

S. aureus bacteraemia surveillance

Quarterly report

October – December 2022

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 2% during October-December 2022 compared to July-September 2022.
- MRSA rates decreased by approximately 46% during October-December 2022 compared to July-September 2022.
- MRSA reports during 2021/22 increased by 7% compared to 2020/21.
- MSSA rates increased by approximately 8% during October-December 2022 compared to July-September 2022.
- MSSA reports during 2021/22 increased by 17% compared to 2020/21.

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

S. aureus bacteraemia surveillance

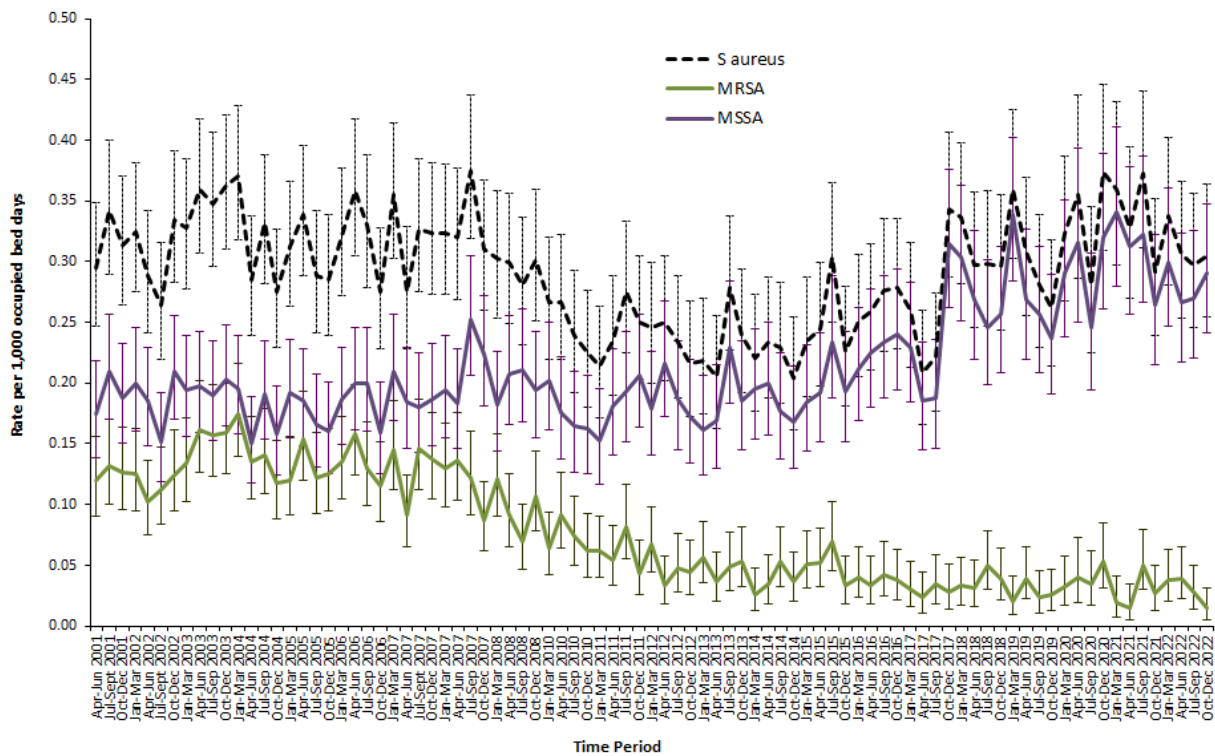


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – December 2022 (see Appendix 3)

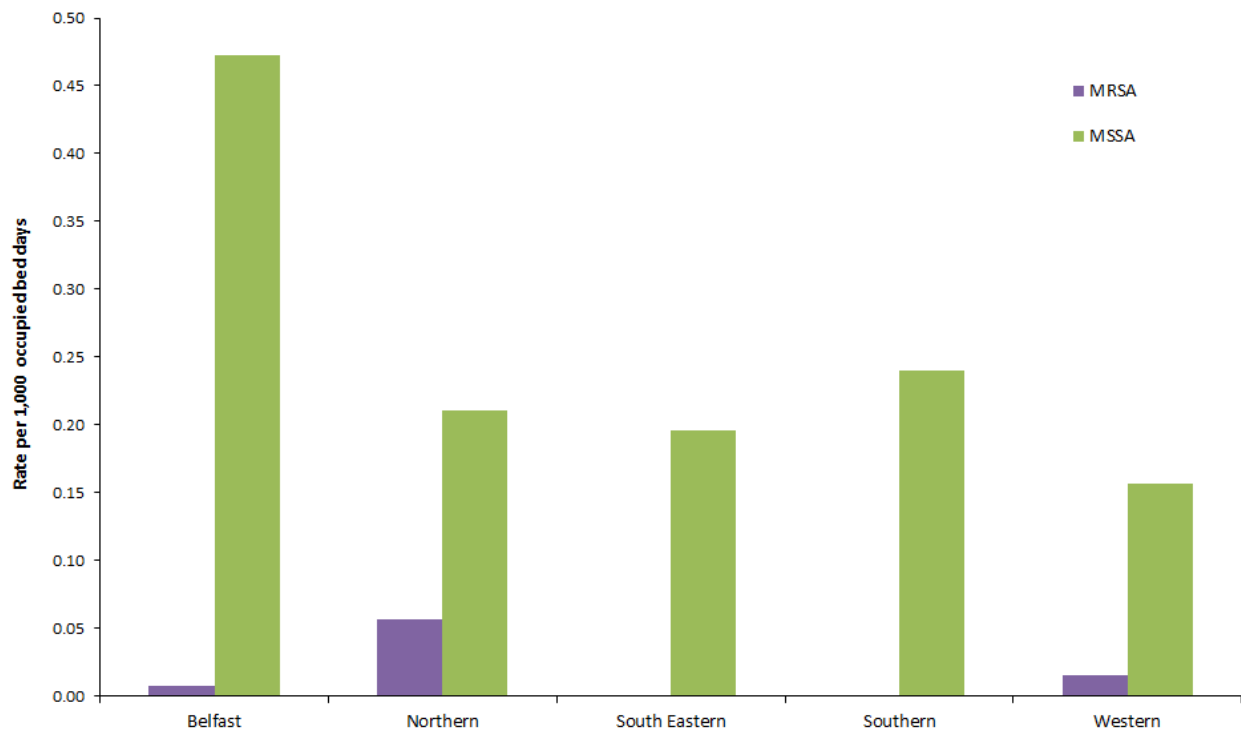


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, Oct-Dec 2022.

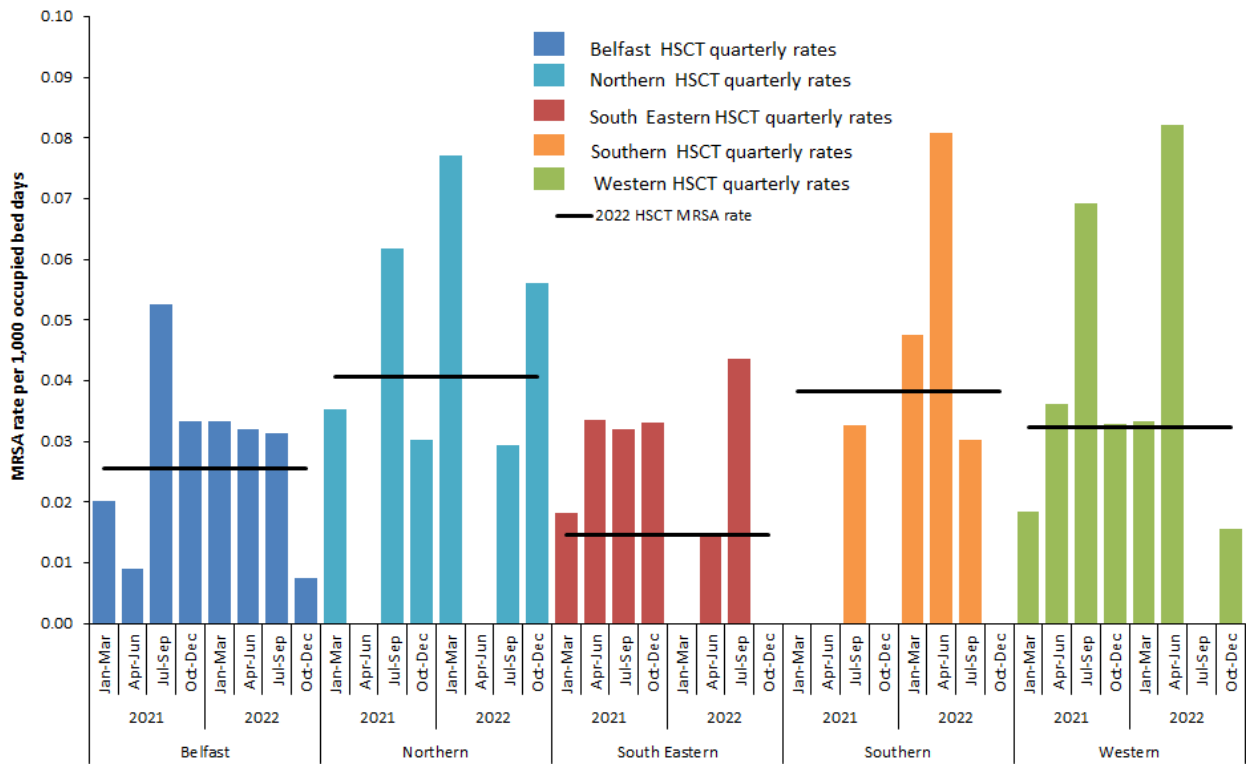


Figure 3: MRSA quarterly rate Jan 2021– Dec 2022, by HSCT, with 2022 HSCT MRSA rate

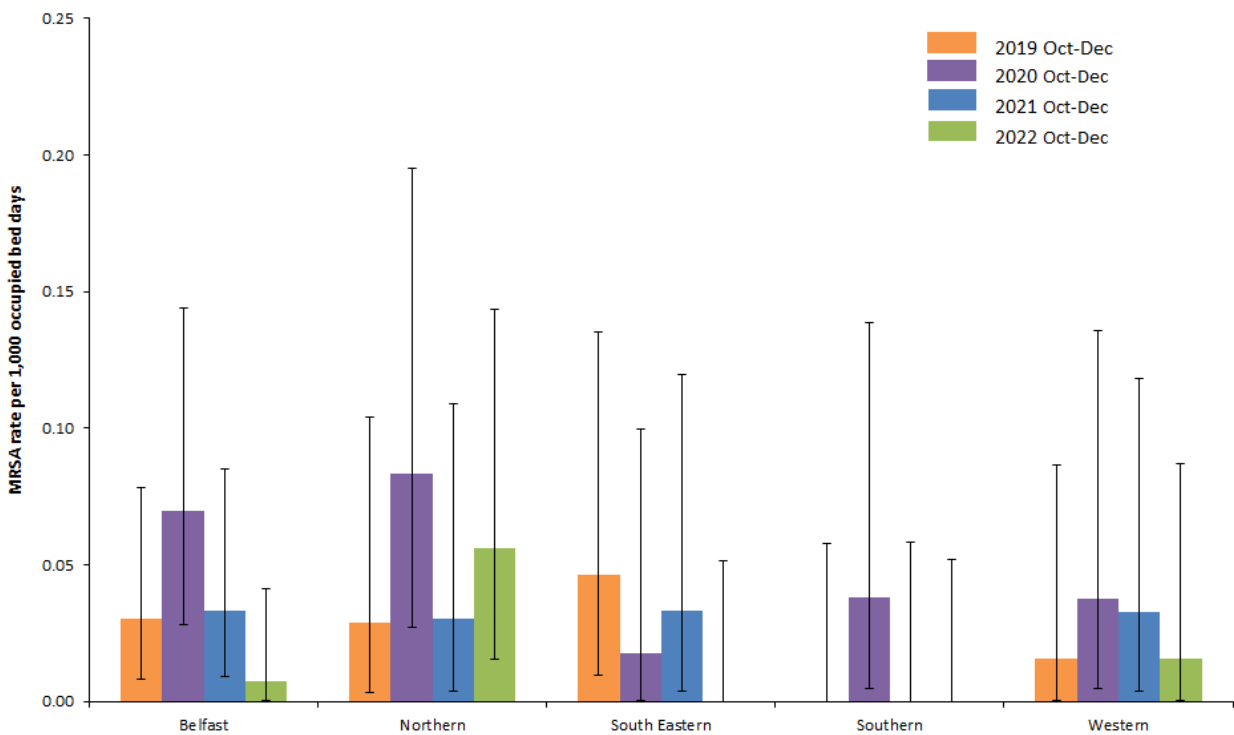


Figure 4: MRSA rate during Oct-Dec, by HSCT, from 2019–2022, with 95% confidence intervals

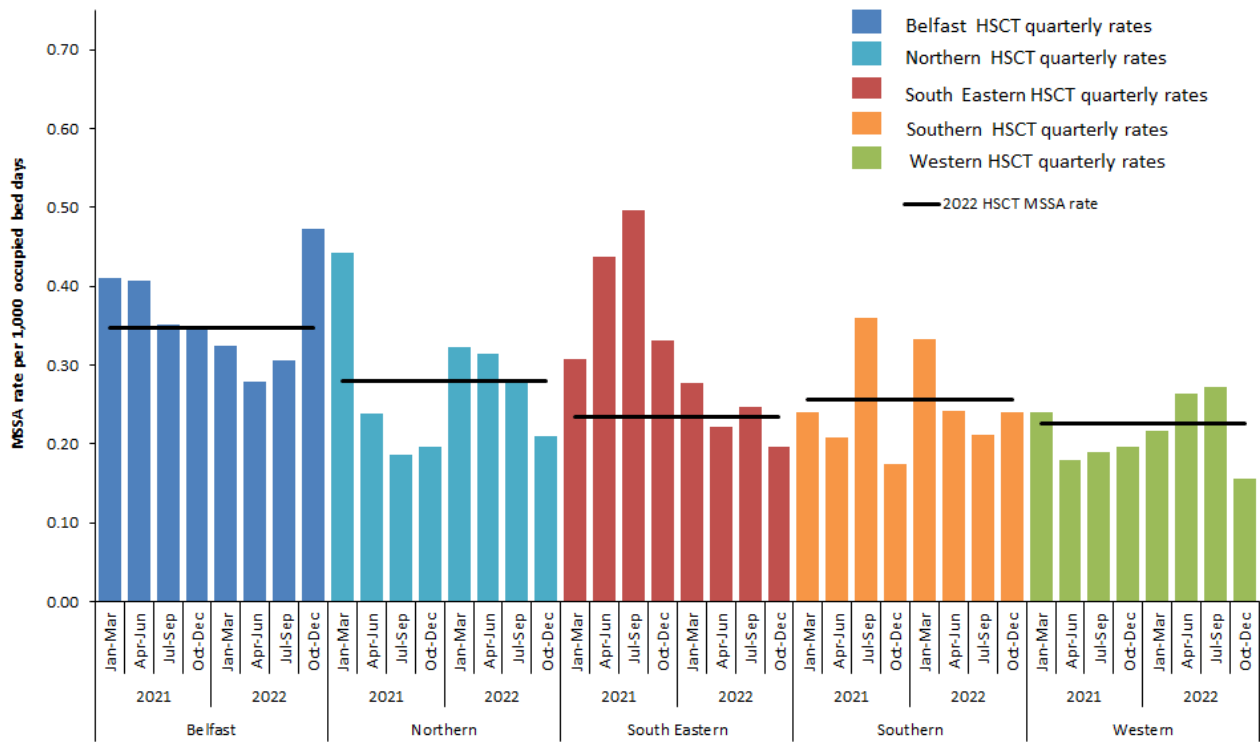


Figure 5: MSA quarterly rate Jan 2021 – Dec 2022, by HSCT, with 2022 HSCT MSA rate

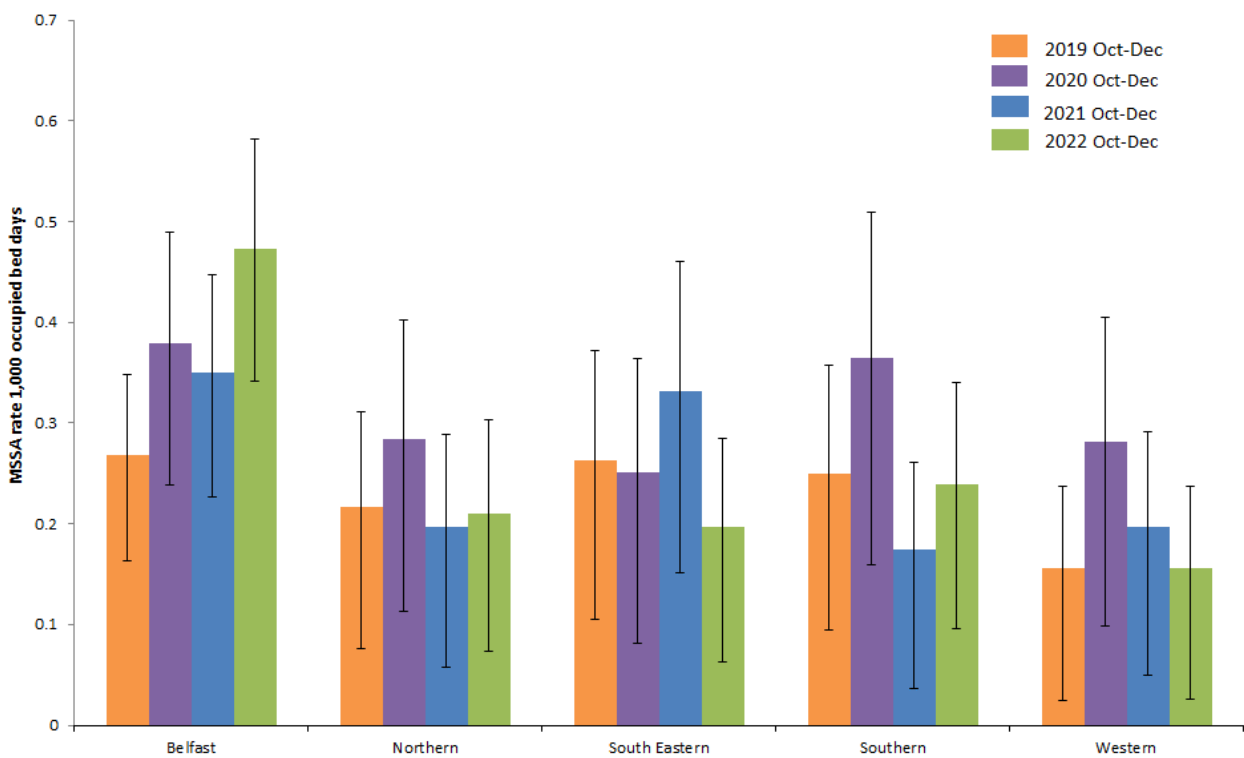


Figure 6: MSA rate during Oct-Dec, by HSCT, from 2019–2022, with 95% confidence intervals.

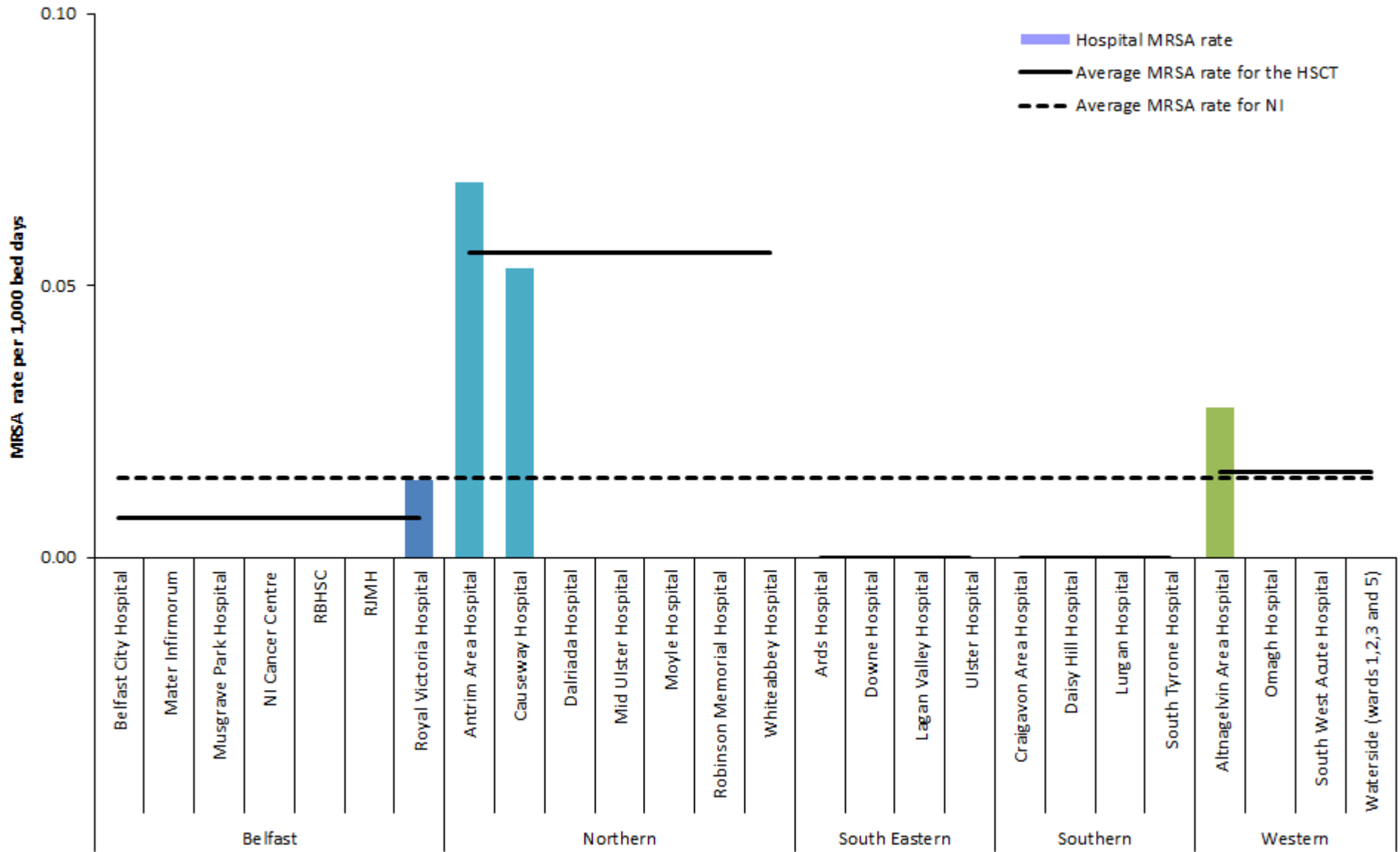


Figure 7: Rates of MRSA, October - December 2022 by individual hospitals, (gaps represent zero episodes), compared to October - December 2022 average rates for Northern Ireland and HSCTs

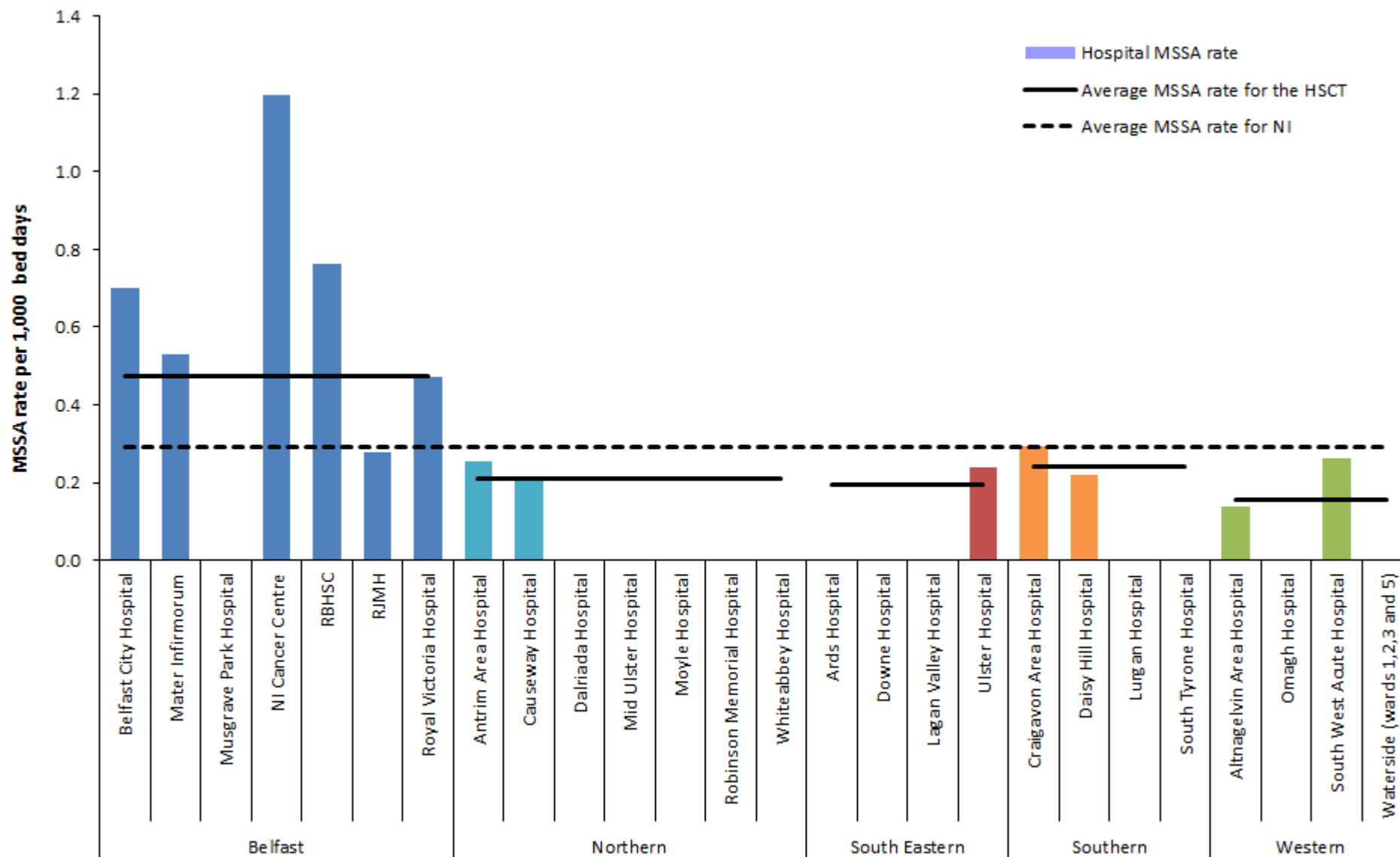


Figure 8: Rates of MSSA, October - December 2022 by individual hospitals, (gaps represent zero episodes), compared to October - December 2022 average rates for Northern Ireland and HSCT

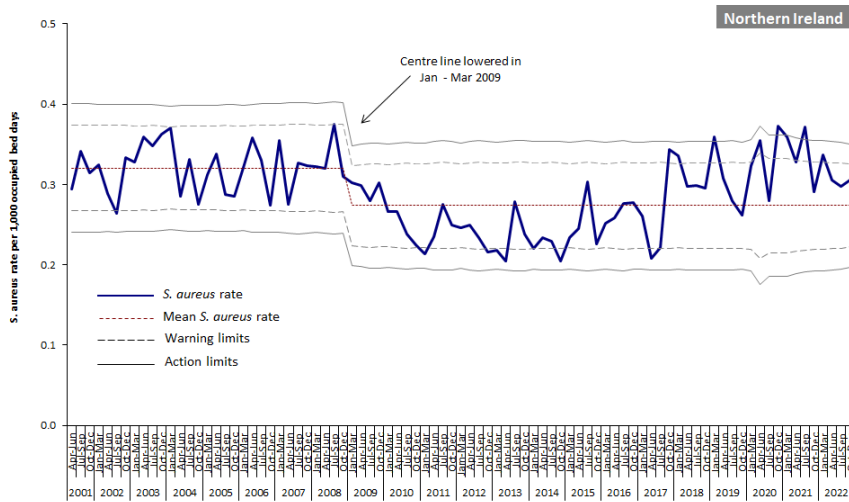


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

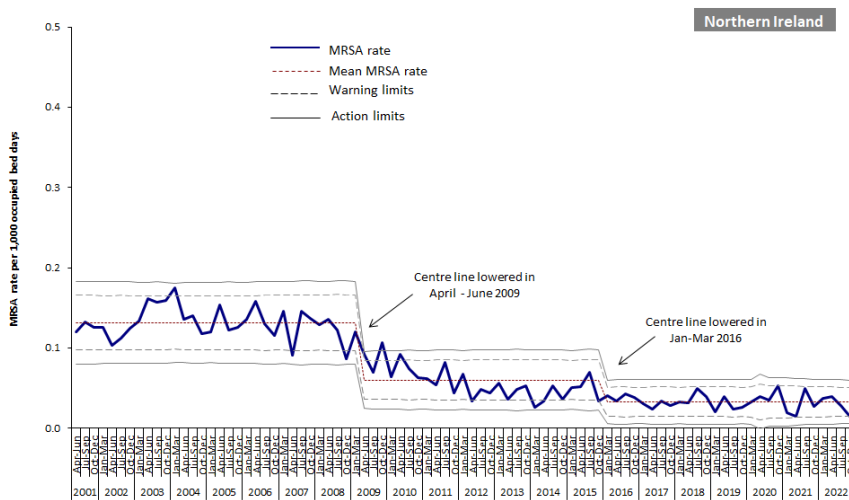


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

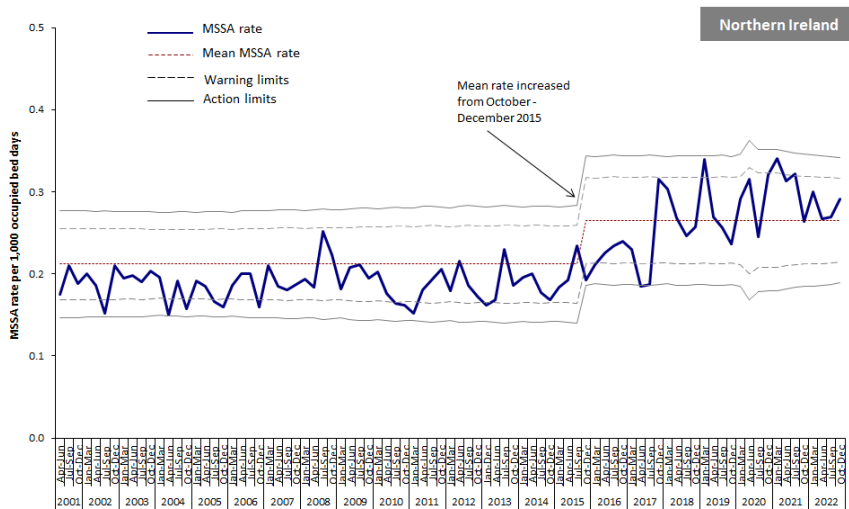


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, Jan 2022 – Dec 2022

Hospital	Jan - Mar 2022	Apr - Jun 2022	Jul - Sep 2022	Oct - Dec 2022
Belfast City Hospital	0.096	0.000	0.000	0.000
Mater Infirmorum	0.068	0.063	0.061	0.000
Musgrave Park Hospital	0.000	0.000	0.000	0.000
NICCO	0.252	0.000	0.000	0.000
RBHSC	0.000	0.136	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Group of Hospitals	0.016	0.031	0.045	0.014
Belfast Health & Social Care Trust	0.033	0.032	0.031	0.007
Antrim Area Hospital	0.075	0.000	0.000	0.069
Causeway Hospital	0.118	0.000	0.111	0.053
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	0.077	0.000	0.029	0.056
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.000	0.000
Lagan Valley Hospital	0.000	0.000	0.137	0.000
Ulster Hospital	0.000	0.018	0.036	0.000
South Eastern Health & Social Care Trust	0.000	0.015	0.044	0.000
Craigavon Area Hospital	0.078	0.103	0.048	0.000
Daisy Hill Hospital	0.000	0.067	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	0.048	0.081	0.030	0.000
Altnagelvin Area Hospital	0.058	0.115	0.000	0.028
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.000	0.056	0.000	0.000
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.033	0.082	0.000	0.016
NI TOTAL	0.037	0.039	0.028	0.015

Table 2: Quarterly MRSA patient episodes, by HSCT, Jan 2022 – Dec 2022

Trust	Jan - Mar 2022 Episodes	Apr - Jun 2022 Episodes	Jul - Sep 2022 Episodes	Oct - Dec 2022 Episodes
Belfast Health & Social Care Trust	4	4	4	1
Northern Health & Social Care Trust	5	0	2	4
South Eastern Health & Social Care Trust	0	1	3	0
Southern Health & Social Care Trust	3	5	2	0
Western Health & Social Care Trust	2	5	0	1
NI TOTAL	14	15	11	6

Appendix 1

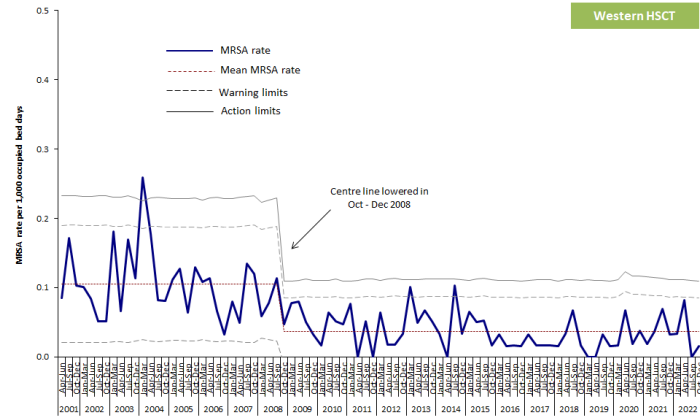
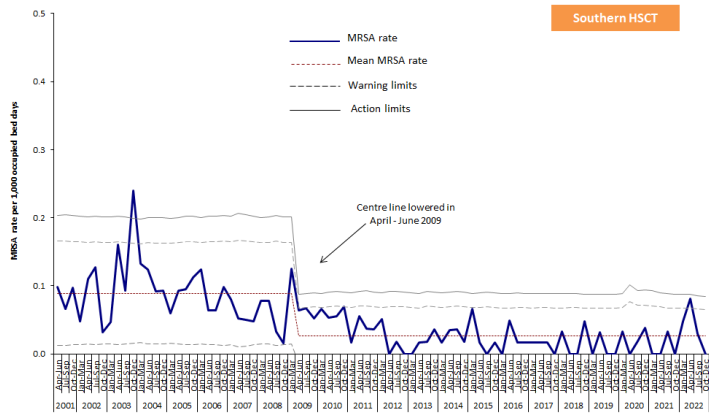
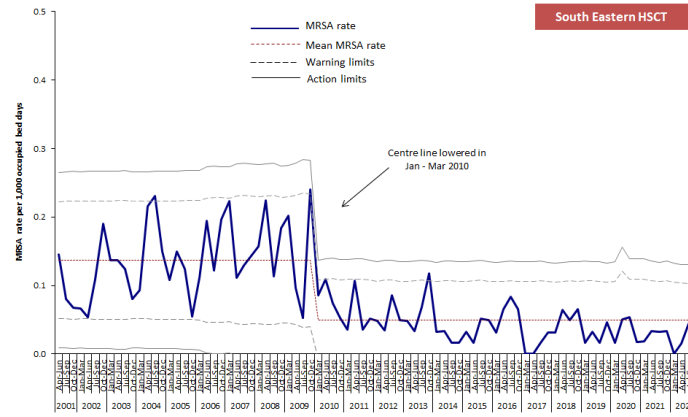
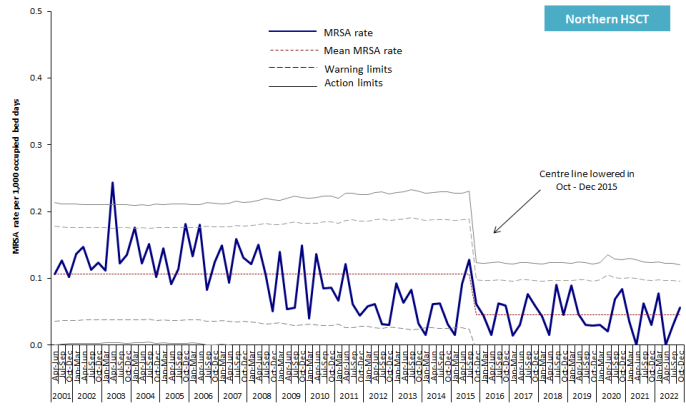
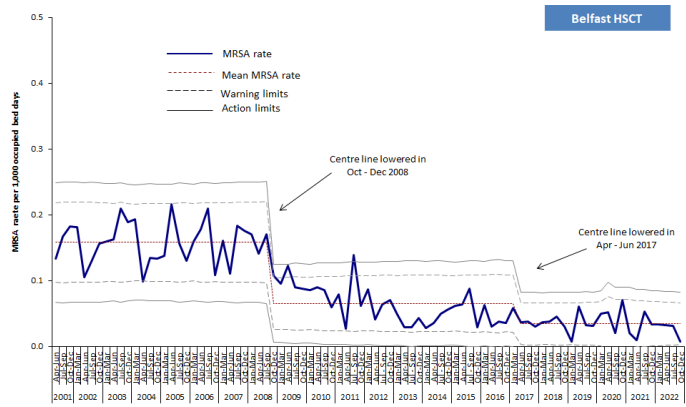
Table 3: Quarterly rate of MSSA patient episodes, by hospital, Jan 2022 – Dec 2022

Hospital	Jan - Mar 2022	Apr - Jun 2022	Jul - Sep 2022	Oct - Dec 2022
Belfast City Hospital	0.578	0.255	0.431	0.701
Mater Infirmorum	0.405	0.507	0.244	0.531
Musgrave Park Hospital	0.205	0.065	0.067	0.000
NICCO	1.009	0.976	0.983	1.197
RBHSC	0.141	0.000	0.740	0.763
RJMH	0.318	0.148	0.000	0.276
Royal Group of Hospitals	0.269	0.280	0.299	0.471
Belfast Health & Social Care Trust	0.324	0.279	0.306	0.473
Antrim Area Hospital	0.252	0.418	0.311	0.253
Causeway Hospital	0.651	0.225	0.332	0.213
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	0.323	0.314	0.279	0.210
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.253	0.000
Lagan Valley Hospital	0.433	0.279	0.685	0.000
Ulster Hospital	0.284	0.237	0.197	0.241
South Eastern Health & Social Care Trust	0.277	0.222	0.247	0.196
Craigavon Area Hospital	0.337	0.284	0.217	0.294
Daisy Hill Hospital	0.506	0.270	0.304	0.220
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	0.333	0.242	0.211	0.240
Altnagelvin Area Hospital	0.375	0.345	0.396	0.138
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.000	0.226	0.165	0.263
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.216	0.263	0.272	0.156
NI TOTAL	0.300	0.267	0.270	0.291

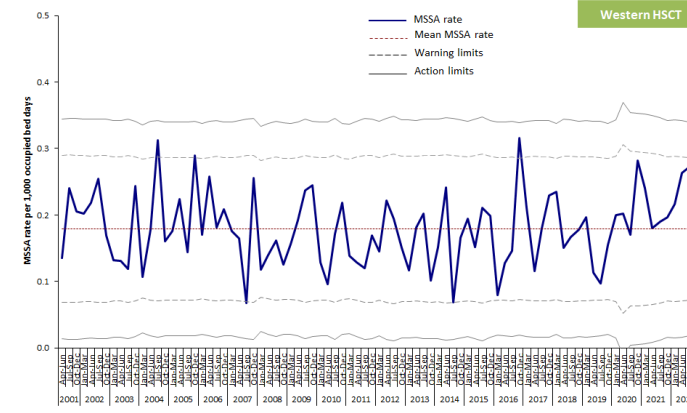
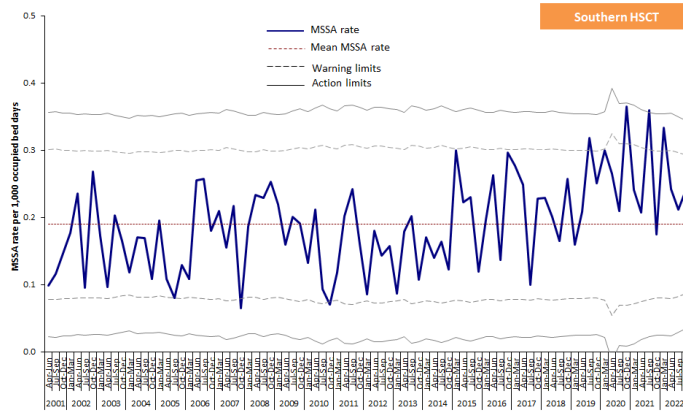
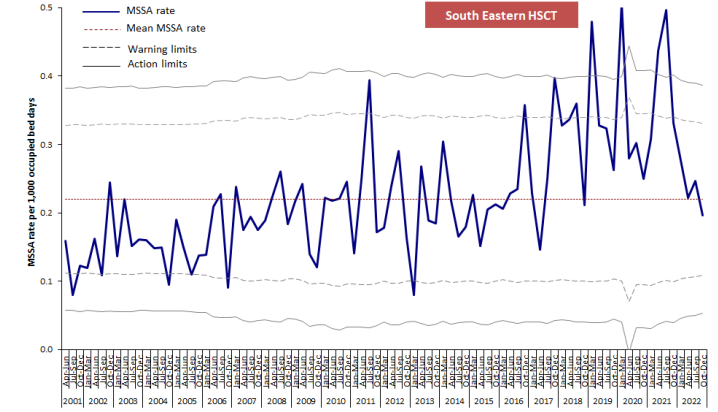
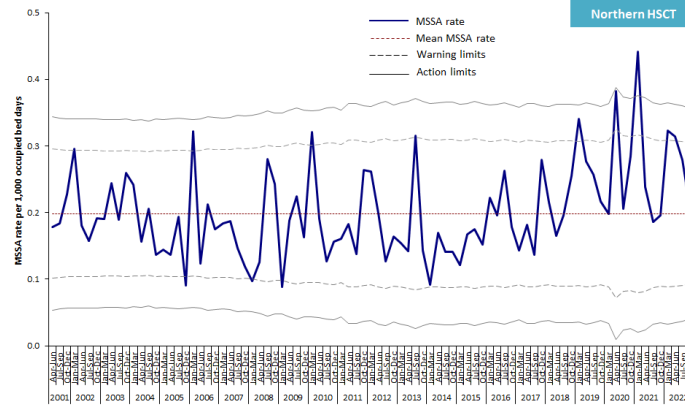
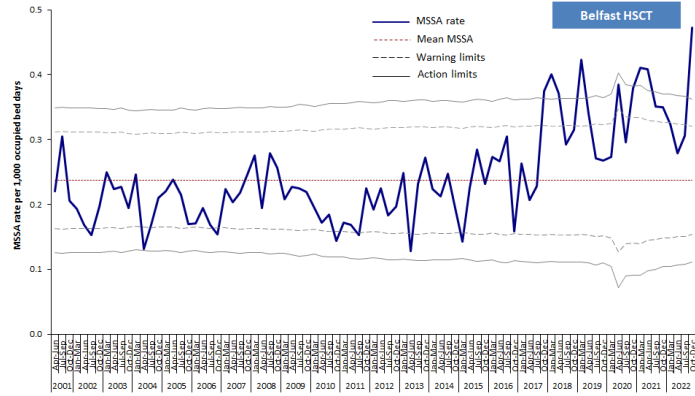
Table 4: Quarterly MSSA patient episodes, by HSCT, Jan 2022 – Dec 2022

Trust	Jan - Mar 2022 Episodes	Apr - Jun 2022 Episodes	Jul - Sep 2022 Episodes	Oct - Dec 2022 Episodes
Belfast Health & Social Care Trust	39	35	39	64
Northern Health & Social Care Trust	21	21	19	15
South Eastern Health & Social Care Trust	18	15	17	14
Southern Health & Social Care Trust	21	15	14	17
Western Health & Social Care Trust	13	16	17	10
NI TOTAL	112	102	106	120

Appendix 2: Trends in MRSA rates, by HSCT and quarter, April 2001 – Dec 2022



Appendix 2: Trends in MSSA rates, by HSCT and quarter, April 2001 – Dec 2022



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, Apr 2013 – Dec 2022.

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Apr-Jun 2013	0.169	0.036	0.205	17.6
Jul-Sep 2013	0.230	0.049	0.278	17.6
Oct-Dec 2013	0.188	0.053	0.241	22.0
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

Appendix 4

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

HSCT	Financial Year												
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Belfast	62	48	46	32	18	28	34	22	19	16	22	15	15
Northern	22	27	19	14	12	11	21	10	14	16	9	12	11
South Eastern	28	15	14	13	15	7	9	13	5	12	7	7	6
Southern	15	11	10	1	5	9	2	6	4	3	4	3	5
Western	11	15	7	10	12	12	9	5	4	7	4	7	10
Northern Ireland	138	116	96	70	62	67	75	56	46	54	46	44	47

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

HSCT	Financial Year												
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Belfast	138	103	109	115	121	112	142	134	163	189	147	138	166
Northern	66	46	57	42	43	37	47	52	55	64	63	73	60
South Eastern	43	46	57	54	57	50	47	64	70	85	88	59	95
Southern	40	28	38	32	38	42	45	59	49	48	67	54	66
Western	49	39	34	40	38	40	38	50	47	42	35	46	46
Northern Ireland	336	262	295	283	297	281	319	359	384	428	400	370	433