



The development and implementation of a multi-disciplinary hip fractures clinical pathway in Tai Po Hospital: A pilot study

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Introduction

A multi-disciplinary hip fractures clinical pathway can facilitate the standardization of treatment protocol, enhance care plan formulation and allow early safe discharge of patients while maintaining the rehabilitation quality. This pilot study aimed at evaluating if the hip fractures clinical pathway could reduce the length of stay (LOS) and maintain the functional outcomes of patients undergo the clinical pathway.

Methodology

A hip fractures clinical pathway (Figure 1) and a discharge checklist (Figure 2) were developed by the Tai Po Hospital orthopaedic rehabilitation team and a pilot study was conducted from 1st April to 30th May, 2009. The LOS, change of Modified Barthel Index (MBI), Functional Independence Measures (FIM)-motor scores, Elderly Mobility Score (EMS) and Modified Functional Ambulation Category (MFAC) were compared between patients underwent the clinical pathway and the conventional practice.

Results

Seventeen and eighty-one patients with hip fractures were recruited to the hip fractures clinical pathway group and conventional practice group respectively. There were no significant difference on the admission scores of Cantonese version of Mini-mental State Examination, MBI, FIM-motor, EMS and MFAC between the two groups ($p > 0.05$, independent t-test). Although there was no statistically significant difference between the overall LOS of both groups ($p > 0.05$, independent t-test), there was a 14.8% reduction in LOS for the patients who underwent the clinical pathway discharged to home placement when comparing with the conventional practice group. (Table 1) No significant difference on the gains of MBI, FIM-motor scores, EMS and MFAC was found between the two groups ($p > 0.05$, independent t-test). (Table 2)

Table 1. Comparison of length of stay (LOS) between patients underwent hip fractures clinical pathway and conventional practice

Length of stay (LOS)	Patients underwent hip fractures clinical pathway	Patients underwent conventional practice	Significance, independent t-test
Overall mean LOS (SD)	19.88 (7.12)	19.70 (9.51)	0.94
Mean LOS of patients discharged to home (SD)	19.20 (7.44)	22.25 (9.25)	0.87
Mean LOS of patients discharged to old aged home (SD)	20.20 (8.59)	17.54 (8.68)	0.92

SD: Standard deviation

Table 2. Comparison of functional scores between patients underwent hip fractures clinical pathway and conventional practice

Functional scores	Patients underwent hip fracture clinical pathway (n=17)	Patients underwent conventional practice (n=81)	Significance, independent t-test
Mean MBI gain (SD)	12.81 (12.47)	14.06 (13.12)	0.74
Mean FIM-motor scores gain (SD)	8.00 (7.16)	8.29 (10.81)	0.92
Mean EMS gain (SD)	4.93 (4.53)	4.43 (3.93)	0.69
Mean MFAC gain (SD)	1.43 (1.28)	1.40 (1.12)	0.94

SD: Standard deviation

Conclusions

The hip fractures clinical pathway emphasized on multidisciplinary communication, early discharge planning and early care-giver intervention which could shorten the LOS of patients discharged to home placement, while maintaining the self-care functions and functional mobility.

Figure 1. The Hip fractures clinical pathway

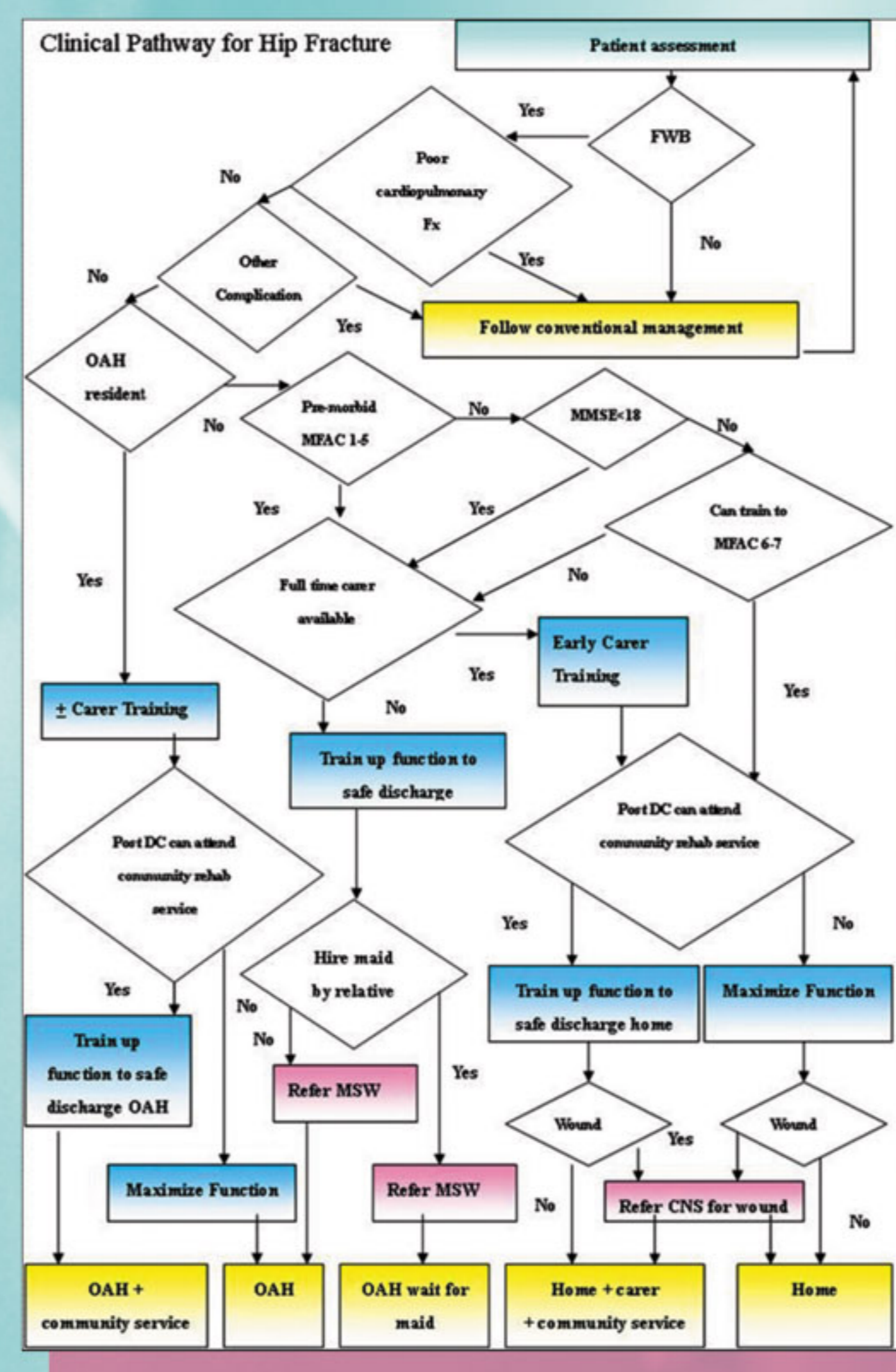


Figure 2. Discharge checklist

The discharge checklist form includes fields for 'Hospital Authority Tai Po Hospital', 'Department of Orthopaedic Rehabilitation', and 'Discharge Checklist'. It contains sections for 'Admission Assessment', 'Discharge Status', 'Functional Status and Risk Factors', and 'Pre-discharge Planning'. The 'Discharge Status' section includes 'Weight-bearing status (Doctor)', 'Wound condition (Nurse)', 'Catheter status', 'Discharge destination (Nurse)', and 'Care availability (Nurse)'. The 'Functional Status and Risk Factors' section includes 'Nurse', 'PT', 'OT', and 'Goals (Multi-disciplinary)'. The 'Pre-discharge Planning' section includes 'Caregiver training (PT/OT)', 'See relative (Doctor)', 'Other referral (Doctor)', 'Medication (Nurse)', 'Transportation (Nurse)', 'Discharge documents (Nurse)', and 'Discharge documents (Nurse)'. The form is dated 12/2008.

