



SHIFT IN APPROACH IMPROVES INFECTION PREVENTION IN THREE SOUTH AFRICAN PUBLIC HOSPITALS

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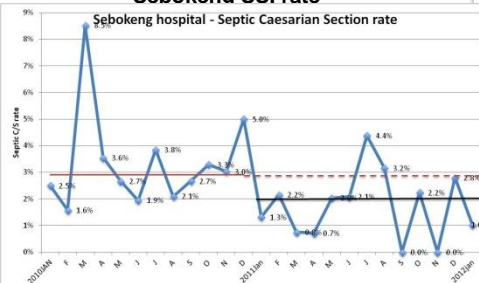
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CONTEXT

Healthcare-associated infections (HAIs) are common and serious adverse events in hospitals globally and an even bigger problem in developing countries¹. A high priority was given to prevention of infections by South African Health Minister, Dr Motsosedi², which prompted enrolment by public health hospitals in the Best Care Always! campaign aimed at reducing HAIs and building improvement skills in South Africa. Thirteen hospitals from Gauteng province participated in learning collaborative from May to November 2010. Despite an interruption in the collaborative, two hospitals, Sebokeng Regional Hospital (720 beds) and Steve Biko Academic hospital (832 beds) continued their implementation efforts and sustained the measurements that were initiated. Although a third hospital, Leratong Regional Hospital (859 beds) experienced resource constraints they were still able to continue with improvement efforts.

Sebokeng SSI rate



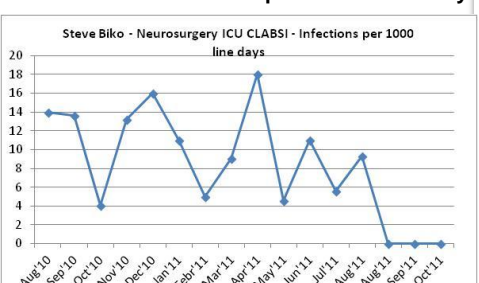
PROBLEM

In all hospitals, efforts to improve infection prevention were mainly the responsibility of ward staff and little measurement was available for improvement before the project. A multidisciplinary team from each hospital prioritized one intervention from the four bundles in the BCA campaign. Sebokeng chose central line bloodstream infection (CLABSI) and then spread to surgical site infections (SSI). Leratong hospital prioritised SSI infections in the maternity unit. Steve Biko hospital selected the CLABSI prevention bundle and chose to start in the neurosurgery ICU. All hospitals had some previous data on infections that could be used as a baseline.

INTERVENTION

Forming a multidisciplinary team of clinical staff was an important shift for all hospitals, as was the adoption of different methods of measurement for the interventions. Data collection methods included the Welsh Safety Cross, days between graphs and rates of infections. After implementation of the CLABSI bundle, Sebokeng hospital commenced measurement of the SSI rate as a percentage of all caesarean sections. Leratong also commenced measurement of the SSI rate and collected rates of infections by doctor. Steve Biko was able to plot the days between infections going back to April 2010. They also introduced the measurement of device days and were then able to track the CLABSI rate per 1000 line days. Data in all hospitals was reviewed monthly and shared during the collaborative and with management periodically thereafter.

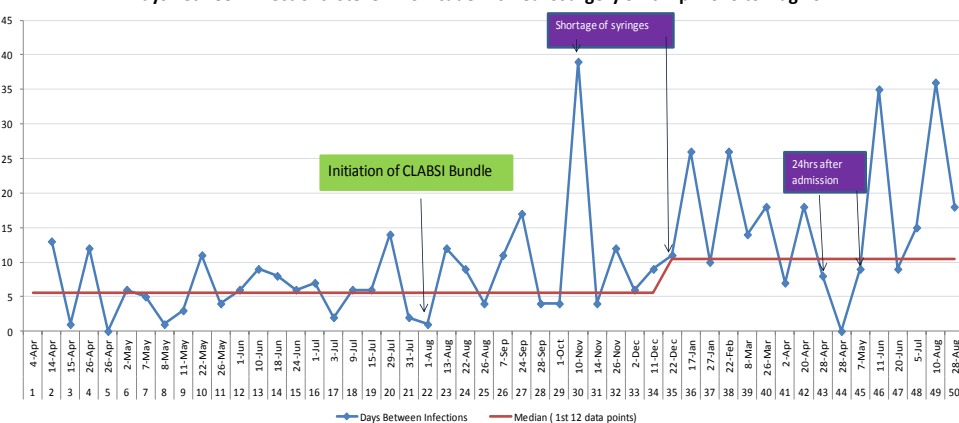
Steve Biko CLABSI rate per 1000 device days



MEASUREMENT OF IMPROVEMENT AND EFFECTS OF CHANGE

Sebokeng Hospital began with a median SSI rate of 2.9% of Caesarean sections in 2010 and over 12 months were able to shift the system to reach a median of 2% SSI rate. Steve Biko achieved an improvement in CLABSI (figure 1). From Dec 2010 there was a shift in the system and the median days between infections increased from 5.5 to 10.5 days between. Their CLABSI rate per 1000 line days reduced from 14 to 5 over the same period. Leratong Hospital began with a SSI rate of 2.6% of Caesarean sections in July 2010. Over the next 12 months they showed an initial immediate decrease but it was not sustained as resource constraints caused them to revert back to shaving. The team and the strong management support was also impacted by other hospital system pressures. Subsequent engagement in the collaborative has resulted in a renewal of this work.

Days Between Infections Steve Biko Academic Neurosurgery Unit Apr 2010 to Aug 2011



LESSONS LEARNT AND MESSAGES FOR OTHERS

Hospitals which sustained their improvement efforts ten months after the last learning collaborative session attributed their success to the shift in improvement methodology with emphasis on measurement. Other critical contributing factors included having a BCA team champion; improved teamwork and communication and strong leadership support. Limitations included resource constraints, staff turnover and some aspects of doctor buy-in.

References:

- Rosenthal VD. Health-care-associated infections in developing countries. *The Lancet* 2011;377: 186-188)
- Fast Track to Quality: The Six Most Critical Areas for Patient-Centered Care (South African National Department of Health 2010)

Acknowledgements:

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