Multidisciplinary Partnership in Discharge Planning for Geriatric Orthopaedics Patients from the Hospital to the Community

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醫管局病床使用率不均
<table>
<thead>
<tr>
<th>康復病床</th>
<th>醫院聯網</th>
<th>急症病症床</th>
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</thead>
<tbody>
<tr>
<td>99.5</td>
<td>新界西</td>
<td>96.9</td>
</tr>
<tr>
<td>94.0</td>
<td>港島東</td>
<td>82.4</td>
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<tr>
<td>92.6</td>
<td>新界東</td>
<td>87.9</td>
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<tr>
<td>90.3</td>
<td>九龍東</td>
<td>86.9</td>
</tr>
<tr>
<td>89.0</td>
<td>九龍西</td>
<td>83.4</td>
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<td>86.7</td>
<td>九龍中</td>
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<tr>
<td>59.1</td>
<td>港島西</td>
<td>75.7</td>
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<tr>
<td>87.9</td>
<td>平均使用率</td>
<td>85.6</td>
</tr>
</tbody>
</table>

資料來源：醫管局
Bed occupancy drops year after year

- Conclusion - HKW is overstaffed
Because of all these,...

- This year, he has no pay scale increment
But, with your logical mind

- We didn’t cut the bed number

- Population size shrinks?

- People get healthier every year?
  (getting older)

- Conclusion is:
  - The system is getting more efficient .....
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Background – Orthopaedic Patients

- Suffered from a diversity of pathologies
  - Spine, Joint, Fracture, Infection...

- What being common:
  - Significant drop of their body functions
    - Broken leg, cannot walk
    - Infected hand, cannot write
  - Particularly true for elderly
The Impact for an elderly

- The impact usually extends beyond the affected body part
- Decrease in independence
- Difficult social reintegration
- Support from the family members
- Families
  - Seldom have such experience and
  - Mostly have never prepared for it.
  - Denial

- Discharge is Delayed

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Impasse - Way Out

- **Family and Patient:**
  - Acceptance of the situation with a realistic expectation
  - Interview them, explain, update progress

- **Our side:**
  - An integrated multi-disciplinary best practice model
  - Regular meeting:
    - Share information
    - Discharge planning in week 1
  - Train the **Carer as Trainer (CAT program)**
  - Early **Mobilisation of Social Resources**
  - Provide **Post-discharge Support Service in Community**
    - GDH, OPD physiotherapy, OPD occupational therapy, community center, CNS
Hopefully...

- On time (Earlier) discharge

Avoid unnecessary prolonged hospitalisation

- Spare hospital resources be channeled to other services

Ensure system efficiency

- But also the shortened institutionalisation will increase their chance of future social reintegration

Optimise patient clinical outcomes
Methodology

- **Study design**
  - Historic cohort
  - Control (1-\textbf{2009} to 12-2009), Intervention (1-\textbf{2010} to 12-2013)

- **Subjects**
  - Patients of 65 years old or above,
  - admitted to the orthopaedic ward of the rehabilitation hospital — TWGHs Fung Yiu King Hospital

- **Team**
  - A multidisciplinary care team
    - an inhouse orthopaedic surgeon, discharge planning nurse, physiotherapist, occupational therapist, prosthetic and orthotic professional, medical social worker, community nursing service and Geriatric Day Hospital staff.
    - Unified goal - discharged back to community in practically shortest stay
    - Regular meeting – predict outcome, share information, tailor rehab target
    - Unified end-point - to train the patient to walk with aids independently, or back to the premorbid conditions for frail cases. Subsequent rehabilitation to be done in out-patient setting
  - Patient/Family- centered model
  - Interview, explain, update and discuss the discharge plan
  - Train the Carer As Trainer

- **Outcome**
  - Length of stay in hospital
  - Discharge destination
  - 30 day unplanned readmission rate
Result

- The hospital received an average of 947 / year
- The average age was 80.6 (SD 9.6 years)
- With the implementation of a multidisciplinary discharge planning, the LOS dived immediately and consistently stayed low.

➤ How low?
Result - average LOS

- Shorter average stay
- More standardised care
- Less long stayer

<table>
<thead>
<tr>
<th>Year</th>
<th>LOS (day)</th>
</tr>
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<tbody>
<tr>
<td>2009</td>
<td>21.7</td>
</tr>
<tr>
<td>2010</td>
<td>17.1</td>
</tr>
<tr>
<td>2011</td>
<td>15.2</td>
</tr>
<tr>
<td>2012</td>
<td>16.0</td>
</tr>
<tr>
<td>2013</td>
<td>14.6</td>
</tr>
</tbody>
</table>
Result – SD of LOS

- Shorter average stay
- More standardised care
  - The SD of LOS narrowed
  - from 18.5 days to 10.2 days
- Less long stayer

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LOS and SD range (day)

2009 2010 2011 2012 2013

18.2 21.7 17.1 15.2 16 14.6 10.2
Result – LOS, long stayer %

- Shorter average stay
- More standardised care
- Less long stayer
  - A 73% drop in long stay (stay more than 30 days)
    - Prevalence dropped from 20.3% to 5.4%.
Result – LOS impact on $ 

- The overall financial impact was related to the 7,028 bed-day being saved

- $1700 / bed-day

- This would equate to HK$11.9 million per year

- Staff salary
- Consumable, drug
- Capital maintenance
- Resource for new / clinically more meaningful service
Result – Patient placement

- **Before admission**
  - 81% living at home

- **On discharge**
  - 72% living at home
  - Only 11.1% home resident becomes institutionalised
    - ? Respite care
    - ? Social reason

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Result – Unplanned readmission

- 30 day unplanned readmission to Orthopaedics acute service
- Before 2.2%
- After 2.3%

Control

D/C planning

50% 70% 90%

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Conclusion

- Multidisciplinary discharge planning team
  - Can significantly decrease the period of unnecessary hospitalisation
    - A 35% shorter rehabilitation hospital LOS
      - from 21.7 days cut to 14.6 days
    - No increase in institutionalisation rate
    - No increase in unplanned readmission rate
- Given the service volume, we have saved 7028 bed-day in a rehab hospital
Thank you!