港島西醫院聯網
Hong Kong West Cluster

A Model of Multi-disciplinary Partnership from Hospital to Community for Geriatric Hip Fracture Patients

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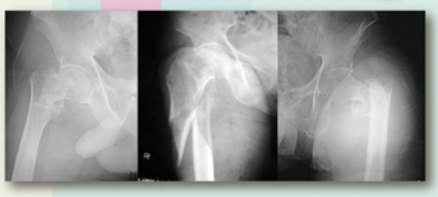
Hip fractures amongst elderly are common.



Introduction:

Mismatch between patients expectation AND functional recovery

- Over-expectation:
  - Families seldom have prior exposure to the problem
  - And tipping of the balance render a significant functional decline
- Limited functional recovery:
  - Old age
  - Impaired cognitive function

Impact:

- Unnecessary prolongation in their hospital stay
- Lower chance of social reintegration

Bridging the gap:

- Early family involvement
- Integrated multi-disciplinary practice model
- Across the continuum of care from hospital to community

Selection Criteria:

Subjects are patients older than 65 year-old and admitted to Fung Yiu King Hospital in 2010 for rehabilitation of proximal femoral fracture. Historical cohort of patients was utilised as control.

Methodology:

A Multi-disciplinary Care Model was developed in January 2010

1. Team member
   - In the Hospital: Orthopaedic surgeon, discharge planning nurse, physiotherapist, occupational therapist, prosthetist & orthotist, medical social worker
   - In the Community: Community nurse, David Trench Rehabilitation Centre community occupational therapist, Geriatric Day Hospital
2. Strategy
   a. Set realistic goal for inpatient rehabilitation (safe to live in the community with accessible support)
   b. Delivery of care by multi-disciplinary approach
   c. Early and heavy involvement of the family
   d. Continuation of rehabilitation supported by community nursing service, David Trench Rehabilitation Centre community occupational therapist and Geriatric Day Hospital. Aim at maximize functional potential.
3. Logistic
   - Patients are systematically assessed within 1st week of admission. A patient / family-centered model of care is adopted to empower them to participate in the decision on the delivery of care and reintegration back into the community.
   - The discharge planning nurse will:
     - Internally - Collaborate with members of the multi-disciplinary rehabilitation team for patients and care-givers training and education
     - Externally - Interviews with patients and family members to inform and explain to them and engage them in the continuous process of care.
4. Outcome analysis
   - Length of stay, discharge placement, readmission rate, the Modified Barthel Index and the amount of complaint and appreciation

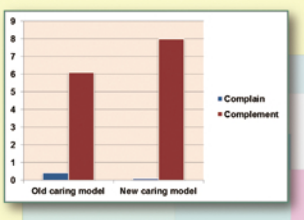


Figure 1. The incidence of complain decreased from 0.4 to 0.1/1000 bed-day. Complement increased from 6.1 to 8.0/1000 bed-day.

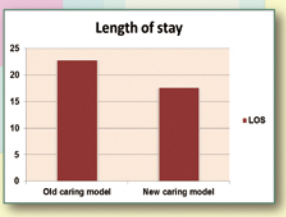


Figure 2. The average length of stay in the rehabilitation hospital was shortened by 5.2 days, t-test p=0.000.

Result:

279 subjects were recruited. 73.7% (206) were female. The mean age was 84.1 year-old. 71.7% (200) patients lived in their home before sustaining the fracture. 85.9% (172) of these patients could return back to home on discharge. Readmission rate within 28 days was 14% (39). 28-day mortality rate was 1.1% (3). The mean Modified Barthel Index increased from 46.1 to 67.2 during the in-patient stay. The score improved further when the patients were discharged back to the community. At the 12th week, the mean Modified Barthel Index increased to 78.3. These parameters were of no significant difference compared to the historic cohort.

However, a significantly shorter hospital stay was observed. The average length of stay in the rehabilitation hospital was shortened by 5.2 days (from 22.8 to 17.6 days) and is equivalent to a shortened of 29.55% hospital bed days. Less conflict between staff and relative was observed. In the meantime, the incidence of complain decreased from 0.4/1000 bed-day to 0.1/1000 bed-day. In addition, complement increased from 6.1/1000 bed-day to 8.0/1000 bed-day.

Conclusion:

The Multi-disciplinary Hopsital-Community Care Model, lead to a **shortened length of stay** without impairing functional recovery

1. an overall cost savings and
2. increased effectiveness in the delivery of care

Most importantly, relatives, patients and staff are more **satisfied**

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