
CONFERENCE ABSTRACT

An Interactive Live Dashboard for Risk Adjusted Hospital Acquired Complications (HAC)

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Aim: This paper explains an innovative method to analyse Hospital Acquired Complications (HACs) and compare performance with peer hospitals to improve patient safety and quality of care.

Design/Methodology: In 2017, Healthscope was an early adopter of the Hospital Acquired Complications (HAC) methodology developed by the Australian Commission on Safety & Quality in Healthcare, using HAC rate as a core Quality KPI for Board and Executive reporting. The HAC measure was ideal for integrated care monitoring of complications, being a combination of 16 different potentially preventable hospital acquired complications, such as falls, infection, haemorrhage, embolism, falls and medication errors.

After using a pure HAC ratio for 12 months, two methods for risk adjustment were developed and trialed. These were based on the Independent Hospital Pricing Authority (IHPA) risk adjustment methodology utilised by the public hospital sector.

In methodology (i) Healthscope and IHPA risk adjusted coefficients were calculated for each risk factor and then used to calculate expected HAC cases and the risk adjusted HAC ratio (expected HAC cases/actual HAC cases) for each HAC group for each of Healthscope's hospitals. Calculated ratios were displayed in a separate funnel plots.

In methodology (ii) IHPA risk adjusted coefficients were applied to every patient episode, with complexity score calculated for each HAC for the target hospital. Overall complexity score was then used to identify peer hospitals with the same patient complexity, from a dataset of 400 public and private hospitals. After identifying peers, HAC ratios were compared and the target hospital ranked as Best Practice, Better than Peers, Equal to Peers, Worse than Peers or Worst Practice.

Outcomes/Findings:

Methodology (i) facilitated internal benchmarking and demonstrated that Healthscope hospitals were well within the confidence interval range of the funnel plot.

Methodology (ii) benchmarked performance against external private and public hospitals with the same complexity/casemix. A web based benchmarking portal was designed, allowing hospitals to view results in real time, and drill down to patient level details. Benchmarking each complication type allowed hospitals to identify which complication was causing the most harm, after risk adjustment.

Conclusion: Methodology (ii) was identified as the most suitable model, as it had the ability to compare ratios with peer hospitals, identify best practice and focus on opportunities for improvement. Use of a risk adjustment methodology facilitates focus on complications that have the greatest potential for change and improvement in patient safety and quality of care.