Service Priorities and Programmes

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Prevention of Post-operative Pneumonia Program to reduce postoperative respiratory complications

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Introduction

As post-operative pneumonia increases both the morbidity and mortality rate, the Prevention of Postoperative Pneumonia Program (4P) was introduced in 2012 July to protect patients from developing post-operative pneumonia. The 4P mainly consists of 3 elements: (1) Perform Triflow or Deep Breathing & Coughing exercise (2) Maintain oral hygiene (3) Encourage early ambulation

Objectives

(1) To prevent patients from acquiring post-operative pneumonia (2) To facilitate their recovery

Methodology

Subjects were patients admitted for performing major or ultra-major elective surgery. Triflow were provided to the patients prior the surgery or just after the operation. And a Chest Promotion Video about deep breathing exercise was shown to patients to ensure they had proper technique on using Triflow for deep breathing exercise. Besides, to reduce the oral bacterial count, the maintenance of oral hygiene was emphasized, and Thymol gargal solution was used for oral care to the post-operative patients twice per day. Finally, to improve the lung expansion, the post-operative patients would either be propping-up on bed or sitting out on daytime. Outcome measures were categorized as the post-operative pneumonia counts in Surgical Outcome Monitoring & Improvement Program (SOMIP) report.

Result

Throughout the research period, there were totally 7419 patients performed major/ultra-major operations. Before launching the program (July 2009 to June 2012),

there were 238 out of 4462 patients acquired post-operative pneumonia. And the Prevention of Post-operative Pneumonia Program was launched since July 2012, and from July 2012 onwards to June 2014, there were 119 out of 2957 patients acquired post-operative pneumonia. That means before the implementation of 4P, there would be 1 patient acquired pneumonia on every 18.75 major/ultra-major operations; but for now, it decreased to 1 patient would acquire pneumonia on every 24.85 major/ultra-major operations. It was 24.5% reduction ($p<0.05$) when compared with the results in 2009-2012. Conclusion: The Prevention of Post-operative Pneumonia Program was effective in protecting patients from acquiring post-operative pneumonia and facilitating their recovery. And besides the doctors and nurses, the engagement of the whole healthcare team such as physiotherapist, healthcare assistance, the patients and their family members were equally important, and all of them contributed to the great success.