

S. aureus bacteraemia surveillance

Quarterly report

April – June 2023

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 17% during April-June 2023 compared to January-March 2023.
- MRSA rates increased by approximately 33% during April-June 2023 compared to January-March 2023.
- MRSA reports during 2022/23 decreased by 11% compared to 2021/22.
- MSSA rates increased by approximately 17% during April-June 2023 compared to January-March 2023.
- MSSA reports during 2022/23 decreased by 1% compared to 2021/22.

For further information or clarification on HCAI definitions, please refer to previous reports or contact hcaini@hscni.net

S. aureus bacteraemia surveillance

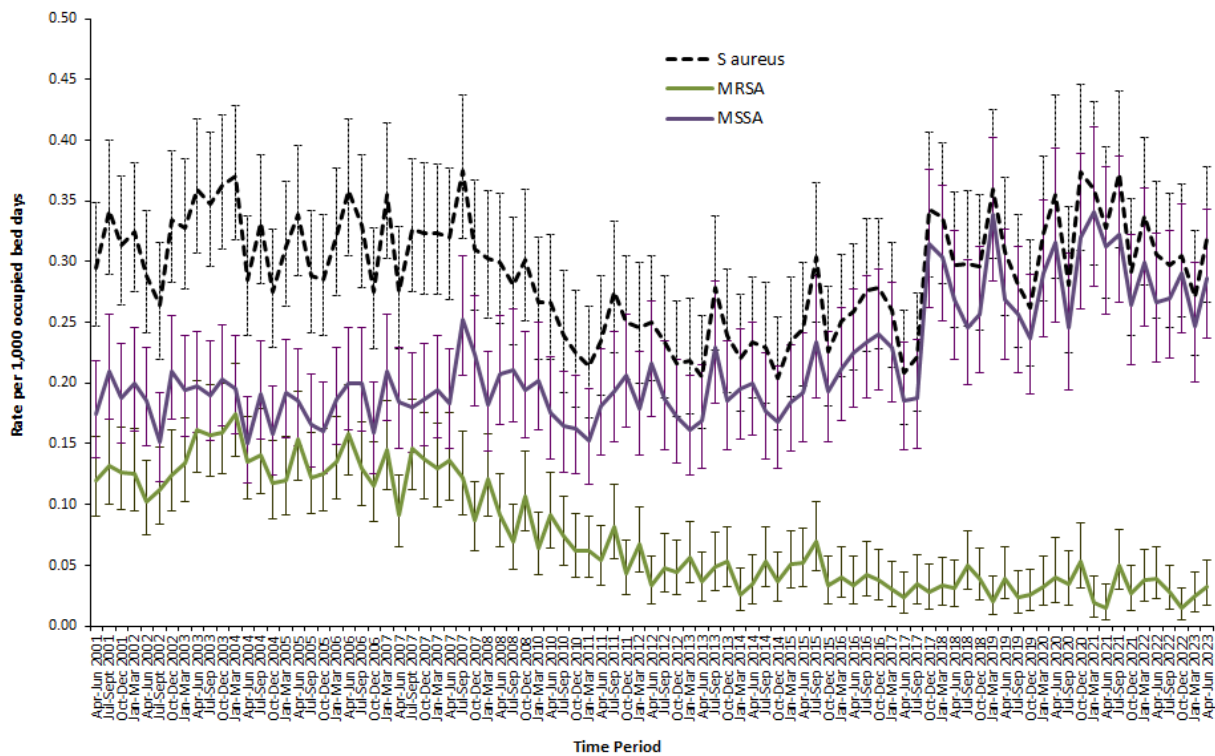


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – June 2023 (see Appendix 3)

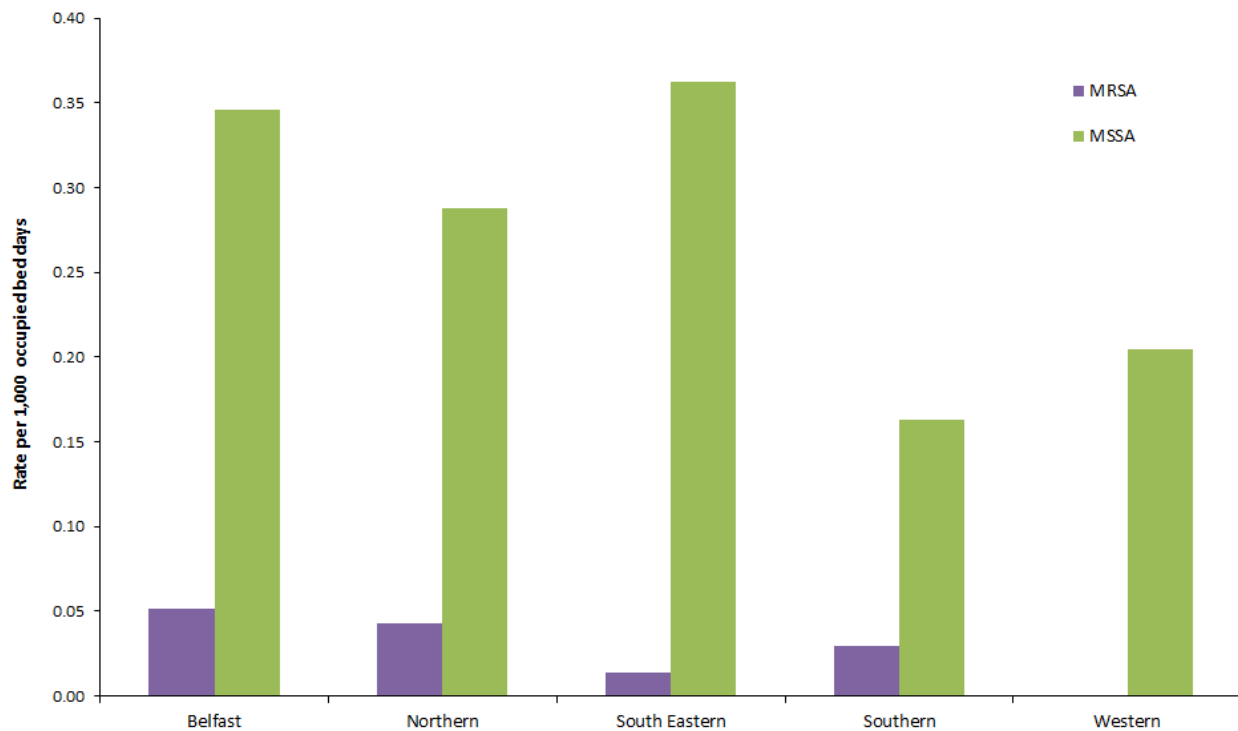


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, Apr-June 2023.

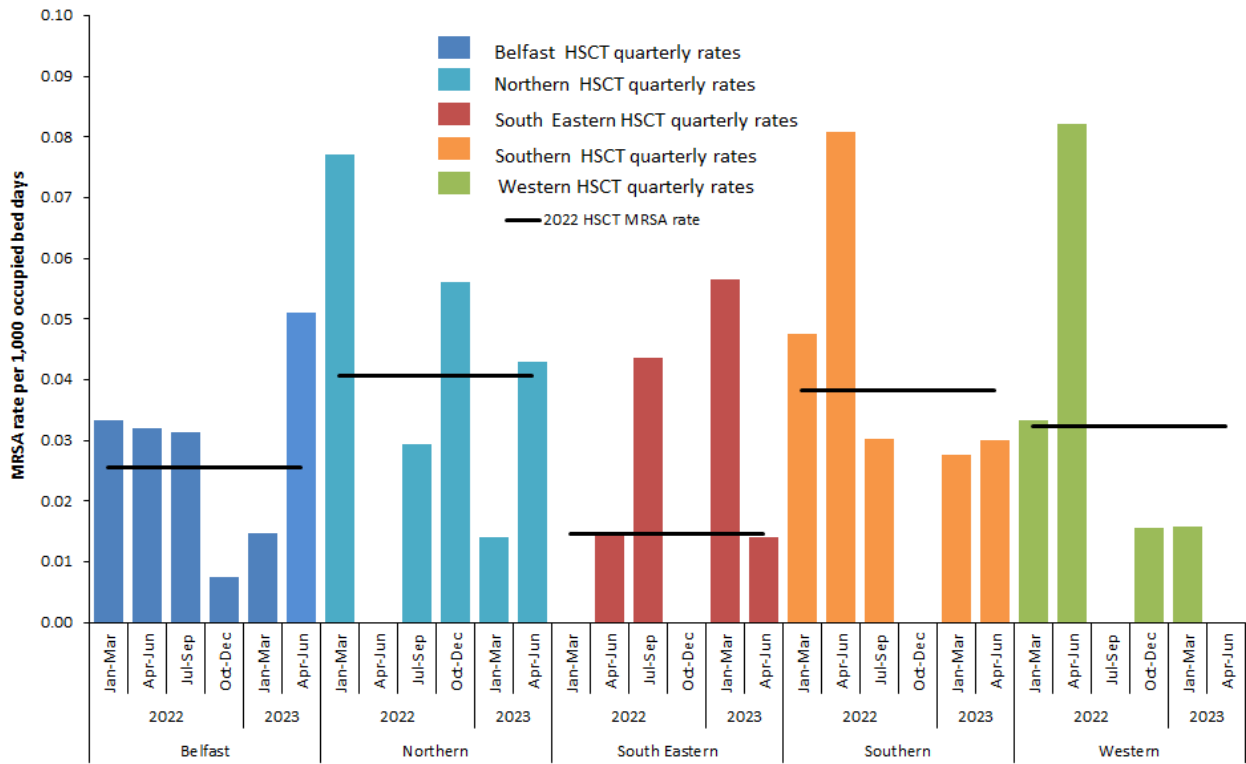


Figure 3: MRSA quarterly rate Jan 2022– June 2023, by HSCT, with 2022 HSCT MRSA rate

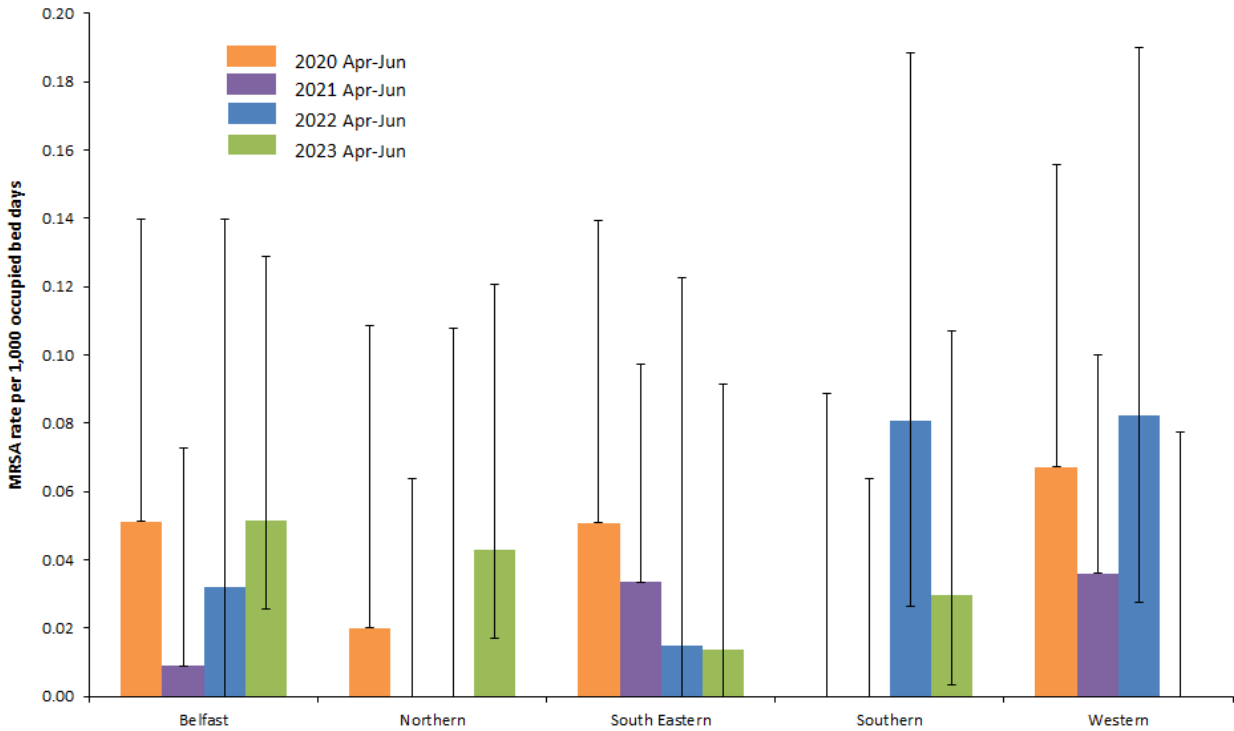


Figure 4: MRSA rate during Apr-June, by HSCT, from 2020–2023, with 95% confidence intervals

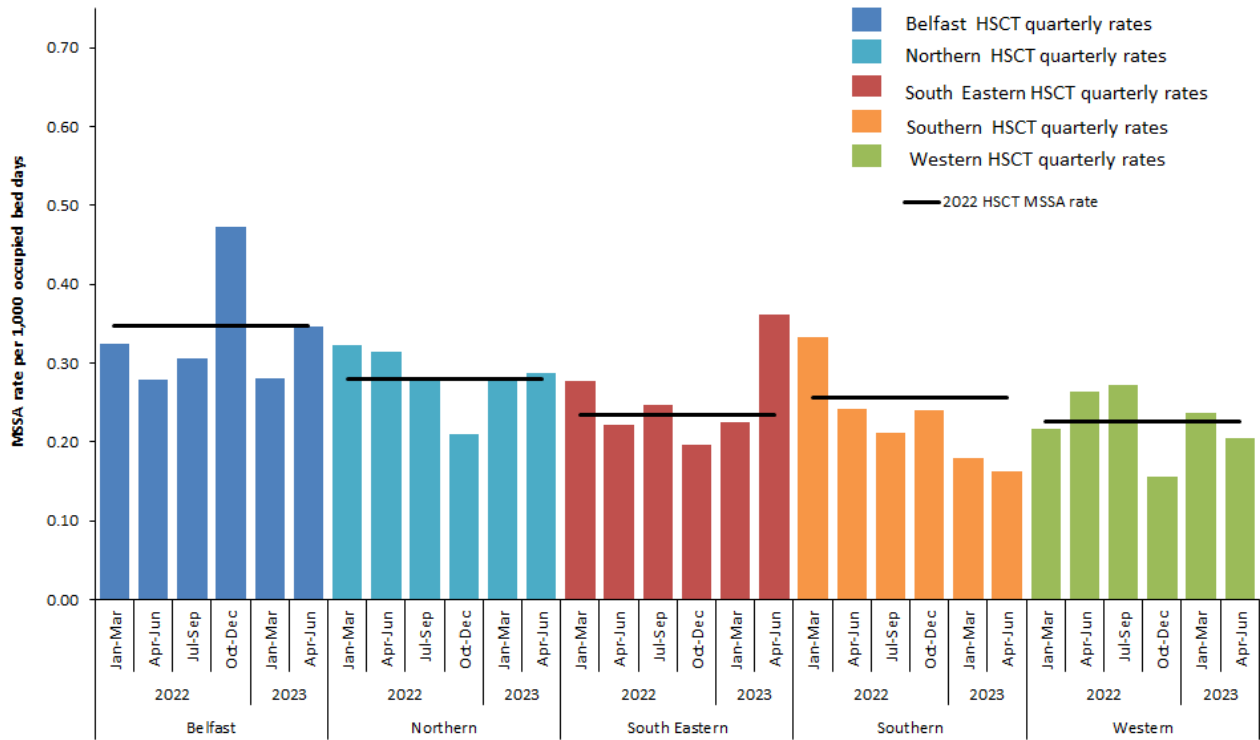


Figure 5: MSA quarterly rate Jan 2022 – Jun 2023, by HSCT, with 2022 HSCT MSA rate

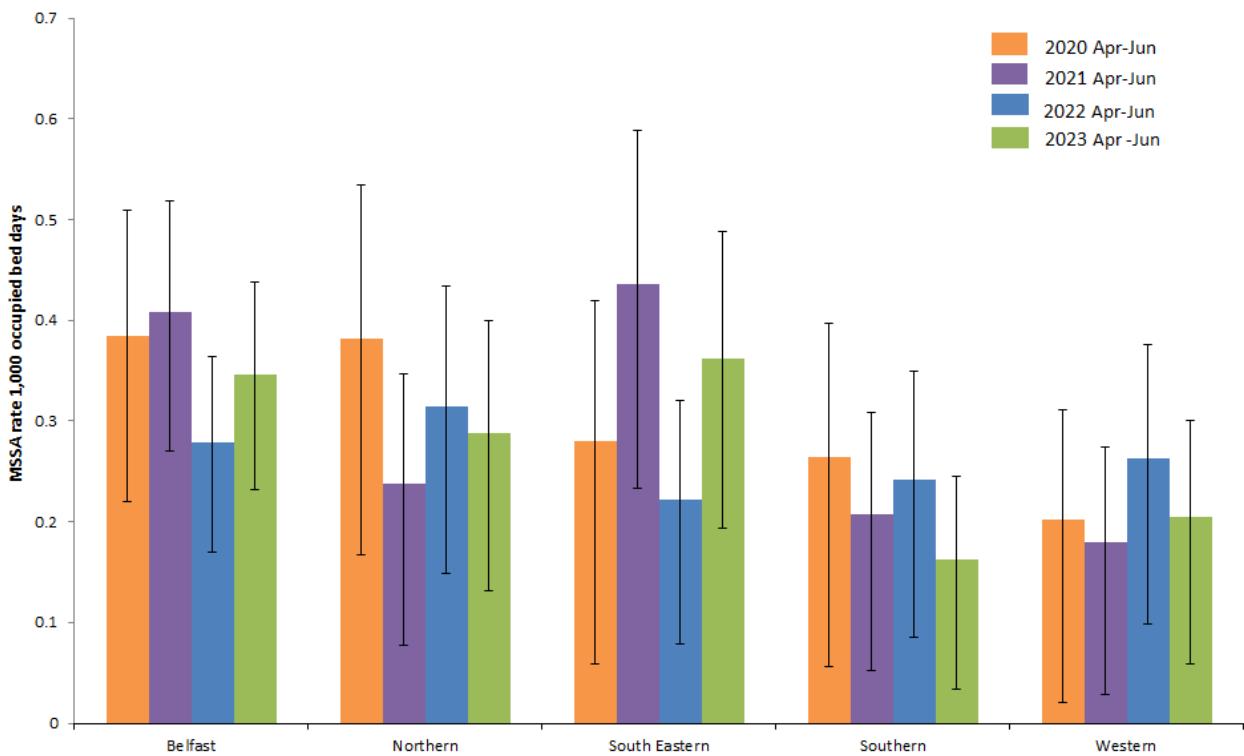


Figure 6: MSA rate during Apr-June, by HSCT, from 2020–2023, with 95% confidence intervals.

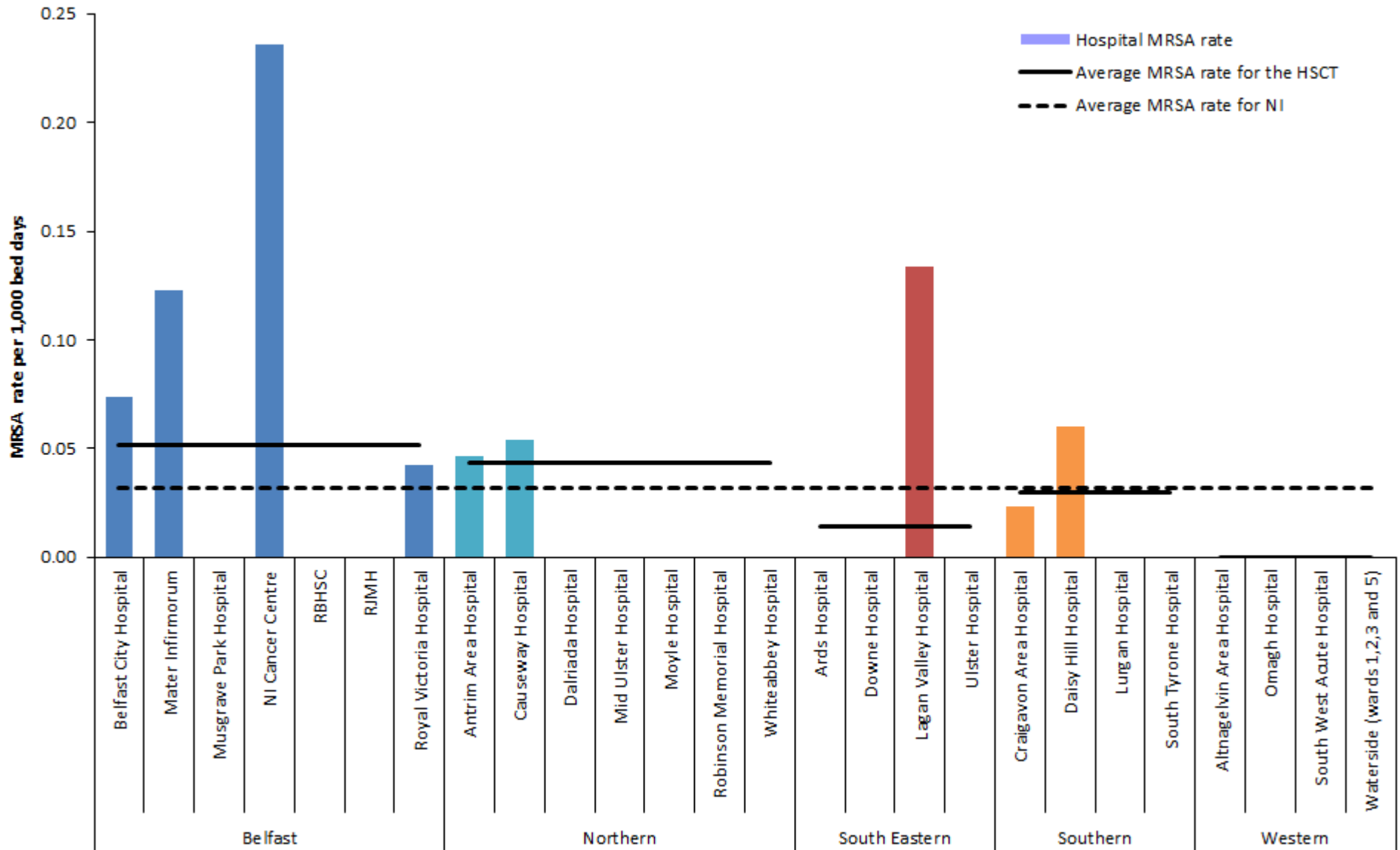


Figure 7: Rates of MRSA, April-June 2023 by individual hospitals, (gaps represent zero episodes), compared to April-June 2023 average rates for Northern Ireland and HSCTs

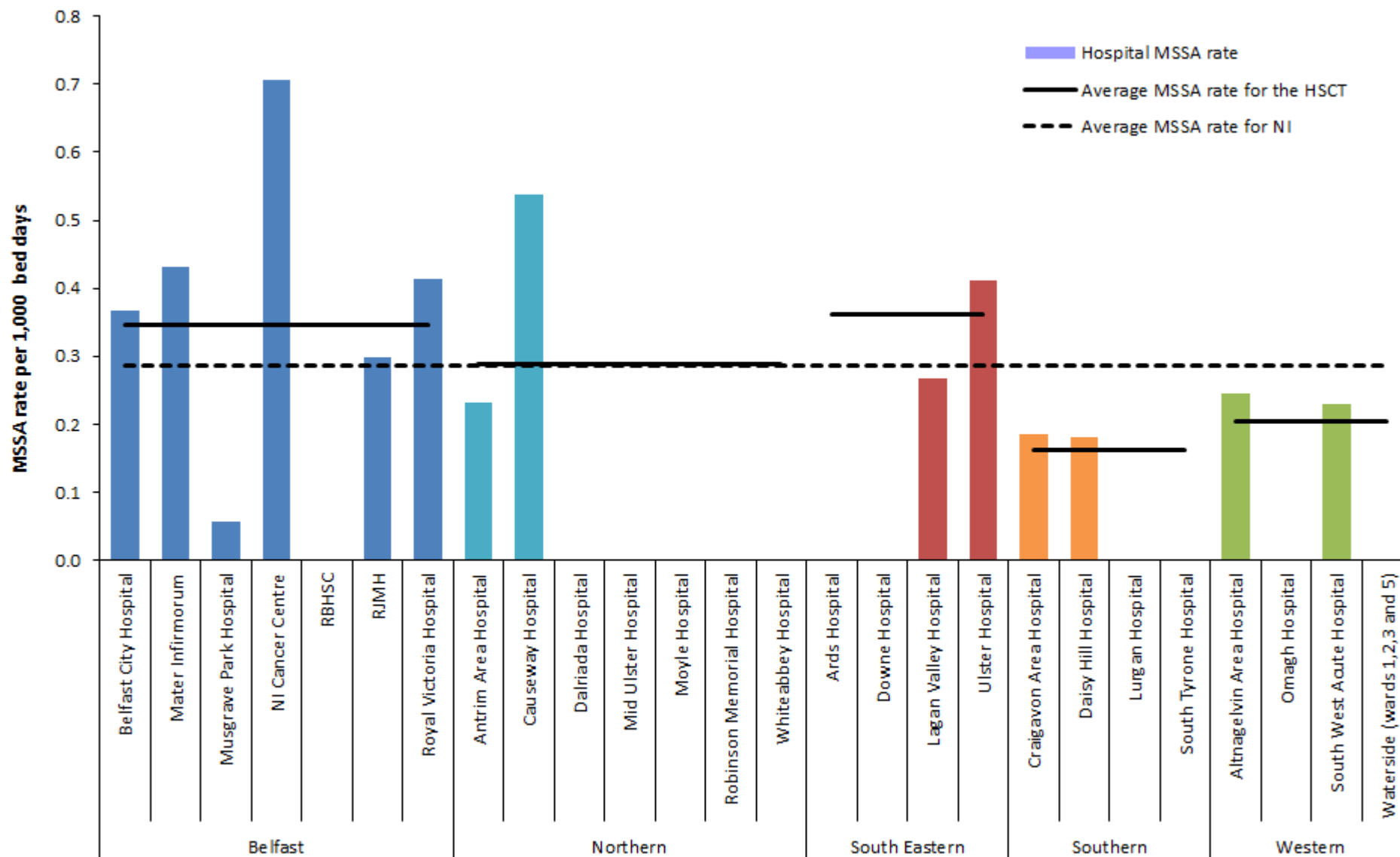


Figure 8: Rates of MSSA, April - June 2023 by individual hospitals, (gaps represent zero episodes), compared to April-June 2023 average rates for Northern Ireland and HSCT

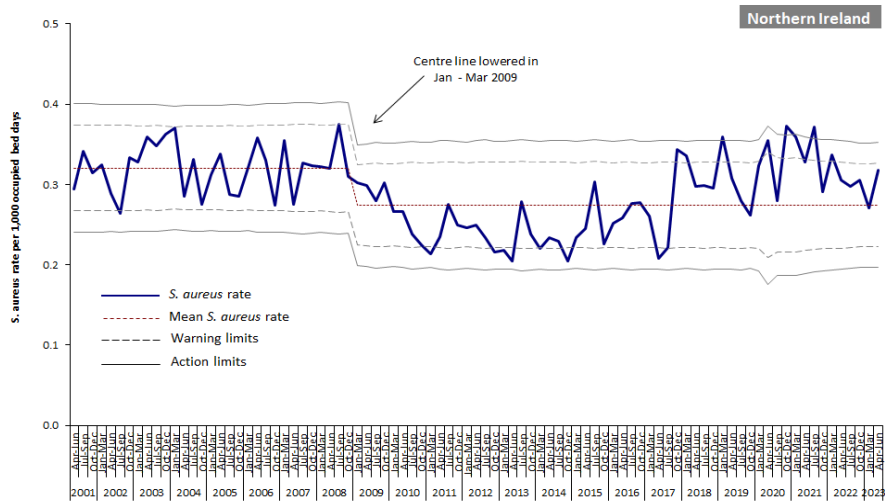


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

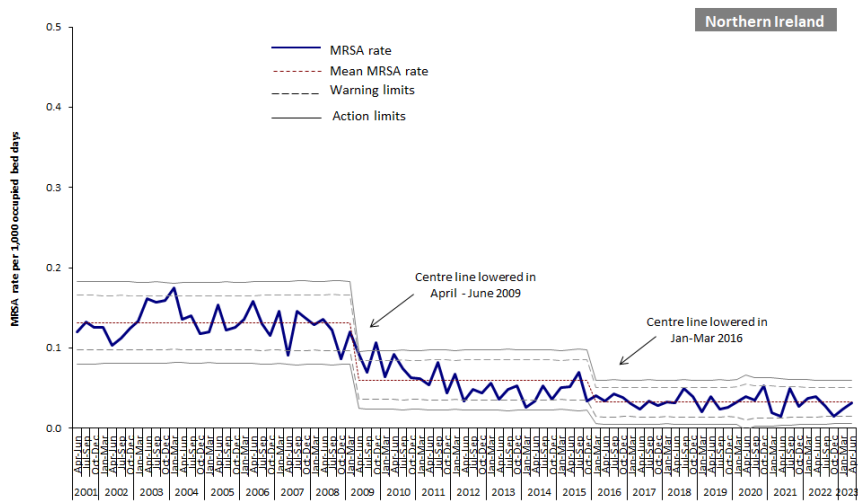


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

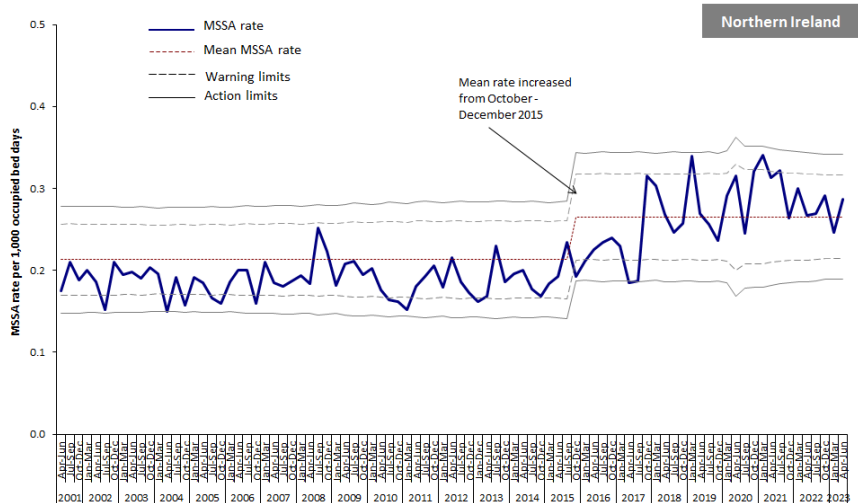


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, July 2022 – June 2023

Hospital	Jul-Sep 2022	Oct-Dec 2022	Jan-Mar 2023	Apr - Jun 2023
Belfast City Hospital	0.000	0.000	0.079	0.074
Mater Infirmorum	0.061	0.000	0.000	0.123
Musgrave Park Hospital	0.000	0.000	0.000	0.000
NICCO	0.000	0.000	0.241	0.236
RBHSC	0.000	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Group of Hospitals	0.045	0.014	0.000	0.043
Belfast Health & Social Care Trust	0.031	0.007	0.015	0.051
Antrim Area Hospital	0.000	0.069	0.023	0.047
Causeway Hospital	0.111	0.053	0.000	0.054
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	0.029	0.056	0.014	0.043
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	0.137	0.137
Ulster Hospital	0.036	0.000	0.052	0.000
South Eastern Health & Social Care Trust	0.044	0.000	0.056	0.014
Craigavon Area Hospital	0.048	0.000	0.044	0.023
Daisy Hill Hospital	0.000	0.000	0.000	0.060
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	0.000	0.028	0.030
Altnagelvin Area Hospital	0.000	0.028	0.027	0.000
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.000	0.000	0.000	0.000
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.000	0.016	0.016	0.000
NI TOTAL	0.028	0.015	0.024	0.032

Table 2: Quarterly MRSA patient episodes, by HSCT, July 2022 – June 2023

Trust	Jul-Sep 2022 Episodes	Oct-Dec 2022 Episodes	Jan-Mar 2023 Episodes	Apr - Jun 2023 Episodes
Belfast Health & Social Care Trust	4	1	2	7
Northern Health & Social Care Trust	2	4	1	3
South Eastern Health & Social Care Trust	3	0	4	1
Southern Health & Social Care Trust	2	0	2	2
Western Health & Social Care Trust	0	1	1	0
NI TOTAL	11	6	10	13

Appendix 1

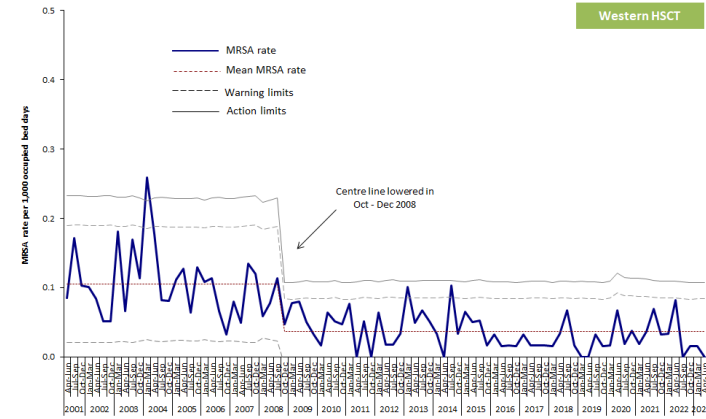
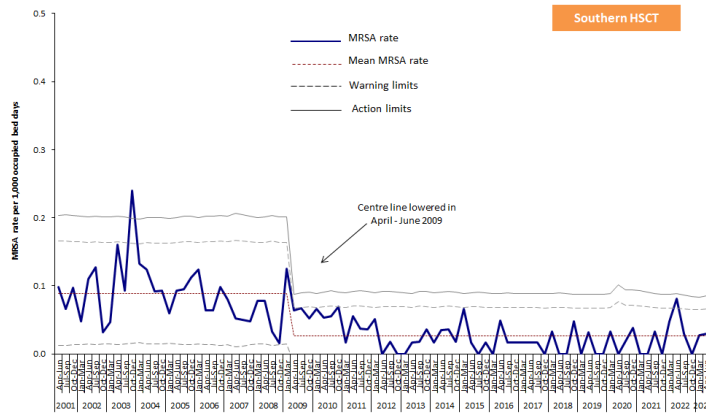
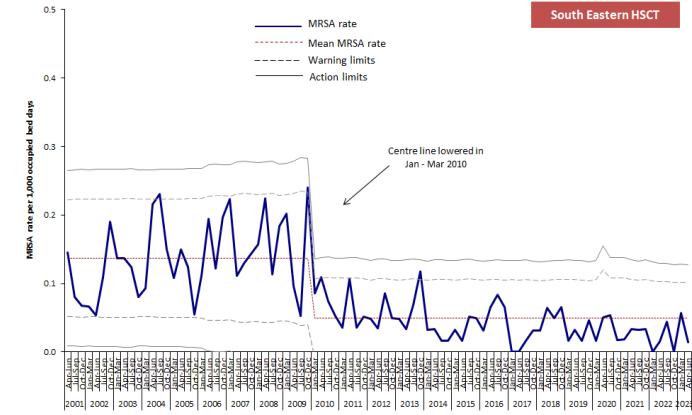
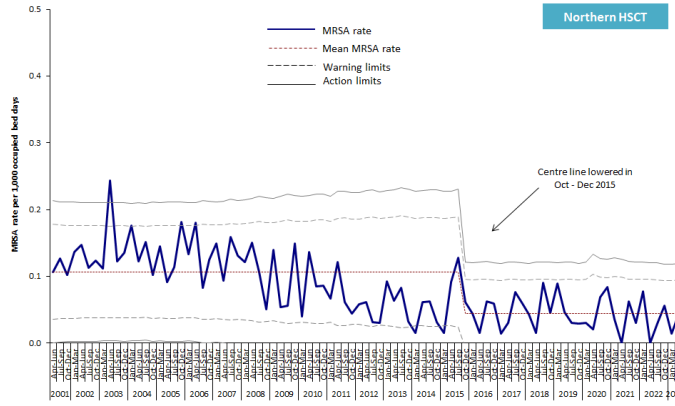
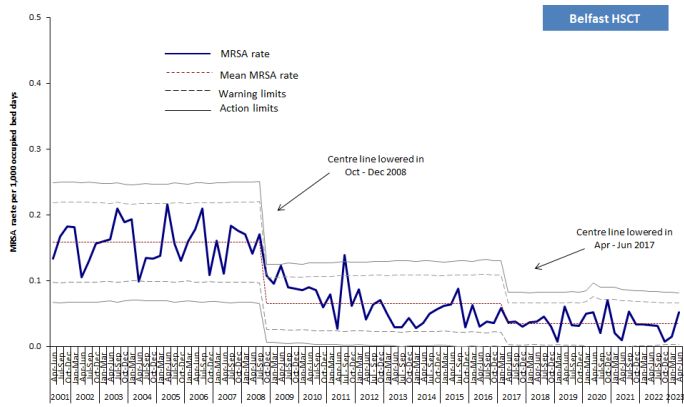
Table 1: Quarterly rate of MSSA patient episodes, by hospital, July 2022 – June 2023

Hospital	Jul-Sep 2022	Oct-Dec 2022	Jan-Mar 2023	Apr-Jun 2023
Belfast City Hospital	0.431	0.701	0.079	0.368
Mater Infirmorum	0.244	0.531	0.062	0.431
Musgrave Park Hospital	0.067	0.000	0.111	0.056
NICCO	0.983	1.197	0.965	0.707
RBHSC	0.740	0.763	0.399	0.000
RJMH	0.000	0.276	0.000	0.298
Royal Group of Hospitals	0.299	0.471	0.385	0.413
Belfast Health & Social Care Trust	0.306	0.473	0.281	0.346
Antrim Area Hospital	0.311	0.253	0.419	0.233
Causeway Hospital	0.332	0.213	0.102	0.538
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	0.279	0.210	0.279	0.288
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.253	0.000	0.000	0.000
Lagan Valley Hospital	0.685	0.000	0.275	0.267
Ulster Hospital	0.197	0.241	0.242	0.412
South Eastern Health & Social Care Trust	0.247	0.196	0.226	0.362
Craigavon Area Hospital	0.217	0.294	0.177	0.186
Daisy Hill Hospital	0.304	0.220	0.216	0.180
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.268	0.000
Southern Health & Social Care Trust	0.211	0.240	0.180	0.163
Altnagelvin Area Hospital	0.396	0.138	0.269	0.246
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.165	0.263	0.291	0.229
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.272	0.156	0.236	0.205
NI TOTAL	0.270	0.291	0.246	0.287

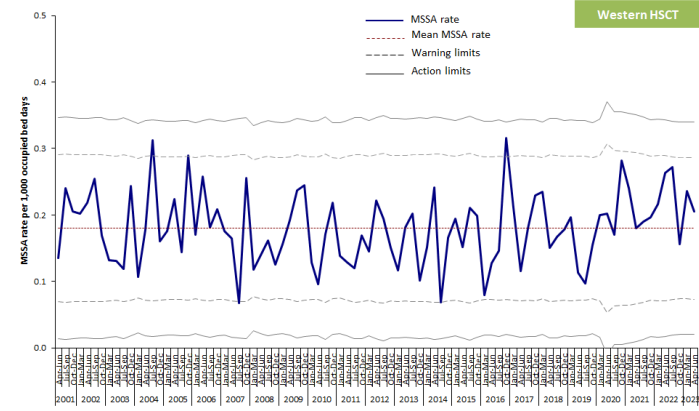
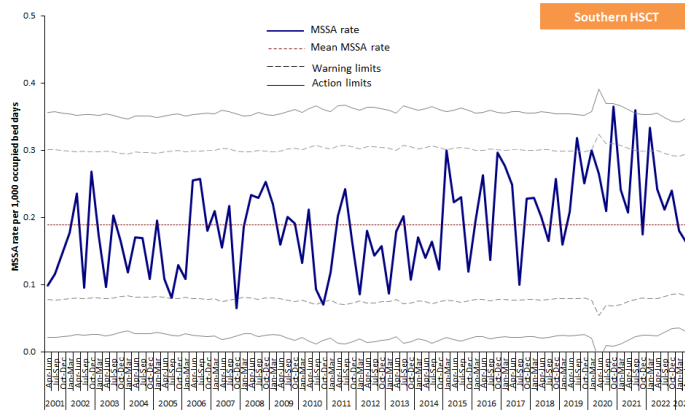
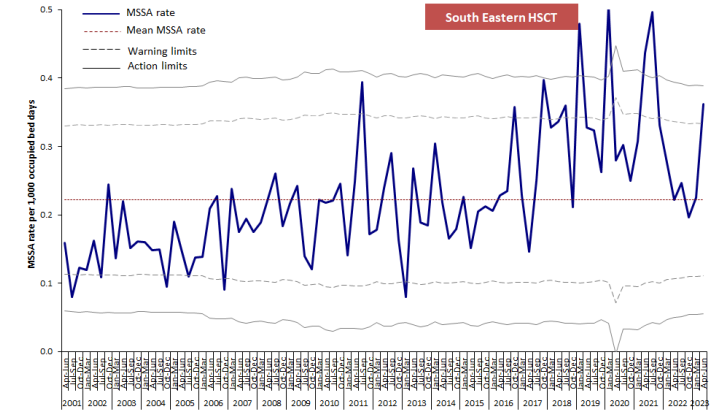
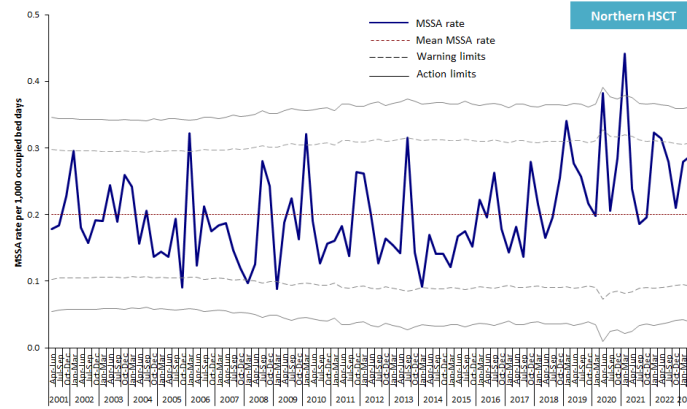
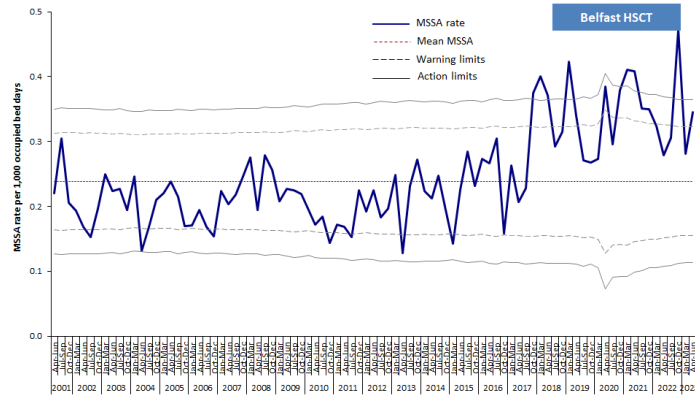
Table 4: Quarterly MSSA patient episodes, by HSCT, July 2022 – June 2023

Trust	Jul-Sep 2022 Episodes	Oct-Dec 2022 Episodes	Jan-Mar 2023 Episodes	Apr-Jun 2023 Episodes
Belfast Health & Social Care Trust	39	64	38	47
Northern Health & Social Care Trust	19	15	20	20
South Eastern Health & Social Care Trust	17	14	16	26
Southern Health & Social Care Trust	14	17	13	11
Western Health & Social Care Trust	17	10	15	13
NI TOTAL	106	120	102	117

Appendix 2: Trends in MRSA rates, by HSCT and quarter, April 2001 – June 2023



Appendix 2: Trends in MSSA rates, by HSCT and quarter, April 2001 – June 2023



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 2014 – Jun 2023.

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Jan-Mar 2014	0.195	0.026	0.221	11.8
Apr-Jun 2014	0.200	0.034	0.234	14.5
Jul-Sep 2014	0.177	0.053	0.229	23.1
Oct-Dec 2014	0.168	0.036	0.204	17.6
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

Appendix 4

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

HSCT	Financial Year												
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Belfast	48	46	32	18	28	34	22	19	16	22	15	15	11
Northern	27	19	14	12	11	21	10	14	16	9	12	11	7
South Eastern	15	14	13	15	7	9	13	5	12	7	7	6	8
Southern	11	10	1	5	9	2	6	4	3	4	3	5	9
Western	15	7	10	12	12	9	5	4	7	4	7	10	7
Northern Ireland	116	96	70	62	67	75	56	46	54	46	44	47	42

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

HSCT	Financial Year												
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Belfast	103	109	115	121	112	142	134	163	189	147	138	166	176
Northern	46	57	42	43	37	47	52	55	64	63	73	60	75
South Eastern	46	57	54	57	50	47	64	70	85	88	59	95	62
Southern	28	38	32	38	42	45	59	49	48	67	54	66	59
Western	39	34	40	38	40	38	50	47	42	35	46	46	58
Northern Ireland	262	295	283	297	281	319	359	384	428	400	370	433	430