

S. aureus bacteraemia surveillance

Quarterly report

July 2015 – September 2015

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 24% during July-September 2015 compared to April-June 2015.
- MRSA rates increased by approximately 35% during July-September 2015 compared to April-June 2015.
- MRSA reports during 2014/15 rose by 8% compared to 2013/14.
- MSSA rates increased by approximately 21% compared to April-June 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

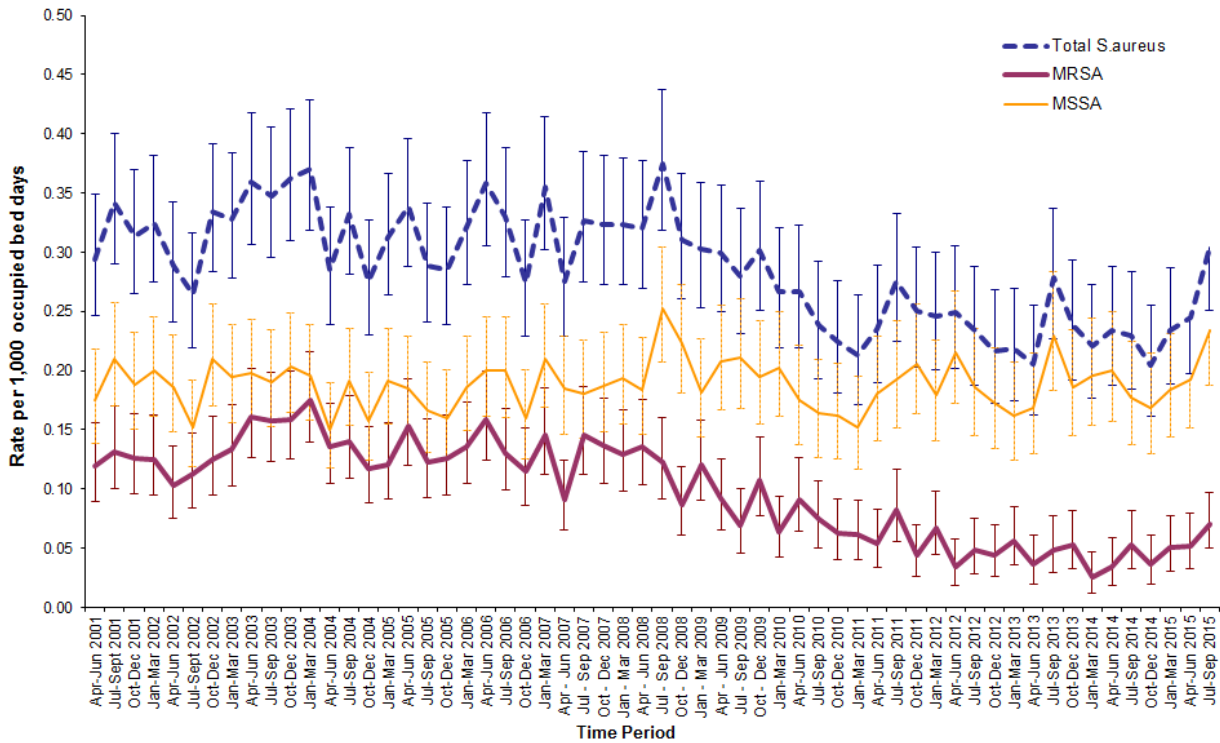


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – September 2015 (see Appendix 3)

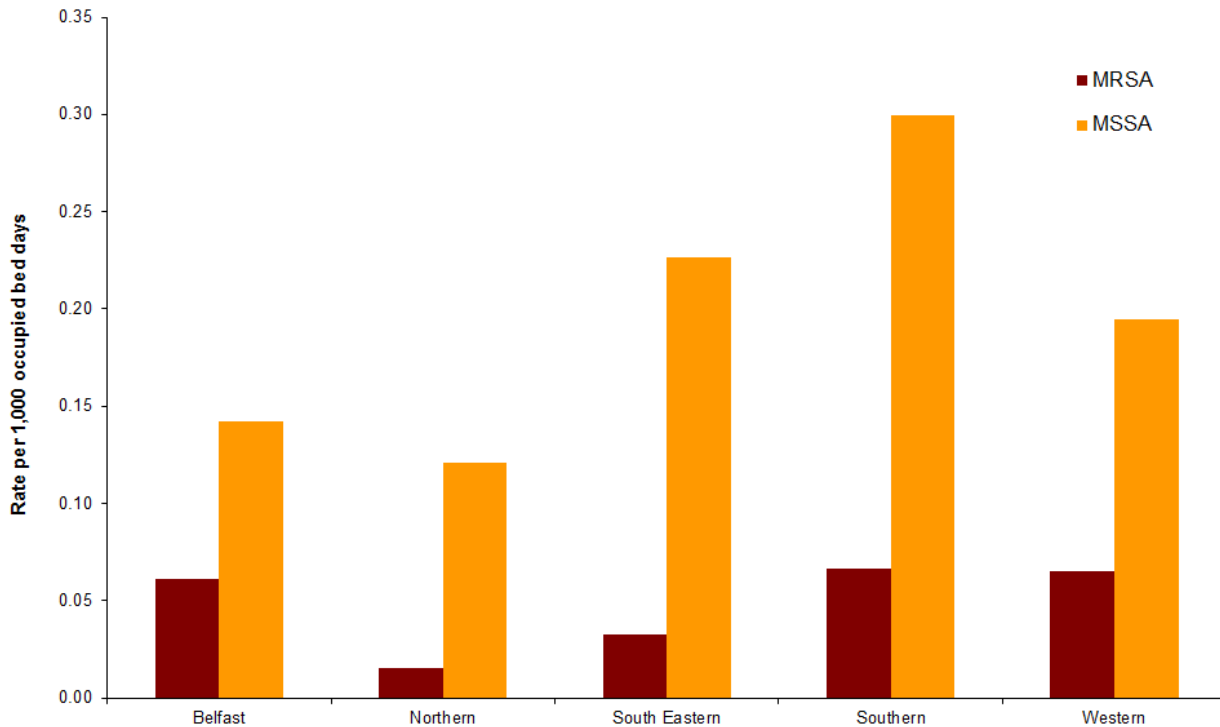


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, July – September 2015

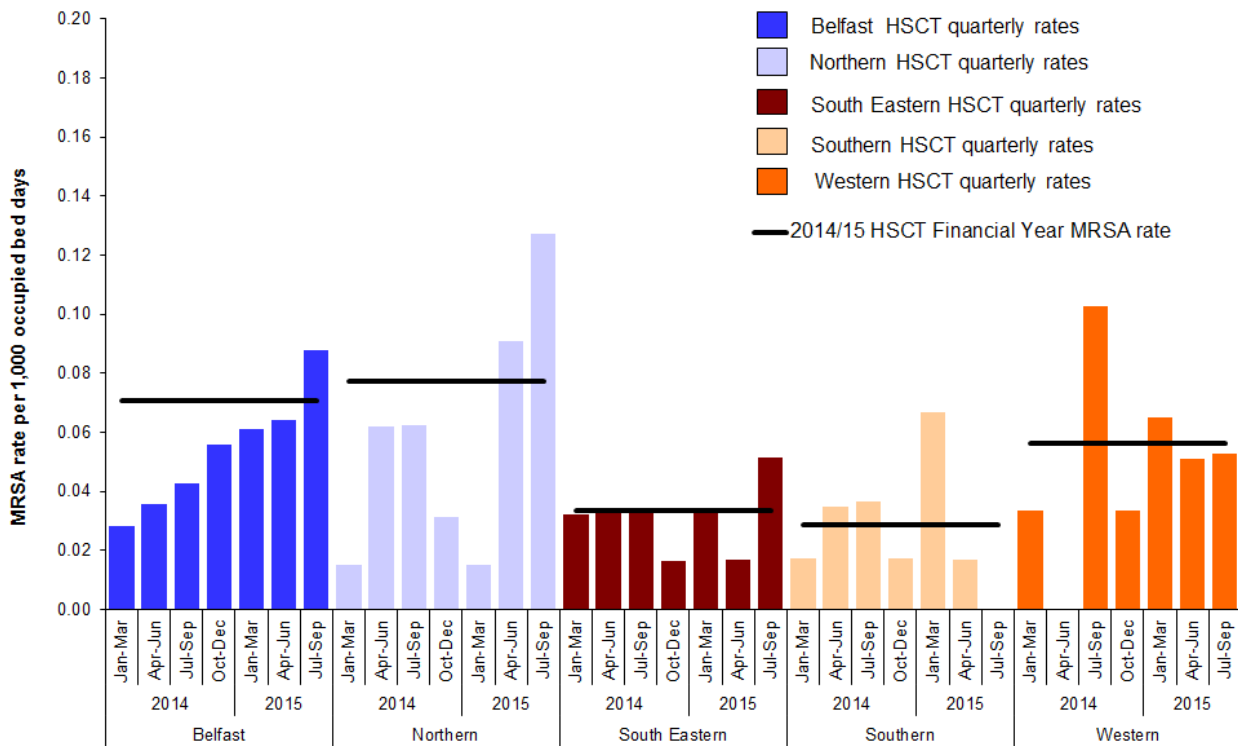


Figure 3: MRSA quarterly rate January 2014 – September 2015, by HSCT, with 2014/15 HSCT Financial Year MRSA rate

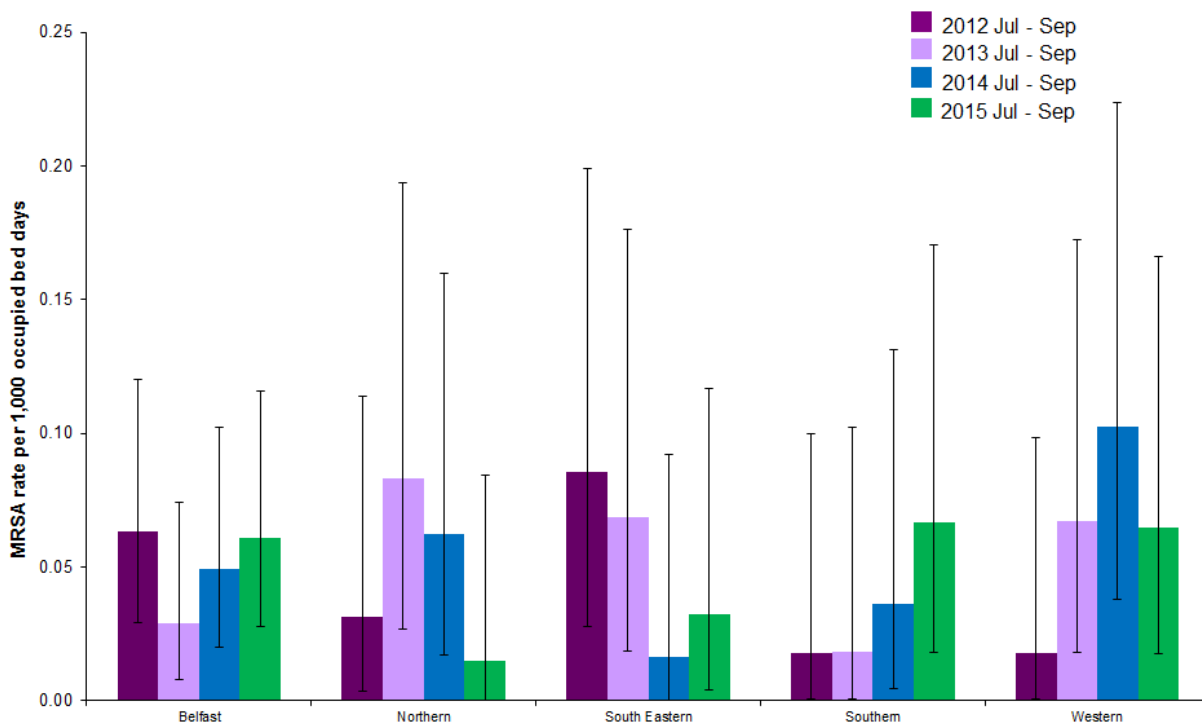


Figure 4: MRSA rate during July - September, by HSCT, from 2012–2015, with 95% confidence intervals

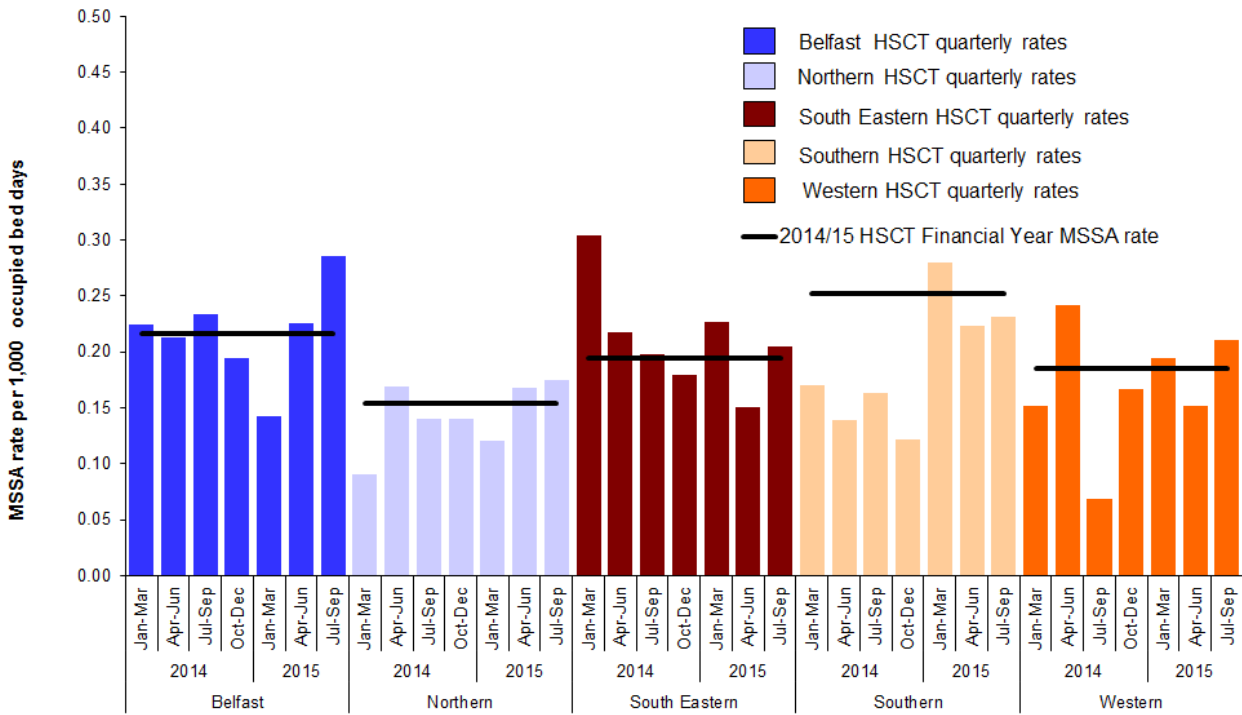


Figure 5: MSSA quarterly rate January 2014 – September 2015, by HSCT, with 2014/15 HSCT Financial Year MSSA rate

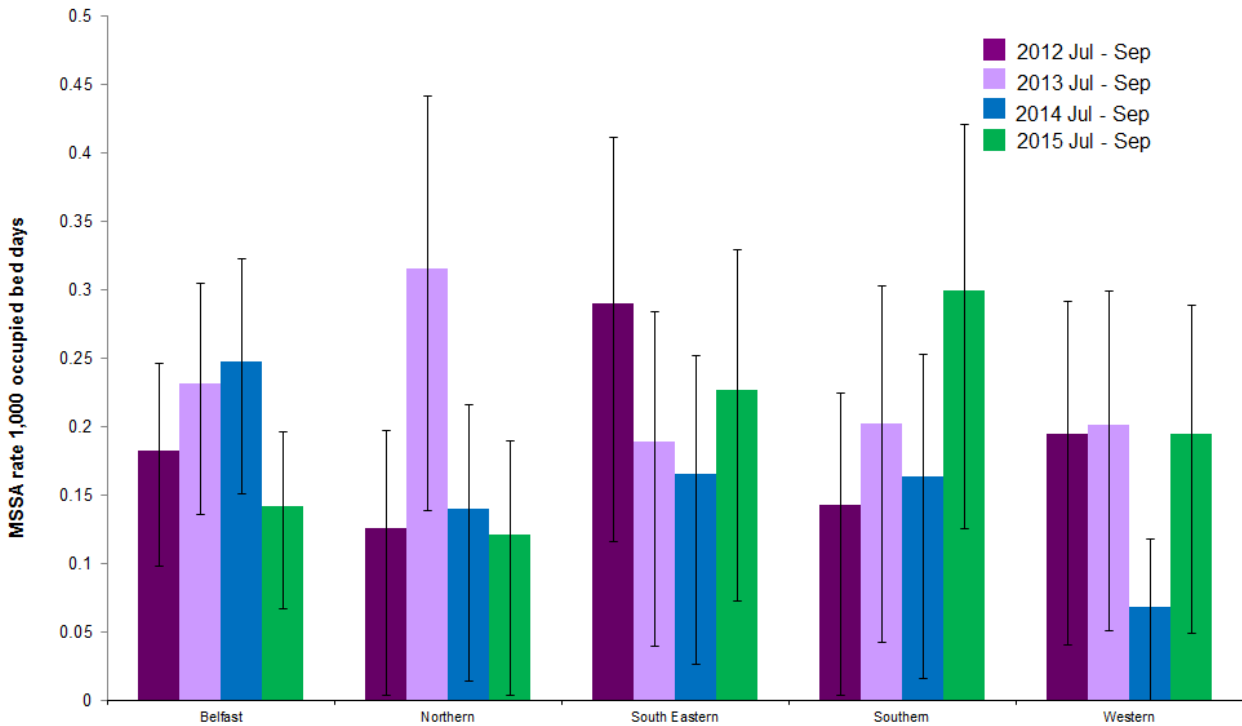


Figure 6: MSSA rate during July – September 2015, by HSCT, from 2012–2015, with 95% confidence intervals

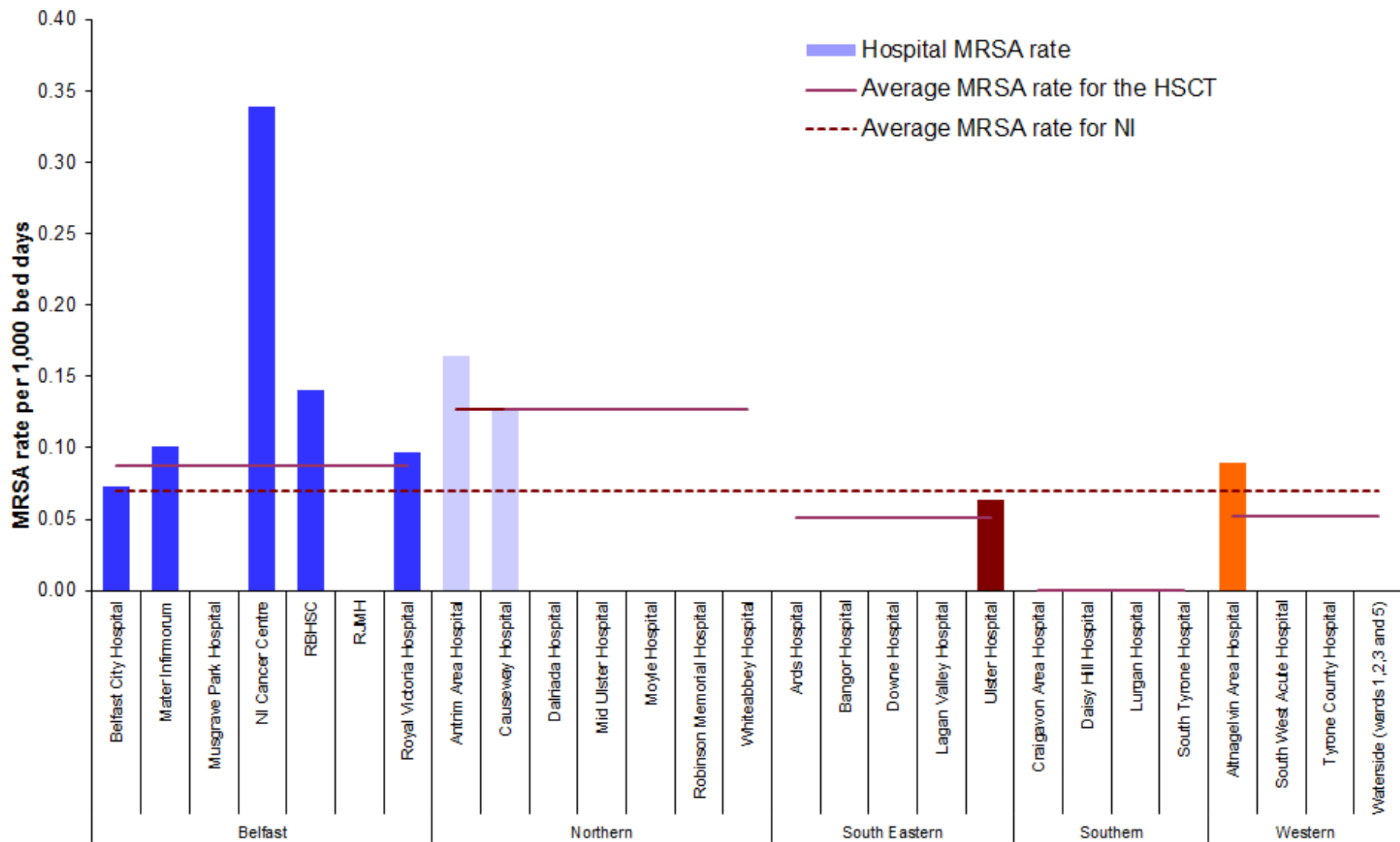


Figure 7: Rates of MRSA, July - September 2015 by individual hospitals, (gaps represent zero episodes), compared to July - September 2015 average rates for Northern Ireland and HSCTs

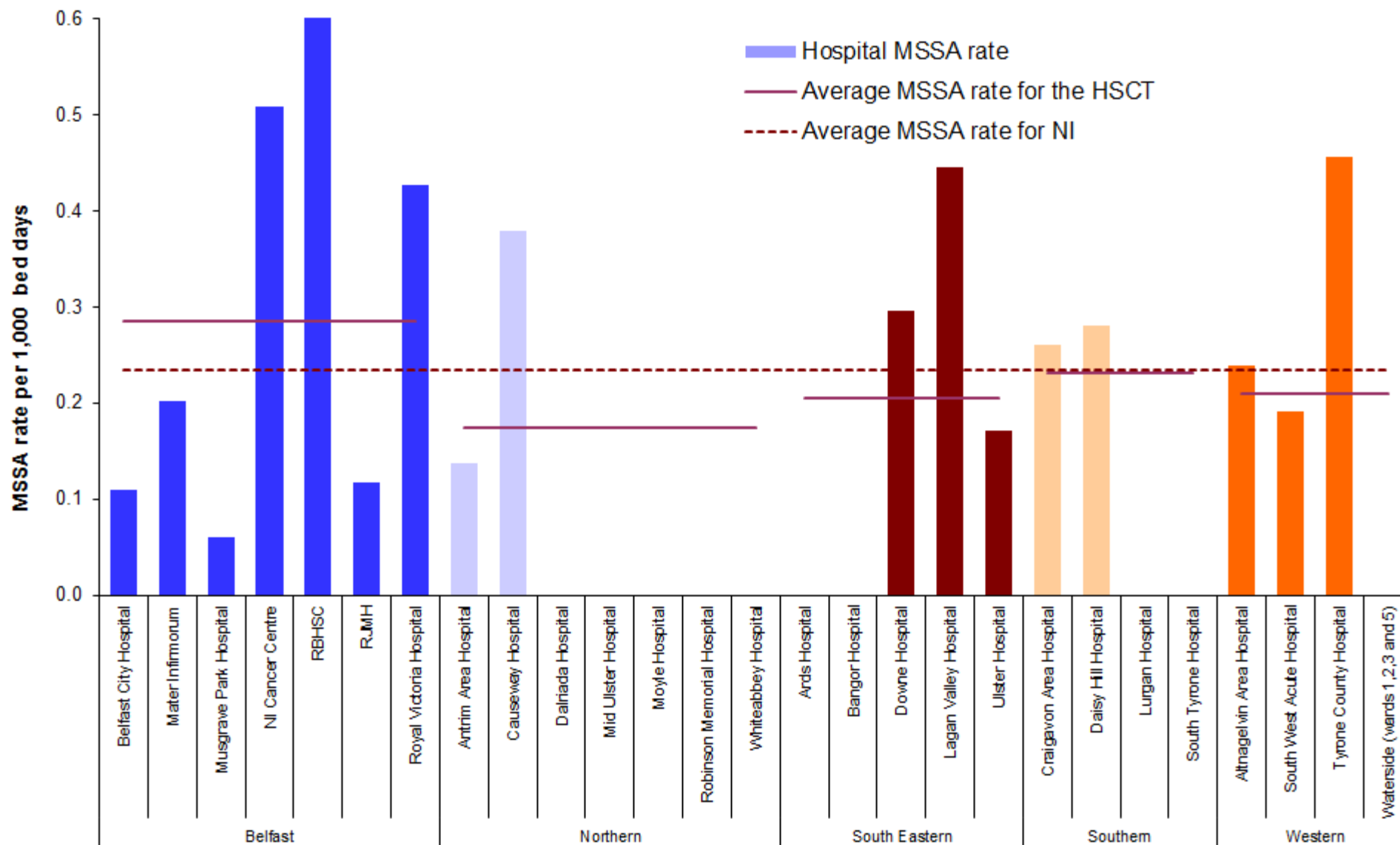


Figure 8: Rates of MSSA, July - September 2015 by individual hospitals, (gaps represent zero episodes), compared to average rates for Northern Ireland and HSCTs, July - September 2015

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

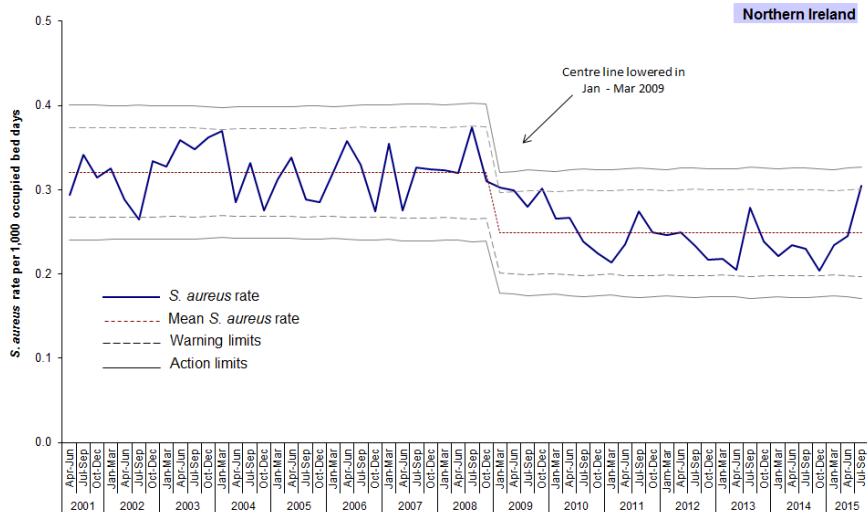


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

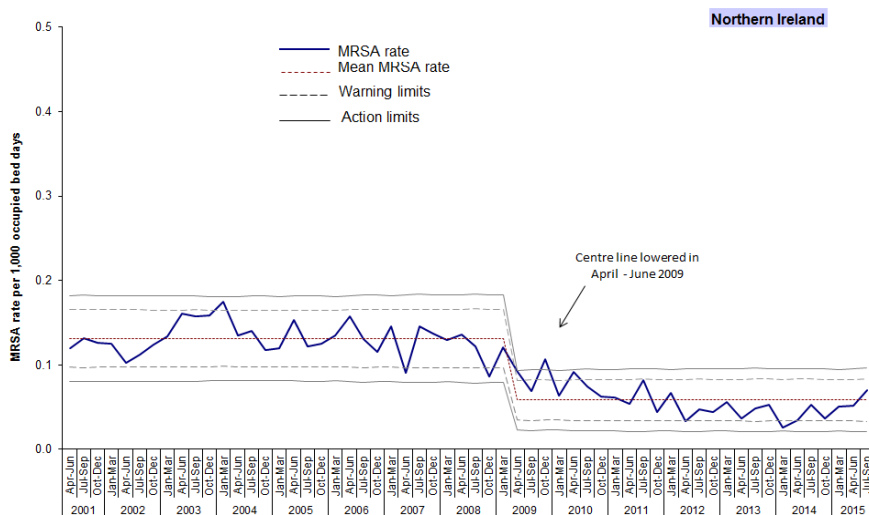
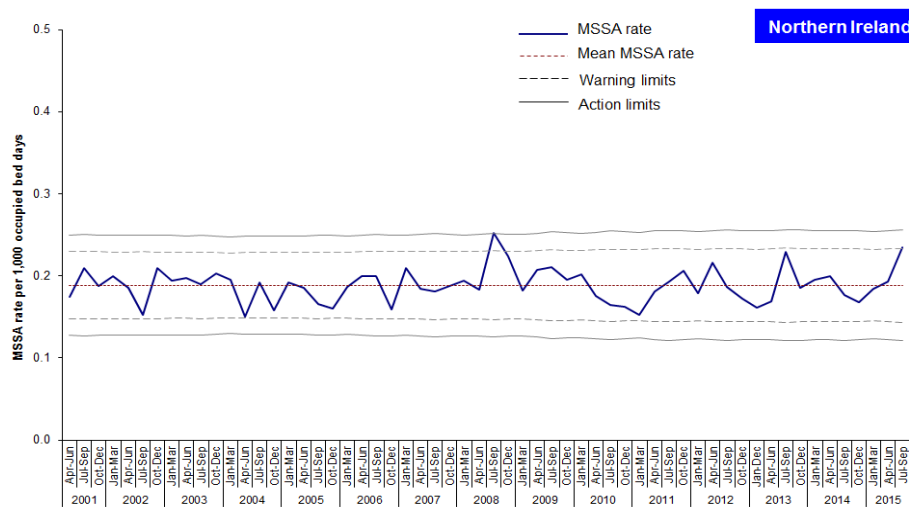


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland



Appendix 1

Table 1: Quarterly rate of MRSA and patient rates, by hospital, Oct 2014 - Sep 2015

Hospital	July - Sept 2014 Rate	Oct - Dec 2014 Rate	Jan-Mar 2015 Rate	Apr - Jun 2015 Rate	July - Sept 2015 Rate
Belfast City Hospital	0.035	0.067	0.033	0.070	0.073
Mater Infirmorum	0.050	0.049	0.191	0.144	0.101
Musgrave Park Hospital	0.000	0.000	0.000	0.058	0.000
NICCO (formerly at Belvoir Park)	0.000	0.164	0.325	0.000	0.339
RBHSC	0.000	0.000	0.000	0.000	0.141
RJMH	0.000	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.075	0.076	0.036	0.056	0.097
Belfast HSCT	0.042	0.056	0.060	0.064	0.088
Antrim Area Hospital	0.028	0.027	0.026	0.156	0.164
Causeway Hospital	0.180	0.062	0.000	0.000	0.126
Dalriada Hospital	0.000	0.000	0.000	0.000	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.000	0.000	0.000	0.000	0.000
Northern HSCT	0.062	0.031	0.020	0.091	0.127
Ards Hospital	0.000	0.000	0.000	0.000	0.000
Bangor Hospital	0.000	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.000	0.000	0.000
Lagan Valley Hospital	0.142	0.000	0.000	0.000	0.000
Ulster Hospital	0.022	0.021	0.041	0.021	0.064
South Eastern HSCT	0.033	0.016	0.030	0.017	0.051
Craigavon Area Hospital	0.030	0.000	0.082	0.000	0.000
Daisy Hill Hospital	0.068	0.066	0.063	0.065	0.000
Lurgan Hospital	0.000	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.000	0.000	0.000
Southern HSCT	0.036	0.017	0.070	0.017	0.000
Altnagelvin Area Hospital	0.000	0.029	0.057	0.029	0.090
South West Acute Hospital	0.316	0.059	0.055	0.120	0.000
Tyrone County Hospital	0.353	0.000	0.344	0.000	0.000
Waterside Hospital (Wards 1-3, 5)	0.000	0.000	0.000	0.000	0.000
Western HSCT	0.103	0.033	0.060	0.051	0.053
Northern Ireland total	0.053	0.036	0.050	0.052	0.070

Trust	Jul - Sept 2014 Episodes	Oct - Dec 2014 Episodes	Jan - March 2015 Episodes	Apr - Jun 2015 Episodes	Jul - Sept 2014 Episodes
Belfast Health & Social Care Trust	6	8	9	9	12
Northern Health & Social Care Trust	4	2	1	6	8
South Eastern Health & Social Care Trust	2	1	2	1	3
Southern Health & Social Care Trust	2	1	4	1	0
Western Health & Social Care Trust	6	2	4	3	3
NI TOTAL	20	14	20	20	26

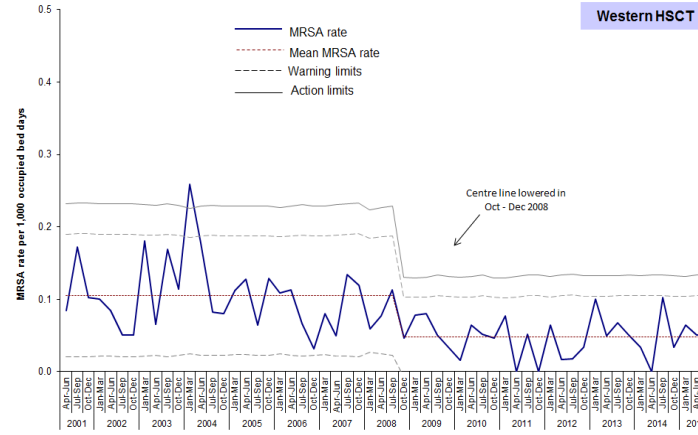
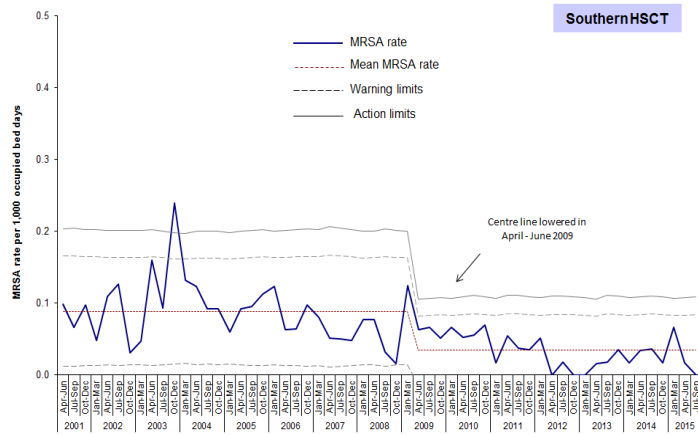
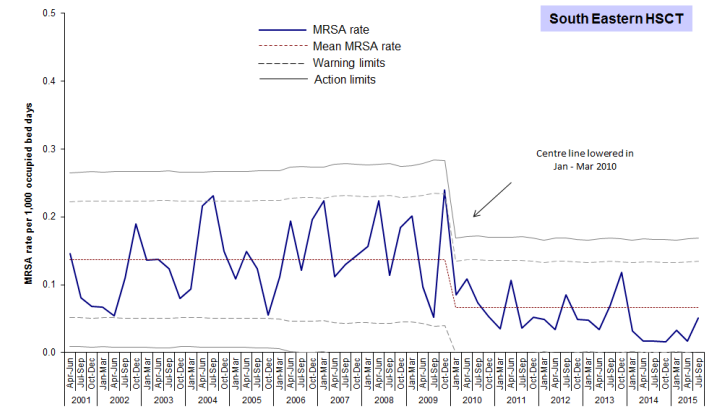
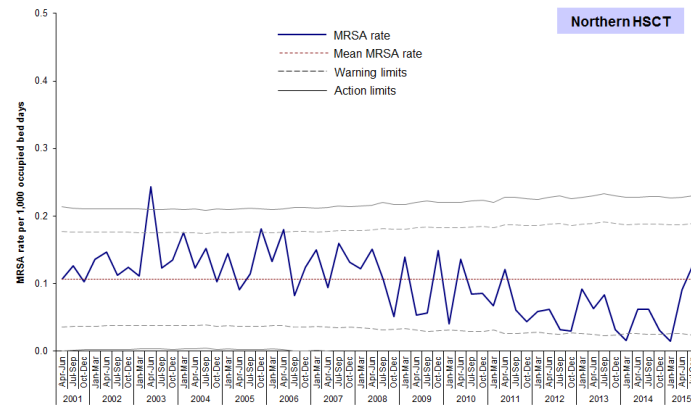
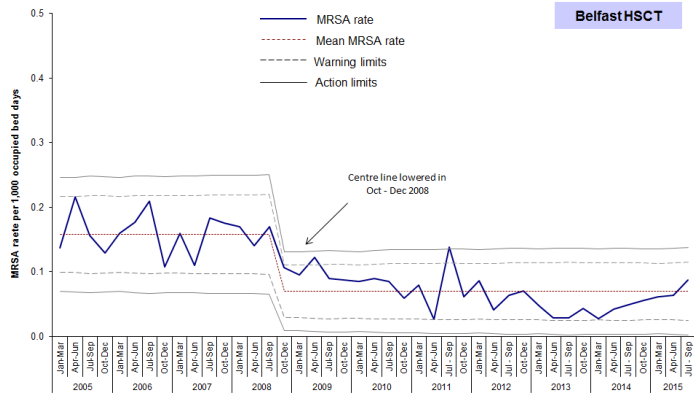
Appendix 1

Table 2: Quarterly rate of MSSA and patients rates, by hospital, Oct 2014 - Sep 2015

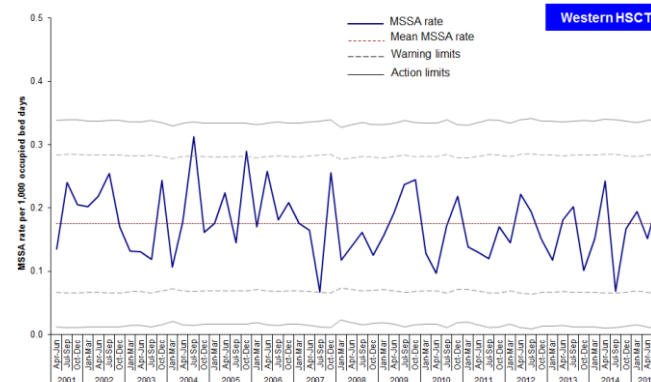
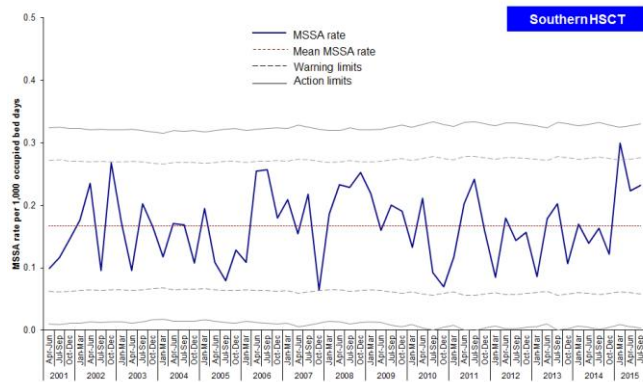
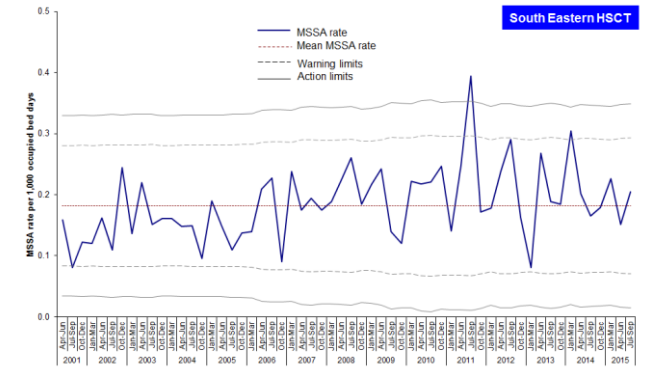
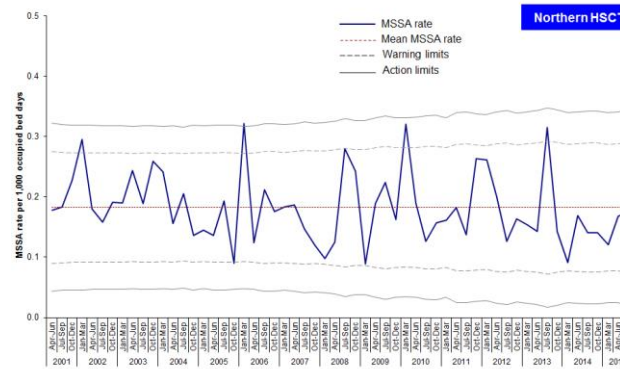
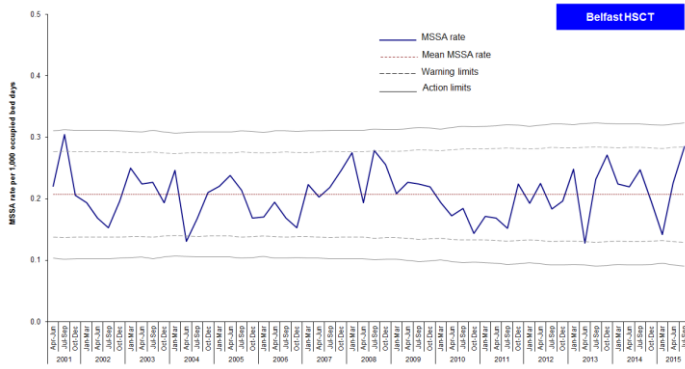
Hospital	Jul - Sept 2014	Oct - Dec 2014	Jan - March 2015	Apr - Jun 2015	Jul - Sept 2015
	Rate	Rate	Rate	Rate	Rate
Belfast City Hospital	0.212	0.269	0.131	0.141	0.109
Mater Infirmorum	0.151	0.098	0.096	0.288	0.202
Musgrave Park Hospital	0.058	0.054	0.055	0.000	0.061
NICCO (formerly at Belvoir Park)	0.169	0.164	0.162	0.496	0.509
RBHSC	0.126	0.548	0.273	0.687	0.704
RJMH	0.000	0.000	0.000	0.000	0.117
Royal Victoria Hospital	0.395	0.227	0.195	0.262	0.427
Belfast HSCT	0.234	0.195	0.140	0.226	0.285
Antrim Area Hospital	0.111	0.107	0.128	0.233	0.137
Causeway Hospital	0.240	0.248	0.189	0.122	0.379
Dalriada Hospital	0.000	0.000	0.000	0.000	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.272	0.263	0.000	0.000	0.000
Northern HSCT	0.140	0.140	0.120	0.168	0.175
Ards Hospital	0.000	0.000	0.000	0.000	0.000
Bangor Hospital	0.000	0.000	0.000	0.000	0.000
Downe Hospital	0.257	0.265	0.276	0.294	0.296
Lagan Valley Hospital	0.142	0.277	0.258	0.000	0.446
Ulster Hospital	0.217	0.168	0.226	0.167	0.171
South Eastern HSCT	0.199	0.180	0.230	0.151	0.205
Craigavon Area Hospital	0.151	0.141	0.330	0.252	0.260
Daisy Hill Hospital	0.204	0.132	0.253	0.260	0.280
Lurgan Hospital	0.000	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.367	0	0.574	0.000	0.000
Southern HSCT	0.164	0.122	0.300	0.223	0.232
Altnagelvin Area Hospital	0.117	0.173	0.314	0.145	0.239
South West Acute Hospital	0.000	0.234	0.055	0.239	0.191
Tyrone County Hospital	0.000	0.000	0.000	0.000	0.456
Waterside Hospital (Wards 1-3, 5)	0.000	0	0.000	0.000	0.000
Western HSCT	0.069	0.167	0.190	0.152	0.210
Northern Ireland total	0.177	0.168	0.184	0.193	0.234

Trust	Jul - Sept 2014	Oct - Dec 2014	Jan - March 2015	Apr - Jun 2015	Jul - Sept 2014
	Episodes	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	33	28	21	32	39
Northern Health & Social Care Trust	9	9	8	11	11
South Eastern Health & Social Care	12	11	14	9	12
Southern Health & Social Care Trust	9	7	18	13	13
Western Health & Social Care Trust	4	10	12	9	12
NI TOTAL	67	65	73	74	87

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 3: MSSA, MRSA and total *S. aureus* patient episode rates, and the percentage of *S. aureus* reported as MRSA, in Northern Ireland, Jan 2006 – Sep 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

Appendix 4

Table 4: 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 5: 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