AN EVALUATION OF THE CASE MANAGEMENT SERVICE PROVIDED BY THE COMMUNITY OUTREACH SERVICES TEAM (HA CONVENTION 2014 SPP2.6)

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THE INTEGRATED CARE AND DISCHARGE SUPPORT PROGRAM (ICDS) FOR ELDERLY PATIENTS

- Background
  - Full implementation in NTEC since 1/2012
  - Discharge planning and post discharge support services for high risk patients for a duration of 8 weeks by an designated ICDS team under the Community Outreach Services Team
- Target patients:
  - Elderly patients (age $\geq$ 60) admitted to medical wards or emergency medical wards (EMW of AED) with admission HARPPE score $\geq$ 0.2
  - Disease specific, those admitted with principle diagnoses of COAD, heart failure or stroke
  - By ward referral

Multidisciplinary Team Approach

Nurse Case Manager

Proactive DC planning & need assessment on post admission Day 1

- Discharge planning and assessment:

Community Engagement with NGO

Enhance CNS support

Home supporting services by NGO

PT Case Manager

Case management

GDH/DRC for rehabilitation for early medical intervention/rehabilitation

OT Case Manager

ICDS Post Discharge Support

Case Management	Enhanced CNS	GDH (DRC)	Home Support Team (TWGHs)
➢ Patient with complex need ➢ High HARPPE score ➢ Disease specific (e.g., COPD, CHF, stroke) ➢ Clinical referral	➢ Patients who needs specific nursing care	➢ Patients who need day hospital rehabilitation/ early medical review	➢ Patients who need home care supporting services
➢ Multi-discipline: Nurses, PT, OT as case managers (Referred by Link Nurse). ➢ Health education/rehab medications management/liaison with other health care services	➢ Home visits by community nursing	➢ Day rehabilitation/Fast Track Clinic for early medical review	➢ Home care suspporting services by NGO (e.g., meal service, escort service, personal care, respite service, etc.)
➢ Home Visits ➢ At least 8 home visits (1 hour) in 8 weeks ➢ Free of charge	➢ 8 x 50-min. home visits in 8 weeks ➢ CNS payment: $80 per visit	➢ 10 quota /day ➢ $ 55 /attendance	➢ 8 weeks home support ➢ Payment required as stipulated by SWD
➢ Phone support - Phone FU from CMs - Ad hoc calls from patients / caregiver - 24 hours voice mail	➢ Phone support - Phone FU from CNs - Ad hoc calls from patients / caregiver - 24 hours voice mail		

Exploring patients' and their carers' levels of satisfaction towards the service of Case Management in the Integrated Care and Discharge Support Service provided by the Community Outreach Services Team: A survey study

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Objectives of the study

- To explore patients' levels of satisfaction towards the service of case management;
- To explore carers' levels of satisfaction towards the service of case management;
- To explore the effect of case management in patients' quality of life , functional status, hospital service utilization and carers' psychological status

Methodology

- Patients and their primary carers who have been recruited into the service of case management in the ICDS provided by the COST of NTEC hospitals during the period from early December 2012 to end of March 2013 will be invited to participate in this study
- For baseline data:
  - Face-to-face interview with the patient by a link nurse or case manager
  - Phone interview with the carer by research assistant

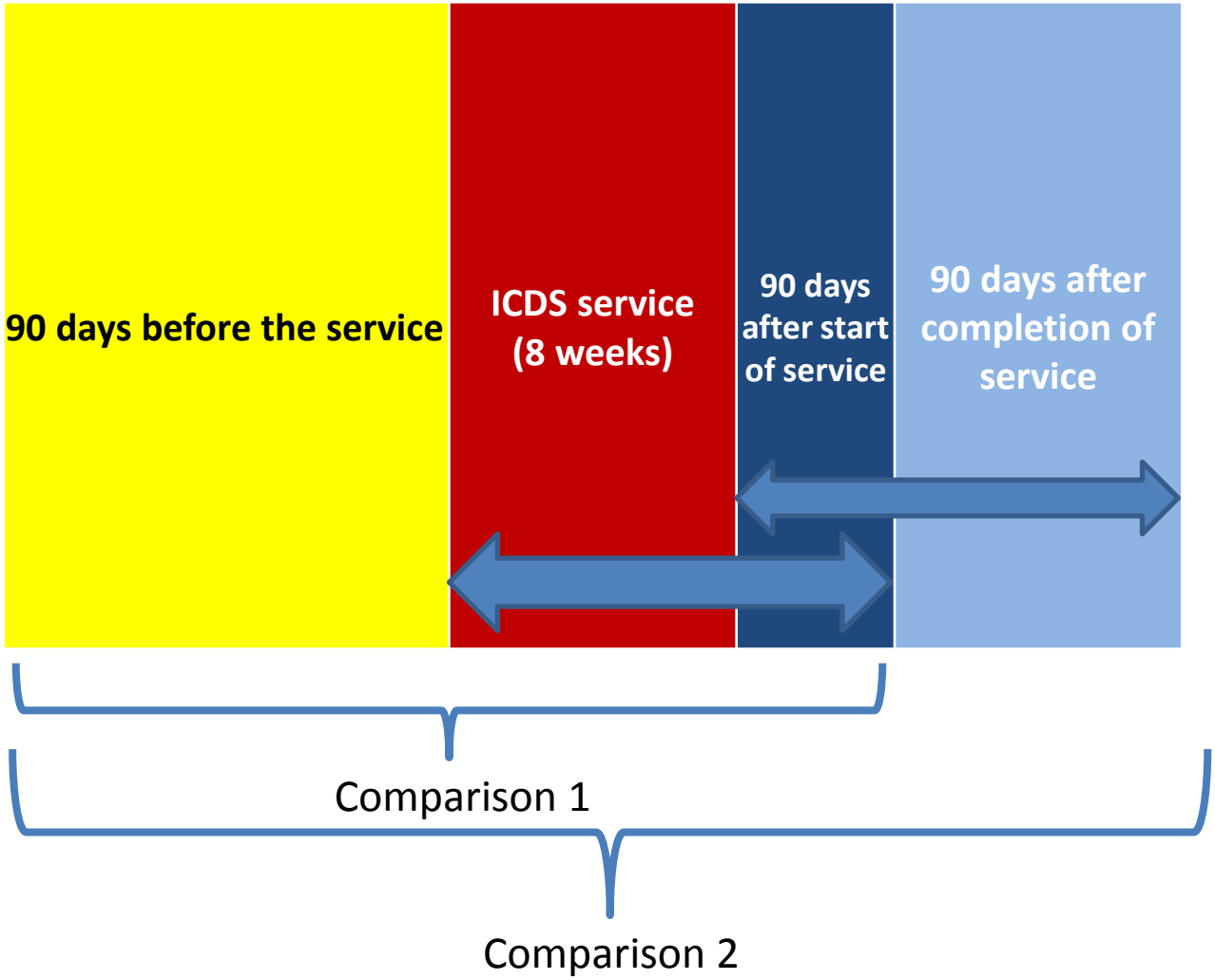
Methodology

- For follow up data:
  - Face-to-face interview with the patient and carer by a research assistant or student helper
- Data on patients' functional status and hospital service utilization will be retrieved from the patient's clinical record or CMS (Clinical Management System)

Outcome measures

- Patients: Quality-of-Life Concerns in the End of Life Questionnaire (mQOLC-E) (Chan & Pang, 2008), Modified Functional Ambulation Classification and Barthel index
- Carer: Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983)
- Hospital utilization 90 days before, 90 days after start of service and 90 days after completion of service
- Patients' and carers' satisfaction questionnaires which consist of 19 and 22 items respectively and rate by using a 5-point Likert scale

Comparison of hospital service utilization prior to and after the service



Subject recruitment (Dec 2012-Mar 2013) and completion of data collection (June 2013)

294 eligible patient-carer dyads were approached

◆4 dyads, and carer from 6 dyads, patients from 2 dyads refused to participate in the study

◆1 carer from a dyad was not communicable

◆Patients in 18 dyads had no carers

263 dyads, 25 patients, 2 carers were recruited

◆Patients in 7 dyads re-hospitalized before start of service

◆Patients in 22 dyads re-hospitalized ≧7 days shortly after start of service

◆Patients in 4 dyads died shortly after start of service

◆1 patient moved to OAH before start of service

-229 patient-carer dyads
-25 patients
-2 carers **Recruited into the study**

-206patient-carer dyads
-26 patients
-13carers **Completed in June 2013**

Result: Patients demographic data

Mean age	79.68 years (SD=7.72)
Male	51.2%
Primary education or below	82.3%
Living together with carer	69.3%
Usually had companion at home	65.7%
Daytime alone	13.8%
Living alone	19.7%
Principal diagnosis COAD CHF Stroke	 26.0% 19.3% 10.2%
Mean duration of the principal diagnosis	2.63 years (SD=3.10)
2 or more co-morbidities Mean HARPPE score Mean HARPPE score (clinical referral)	21.6% 0.29 (SD=0.72) 0.00997 (SD=0.46)

Result: Care givers demographic data

Carer Characteristics	Result
Mean age	58.2 (SD = 15.5)
Male	29.9%
Secondary junior or above educational level	56.7%
Relationship with patients ● Spouse ● Daughter ● Son ● Relatives	 43.7% 29.4% 17.7% 9.1%
Housewife	35.5%
Full-time employed	33.3%
Retired	18.6%
Either part-time employed, self employed or unemployed	11.7%

Results	p value
Improvement in patients' quality of life (mQOLC Dimension)	
Overall	p < 0.0005
Physical discomfort	p < 0.0005
Food-related concerns	p < 0.0005
Care and support	p < 0.0005
Existential distress	p < 0.0005
Value of life	p = 0.02
Improvement in patient's functional status	
MFAC	p < 0.0005
Barthel index	p < 0.0005
Improvement in carers' psychological status (Hospital Depression & Anxiety Score)	
Depression	p = 0.0005
Anxiety	p < 0.0005
Reduction in patient's hospital service utilization between 90 days prior to start of CM service & 90 days after start of CM service and between 90 days prior to start of CM service & 90 days after completion of CM	P < 0.0005
Patients and carers towards the CM service	Mean satisfaction score 4.48 and 4.36/5 for patients and carers

Comparison of Quality of Life scores of patients at baseline and follow up

mQOLC-E Dimension[1]	N	Pre	Post	Changes	
		Mean±SD	Mean±SD	Mean±SD	p-value[2]
Overall mQOLC-E	153	3.04 ± 0.41	3.34 ± 0.56	0.29 ± 0.04	0.000***
Physical discomfort	186	2.83 ± 0.62	3.20 ± 0.67	0.37 ± 0.84	0.000***
Food-related concerns	186	2.59 ± 0.72	3.08 ± 0.87	0.48 ± 1.00	0.000***
Care and support	186	3.42 ± 0.41	3.60 ± 0.50	0.18 ± 0.58	0.000***
Negative emotions	184	3.13 ± 0. 73	3.24 ± 0.88	0.11 ± 0.96	0.140
Existential distress	175	2.91 ± 0.76	3.34 ± 0.79	0.43 ± 0.95	0.000***
Value of life	171	3.32 ± 0.53	3.45 ± 0.69	0.13 ± 0.73	0.02*

[1] Scores range from 1 = 'the least satisfaction' to 5 = 'the most satisfaction towards the condition'; the higher the score the better quality of life

[2] Paired Samples T-test *p-value<0.05, **p-value<0.01, ***p-value<0.0005

Comparison of functional status of patients (N=254) at baseline and follow up

		Pre	Post	Changes	
Clinical indicators	N	**Mean±SD**	**Mean±SD**	**Mean±SD**	**p-value[1]**
MFAC[2]	121	5.68 ± 1.36	6.27 ± 1.12	0.60 ± 0.86	0.000***
Barthel Index[3]	251	17.25 ± 3.78	18.28 ± 3.29	1.03 ± 2.81	0.000***

[1] Paired Samples T-test *p-value<0.05, **p-value<0.01, ***p-value<0.0005
[2] Modified Functional Ambulation Classification (MFAC): Category from 1-7; the higher the category, the higher functional ambulation ability.
[3] Barthel index ranges from “0” to “20”; the higher the index, the higher the functional ability.

Comparison of scores of the psychological status of carers (N=231) at baseline and follow up

		Pre	Post	Changes	
Psychological characteristics	**N**	**Mean±SD**	**Mean±SD**	**Mean±SD**	**p-value[2]**
HADS Depression[1]	218	10.09 ± 2.22	9.39 ± 1.67	-0.69 ± 2.65	0.000***
HADS Anxiety[1]	219	10.37 ± 2.90	7.51 ± 2.19	-2.85 ± 3.23	0.000***

[1] Scores of HADS: depression and anxiety range from 0 to 21with higher scores indicating more depression and anxiety respectively
[2] Paired Samples T-test *p-value<0.05, **p-value<0.01, ***p-value<0.0005

Comparison of hospital service utilization between 90 days prior to the start of CM service and 90 days after the start of the service (N=254)

Hospital service	N	90 days before service started	90 days after service started	Chnages	p-value[1]
		Mean±SD	Mean±SD	Mean±SD	
Length of hospitalization (in days)	254	11.06 ± 10.93	3.77 ± 8.39	-7.30 ± 12.35	0.000***
Number of unplanned hospital admissions	254	1.35 ± 0.61	0.38 ± 0.73	-0.97 ± 0.88	0.000***
Number of A&E attendance in the past 90 days	254	1.59 ± 0.83	0.59 ± 0.90	-1.00 ± 1.16	0.000***

[1] Paired Samples T-test

*p-value<0.05, **p-value<0.01, ***p-value<0.0005

Comparison of hospital service utilization between 90 days prior to service start and 90 days after service COMPLETED (N=254)

Hospital service	N	90 days before service started	90 days after service completed	Changes	
		Mean±SD	Mean±SD	Mean±SD	p-value[1]
Length of hospitalization (in days)	254	11.06 ± 10.93	4.23 ± 10.11	-6.68 ± 13.83	0.000***
Number of unplanned hospital admissions	254	1.35 ± 0.61	0.45 ± 0.82	-0.90 ± 0.97	0.000***
Number of A&E attendance in the past 90 days	254	1.59 ± 0.83	0.65 ± 1.02	-0.94 ± 1.30	0.000***

[1] Paired Samples T-test

*p-value<0.05, **p-value<0.01, ***p-value<0.0005

Satisfaction with case management service

- 232 patients and 219 carers completed the follow-up survey
- Most of them had responded to all the items in the satisfaction questionnaire
- Both patients and carers had a high level of overall satisfaction with the CM service
- Mean score[1] of overall satisfaction

1. Patient: 4.48 (SD=0.64; range: 2-5)
2. Carer: 4.36 (SD=0.69; range: 1-5)

[1]Scores range from 1 = 'very dissatisfied' to 5 = 'very satisfied'

Summary of the study

- An 8-week post discharge support program to high risk patients resulted in ***statistically significant***

Improvement in patients' quality of life

Improvement in patients' functional status

Improvement in caregivers' psychological status

Reduction in patient's hospital service utilization which is sustainable until 90 days after completion of ICDS service

High level of satisfaction of patients and caregivers towards the CM service

End

Questions and comments are welcome