

MRSA PCR spearheads a successful healthcare associated infection [HCAI] programme while supporting government aims of cost saving, improving quality, driving efficiency and safety in patient care.

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BACKGROUND:

- Rapid and accurate identification of MRSA in hospital admissions is essential for timely decisions on optimal treatment, isolation/bio-burden reduction, and reducing the potential for cross transmission/self-acquisition, patient harm/mortality.
- Significant reductions in MRSA infections including bacteraemias can be used to realise cost savings.
- We present a case for improving efficiency, productivity and quality outcomes using health informatics and statistical process control based analysis of MRSA infections including key indicators - re-admissions, mortality and length of stay.

METHODS:

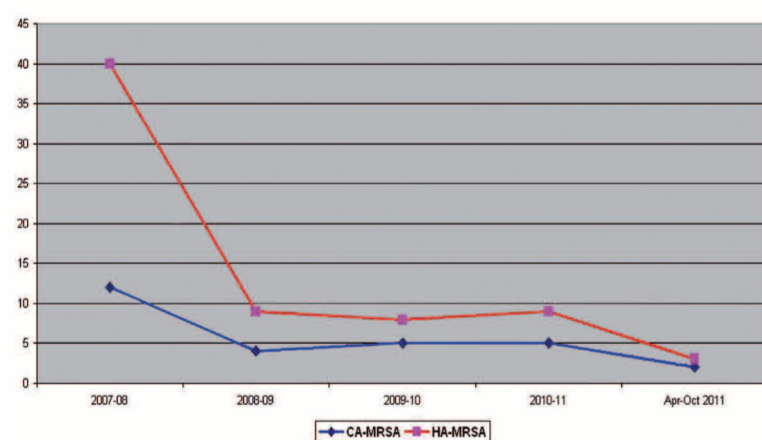
- SPC based analysis,
- data entry and testing,
- analysis of key indicators,
- detailed analysis and cost modelling using local costs.

RESULTS:

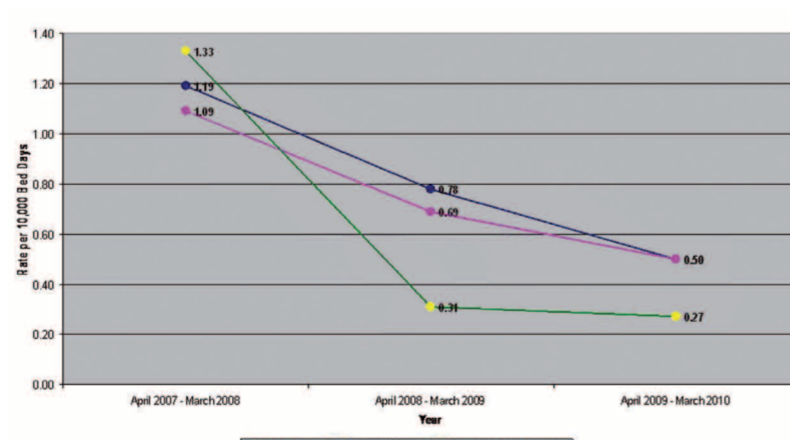
Preliminary data available at time of submission shows:

- Reduction in total MRSA infection bed-days by 73% 827 in 07/08 to 222 in 10/11;
- MRSA surgical site infections bed-days by 69.8% [691 in 07/08 to 208 in 10/11].
- Reduction readmissions with MRSA infection from 3 to 1/month [07/08 to 10/11].

MRSA bacteraemia trend [acute trust and primary care] 2007-til date



MRSA bacteraemias per 10,000 bed days

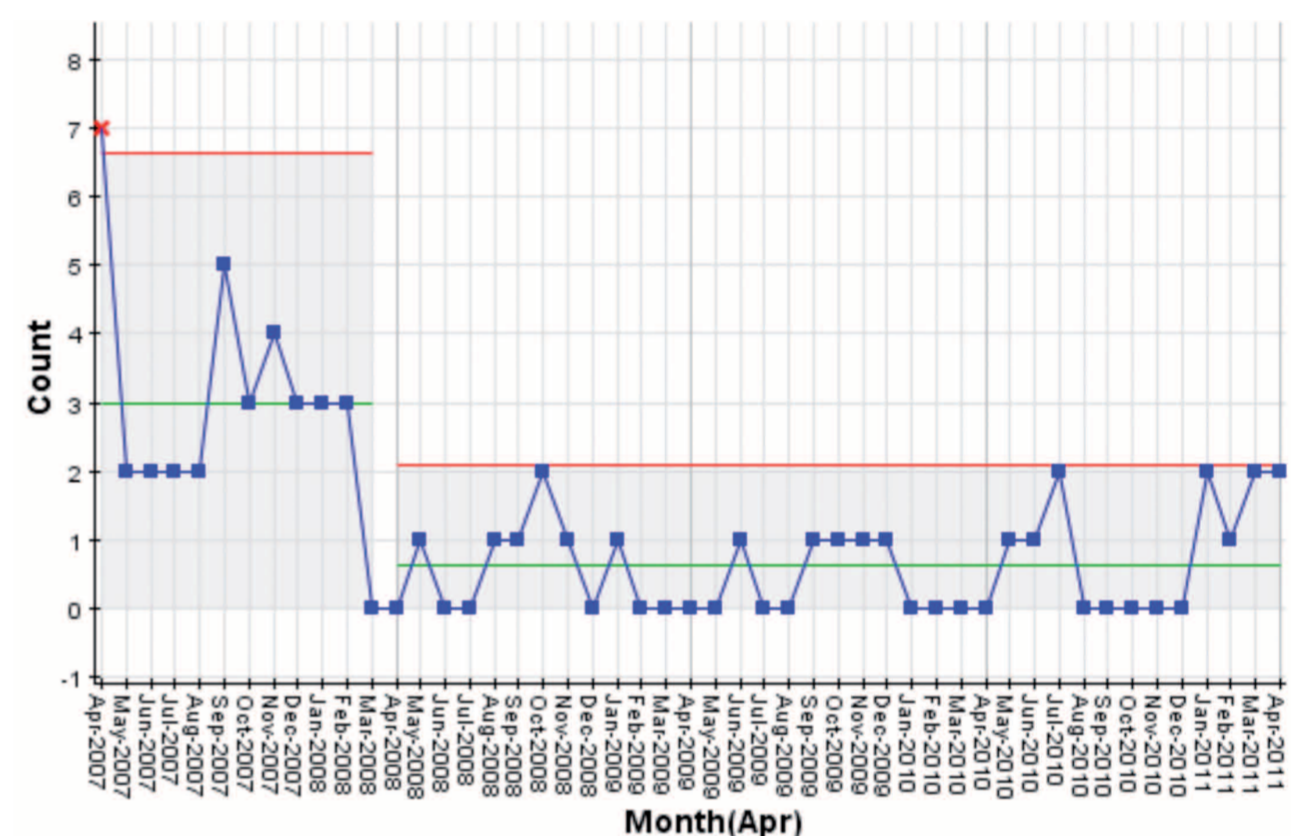


- MRSA bacteraemias in BTH reduced from 1.33 to 0.27/10,000 bed-days [2007-08 to 2010-11] as compared to National [1.19 to 0.5/10K bed-days] & northwest [1.09 to 0.5/10K bed-days]. Optimisation of glycopeptide usage with over 50% reduction.

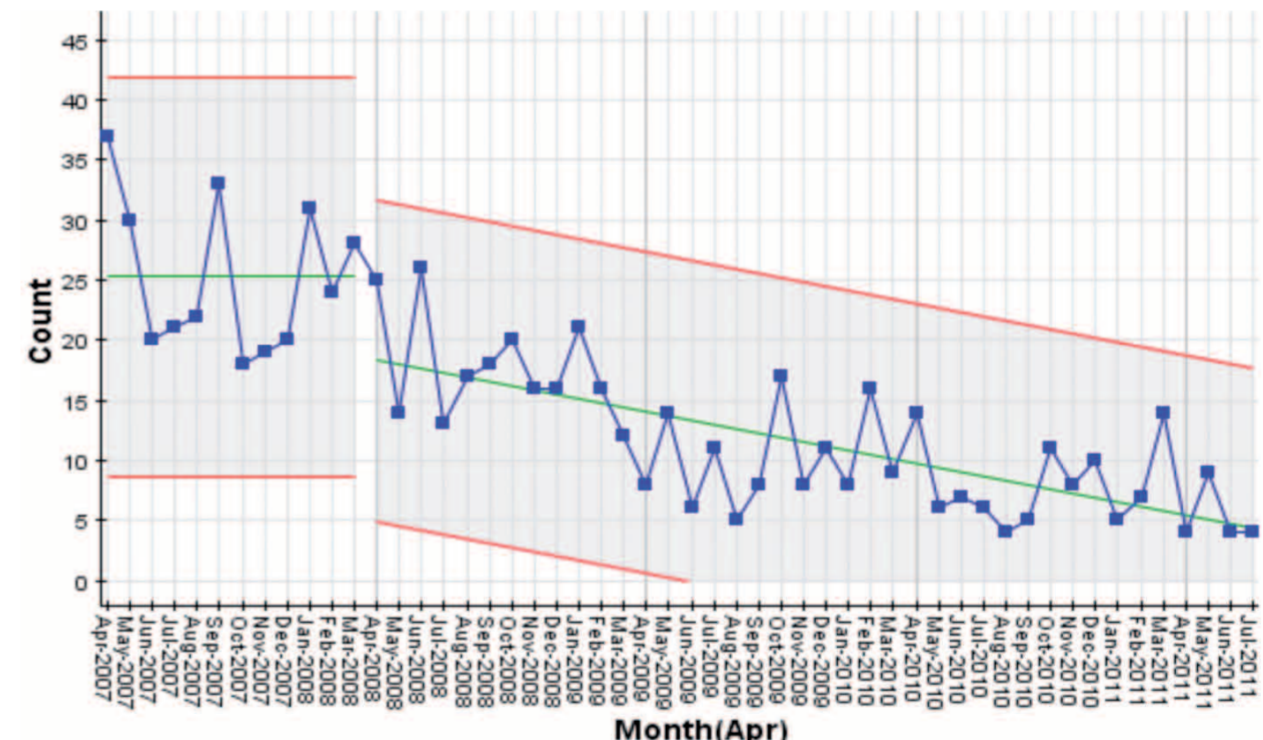
Preliminary SPC charts

These preliminary SPC charts show the downward trend in the number of patients who had a positive test for MRSA infection since the introduction of BD GeneOhm MRSA PCR in April 2008. This analysis has been undertaken by Lightfoot Solutions by matching data from the pathology system with inpatient data from the patient administration system (PAS). A match was identified where there was a positive test result for MRSA in the pathology system for a patient who was recorded in the PAS as an inpatient on the relevant date.

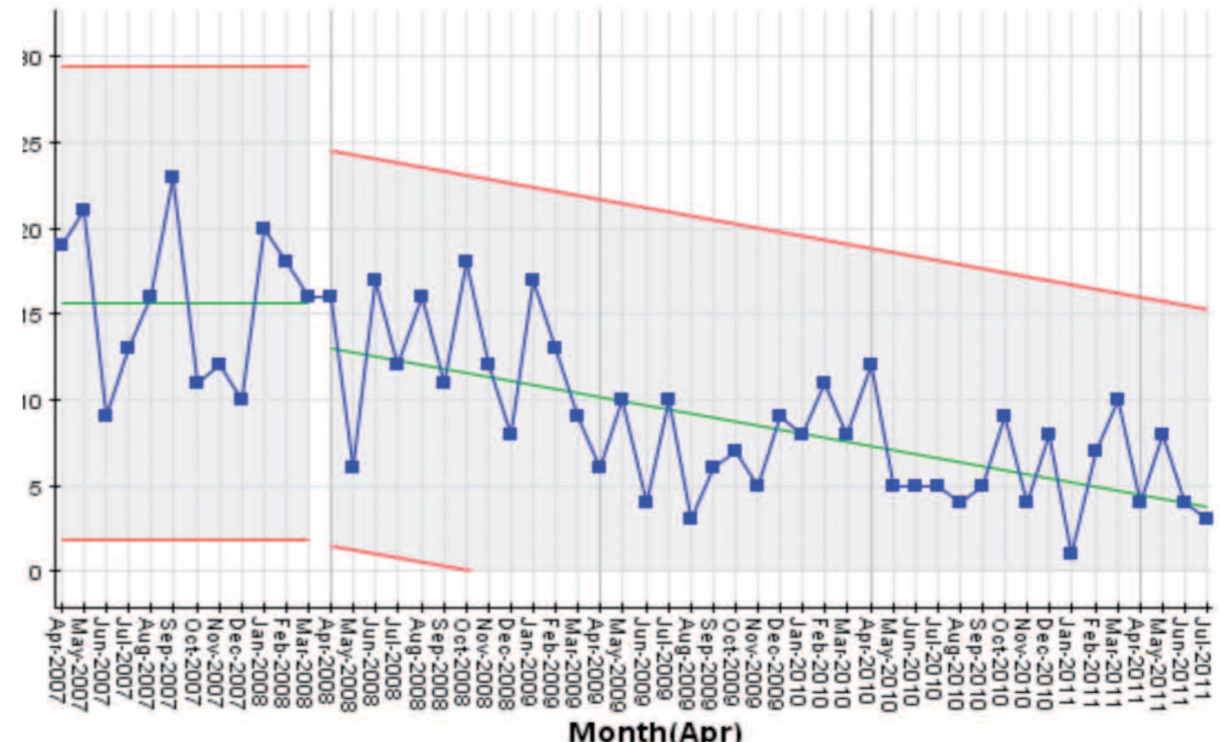
MRSA Bacteraemia rates



All MRSA infections (excluding bacteraemia)



MRSA Wound infections



CONCLUSIONS:

- Blackpool Teaching Hospital must save £50M over 3-4 years as its share of the Government aim to deliver £20 billion (4%) efficiency savings in the NHS by the end of 2014-15.
- Reduction in HCAI and other quality initiatives have been used to close a 24 bedded ward driving savings of approx £970K.
- SPC based analysis and health informatics project is set to analyse in details the savings from reductions in HCAI using local costs.

