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Sustained Reduction in Surgical-site Infection Rate with Actionable Data

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Introduction

Surgical Outcome Monitoring and Improvement Program (SOMIP) is a corporate-wide standardized quality assurance program which provide risk-adjusted outcome data of operations performed in Hospital Authority. Apart from annual reports, the data captured would be given to individual hospital for further evaluation. We noticed a higher than average surgical site infection (SSI) rate in the elective operation in the Division of Hepatobiliary and Pancreatic Surgery (HBP) in 2009-2010. Actions were taken to evaluate the possible causes of the increased SSI rate and to initiate a change in the care bundle.

Objectives

1. To describe our strategy in dealing with the increased SSI rate
2. To evaluate the effectiveness and sustainability of the care bundle in terms of reduction of SSI

Methodology

The data of elective operations of the HBP team of Prince of Wales Hospital in 2009-2010 was reviewed with operations of high SSI rate identified. Potential risk factors of SSI were evaluated with statistical analysis. SSI care bundle was devised to address SSI issues on the whole patient journey for elective operations. We formally started to use this care bundle in December 2010. Yearly SSI rate of elective operations by HBP team after adopting the SSI care bundle was reviewed to evaluate the effect of the care bundle.

Result

The number of elective operations captured by SOMIP in year 2009-2010 and year 2010 to 2015 of the HBP team of Prince of Wales Hospital were 225 and 1083

respectively. Open hepatectomy and radiofrequency were found to have the highest SSI rate in 2009-2010. Their SSI rates in 2009-2010 were 38.8% and 42.9% respectively. Operation time longer than 180 minutes was found to be an independent factor for SSI (p