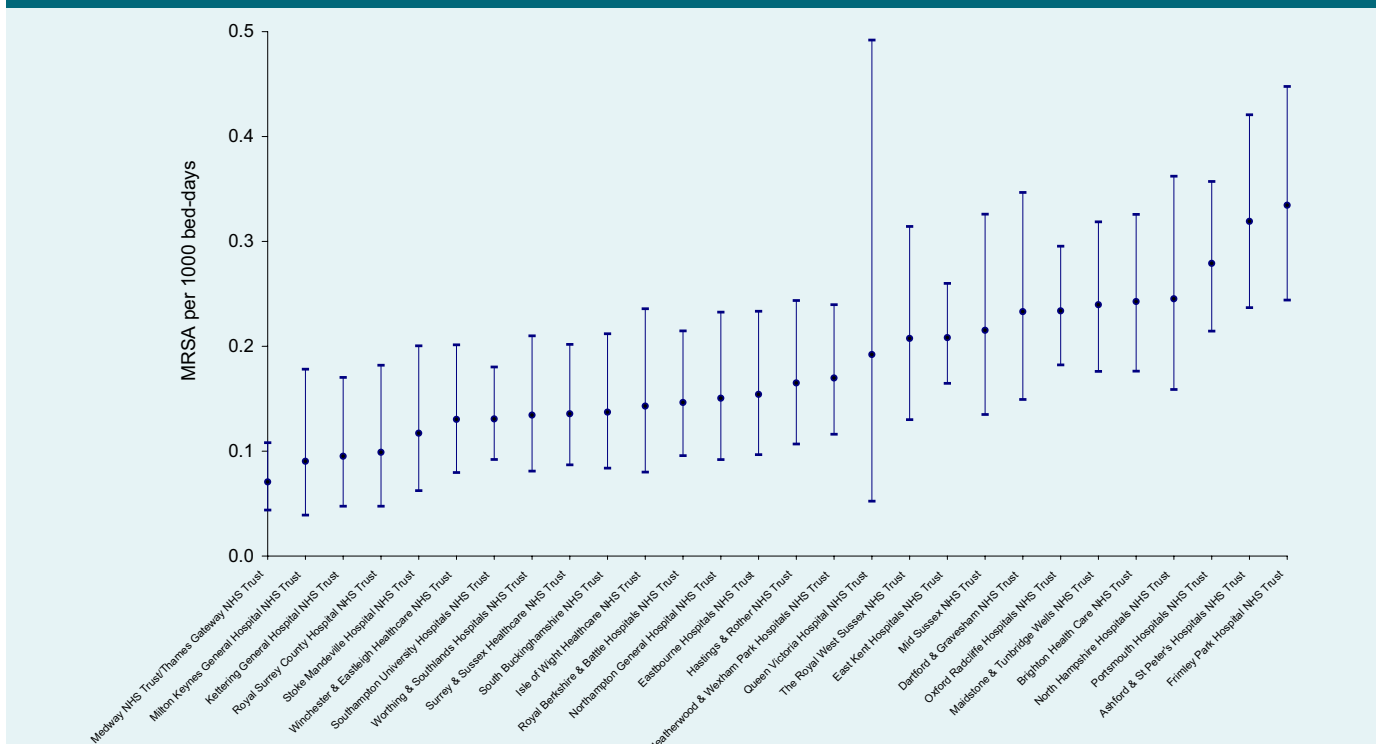
* based on average daily number of occupied beds (all wards) in 2000/1

Table 6 MRSA bacteraemia rates by acute NHS Trust, Northern and Yorkshire region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category†
Airedale NHS Trust	general acute	0.07	109
Bradford Hospitals NHS Trust	general acute	0.18	34
Calderdale & Huddersfield NHS Trust	general acute	0.08	104
City Hospitals Sunderland NHS Trust	general acute	0.16	43
Dewsbury Health Care NHS Trust	general acute	0.16	45
Gateshead Health NHS Trust	general acute	0.03	123
Harrogate Health Care NHS Trust	general acute	0.08	101
Hull & East Yorkshire Hospitals NHS Trust	general acute	0.28	7
Leeds Teaching Hospitals NHS Trust	specialist	0.22	25
Newcastle Upon Tyne Hospitals NHS Trust	specialist	0.14	34
North Cumbria Acute Hospitals NHS Trust	general acute	0.09	93
North Durham Health Care NHS Trust	general acute	0.09	96
North Tees & Hartlepool NHS Trust	general acute	0.07	108
Northallerton Health Services NHS Trust	general acute	0.05	116
Northumbria Healthcare NHS Trust	general acute	0.11	75
Pinderfields & Pontefract Hospitals NHS Trust	general acute	0.15	50
Scarborough & NE Yorkshire Healthcare NHS Trust	general acute	0.19	30
South Durham Health Care NHS Trust	general acute	0.05	119
South Tees Hospitals NHS Trust	general acute	0.37	2
South Tyneside Healthcare NHS Trust	general acute	0.02	124
York Health Services NHS Trust	general acute	0.09	96
Northern & Yorkshire Region Total		0.15	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 13 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, South East region: April to December 2001



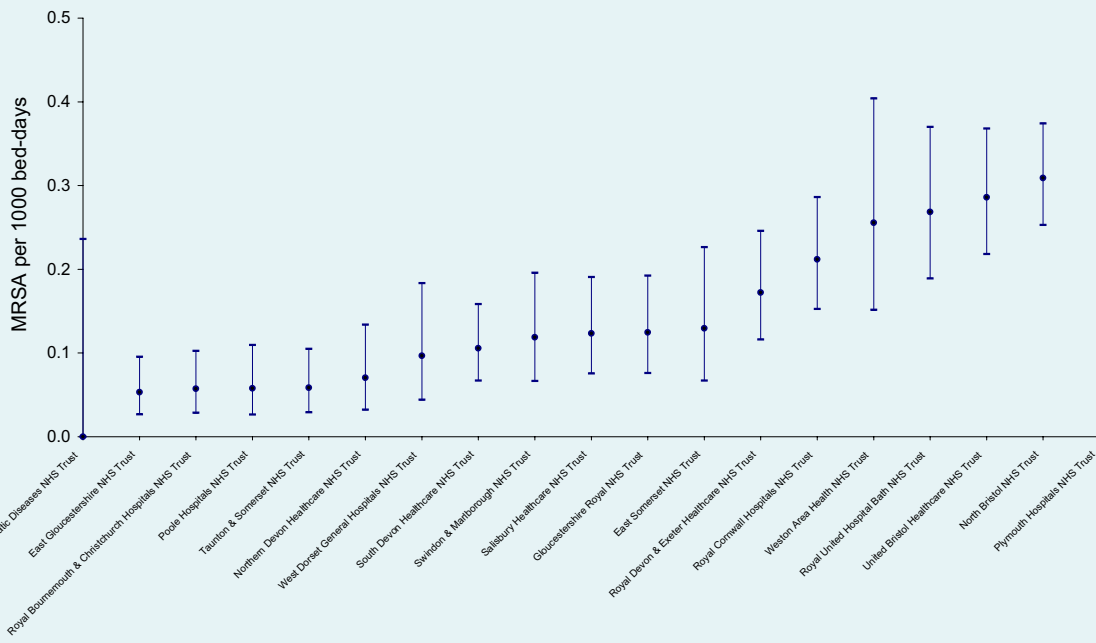
* based on average daily number of occupied beds (all wards) in 2000/1

Table 7 MRSA bacteraemia rates by acute NHS Trust, South East region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category†
Ashford & St Peter's Hospitals NHS Trust	specialist	0.32	6
Brighton Health Care NHS Trust	specialist	0.24	22
Dartford & Gravesham NHS Trust	general acute	0.23	19
East Kent Hospitals NHS Trust	specialist	0.21	27
Eastbourne Hospitals NHS Trust	specialist	0.15	32
Frimley Park Hospital NHS Trust	general acute	0.33	4
Hastings & Rother NHS Trust	general acute	0.17	40
Heatherwood & Wexham Park Hospitals NHS Trust	general acute	0.17	37
Isle of Wight Healthcare NHS Trust	general acute	0.14	53
Kettering General Hospital NHS Trust	general acute	0.10	89
Maidstone & Tunbridge Wells NHS Trust	specialist	0.24	23
Medway NHS Trust/Thames Gateway NHS Trust	specialist	0.07	42
Mid Sussex NHS Trust	specialist	0.22	26
Milton Keynes General Hospital NHS Trust	general acute	0.09	95
North Hampshire Hospitals NHS Trust	specialist	0.25	21
Northampton General Hospital NHS Trust	general acute	0.15	49
Oxford Radcliffe Hospitals NHS Trust	specialist	0.23	24
Portsmouth Hospitals NHS Trust	specialist	0.28	15
Queen Victoria Hospital NHS Trust	specialist	0.19	31
Royal Berkshire & Battle Hospitals NHS Trust	specialist	0.15	33
Royal Surrey County Hospital NHS Trust	specialist	0.10	41
South Buckinghamshire NHS Trust**	general acute	0.14	60
Southampton University Hospitals NHS Trust	specialist	0.13	35
Stoke Mandeville Hospital NHS Trust	specialist	0.12	37
Surrey & Sussex Healthcare NHS Trust	general acute	0.14	62
The Royal West Sussex NHS Trust	specialist	0.21	28
Winchester & Eastleigh Healthcare NHS Trust	general acute	0.13	66
Worthing & Southlands Hospitals NHS Trust	general acute	0.13	63
South East Region total		0.18	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 14 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, South West region: April to December 2001



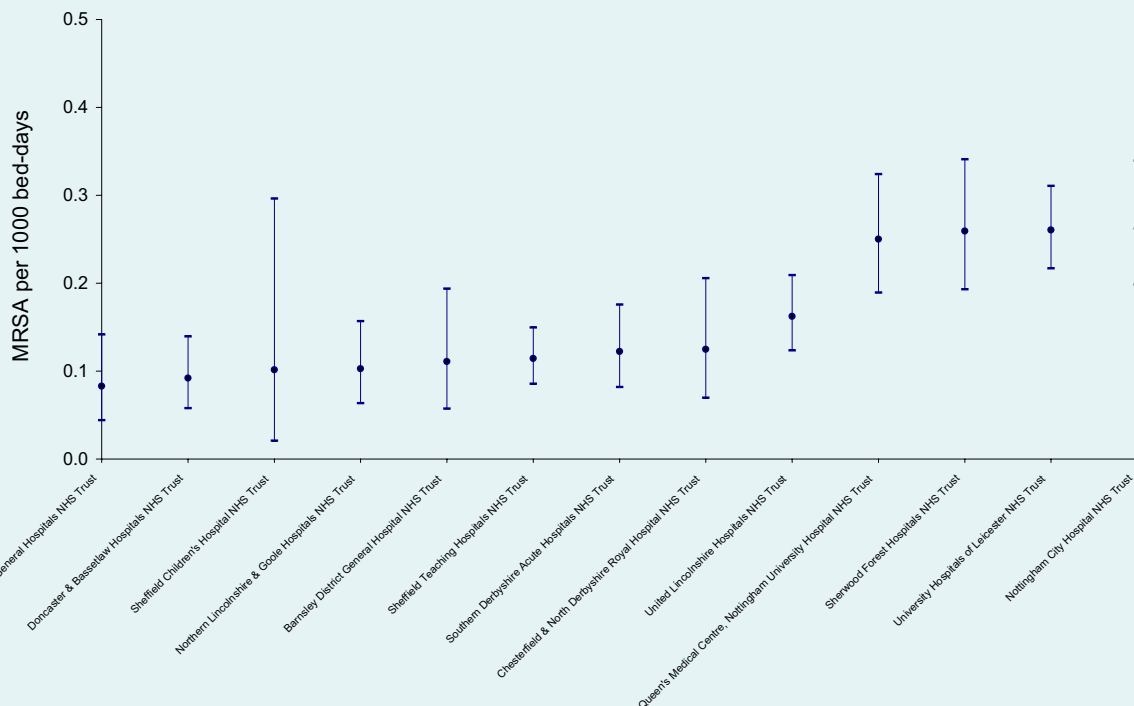
* based on average daily number of occupied beds (all wards) in 2000/1

Table 8 MRSA bacteraemia rates by acute NHS Trust, South West region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category†
East East Gloucestershire NHS Trust	general acute	0.05	118
East Somerset NHS Trust	general acute	0.13	67
Gloucestershire Royal NHS Trust	general acute	0.12	70
North Bristol NHS Trust	specialist	0.31	8
Northern Devon Healthcare NHS Trust	general acute	0.07	105
Plymouth Hospitals NHS Trust	specialist	0.34	5
Poole Hospitals NHS Trust	general acute	0.06	114
Royal Bournemouth & Christchurch Hospitals NHS Trust	general acute	0.06	115
Royal Cornwall Hospitals NHS Trust	general acute	0.21	25
Royal Devon & Exeter Healthcare NHS Trust	general acute	0.17	35
Royal National Hospital for Rheumatic Diseases NHS Trust	single specialty	0.00	14
Royal United Hospital Bath NHS Trust	general acute	0.27	9
Salisbury Healthcare NHS Trust	general acute	0.12	71
South Devon Healthcare NHS Trust	general acute	0.11	78
Swindon & Marlborough NHS Trust	general acute	0.12	73
Taunton & Somerset NHS Trust	general acute	0.06	113
United Bristol Healthcare NHS Trust	specialist	0.29	13
West Dorset General Hospitals NHS Trust	general acute	0.10	88
Weston Area Health NHS Trust	general acute	0.26	14
South West Region Total		0.17	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 15 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, Trent region: April to December 2001



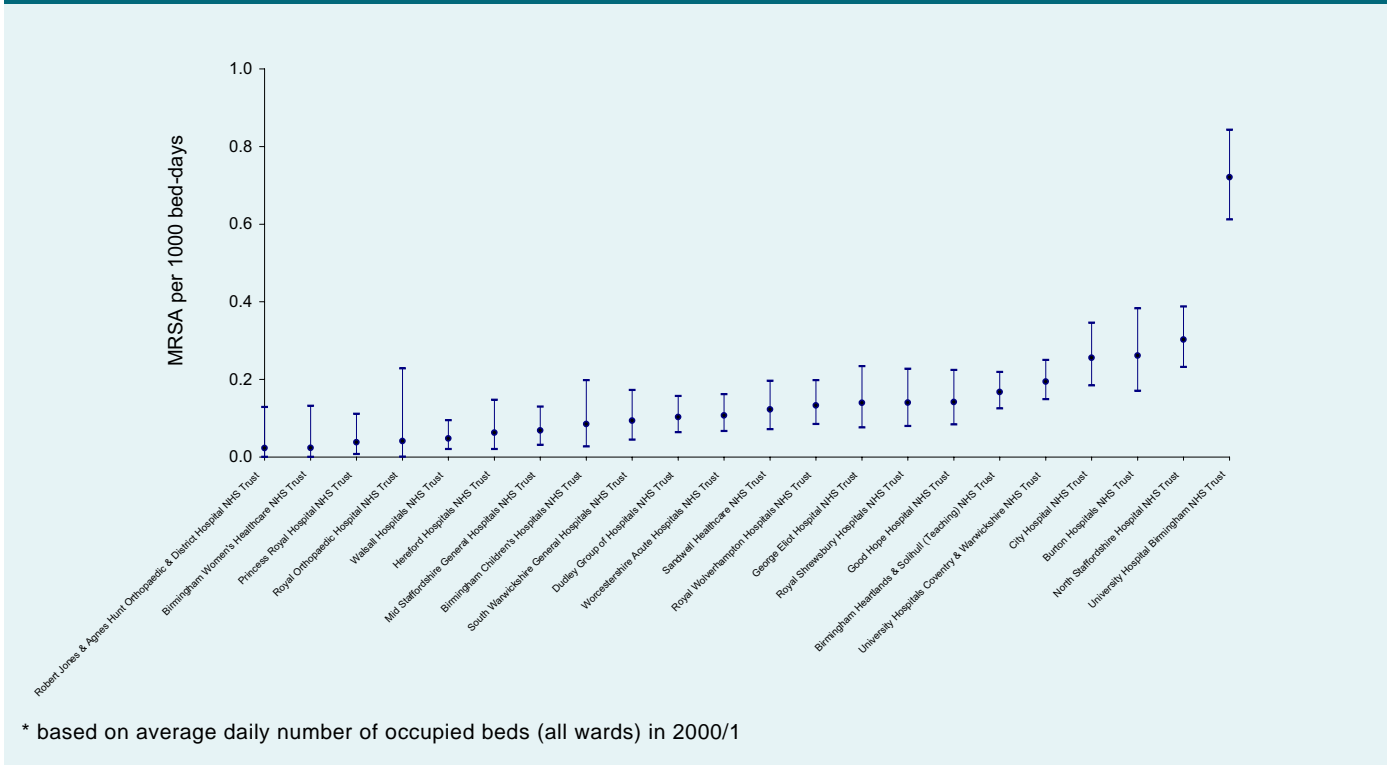
* based on average daily number of occupied beds (all wards) in 2000/1

Table 9 MRSA bacteraemia rates by acute NHS Trust, Trent region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category
Barnsley District General Hospital NHS Trust	general acute	0.11	76
Chesterfield & North Derbyshire Royal Hospital NHS Trust	general acute	0.12	69
Doncaster & Bassetlaw Hospitals NHS Trust	general acute	0.09	92
Northern Lincolnshire & Goole Hospitals NHS Trust	general acute	0.10	82
Nottingham City Hospital NHS Trust	specialist	0.26	17
Queen's Medical Centre, Nottingham University Hospital NHS Trust	specialist	0.25	20
Rotherham General Hospitals NHS Trust	general acute	0.08	99
Sheffield Children's Hospital NHS Trust	specialist	0.10	40
Sheffield Teaching Hospitals NHS Trust	specialist	0.11	38
Sherwood Forest Hospitals NHS Trust	general acute	0.26	11
Southern Derbyshire Acute Hospitals NHS Trust	specialist	0.12	36
United Lincolnshire Hospitals NHS Trust	general acute	0.16	42
University Hospitals of Leicester NHS Trust	specialist	0.26	18
Trent Region Total		0.17	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 16 MRSA bacteraemia rates with 95% confidence intervals*, by acute NHS Trust, West Midlands region: April to December 2001



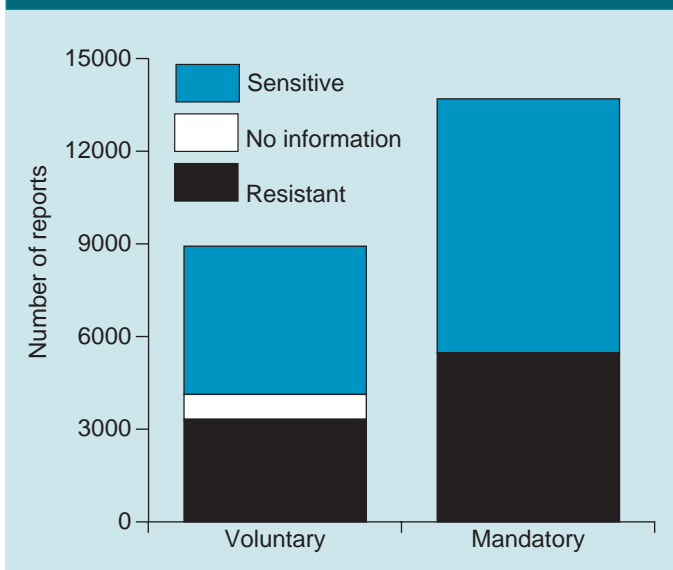
* based on average daily number of occupied beds (all wards) in 2000/1

Table 10 MRSA bacteraemia rates by acute NHS Trust, West Midlands region: April to December, 2001

Trust Name	Trust Category	MRSA per 1000 bed-days*	National ranking according to Trust category
Birmingham Children's Hospitals NHS Trust	single specialty	0.08	7
Birmingham Heartlands & Solihull (Teaching) NHS Trust	general acute	0.17	38
Birmingham Women's Healthcare NHS Trust	single specialty	0.02	12
Burton Hospitals NHS Trust	general acute	0.26	10
City Hospital NHS Trust	general acute	0.26	13
Dudley Group of Hospitals NHS Trust	general acute	0.10	80
George Eliot Hospital NHS Trust	general acute	0.14	58
Good Hope Hospital NHS Trust	general acute	0.14	54
Hereford Hospitals NHS Trust	general acute	0.06	111
Mid Staffordshire General Hospitals NHS Trust	general acute	0.07	107
North Staffordshire Hospital NHS Trust	specialist	0.30	9
Princess Royal Hospital NHS Trust	general acute	0.04	122
Robert Jones & Agnes Hunt Orthopaedic & District Hospital NHS Trust	single specialty	0.02	13
Royal Orthopaedic Hospital NHS Trust	single specialty	0.04	11
Royal Shrewsbury Hospitals NHS Trust	general acute	0.14	56
Royal Wolverhampton Hospitals NHS Trust	general acute	0.13	65
Sandwell Healthcare NHS Trust	general acute	0.12	72
South Warwickshire General Hospitals NHS Trust	general acute	0.09	90
University Hospital Birmingham NHS Trust	specialist	0.72	1
University Hospitals Coventry & Warwickshire NHS Trust	specialist	0.19	30
Walsall Hospitals NHS Trust	general acute	0.05	120
Worcestershire Acute Hospitals NHS Trust	general acute	0.11	77
West Midlands total		0.18	

* based on average daily number of occupied beds (all wards) in 2000/1

Figure 17 Comparison of the composition of the *S. aureus* susceptibility data for English health regions by surveillance scheme: April to December 2001



received and in the reporting rate. There has been a continuing fall in the percentage of reports without methicillin susceptibility information, and of the reports with this information, the percentage showing resistance to methicillin has remained constant from the previous year.

The second set of published results for the Department of Health's mandatory MRSA bacteraemia surveillance scheme has generally endorsed the earlier results, with no

substantial changes in the bacteraemia rates for particular trusts, institution types, or regions. With the decreases in the confidence intervals, it is, however, possible to see certain trends emerging. Further differentiation is expected as more data becomes available.

The comparison of the two different MRSA surveillance schemes has revealed that the differences in the results produced by the two schemes varies widely between the regions, particularly in terms of the total number of *S. aureus* reports received. In general, those regions with the greatest difference in the number of reports were also those that had the greatest difference in the MRSA as a percentage of isolates for which methicillin susceptibility was available, although the difference was no more than 5% for any region. The figure for the whole of England only differed between schemes by 1%. This is encouraging as it indicates that the voluntary reporting system has been providing a relatively accurate estimate of MRSA as a proportion of *S. aureus* bacteraemias at a national level.

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1. PHLS. First report of the Department of Health's mandatory MRSA bacteraemia surveillance scheme in acute NHS Trusts in England: April to September 2001. *Commun Dis Rep CDR Wkly [serial online]* 2002 [cited 20 March 2002];12 (6): bacteraemias. Available at <www.phls.org.uk/publications/CDR%20Weekly/archive02/bacteraemiaarchive02.html#MRSA surv>.
2. CDSC. *Staphylococcus aureus* bacteraemia: England and Wales: January to December 2000. *Commun Dis Rep CDR Wkly [serial online]* 2001 [cited 20 March 2002];11 (7):bacteraemias. Available at <www.phls.org.uk/publications/CDR%20Weekly/>

Figure 18 Comparison of the number of *S. aureus* reports received under voluntary and mandatory reporting schemes, English health regions: April to December 2001

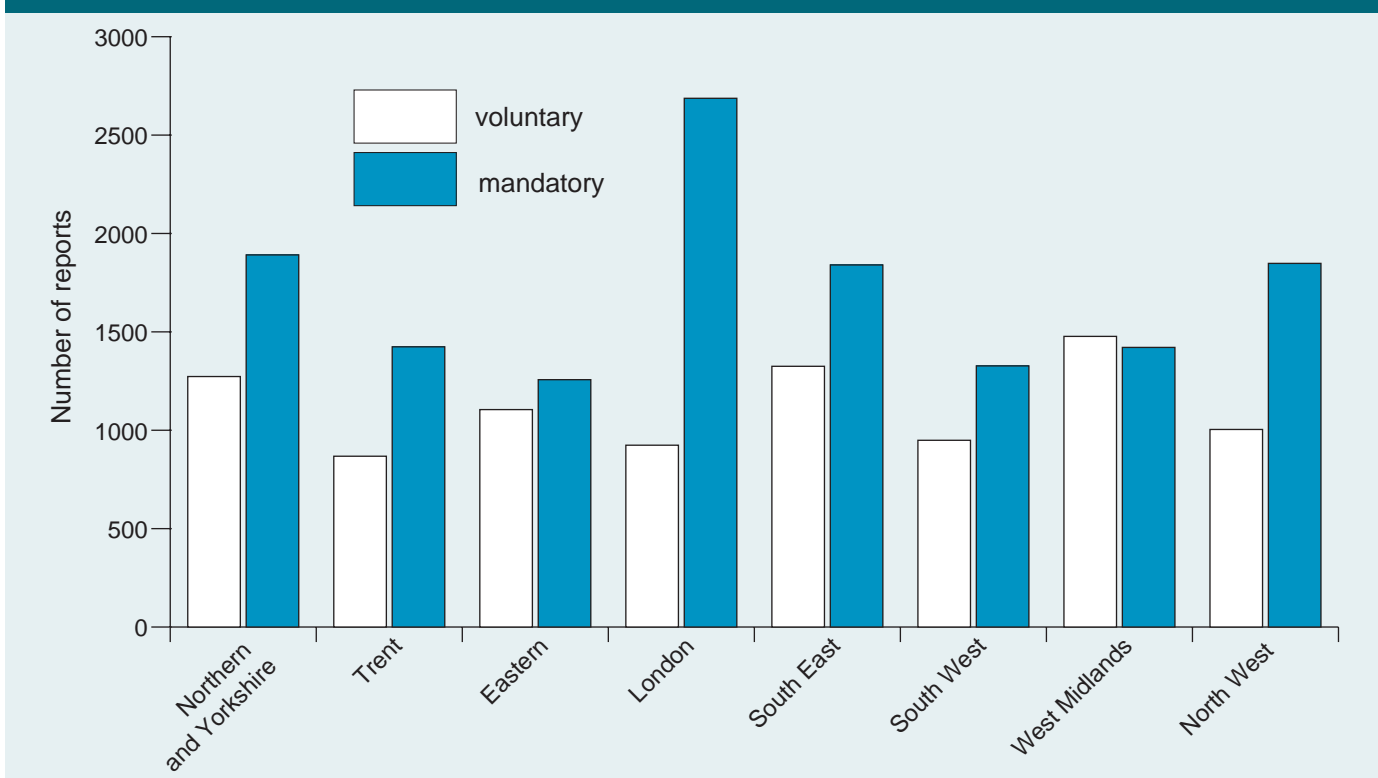
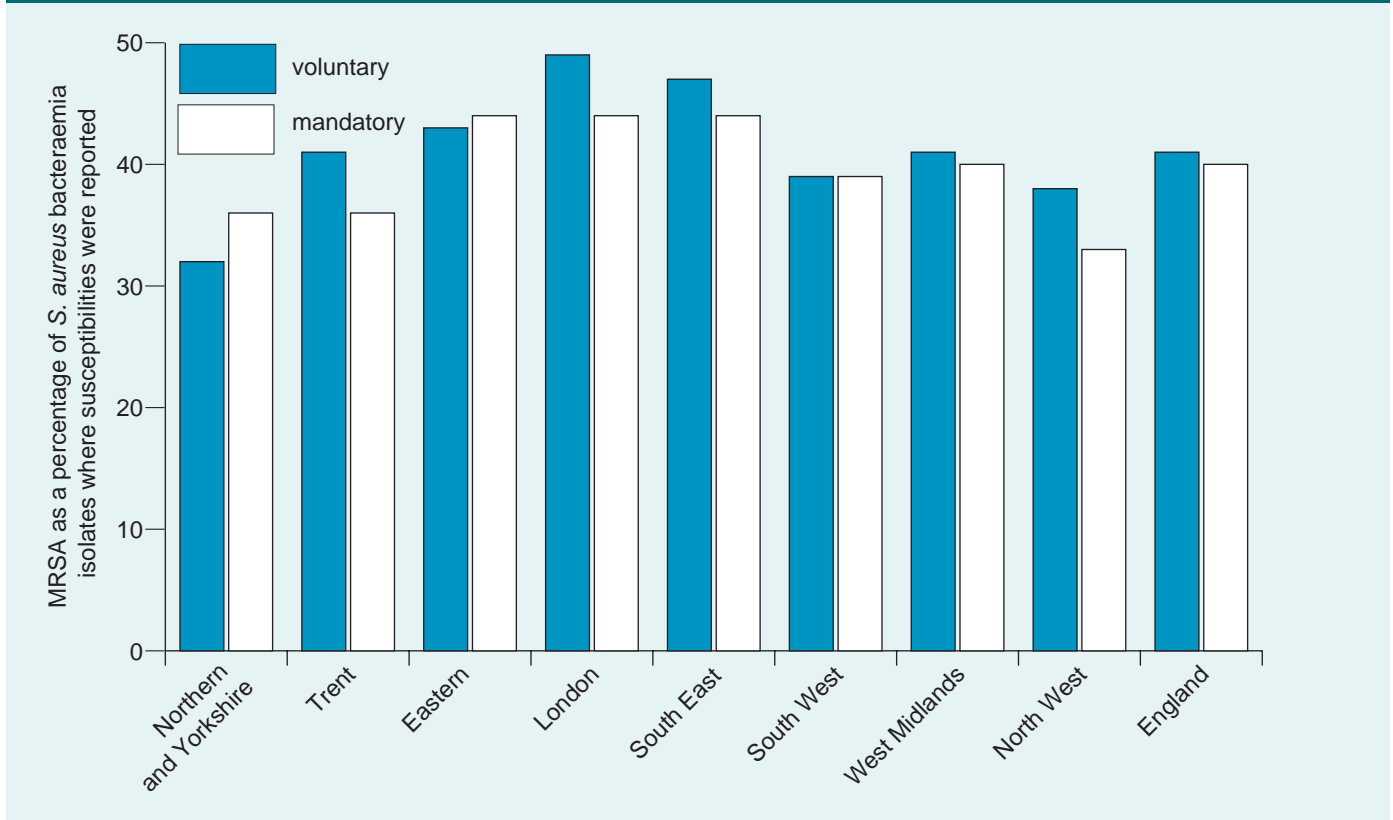


Figure 19 MRSA as a percentage of total *S. aureus* reported with information on methicillin susceptibility, English health regions: April to December 2001



archive/bacteraemiaarchive.html#staphaureus >.

3. PHLS. *Staphylococcus aureus* bacteraemia: England and Wales July to September 2001. *Commun Dis Rep CDR Wkly* [serial

online] 2001 [cited 20 March 2002];11 (46): bacteraemias. Available at <www.phls.org.uk/publications/CDR%20Weekly/archive/bacteraemiaarchive.html#Saureus_Jul-Sep>.