

# Multidisciplinary Supported Discharge Program for Stroke Patients in OLMH

presented by Sharon Poon (O.T.I)

OLMH

# Background

- Stroke patients constituted 17% of in-patients in Geriatric Ward in OLMH in 2010
- Overwhelmed with the unexpected demand in daily caring issues with limited support  
(Cecil, Parahoo, Thompson, McCaughan, Power & Campbell, 2010)
- 4 distinct trajectories of psychological distress faced by stroke patients (Lutz, Young, Cox, Martz & Creasy, 2011)
- Anxiety and depression in carers of stroke during the first 3 months after discharge (Greenwood & Mackenzie, 2010)

# OLMH Stroke Rehabilitation Care Management Plan

- Deliver comprehensive stroke rehabilitation service to patients admitted to Geriatric Ward in OLMH
- Multidisciplinary team: Geriatrician, Nurse, Physiotherapist, Occupational Therapist, Medical Social Worker, Dietitian, Pharmacist, Pastoral Care
- Weekly case conference for rehabilitation progress, rehabilitation plan, pre-discharge plan and post-discharge arrangement

# OLMH Stroke Rehabilitation Care Management

|               | Admission   | Rehabilitation  | Case Conference   | Pre-discharge Stage   |
|---------------|---|---|---|---|
| Medical       | <ul style="list-style-type: none"> <li>Systematic Ass. &amp; impairment evaluation</li> <li>Diagnosis and risk factors review</li> <li>Medication Review &amp; follow up</li> </ul> | <ul style="list-style-type: none"> <li>Review all professions' Ass. +/- refine Mx. Plan</li> <li>Medical review &amp; Mx.</li> <li>Optimize RF control</li> </ul> | <ul style="list-style-type: none"> <li>Social background and premorbid state evaluation</li> <li>Finding of Initial Ass.</li> <li>Discussion on rehab progress</li> <li>Refine rehab plan</li> <li>Social condition and D/C arrangement</li> <li>Post-discharge arrangement</li> <li>Long-term care plan</li> </ul> | <ul style="list-style-type: none"> <li>Optimize risk factor control</li> <li>Finalize secondary prevention</li> <li>Review blood results</li> <li>Enhance information exchange</li> </ul> |
| Nurse         | <ul style="list-style-type: none"> <li>Comprehensive nursing Ass.</li> <li>Fall Ass.</li> <li>Intake &amp; Output chart for 2 days</li> <li>Pressure Sore Care Program</li> </ul>   | <ul style="list-style-type: none"> <li>Nursing daily Ass.</li> <li>Educate pt and carer stroke management and prevention of complication</li> </ul>               |   | <ul style="list-style-type: none"> <li>Pre-discharge Ass.&amp; planning</li> <li>Introduce phone FU service</li> <li>Refer to GDH/ CNS/ICM</li> </ul>                                     |
| OT            | <ul style="list-style-type: none"> <li>Blanket referral</li> <li>OT Ass. within 2 days</li> <li>Living environment and supportive system</li> </ul>                                 | <ul style="list-style-type: none"> <li>Commence Rx and revise accordingly</li> </ul>  |   | <ul style="list-style-type: none"> <li>Advise on assistance needed &amp; assistive device</li> <li>Pre-d/c home Ass.</li> <li>Home based training</li> </ul>                              |
| PT            | <ul style="list-style-type: none"> <li>Blanket referral</li> <li>PT Ass. within 2 days</li> <li>PT Treatment</li> </ul>   | <ul style="list-style-type: none"> <li>Commence Rx and revise accordingly</li> </ul>  |   | <ul style="list-style-type: none"> <li>Continue rehab</li> <li>Prescribe walking aids or WC</li> <li>Review PT Ass.</li> </ul>  |
| Dietitian     | <ul style="list-style-type: none"> <li>On referral basis</li> <li>Nutrition screening</li> </ul>  | -----   |   | -----   |
| MSW           | <ul style="list-style-type: none"> <li>On referral basis</li> <li>Seen within 2 working days upon receiving referral</li> </ul>   | <ul style="list-style-type: none"> <li>Psychosocial need Ass.</li> <li>Care &amp; D/C plan</li> <li>Community resources</li> </ul>                                |   | -----   |
| Pharmacist    | -----   | -----   |   | <ul style="list-style-type: none"> <li>Medication review</li> </ul>   |
| ST            | <ul style="list-style-type: none"> <li>On referral basis</li> </ul>   | -----   | -----   | -----   |
| Pastoral Care | <ul style="list-style-type: none"> <li>Emotional support</li> </ul>   | -----   | -----   | -----   |

# Multidisciplinary Supported Discharge Program for Stroke Patients in OLMH

- Sequel to OLMH Stroke Rehabilitation Care Management Plan
- Facilitate stroke patients and their caregivers to adapt to community living at early post discharge period
- Key members: Geriatrician, nurses and occupational therapists

# Objectives

1. To provide support to stroke patients who were discharged to the community and their caregivers
2. To identify the health care needs and the sources of stress for stroke patients and their caregivers
3. To provide support and intervention on health care needs in a timely manner

# Roles of Different Disciplines

## Geriatrician

- Risk factors, medication and follow up investigation

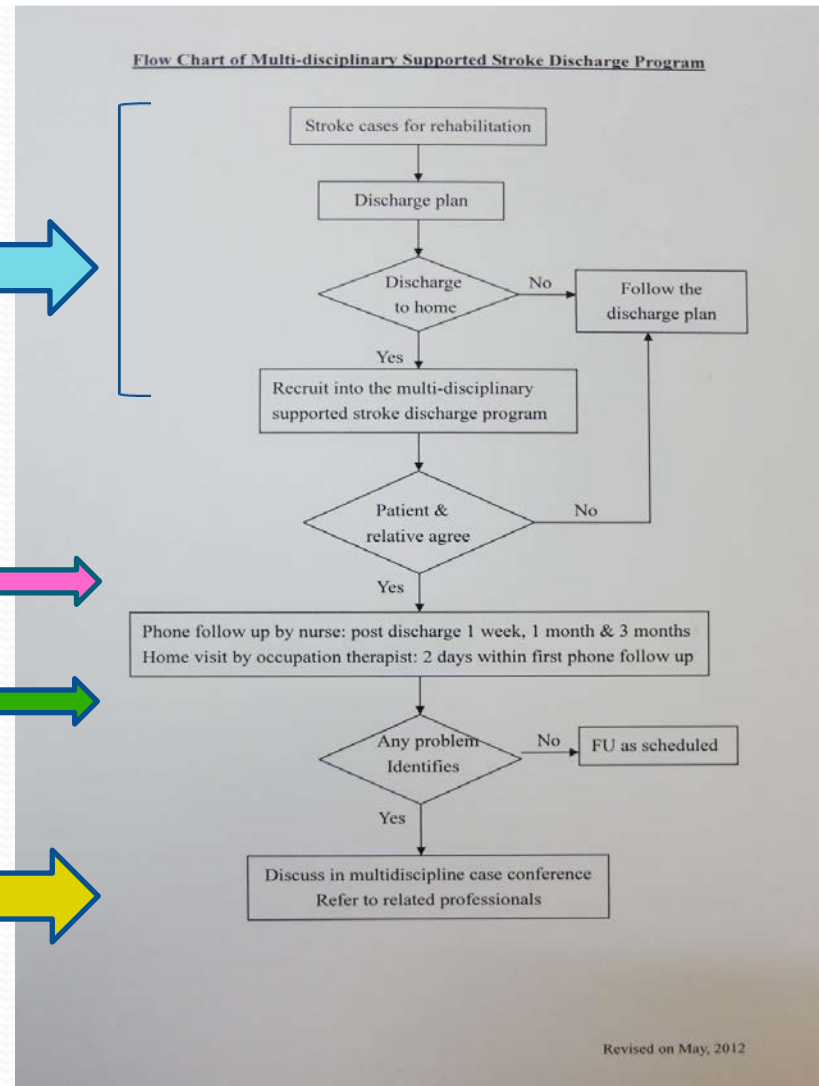
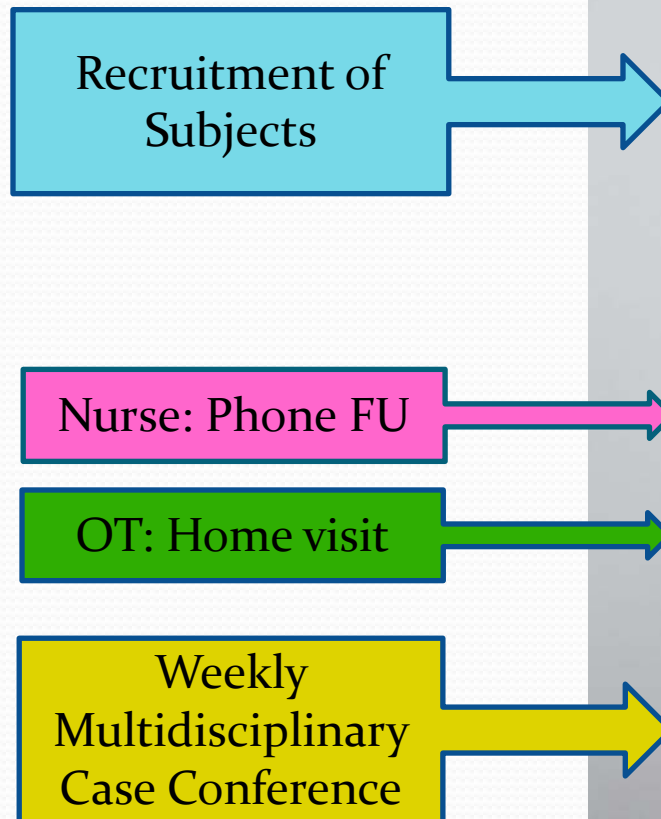
## Nurse

- Telephone follow-up (e.g. medication, caring problems, psychological support, outcome measures)

## OT

- Home visit (e.g. home assessment, home modification, prescription of ADL aids)

# Flow Chart of Multidisciplinary Supported Discharge Program for Stroke Patients





# Recruitment of Subjects

- Inclusion Criteria:
  - Patients admitted to geriatric ward with diagnosis of stroke
  - Stroke patients who are planned to be discharged home
- Exclusion Criteria:
  - Patients who were discharged to OAH
  - Patients who were admitted to ICM program
  - Patients who rejected to participate this program

# Post-discharge phone follow-up by nurse

**Our Lady of Maryknoll Hospital**  
Stroke Rehabilitation Program  
Post-Discharge Follow Up Record

Gum Label

Date of Discharge: \_\_\_\_\_

Introduction service to patient & relative (Name: \_\_\_\_\_ Relationship: \_\_\_\_\_ Date: \_\_\_\_\_)

Telephone number: Patient: \_\_\_\_\_ Care giver: \_\_\_\_\_ Prefer contact time: \_\_\_\_\_

Address (if different from the label): \_\_\_\_\_

FU arrangement: Name of Hospital / Clinic: \_\_\_\_\_ Date of Appointment: \_\_\_\_\_

GHM: \_\_\_\_\_

Geni/Med: \_\_\_\_\_

Other: \_\_\_\_\_

Remarks: GDS: /15 on \_\_\_\_\_ AMT: /10 on \_\_\_\_\_

| Post discharge Phone FU & Home Visit |                      |                      |                       |                 |
|--------------------------------------|----------------------|----------------------|-----------------------|-----------------|
| Date                                 | 1 <sup>st</sup> week |                      | 1 <sup>st</sup> month |                 |
|                                      | Nurse                | Occupation Therapist | Nurse                 | Nurse           |
| BI (Barthel Index)                   | / 100                | / 100                | / 100                 | / 100           |
| MFAC                                 | 1 臥床                 | 1 臥床                 | 1 臥床                  | 1 臥床            |
| (Modified)                           | 2 坐位                 | 2 坐位                 | 2 坐位                  | 2 坐位            |
| Functional                           | 3 獨行步行               | 3 獨行步行               | 3 獨行步行                | 3 獨行步行          |
| Ambulatory                           | 4 輕扶步行               | 4 輕扶步行               | 4 輕扶步行                | 4 輕扶步行          |
| Category)                            | 5 獨行步行               | 5 獨行步行               | 5 獨行步行                | 5 獨行步行          |
|                                      | 6 室內步行               | 6 室內步行               | 6 室內步行                | 6 室內步行          |
|                                      | 7 室外步行               | 7 室外步行               | 7 室外步行                | 7 室外步行          |
| Stress level                         | Caregiver: / 30      | Caregiver: / 30      | Caregiver: / 30       | Caregiver: / 30 |
| 0=no, 10=severe                      | Patient: / 30        | Patient: / 30        | Patient: / 30         | Patient: / 30   |
| Medication                           |                      |                      |                       |                 |
| Follow up                            |                      |                      |                       |                 |
| Other concern                        |                      |                      |                       |                 |
| Follow up action                     |                      |                      |                       |                 |
| Staff Name / Rank                    |                      |                      |                       |                 |
| Signature                            |                      |                      |                       |                 |
| Date                                 | Case Conference      |                      |                       | Signature       |
|                                      |                      |                      |                       |                 |
|                                      |                      |                      |                       |                 |

Revised on March 2012

聖母醫院 (Our Lady of Maryknoll Hospital) Simplified Chinese Barthel Index

| 項目  | 說明     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|--------|---|---|---|---|---|---|---|
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Three sections of phone FU:  
1<sup>st</sup> wk, 1<sup>st</sup> month & 3<sup>rd</sup> month



# Home Visit by OT

within 2 days after  
1<sup>st</sup> phone FU by nurse

O-782(2)  
Our Lady of Maryknoll Hospital  
Occupational Therapy Department  
Community Occupational Therapy  
Home Visit Report

Gum Label

Diagnosis & History: \_\_\_\_\_ Date of Visit: \_\_\_\_\_

**Social Background**  
Living alone / with \_\_\_\_\_  
Social support: \_\_\_\_\_  
Financial situation: Supported by family / OAA / DA / CSSA

**Home Environment**  
Type of home: \_\_\_\_\_  
Accessibility: Direct lift-landing / No lift / Non direct lift landing    Remarks: \_\_\_\_\_  
Toilet: Seated type / Squatted type    Remarks: \_\_\_\_\_  
Bathing facility: Bathtub / Shower stall / Bucket / Water heater    Remarks: \_\_\_\_\_  
Others: \_\_\_\_\_

**Functional Performance**  
BADL: \_\_\_\_\_  
IADL: \_\_\_\_\_

**Occupational Therapy Intervention**

| Problem Identification | Action/Suggestion |
|------------------------|-------------------|
|                        |                   |

Follow-up Plan: \_\_\_\_\_

Date: \_\_\_\_\_ Occupational Therapist: \_\_\_\_\_



# Weekly Multidisciplinary Case Conference

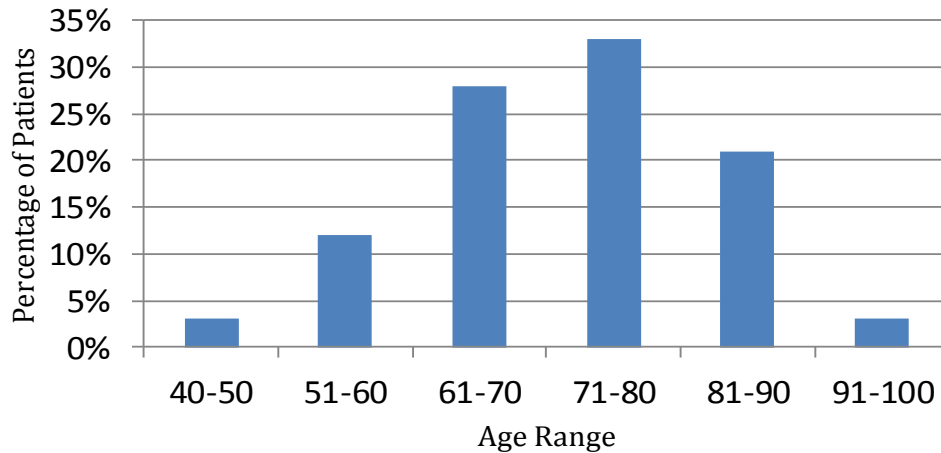


# Outcome Measures

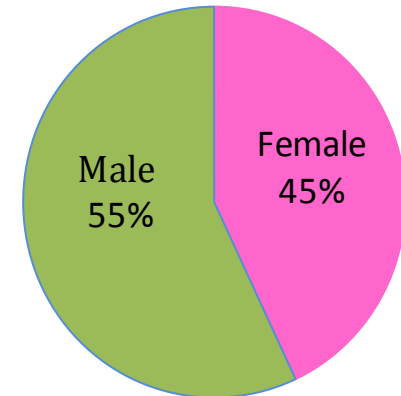
1. Modified Barthel Index (MBI)
2. Modified Functional Ambulatory Categories (MFAC)
3. Patient and Caregiver's stress level (rating 1-10)
4. Patient and Caregiver's satisfaction on the effectiveness of the program (rating 1-10):
  - How helpful do you find this service?
  - What is your satisfaction level of this program?

# Results: Subject Profile (Age & Gender)

**Age of Patients (N=35)**  
(Mean: 69.88)



**Gender of Patients (N=35)**



# Mean & SD of Outcome Measures

|                             | Phone FU<br>(1 week) | Home Visit    | Phone FU<br>(1 <sup>st</sup> month) | Phone FU<br>(3 <sup>rd</sup> month) |
|-----------------------------|----------------------|---------------|-------------------------------------|-------------------------------------|
| MBI                         | 85.27 (23.90)        | 83.06 (26.97) | 92.21 (19.98)                       | 92.20 (18.74)                       |
| MFAC                        | 5.85 (1.39)          | -----         | 6.39 (1.00)                         | 6.43 (1.22)                         |
| Caregiver's<br>Stress Level | 4.43 (2.87)          | -----         | 3.53 (2.58)                         | 3.20 (2.59)                         |
| Patient's<br>Stress Level   | 2.57 (2.74)          | -----         | 1.61 (2.05)                         | 1.03 (1.84)                         |

# Paired Samples Test

|                                | Std Error Mean | t     | p value |
|--------------------------------|----------------|-------|---------|
| MBI (1 wk vs 1 m)              | .722           | -4.21 | .000*   |
| MBI (1 wk vs 3 m)              | 1.38           | -2.56 | .016*   |
| MBI (1 m vs 3 m)               | .953           | -.90  | .373    |
| MFAC (1 wk vs 1 m)             | .081           | -3.26 | .002*   |
| MFAC (1 wk vs 3 m)             | .128           | -2.92 | .005*   |
| MFAC (1 m vs 3 m)              | .105           | -1.42 | .164    |
| Caregiver Stress (1 wk vs 1 m) | .323           | 3.33  | .002*   |
| Caregiver Stress (1 wk vs 3 m) | .402           | 3.16  | .003*   |
| Caregiver Stress (1 m vs 3 m)  | .285           | 1.02  | .316    |
| Patient Stress (1 wk vs 1 m)   | .410           | 1.28  | .208    |
| Patient Stress (1 wk vs 3 m)   | .467           | 1.50  | .142    |
| Patient Stress (1 m vs 3 m)    | .258           | 0.68  | .501    |

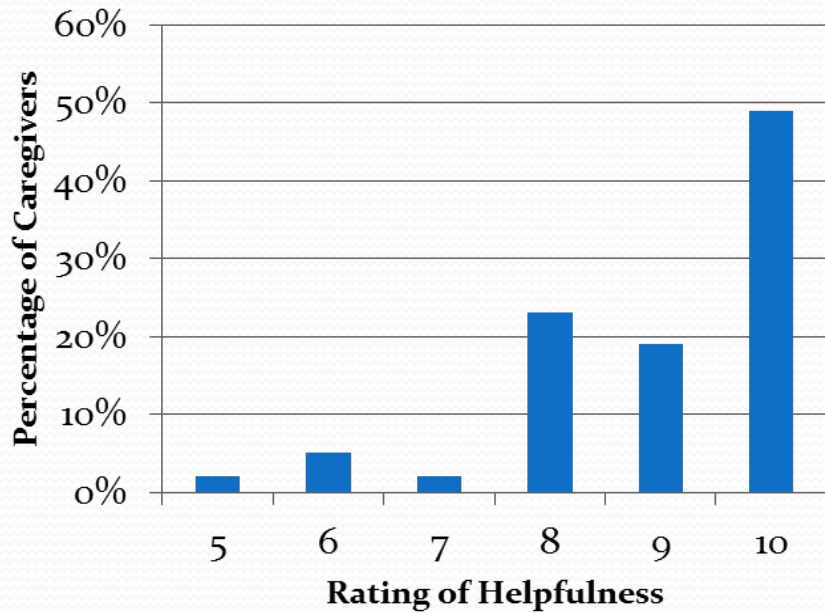


# Correlation Coefficient (1 wk)

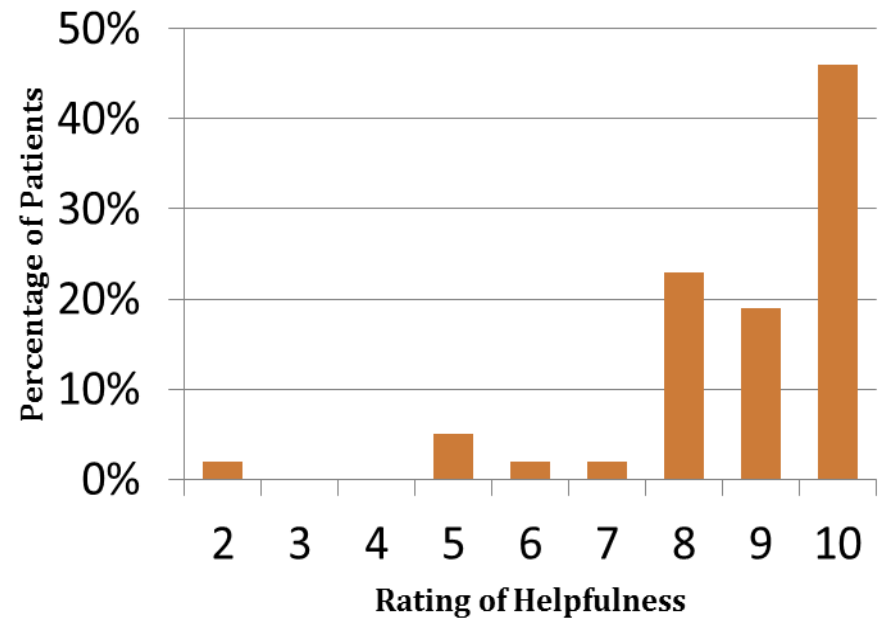
|                              | MBI<br>(1 wk) | MBI<br>(home visit) | MFAC<br>(1 wk) | Caregiver's<br>Stress (1 wk) | Patient's<br>Stress (1 wk) |
|------------------------------|---------------|---------------------|----------------|------------------------------|----------------------------|
| MBI<br>(1 wk)                | 1             | <b>.995**</b>       | <b>.902**</b>  | .100                         | .033                       |
| MBI<br>(home visit)          | <b>.995**</b> | ---                 | ---            | ---                          | ---                        |
| MFAC<br>(1 wk)               | <b>.902**</b> | ---                 | 1              | .095                         | .048                       |
| Caregiver's<br>Stress (1 wk) | .100          | ---                 | .095           | 1                            | <b>.319*</b>               |
| Patient's<br>Stress (1 wk)   | .033          | ---                 | .048           | <b>.319*</b>                 | 1                          |

# Results: Caregivers and Patients' Feeling of Helpfulness

### Caregiver's Feeling of Helpfulness

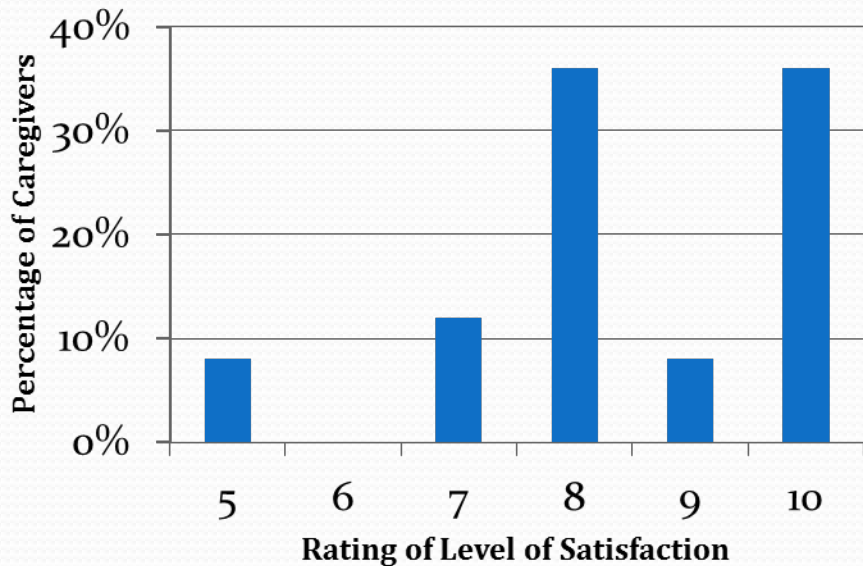


### Patients' Feeling of Helpfulness

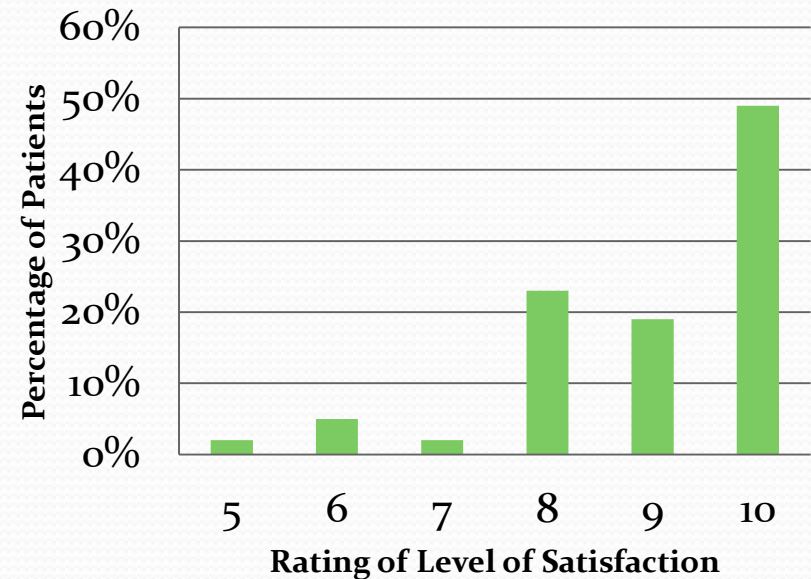


# Results: Caregivers and Patients' Level of Satisfaction

### Caregivers' Level of Satisfaction



### Patients Level of Satisfaction



# Case Presentation

- **Patient:** Mr. Lee (M/85)
- **Diagnosis:** CVA R hemi
- **Social History:** Lives alone
  - daughter: weekly visit + phone contact
  - close friend: frequent visit
- **Mobility status:** walk with stick
- **MFAC:** 6
- **MBI:** 93/100 (at home)
- **MMSE:** 24/30
- **Stress level - Patient:** 0    **Carer (daughter):** 6

# Environmental barrier: Toilet



# Environmental barrier: Shower space



# Recommendation: Handrail installation in shower space (Video clip)



# IADL Performance: hanging clothes





# Conclusion

- Continuity of care after discharge is valuable for stroke patients and caregivers:
  - to handle stress in daily life (e.g. medication, symptom management, home safety)
  - increase self efficacy to maintain independence in community living
- Effective communication between different health professionals is valuable for better patient care

## Team Members

Dr. S.T. Lau (SMO, M&G)  
Ms. Amy Lam (WM, M&G)  
Ms. Sylvia Yu (NO, M&G)  
Ms. Sharon Poon (OT I)  
Ms. Kabo Chan (OT II)  
Ms. Winifred Lam (RN, M&G)  
Ms. Angel Leung (EN, M&G)  
Ms. Edith Pang (RN, M&G )  
Ms. Amy Poon (RN, M&G)  
Ms. Rebecca Tsang (EN, M&G)  
Ms. Ivy Wong (RN, M&G)  
Ms. Shirley Wong (OT II)

## Acknowledgement

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Dr. K.M. Lo (AC, M&G)  
Ms. Jane Man (OT I i/c)  
Ms. Jo Jo Kwan (NC, Diabetes Care)

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**THANK YOU**