

S. aureus bacteraemia surveillance

Quarterly report

October – December 2021

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) decreased by approximately 22% during October-December 2021 compared to July-September 2021.
- MRSA rates decreased by approximately 46% during October-December 2021 compared to July-September 2021.
- MRSA reports during 2020/21 decreased by 4% compared to 2019/20.
- MSSA rates decreased by approximately 18% during October-December 2021 compared to July-September 2021.
- MSSA reports during 2020/21 decreased by 7% compared to 2019/20.

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

S. aureus bacteraemia surveillance

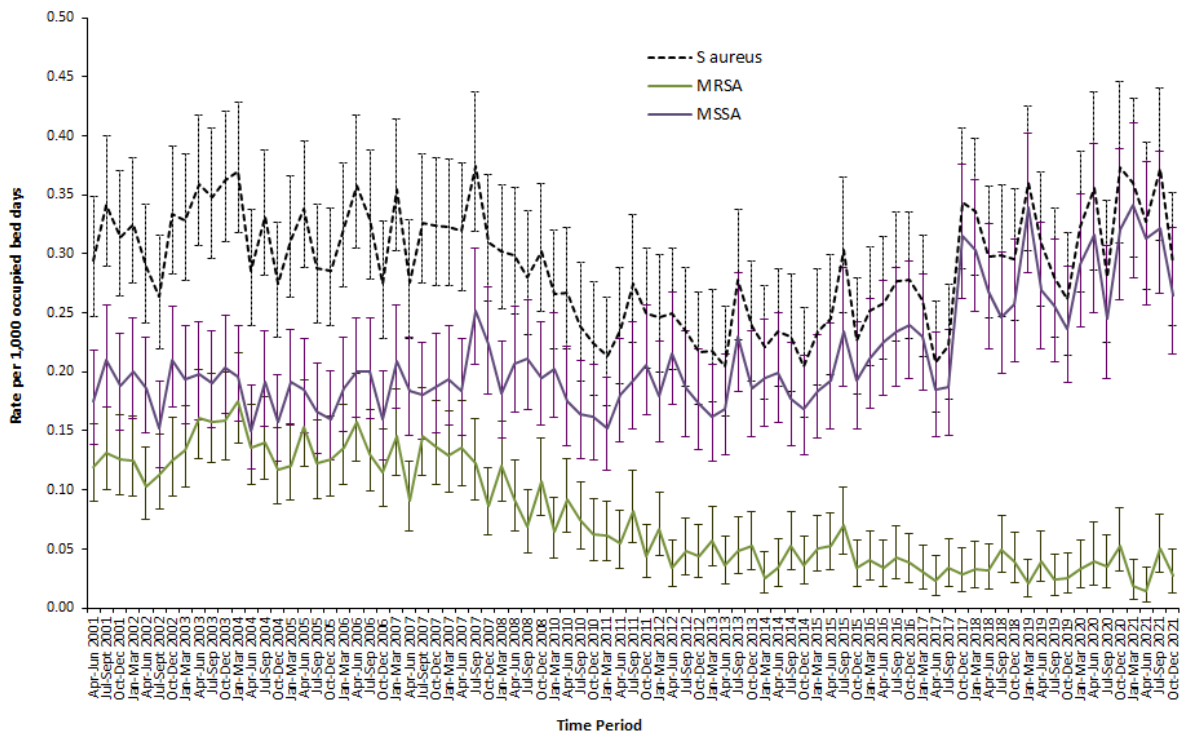


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – December 2021 (see Appendix 3)

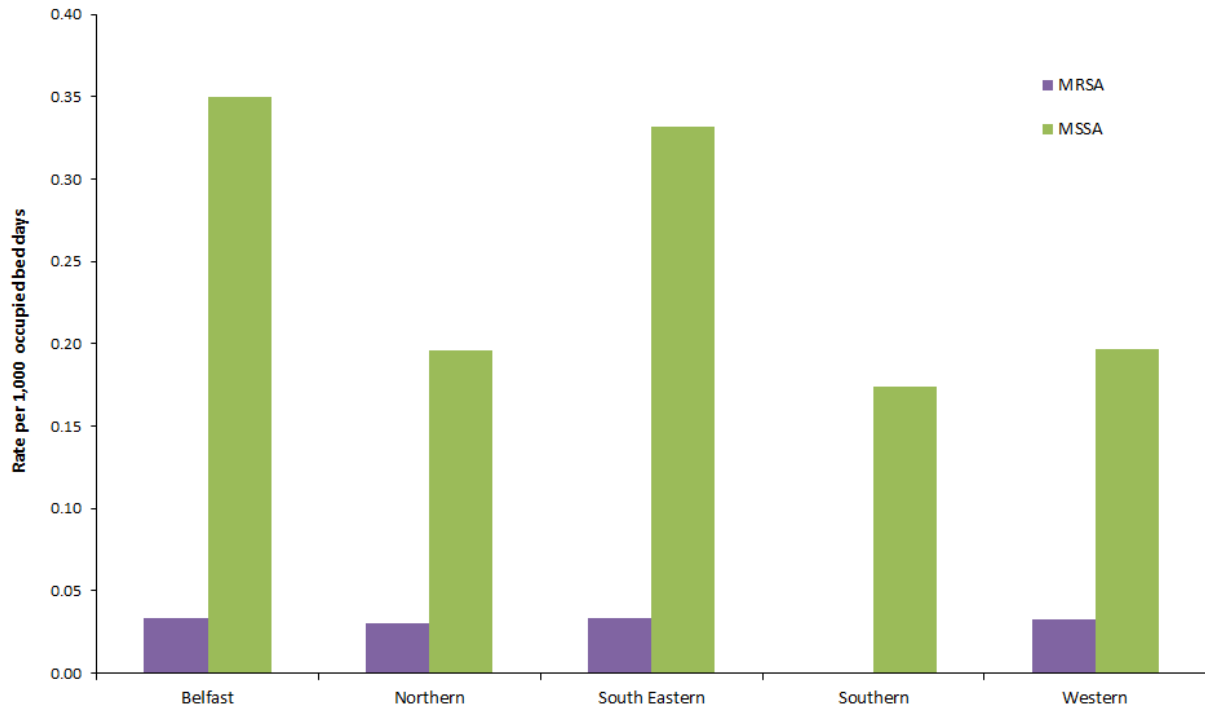


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, Oct - Dec 2021.

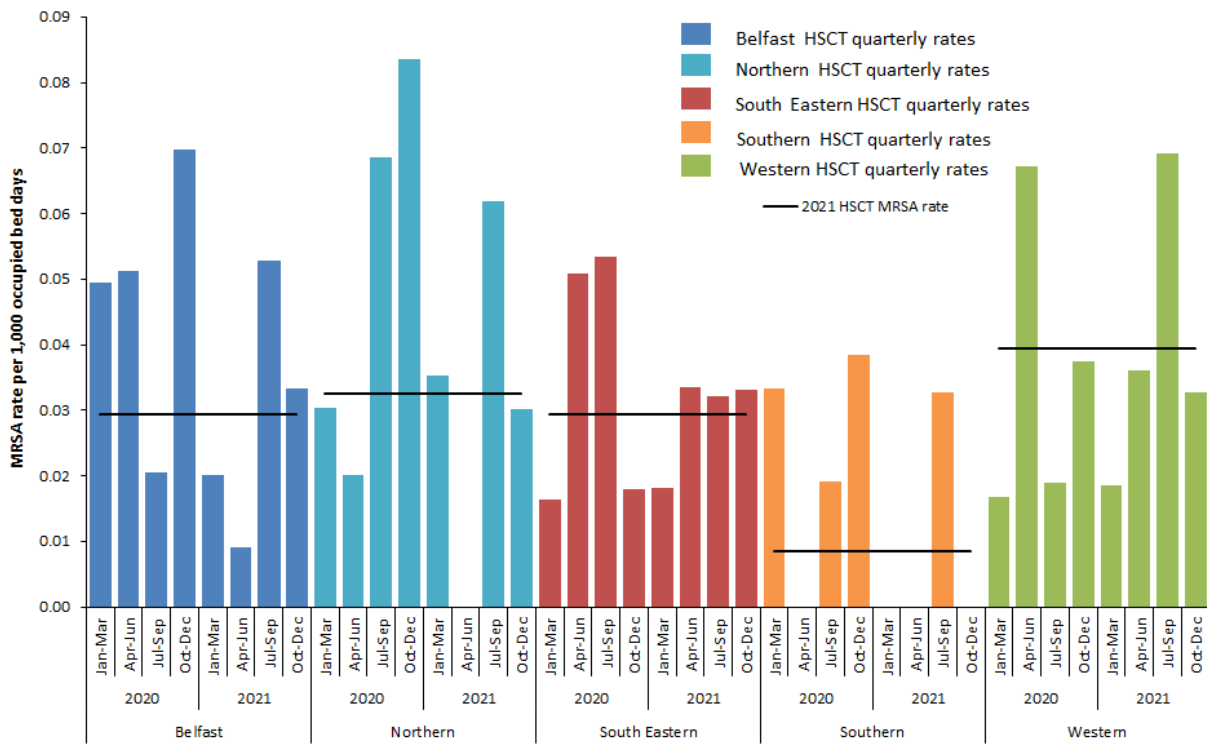


Figure 3: MRSA quarterly rate Jan 2020 – Dec 2021, by HSCT, with 2021 HSCT MRSA rate

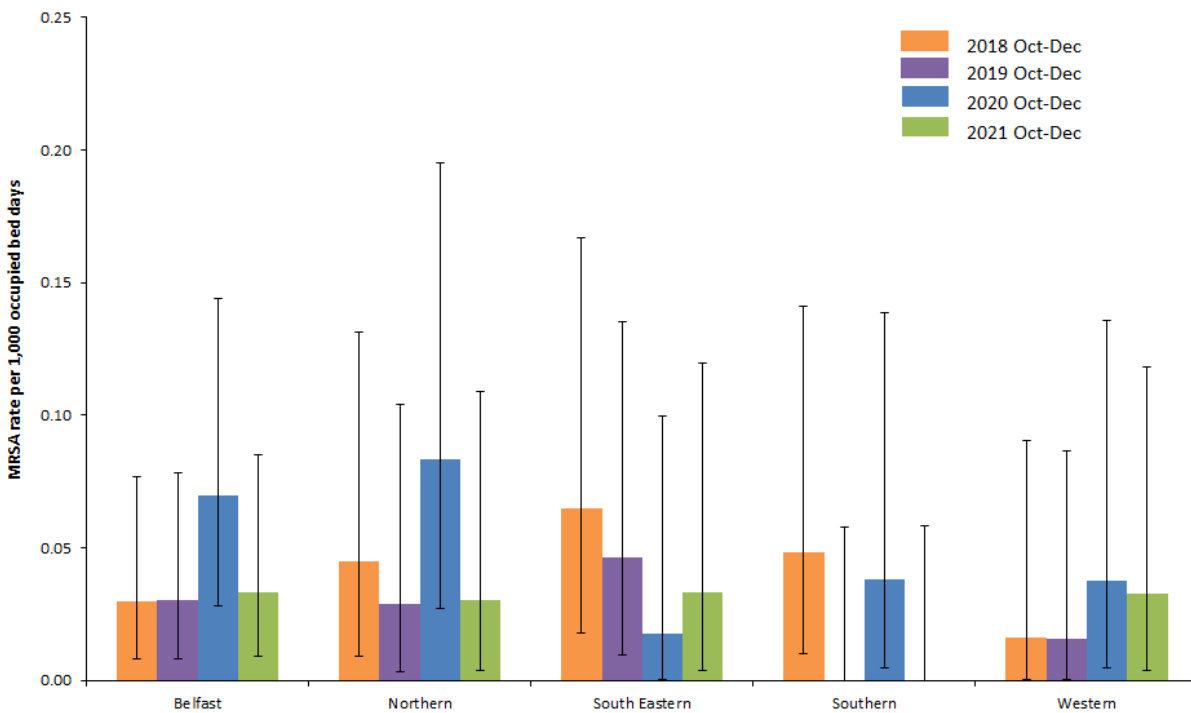


Figure 4: MRSA rate during Oct - Dec, by HSCT, from 2018–2021, with 95% confidence intervals

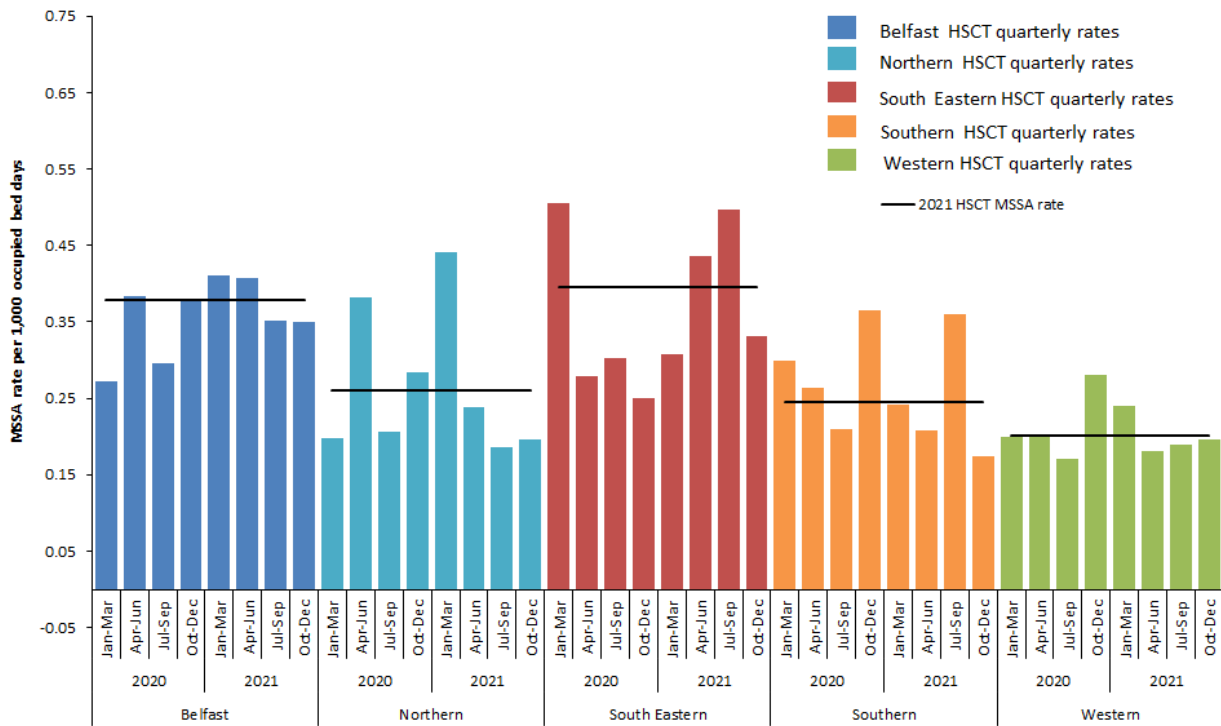


Figure 5: MSSA quarterly rate Jan 2020 – Dec 2021, by HSCT, with 2021 HSCT MSSA rate

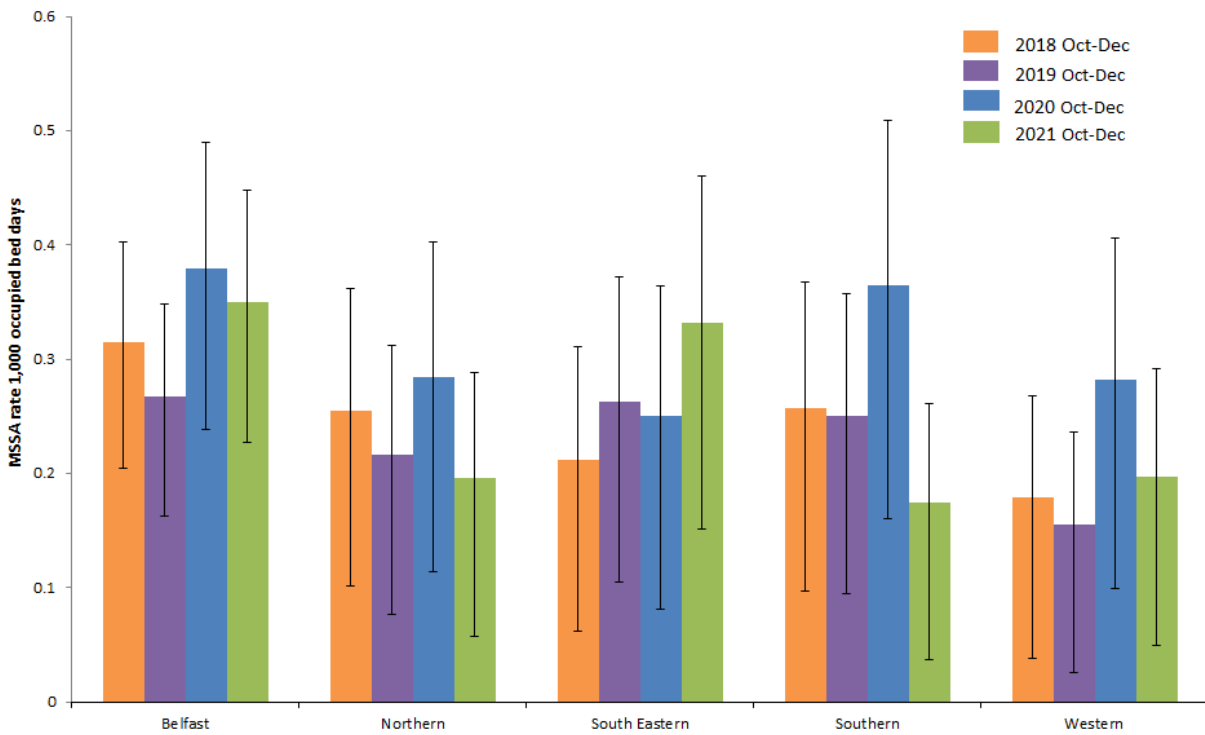


Figure 6: MSSA rate during Oct - Dec, by HSCT, from 2018–2021, with 95% confidence intervals.

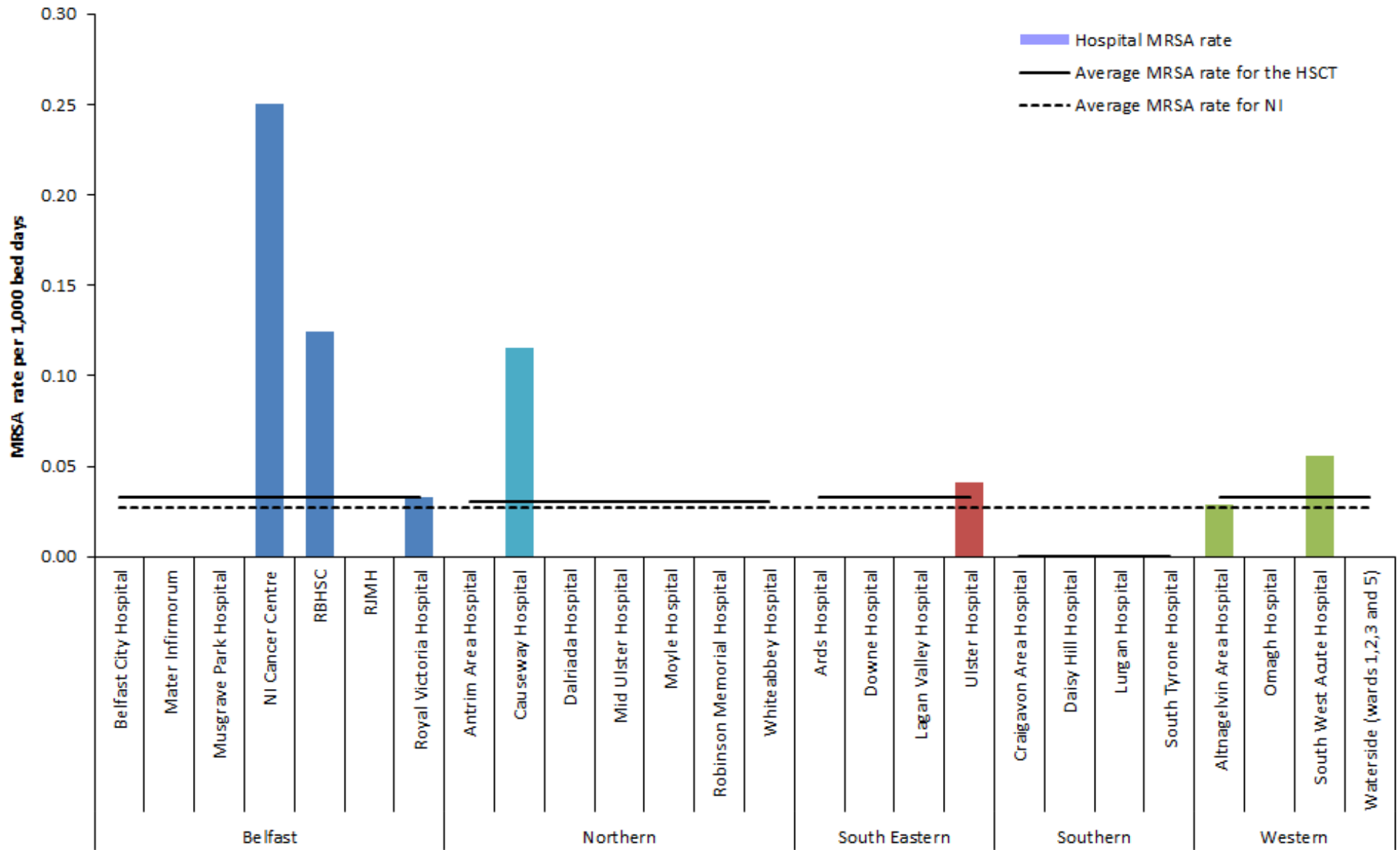


Figure 7: Rates of MRSA, October - December 2021 by individual hospitals, (gaps represent zero episodes), compared to October - December 2021 average rates for Northern Ireland and HSCTs

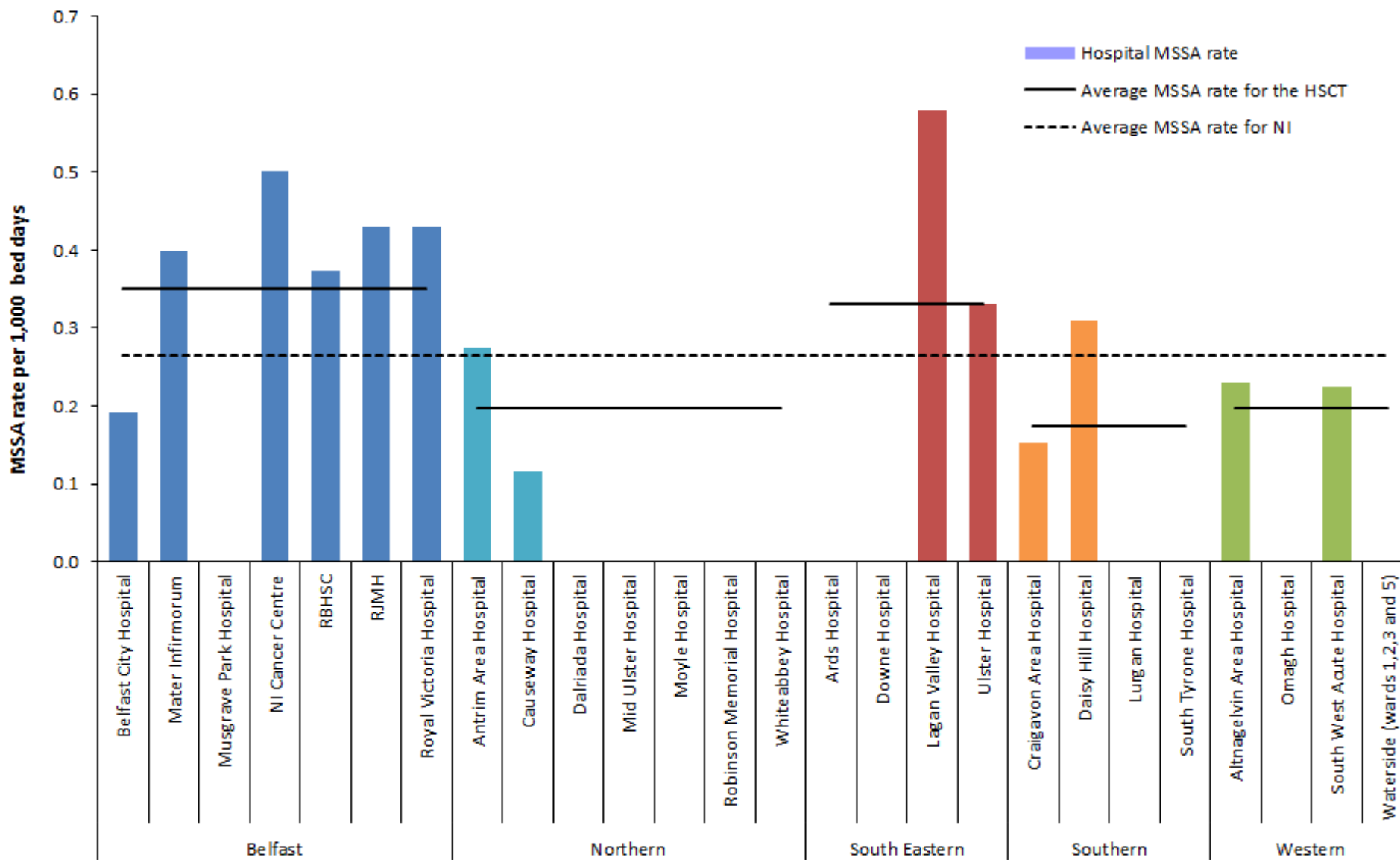


Figure 8: Rates of MSSA, October – December 2021 by individual hospitals, (gaps represent zero episodes), compared to October – December 2021 average rates for Northern Ireland and HSCT

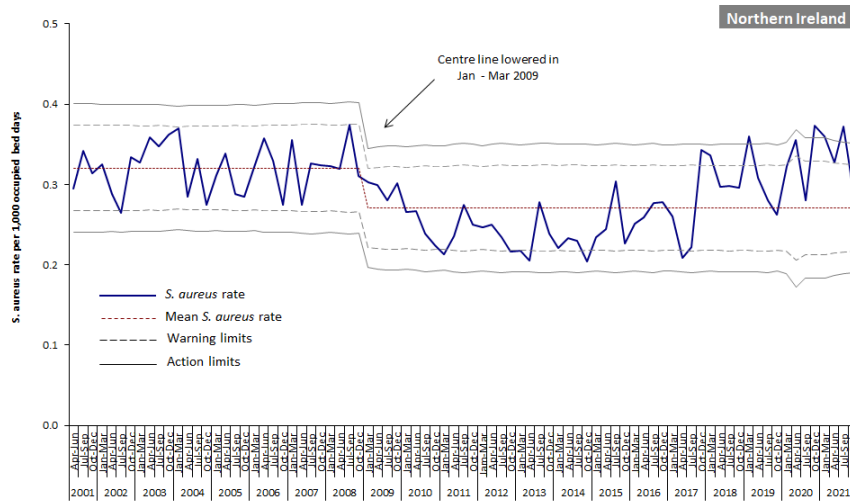


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

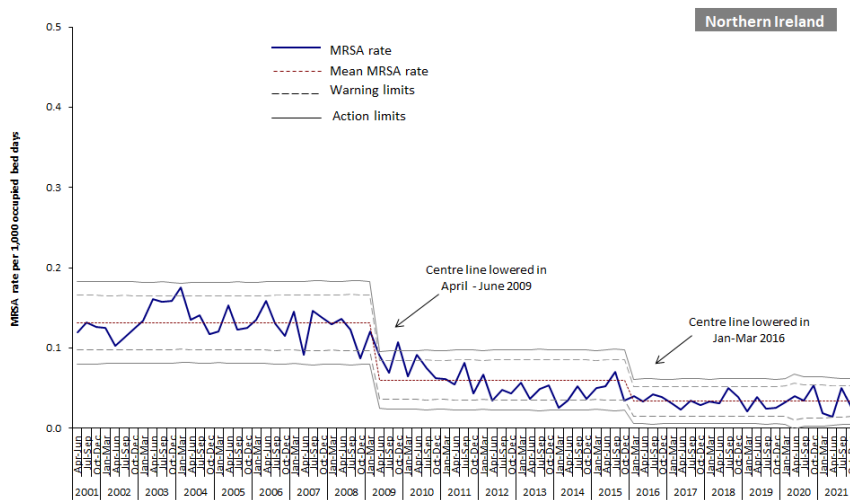


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

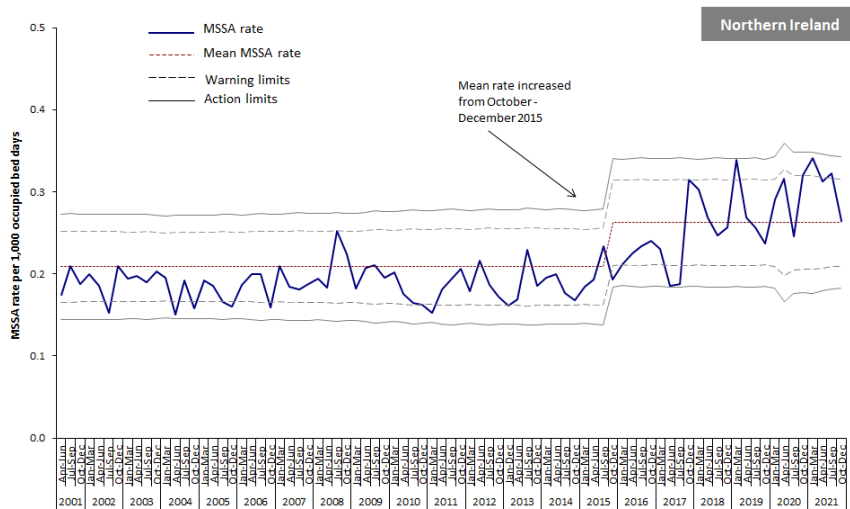


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, Jan 2021 – Dec 2021

Hospital	Jan - Mar 2021	Apr - Jun 2021	Jul - Sep 2021	Oct - Dec 2021
Belfast City Hospital	0.000	0.096	0.000	0.000
Mater Infirmorum	0.000	0.000	0.147	0.000
Musgrave Park Hospital	0.102	0.000	0.000	0.000
NICCO	0.000	0.000	0.000	0.250
RBHSC	0.000	0.000	0.000	0.125
RJMH	0.000	0.000	0.000	0.000
Royal Group of Hospitals	0.018	0.000	0.069	0.033
Belfast Health & Social Care Trust	0.020	0.009	0.053	0.033
Antrim Area Hospital	0.028	0.000	0.077	0.000
Causeway Hospital	0.070	0.000	0.056	0.115
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	0.035	0.000	0.062	0.030
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	0.000	0.000
Ulster Hospital	0.022	0.042	0.040	0.041
South Eastern Health & Social Care Trust	0.018	0.034	0.032	0.033
Craigavon Area Hospital	0.000	0.000	0.052	0.000
Daisy Hill Hospital	0.000	0.000	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	0.000	0.000	0.033	0.000
Altnagelvin Area Hospital	0.000	0.064	0.123	0.029
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.063	0.000	0.000	0.056
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.018	0.036	0.069	0.033
NI TOTAL	0.019	0.015	0.050	0.027

Table 2: Quarterly MRSA patient episodes, by HSCT, Jan 2021 – Dec 2021

Trust	Jan - Mar 2021 Episodes	Apr - Jun 2021 Episodes	Jul - Sep 2021 Episodes	Oct - Dec 2021 Episodes
Belfast Health & Social Care Trust	2	1	6	4
Northern Health & Social Care Trust	2	0	4	2
South Eastern Health & Social Care Trust	1	2	2	2
Southern Health & Social Care Trust	0	0	2	0
Western Health & Social Care Trust	1	2	4	2
NI TOTAL	6	5	18	10

Appendix 1

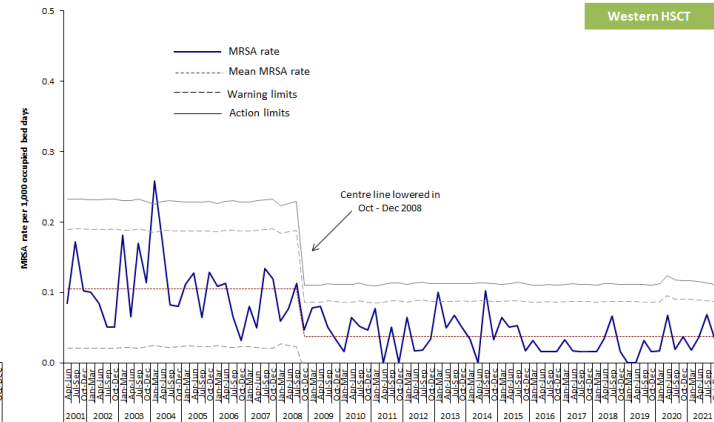
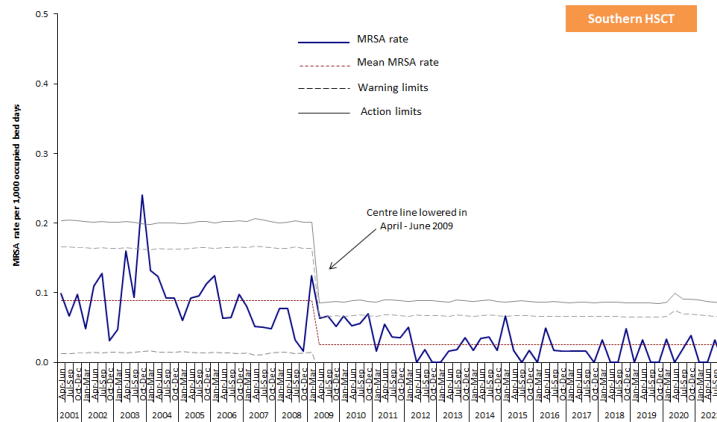
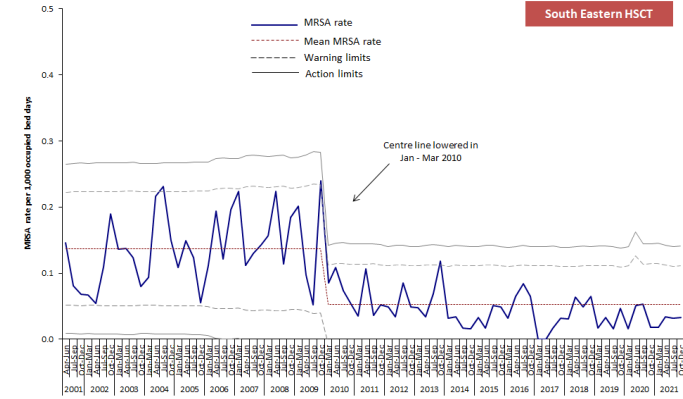
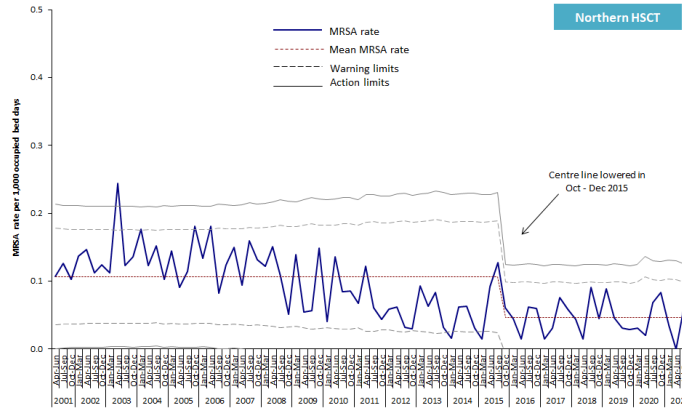
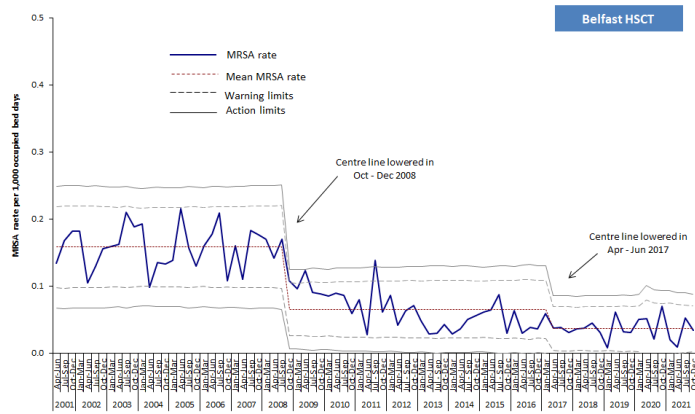
Table 3: Quarterly rate of MSSA patient episodes, by hospital, Jan 2021 – Dec 2021

Hospital	Jan - Mar 2021	Apr - Jun 2021	Jul - Sep 2021	Oct - Dec 2021
Belfast City Hospital	0.333	0.382	0.285	0.190
Mater Infirmorum	0.636	0.565	0.220	0.398
Musgrave Park Hospital	0.102	0.000	0.074	0.000
NICCO	0.539	0.000	0.808	0.501
RBHSC	0.505	0.587	0.288	0.374
RJMH	0.000	0.287	0.406	0.430
Royal Group of Hospitals	0.461	0.487	0.429	0.429
Belfast Health & Social Care Trust	0.411	0.408	0.351	0.350
Antrim Area Hospital	0.531	0.297	0.231	0.274
Causeway Hospital	0.352	0.206	0.169	0.115
Dalriada Hospital	0.000	0.000	0.000	0.000
Mid Ulster Hospital	0.883	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	0.442	0.238	0.186	0.196
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.289	0.000
Lagan Valley Hospital	0.000	0.283	0.289	0.580
Ulster Hospital	0.380	0.505	0.554	0.331
South Eastern Health & Social Care Trust	0.307	0.436	0.496	0.331
Craigavon Area Hospital	0.346	0.193	0.442	0.152
Daisy Hill Hospital	0.076	0.329	0.323	0.310
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	0.241	0.207	0.359	0.174
Altnagelvin Area Hospital	0.231	0.288	0.185	0.231
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.380	0.061	0.291	0.225
Waterside Hospital	0.000	0.000	0.000	0.000
Western Health & Social Care Trust	0.197	0.180	0.190	0.197
NI TOTAL	0.264	0.313	0.322	0.264

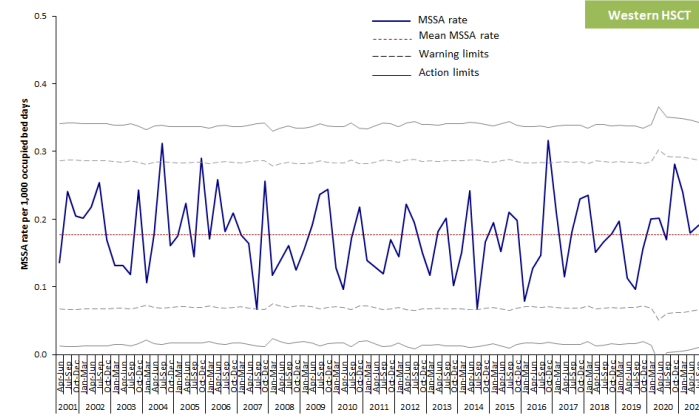
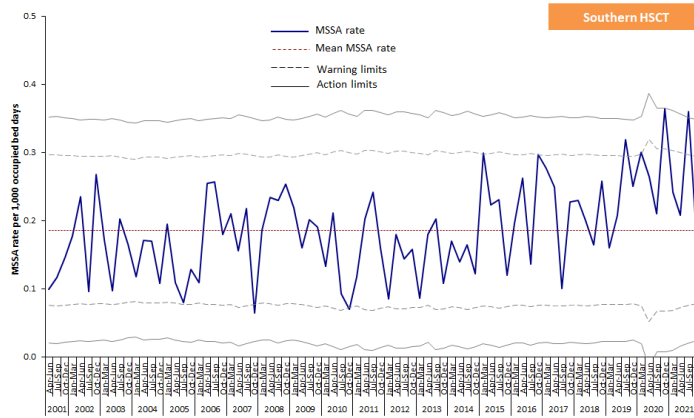
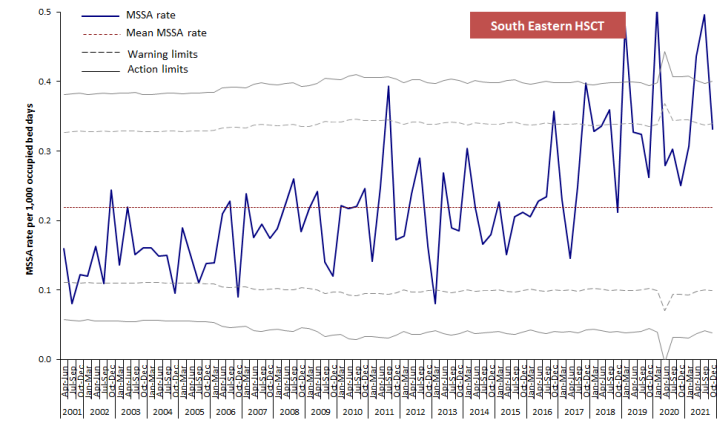
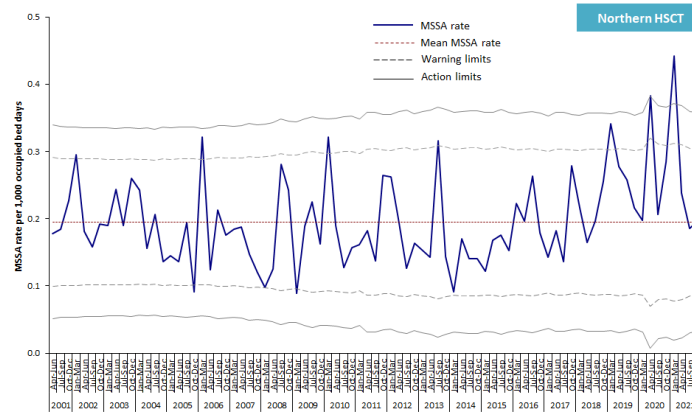
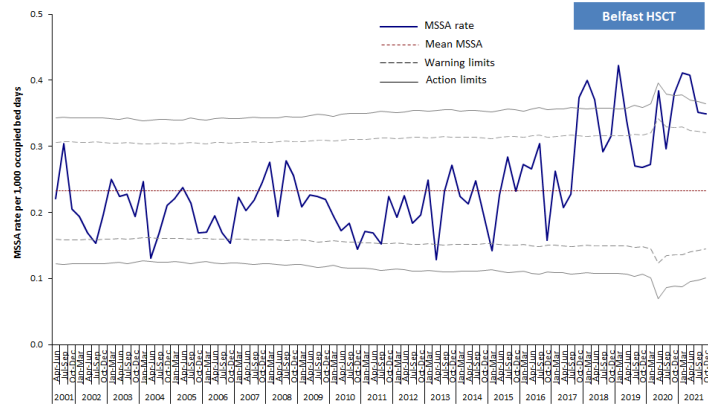
Table 4: Quarterly MSSA patient episodes, by HSCT, Jan 2021 – Dec 2021

Trust	Jan - Mar 2021 Episodes	Apr - Jun 2021 Episodes	Jul - Sep 2021 Episodes	Oct - Dec 2021 Episodes
Belfast Health & Social Care Trust	41	45	40	42
Northern Health & Social Care Trust	25	14	12	13
South Eastern Health & Social Care Trust	17	26	31	20
Southern Health & Social Care Trust	13	12	22	11
Western Health & Social Care Trust	14	10	11	12
NI TOTAL	110	107	116	98

Appendix 2: Trends in MRSA rates, by HSCT and quarter, April 2001 – Dec 2021



Appendix 2: Trends in MSSA rates, by HSCT and quarter, April 2001 – Dec 2021



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 2012 – Dec 2021.

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Jan-Mar 2012	0.179	0.067	0.246	27.3
Apr-Jun 2012	0.216	0.034	0.250	13.6
Jul-Sep 2012	0.186	0.048	0.234	20.5
Oct-Dec 2012	0.173	0.044	0.216	20.4
Jan-Mar 2013	0.162	0.056	0.218	25.7
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

Appendix 4

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

HSCT	Financial Year												
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Belfast	86	62	48	46	32	18	28	34	22	19	16	22	15
Northern	35	22	27	19	14	12	11	21	10	14	16	9	12
South Eastern	46	28	15	14	13	15	7	9	13	5	12	7	7
Southern	16	15	11	10	1	5	9	2	6	4	3	4	3
Western	20	11	15	7	10	12	12	9	5	4	7	4	7
Northern Ireland	203	138	116	96	70	62	67	75	56	46	54	46	44

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

HSCT	Financial Year												
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Belfast	157	138	103	109	115	121	112	142	134	163	189	147	138
Northern	57	66	46	57	42	43	37	47	52	55	64	63	73
South Eastern	56	43	46	57	54	57	50	47	64	70	85	88	59
Southern	59	40	28	38	32	38	42	45	59	49	48	67	54
Western	37	49	39	34	40	38	40	38	50	47	42	35	47
Northern Ireland	366	336	262	295	283	297	281	319	359	384	428	400	371