

S. aureus bacteraemia surveillance

Quarterly report

April 2016 – June 2016

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 3% during April-June 2016 compared to January-March 2016.
- MRSA rates decreased by approximately 15% during April-June 2016 compared to January-March 2016.
- MRSA reports during 2015/16 rose by 12% compared to 2014/15.
- MSSA rates increased by approximately 7% compared to January-March 2016.
- MSSA reports during 2015/16 increased by 14% compared to 2014/15.
- MSSA rates remain within expected parameters on the SPC chart for Northern Ireland.

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

S. aureus bacteraemia surveillance

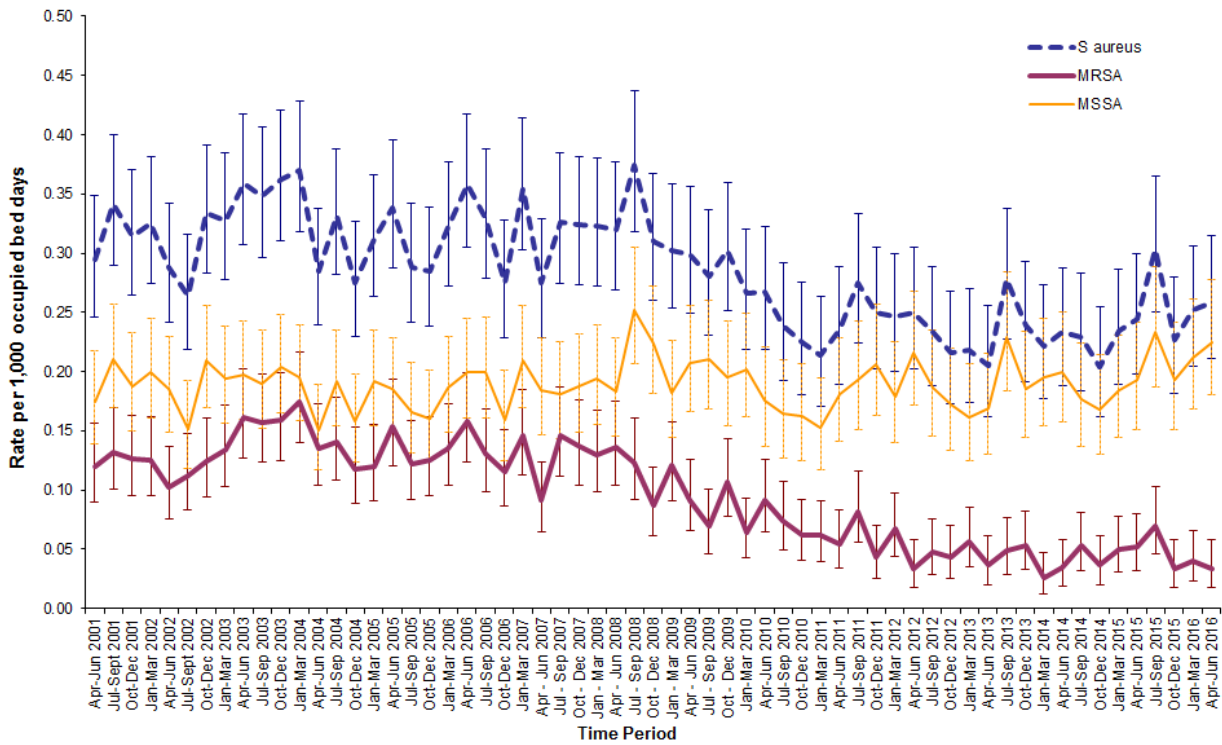


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – June 2016 (see Appendix 3)

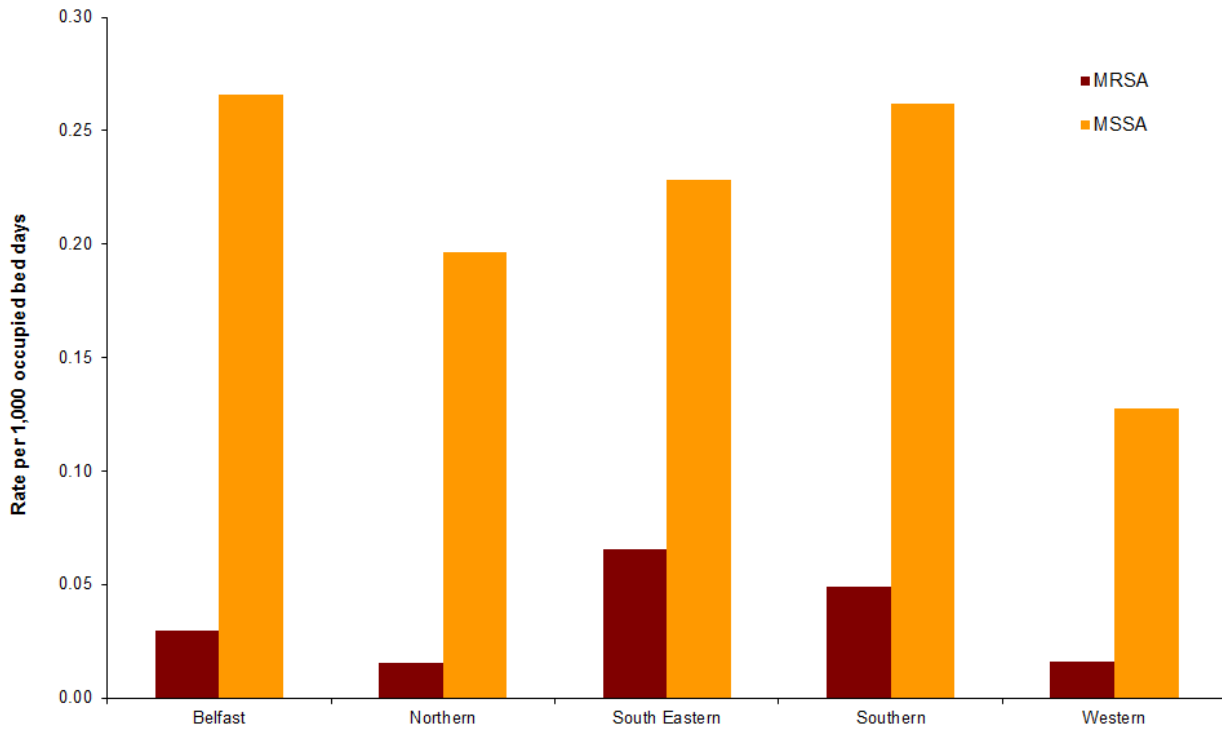


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, April - June 2016

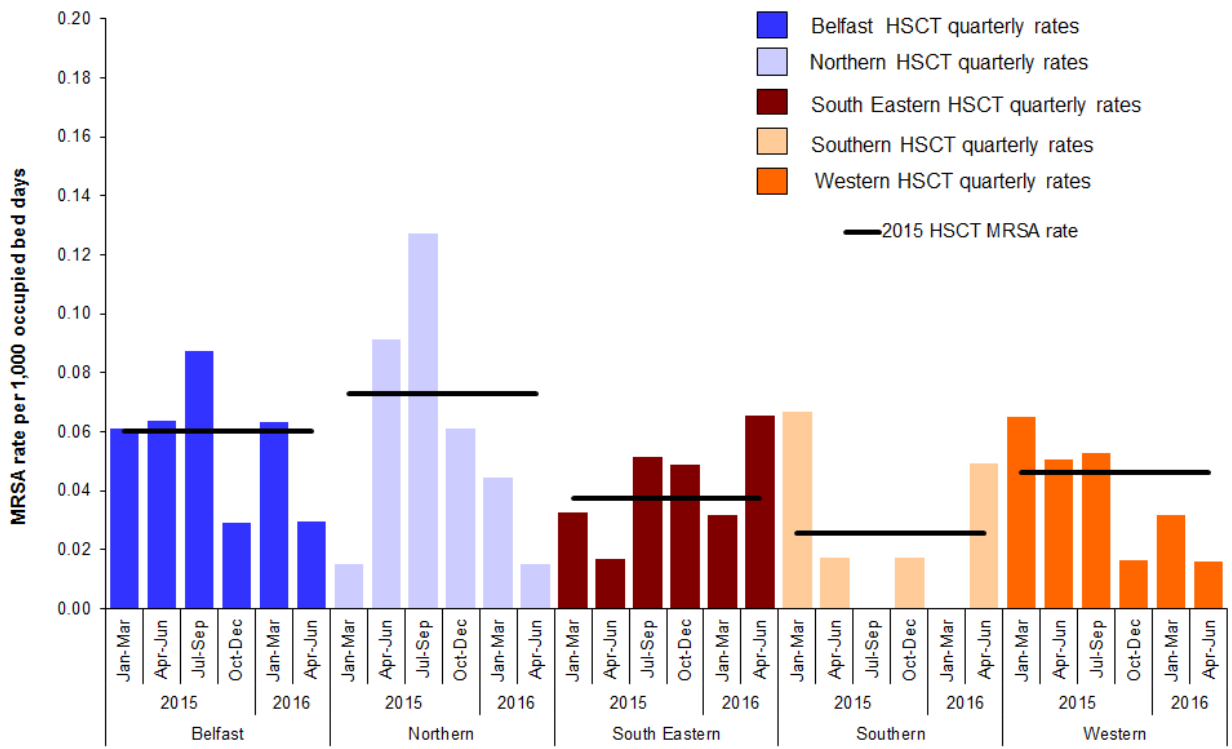


Figure 3: MRSA quarterly rate January 2015 – June 2016, by HSCT, with 2015 HSCT MRSA rate

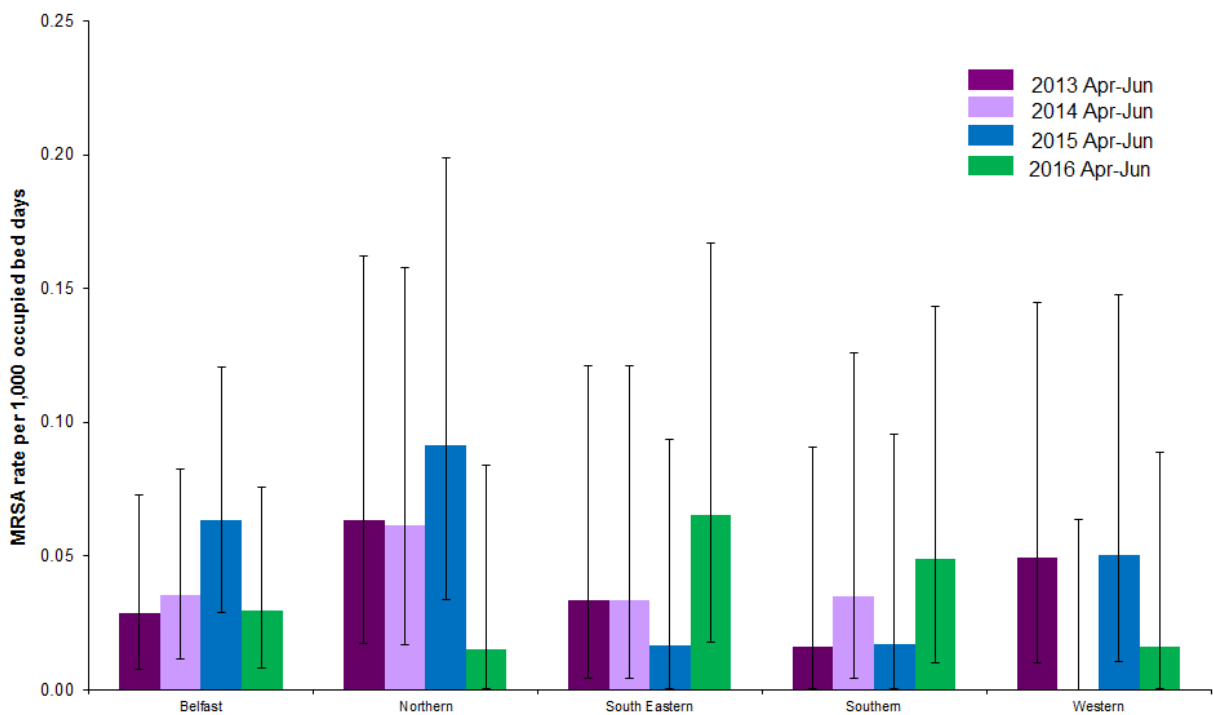


Figure 4: MRSA rate during April-June, by HSCT, from 2013–2016, with 95% confidence intervals

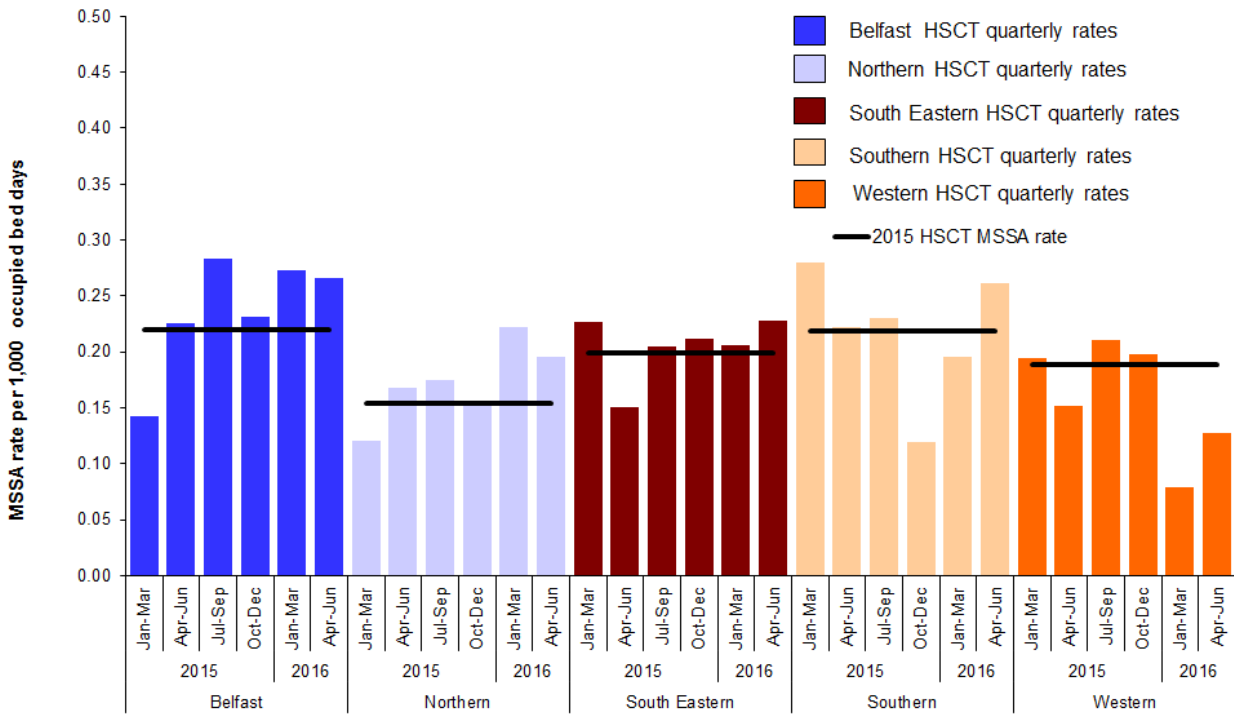


Figure 5: MSSA quarterly rate January 2015 – June 2016, by HSCT, with 2015 HSCT MSSA rate

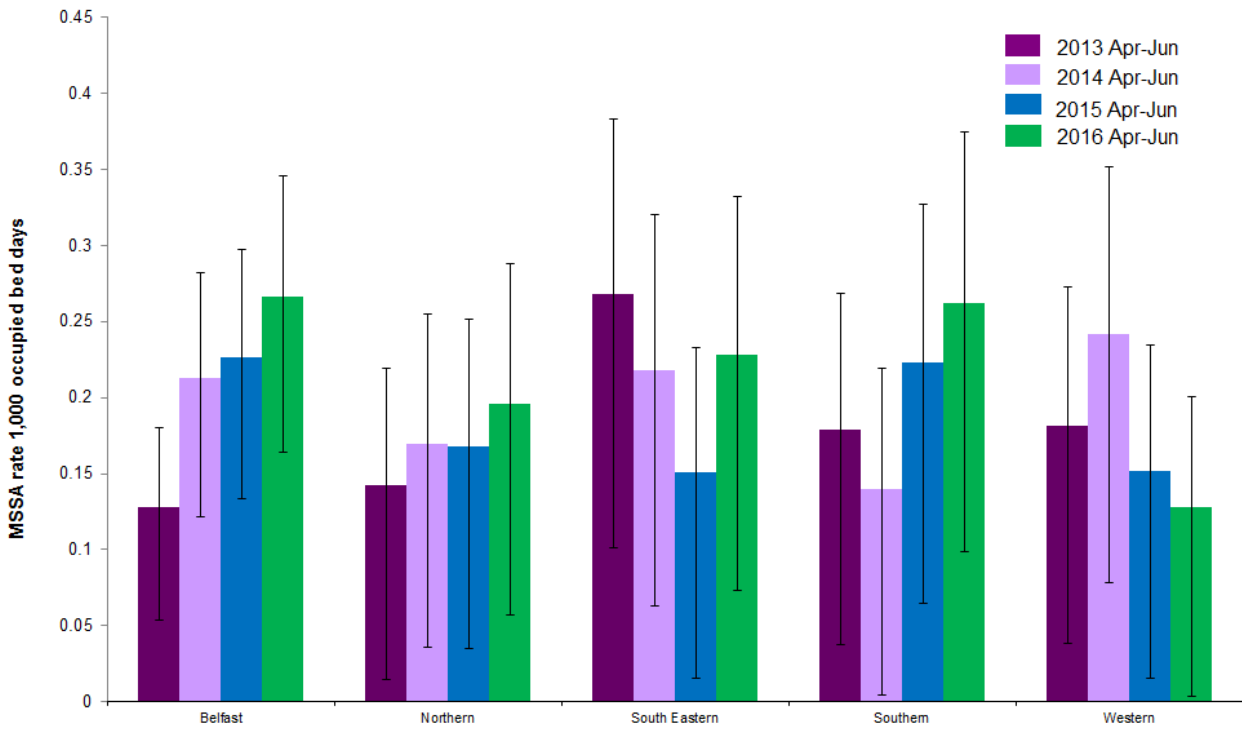


Figure 6: MSSA rate during April - June, by HSCT, from 2013–2016, with 95% confidence intervals

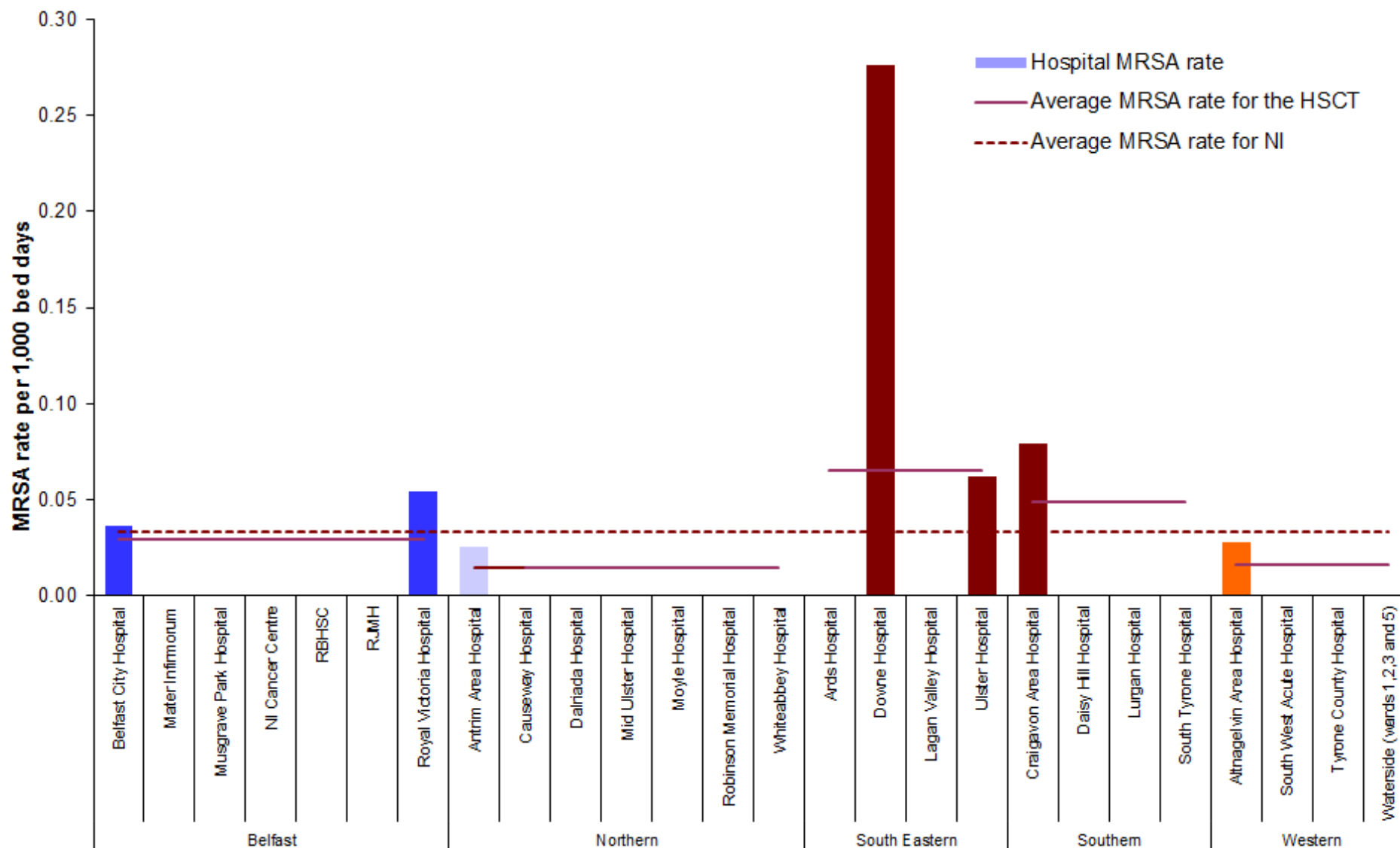


Figure 7: Rates of MRSA, April - June 2016 by individual hospitals, (gaps represent zero episodes), compared to April - June 2016 average rates for Northern Ireland and HSCTs

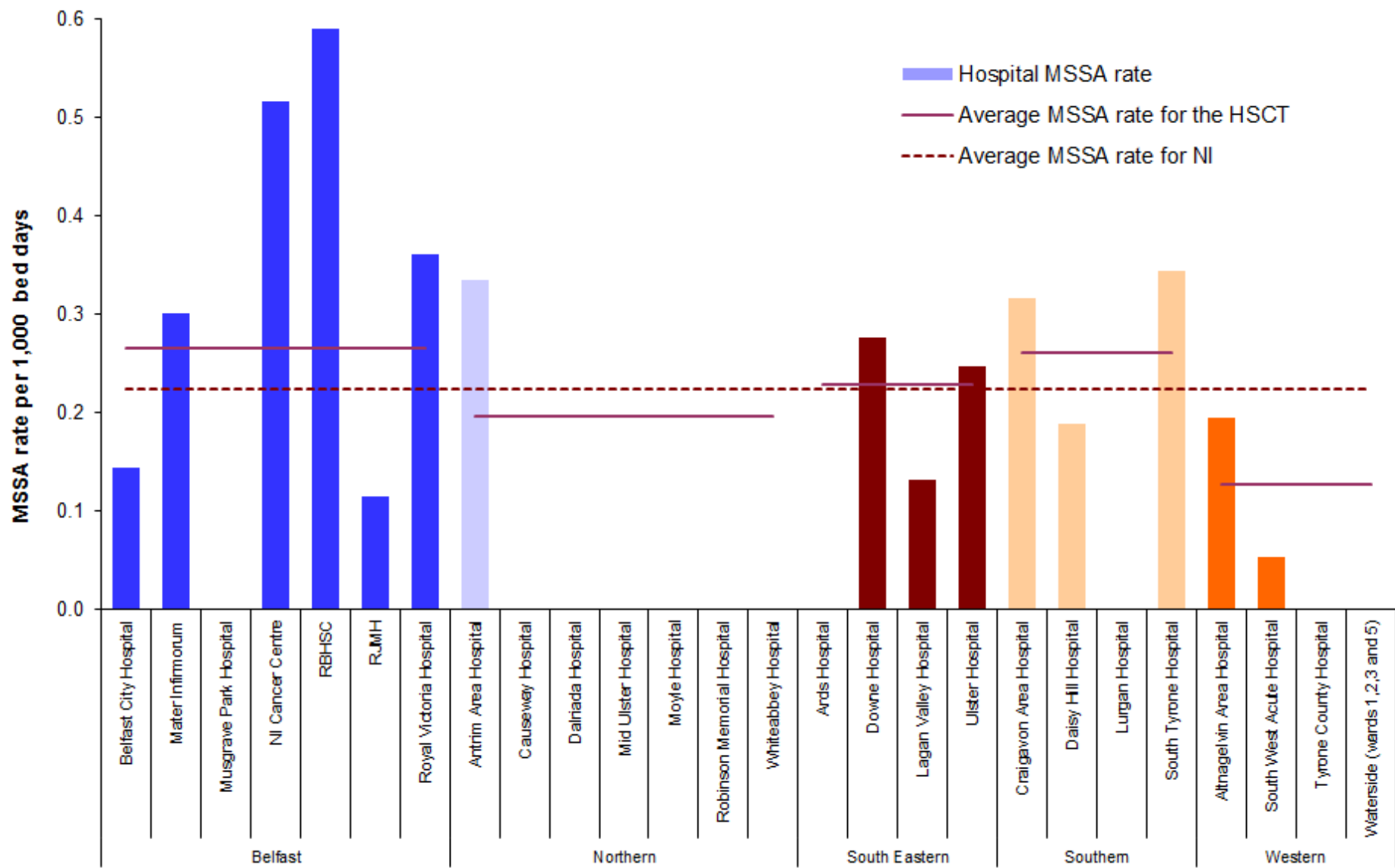


Figure 8: Rates of MSSA, April – June 2016 by individual hospitals, (gaps represent zero episodes), compared to average rates for Northern Ireland and HSCTs, April – June 2016

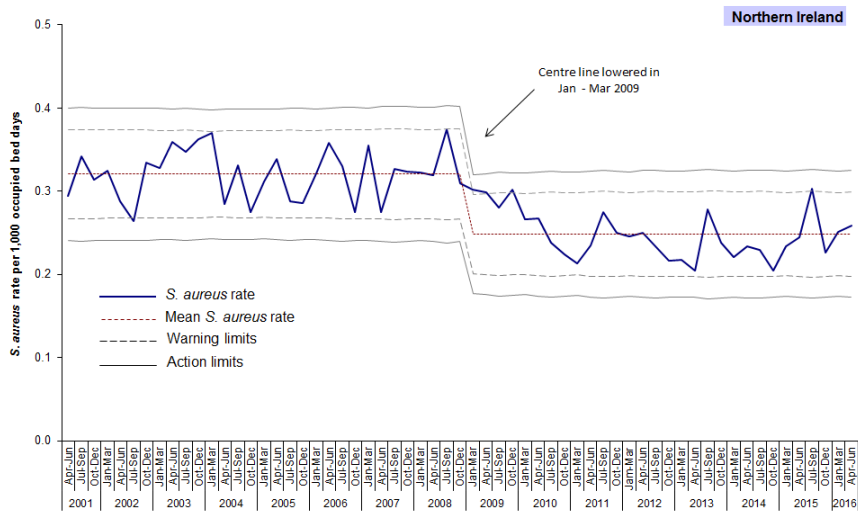


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

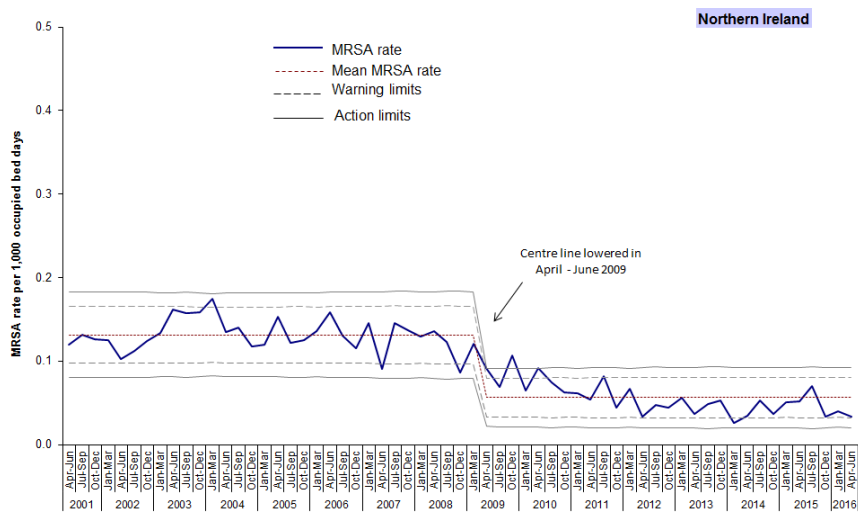


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

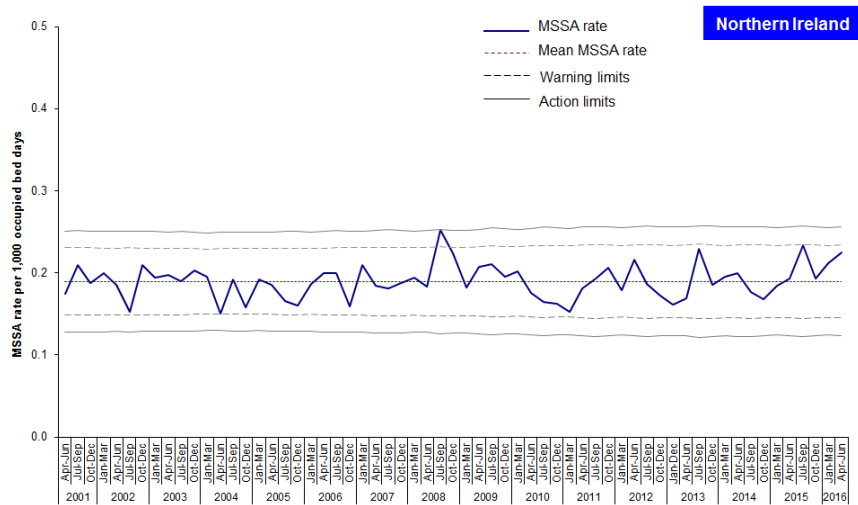


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, Jul 2015 – Jun 2016

Hospital	Jul - Sept 2015 Rate	Oct - Dec 2015 Rate	Jan - Mar 2016 Rate	Apr - Jun 2016 Rate
Belfast City Hospital	0.073	0.000	0.035	0.036
Mater Infirmorum	0.101	0.100	0.050	0.000
Musgrave Park Hospital	0.000	0.000	0.055	0.000
NICCO (formerly at Belvoir Park)	0.339	0.000	0.000	0.000
RBHSC	0.141	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.097	0.039	0.109	0.054
Belfast HSCT	0.088	0.029	0.063	0.030
Antrim Area Hospital	0.164	0.078	0.076	0.026
Causeway Hospital	0.126	0.060	0.000	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
Northern HSCT	0.127	0.061	0.045	0.015
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.000	0.276
Lagan Valley Hospital	0.000	0.000	0.000	0.000
Ulster Hospital	0.064	0.061	0.040	0.062
South Eastern HSCT	0.051	0.049	0.032	0.065
Craigavon Area Hospital	0.000	0.000	0.000	0.079
Daisy Hill Hospital	0.000	0.066	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 HSCT	0.000	0.017	0.000	0.049
Altnagelvin Area Hospital	0.090	0.000	0.000	0.028
South West Acute Hospital	0.000	0.058	0.108	0.000
Tyrone County Hospital	0.000	0.000	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.053	0.017	0.032	0.016
Northern Ireland total	0.070	0.034	0.040	0.034

Table 2: Quarterly MRSA patient episodes, by Trust, Jul 2015 – Jun 2016

Trust	Jul - Sept 2015 Episodes	Oct - Dec 2015 Episodes	Jan - Mar 2016 Episodes	Apr - Jun 2016 Episodes
Belfast Health & Social Care Trust	12	4	9	4
Northern Health & Social Care Trust	8	4	3	1
South Eastern Health & Social Care Trust	3	3	2	4
Southern Health & Social Care Trust	0	1	0	3
Western Health & Social Care Trust	3	1	2	1
NI TOTAL	26	13	16	13

Appendix 1

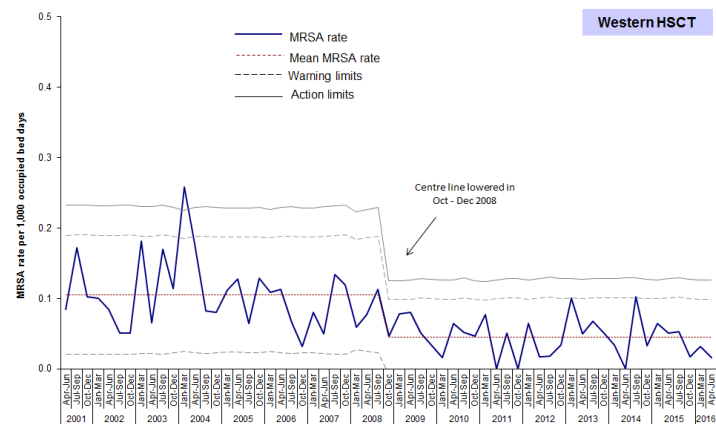
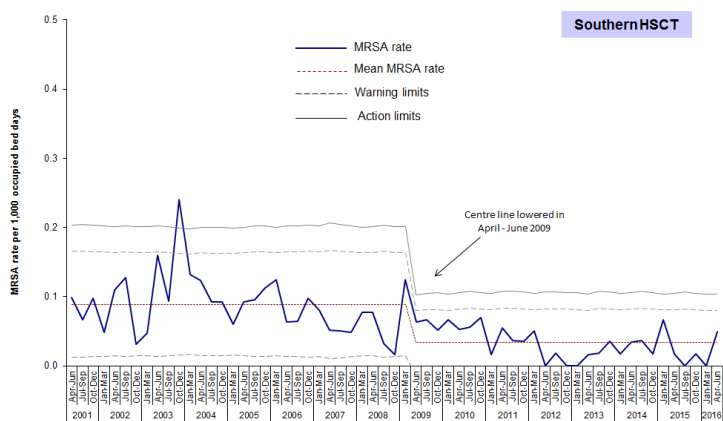
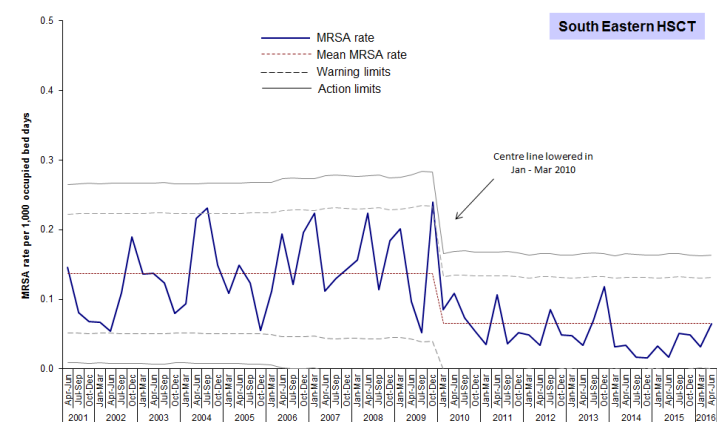
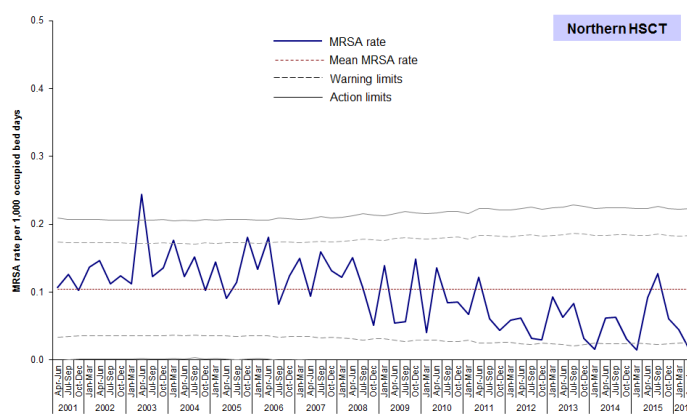
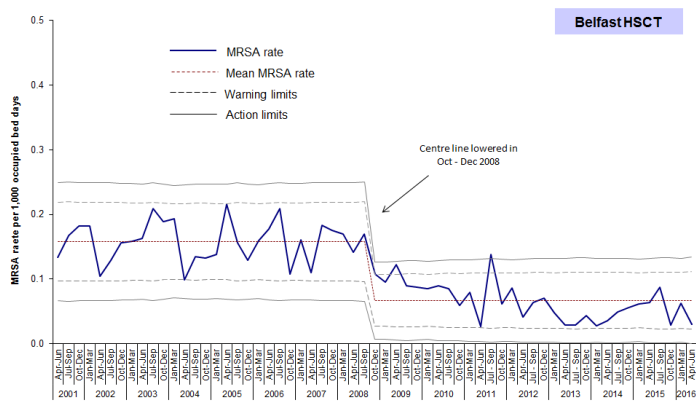
Table 3: Quarterly rate of MSSA patient episodes, by hospital, Jul 2015 - Jun 2016

Hospital	Jul - Sept 2015	Oct - Dec 2015	Jan - Mar 2016	Apr - Jun 2016
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.109	0.364	0.317	0.145
Mater Infirmorum	0.202	0.201	0.100	0.301
Musgrave Park Hospital	0.061	0.000	0.000	0.000
NICCO (formerly at Belvoir Park)	0.509	0.501	0.857	0.517
RBHSC	0.704	0.529	0.587	0.591
RJMH	0.117	0.000	0.115	0.115
Royal Victoria Hospital	0.427	0.213	0.327	0.361
Belfast HSCT	0.285	0.232	0.273	0.266
Antrim Area Hospital	0.137	0.157	0.255	0.336
Causeway Hospital	0.379	0.242	0.301	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
Northern HSCT	0.175	0.152	0.223	0.196
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.296	0.284	0.264	0.276
Lagan Valley Hospital	0.446	0.281	0.000	0.131
Ulster Hospital	0.171	0.204	0.240	0.248
South Eastern HSCT	0.205	0.212	0.206	0.228
Craigavon Area Hospital	0.260	0.111	0.239	0.317
Daisy Hill Hospital	0.280	0.199	0.184	0.190
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.345
Southern HSCT	0.232	0.120	0.196	0.262
Altnagelvin Area Hospital	0.239	0.256	0.055	0.195
South West Acute Hospital	0.191	0.173	0.162	0.054
Tyrone County Hospital	0.456	0.000	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.210	0.198	0.080	0.128
Northern Ireland total	0.234	0.193	0.211	0.252

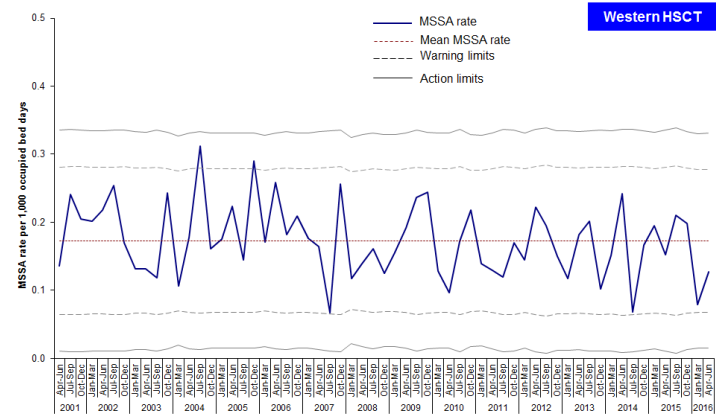
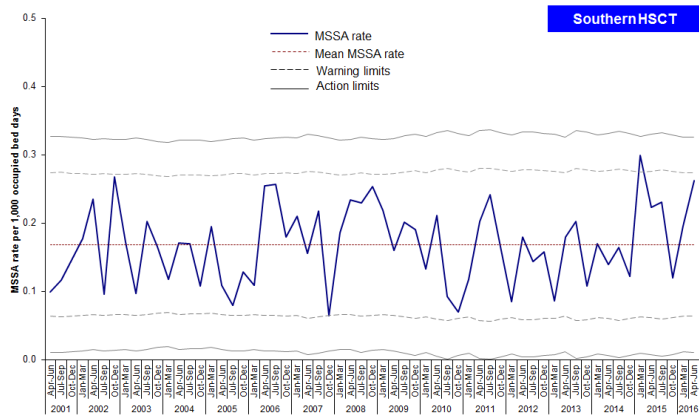
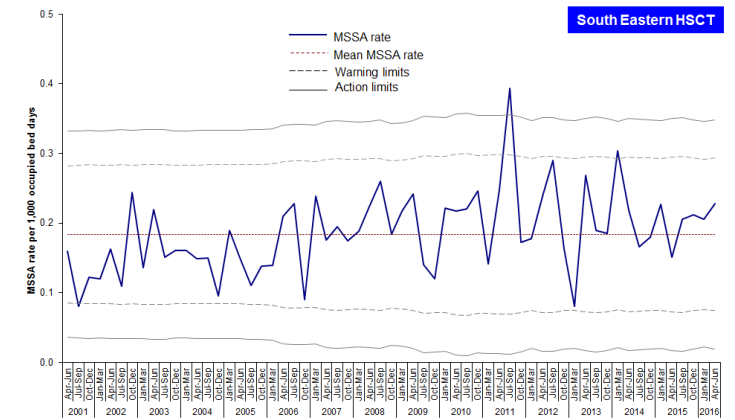
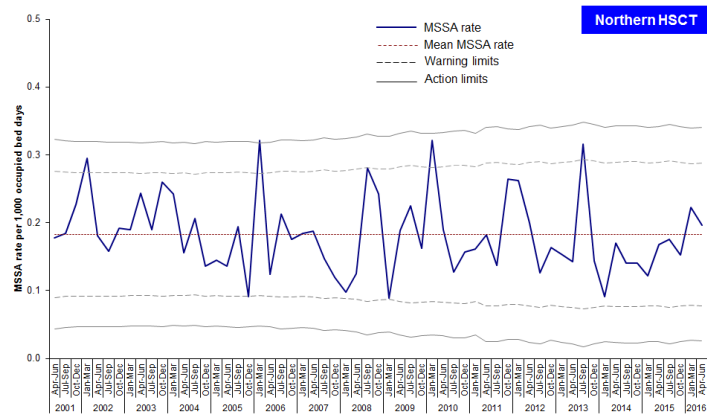
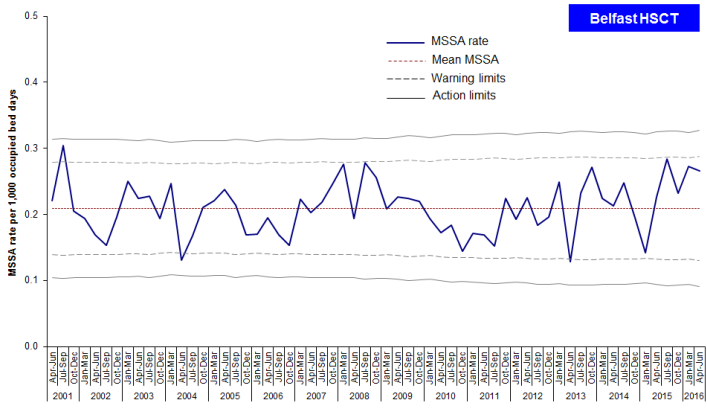
Table 4: Quarterly MSSA patient episodes, by Trust, Jul 2015 - Jun 2016

Trust	Jul - Sept 2015	Oct - Dec 2015	Jan - Mar 2016	Apr - Jun 2016
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	39	32	39	36
Northern Health & Social Care Trust	11	10	15	13
South Eastern Health & Social Care Trust	12	13	13	14
Southern Health & Social Care Trust	13	7	12	16
Western Health & Social Care Trust	12	12	5	8
NI TOTAL	87	74	84	87

Appendix 2: Trends in MRSA rates, by HSCT and quarter, 2001–2016



Appendix 2: Trends in MSSA rates, by HSCT and quarter, 2001–2016



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, Jul 2006 – Jun 2016

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Jul-Sep 2006	0.201	0.129	0.330	39.1
Oct-Dec 2006	0.159	0.115	0.273	42.1
Jan-Mar 2007	0.208	0.145	0.353	41.1
Apr-Jun 2007	0.183	0.091	0.274	33.2
Jul-Sep 2007	0.181	0.146	0.326	44.8
Oct-Dec 2007	0.187	0.137	0.324	42.3
Jan-Mar 2008	0.194	0.129	0.323	39.9
Apr-Jun 2008	0.184	0.136	0.320	42.5
Jul-Sep 2008	0.252	0.122	0.375	32.5
Oct-Dec 2008	0.223	0.087	0.310	28.1
Jan-Mar 2009	0.182	0.120	0.302	39.7
Apr-Jun 2009	0.207	0.092	0.299	30.8
Jul-Sep 2009	0.206	0.069	0.275	25.1
Oct-Dec 2009	0.195	0.107	0.302	35.4
Jan-Mar 2010	0.202	0.064	0.266	24.1
Apr-Jun 2010	0.175	0.091	0.267	34.1
Jul-Sep 2010	0.164	0.074	0.239	31.0
Oct-Dec 2010	0.160	0.062	0.222	27.9
Jan-Mar 2011	0.152	0.061	0.214	28.5
Apr-Jun 2011	0.181	0.054	0.235	23.0
Jul-Sep 2011	0.193	0.082	0.275	29.8
Oct-Dec 2011	0.206	0.044	0.250	17.6
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

Appendix 4

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

HSCT	Financial Year									
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Belfast	115	109	86	62	48	46	32	18	28	34
Northern	47	42	35	22	27	19	14	12	11	21
South Eastern	49	34	46	28	15	14	13	15	7	9
Southern	19	14	16	15	11	10	1	5	9	2
Western	18	22	20	11	15	7	10	12	12	9
Northern Ireland	248	221	203	138	116	96	70	62	67	75

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

HSCT	Financial Year									
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Belfast	130	161	157	138	103	109	115	121	112	142
Northern	60	46	57	66	46	57	42	43	37	47
South Eastern	51	46	56	43	46	57	54	57	50	47
Southern	56	38	59	40	28	38	32	38	42	45
Western	51	37	37	49	39	34	40	38	40	38
Northern Ireland	348	328	366	336	262	295	283	297	281	319