Explorative review of the characteristics of hip-fracture patients potentially benefit from 7-day-Rehabilitation service

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Introduction
Systematic review supported additional weekend physiotherapy decreased length-of-stay, improved mobility and quality-of-life in patient groups including stroke, and lower-limb orthopaedic conditions. However, the characteristics of respondent for the enhanced rehabilitation service warranted further research to assure the appropriateness of care with accountable services being delivered to the right recipients.

Objectives
To evaluate the characteristics of hip-fracture patients potentially benefit from 7-day-Rehabilitation service.

Methodology
A retrospective review of patients, transferred to Kowloon Hospital with surgery for fracture of proximal femur, was conducted to explore the characteristics of potential respondents. Elderly Mobility Scale(EMS), walking status and residence before admission were assessed.

Pearson correlation was conducted to assess the correlation of age to EMS at discharge and the change score of EMS(EMSCS). To analyze difference of training effects in EMSCS, independent t-test were used including age groups(young-old group:age≤80, or old-old group:age>81), different premorbid walking status(independent walker, or assisted/dependent walker) and residence(home, or old-age-home).

Result
A total of 521 patients aged 82.6±8.3 years were evaluated. The mean EMSCS was 5.1±3.9. The results revealed a significant negative correlation between age and EMS at discharge(r=-0.421,p<0.001) and EMSCS(r=-0.325,p<0.001), reflecting age could be a negative factor affecting the improvement of functional mobility.

There was a significant difference in EMSCS with an increase of 6.6±4.0 in the
young-old group (N=187) and 4.2±3.6 in the old-old group (N=331) (p<0.001); 5.5±3.9 in home-residence group (N=442) and 2.5±2.9 in old-age-home-residence group (N=78) (p<0.001); 5.4±3.9 in the independent pre-morbid group (N=464) and 2.3±3.2 in assisted/dependent pre-morbid group (N=47) (p<0.001).

EMS is useful in allocating people to the most appropriate care setting. Statistically & clinically significant improvement was detected in all patients groups with greater improvement in the young-old, home residence and independent pre-morbid groups whose mobility level was raised from high level of dependency (EMS<10) to borderline safety & independence (EMS10-14).

The current physiotherapy-program was effective in improving the mobility of patients with hip-fracture even for patients with old age and compromised pre-morbid mobility. The results suggested young with age≤ 80, independent pre-morbid status or home residence could possibly be more beneficial for the intensive rehabilitation. This clientele is likely to be significantly benefitted from further top-up dose of weekend rehabilitation in upgrading the patients to safe and independent community integration.