

S. aureus bacteraemia surveillance

Quarterly report

January 2015 – March 2015

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 39% during January-March 2015 compared to October-December 2014.
- MRSA rates increased by approximately 39% during January-March 2015 compared to October-December 2014.
- MRSA reports during 2014/15 rose by 8% compared to 2013/14.
- MSSA rates increased by approximately 10% compared to October-December 2014.
- MSSA reports during 2014/15 decreased by 5% compared to 2013/14.
- 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**

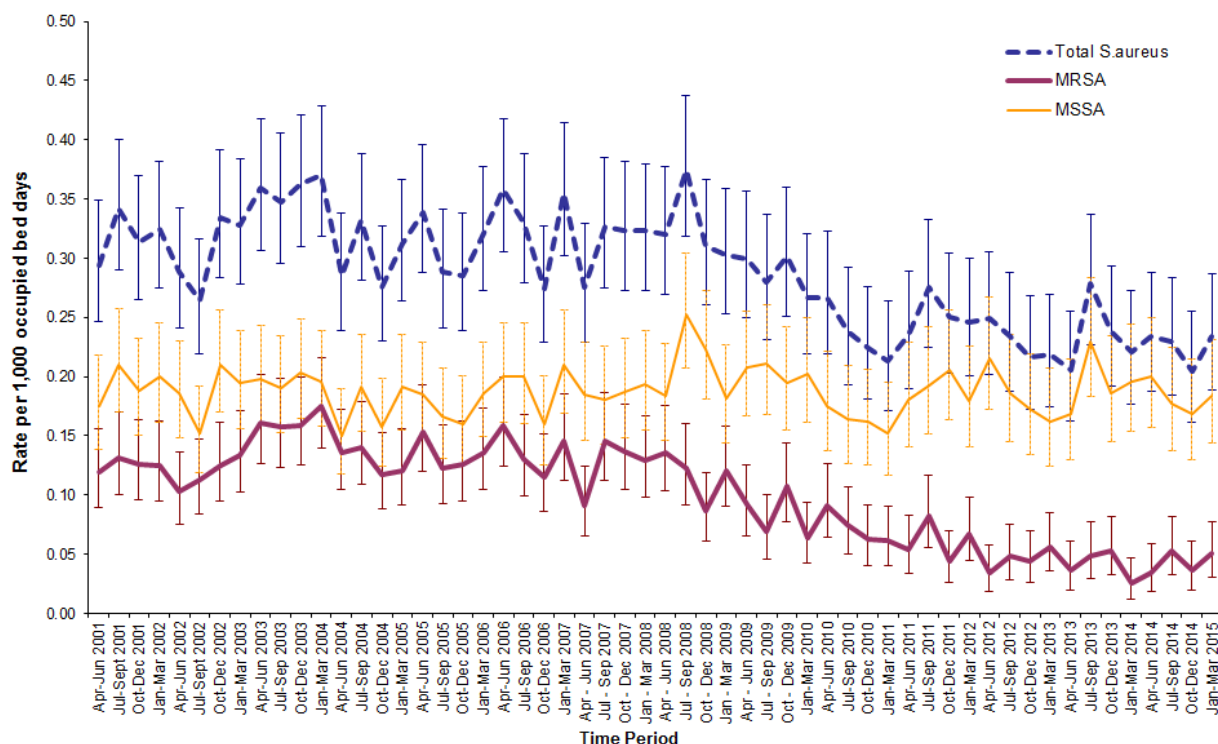


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – March 2015 (see Appendix 3)

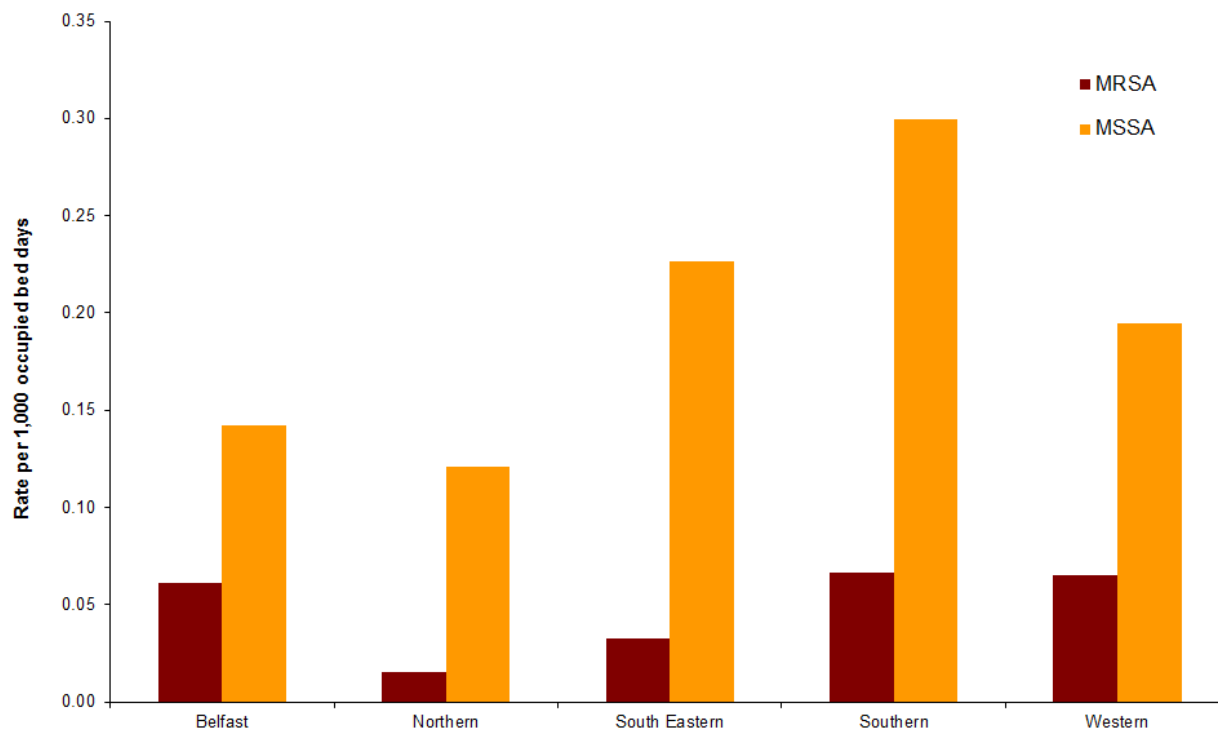


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, January - March 2015

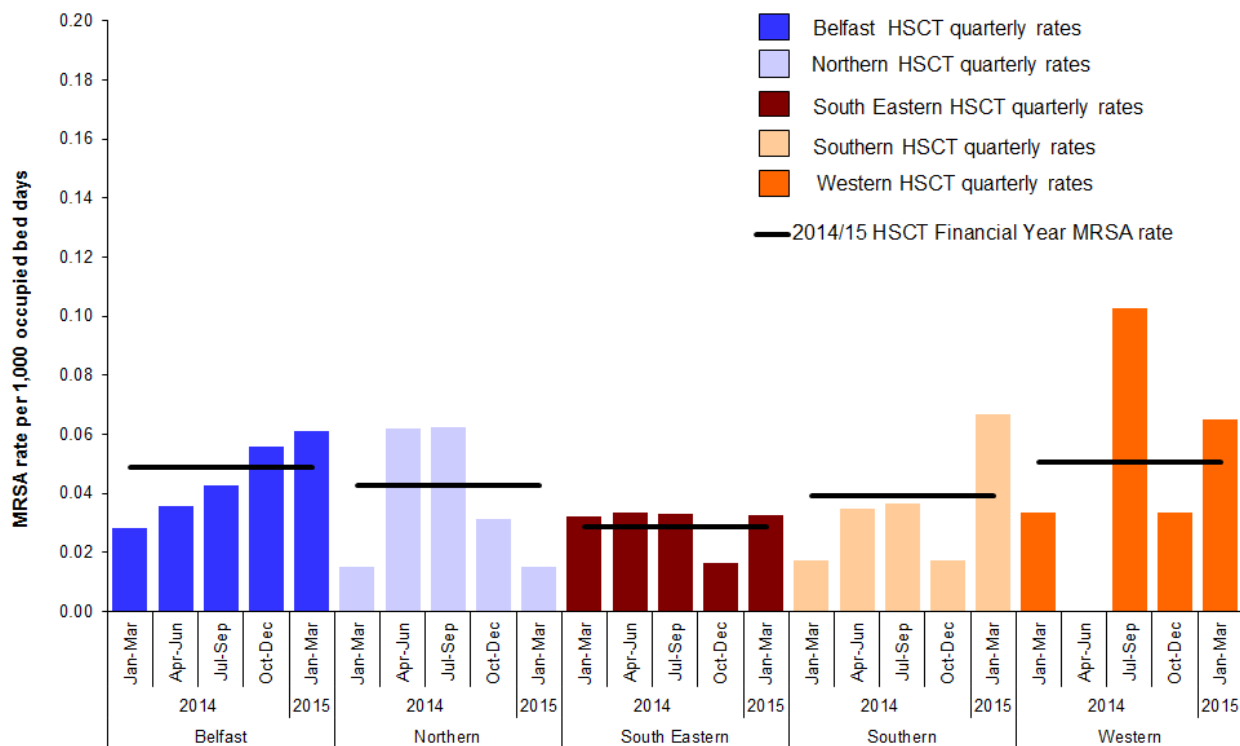


Figure 3: MRSA quarterly rate January 2014 – March 2015, by HSCT, with 2014/15 HSCT Financial Year MRSA rate

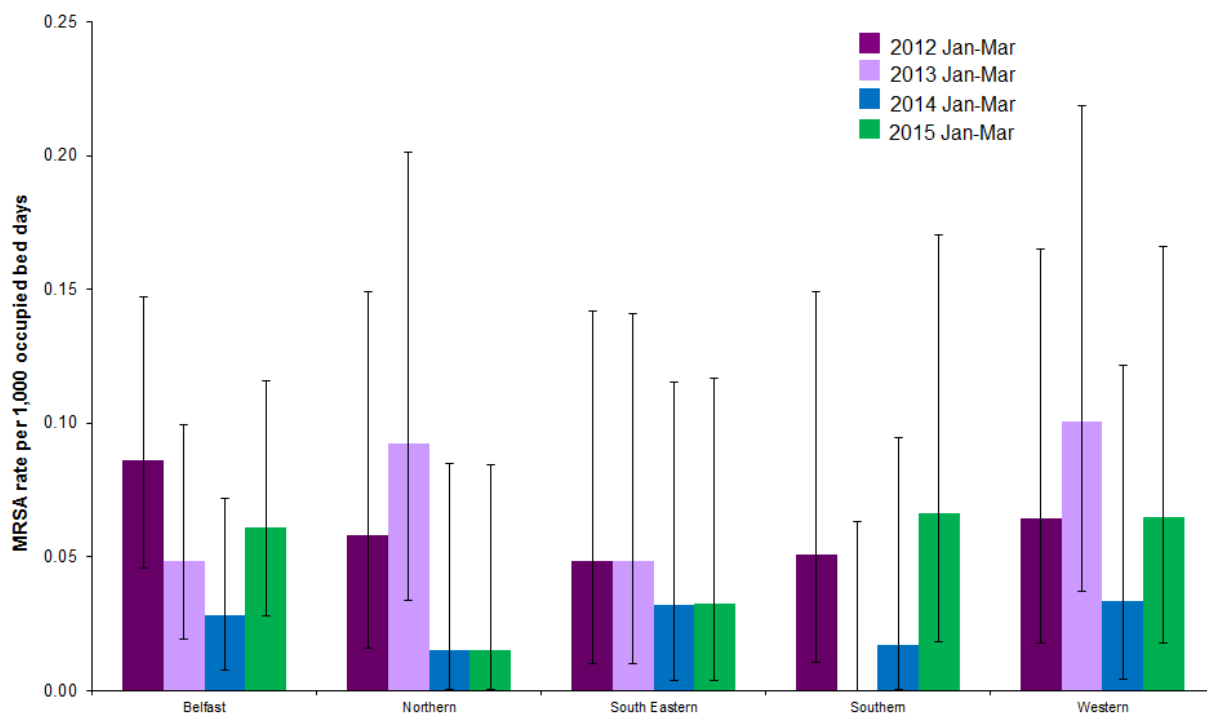


Figure 4: MRSA rate during January - March, by HSCT, from 2012–2015, with 95% confidence intervals

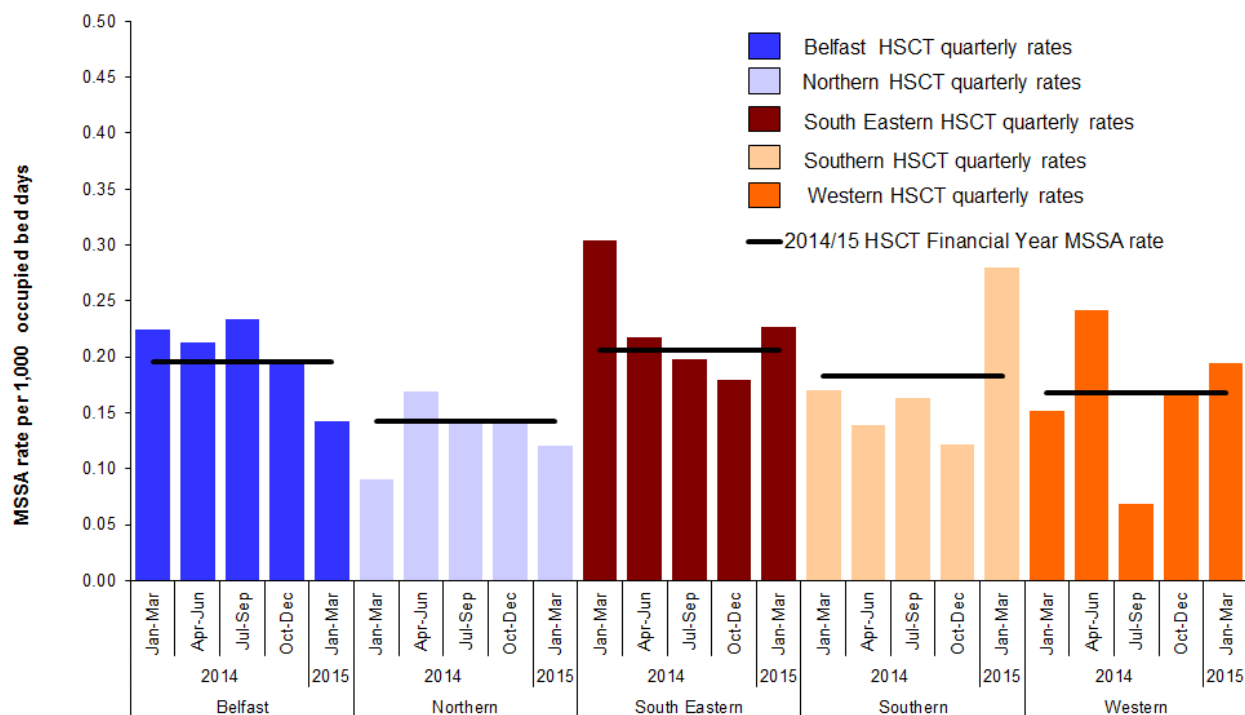


Figure 5: MSSA quarterly rate January 2014 – March 2015, by HSCT, with 2014/15 HSCT Financial Year MSSA rate

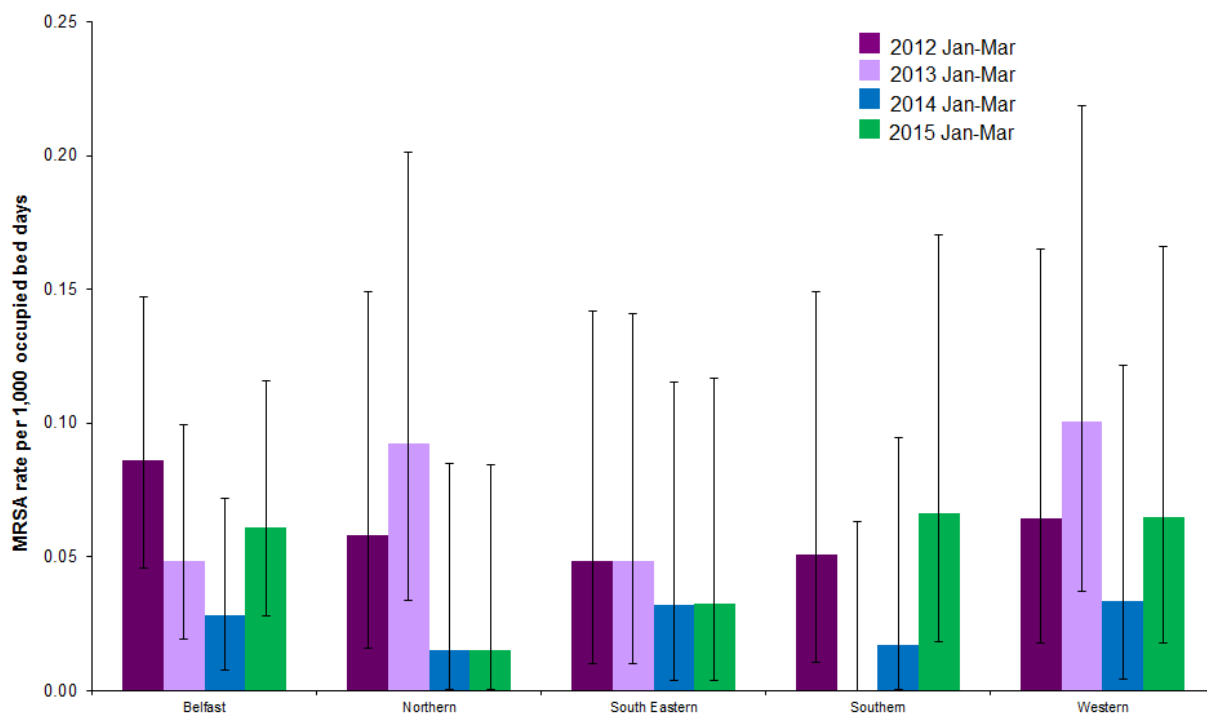


Figure 6: MSSA rate during January - March, by HSCT, from 2012–2015, with 95% confidence intervals

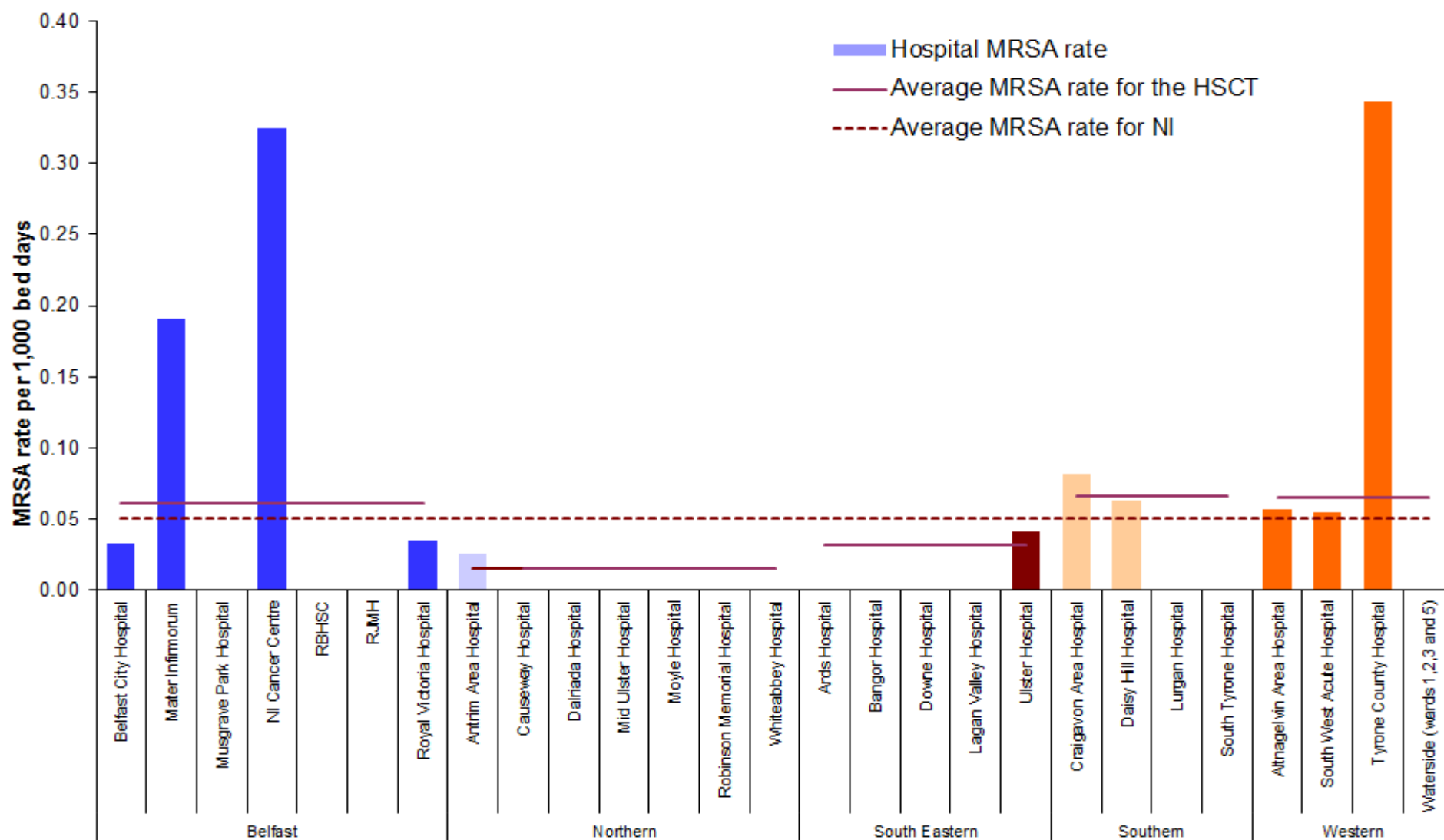


Figure 7: Rates of MRSA, January - March 2015 by individual hospitals, (gaps represent zero episodes), compared to January - March 2015 average rates for Northern Ireland and HSCTs

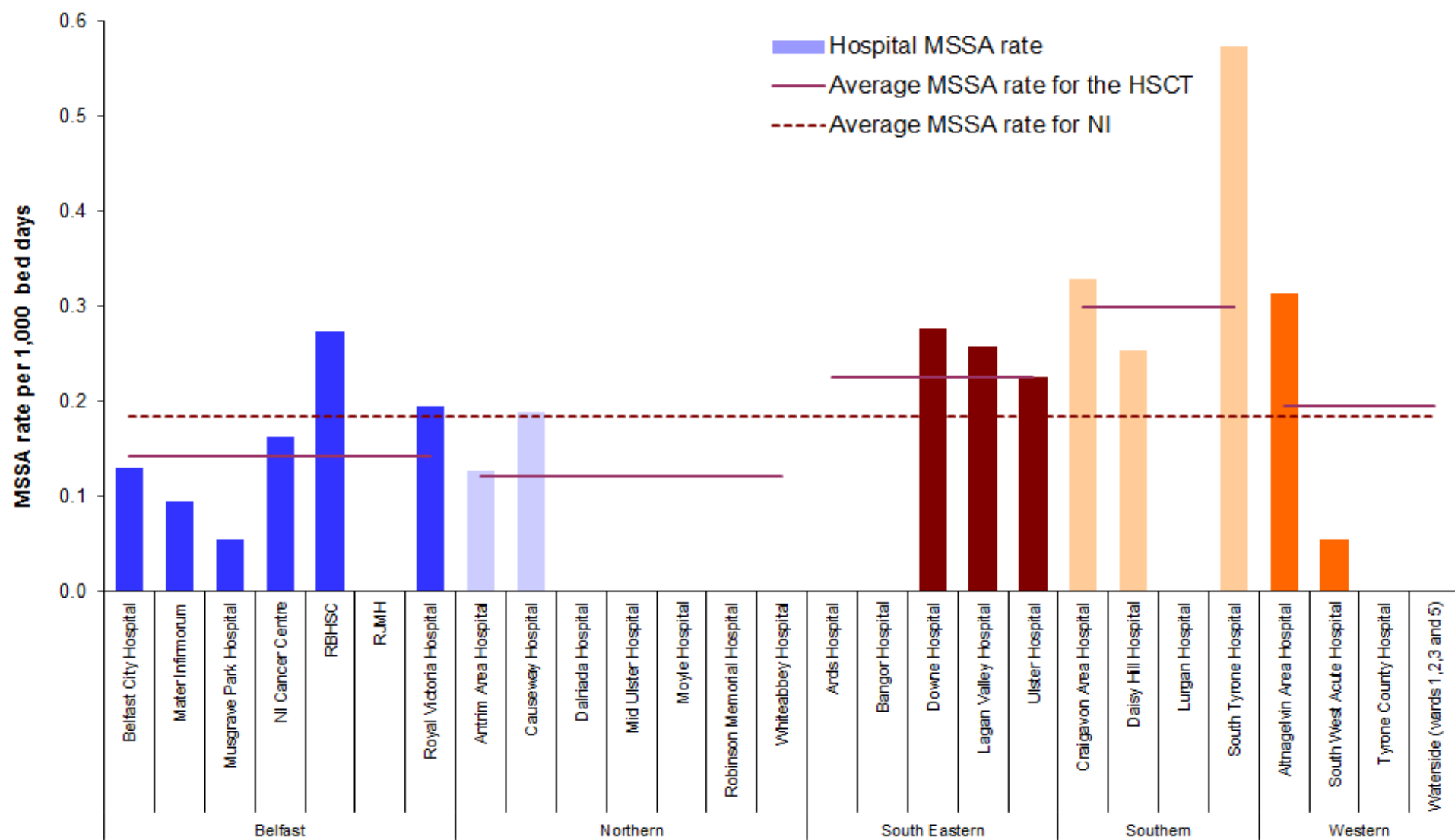


Figure 8: Rates of MSSA, January - March 2015 by individual hospitals, (gaps represent zero episodes), compared to average rates for Northern Ireland and HSCTs, January - March 2015

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

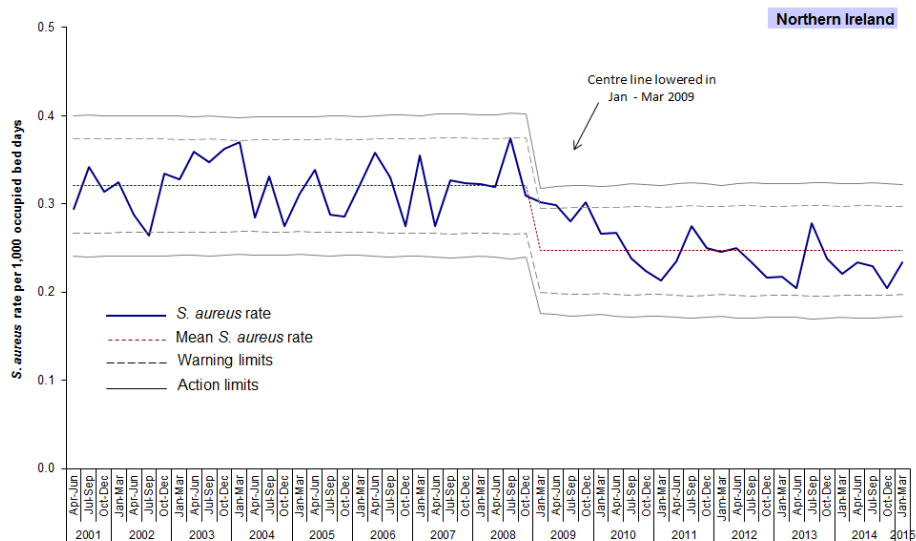


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

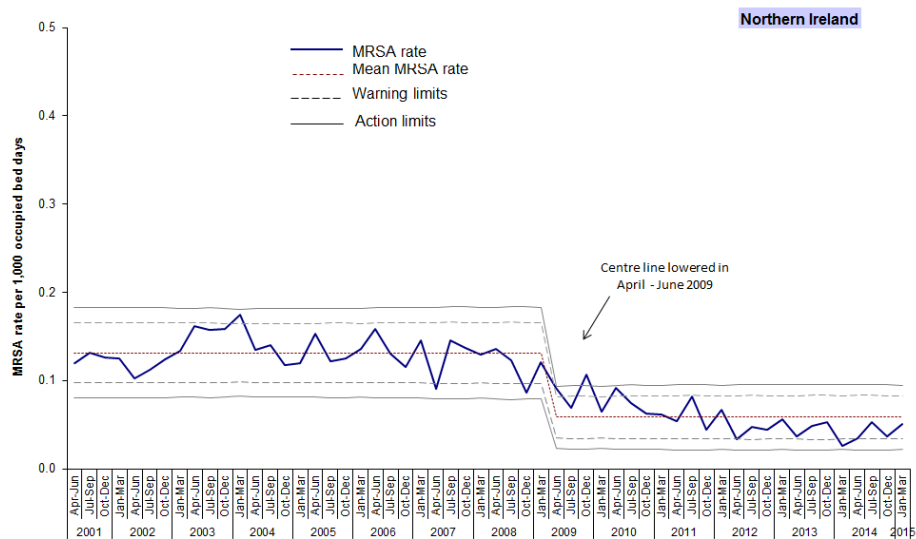
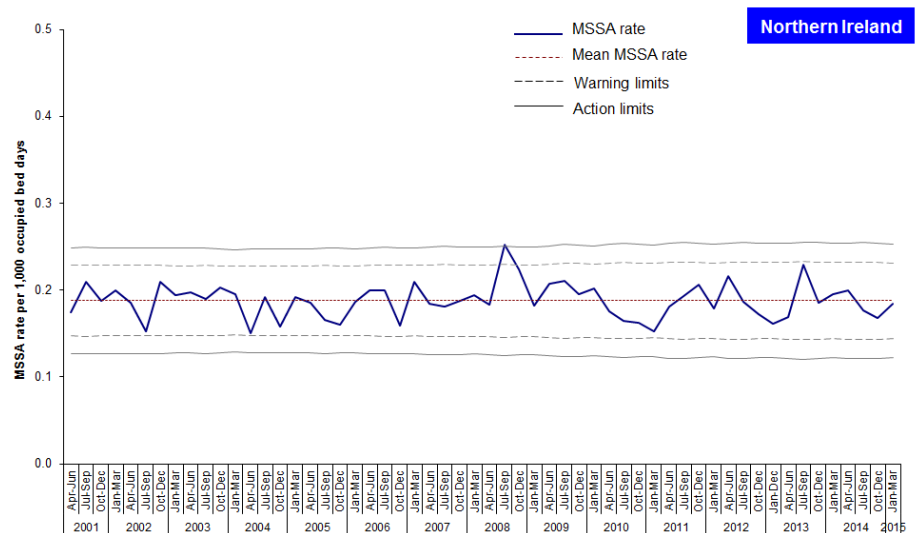


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland



Appendix 1

Table 1: Quarterly rate of MRSA patient rates, by hospital, Apr 2014 - Mar 2015

Hospital	Apr - Jun 2014 Rate	July - Sept 2014 Rate	Oct - Dec 2014 Rate	Jan-Mar 2015 Rate
Belfast City Hospital	0.000	0.035	0.067	0.033
Mater Infirmorum	0.052	0.050	0.049	0.191
Musgrave Park Hospital	0.000	0.000	0.000	0.000
NICCO (formerly at Belvoir Park)	0.000	0.000	0.164	0.325
RBHSC	0.140	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.057	0.075	0.076	0.036
Belfast HSCT	0.035	0.042	0.056	0.060
Antrim Area Hospital	0.053	0.028	0.027	0.026
Causeway Hospital	0.123	0.180	0.062	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	0.062	0.062	0.031	0.020
Ards Hospital	0.000	0.000	0.000	0.000
Bangor Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.000	0.000
Lagan Valley Hospital	0.139	0.142	0.000	0.000
Ulster Hospital	0.022	0.022	0.021	0.041
South Eastern HSCT	0.034	0.033	0.016	0.030
Craigavon Area Hospital	0.058	0.030	0.000	0.082
Daisy Hill Hospital	0.000	0.068	0.066	0.063
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000
Southern HSCT	0.035	0.036	0.017	0.070
Altnagelvin Area Hospital	0.000	0.000	0.029	0.057
South West Acute Hospital	0.000	0.316	0.059	0.055
Tyrone County Hospital	0.000	0.353	0.000	0.344
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.000	0.103	0.033	0.060
Northern Ireland total	0.030	0.053	0.036	0.050

Table 2: Quarterly number of MRSA patient episodes, by Trust, Apr 2014 - Mar 2015

Trust	Apr - Jun 2014 Episodes	Jul - Sept 2014 Episodes	Oct - Dec 2014 Episodes	Jan - March 2015 Episodes
Belfast Health & Social Care Trust	5	6	8	9
Northern Health & Social Care Trust	4	4	2	1
South Eastern Health & Social Care Trust	2	2	1	2
Southern Health & Social Care Trust	2	2	1	4
Western Health & Social Care Trust	0	6	2	4
NI TOTAL	13	20	14	20

Appendix 1

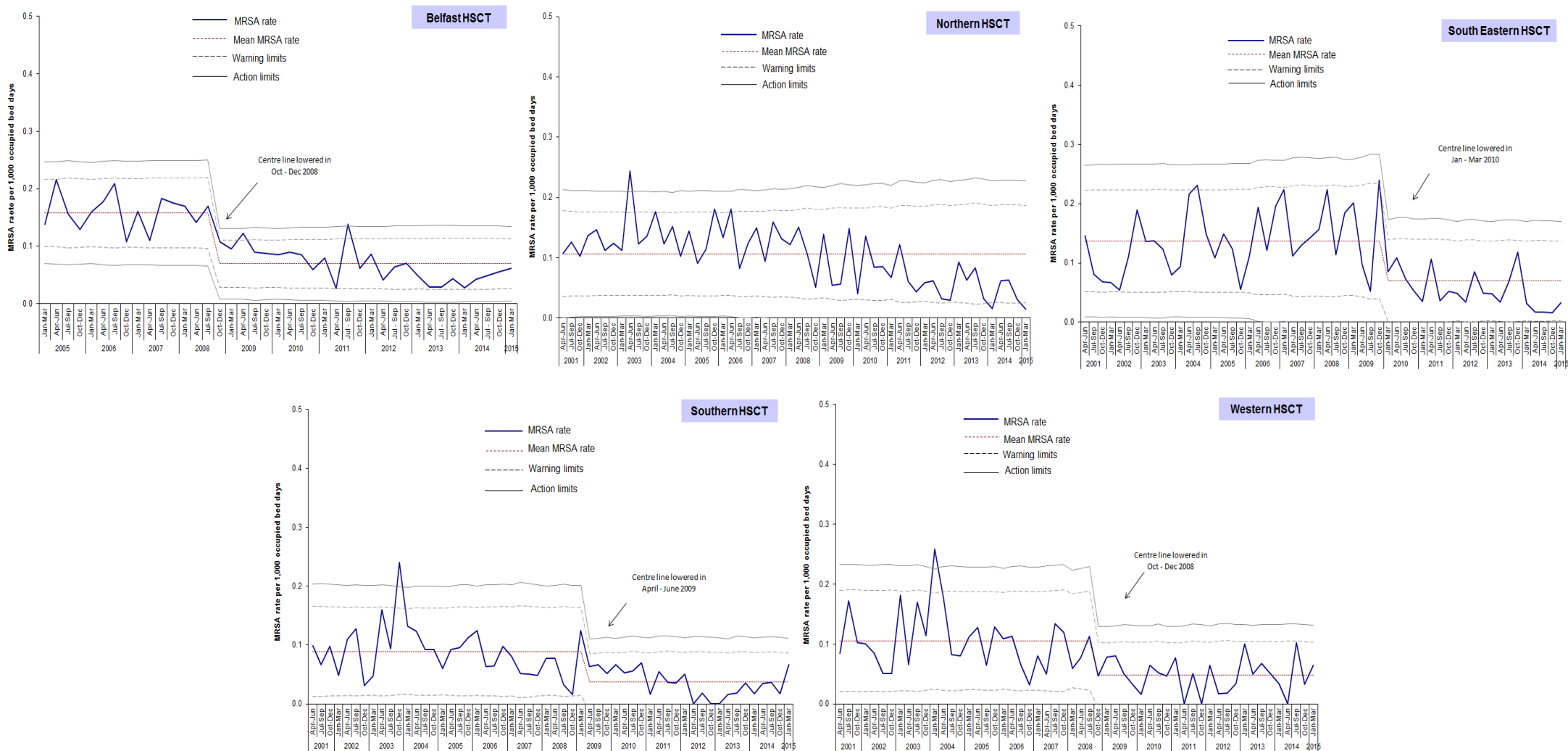
Table 3: Quarterly rate of MSSA patient rates, by hospital, Apr 2014 – Mar 2015

Hospital	Apr - Jun 2014	Jul - Sept 2014	Oct - Dec 2014	Jan - March 2015
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.034	0.212	0.269	0.131
Mater Infirmorum	0.418	0.151	0.098	0.096
Musgrave Park Hospital	0.055	0.058	0.054	0.055
NICCO (formerly at Belvoir Park)	0.170	0.169	0.164	0.162
RBHSC	0.559	0.126	0.548	0.273
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.283	0.395	0.227	0.195
Belfast HSCT	0.213	0.234	0.195	0.140
Antrim Area Hospital	0.238	0.111	0.107	0.128
Causeway Hospital	0.123	0.240	0.248	0.189
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	0.272	0.263	0.000
Northern HSCT	0.170	0.140	0.140	0.120
Ards Hospital	0.000	0.000	0.000	0.000
Bangor Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.257	0.265	0.276
Lagan Valley Hospital	0.139	0.142	0.277	0.258
Ulster Hospital	0.265	0.217	0.168	0.226
South Eastern HSCT	0.218	0.199	0.180	0.230
Craigavon Area Hospital	0.116	0.151	0.141	0.330
Daisy Hill Hospital	0.264	0.204	0.132	0.253
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.367	0	0.574
Southern HSCT	0.140	0.164	0.122	0.300
Altnagelvin Area Hospital	0.272	0.117	0.173	0.314
South West Acute Hospital	0.237	0.000	0.234	0.055
Tyrone County Hospital	0.358	0.000	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0	0.000
Western HSCT	0.242	0.069	0.167	0.190
Northern Ireland total	0.200	0.177	0.168	0.184

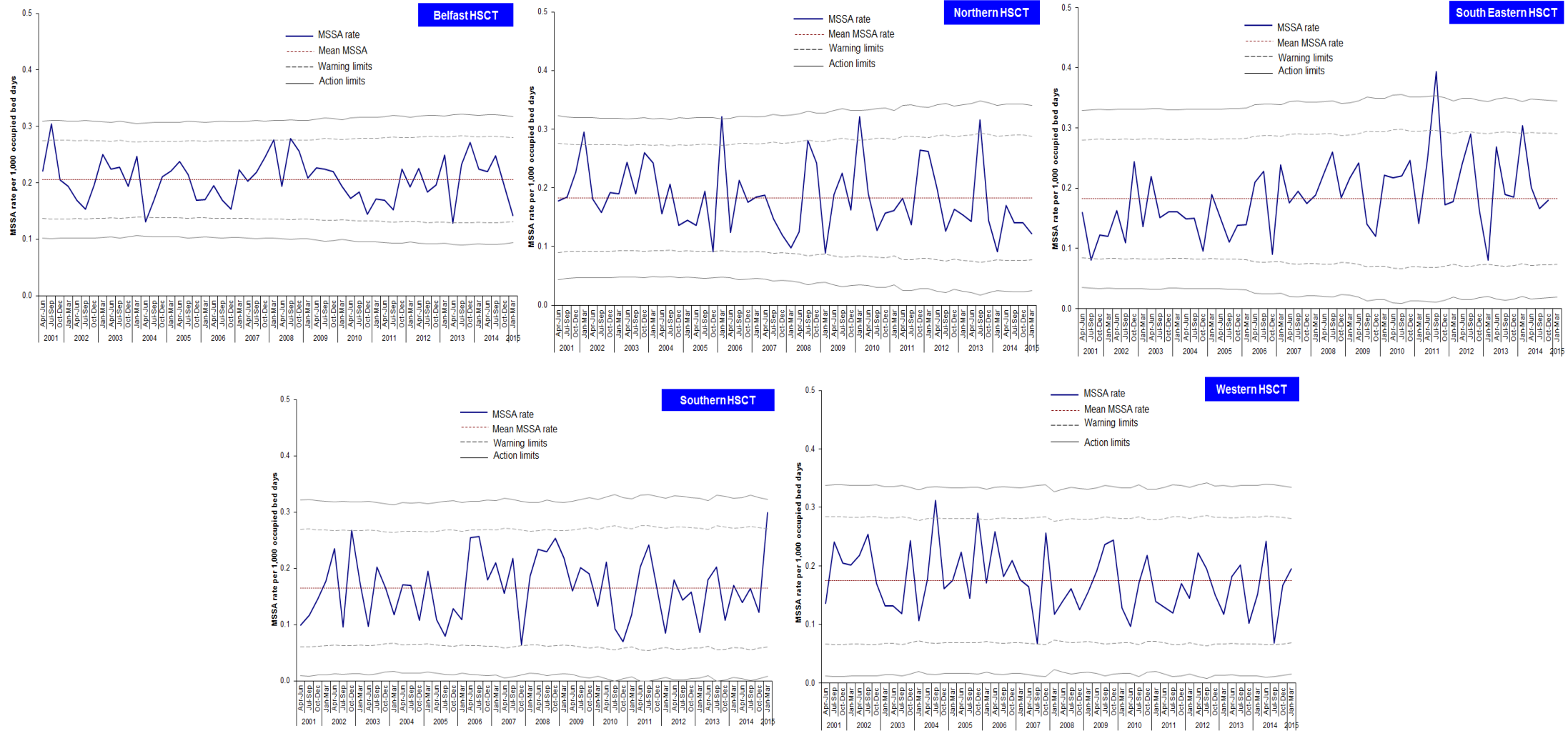
Table 4: Quarterly number of MSSA patient episodes, by Trust Apr 2014 - Mar 2015

Trust	Apr - Jun 2014	Jul - Sept 2014	Oct - Dec 2014	Jan - March 2015
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	30	33	28	21
Northern Health & Social Care Trust	11	9	9	8
South Eastern Health & Social Care Trust	13	12	11	14
Southern Health & Social Care Trust	8	9	7	18
Western Health & Social Care Trust	14	4	10	12
NI TOTAL	76	67	65	73

Appendix 2: Trends in MRSA rates, by HSCT and quarter, 2001–2015



Appendix 2: Trends in MSSA rates, by HSCT and quarter, 2001–2015



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 2006 – Mar 2015

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
Jan-Mar 2006	0.186	0.135	0.321	42.1
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

Appendix 4

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

HSCT	Financial Year									
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Belfast	118	115	109	86	62	48	46	32	18	28
Northern	46	47	42	35	22	27	19	14	12	11
South Eastern	32	49	34	46	28	15	14	13	15	7
Southern	27	19	14	16	15	11	10	1	5	9
Western	27	18	22	20	11	15	7	10	12	12
Northern Ireland	250	248	221	203	138	116	96	70	62	67

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

HSCT	Financial Year									
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Belfast	141	130	161	157	138	103	109	115	121	112
Northern	66	60	46	57	66	46	57	42	43	37
South Eastern	39	51	46	56	43	46	57	54	57	50
Southern	27	56	38	59	40	28	38	32	38	42
Western	52	51	37	37	49	39	34	40	38	40
Northern Ireland	325	348	328	366	336	262	295	283	297	281