

S. aureus bacteraemia surveillance

Quarterly report

January – March 2024

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 3% during January-March 2024 compared to October-December 2023.
- MRSA rates decreased by approximately 29% during January-March 2024 compared to October-December 2023.
- MRSA reports during 2023/24 increased by 10% compared to 2022/23.
- MSSA rates increased by approximately 6% during January-March 2024 compared to October-December 2023.
- MSSA reports during 2023/24 increased by 16% compared to 2022/23.

Please note: Bed Day data were not available for SEHSCT hospitals and estimates were used this quarter (averages taken for Q1, 2020-2023).

S. aureus bacteraemia surveillance

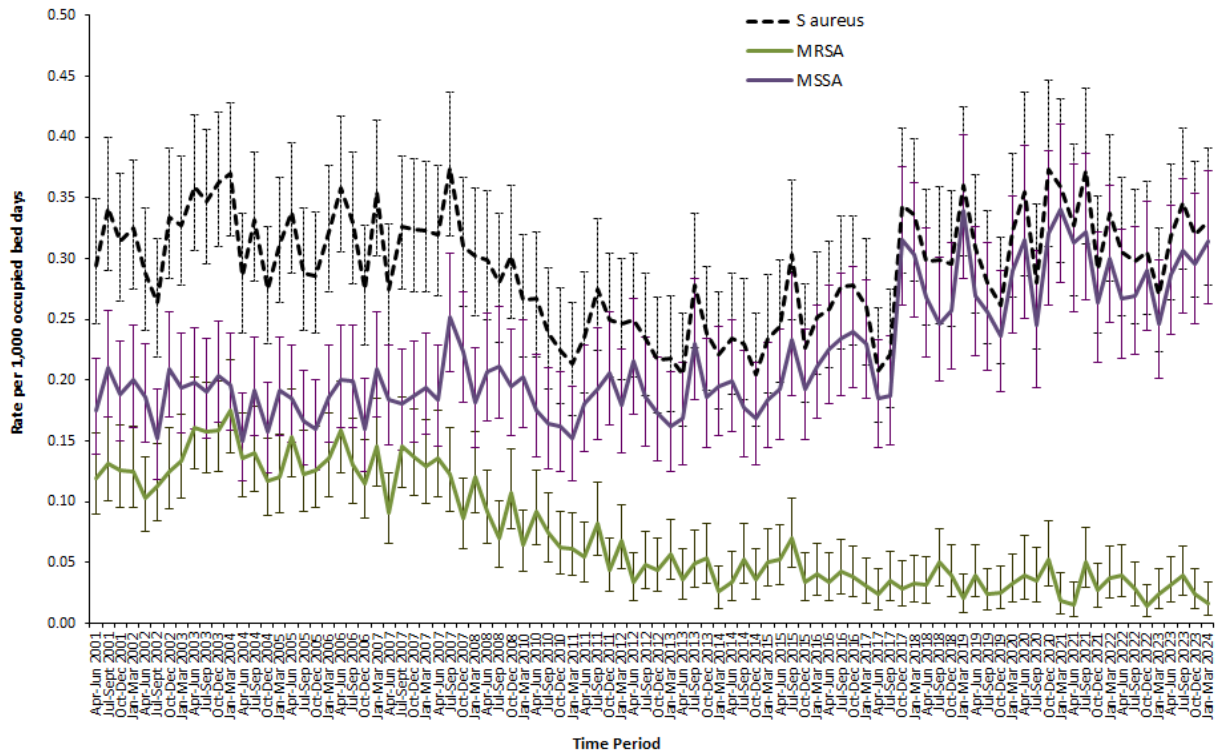


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – March 2024 (see Appendix 3)

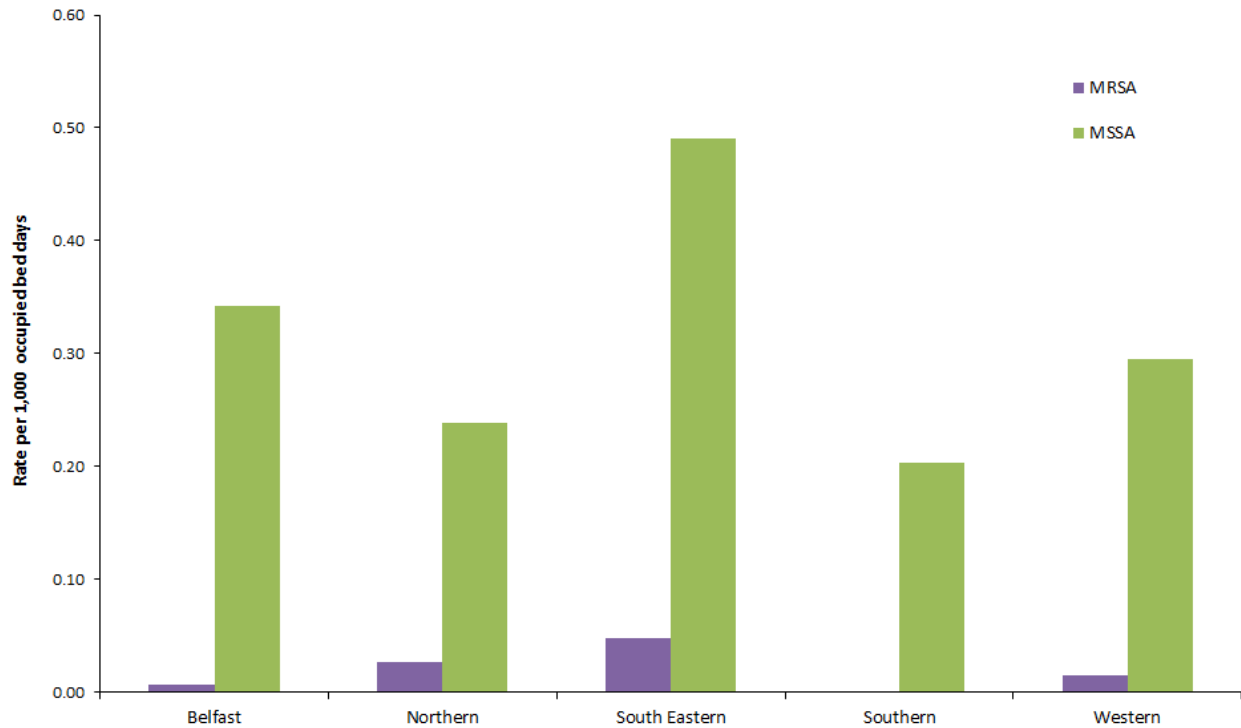


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, Jan-Mar 2024.

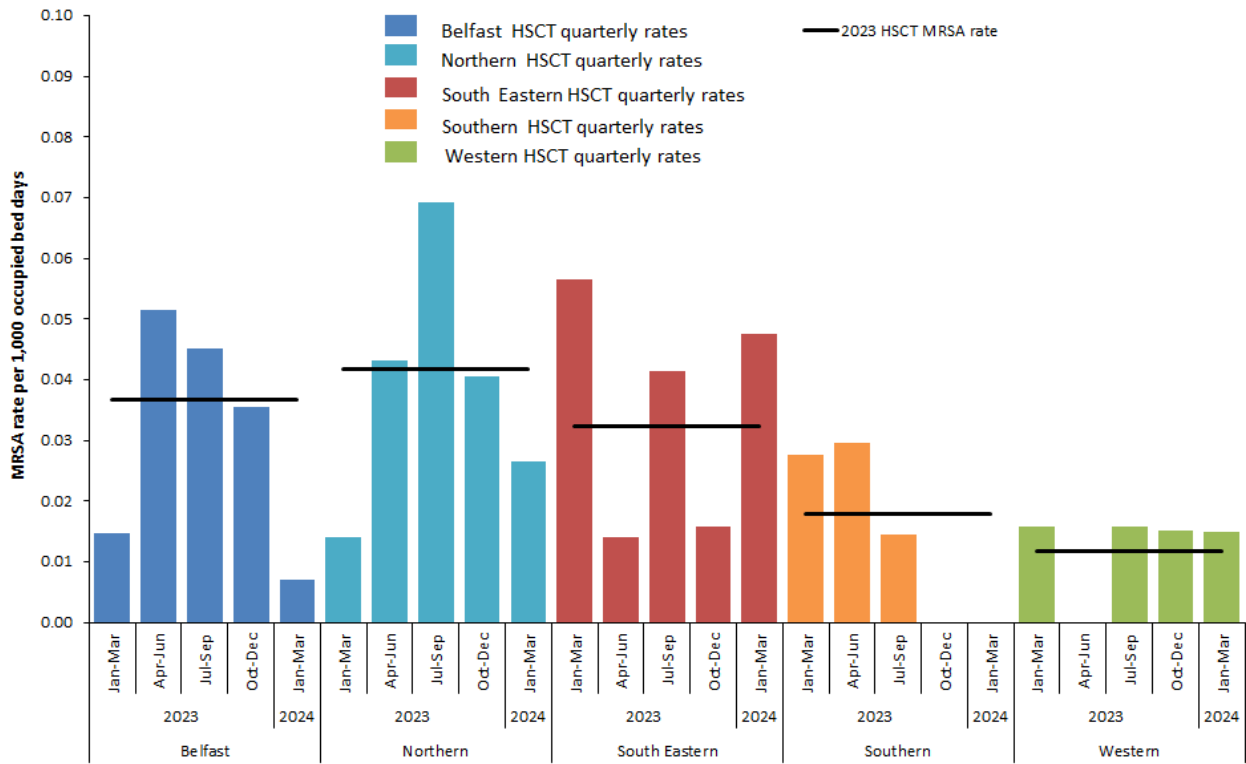


Figure 3: MRSA quarterly rate Jan 2023 – Mar 2024, by HSCT, with 2023 HSCT MRSA rate

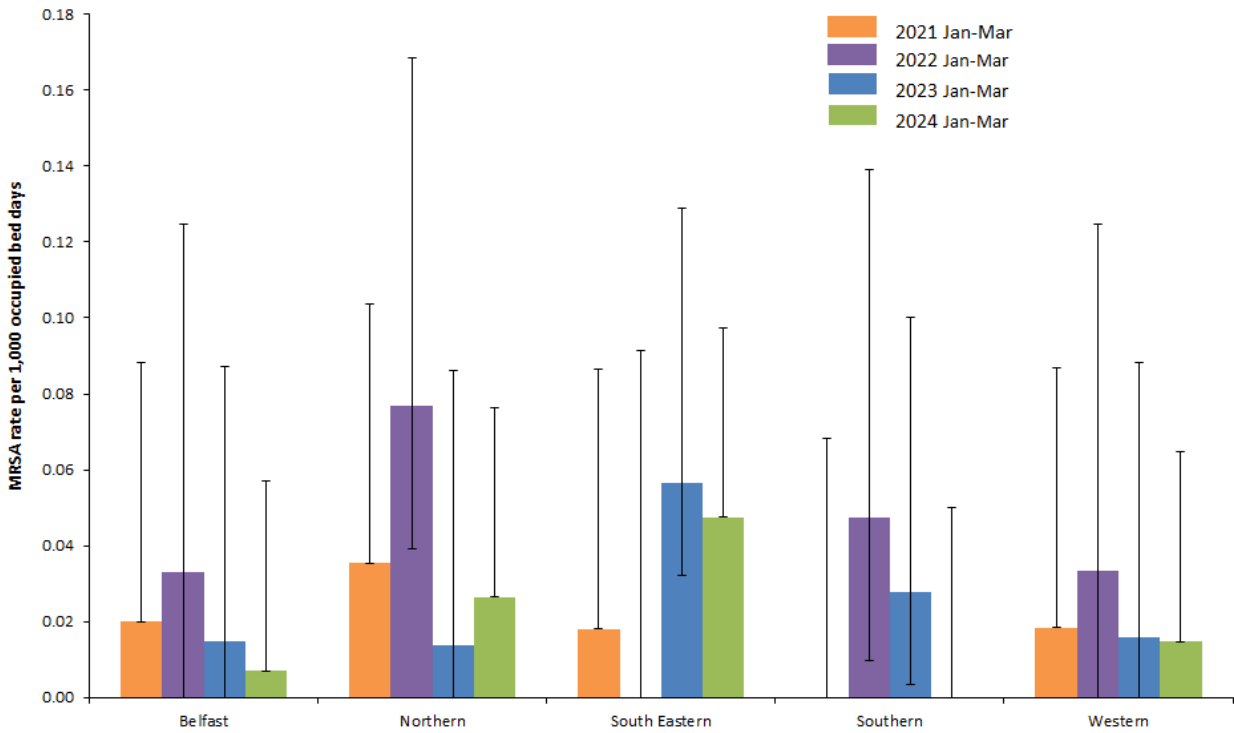


Figure 4: MRSA rate during Jan-Mar, by HSCT, from 2021–2024, with 95% confidence intervals

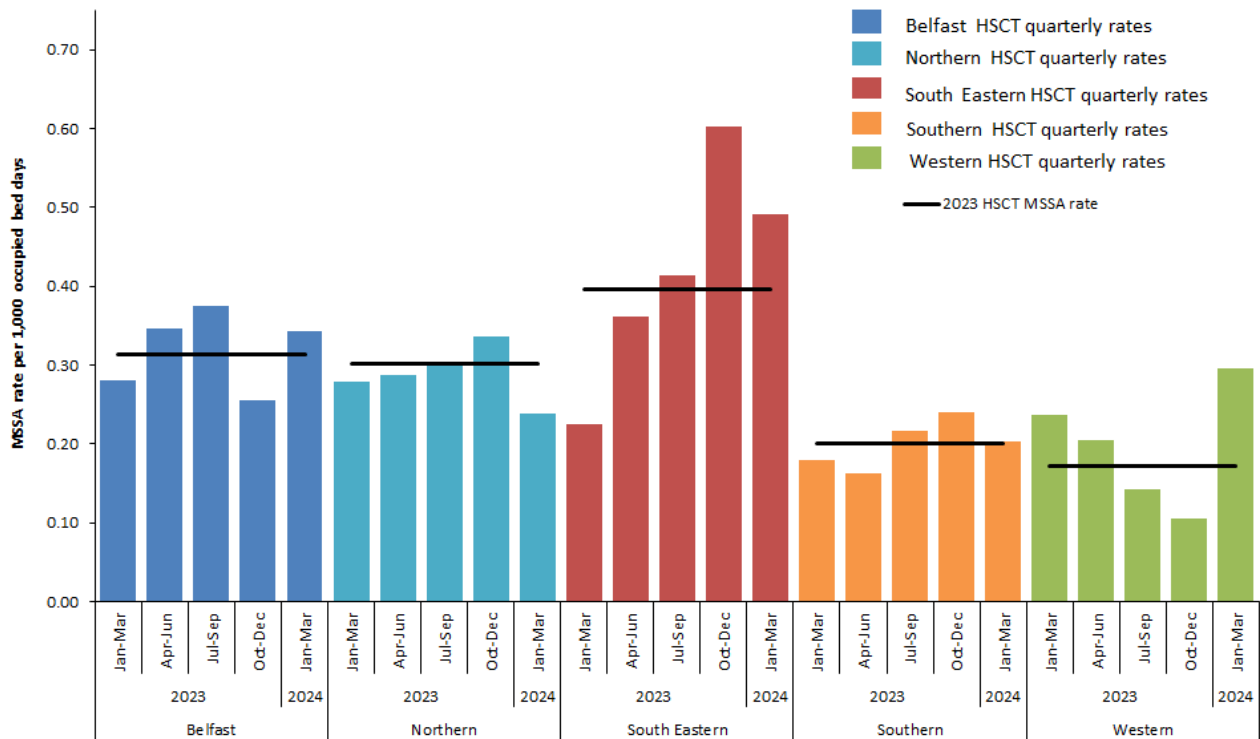


Figure 5: MSSA quarterly rate Jan 2023 – Mar 2024, by HSCT, with 2023 HSCT MSSA rate

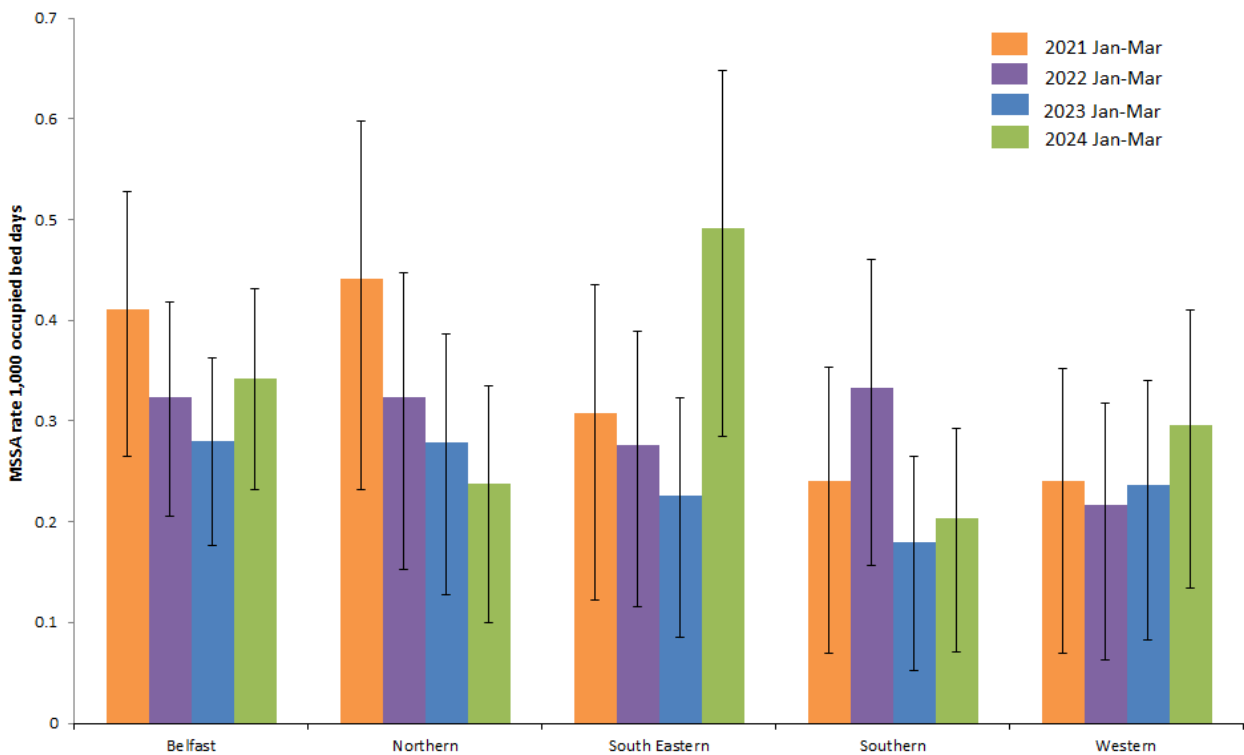


Figure 6: MSSA rate during Jan-Mar, by HSCT, from 2021–2024, with 95% confidence intervals

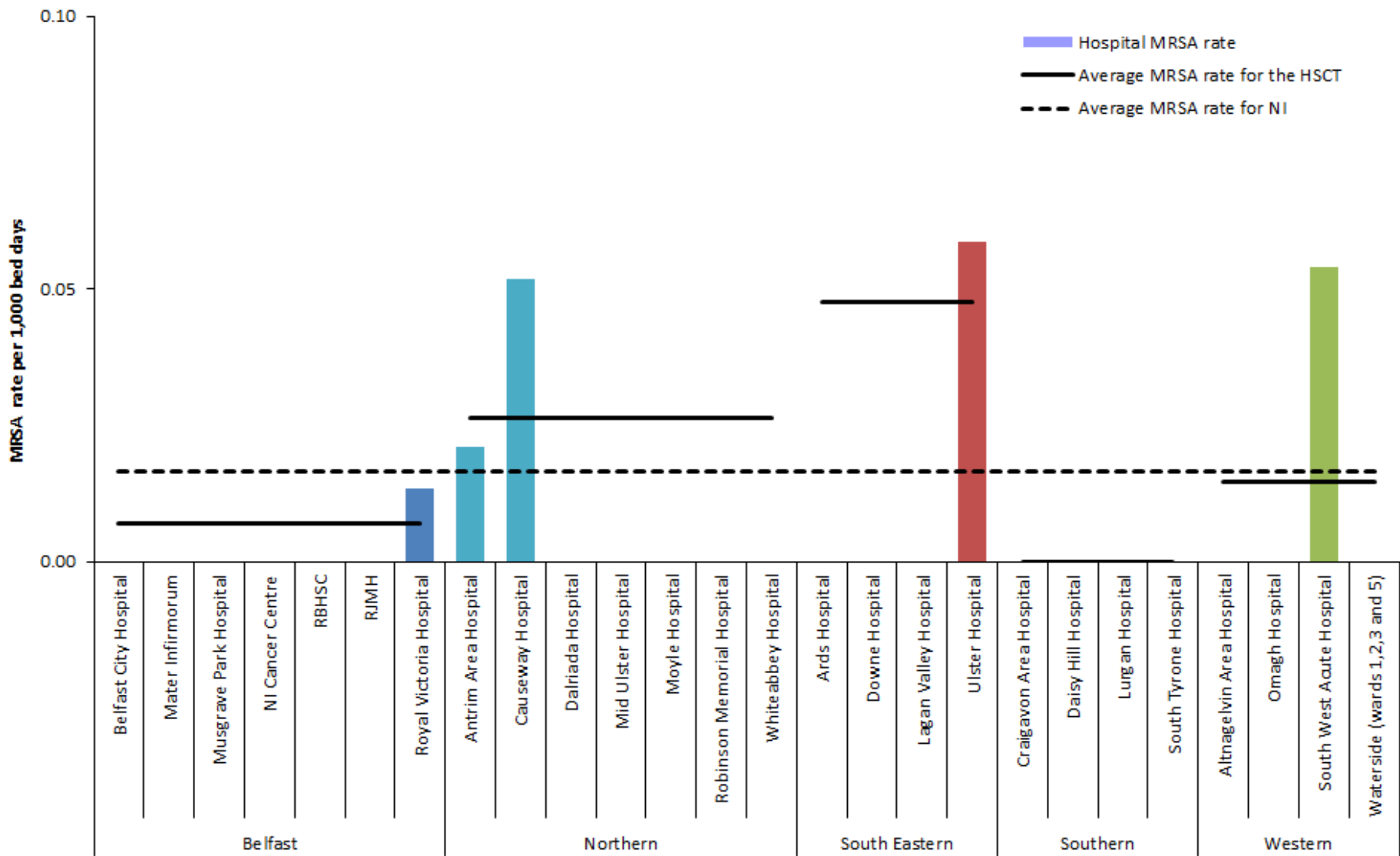


Figure 7: Rates of MRSA, January-March 2024 by individual hospitals, (gaps represent zero episodes), compared to January-March 2024 average rates for Northern Ireland and HSCTs

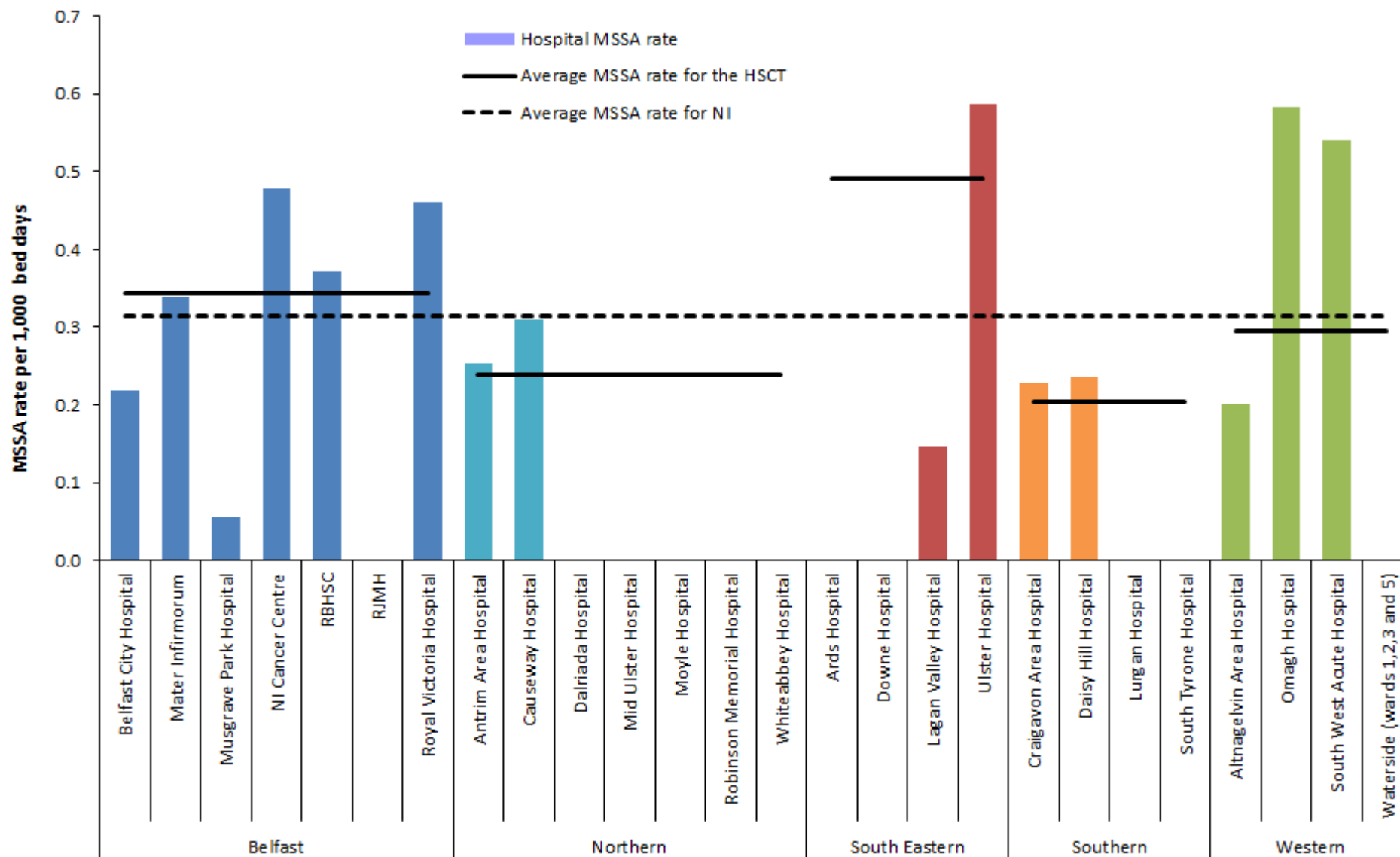


Figure 8: Rates of MSSA, January-March 2024 by individual hospitals, (gaps represent zero episodes), compared to January-March 2024 average rates for Northern Ireland and HSCT

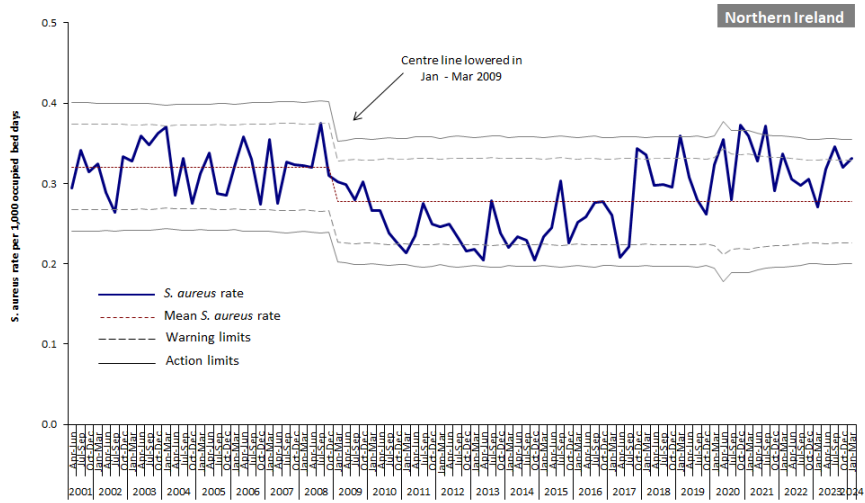


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

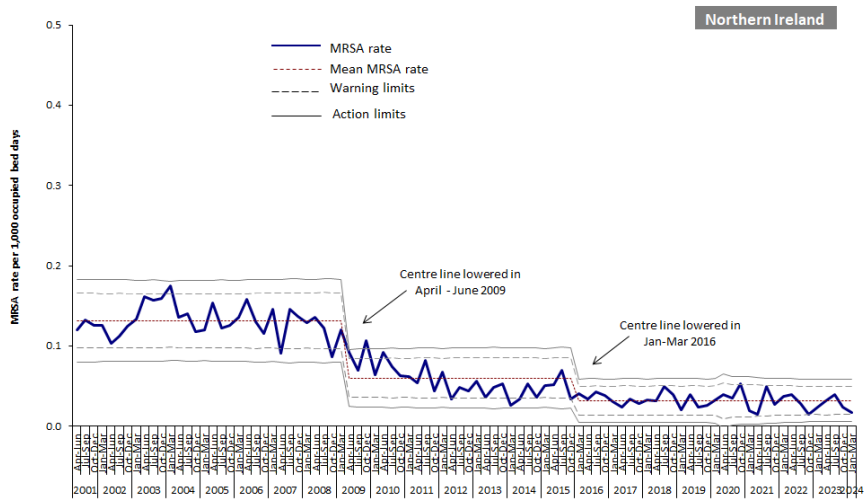


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

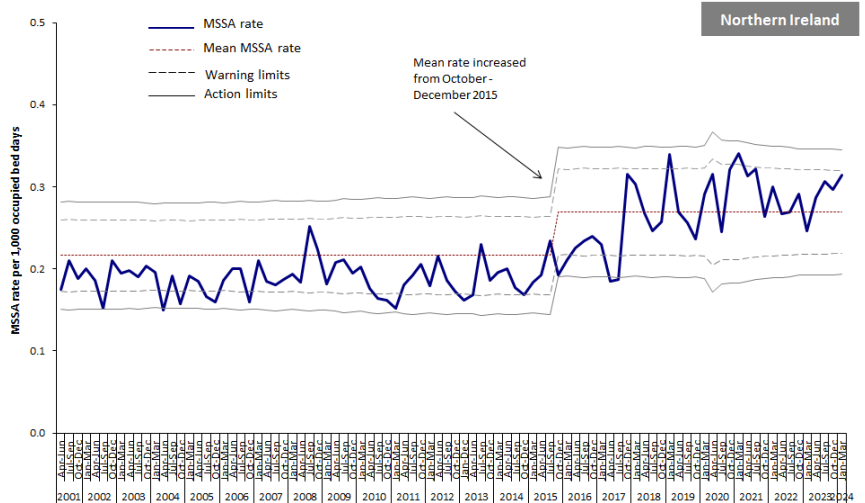


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, Apr 2023 – Mar 2024

Hospital	Apr - Jun 2023	Jul - Sep 2023	Oct - Dec 2023	Jan-Mar 2024
Belfast City Hospital	0.074	0.220	0.075	0.000
Mater Infirmorum	0.123	0.000	0.059	0.000
Musgrave Park Hospital	0.000	0.000	0.000	0.000
NICCO	0.236	0.000	0.000	0.000
RBHSC	0.000	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Group of Hospitals	0.043	0.042	0.041	0.014
Belfast Health & Social Care Trust	0.051	0.045	0.035	0.007
Antrim Area Hospital	0.047	0.022	0.064	0.021
Causeway Hospital	0.054	0.220	0.000	0.052
Dalriada Hospital	0.000	0.000	0.000	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.000	0.000	0.000	0.000
Northern Health & Social Care Trust	0.043	0.069	0.040	0.026
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.000	0.000
Lagan Valley Hospital	0.137	0.000	0.000	0.000
Ulster Hospital	0.000	0.051	0.020	0.059
South Eastern Health & Social Care Trust	0.014	0.041	0.016	0.048
Craigavon Area Hospital	0.023	0.000	0.000	0.000
Daisy Hill Hospital	0.060	0.060	0.000	0.000
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000
Southern Health & Social Care Trust	0.030	0.014	0.000	0.000
Altnagelvin Area Hospital	0.000	0.027	0.026	0.000
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.000	0.000	0.000	0.054
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.000	0.016	0.015	0.015
NI TOTAL	0.032	0.039	0.024	0.017

Table 2: Quarterly MRSA patient episodes, by HSCT, Apr 2023 – Mar 2024

Trust	Apr - Jun 2023 Episodes	Jul - Sep 2023 Episodes	Oct - Dec 2023 Episodes	Jan-Mar 2024 Episodes
Belfast Health & Social Care Trust	7	6	5	1
Northern Health & Social Care Trust	3	5	3	2
South Eastern Health & Social Care Trust	1	3	1	3
Southern Health & Social Care Trust	2	1	0	0
Western Health & Social Care Trust	0	1	1	1
NI TOTAL	13	16	10	7

Appendix 1

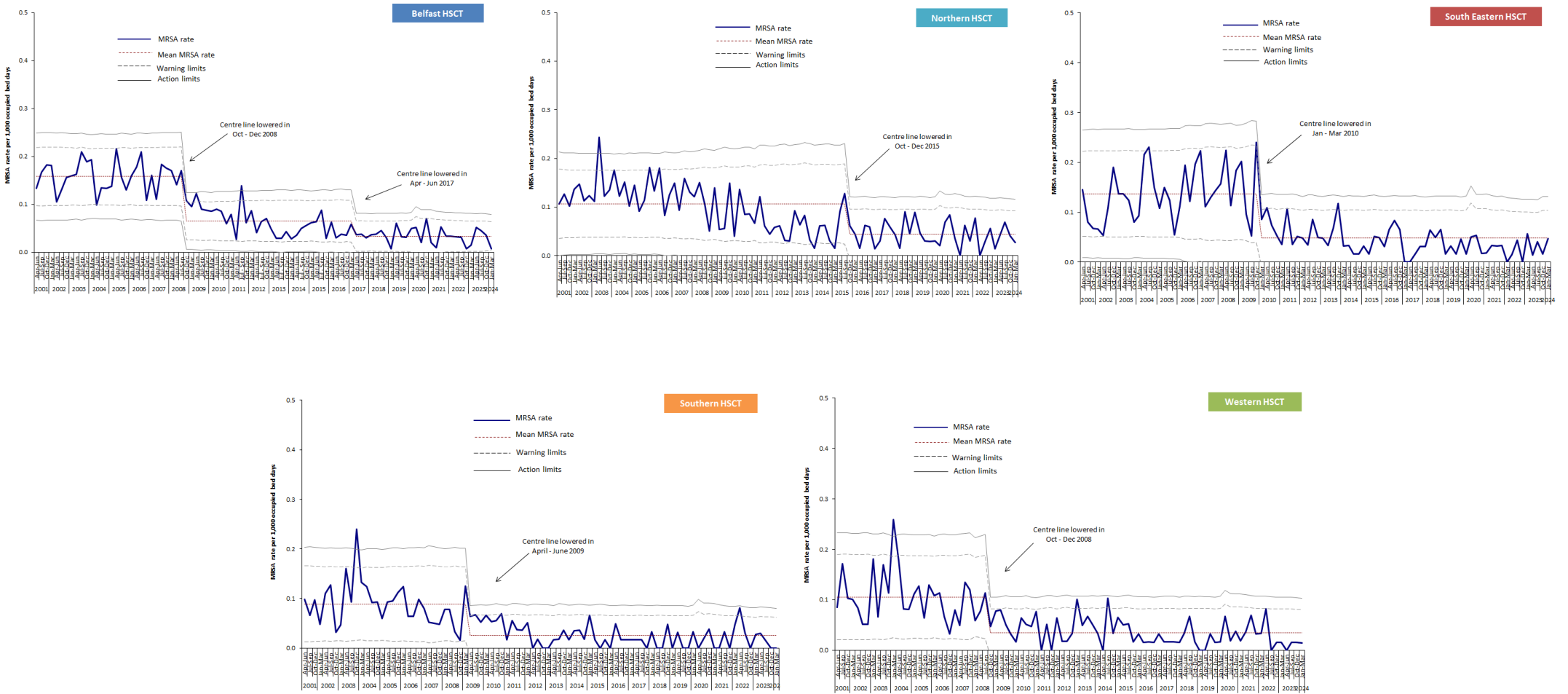
Table 3: Quarterly rate of MSSA patient episodes, by hospital, Apr 2023 – Mar 2024

Hospital	Apr-Jun 2023	Jul-Sep 2023	Oct-Dec 2023	Jan-Mar 2024
Belfast City Hospital	0.368	0.294	0.150	0.218
Mater Infirmorum	0.431	0.294	0.356	0.339
Musgrave Park Hospital	0.056	0.123	0.057	0.056
NICCO	0.707	0.463	0.706	0.478
RBHSC	0.000	0.285	0.609	0.372
RJMH	0.298	0.000	0.126	0.000
Royal Group of Hospitals	0.413	0.502	0.246	0.461
Belfast Health & Social Care Trust	0.346	0.375	0.255	0.343
Antrim Area Hospital	0.233	0.372	0.429	0.253
Causeway Hospital	0.538	0.275	0.258	0.310
Dalriada Hospital	0.000	0.000	0.000	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.000	0.000	0.000	0.000
Northern Health & Social Care Trust	0.288	0.304	0.337	0.238
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.274	0.000
Lagan Valley Hospital	0.267	0.393	0.716	0.146
Ulster Hospital	0.412	0.458	0.629	0.587
South Eastern Health & Social Care Trust	0.362	0.413	0.602	0.491
Craigavon Area Hospital	0.186	0.245	0.283	0.228
Daisy Hill Hospital	0.180	0.239	0.240	0.236
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000
Southern Health & Social Care Trust	0.163	0.216	0.239	0.203
Altnagelvin Area Hospital	0.246	0.135	0.130	0.201
Omagh Hospital	0.000	0.000	0.000	0.583
South West Acute Hospital	0.229	0.229	0.111	0.541
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.205	0.143	0.106	0.296
NI TOTAL	0.287	0.307	0.296	0.314

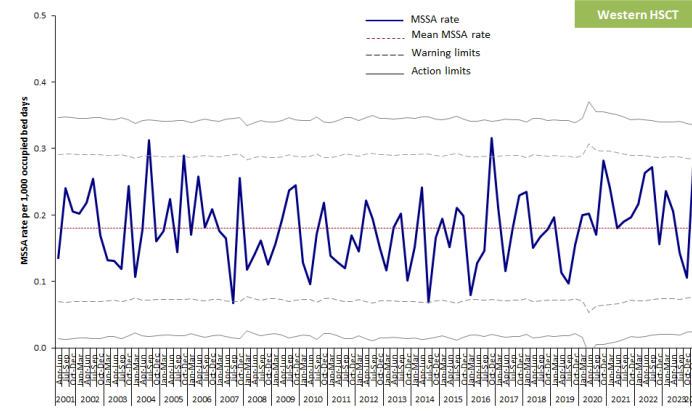
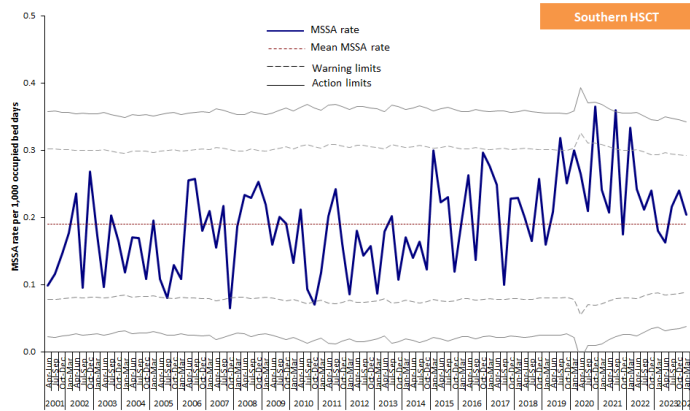
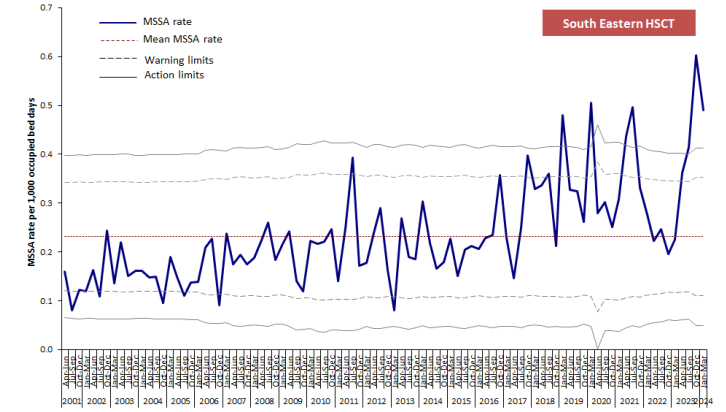
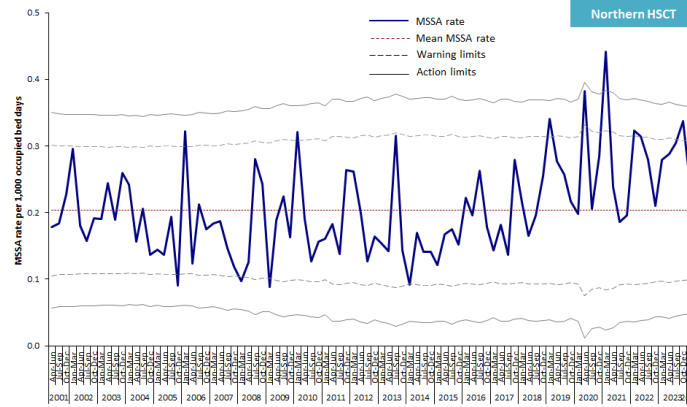
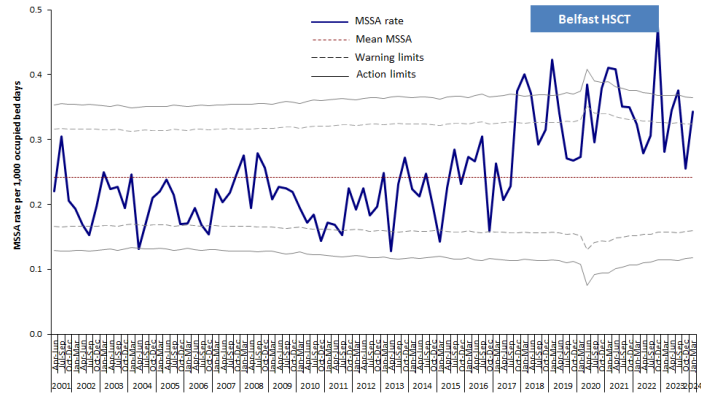
Table 4: Quarterly MSSA patient episodes, by HSCT, Apr 2023 – Mar 2024

Trust	Apr-Jun 2023 Episodes	Jul-Sep 2023 Episodes	Oct-Dec 2023 Episodes	Jan-Mar 2024 Episodes
Belfast Health & Social Care Trust	47	50	36	49
Northern Health & Social Care Trust	20	22	25	18
South Eastern Health & Social Care Trust	26	30	38	31
Southern Health & Social Care Trust	11	15	17	15
Western Health & Social Care Trust	13	9	7	20
NI TOTAL	117	126	123	133

Appendix 2: Trends in MRSA rates, by HSCT and quarter, April 2001 – Mar 2024



Appendix 2: Trends in MSSA rates, by HSCT and quarter, April 2001 – Mar 2024



Appendix 3

Table 5: MSSA, MRSA and total *S. aureus* patient episode rates, and the percentage of *S. aureus* reported as MRSA, in Northern Ireland, Jan 2015 – Mar 2024.

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Jan-Mar 2015	0.184	0.050	0.234	21.4
Apr-Jun 2015	0.193	0.052	0.245	21.2
Jul-Sep 2015	0.234	0.070	0.304	23.0
Oct-Dec 2015	0.193	0.034	0.226	15.0
Jan-Mar 2016	0.211	0.040	0.252	15.9
Apr-Jun 2016	0.225	0.034	0.259	13.1
Jul-Sep 2016	0.234	0.043	0.277	15.5
Oct-Dec 2016	0.240	0.038	0.278	13.7
Jan-Mar 2017	0.230	0.031	0.260	11.9
Apr-Jun 2017	0.185	0.023	0.208	11.1
Jul-Sep 2017	0.187	0.034	0.222	15.3
Oct-Dec 2017	0.315	0.028	0.343	8.2
Jan-Mar 2018	0.303	0.033	0.339	9.7
Apr-Jun 2018	0.269	0.050	0.300	10.4
Jul-Sep 2018	0.246	0.050	0.296	16.9
Oct-Dec 2018	0.257	0.039	0.296	13.2
Jan-Mar 2019	0.342	0.021	0.362	5.8
Apr-Jun 2019	0.269	0.039	0.308	12.7
Jul-Sep 2019	0.256	0.024	0.280	8.6
Oct-Dec 2019	0.237	0.025	0.262	9.5
Jan-Mar 2020	0.291	0.033	0.323	10.2
Apr-Jun 2020	0.316	0.039	0.355	11.0
Jul-Sep 2020	0.245	0.035	0.280	12.5
Oct-Dec 2020	0.320	0.053	0.373	14.2
Jan-Mar 2021	0.264	0.019	0.360	5.3
Apr-Jun 2021	0.313	0.015	0.327	4.6
Jul-Sep 2021	0.322	0.050	0.372	13.4
Oct-Dec 2021	0.264	0.027	0.291	9.3
Jan-Mar 2022	0.300	0.037	0.337	11.0
Apr-Jun 2022	0.267	0.039	0.306	12.7
Jul-Sep 2022	0.270	0.028	0.298	9.4
Oct-Dec 2022	0.291	0.015	0.305	4.9
Jan-Mar 2023	0.246	0.024	0.271	8.9
Apr-June 2023	0.287	0.032	0.318	10.1
Jul-Sep 2023	0.307	0.039	0.346	11.3
Oct-Dec 2023	0.296	0.024	0.320	7.5
Jan-Mar 2024	0.314	0.017	0.331	5.1

Appendix 4

Table 6: MRSA patient episodes for each financial year, by HSCT

HSCT	Financial Year												
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Belfast	46	32	18	28	34	22	19	16	22	15	15	11	19
Northern	19	14	12	11	21	10	14	16	9	12	11	7	13
South Eastern	14	13	15	7	9	13	5	12	7	7	6	8	8
Southern	10	1	5	9	2	6	4	3	4	3	5	9	3
Western	7	10	12	12	9	5	4	7	4	7	10	7	3
Northern Ireland	96	70	62	67	75	56	46	54	46	44	47	42	46

Table 7: MSSA patient episodes for each financial year, by HSCT

HSCT	Financial Year												
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Belfast	109	115	121	112	142	134	163	189	147	138	166	176	182
Northern	57	42	43	37	47	52	55	64	63	73	60	75	85
South Eastern	57	54	57	50	47	64	70	85	88	59	95	62	125
Southern	38	32	38	42	45	59	49	48	67	54	66	59	58
Western	34	40	38	40	38	50	47	42	35	46	46	58	49
Northern Ireland	295	283	297	281	319	359	384	428	400	370	433	430	499