



**Service Priorities and Programmes**  
**Electronic Presentations**

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**Efficacy of new diagrammatic exercise reminder card to enhance patient engagement and improve post-operative outcomes for patient after abdominal surgery at TKOH**

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**Introduction**

It has been reported that perioperative pulmonary complications (PPCs) occurred in 9% to 40% of patients undergoing abdominal surgery. These complications prolong postoperative recovery, attribute to additional health care cost and may lead to death. Intensive chest expansion exercise and early mobilization are strategies to reduce PPCs. However, poor patients' adherence to the recommended exercise regime decreases the effectiveness of treatment in patients with communication barrier or distracting factors such as pain and fatigue at early post-operative phase. Therefore, clear and simple diagrammatic clue is important to increase patients' adherence and enhance treatment outcomes.

**Objectives**

1)To improve patients' adherence to post-operative exercise regime by simple self-explanatory photos 2)To evaluate the efficacy of the enhanced exercise program

**Methodology**

Pre-operative Phase Patients at high risk of developing PPCs were recruited to participate in the program. Apart from conventional pre-operative chest physiotherapy, a self-explanatory exercise reminder card with photos illustrated the exercise regime was prescribed and placed on patient's bedside. Post-operative Phase Post-operative physiotherapy, appropriate positioning and progressive mobilization exercise were provided by physiotherapists daily. Reinforcement of exercise as shown in the reminder card was carried out by other health care workers and carers after physiotherapy service hours. The outcomes included inspiratory capacity (IC), SpO<sub>2</sub> in post-operative day 1-3, incidence of documented PPCs, pre-operative and pre-discharge Modified Functional Ambulation Categories (MFAC), discharge destination and feedback from patients and other health care workers.

**Result**

Sixty-seven patients participated in the program. The patients achieved an average of 70% of normal IC upon discharge. The mean SpO<sub>2</sub> on days 1-3 was maintained at

98% which is above the recommended value. PPCs occurred in 3 (4.4%) patients which is lower than the reported rate of 9% to 40% in previous researches. Fifty-two (77%) patients regained pre-morbid MFAC and 60 (89%) patients discharged home directly. Feedback through questionnaires from other health care workers and patients were positive. They found the card was easy to understand and reminded them to perform self-exercise effectively. The exercise card appeared to be effective in engage patient in self exercise. It is a cost effective mean to enhance surgical outcomes and worth for further application.