Fast-track protocol after total knee arthroplasty (TKA) through multi-disciplinary collaboration

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**Introduction**  
Fast-track protocol after TKA has yielded quicker functional recovery, reduced morbidity, decreased length of convalescence, increased satisfaction and reduced hospital costs. It requires multidisciplinary collaboration between orthopaedic surgeons, anaesthesiologist, nurses, physiotherapists and occupational therapist by adding multimodal evidence-based care principles and optimized logistics.

**Objectives**  
Since May 2013, the traditional rehabilitation plan was modified and a new ERP was implemented for patients after primary TKA. Patients had preoperative patient education including information on intended LOS, preoperative physiotherapy and occupational therapy assessment, comprehensive multimodal pain control including intraoperative local infiltration of analgesia, and early mobilization postoperatively. Some patients would be recruited in the fast tract discharge program, in which they would be discharged home directly from QMH within one week, after screening by physiotherapy. For the other patients, they would be transferred to MMRC for rehabilitation once medical condition stabilized in QMH. The patients would be discharged home after fulfilment of strict functional and standardized discharge criteria. The expected duration of rehabilitation in MMRC would be 7 day and 14 day for unilateral and one-stage bilateral TKA respectively. This study aimed to review the outcome.

**Methodology**  
Patients who transferred to MMRC in ERP from May 2013 to Jan 2015 after primary
TKA were included in the study. Patient’s data and rehabilitation outcome were prospectively collected, and analysed.

**Result**
There were 168 patients included (129 female and 39 female) with 28 and 140 patients unilateral and bilateral TKA done respectively. Mean age of the patients was 72.7±8.5 (48-89). The percentage of patients being discharged within the expected duration were 75 % (105/140) and 82.1 % (23/28) in unilateral TKA and 1-stage bilateral TKA groups respectively. The mean Knee Society Functional Score and Motor Functional Independence Measure Scores were 43.3±13.9/100 (15-100) and 80.6±6.5/91 (40-88), which were comparable to the rehabilitation outcomes in the traditional rehabilitation plan. ERP is possible to reduce hospital stays following TKA while maintaining treatment outcome.