

S. aureus bacteraemia surveillance

Quarterly report

October 2015 – December 2015

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) decreased by approximately 25% during October-December 2015 compared to July-September 2015.
- MRSA rates decreased by approximately 51% during October-December 2015 compared to July-September 2015.
- MRSA reports during 2014/15 rose by 8% compared to 2013/14.
- MSSA rates decreased by approximately 18% compared to July-September 2015.
- 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

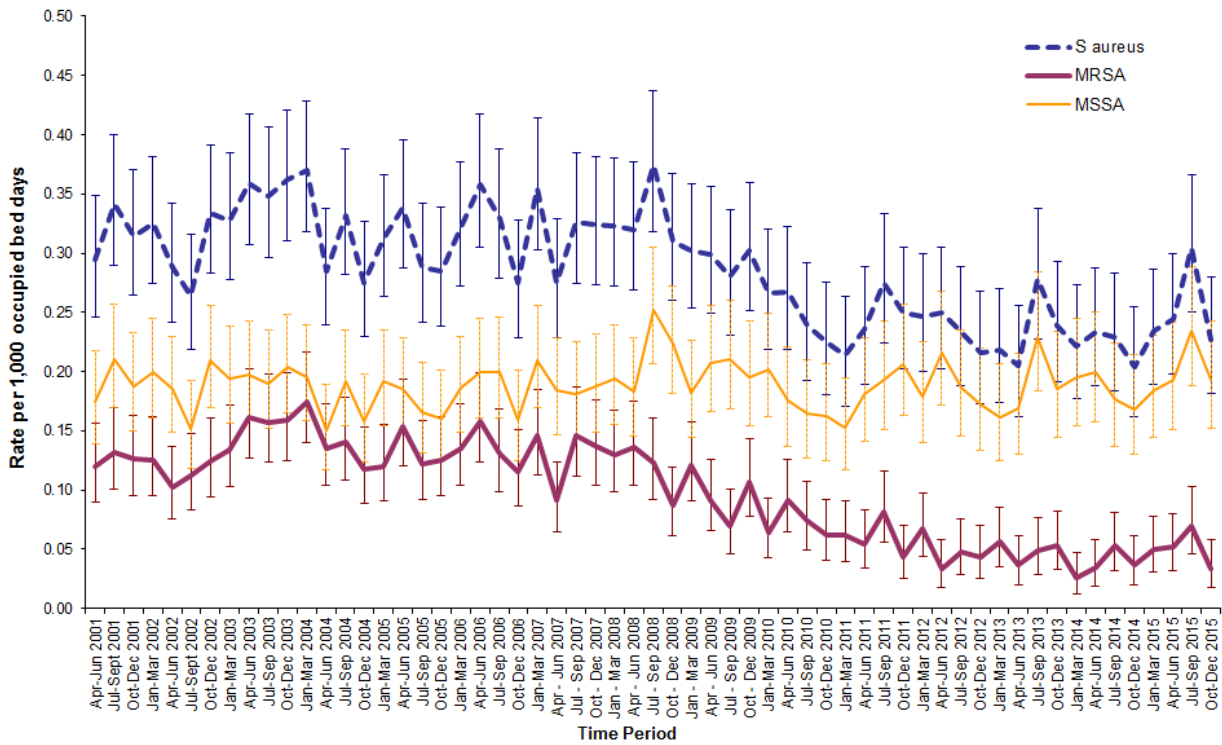


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – December 2015 (see Appendix 3)

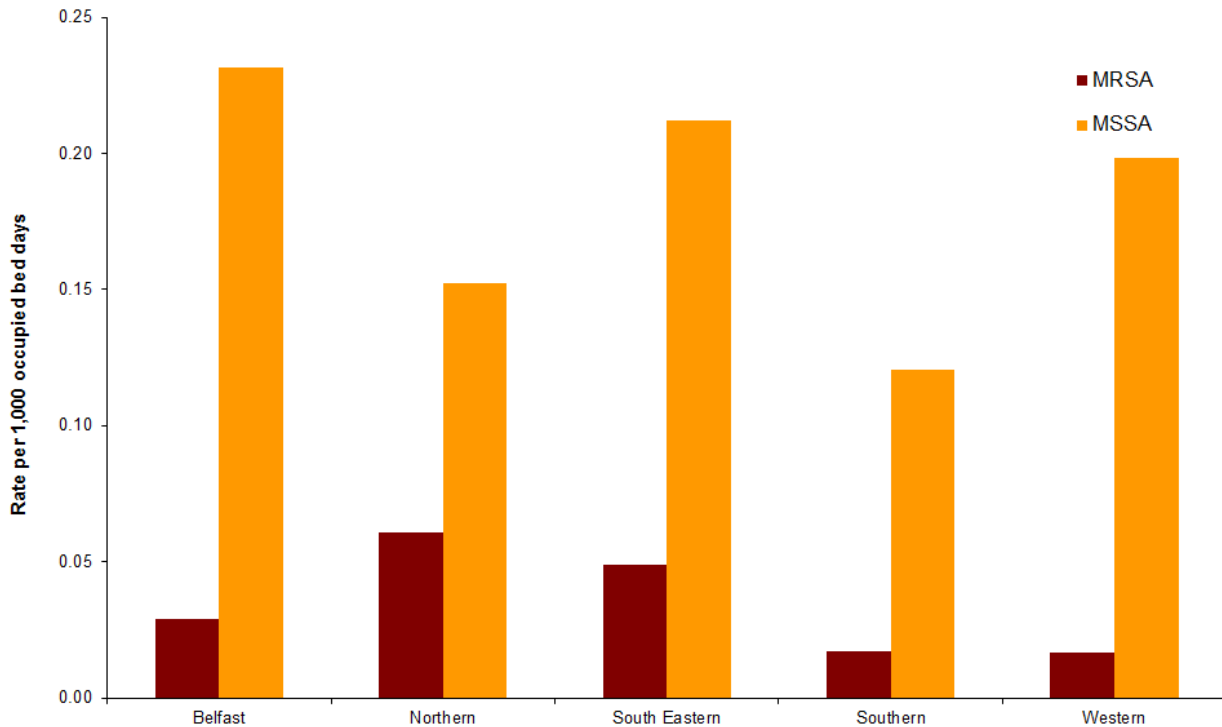


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, October – December 2015

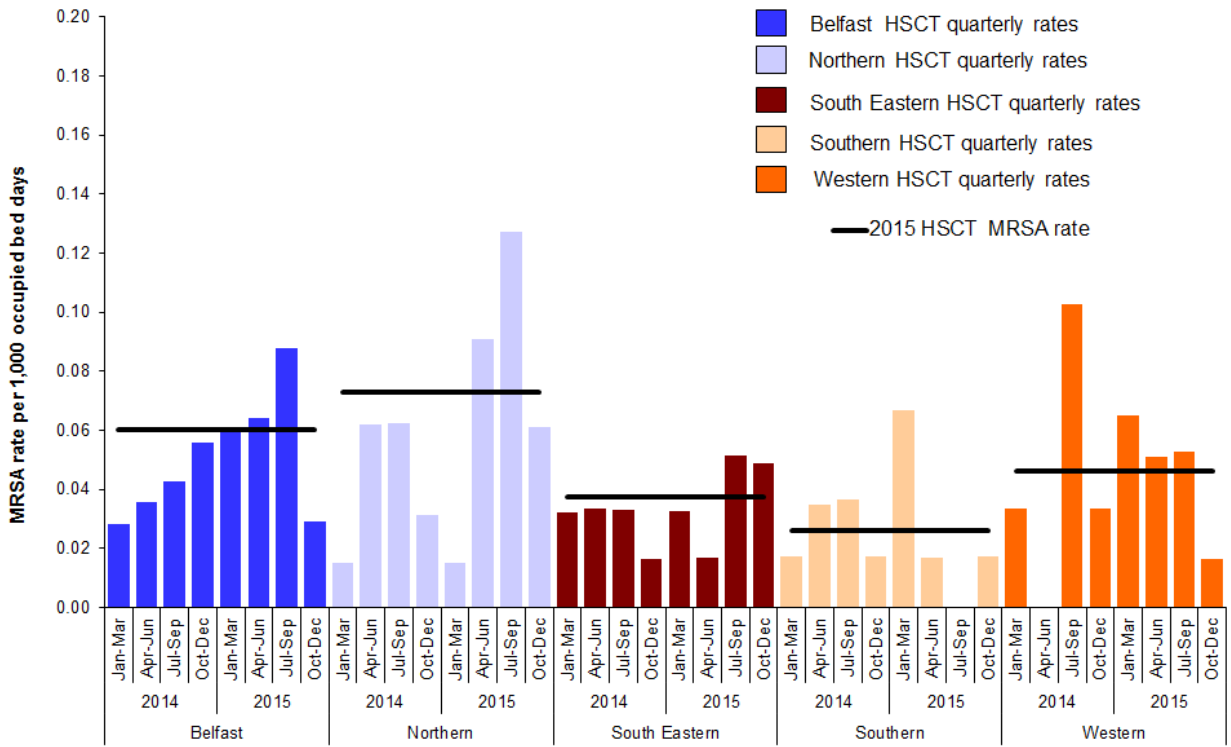


Figure 3: MRSA quarterly rate January 2014 – December 2015, by HSCT, with 2015 annual HSCT MRSA rate

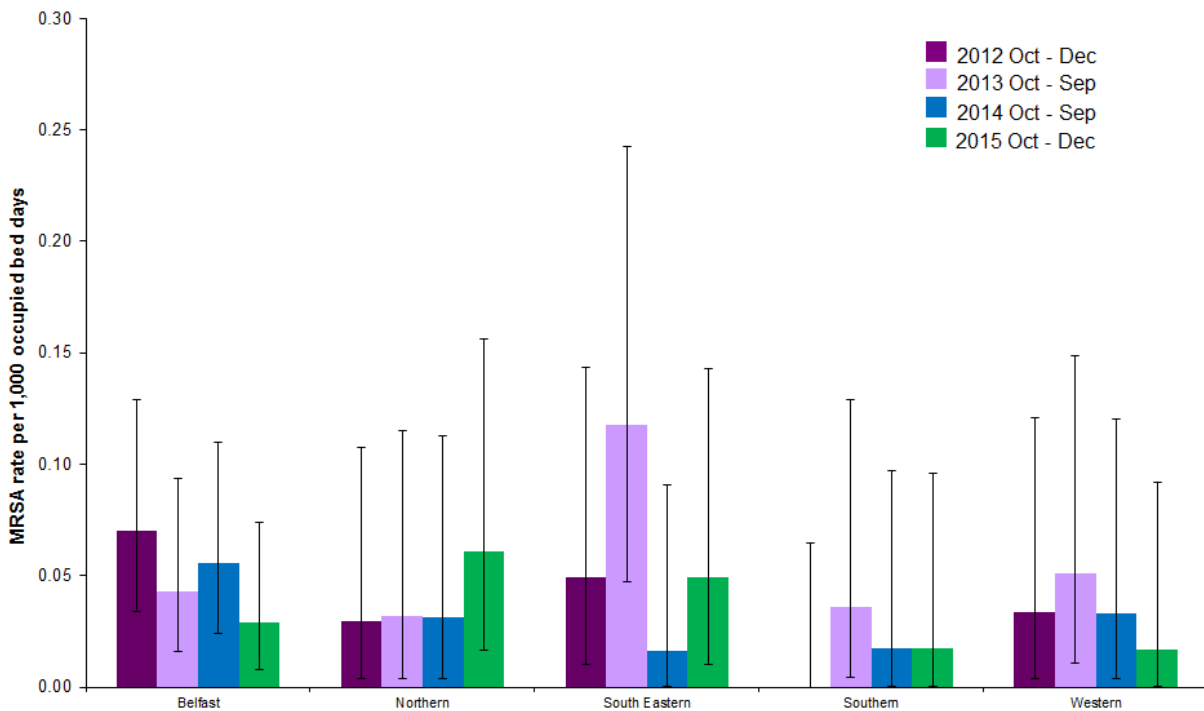


Figure 4: MRSA rate during October - December, by HSCT, from 2012–2015, with 95% confidence intervals

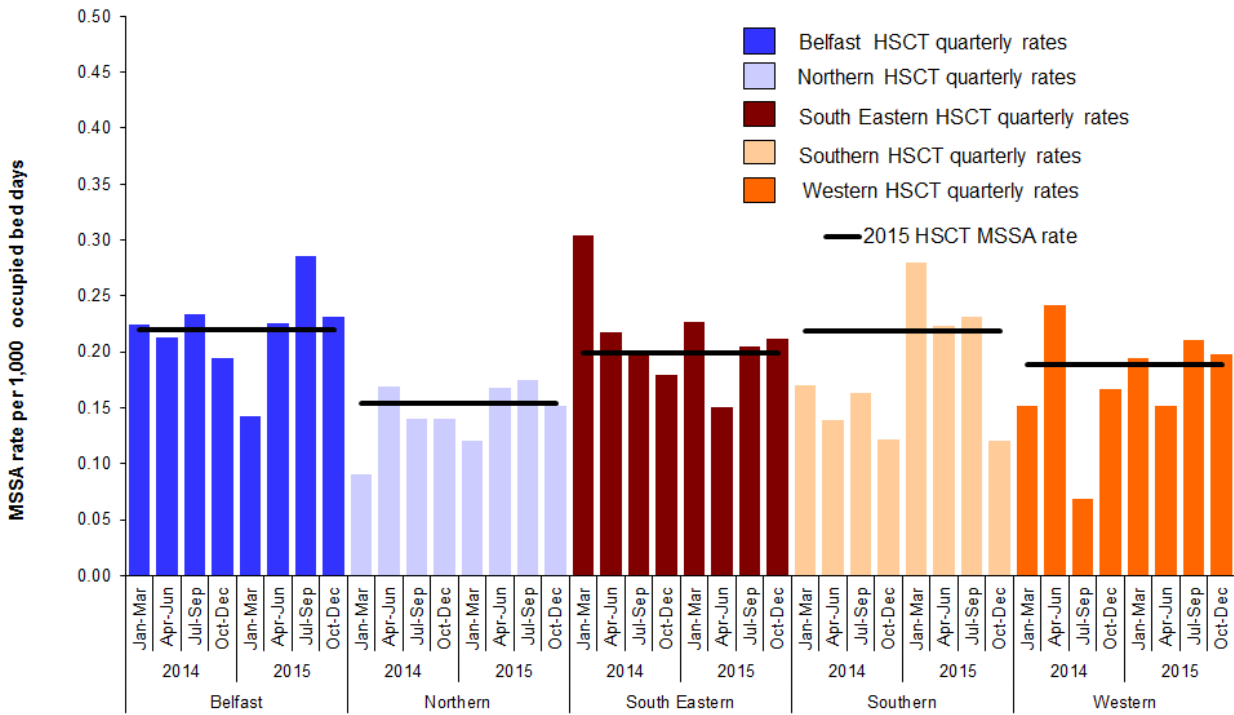


Figure 5: MSSA quarterly rate January 2014 – December 2015, by HSCT, with 2015 HSCT MSSA rate

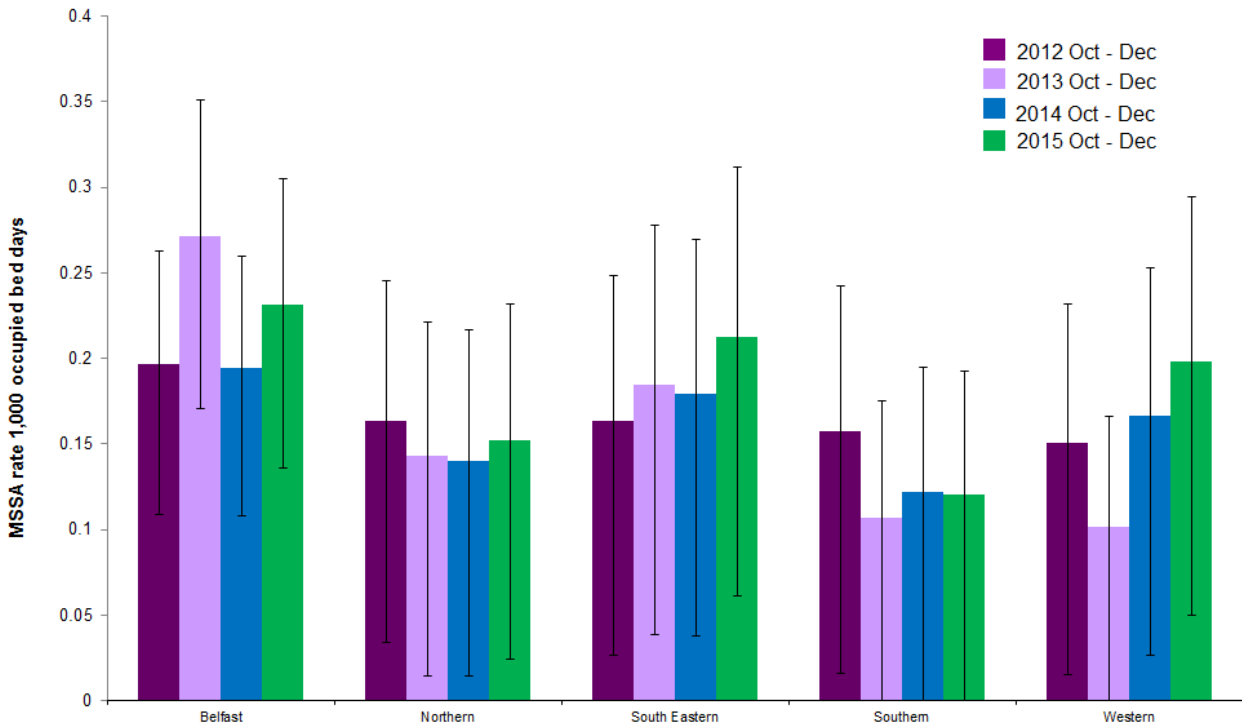


Figure 6: MSSA rate during October - December, by HSCT, from 2012–2015, with 95% confidence intervals

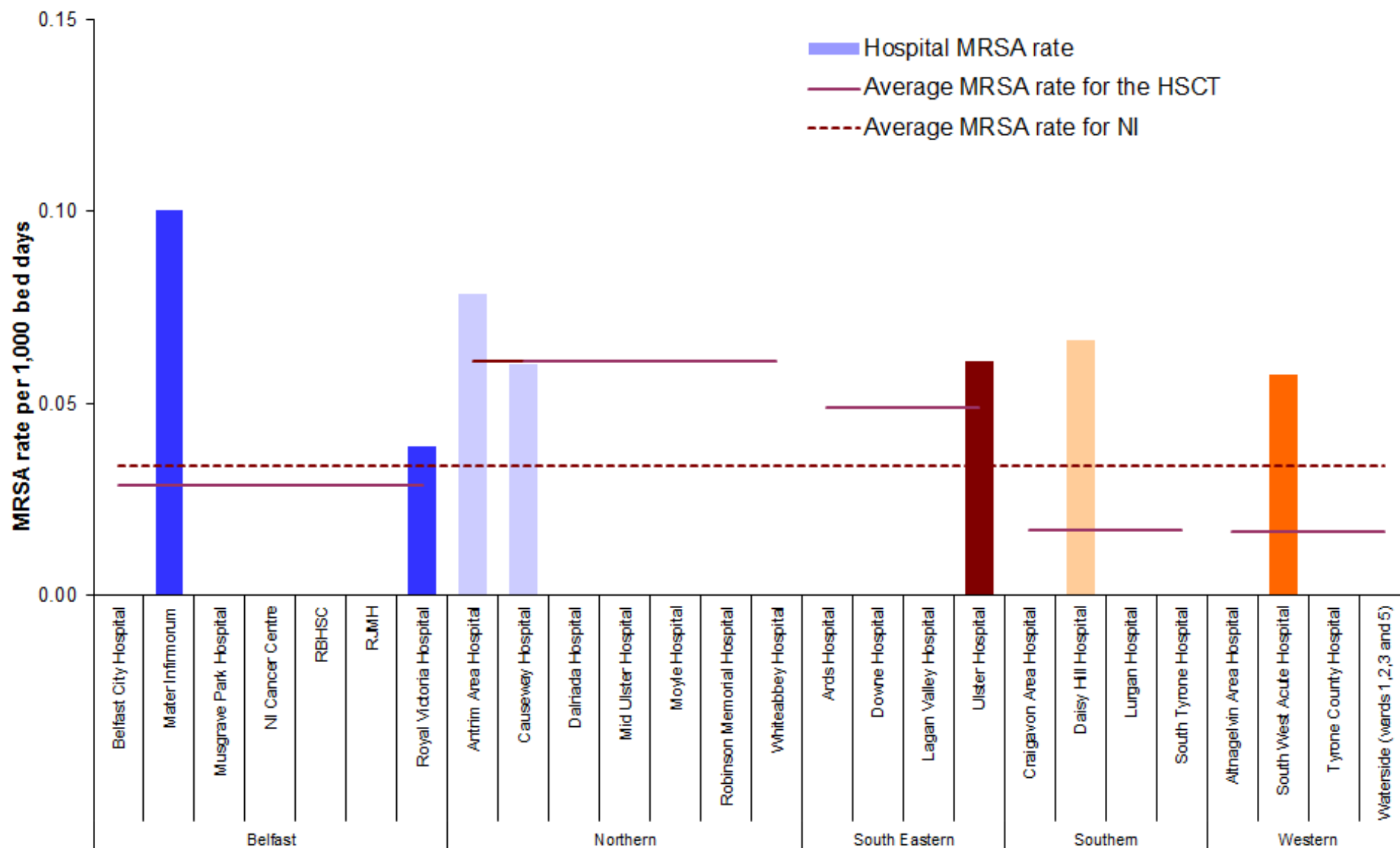


Figure 7: Rates of MRSA, October - December 2015 by individual hospitals, (gaps represent zero episodes), compared to October - December 2015 average rates for Northern Ireland and HSCTs

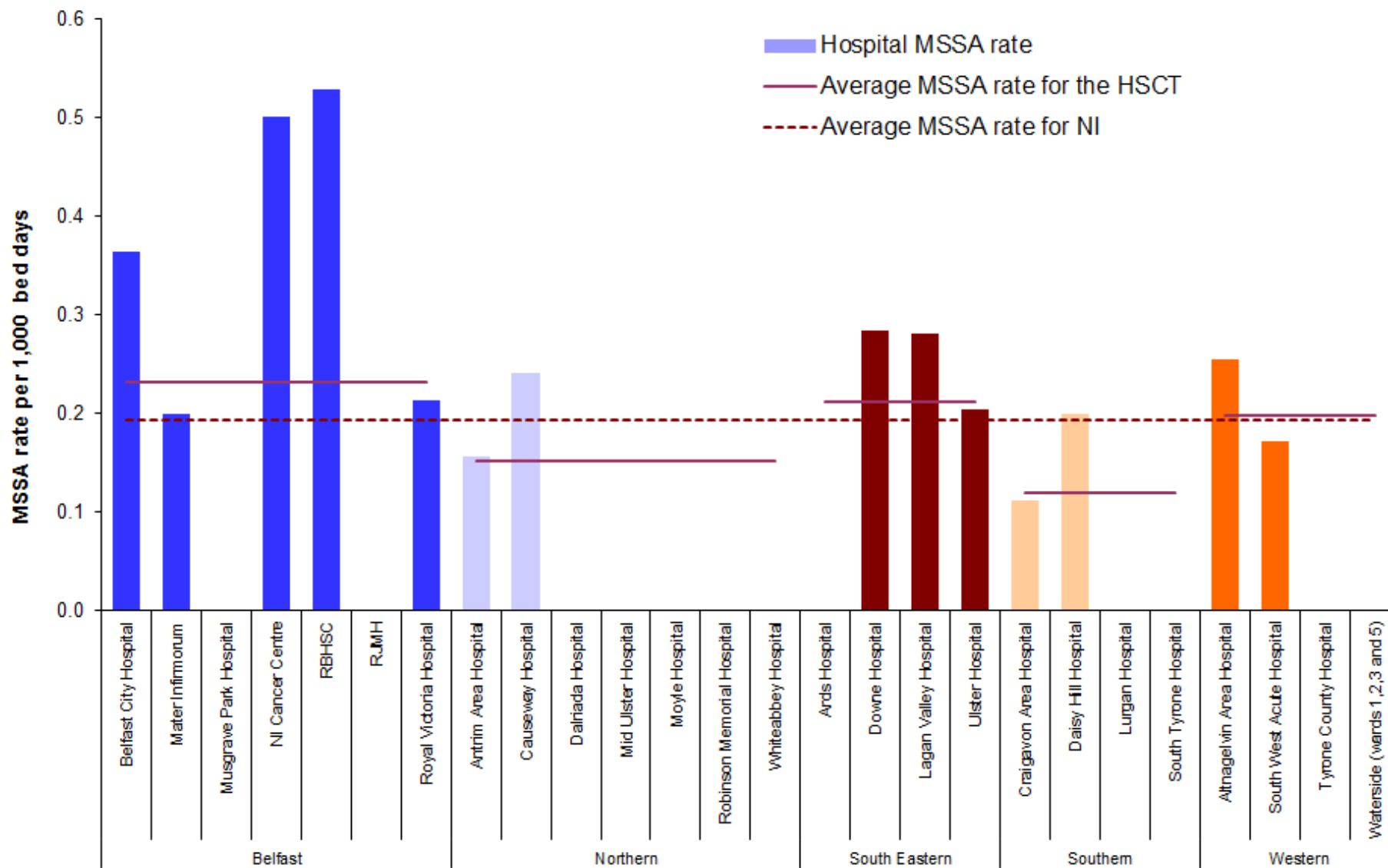


Figure 8: Rates of MSSA, October - December 2015 by individual hospitals, (gaps represent zero episodes), compared to average rates for Northern Ireland and HSCTs, October - December 2015

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

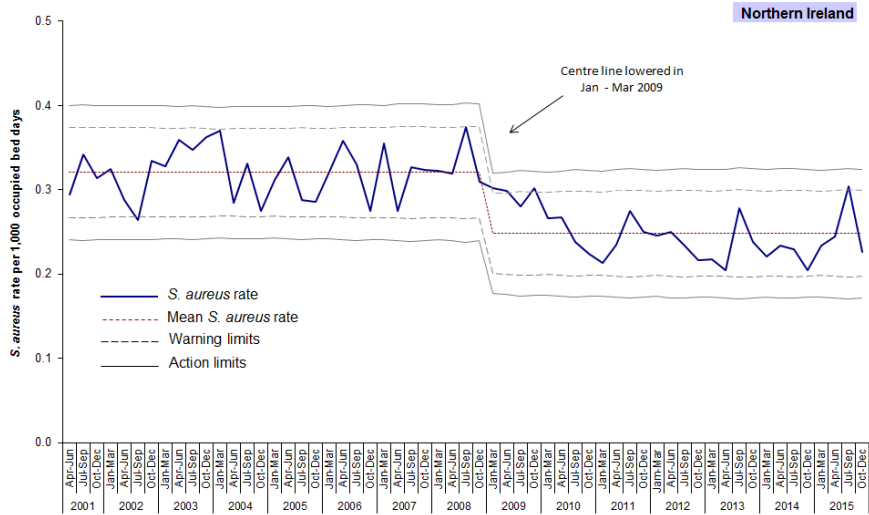


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

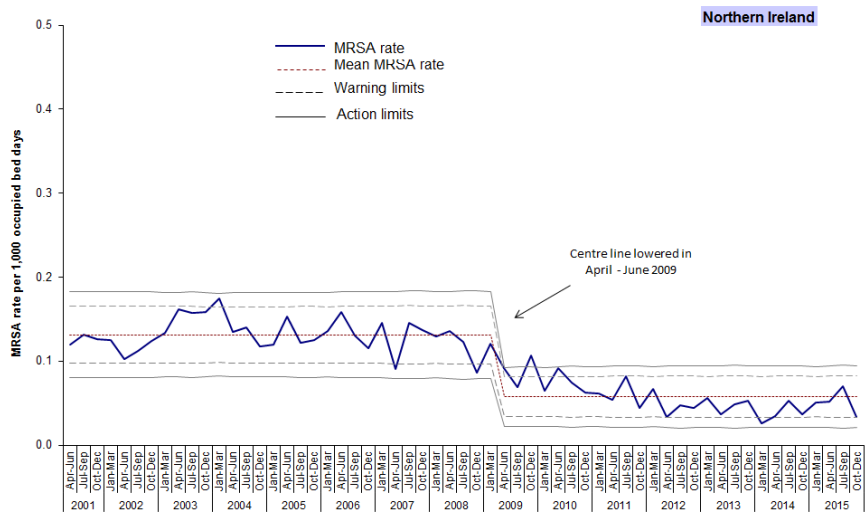
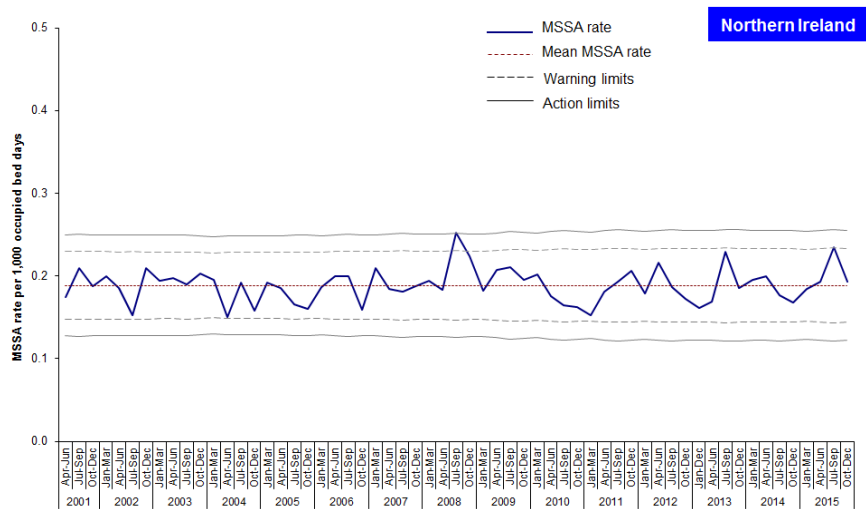


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland



Appendix 1

Table 1: Quarterly rate of MRSA patients, by hospital, Jan 2015 – Dec 2015

Hospital	Jan-Mar 2015	Apr - Jun 2015	July - Sept 2015	Oct - Dec 2015
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.033	0.070	0.073	0.000
Mater Infirmorum	0.191	0.144	0.101	0.100
Musgrave Park Hospital	0.000	0.058	0.000	0.000
NICCO (formerly at Belvoir Park)	0.325	0.000	0.339	0.000
RBHSC	0.000	0.000	0.141	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.036	0.056	0.097	0.039
Belfast HSCT	0.060	0.064	0.088	0.029
Antrim Area Hospital	0.026	0.156	0.164	0.078
Causeway Hospital	0.000	0.000	0.126	0.060
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	0.020	0.091	0.127	0.061
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	0.041	0.021	0.064	0.061
South Eastern HSCT	0.030	0.017	0.051	0.049
Craigavon Area Hospital	0.082	0.000	0.000	0.000
Daisy Hill Hospital	0.063	0.065	0.000	0.066
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000
Southern HSCT	0.070	0.017	0.000	0.017
Altnagelvin Area Hospital	0.057	0.029	0.090	0.000
South West Acute Hospital	0.055	0.120	0.000	0.058
Tyrone County Hospital	0.344	0.000	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.060	0.051	0.053	0.017
Northern Ireland total	0.050	0.052	0.070	0.034

Table 2: Quarterly episodes of MRSA patients, by Trust, Jan 2015 – Dec 2015

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

Appendix 1

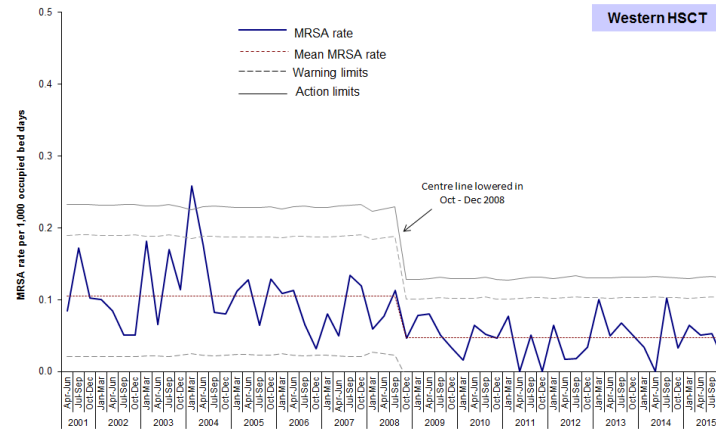
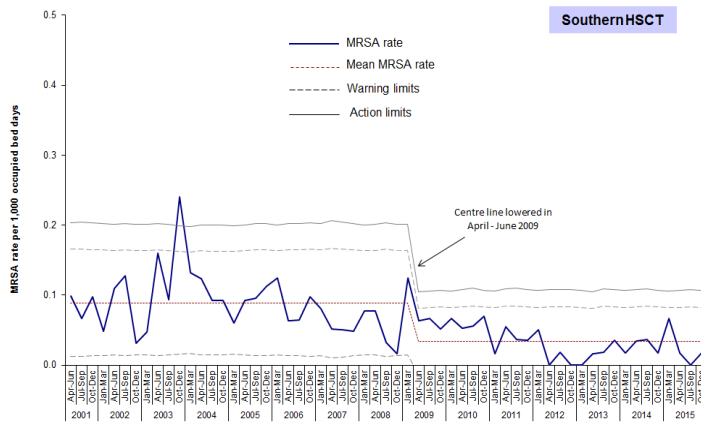
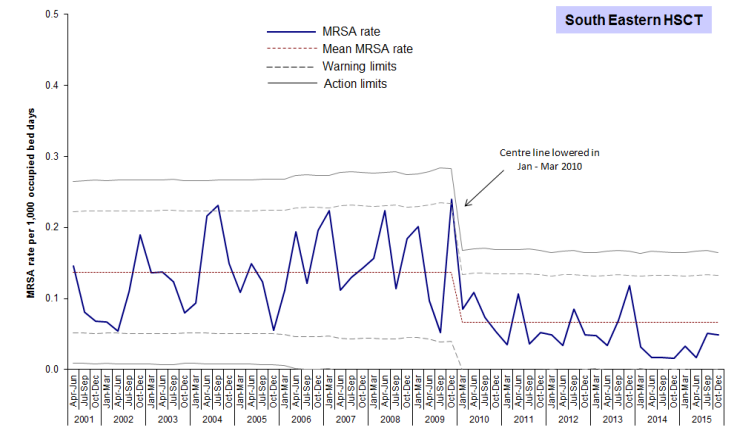
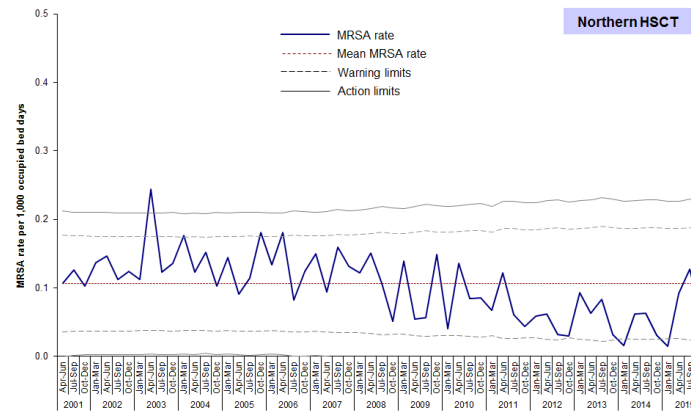
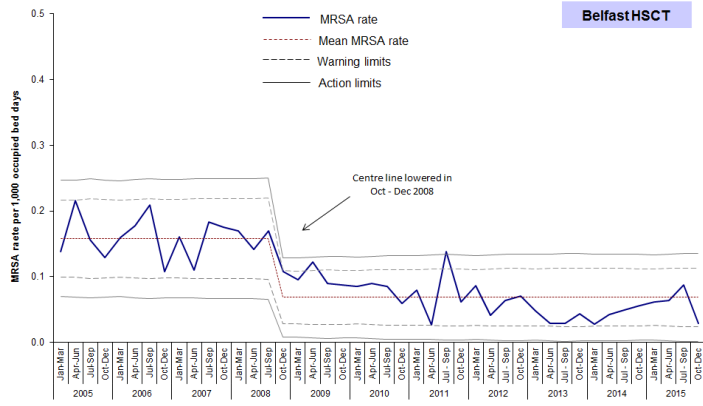
Table 3: Quarterly rate of MSSA patients, by hospital, Jan 2015 - Dec 2015

Hospital	Jan - March 2015	Apr - Jun 2015	Jul - Sept 2015	Oct - Dec 2015
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.131	0.141	0.109	0.364
Mater Infirmorum	0.096	0.288	0.202	0.201
Musgrave Park Hospital	0.055	0.000	0.061	0.000
NICCO (formerly at Belvoir Park)	0.162	0.496	0.509	0.501
RBHSC	0.273	0.687	0.704	0.529
RJMh	0.000	0.000	0.117	0.000
Royal Victoria Hospital	0.195	0.262	0.427	0.213
Belfast HSCT	0.140	0.226	0.285	0.232
Antrim Area Hospital	0.128	0.233	0.137	0.157
Causeway Hospital	0.189	0.122	0.379	0.242
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	0.120	0.168	0.175	0.152
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.276	0.294	0.296	0.284
Lagan Valley Hospital	0.258	0.000	0.446	0.281
Ulster Hospital	0.226	0.167	0.171	0.204
South Eastern HSCT	0.230	0.151	0.205	0.212
Craigavon Area Hospital	0.330	0.252	0.260	0.111
Daisy Hill Hospital	0.253	0.260	0.280	0.199
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.574	0.000	0.000	0.000
Southern HSCT	0.300	0.223	0.232	0.120
Altnagelvin Area Hospital	0.314	0.145	0.239	0.256
South West Acute Hospital	0.055	0.239	0.191	0.173
Tyrone County Hospital	0.000	0.000	0.456	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000
Western HSCT	0.190	0.152	0.210	0.198
Northern Ireland total	0.184	0.193	0.234	0.193

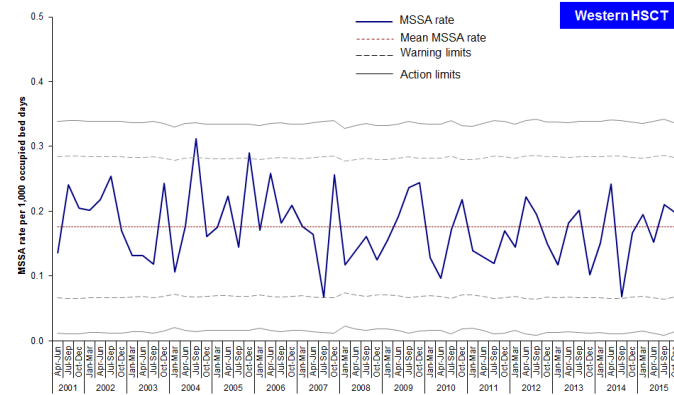
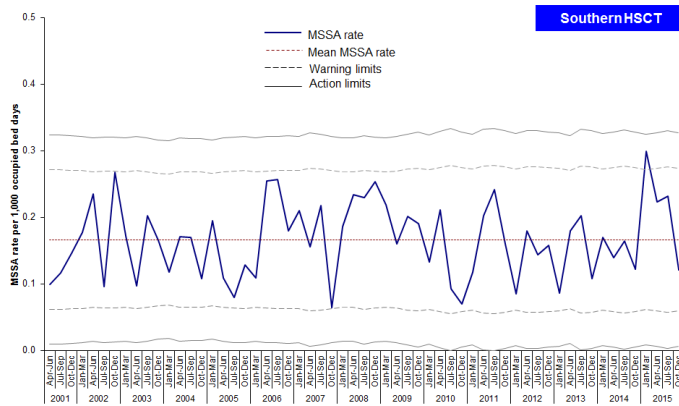
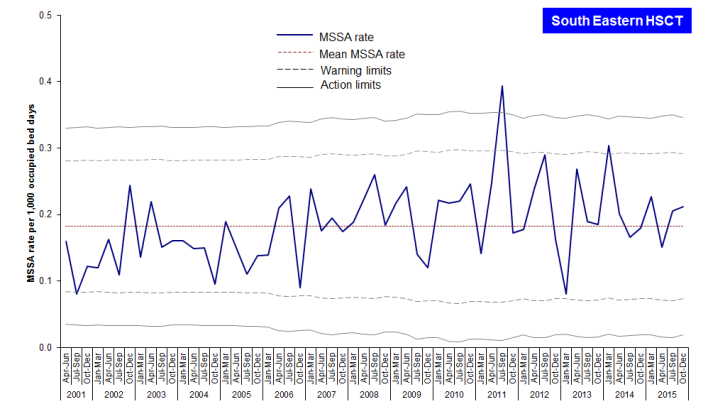
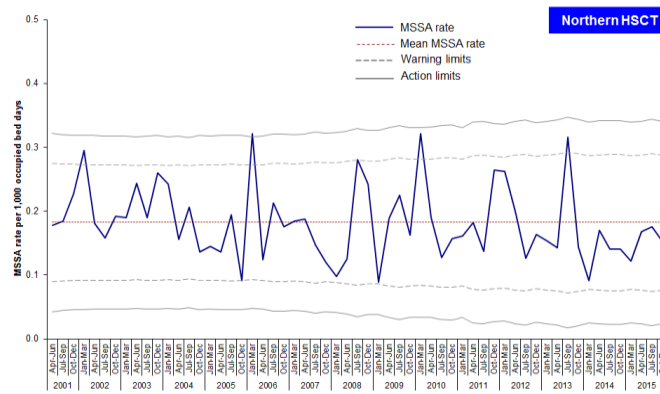
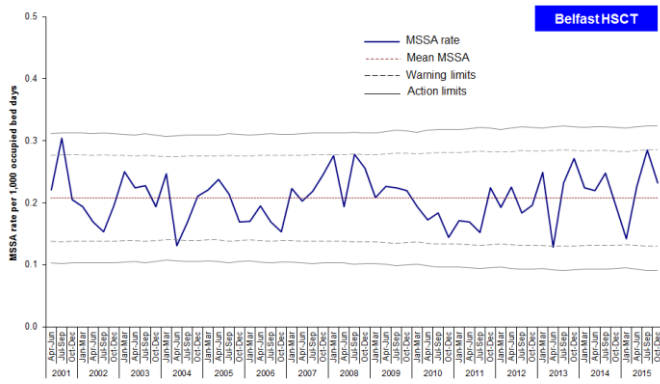
Table 4: Quarterly episodes of MSSA patient, by Trust, Jan 2015 - Dec 2015

Trust	Jan - March 2015	Apr - Jun 2015	Jul - Sept 2015	Oct - Dec 2015
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	21	32	39	32
Northern Health & Social Care Trust	8	11	11	10
South Eastern Health & Social Care Trust	14	9	12	13
Southern Health & Social Care Trust	18	13	13	7
Western Health & Social Care Trust	12	9	12	12
NI TOTAL	73	74	87	74

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 – Dec 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
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

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