

S. aureus bacteraemia surveillance

Quarterly report

January 2016 – March 2016

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 11% during January-March 2016 compared to October-December 2015.
- MRSA rates increased by approximately 18% during January-March 2016 compared to October-December 2015.
- MRSA reports during 2015/16 rose by 12% compared to 2014/15.
- MSSA rates increased by approximately 9% compared to October-December 2015.
- 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

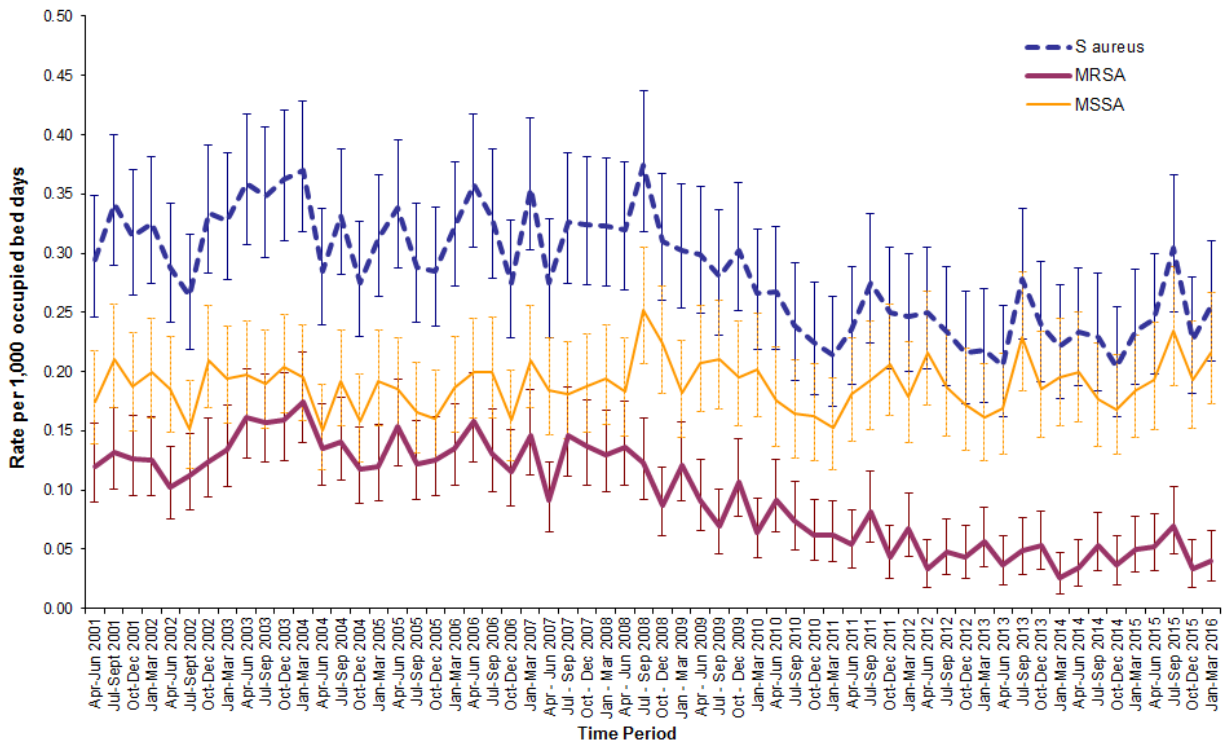


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – March 2016 (see Appendix 3)

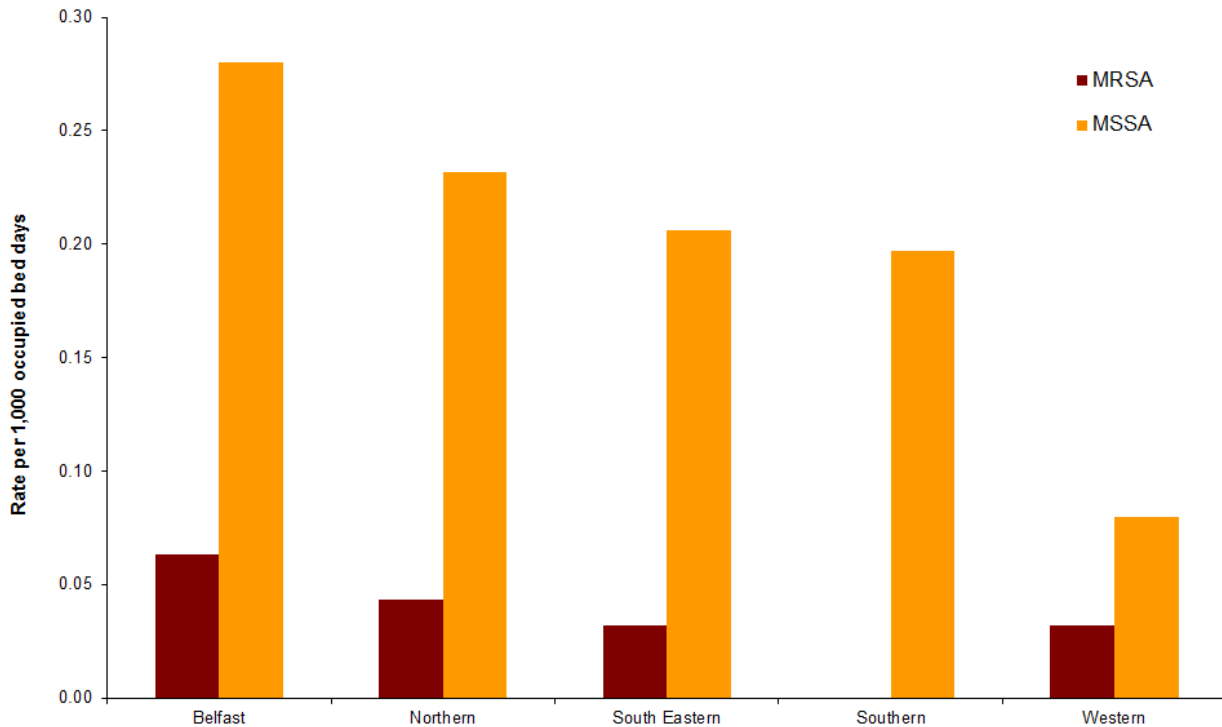


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, January – March 2016

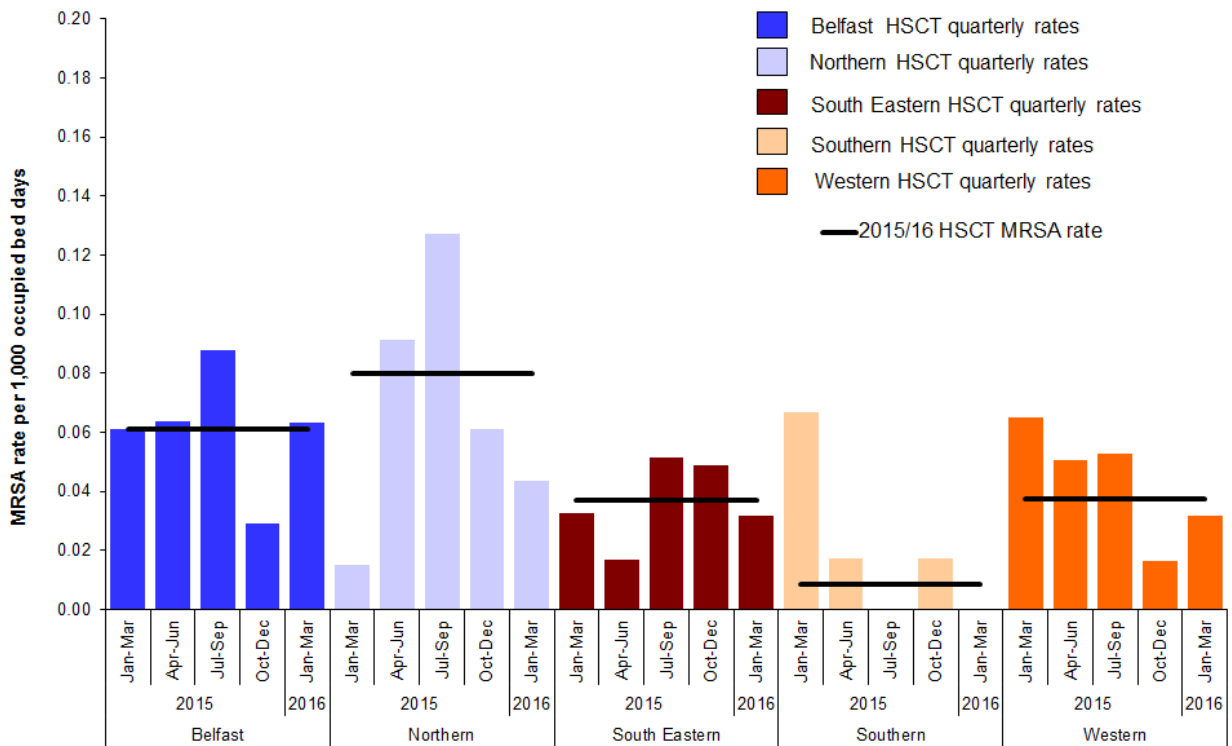


Figure 3: MRSA quarterly rate January 2015 – March 2016, by HSCT, with 2015/16 HSCT MRSA rate

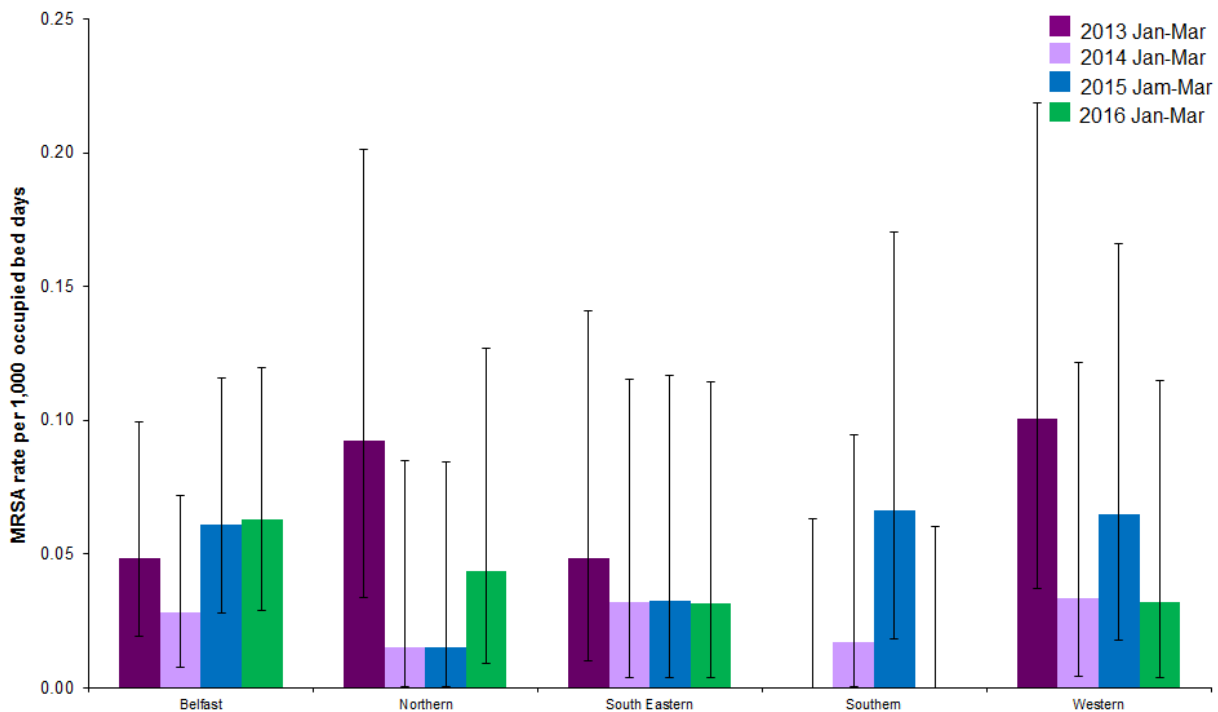


Figure 4: MRSA rate during January - March, by HSCT, from 2013–2016, with 95% confidence intervals

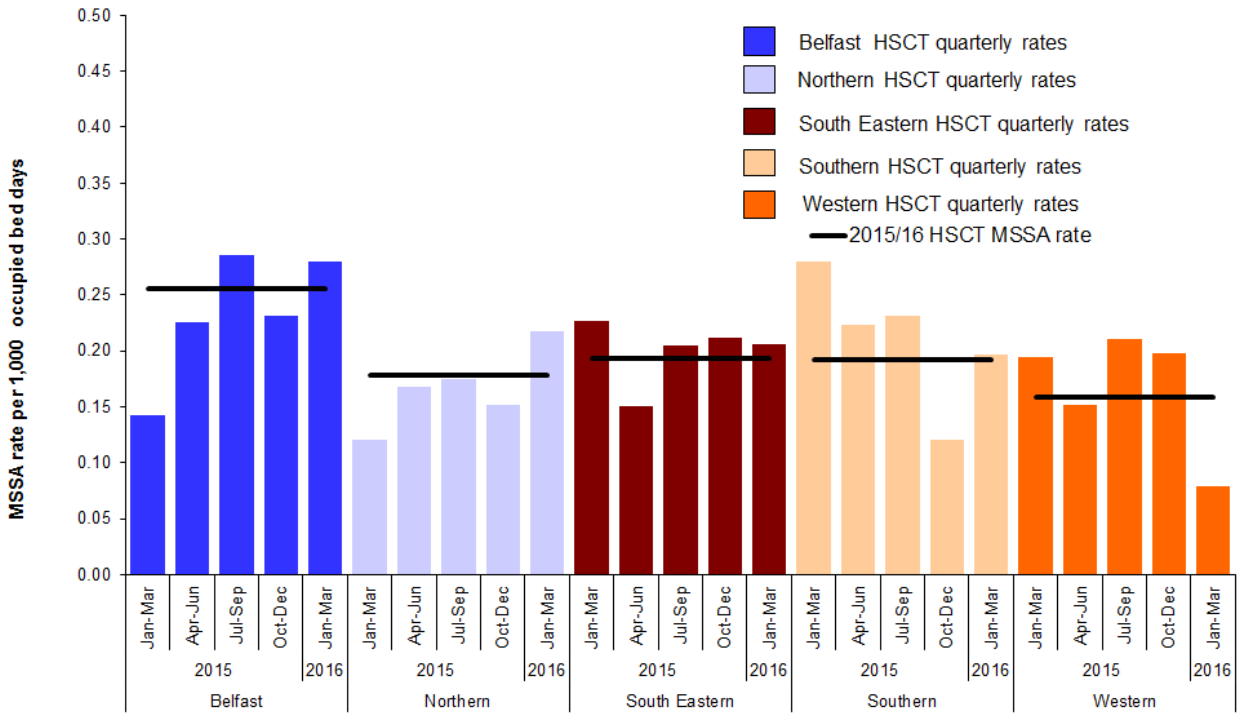


Figure 5: MSSA quarterly rate January 2015 – March 2016, by HSCT, with 2015/16 HSCT MSSA rate

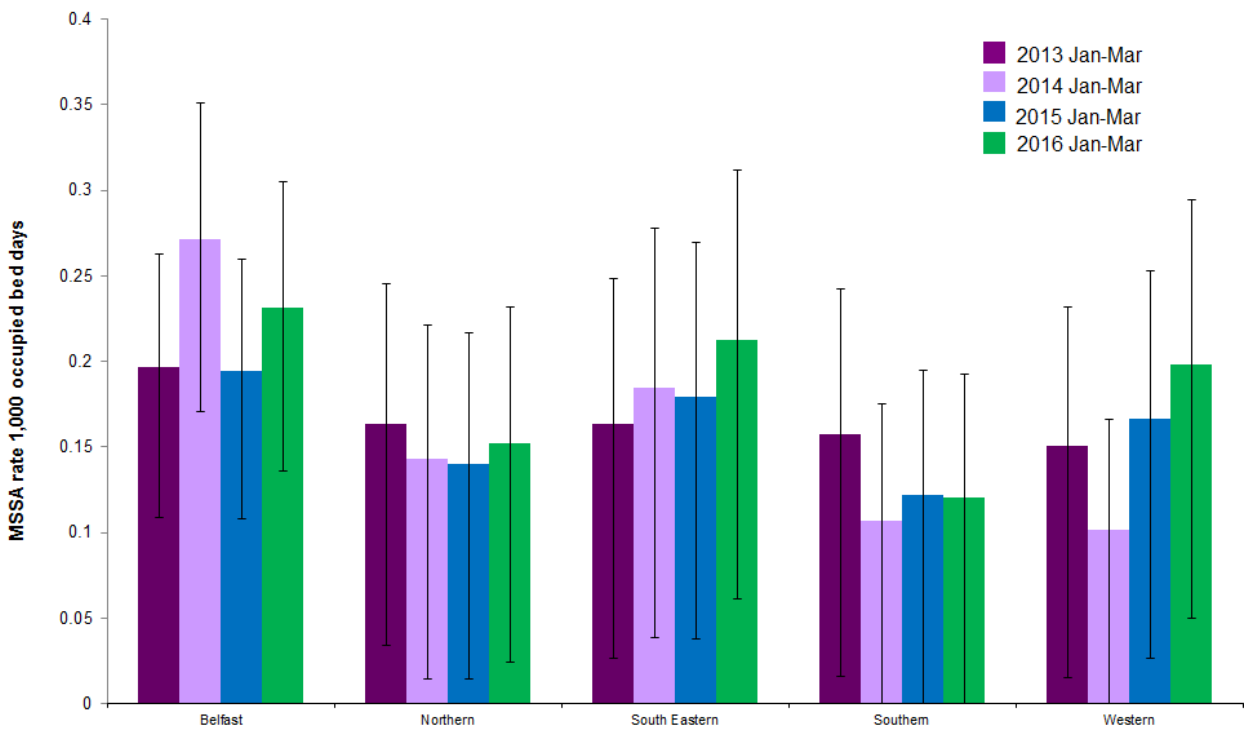


Figure 6: MSSA rate during January - March, by HSCT, from 2013–2016, with 95% confidence intervals

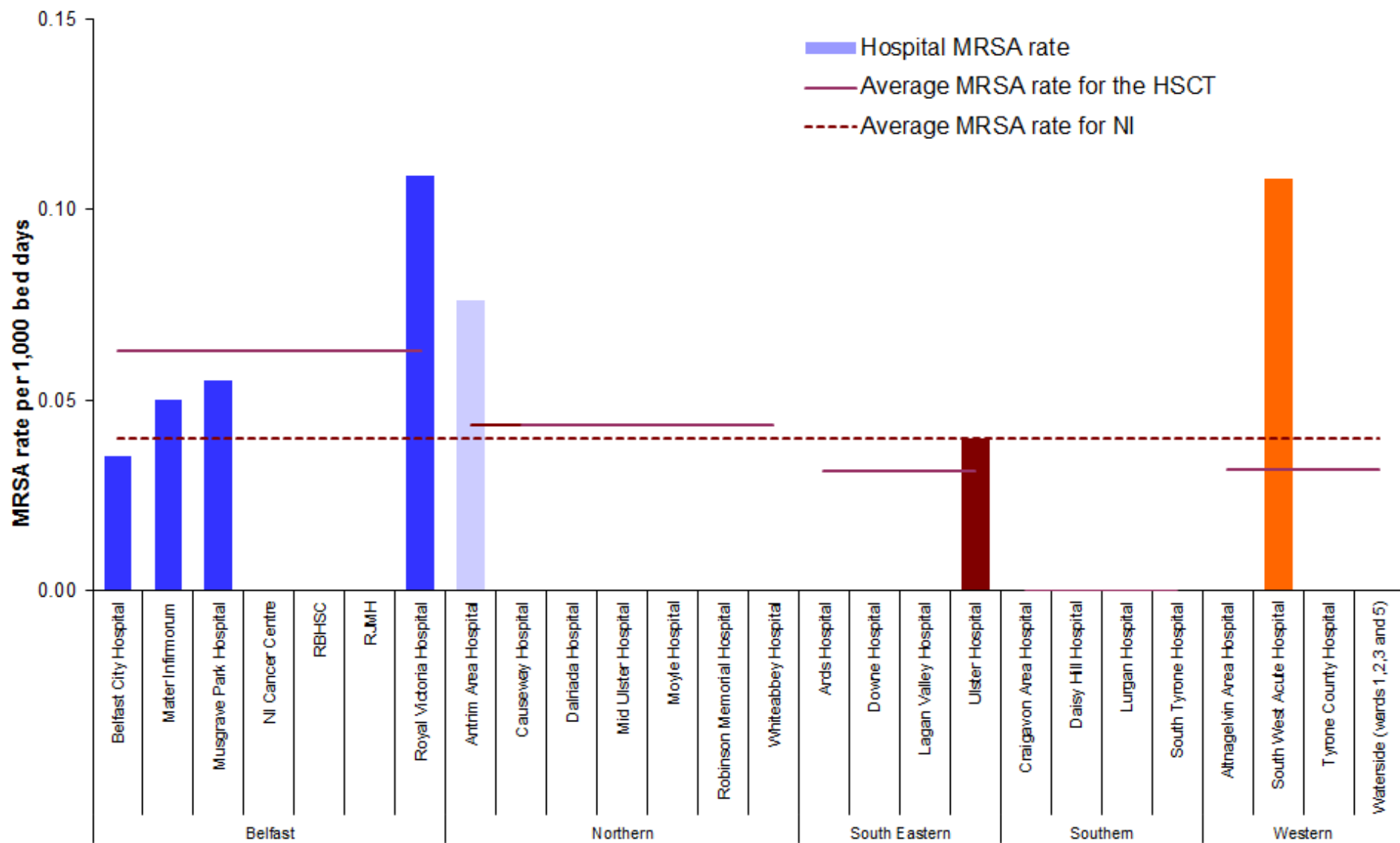


Figure 7: Rates of MRSA, January - March 2016 by individual hospitals, (gaps represent zero episodes), compared to January - March 2016 average rates for Northern Ireland and HSCTs

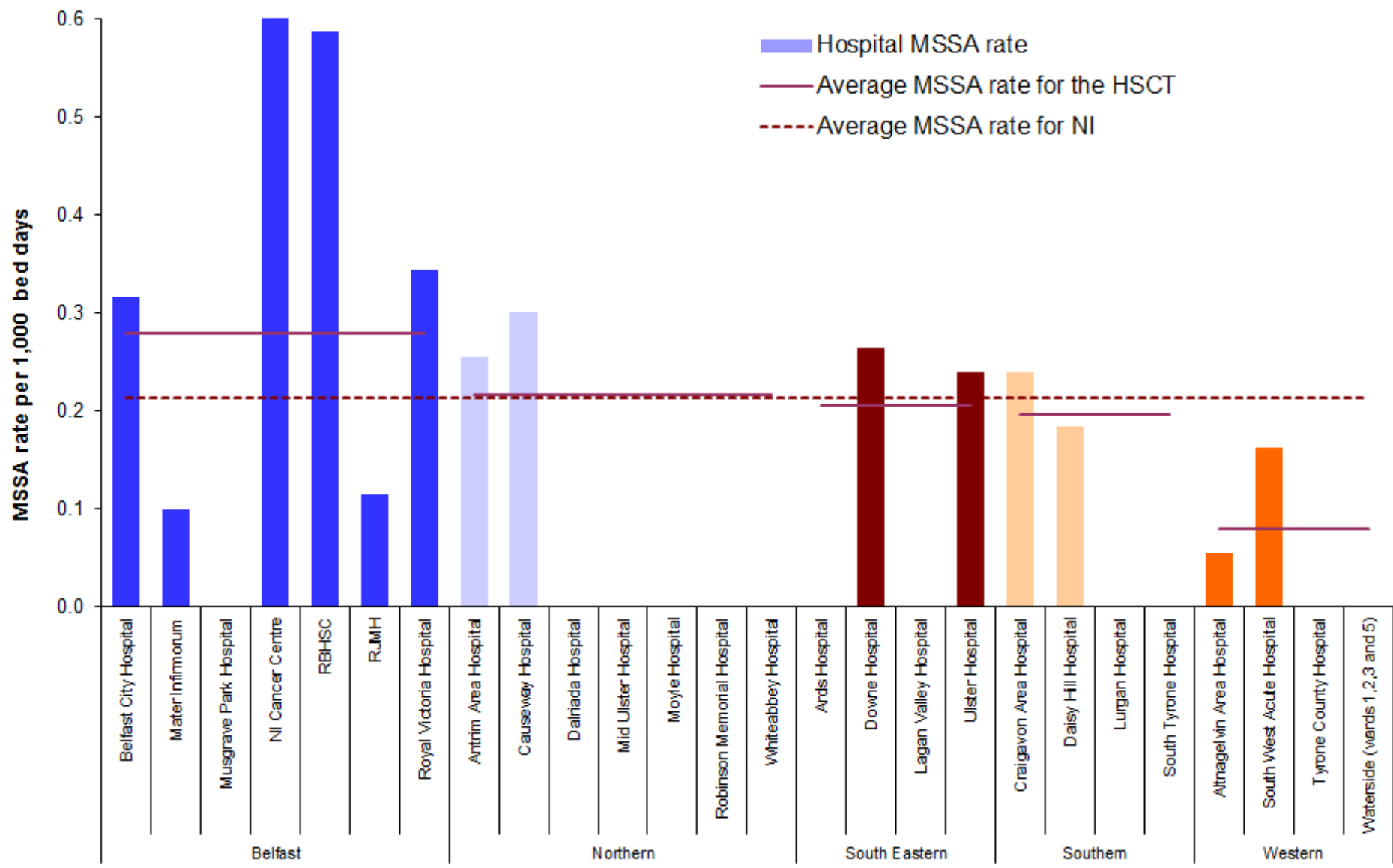


Figure 8: Rates of MSSA, January – March 2016 by individual hospitals, (gaps represent zero episodes), compared to January – March 2016 average rates for Northern Ireland and HSCTs

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

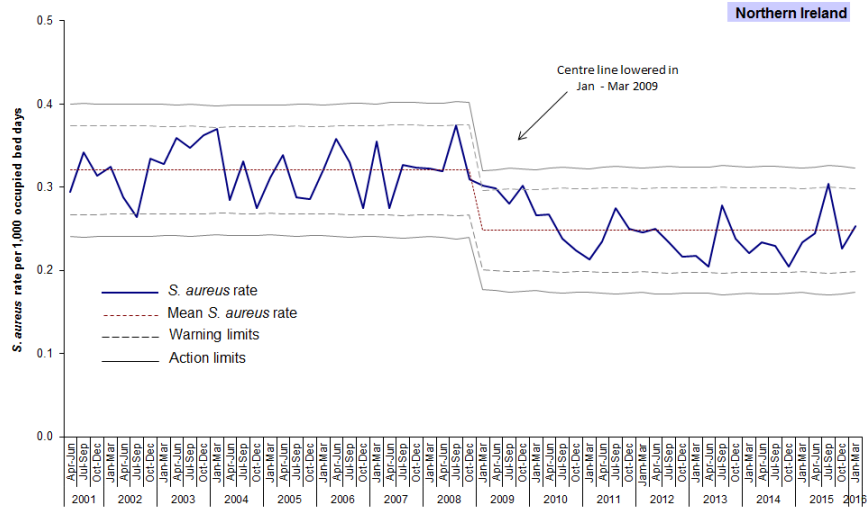


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

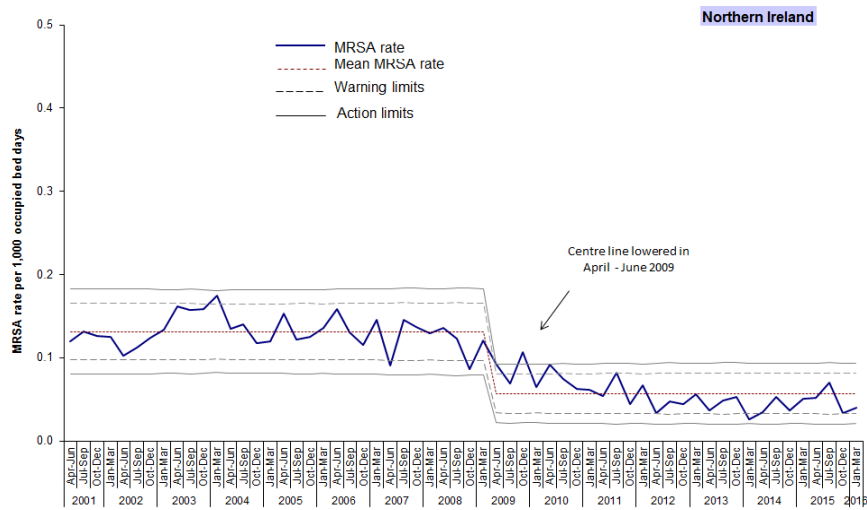
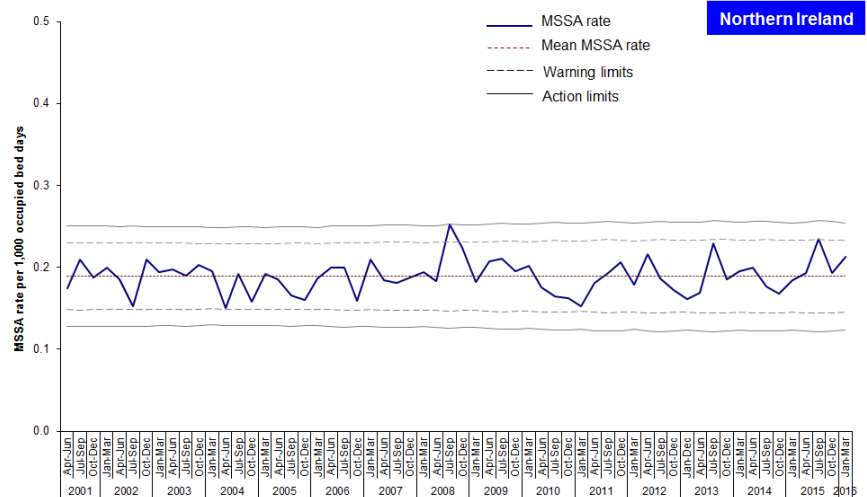


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland



Appendix 1

Table 1: Quarterly rate of MRSA patients, by hospital, Apr 2015 – Mar 2016

Hospital	Apr - Jun 2015	July - Sept 2015	Oct - Dec 2015	Jan-Mar 2016
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.070	0.073	0.000	0.035
Mater Infirmorum	0.144	0.101	0.100	0.050
Musgrave Park Hospital	0.058	0.000	0.000	0.055
NICCO (formerly at Belvoir Park)	0.000	0.339	0.000	0.000
RBHSC	0.000	0.141	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.056	0.097	0.039	0.109
Belfast HSCT	0.064	0.088	0.029	0.063
Antrim Area Hospital	0.156	0.164	0.078	0.076
Causeway Hospital	0.000	0.126	0.060	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	0.091	0.127	0.061	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	0.000	0.000	0.000	0.000
Ulster Hospital	0.021	0.064	0.061	0.040
South Eastern HSCT	0.017	0.051	0.049	0.032
Craigavon Area Hospital	0.000	0.000	0.000	0.000
Daisy Hill Hospital	0.065	0.000	0.066	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	0.017	0.000	0.017	0.000
Altnagelvin Area Hospital	0.029	0.090	0.000	0.000
South West Acute Hospital	0.120	0.000	0.058	0.108
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	0.051	0.053	0.017	0.032
Northern Ireland total	0.052	0.070	0.034	0.040

Table 2: Quarterly episodes of MRSA patients, by Trust, Apr 2015 – Mar 2016

Trust	Apr - Jun 2015	Jul - Sept 2014	Oct - Dec 2015	Jan - March 2016
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	9	12	4	9
Northern Health & Social Care Trust	6	8	4	3
South Eastern Health & Social Care Trust	1	3	3	2
Southern Health & Social Care Trust	1	0	1	0
Western Health & Social Care Trust	3	3	1	2
NI TOTAL	20	26	13	16

Appendix 2

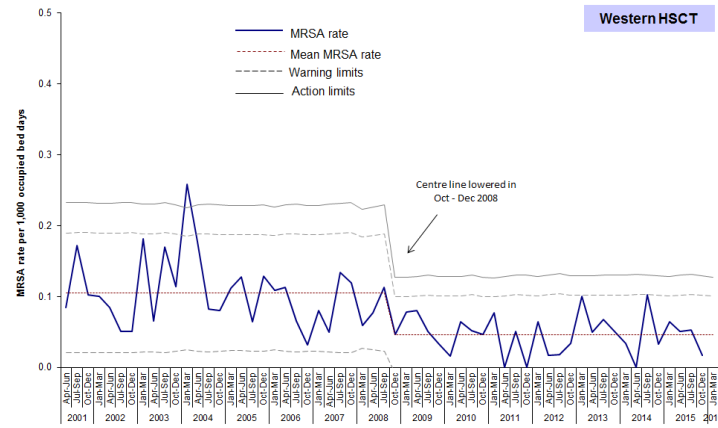
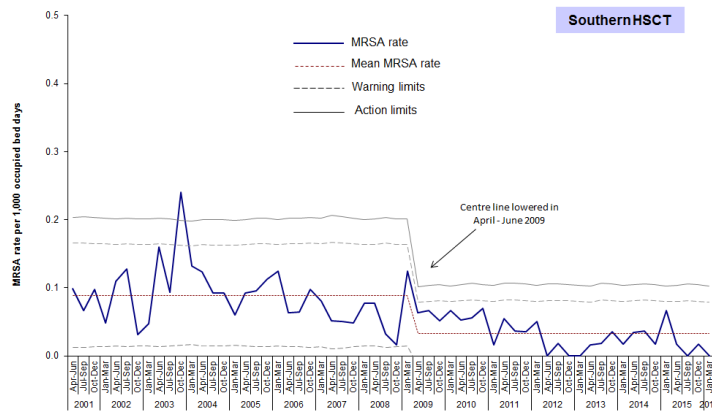
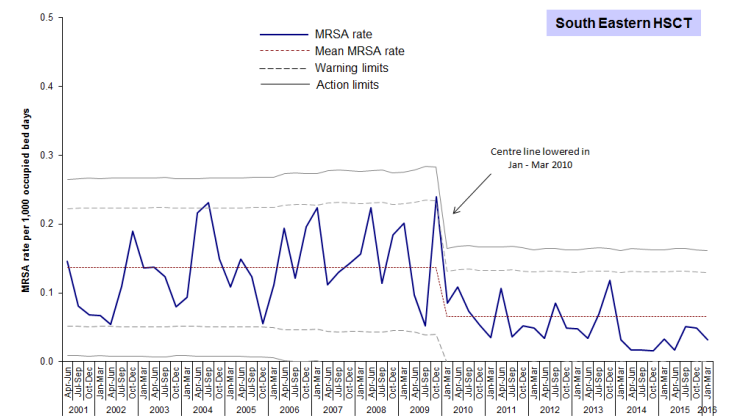
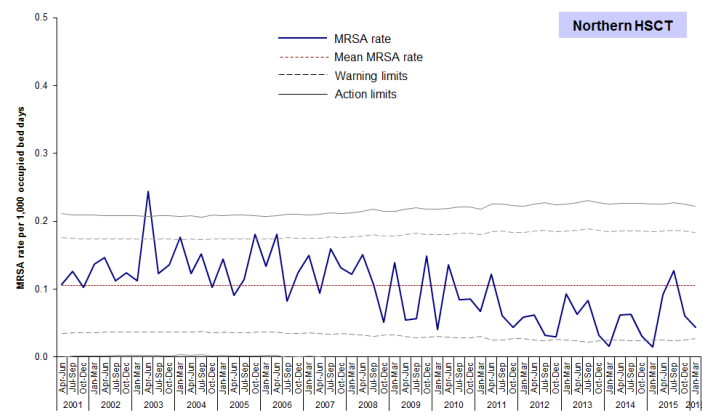
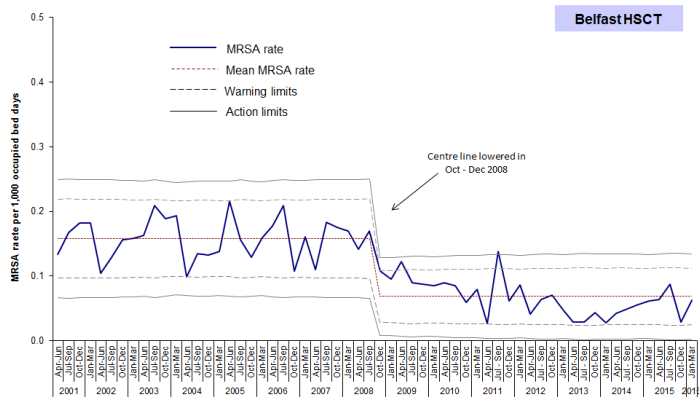
Table 3: Quarterly rate of MSSA patient, by hospital, Apr 2015 - Mar 2016

Hospital	Apr - Jun 2015	Jul - Sept 2015	Oct - Dec 2015	Jan - March 2016
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.141	0.109	0.364	0.317
Mater Infirmorum	0.288	0.202	0.201	0.100
Musgrave Park Hospital	0.000	0.061	0.000	0.000
NICCO (formerly at Belvoir Park)	0.496	0.509	0.501	0.857
RBHSC	0.687	0.704	0.529	0.587
RJMH	0.000	0.117	0.000	0.115
Royal Victoria Hospital	0.262	0.427	0.213	0.327
Belfast HSCT	0.226	0.285	0.232	0.273
Antrim Area Hospital	0.233	0.137	0.157	0.255
Causeway Hospital	0.122	0.379	0.242	0.301
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	0.168	0.175	0.152	0.217
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.294	0.296	0.284	0.264
Lagan Valley Hospital	0.000	0.446	0.281	0.000
Ulster Hospital	0.167	0.171	0.204	0.240
South Eastern HSCT	0.151	0.205	0.212	0.206
Craigavon Area Hospital	0.252	0.260	0.111	0.241
Daisy Hill Hospital	0.260	0.280	0.199	0.184
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000
Southern HSCT	0.223	0.232	0.120	0.197
Altnagelvin Area Hospital	0.145	0.239	0.256	0.055
South West Acute Hospital	0.239	0.191	0.173	0.162
Tyrone County Hospital	0.000	0.456	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.152	0.210	0.198	0.080
Northern Ireland total	0.193	0.234	0.193	0.213

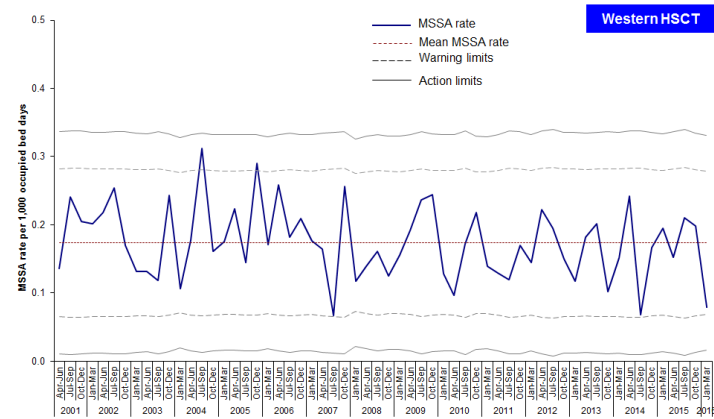
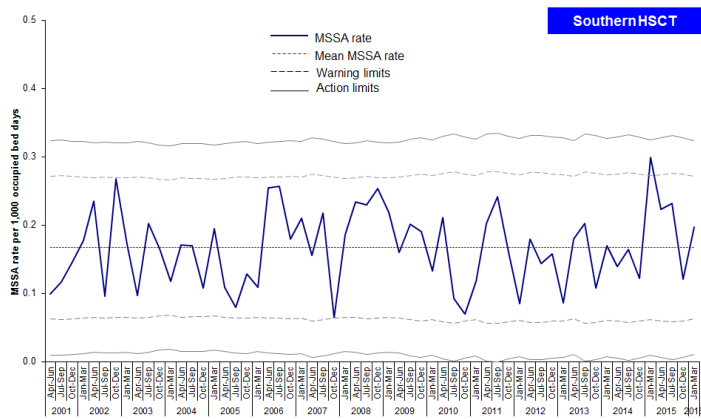
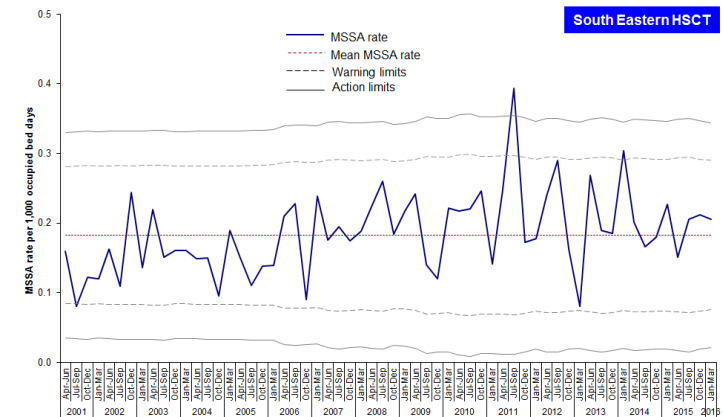
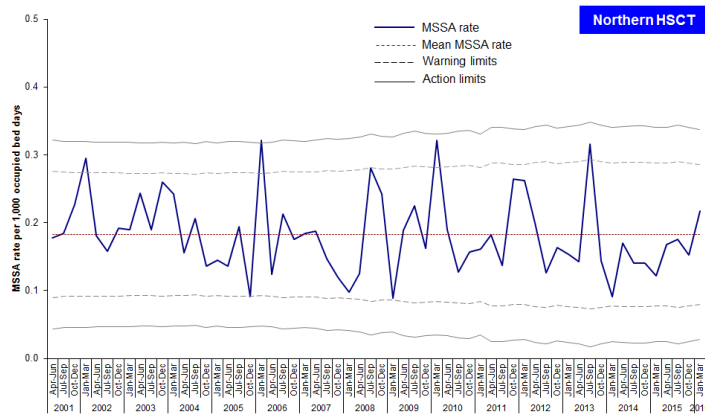
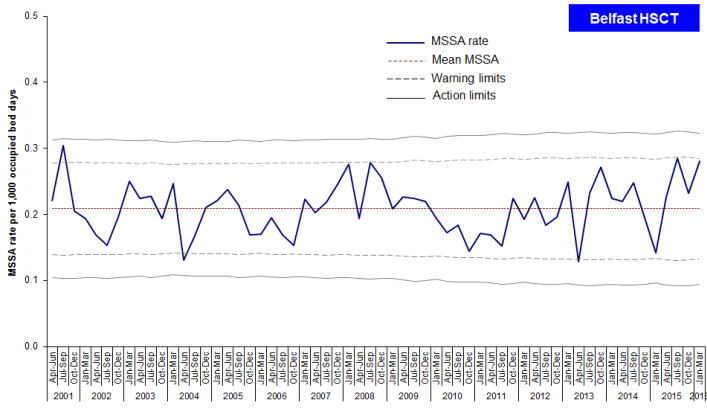
Table 4: Quarterly episodes of MSSA patient, by Trust, Apr 2015 – Mar 2016

Trust	Apr - Jun 2015	Jul - Sept 2015	Oct - Dec 2015	Jan - March 2016
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	32	39	32	39
Northern Health & Social Care Trust	11	11	10	15
South Eastern Health & Social Care Trust	9	12	13	13
Southern Health & Social Care Trust	13	13	7	12
Western Health & Social Care Trust	9	12	12	5
NI TOTAL	74	87	74	84

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, Apr 2006 – Mar 2016

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Apr-Jun 2006	0.199	0.157	0.356	44.1
Jul-Sep 2006	0.201	0.129	0.33	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	0.32	42.5
Jul-Sep 2008	0.252	0.122	0.375	32.5
Oct-Dec 2008	0.223	0.087	0.31	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	0.162	0.062	0.224	27.7
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	27.2
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	0.227	15.0
Jan-Mar 2016	0.211	0.040	0.251	15.9

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