

# *S. aureus* bacteraemia surveillance

## Quarterly report

### January – March 2023

#### Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) decreased by approximately 11% during January-March 2023 compared to October-December 2022.
- MRSA rates increased by approximately 60% during January-March 2023 compared to October-December 2022.
- MRSA reports during 2022/23 decreased by 11% compared to 2021/22.
- MSSA rates decreased by approximately 15% during January-March 2023 compared to October-December 2022.
- 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](mailto:hcaini@hscni.net)

# S. aureus bacteraemia surveillance

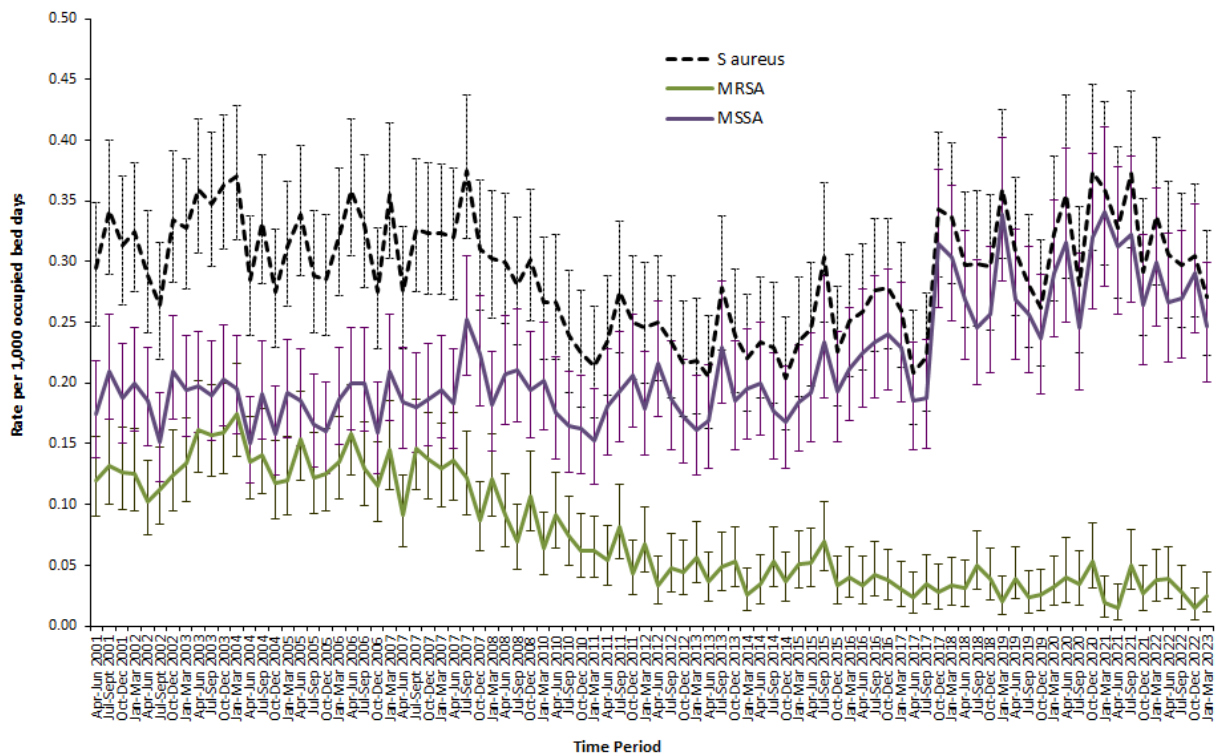


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – March 2023 (see Appendix 3)

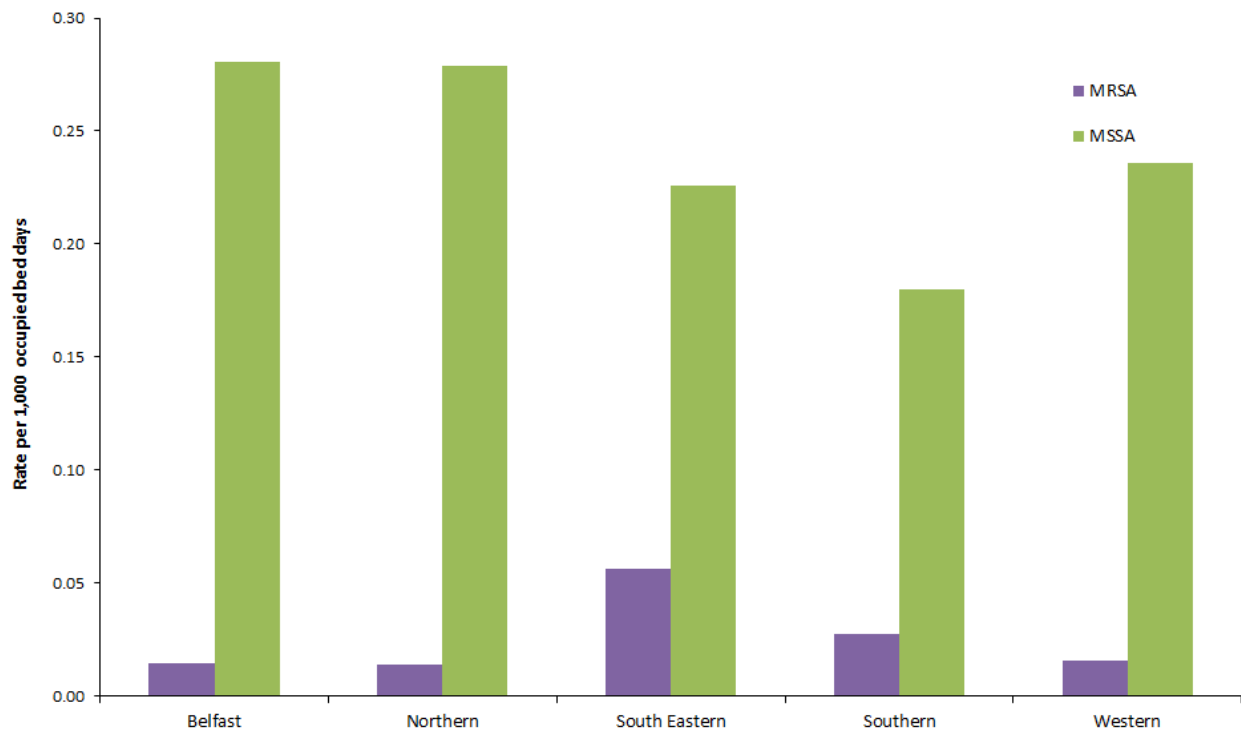


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, Jan-Mar 2023.

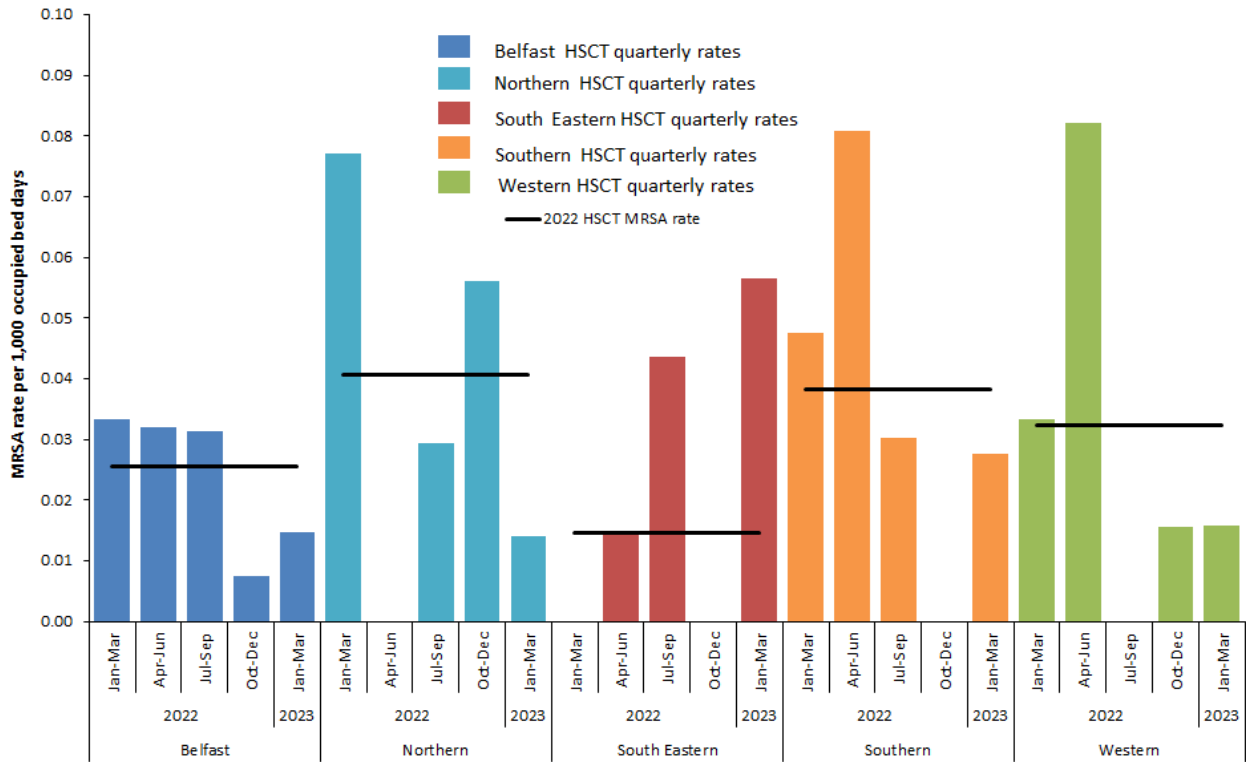


Figure 3: MRSA quarterly rate Jan 2022– Mar 2023, by HSCT, with 2022 HSCT MRSA rate

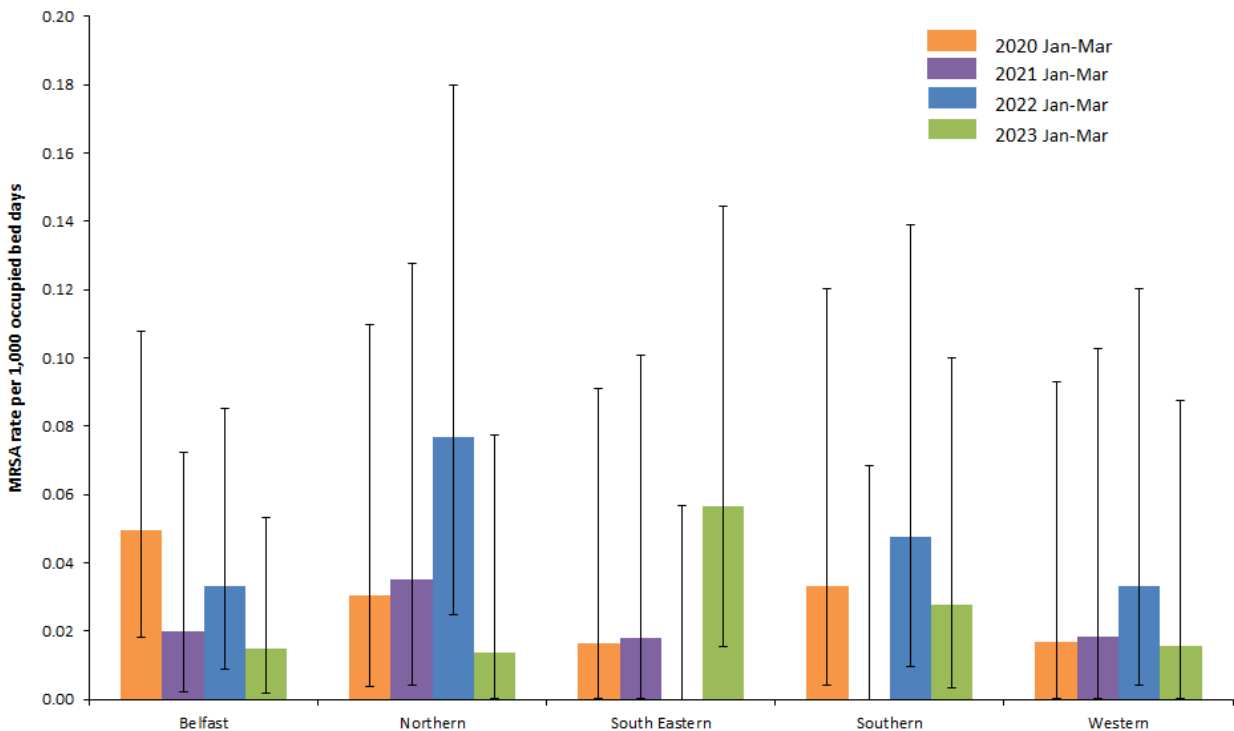


Figure 4: MRSA rate during Jan-Mar, by HSCT, from 2020–2023, with 95% confidence intervals

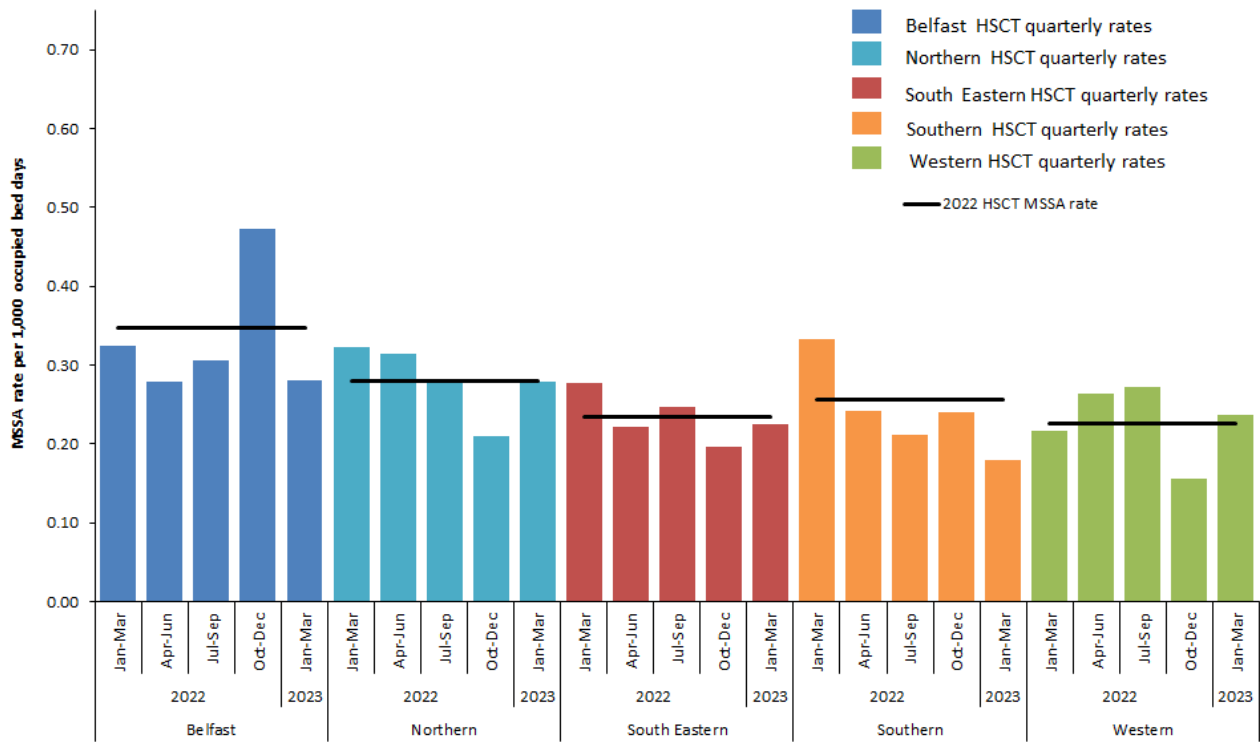


Figure 5: MSSA quarterly rate Jan 2022 – Mar 2023, by HSCT, with 2022 HSCT MSSA rate

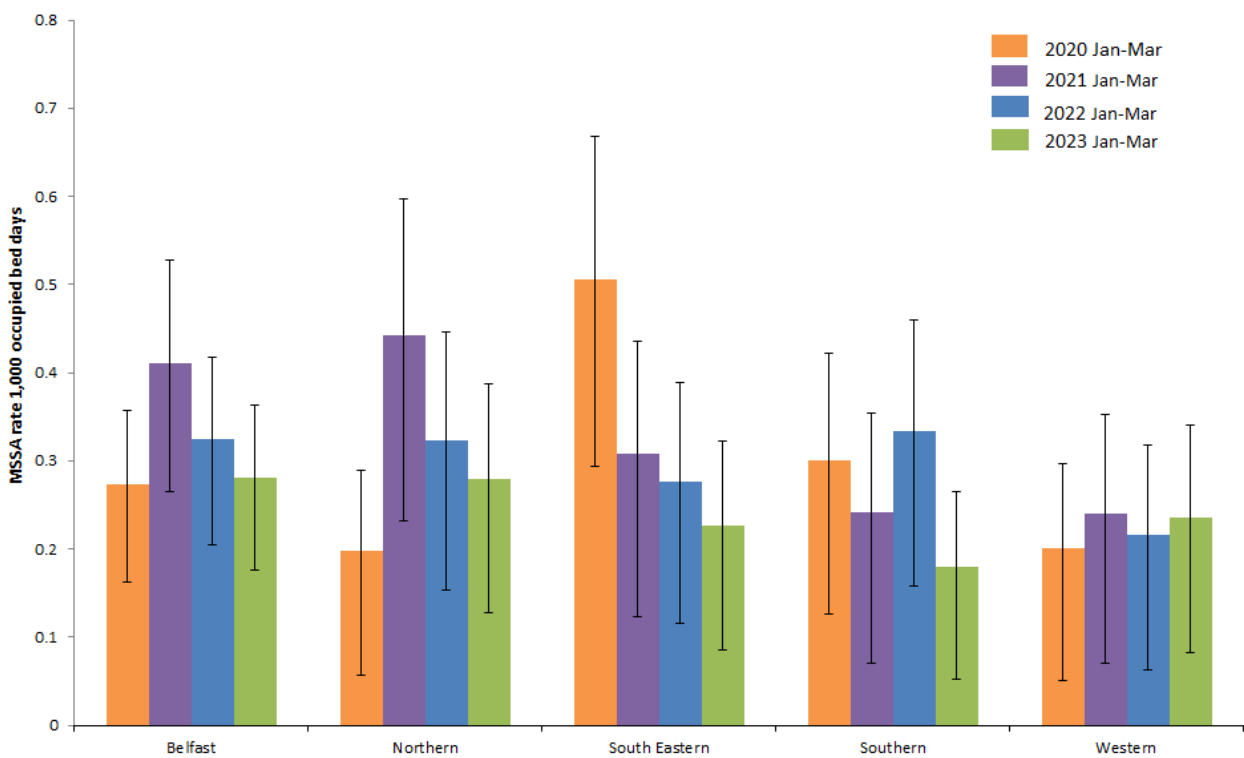


Figure 6: MSSA rate during Jan-Mar, by HSCT, from 2020–2023, with 95% confidence intervals.

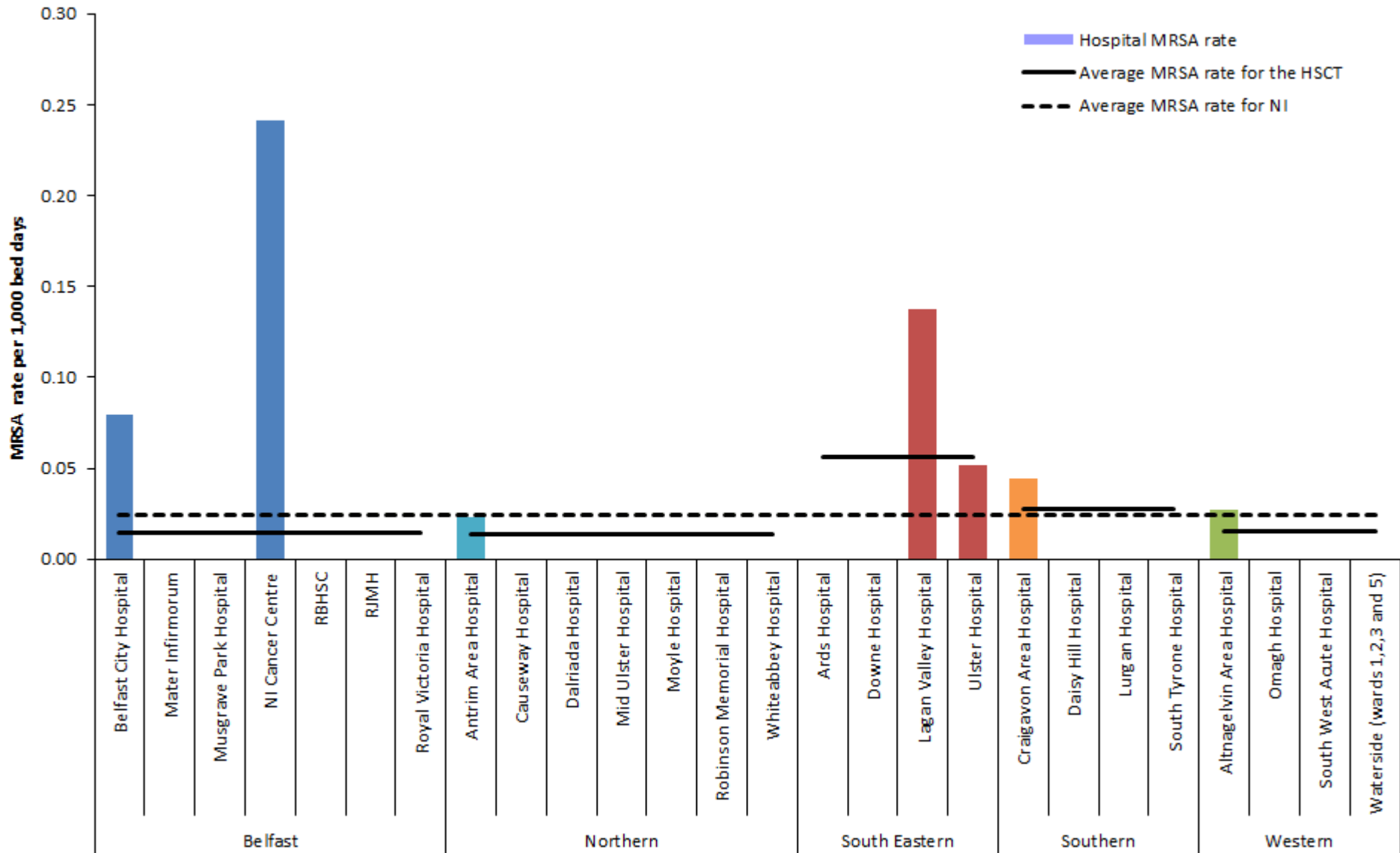


Figure 7: Rates of MRSA, January – March 2023 by individual hospitals, (gaps represent zero episodes), compared to January – March 2023 average rates for Northern Ireland and HSCTs

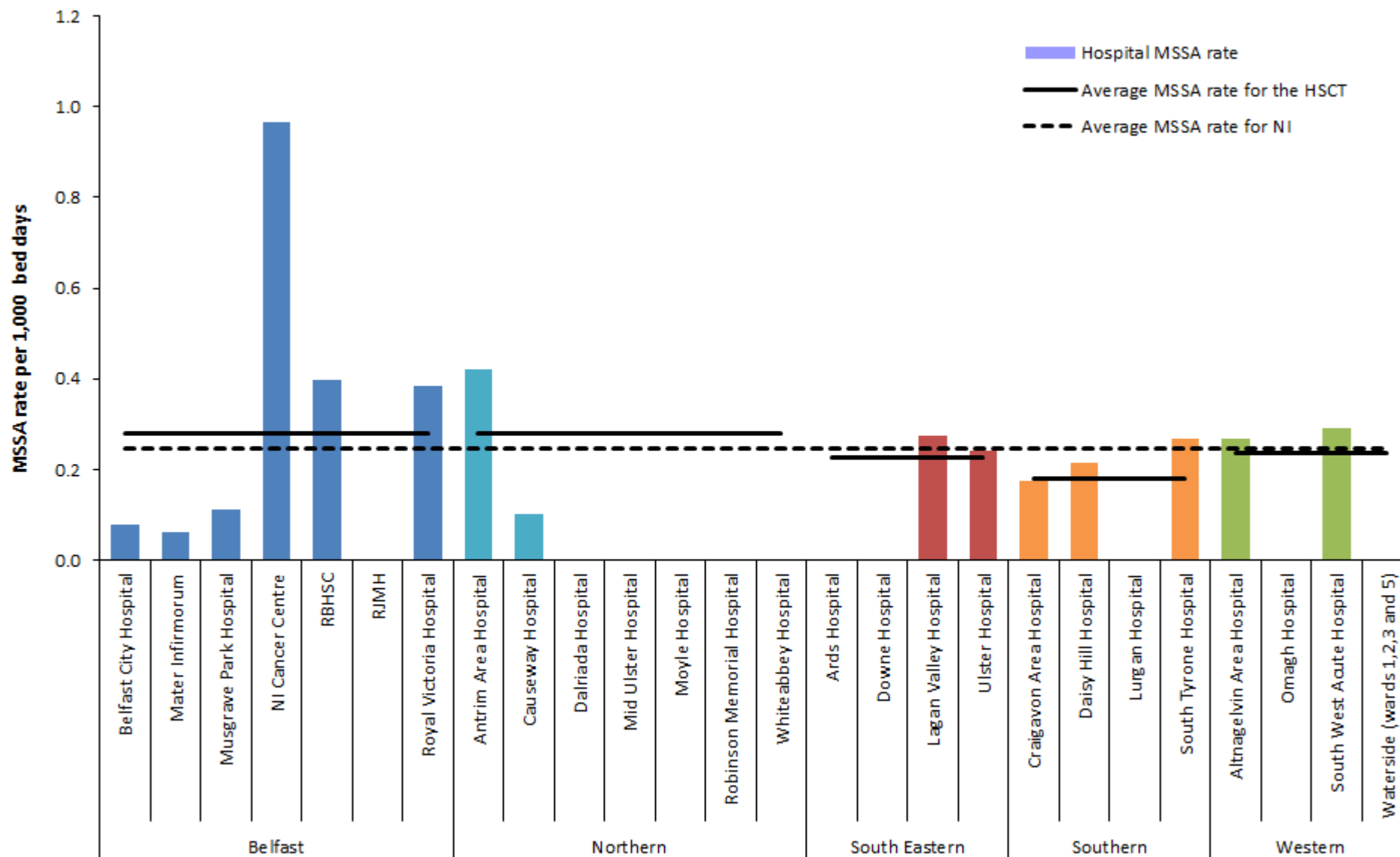
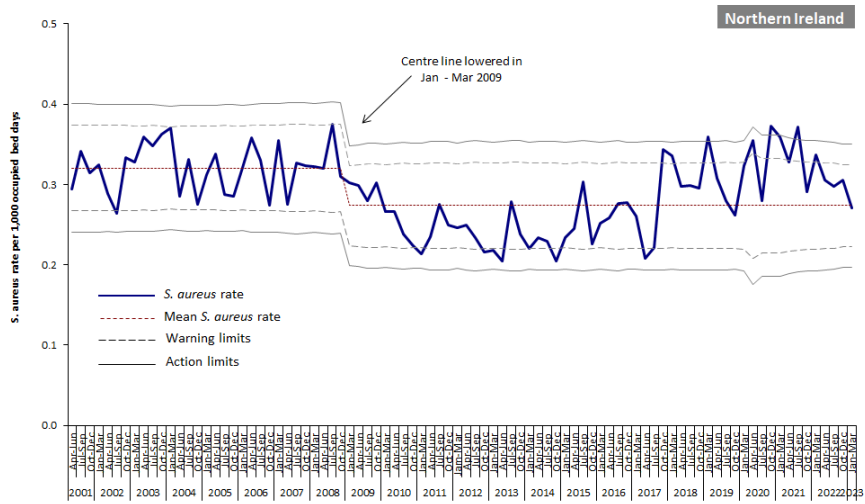
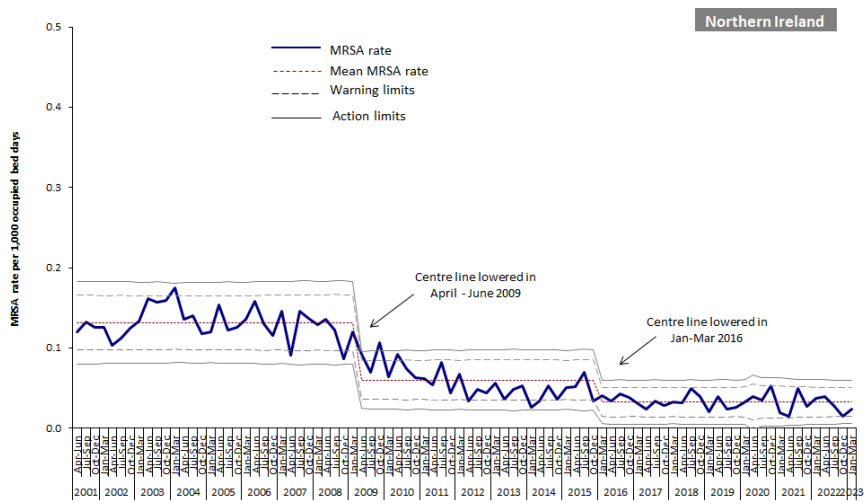


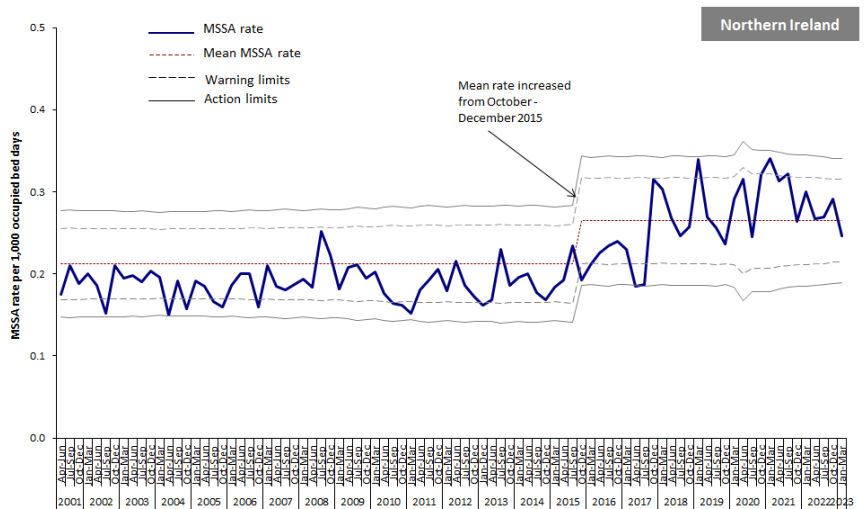
Figure 8: Rates of MSSA, January – March 2023 by individual hospitals, (gaps represent zero episodes), compared to January – March 2023 average rates for Northern Ireland and HSCT



**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, Apr 2022 – Mar 2023**

Hospital	Apr - Jun 2022	Jul - Sep 2022	Oct - Dec 2022	Jan - Mar 2023
Belfast City Hospital	0.000	0.000	0.000	0.079
Mater Infirmorum	0.063	0.061	0.000	0.000
Musgrave Park Hospital	0.000	0.000	0.000	0.000
NICCO	0.000	0.000	0.000	0.241
RBHSC	0.136	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Group of Hospitals	0.031	0.045	0.014	0.000
<b>Belfast Health &amp; Social Care Trust</b>	<b>0.032</b>	<b>0.031</b>	<b>0.007</b>	<b>0.015</b>
Antrim Area Hospital	0.000	0.000	0.069	0.023
Causeway Hospital	0.000	0.111	0.053	0.000
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
<b>Northern Health &amp; Social Care Trust</b>	<b>0.000</b>	<b>0.029</b>	<b>0.056</b>	<b>0.014</b>
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	0.137	0.000	0.137
Ulster Hospital	0.018	0.036	0.000	0.052
<b>South Eastern Health &amp; Social Care Trust</b>	<b>0.015</b>	<b>0.044</b>	<b>0.000</b>	<b>0.056</b>
Craigavon Area Hospital	0.103	0.048	0.000	0.044
Daisy Hill Hospital	0.067	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
<b>Southern Health &amp; Social Care Trust</b>	<b>0.081</b>	<b>0.030</b>	<b>0.000</b>	<b>0.028</b>
Altnagelvin Area Hospital	0.115	0.000	0.028	0.027
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.056	0.000	0.000	0.000
Waterside Hospital	0.000	0.000	0.000	0.000
<b>Western Health &amp; Social Care Trust</b>	<b>0.082</b>	<b>0.000</b>	<b>0.016</b>	<b>0.016</b>
<b>NI TOTAL</b>	<b>0.039</b>	<b>0.028</b>	<b>0.015</b>	<b>0.024</b>

**Table 2: Quarterly MRSA patient episodes, by HSCT, Apr 2022 – Mar 2023**

Trust	Apr - Jun 2022 Episodes	Jul - Sep 2022 Episodes	Oct - Dec 2022 Episodes	Jan - Mar 2023 Episodes
Belfast Health & Social Care Trust	4	4	1	2
Northern Health & Social Care Trust	0	2	4	1
South Eastern Health & Social Care Trust	1	3	0	4
Southern Health & Social Care Trust	5	2	0	2
Western Health & Social Care Trust	5	0	1	1
<b>NI TOTAL</b>	<b>15</b>	<b>11</b>	<b>6</b>	<b>10</b>



## Appendix 1

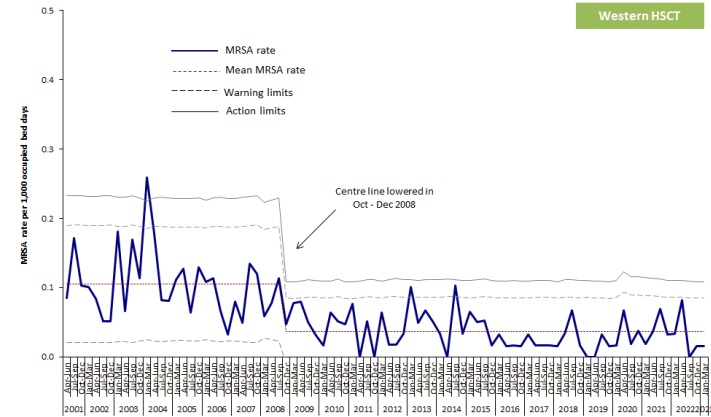
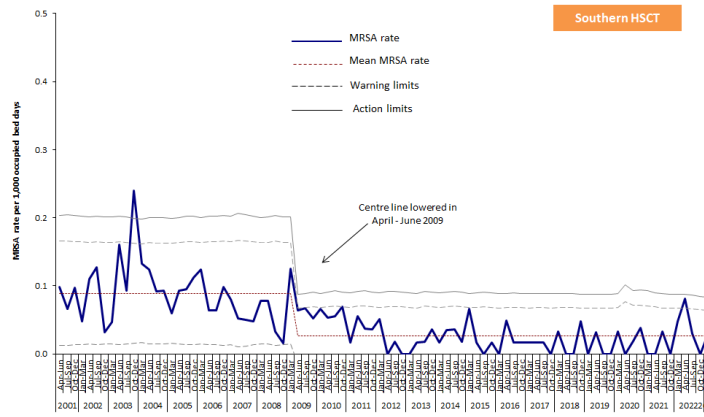
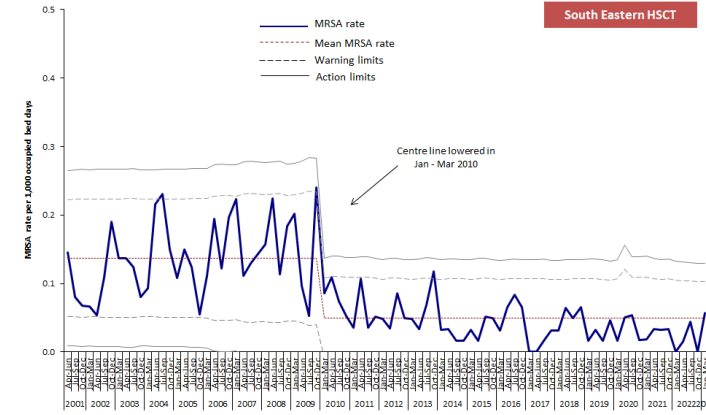
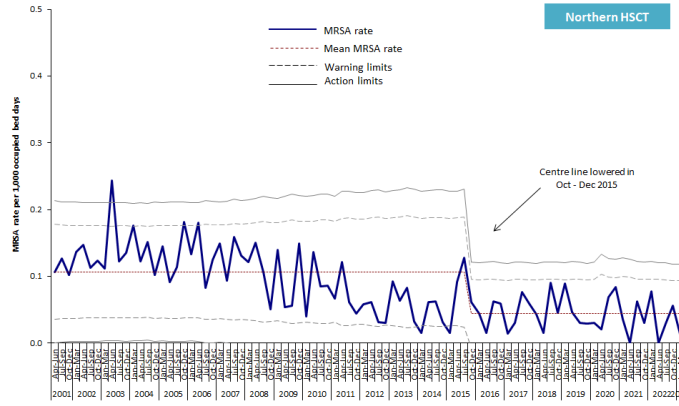
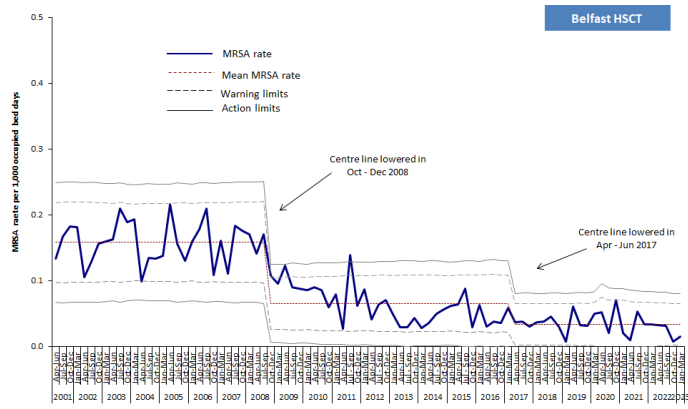
**Table 3: Quarterly rate of MSSA patient episodes, by hospital, Apr 2022 – Mar 2023**

Hospital	Apr - Jun 2022	Jul - Sep 2022	Oct - Dec 2022	Jan - Mar 2023
Belfast City Hospital	0.255	0.431	0.701	0.079
Mater Infirmorum	0.507	0.244	0.531	0.062
Musgrave Park Hospital	0.065	0.067	0.000	0.111
NICCO	0.976	0.983	1.197	0.965
RBHSC	0.000	0.740	0.763	0.399
RJMH	0.148	0.000	0.276	0.000
Royal Group of Hospitals	0.280	0.299	0.471	0.385
<b>Belfast Health &amp; Social Care Trust</b>	<b>0.279</b>	<b>0.306</b>	<b>0.473</b>	<b>0.281</b>
Antrim Area Hospital	0.418	0.311	0.253	0.419
Causeway Hospital	0.225	0.332	0.213	0.102
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
<b>Northern Health &amp; Social Care Trust</b>	<b>0.314</b>	<b>0.279</b>	<b>0.210</b>	<b>0.279</b>
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.253	0.000	0.000
Lagan Valley Hospital	0.279	0.685	0.000	0.275
Ulster Hospital	0.237	0.197	0.241	0.242
<b>South Eastern Health &amp; Social Care Trust</b>	<b>0.222</b>	<b>0.247</b>	<b>0.196</b>	<b>0.226</b>
Craigavon Area Hospital	0.284	0.217	0.294	0.177
Daisy Hill Hospital	0.270	0.304	0.220	0.216
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.268
<b>Southern Health &amp; Social Care Trust</b>	<b>0.242</b>	<b>0.211</b>	<b>0.240</b>	<b>0.180</b>
Altnagelvin Area Hospital	0.345	0.396	0.138	0.269
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.226	0.165	0.263	0.291
Waterside Hospital	0.000	0.000	0.000	0.000
<b>Western Health &amp; Social Care Trust</b>	<b>0.263</b>	<b>0.272</b>	<b>0.156</b>	<b>0.236</b>
<b>NI TOTAL</b>	<b>0.267</b>	<b>0.270</b>	<b>0.291</b>	<b>0.246</b>

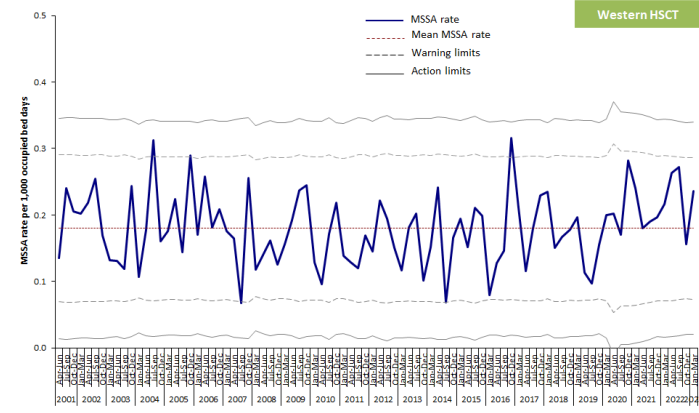
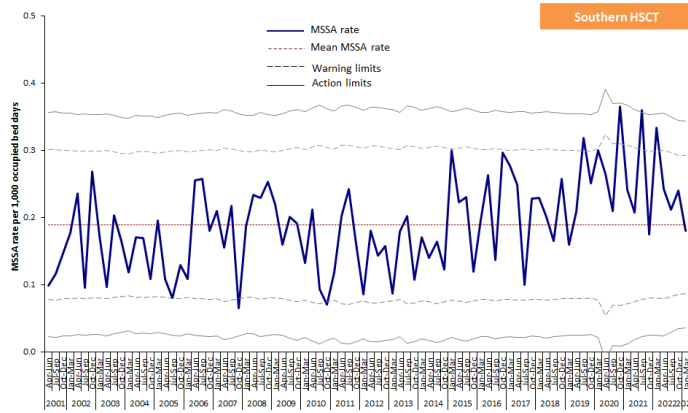
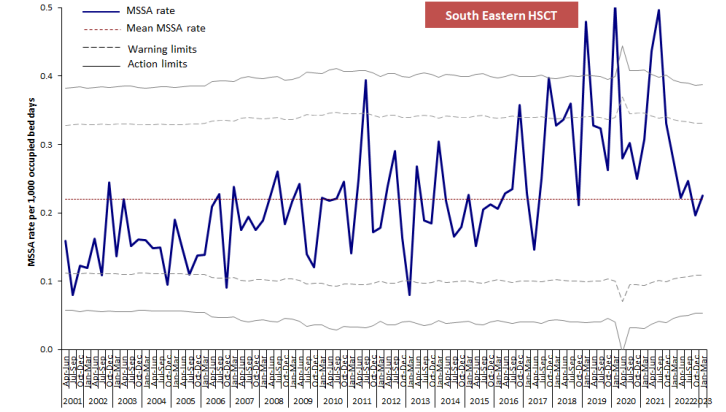
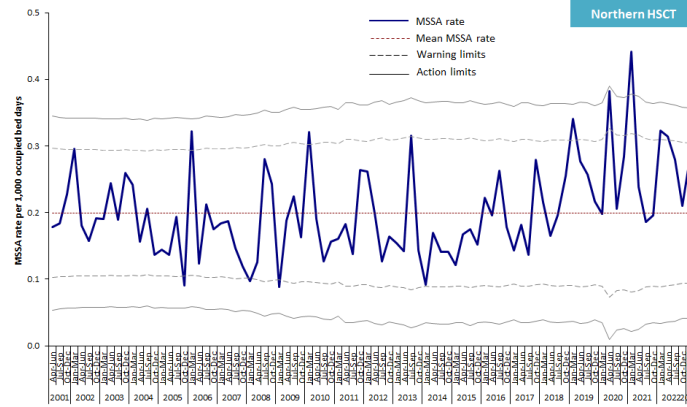
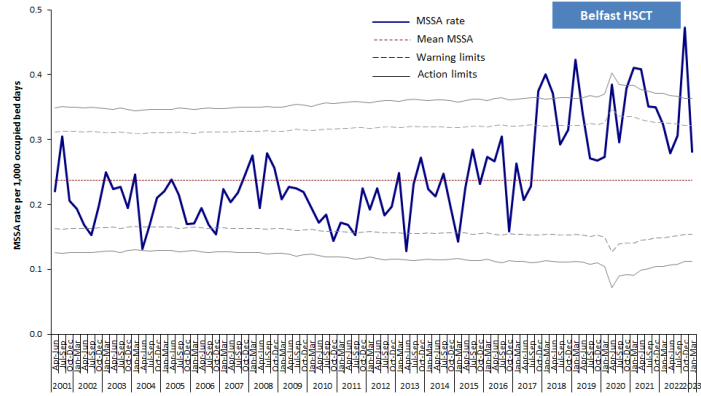
**Table 4: Quarterly MSSA patient episodes, by HSCT, Apr 2022 – Mar 2023**

Trust	Apr - Jun 2022 Episodes	Jul - Sep 2022 Episodes	Oct - Dec 2022 Episodes	Jan - Mar 2023 Episodes
Belfast Health & Social Care Trust	35	39	64	38
Northern Health & Social Care Trust	21	19	15	20
South Eastern Health & Social Care Trust	15	17	14	16
Southern Health & Social Care Trust	15	14	17	13
Western Health & Social Care Trust	16	17	10	15
<b>NI TOTAL</b>	<b>102</b>	<b>106</b>	<b>120</b>	<b>102</b>

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



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

## 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
<b>Northern Ireland</b>	<b>116</b>	<b>96</b>	<b>70</b>	<b>62</b>	<b>67</b>	<b>75</b>	<b>56</b>	<b>46</b>	<b>54</b>	<b>46</b>	<b>44</b>	<b>47</b>	<b>42</b>

**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
<b>Northern Ireland</b>	<b>262</b>	<b>295</b>	<b>283</b>	<b>297</b>	<b>281</b>	<b>319</b>	<b>359</b>	<b>384</b>	<b>428</b>	<b>400</b>	<b>370</b>	<b>433</b>	<b>430</b>