

S. aureus bacteraemia surveillance

Quarterly report

July 2016 – September 2016

Key points

- Overall *S. aureus* (SA) rates for Northern Ireland (MRSA plus MSSA bacteraemias) increased by approximately 7% during July-September 2016 compared to April-June 2016.
- MRSA rates increased by approximately 26% during July-September 2016 compared to April-June 2016.
- MRSA reports during 2015/16 rose by 12% compared to 2014/15.
- MSSA rates increased by approximately 4% compared to April-June 2016.
- MSSA reports during 2015/16 increased by 14% compared to 2014/15.

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

S. aureus bacteraemia surveillance

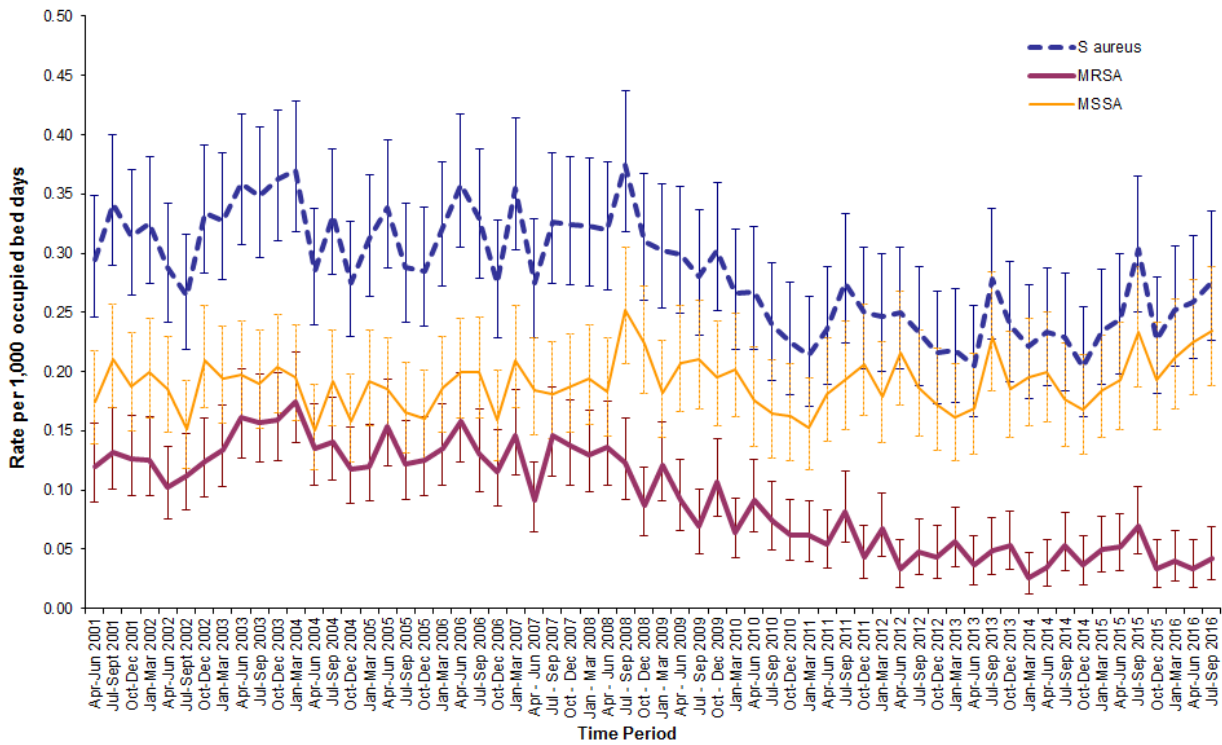


Figure 1: MSSA, MRSA and *S. aureus* rates in Northern Ireland by quarter, with 95% confidence intervals, April 2001 – September 2016 (see Appendix 3)

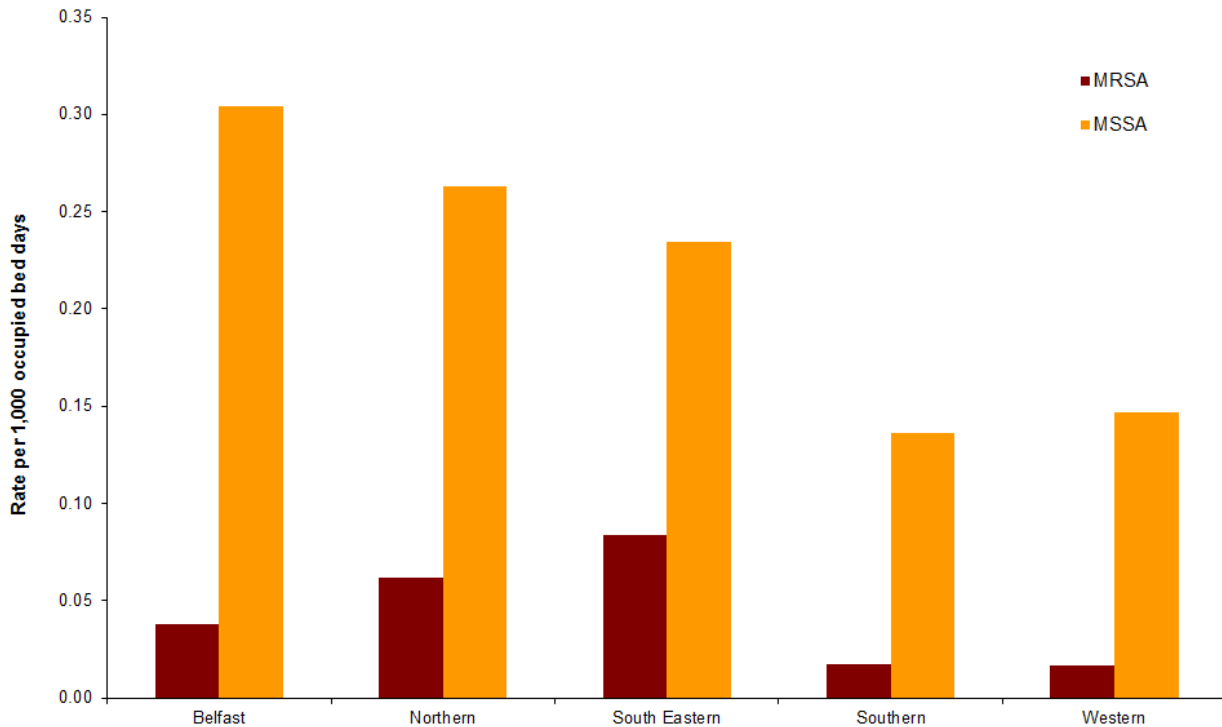


Figure 2: MRSA and MSSA rates per 1,000 occupied bed days, by HSCT, July - September 2016

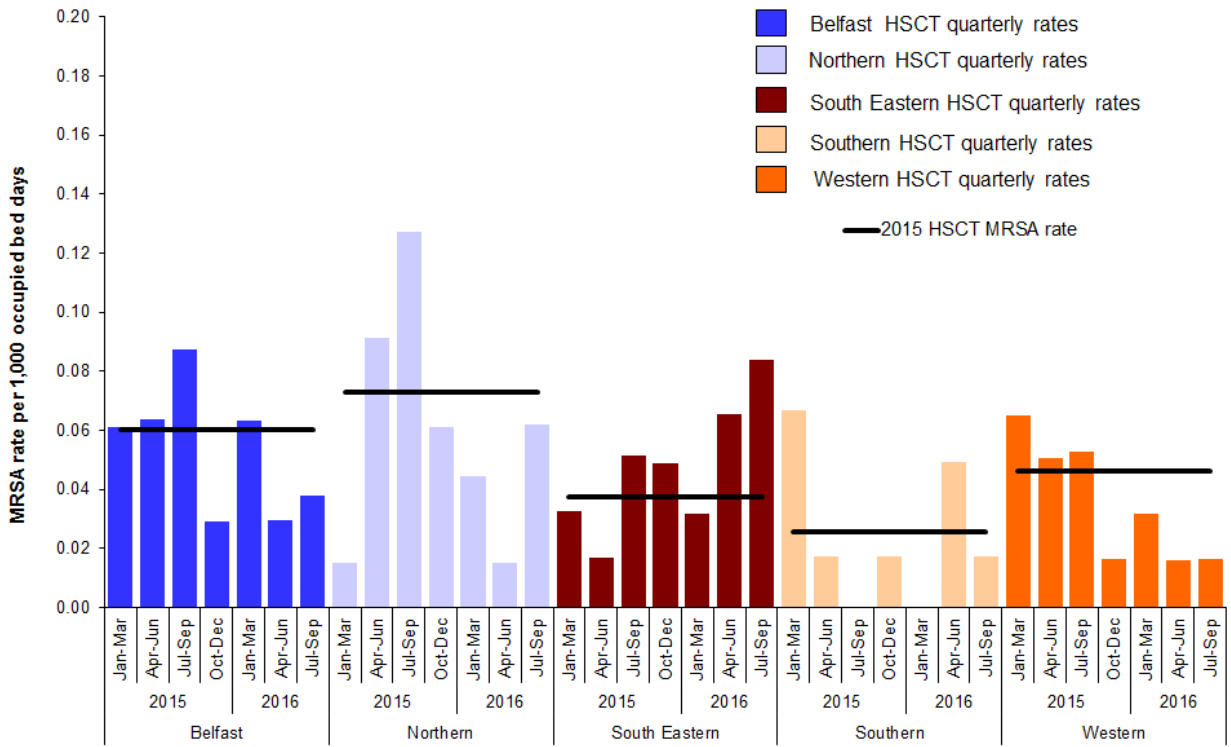


Figure 3: MRSA quarterly rate January 2015 – September 2016, by HSCT, with 2015 HSCT MRSA rate

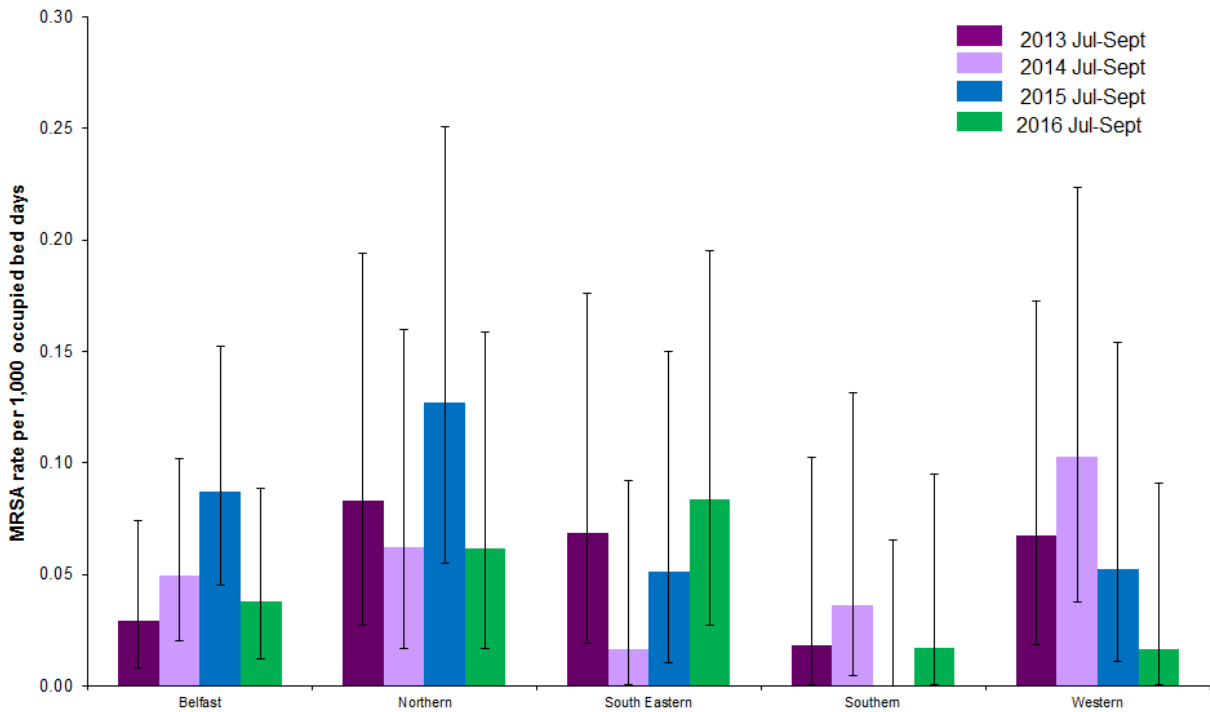


Figure 4: MRSA rate during July-September, by HSCT, from 2013–2016, with 95% confidence intervals

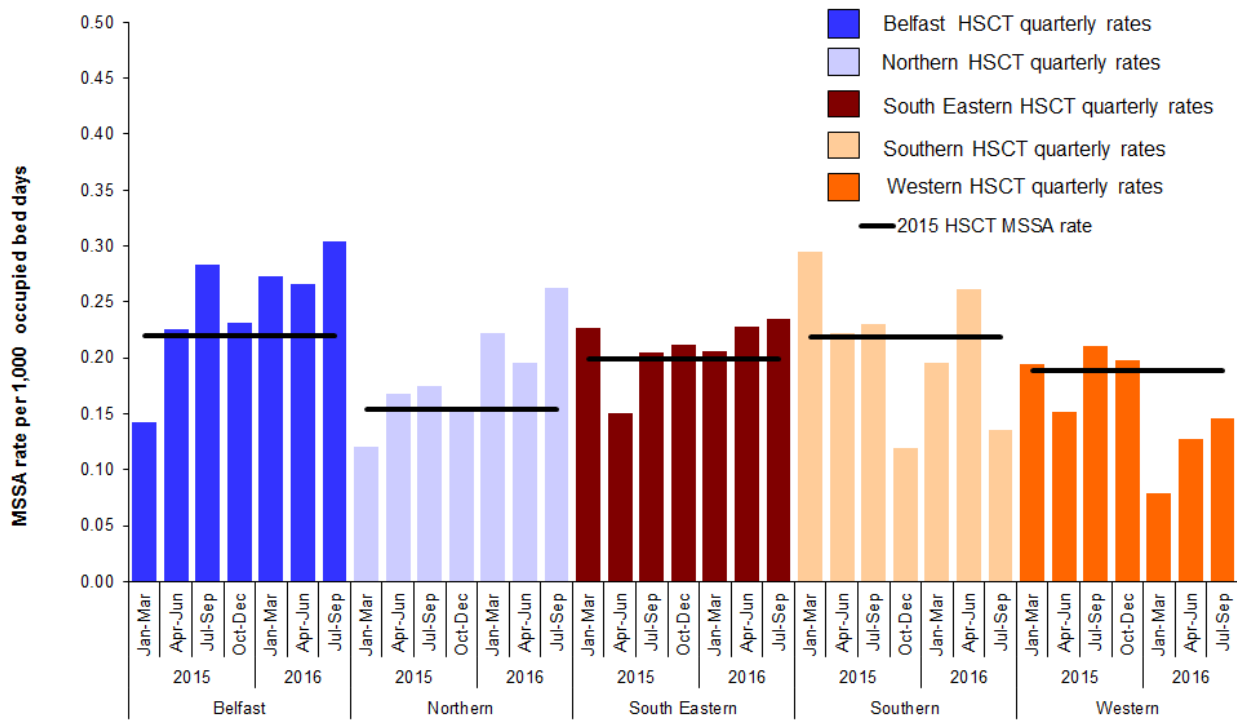


Figure 5: MSSA quarterly rate January 2015 – September 2016, by HSCT, with 2015 HSCT MSSA rate

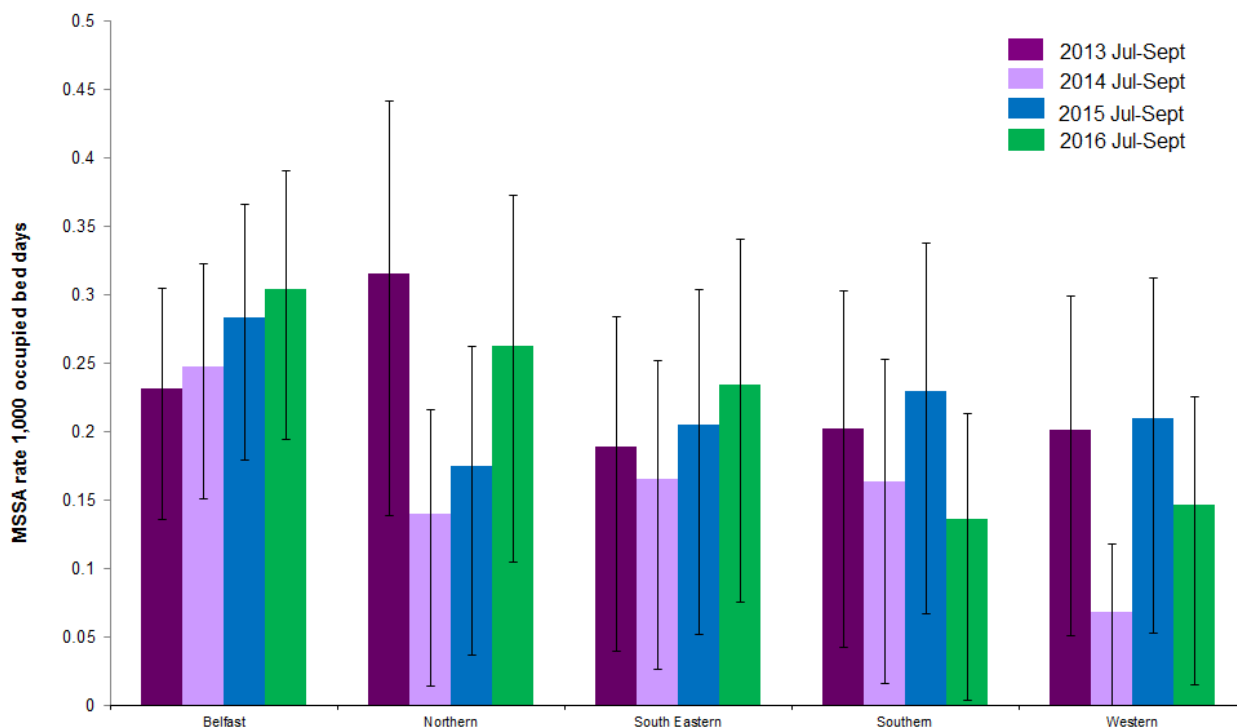


Figure 6: MSSA rate during July - September, by HSCT, from 2013–2016, with 95% confidence intervals

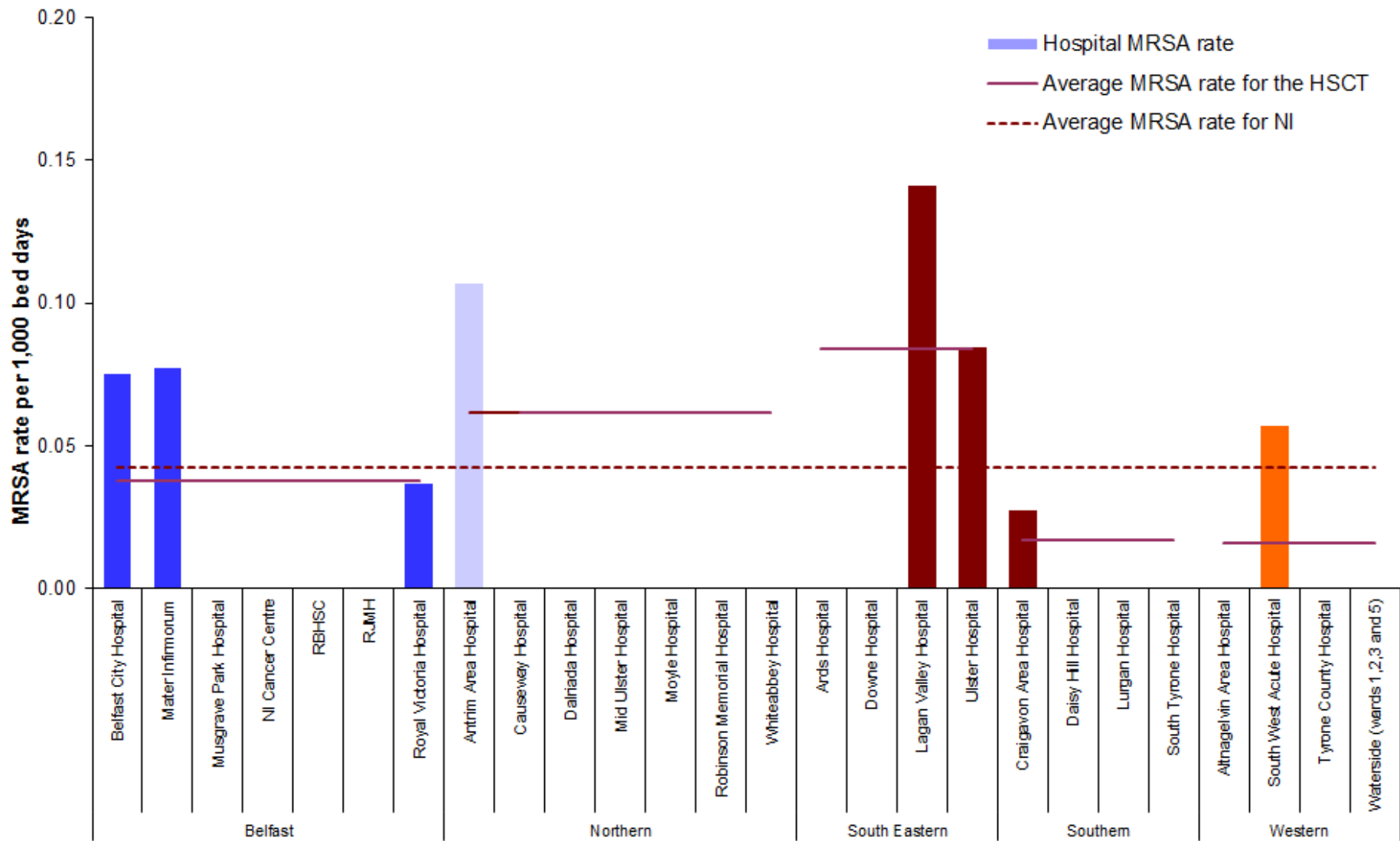


Figure 7: Rates of MRSA, July - September 2016 by individual hospitals, (gaps represent zero episodes), compared to July - September 2016 average rates for Northern Ireland and HSCTs

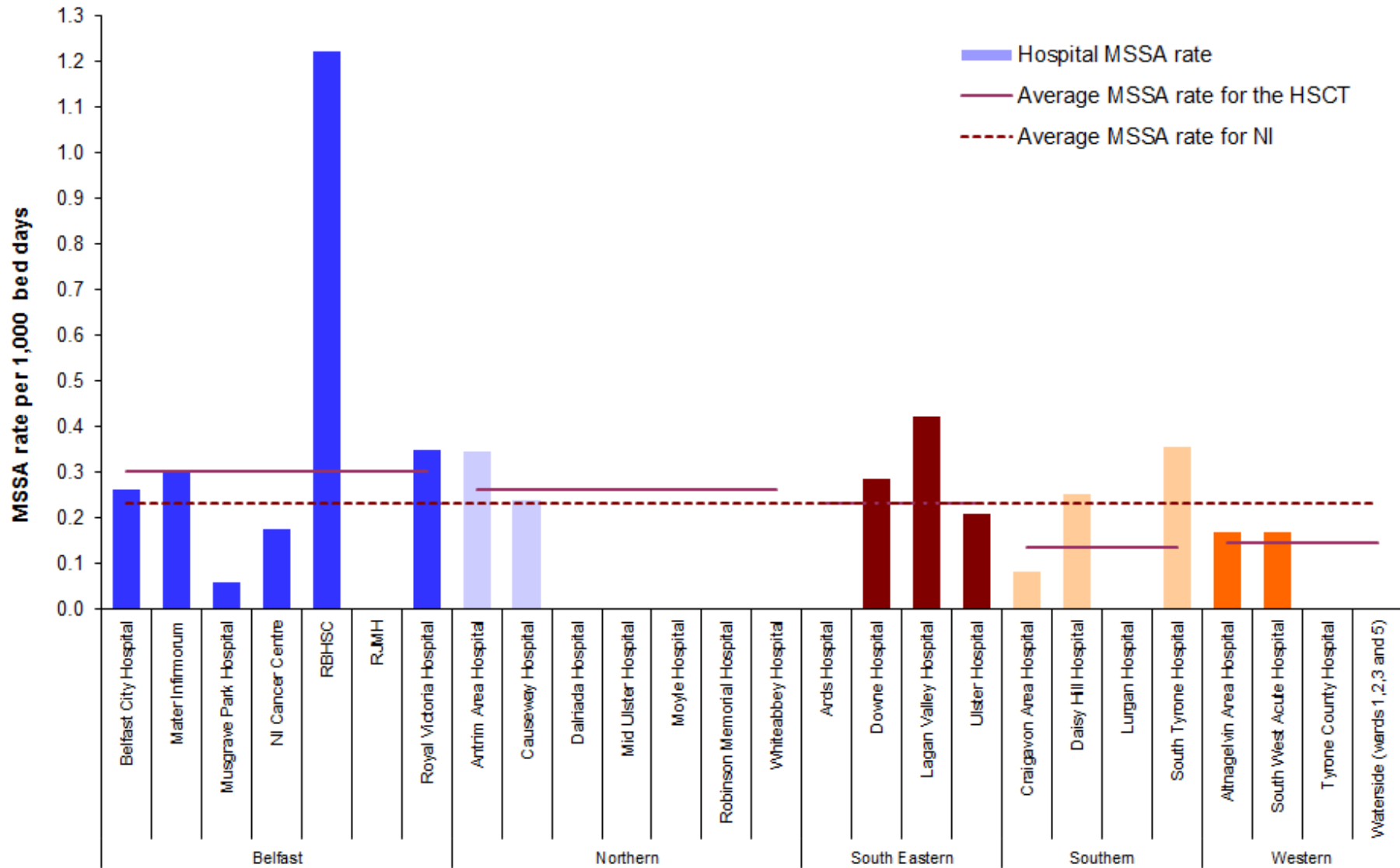


Figure 8: Rates of MSSA, July - September 2016 by individual hospitals, (gaps represent zero episodes), compared to July – September 2016 average rates for Northern Ireland and HSCTs

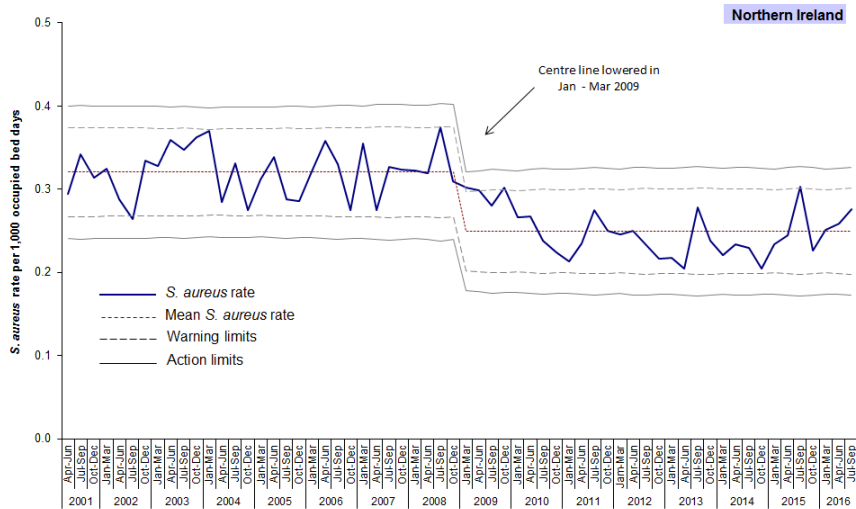


Figure 9a: Statistical process control chart for quarterly *S. aureus* rates in Northern Ireland

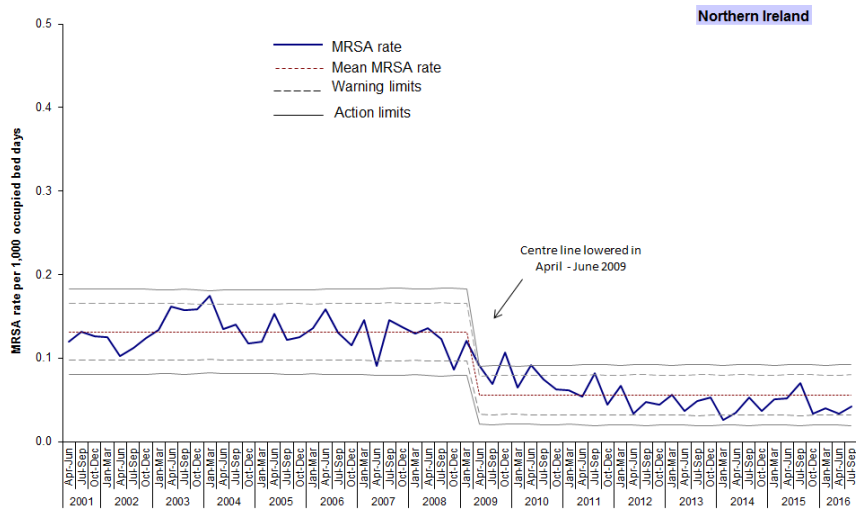


Figure 9b: Statistical process control chart for quarterly MRSA rates in Northern Ireland

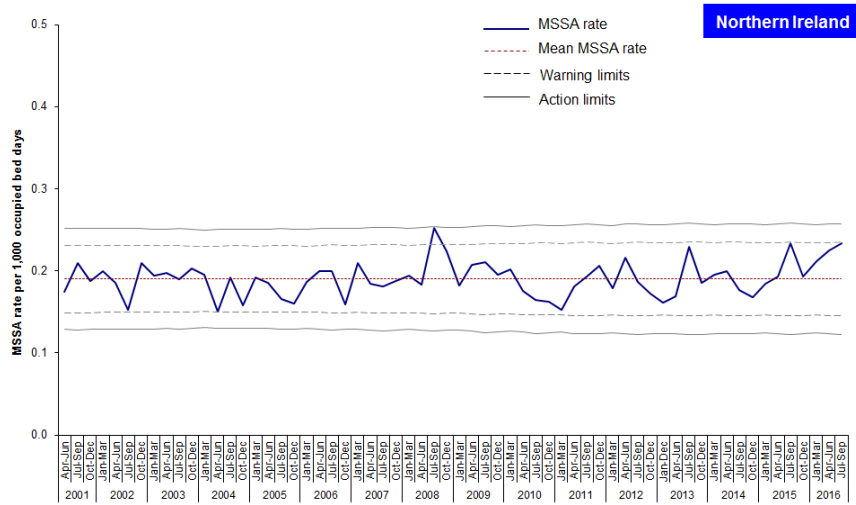


Figure 9c: Statistical process control chart for quarterly MSSA rates in Northern Ireland

Appendix 1

Table 1: Quarterly rate of MRSA patient episodes, by hospital, Oct 2015 – Sept 2016

Hospital	Oct - Dec 2015	Jan - Mar 2016	Apr - Jun 2016	Jul - Sept 2016
	Rate	Rate	Rate	Rate
Belfast City Hospital	0.000	0.035	0.036	0.075
Mater Infirmorum	0.100	0.050	0.000	0.077
Musgrave Park Hospital	0.000	0.055	0.000	0.000
NICCO (formerly at Belvoir Park)	0.000	0.000	0.000	0.000
RBHSC	0.000	0.000	0.000	0.000
RJMH	0.000	0.000	0.000	0.000
Royal Victoria Hospital	0.039	0.109	0.054	0.037
Belfast HSCT	0.029	0.063	0.030	0.038
Antrim Area Hospital	0.078	0.076	0.026	0.107
Causeway Hospital	0.060	0.000	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	0.061	0.045	0.015	0.062
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.000	0.000	0.276	0.000
Lagan Valley Hospital	0.000	0.000	0.000	0.141
Ulster Hospital	0.061	0.040	0.062	0.084
South Eastern HSCT	0.049	0.032	0.065	0.084
Craigavon Area Hospital	0.000	0.000	0.079	0.027
Daisy Hill Hospital	0.066	0.000	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	0.017	0.000	0.049	0.017
Altnagelvin Area Hospital	0.000	0.000	0.028	0.000
South West Acute Hospital	0.058	0.108	0.000	0.057
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	0.017	0.032	0.016	0.016
Northern Ireland total	0.034	0.040	0.034	0.043

Table 2: Quarterly MRSA patient episodes, by Trust, Oct 2015 – Sept 2016

Trust	Oct - Dec 2015	Jan - Mar 2016	Apr - Jun 2016	Jul - Sept 2016
	Episodes	Episodes	Episodes	Episodes
Belfast Health & Social Care Trust	4	9	4	5
Northern Health & Social Care Trust	4	3	1	4
South Eastern Health & Social Care Trust	3	2	4	5
Southern Health & Social Care Trust	1	0	3	1
Western Health & Social Care Trust	1	2	1	1
NI TOTAL	13	16	13	16

Appendix 1

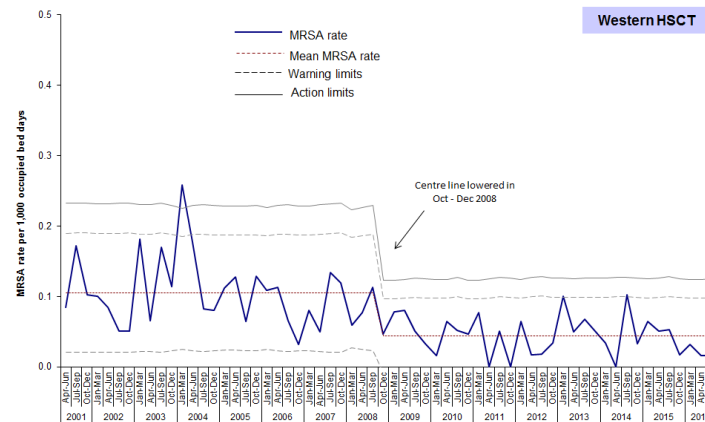
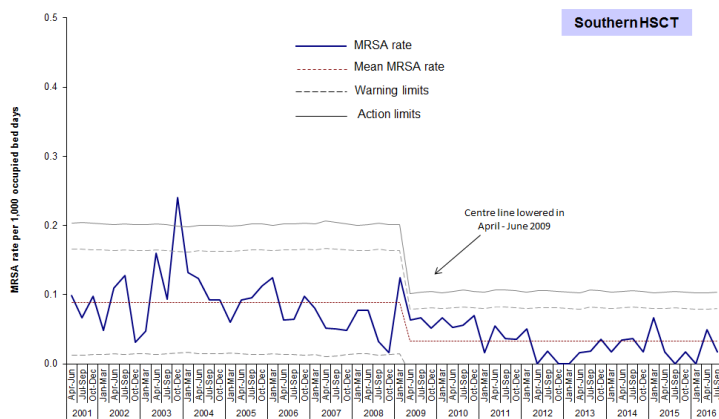
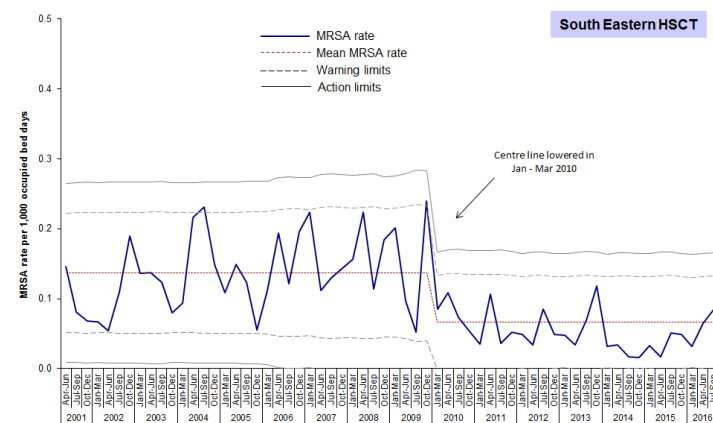
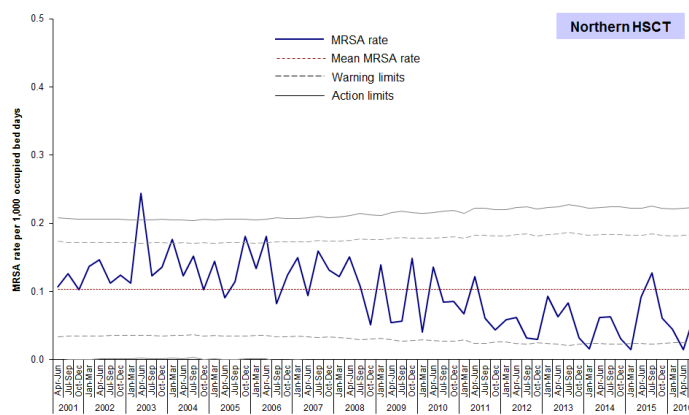
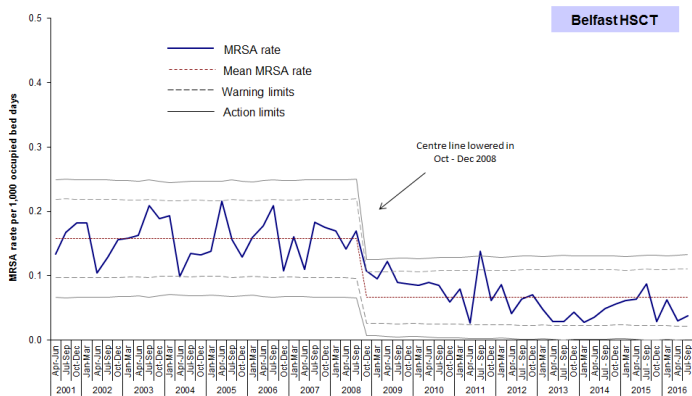
Table 3: Quarterly rate of MSSA patient episodes, by hospital, Oct 2015 - Sept 2016

Hospital	Oct - Dec 2015 Rate	Jan - Mar 2016 Rate	Apr - Jun 2016 Rate	Jul - Sep 2016 Rate
Belfast City Hospital	0.364	0.317	0.145	0.264
Mater Infirmorum	0.201	0.100	0.301	0.308
Musgrave Park Hospital	0.000	0.000	0.000	0.060
NICCO (formerly at Belvoir Park)	0.501	0.857	0.517	0.177
RBHSC	0.529	0.587	0.591	1.221
RJMH	0.000	0.115	0.115	0.000
Royal Victoria Hospital	0.213	0.327	0.361	0.350
Belfast HSCT	0.232	0.273	0.266	0.304
Antrim Area Hospital	0.157	0.255	0.336	0.348
Causeway Hospital	0.242	0.301	0.000	0.241
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	0.152	0.223	0.196	0.263
Ards Hospital	0.000	0.000	0.000	0.000
Downe Hospital	0.284	0.264	0.276	0.285
Lagan Valley Hospital	0.281	0.000	0.131	0.423
Ulster Hospital	0.204	0.240	0.248	0.211
South Eastern HSCT	0.212	0.206	0.228	0.235
Craigavon Area Hospital	0.111	0.239	0.317	0.082
Daisy Hill Hospital	0.199	0.184	0.190	0.254
Lurgan Hospital	0.000	0.000	0.000	0.000
South Tyrone Hospital	0.000	0.000	0.345	0.357
Southern HSCT	0.120	0.196	0.262	0.136
Altnagelvin Area Hospital	0.256	0.055	0.195	0.170
South West Acute Hospital	0.173	0.162	0.054	0.170
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	0.198	0.080	0.128	0.147
Northern Ireland total	0.193	0.211	0.252	0.234

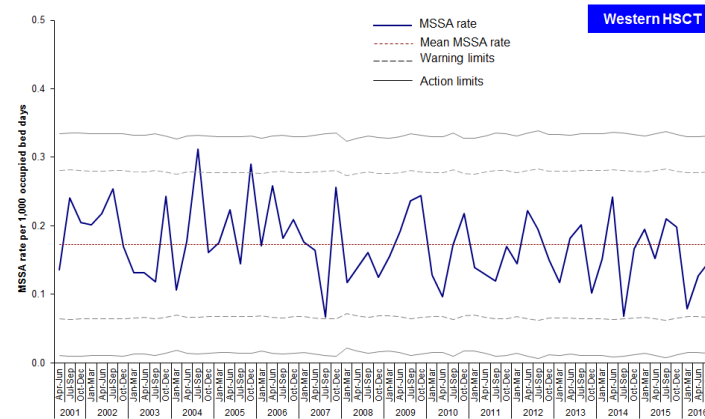
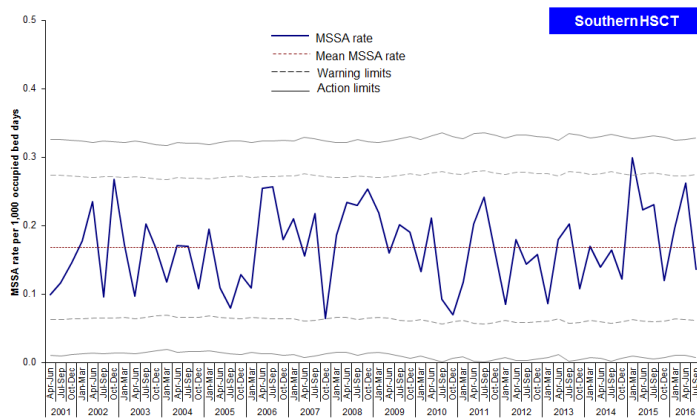
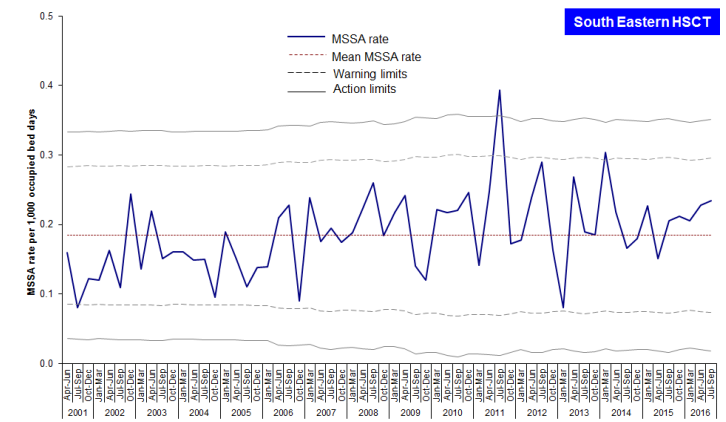
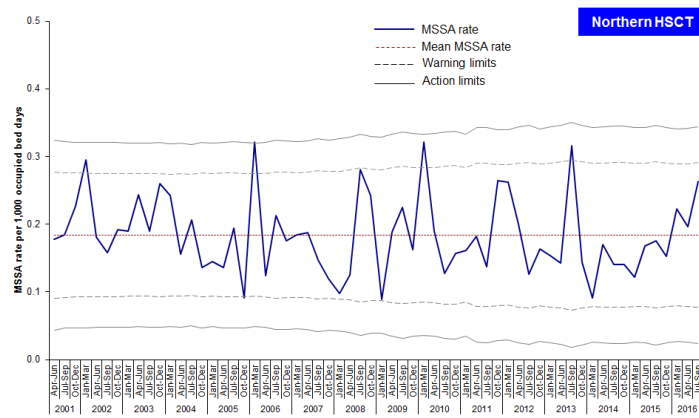
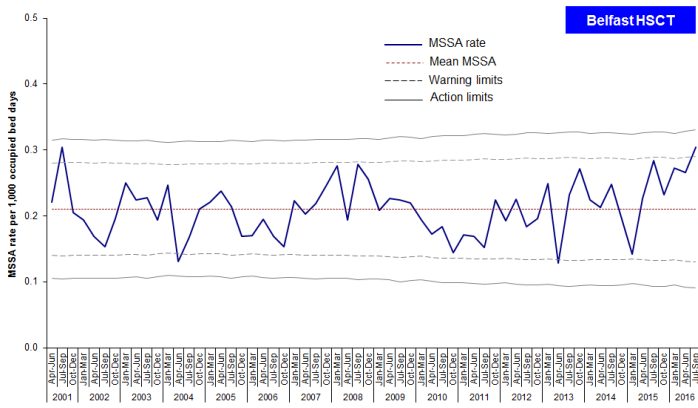
Table 4: Quarterly MSSA patient episodes, by Trust, Oct 2015 - Sept 2016

Trust	Oct - Dec 2015 Episodes	Jan - Mar 2016 Episodes	Apr - Jun 2016 Episodes	Jul - Sep 2016 Episodes
Belfast Health & Social Care Trust	32	39	36	40
Northern Health & Social Care Trust	10	15	13	17
South Eastern Health & Social Care Trust	13	13	14	14
Southern Health & Social Care Trust	7	12	16	8
Western Health & Social Care Trust	12	5	8	9
NI TOTAL	74	84	87	88

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, Jan 2007 – Sept 2016

Quarter	MSSA rate	MRSA rate	All <i>S. aureus</i> rate	% MRSA
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
Jul-Sep 2016	0.234	0.043	0.277	15.5

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