

***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: 01/04/08 – 31/03/09

	Blood Culture Sets Taken (BCS)	Positive Blood Cultures (PBS)*	Total <i>S. aureus</i>	MRSA	Bed days	% of BCS that are MRSA	% of PBS that are MRSA	% of <i>S. aureus</i> that are MRSA	BCS / 100 000 bed days	PBS/ 100 000 bed days	Total <i>S. aureus</i> / 100 000 bed days	MRSA/ 100 000 bed days
Total	92879	14114	1015	340	3857907	0.37	2.41	33.50	2407	366	26	9
Min	716	79	11	0	15214	0.00	0.00	0.00	1830	290	22	0
Max	19847	2744	228	82	832808	0.43	2.99	35.96	4706	519	72	12
Mean	11609.9	1764.3	126.9	42.5	482238.3	0.32	2.14	29.25	2686.5	382.4	31.9	7.7
Median	11851.5	1839	120.5	42	474204	0.36	2.39	33.08	2505.3	395.6	26.4	8.1

*Including duplicates and contaminants

All Wales Quarterly Trend Data: 01/04/01 – 31/03/09

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	1016563	10	19	30
Jan 05 - Mar 05	16	112	142	254	1067149	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	993953	7	16	24
Oct 06 - Dec 06	23	87	183	270	988600	9	19	27
Jan 07 - Mar 07	24	73	151	224	1009656	7	15	22
Apr 07 - Jun 07	25	89	162	251	991846	9	16	25
Jul 07 - Sep 07	26	104	169	273	979965	11	18	28
Oct 07 - Dec 07	27	97	176	273	975178	10	18	28
Jan 08 - Mar 08	28	84	128	212	996078	8	13	21
Apr 08 - Jun 08	29	89	170	259	959472	9	18	27
Jul 08 - Sep 08	30	88	159	247	956329	9	17	26
Oct 08 - Dec 08	31	83	181	264	962943	9	19	27
Jan 09 - Mar 09	32	80	165	245	977028	8	17	25

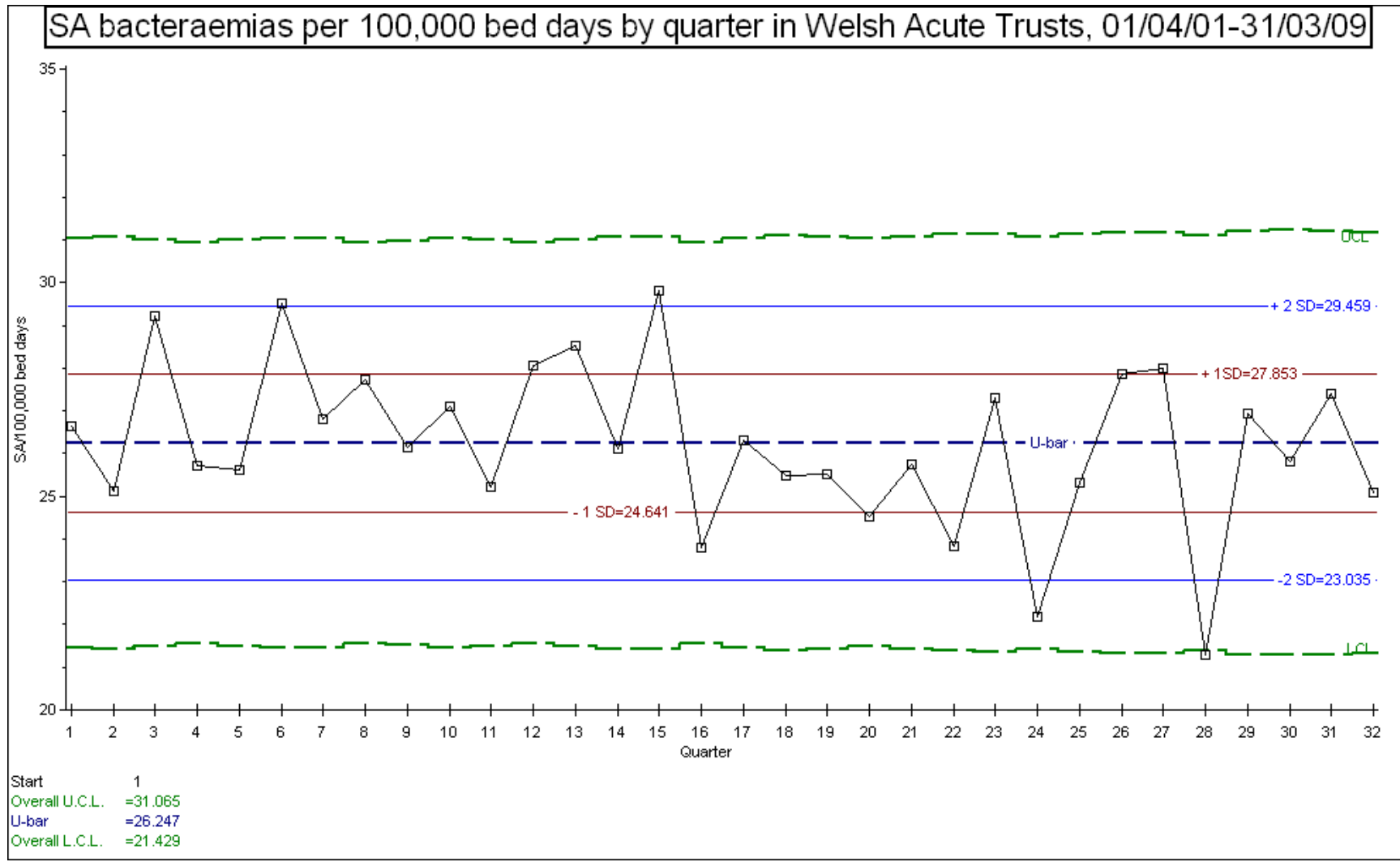
All Wales Annual Trend Data: 01/04/01 – 31/03/09

	Apr 01- Mar 02	Apr 02- Mar 03	Apr 03- Mar 04	Apr 04- Mar 05	Apr 05- Mar 06	Apr 06- Mar 07	Apr 07- Mar 08	Apr 08- Mar 09
Blood culture sets	86028	84893	88358	91436	92646	96189	95354	92879
Positive blood culture sets	13109	13684	12936	12896	13764	14309	14397	14114
Total S. aureus	1110	1147	1116	1119	1039	993	1009	1015
Total MRSA	466	486	489	439	390	319	374	340
Total MSSA	644	661	627	680	649	674	635	675
% blood cultures sets tested positive	15.24	16.12	14.64	14.10	14.86	14.88	15.10	15.20
% blood cultures sets that are SA	1.29	1.35	1.26	1.22	1.12	1.03	1.06	1.09
% blood cultures sets that are MRSA	0.54	0.57	0.55	0.48	0.42	0.33	0.39	0.37
% blood cultures sets that are MSSA	0.75	0.78	0.71	0.74	0.70	0.70	0.67	0.73
% positive blood cultures that are SA	8.47	8.38	8.63	8.68	7.55	6.94	7.01	7.19
% positive blood cultures that are MRSA	3.55	3.55	3.78	3.40	2.83	2.23	2.60	2.41
% positive blood cultures that are MSSA	4.91	4.83	4.85	5.27	4.72	4.71	4.41	4.78
% S. aureus blood cultures that are MRSA	41.98	42.37	43.82	39.23	37.54	32.12	37.07	33.50
Bed days	4161704	4183751	4190752	4140262	4080387	4009392	3943067	3857907
BCS/100,000 bed days	2067	2029	2108	2208	2271	2399	2418	2407
PBS/100,000 bed days	315	327	309	311	337	357	365	366
SA/100,000 bed days	27	27	27	27	25	25	26	26
MRSA/100,000 bed days	11	12	12	11	10	8	9	9
MSSA/100,000 bed days	15	16	15	16	16	17	16	17

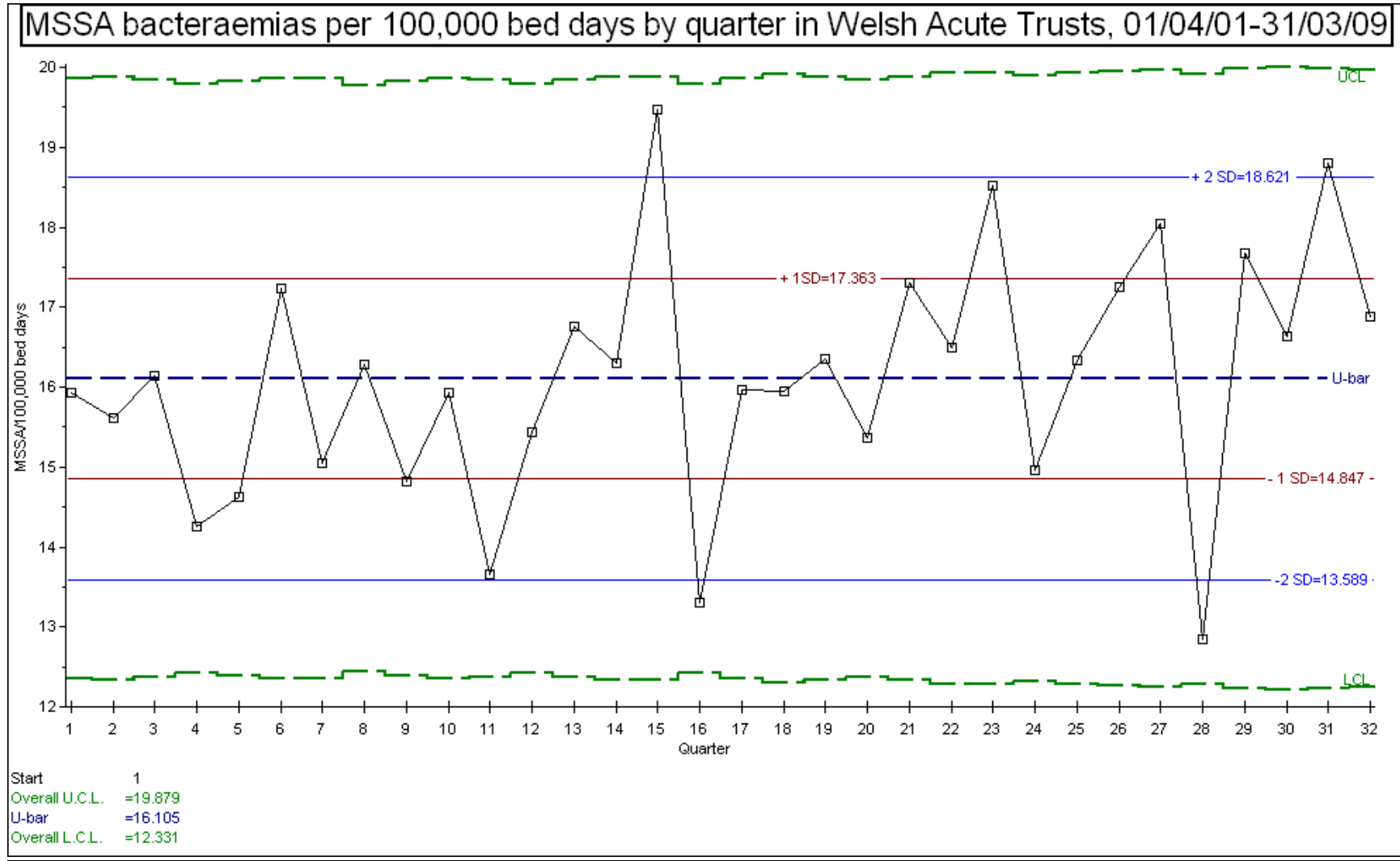
All Wales Statistical Process Control Charts for Rates of *S. aureus* Blood Stream Infections per 100 000 Bed Days

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 – 31/03/09



SPC Chart for Quarterly MSSA Blood Stream (Bacteraemia) Rates: 01/04/01 – 31/03/09



SPC Chart for Quarterly MRSA Blood Stream (Bacteraemia) Rates: 01/04/01 – 31/03/09

