

**Staphylococcus aureus Blood Stream Infection (Bacteraemia)**  
**Surveillance**

**All Wales Data per 100 000 Bed Days**

### **Rates of *Staphylococcus aureus* Blood Stream Infections per 100 000 bed days**

For the *Staphylococcus aureus* blood stream infection (bacteraemia) surveillance scheme, rates produced for reports have historically used 1000 bed days as the standard comparison denominator. However, the Top Ten Blood Stream Infection (bacteraemia) surveillance uses 100 000 bed days as the standard comparison denominator. To allow comparisons between the two schemes, the *Staph. aureus* data published for each Trust has been recalculated to be per 100 000 bed days. However to allow comparison with the English scheme, which is presented per 10,000 bed days please divide the Welsh figures by 10.

#### **All Wales Annual Data: 01/01/06 – 31/12/06**

|        | <b>Blood Culture Sets Taken (BCS)</b> | <b>Positive Blood Cultures (PBS)*</b> | <b>Total <i>S. aureus</i></b> | <b>MRSA</b> | <b>Bed days</b> | <b>% of BCS that are MRSA</b> | <b>% of PBS that are MRSA</b> | <b>% of <i>S. aureus</i> that are MRSA</b> | <b>BCS / 100 000 bed days</b> | <b>PBS/ 100 000 bed days</b> | <b>Total <i>S. aureus</i> /100 000 bed days</b> | <b>MRSA/ 100 000 bed days</b> |
|--------|---------------------------------------|---------------------------------------|-------------------------------|-------------|-----------------|-------------------------------|-------------------------------|--|-------------------------------|------------------------------|---|-------------------------------|
| Total  | 95304                                 | 14271                                 | 1014                          | 336         | 4037571         | 0.35                          | 2.35                          | 33.14                                      | 2360                          | 353                          | 25  | 8                             |
| Min    | 974                                   | 106                                   | 10                            | 1           | 16035           | 0.10                          | 0.70                          | 10.00                                      | 1634                          | 235                          | 16  | 3                             |
| Max    | 20293                                 | 3264                                  | 223                           | 78          | 735465          | 0.52                          | 3.82                          | 54.39                                      | 6074                          | 661                          | 62  | 13                            |
| Mean   | 7331.08                               | 1097.77                               | 78.00                         | 25.85       | 310582          | 0.34                          | 2.34                          | 31.97                                      | 2642                          | 379                          | 28  | 8                             |
| Median | 5948                                  | 900                                   | 61                            | 21          | 258524          | 0.36                          | 2.48                          | 33.33                                      | 2350                          | 358                          | 24  | 9                             |

\*Including duplicates and contaminants

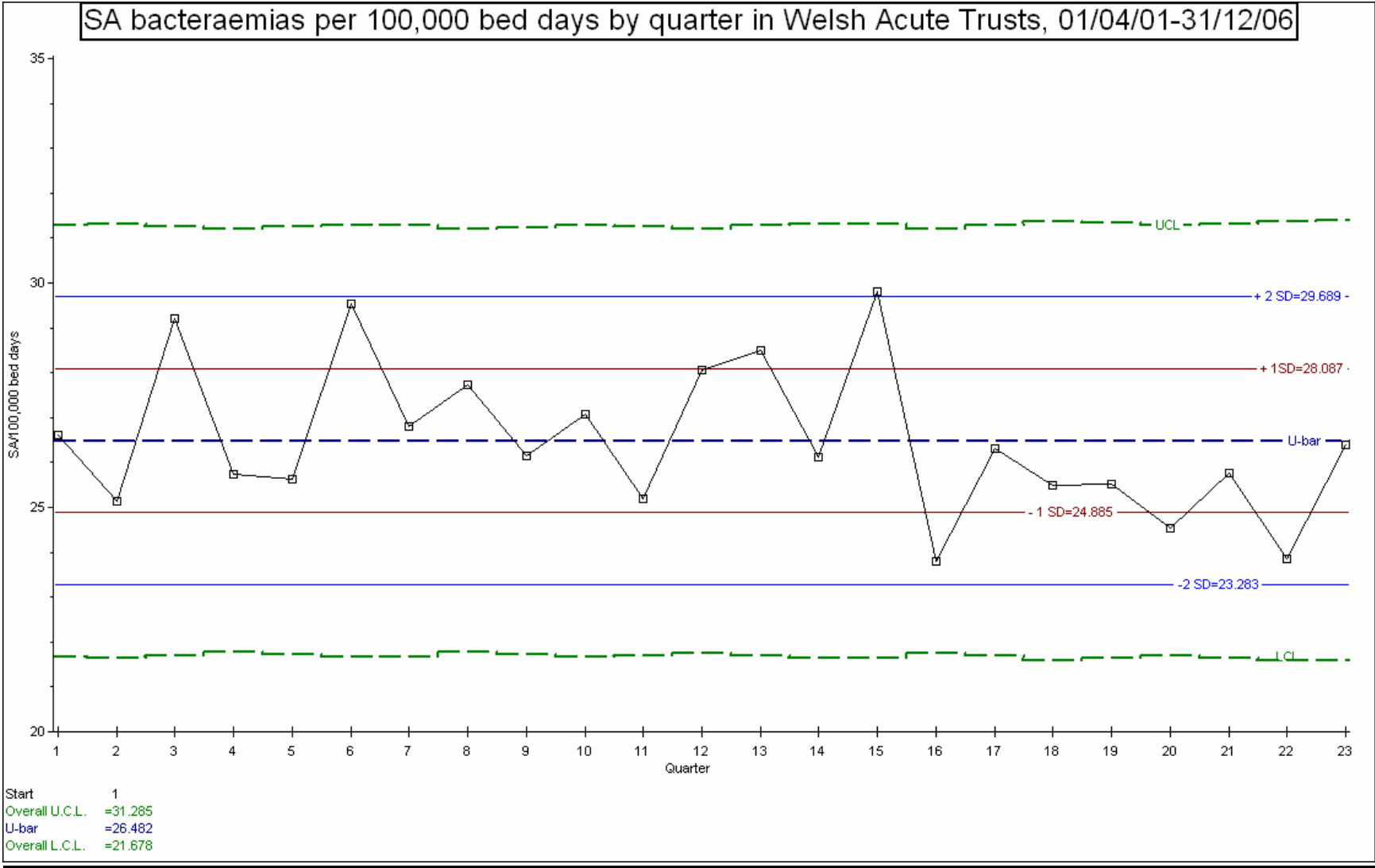
### All Wales Quarterly Trend Data: 01/04/01 – 31/12/06

| Quarter         | Quarter no | MRSA | MSSA | Total <i>S. aureus</i> | Bed days | MRSA/100 000 bed days | MSSA/100 000 bed days | SA/100 000 bed days |
|-----------------|------------|------|------|------------------------|----------|-----------------------|-----------------------|---------------------|
| Apr 01 - Jun 01 | 1          | 110  | 164  | 274                    | 1029087  | 11                    | 16                    | 27                  |
| Jul 01 - Sep 01 | 2          | 97   | 159  | 256                    | 1018970  | 10                    | 16                    | 25                  |
| Oct 01 - Dec 01 | 3          | 136  | 168  | 304                    | 1040908  | 13                    | 16                    | 29                  |
| Jan 02 - Mar 02 | 4          | 123  | 153  | 276                    | 1072739  | 11                    | 14                    | 26                  |
| Apr 02 - Jun 02 | 5          | 115  | 153  | 268                    | 1045924  | 11                    | 15                    | 26                  |
| Jul 02 - Sep 02 | 6          | 127  | 178  | 305                    | 1033039  | 12                    | 17                    | 30                  |
| Oct 02 - Dec 02 | 7          | 121  | 155  | 276                    | 1029996  | 12                    | 15                    | 27                  |
| Jan 03 - Mar 03 | 8          | 123  | 175  | 298                    | 1074792  | 11                    | 16                    | 28                  |
| Apr 03 - Jun 03 | 9          | 119  | 156  | 275                    | 1052235  | 11                    | 15                    | 26                  |
| Jul 03 - Sep 03 | 10         | 115  | 164  | 279                    | 1029986  | 11                    | 16                    | 27                  |
| Oct 03 - Dec 03 | 11         | 120  | 142  | 262                    | 1039490  | 12                    | 14                    | 25                  |
| Jan 04 - Mar 04 | 12         | 135  | 165  | 300                    | 1069041  | 13                    | 15                    | 28                  |
| Apr 04 - Jun 04 | 13         | 122  | 174  | 296                    | 1038283  | 12                    | 17                    | 29                  |
| Jul 04 - Sep 04 | 14         | 100  | 166  | 266                    | 1018268  | 10                    | 16                    | 26                  |
| Oct 04 - Dec 04 | 15         | 105  | 198  | 303                    | 1014098  | 10                    | 19                    | 30                  |
| Jan 05 - Mar 05 | 16         | 112  | 142  | 254                    | 1074780  | 10                    | 13                    | 24                  |
| Apr 05 - Jun 05 | 17         | 107  | 165  | 272                    | 1033184  | 10                    | 16                    | 26                  |
| Jul 05 - Sep 05 | 18         | 95   | 159  | 254                    | 996746   | 10                    | 16                    | 25                  |
| Oct 05 - Dec 05 | 19         | 93   | 166  | 259                    | 1015183  | 9                     | 16                    | 26                  |
| Jan 06 - Mar 06 | 20         | 95   | 159  | 254                    | 1035274  | 9                     | 15                    | 25                  |
| Apr 06 - Jun 06 | 21         | 86   | 176  | 262                    | 1016356  | 8                     | 17                    | 26                  |
| Jul 06 - Sep 06 | 22         | 73   | 164  | 237                    | 993488   | 7                     | 17                    | 24                  |
| Oct 06 - Dec 06 | 23         | 82   | 179  | 261                    | 988601   | 8                     | 18                    | 26                  |

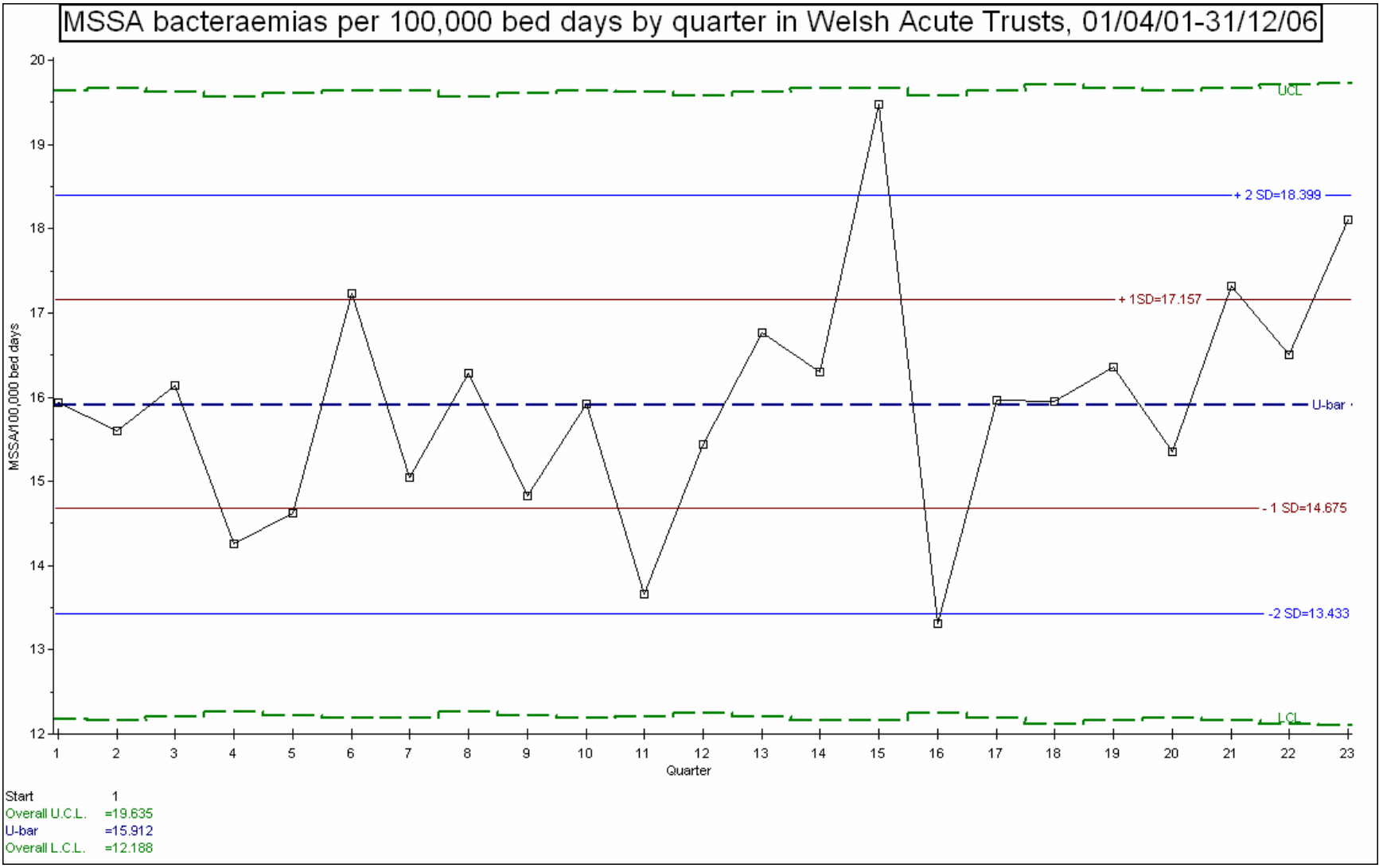
## **All Wales Statistical Process Control Charts for Rates of *S. aureus* Blood Stream Infections per 100 000 Bed Days**

Data from the *Staphylococcus aureus* blood stream infection (bacteraemia) surveillance are used to produce statistical process control (SPC) charts. These compare a Trust's rate of infection with calculated upper and lower control limits, which allow natural variation in rates to be distinguished from situations where something unusual is occurring. SPC charts are used to compare rates within a Trust over time and between equivalent Trusts at a given point in time. Trusts are asked to investigate if their rates fall outside the control limits of the SPC charts. More information about the statistical analyses performed on the *S. aureus* data and what the results mean is provided in the section on the *S. aureus* Blood Stream Infections surveillance scheme.

**SPC Chart for Quarterly *S. aureus* Blood Stream (Bacteraemia) Rates: 01/04/01 – 31/12/06**



**SPC Chart for Quarterly MSSA Blood Stream (Bacteraemia) Rates: 01/04/01 – 31/12/06**



# SPC Chart for Quarterly MRSA Blood Stream (Bacteraemia) Rates: 01/04/01 – 31/12/06

