Integrated Care Management

(ICM)

Integrated Care and Discharge Support for the Elderly Patients

(ICDS)

支援長者離院綜合服務

Dr Bernard Kong

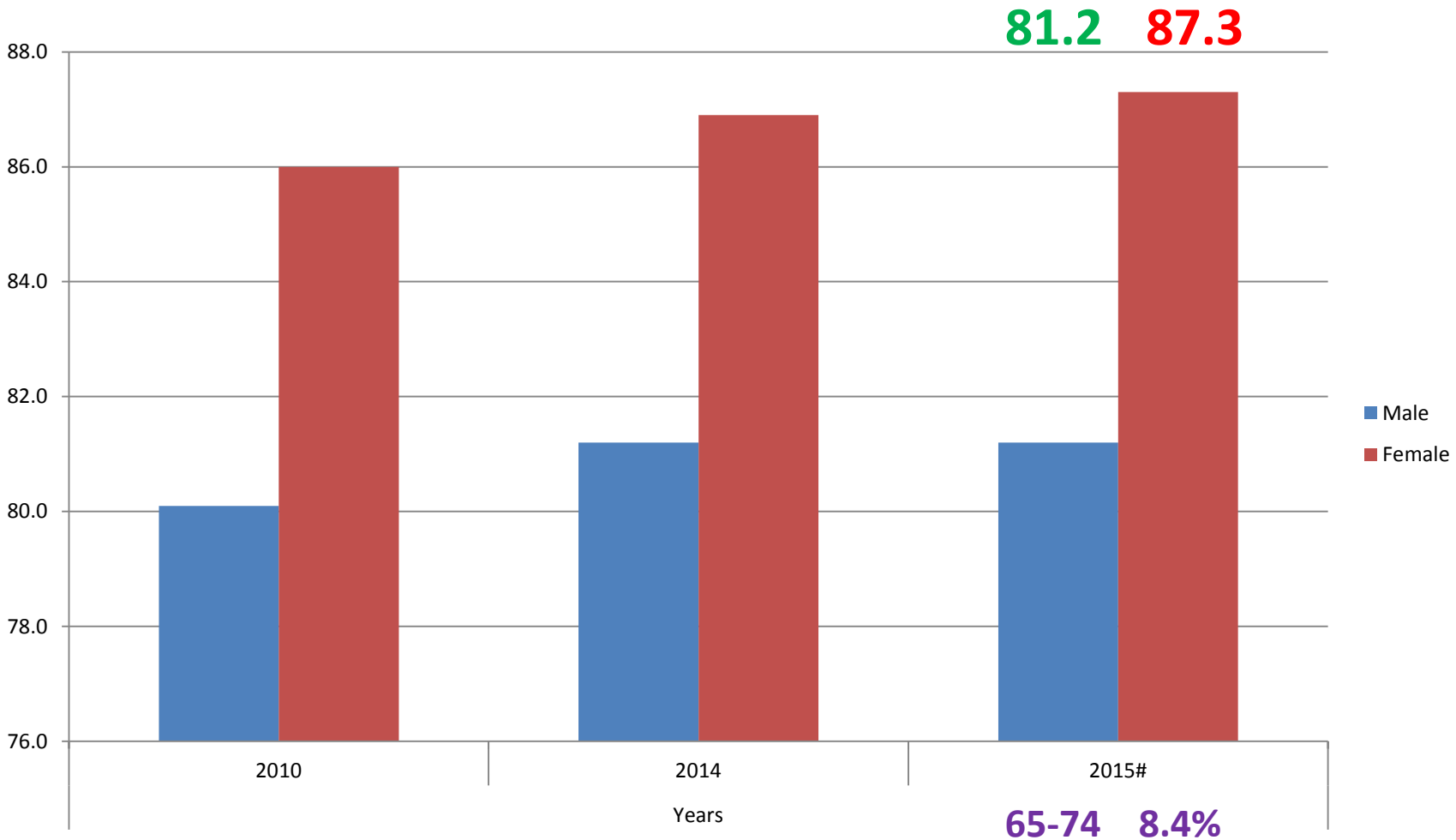
Medical Consultant

Pamela Youde Nethersole Easter Hospital

The issue in Hong Kong
Population 7.32 million

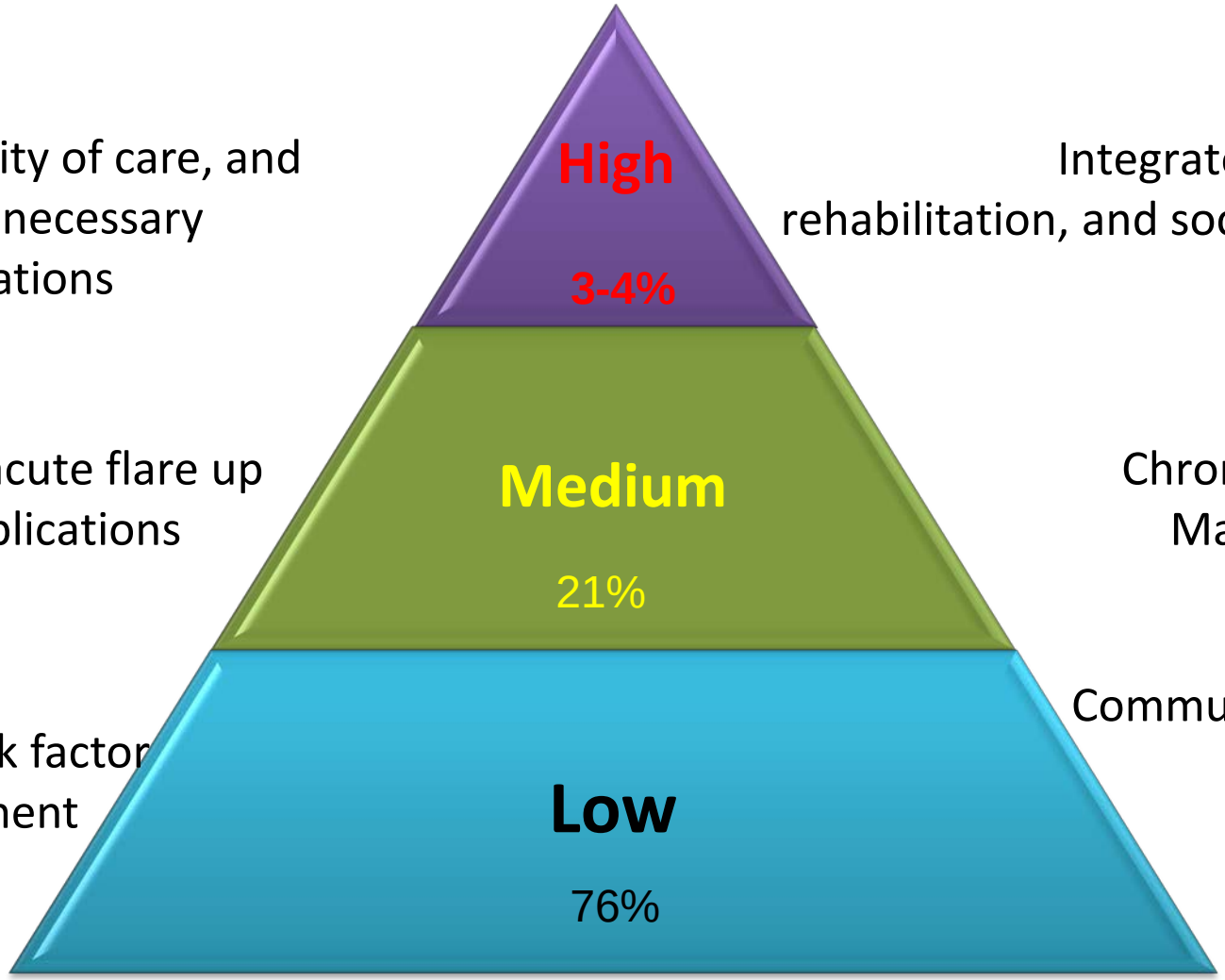
- In 2014 – 370,000 discharges (1000 per day)
- Elderly (≥65) accounts for
  - 15.7% (1150500/7,320,000) population
  - 53% A&E admissions
  - 68% unplanned readmitted patients
  - 56% bed days in all HA hospitals
  - >65
    - living alone 13%
    - >85 18%,
      - 33% ageing home

Life Expectancy



65-74 8.4%
75-84 5.0%
>85 2.3%

Categories



Align quality of care, and reduce unnecessary hospitalisations

Integrated medical, rehabilitation, and social support services

Prevent acute flare up and complications

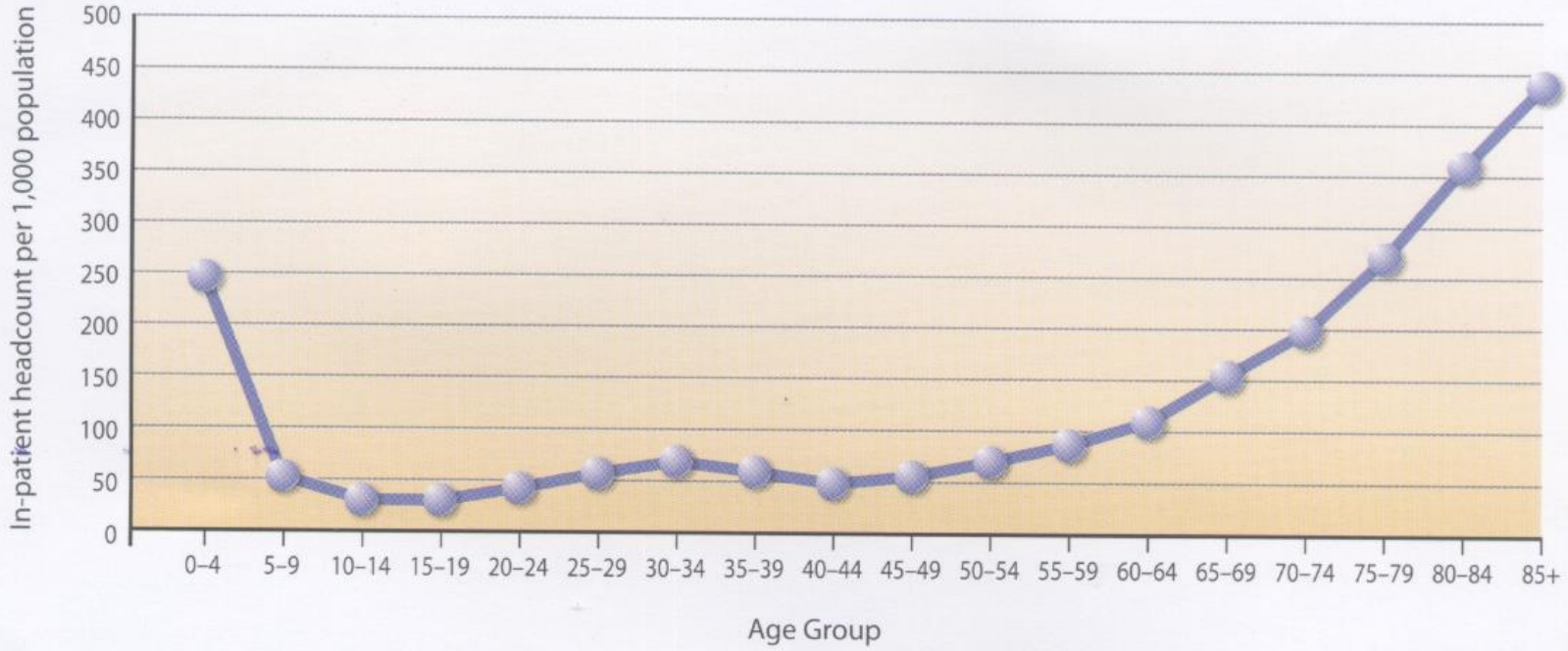
Chronic Disease Management

Better risk factor management

Community-based primary prevention strategies

Hospital Utilization Rate

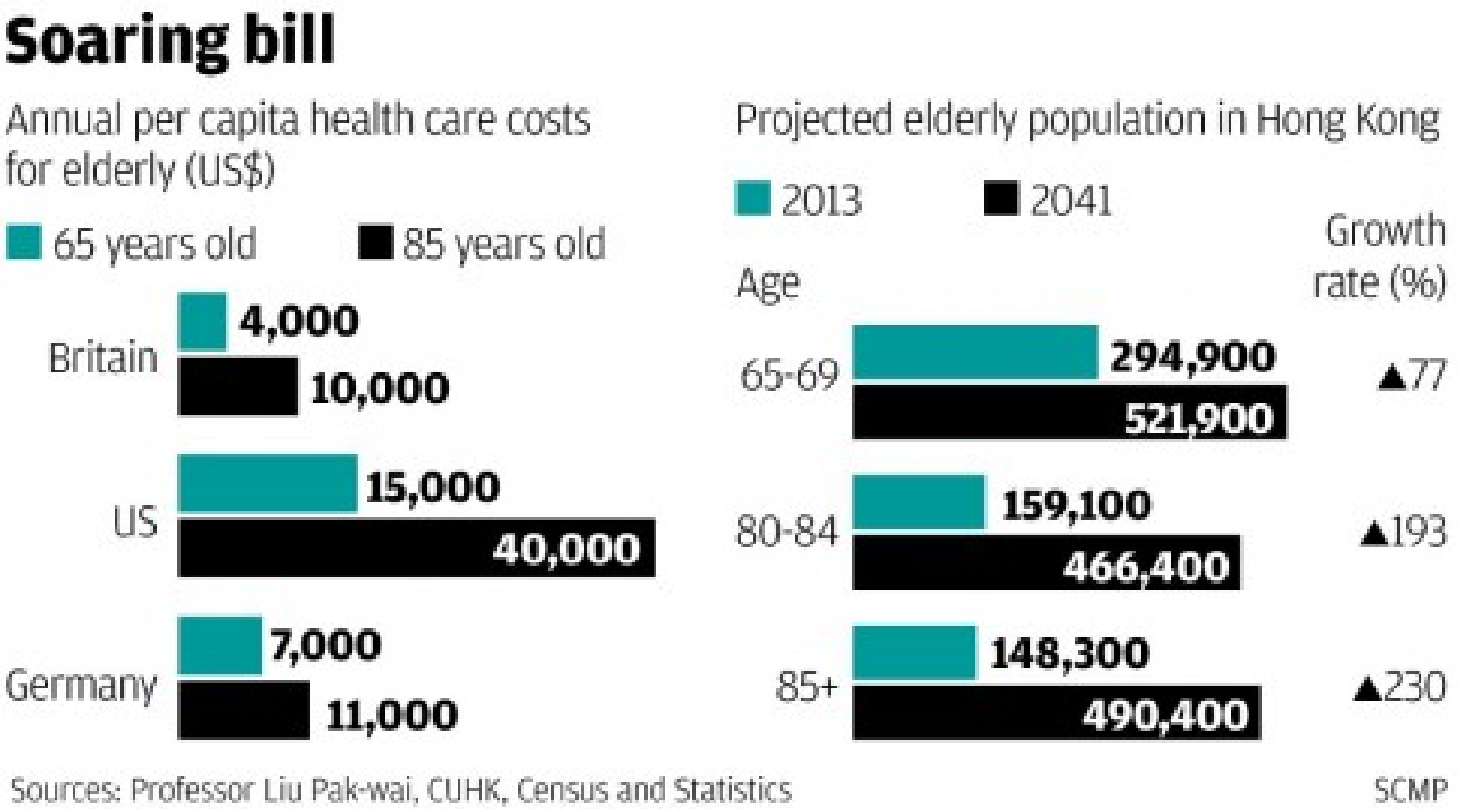
Figure 3: Population ageing increases healthcare services consumption – Average number of in-patients in HA hospitals by age (2010)



Source: Hospital Authority Administration System, 2010

Cost to Take Care of Elderly

>85 ↑ 230%



FACTORS ASSOCIATED WITH POOR DISCHARGE OUTCOMES

- Age>80
- Fair-to-poor self-rating of health
- Recent and frequent hospitalizations
- Inadequate social support
- Multiple, active chronic health problems
- Depression history
- Chronic disability and functional impairment
- History of nonadherence to therapeutic regimen
- Lack of documented patient/family education

Slide courtesy of Bill Lyons, MD; University of Nebraska

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Readmissions, Observation, and the Hospital Readmissions Reduction Program

Rachael B. Zuckerman, M.P.H., Steven H. Sheingold, Ph.D., E. John Orav, Ph.D., Joel Ruhter, M.P.P., M.H.S.A., and Arnold M. Epstein, M.D.

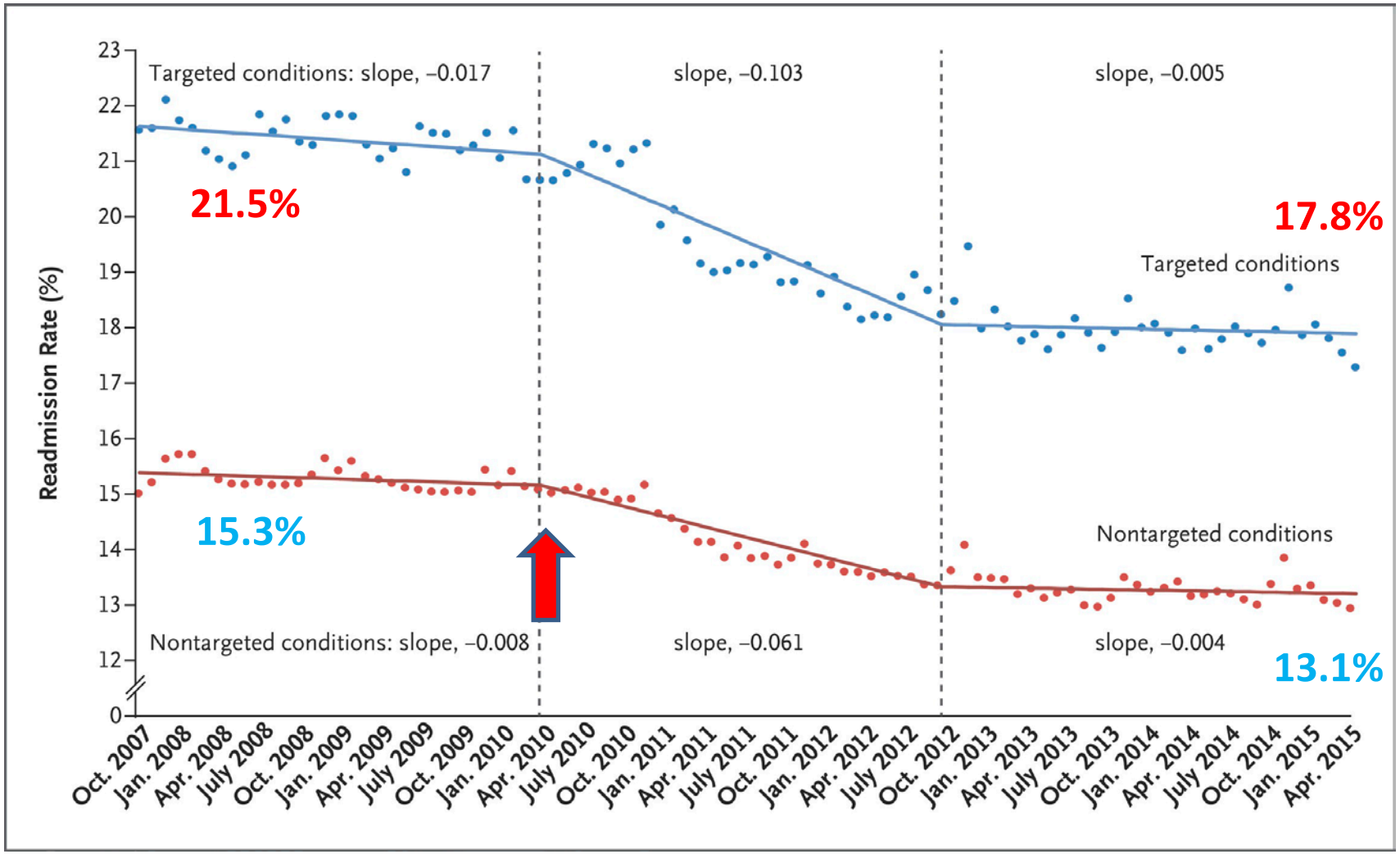
- 2013-2014
  - Acute myocardial infarction
  - Heart Failure
  - Pneumonia
- 2015
  - Total knee and hip replacement
  - Chronic Obstructive pulmonary disease

3387 hospitals (Oct 2007 – May 31 2015)

Affordable Care Act
March 2010

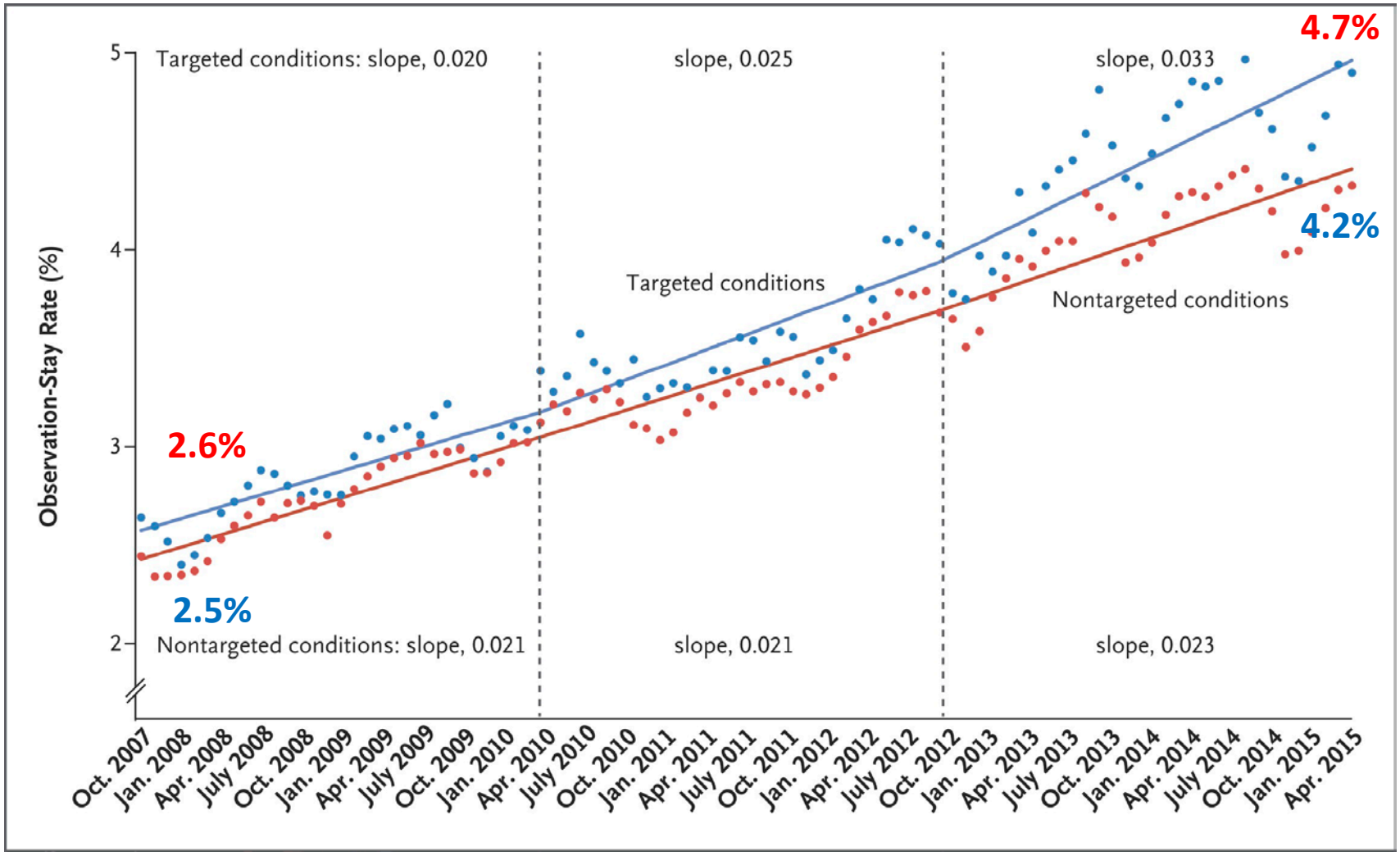
Financial Penalties to Hospital
With higher than expected
readmission rates

Change in Readmission Rates - 30 days



The NEW ENGLAND JOURNAL of MEDICINE

Change in Observation-Service 30 Days after Discharge.



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Milestone

1994 CGAT

2004
- Community Geriatric Assessment Team (CGAT)/ Visiting Medical Officer (VMO) Scheme developed
- Remote Clinical Management System (CMS) access in old age homes
- Telephone Nursing Consultation Service for high risk patients established in Hong Kong East Cluster (HKEC)

2006
- HA-wide risk prediction tool – the Hospital Admission Risk Reduction Programme for the Elderly (HARRPE) established to identify high risk elderly patients on discharge

2007
- Elderly Care at Home (EC@Home) service established at Kowloon Central Cluster (KCC)

2008
- Integrated Discharge Support Programme (IDSP) piloted in New Territories West Cluster (NTWC), Kowloon East Cluster (KEC) and Kowloon West Cluster (KWC)
- The Chinese University of Hong Kong (CUHK) and The University of Hong Kong (HKU) commissioned to study on reducing avoidable hospitalization in HA

2009
- Community Health Call Centre (CHCC) established at Tang Shiu Kin Community and Ambulatory Care Centre
- Acute Care for the Elderly (ACE) Project initiated
- Enhanced primary care programmes at General Out-patient Clinics (GOPC)

2010
- A taskforce established to develop the HA Strategic Service Framework for Elderly Patients

社會福利署（社署）於**2001**年**4**月起

社會福利署（社署）於2003年4月1日

Integrated Care Model for High Risk Elders (ICM)

- ICM has been started in all medical wards since October, 2011
- Objective: To provide discharge planning and supportive services for older patients who are discharged from hospital to home – To enable frail elderly patient to reside independently in the community

Target Patients

Age

- **60 or above**

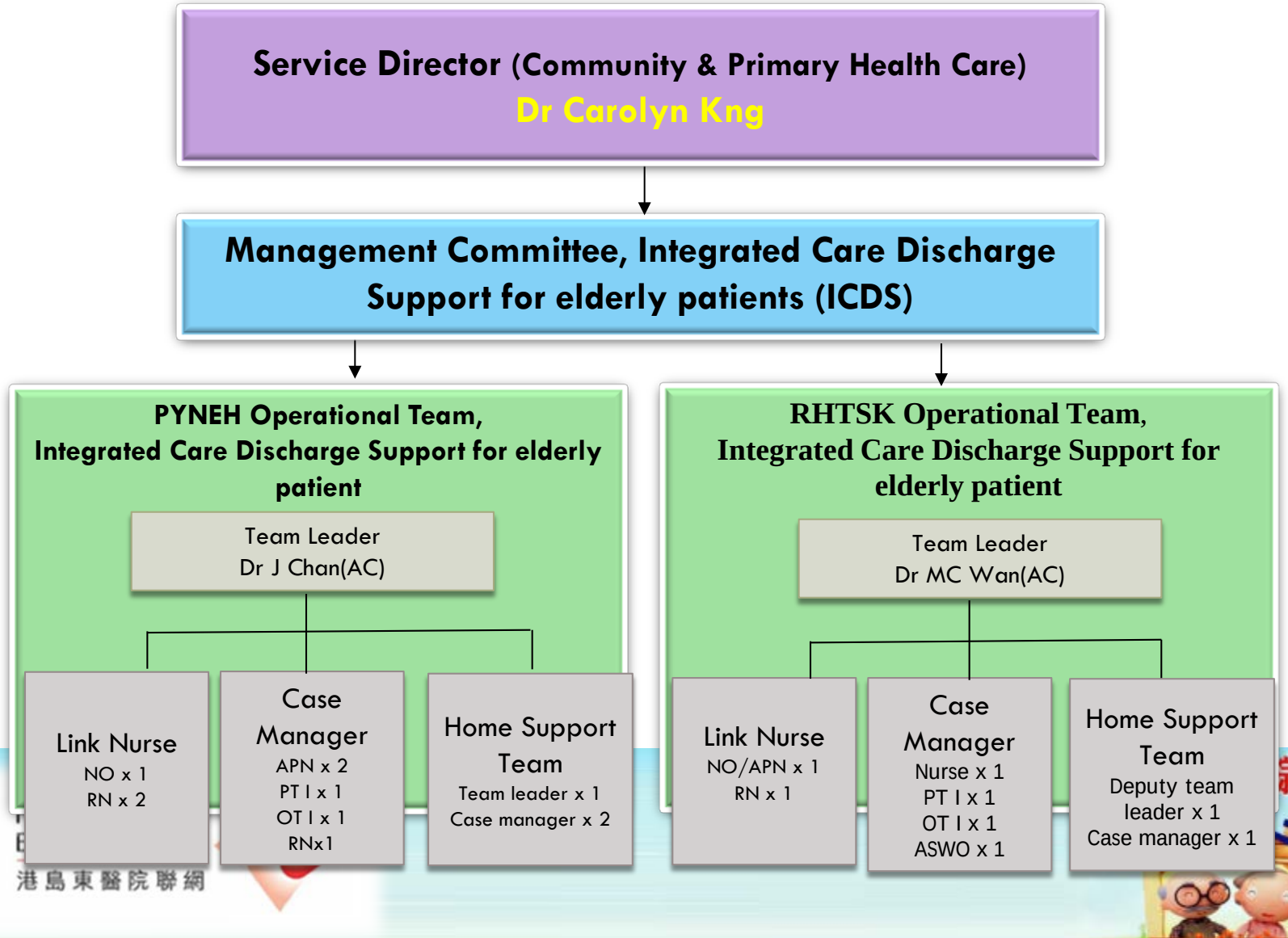
High Risk Group

Hospital Admission Risk Reduction Program For the Elderly
(老人入院風險控制方案)
HARPPE
+
Clinical Referral & Proactive Recruitment

Exclude

- **Service users of mainstream home care services**

Structure


Service Director (Community & Primary Health Care)
Dr Carolyn Kng
Management Committee, Integrated Care Discharge Support for elderly patients (ICDS)
PYNEH Operational Team, Integrated Care Discharge Support for elderly patient
Team Leader
Dr J Chan(AC)
Link Nurse
NO x 1
RN x 2
Case Manager
APN x 2
PT I x 1
OT I x 1
RNx1
Home Support Team
Team leader x 1
Case manager x 2
RHTSK Operational Team, Integrated Care Discharge Support for elderly patient
Team Leader
Dr MC Wan(AC)
Link Nurse
NO/APN x 1
RN x 1
Case Manager
Nurse x 1
PT I x 1
OT I x 1
ASWO x 1
Home Support Team
Deputy team leader x 1
Case manager x 1

Summary on Target Deliverables PYNEH & RHTSK 2015/16:

Target Deliverables for HKEC (2015-16 full year)	PYNEH	RHTSK
I. Discharge planning	No. of patient episode:	No. of patient episode:
1. IDSP:	2716	1358
1. Reduction of avoidable hospitalization for elderly patients (Case Management)	3085	1542
1. Enhanced CNS: 1580 no.	1053	527
Total: 10,281	**6,854**	**3,427**
I. Case management:		
No. of patients: 913	No. of patients: 609	No. of patients: 304
No. of visits: 7,305	No. of visits :4,870	No. of visits: 2,435
I. Additional GDH service: Target:40 places 7200 attendances	27 additional places 4,860 attendances	13 additional places 2,340 attendances
I. NGO Home Support Services: 1081episodes	No. of referrals:	No. of referrals:
	721	360
I. Transitional residential care by NGO: 54 no. of patients	No. of patients:	No. of patients:
	36	18

Pre-discharge Planning

Integrated post-discharge Care

Post -ICM care

High risk elderly in-patient

Discharge Planning Nurse:
Pre-discharge assessment

Case Manager (CM) Nurse/PT/OT

Home Support Team (HST)

Both (CM & HST)

Post-discharge
8-week ICM intervention
+/- GDH/Fast Track Clinic

Community Health Call Service

How we provide care

- Case recruitment by **Discharge Planning** nurse
- Home visit by **Case Manager / HST**
- **HST** has close links with social care services
- **TR bed** to resolve interim residence after hospital stay
- **GDH** to offer rehabilitation places
- **Fast track clinic** to provide prompt access to medical attention to avoid admission to A&E

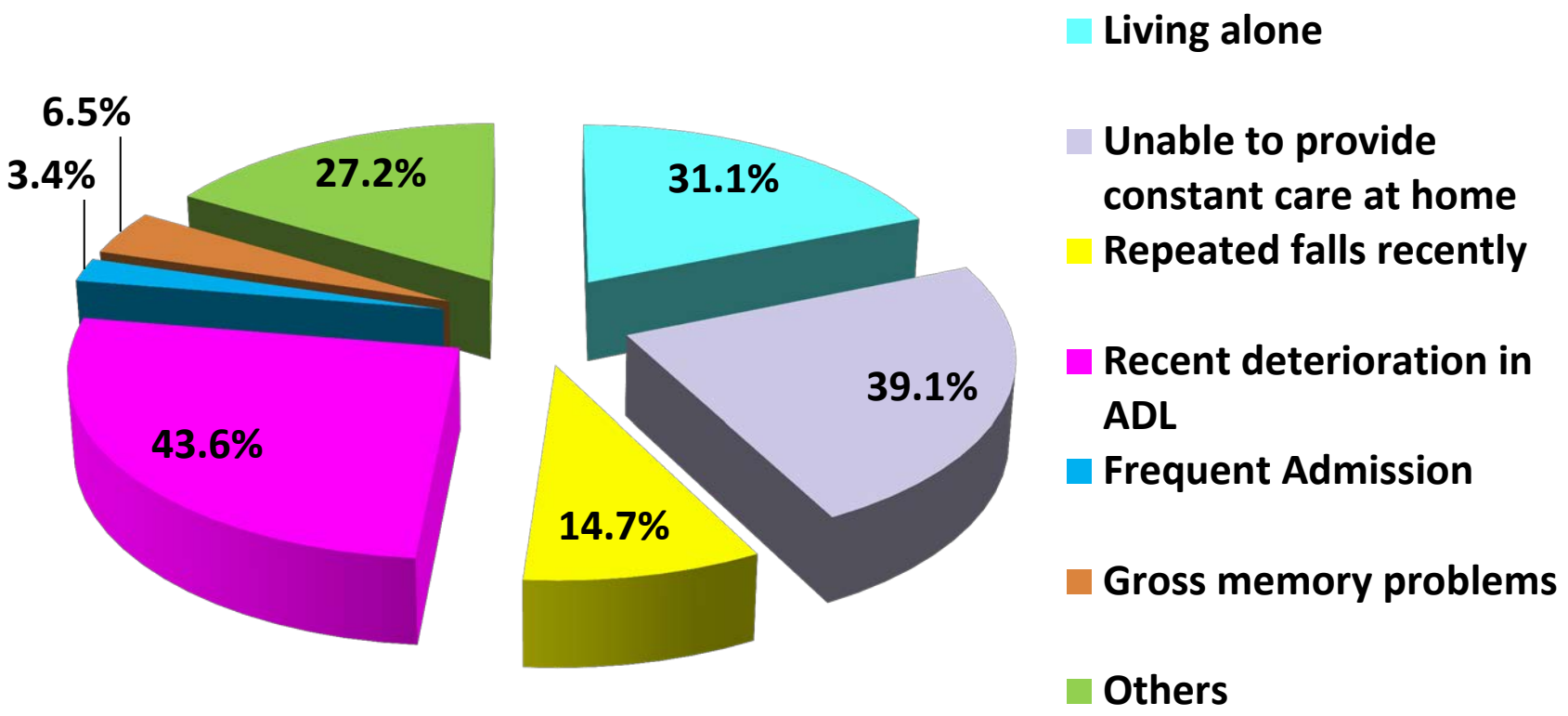
HST – Home Support Team

Link Nurses (Pre-discharge Assessment)

IPAD

Reasons of Clinical Referral (RH)

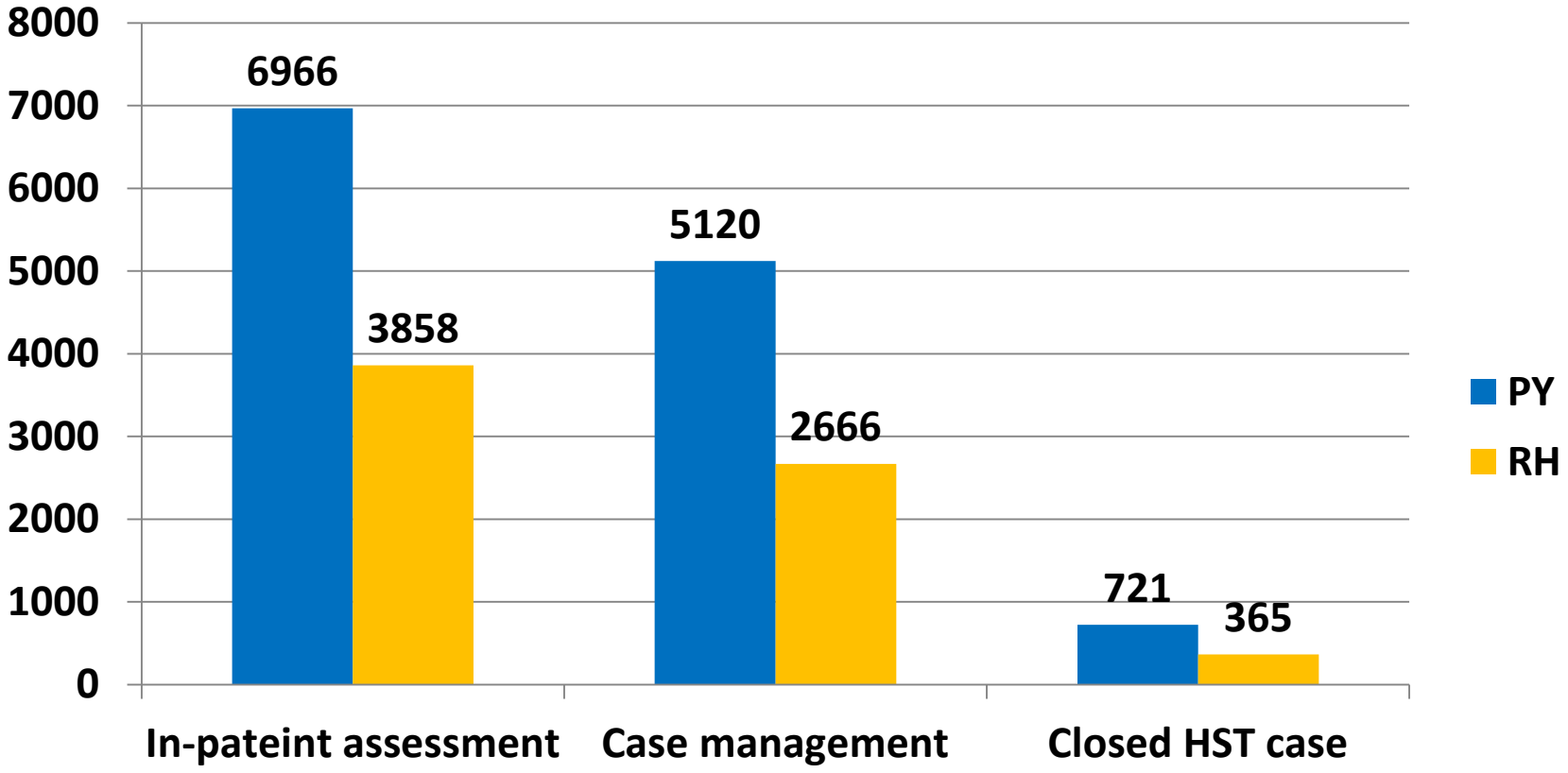
Total Referral cases: 825



PYICM

HARPPE + clinical (393 + 882) = 1275 patients 69% clinical cases

Apr 2015 – Mar 2016 Deliverables



EAC Data (Fast Track Clinic)

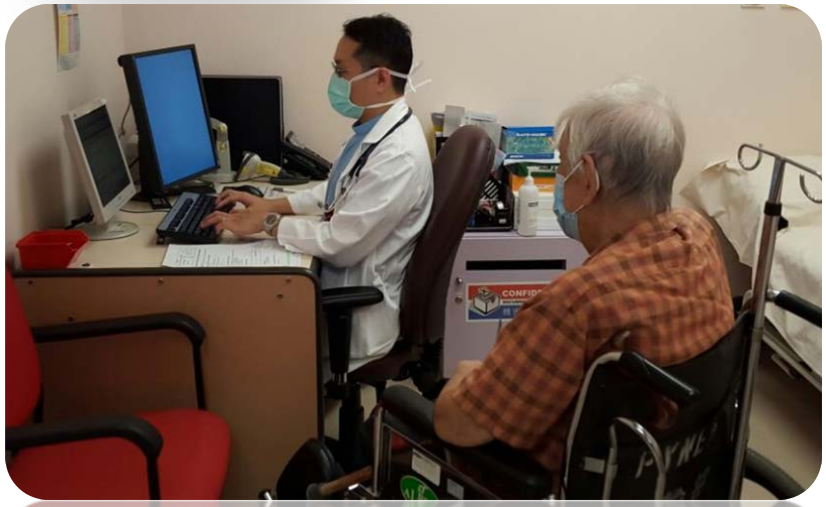
Month/ Year	PYNEH	RH
Apr-15	21	1
May-15	29	1
Jun-15	40	1
Jul-15	36	0
Aug-15	20	0
Sep-15	28	0
Oct-15	33	2
Nov-15	23	3
Dec-15	51	4
Jan-16	32	1
Feb-16	28	2
Mar-16	38	3
Total	379	18

Integrated Post-discharge Care
Disease Monitoring and Review

On-going Home Visit

Telephone Consultation

Case Conference

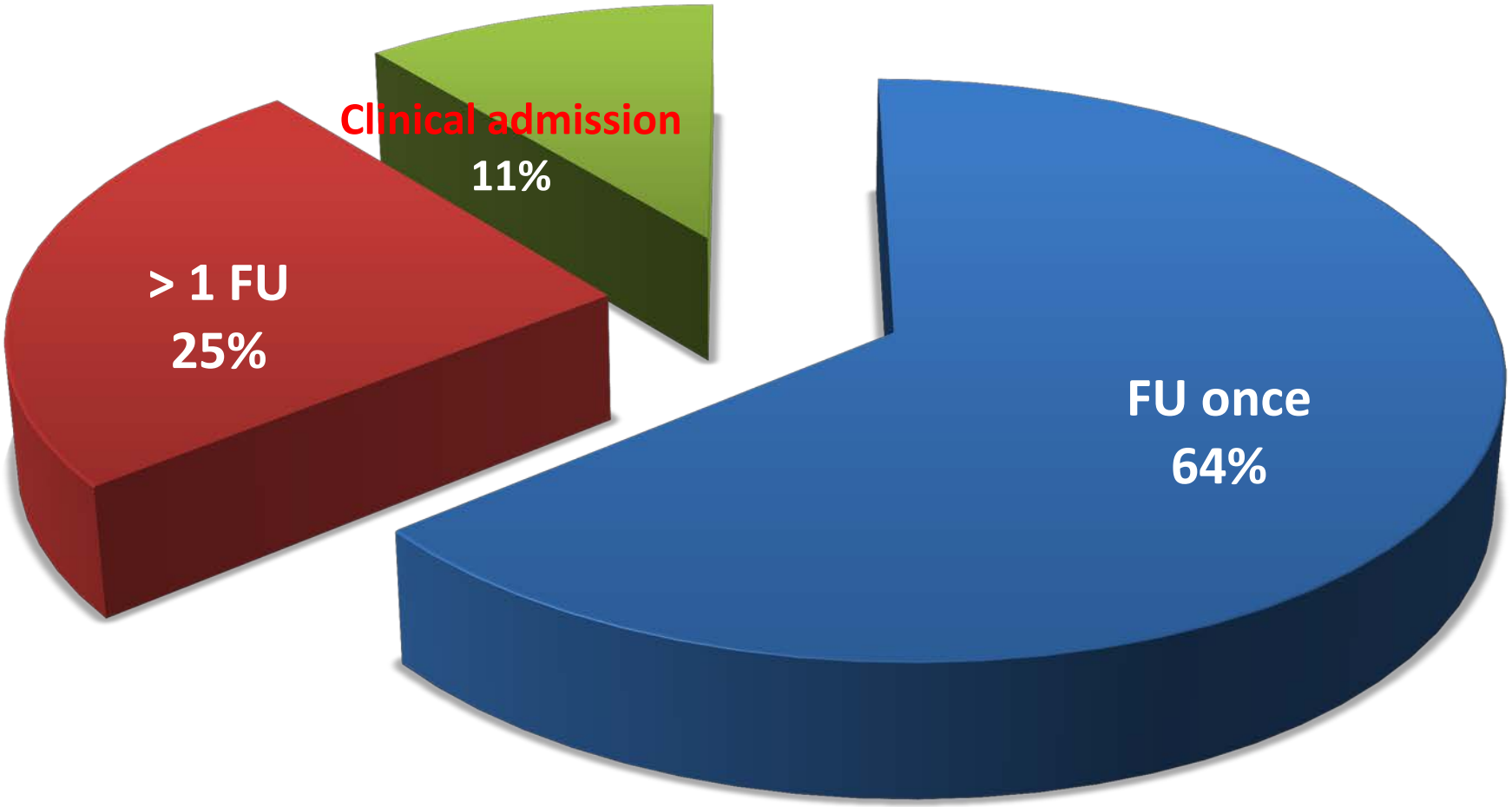


Fast Track Clinic

Fast Track Clinic Patient Characteristics
(In 2014-15, 174 patients in 274 clinic attendances)

		Range	Implications:
Age	80.41 (average)	60-100	
Sex : Male	53		
: Female	121		
HARRPE $\geq$ 0.2	60 (34%)		
Clinical referral	114 (66%)		Identify high risk elderly for timely intervention
No. of drugs	**~ 8 (average)**		**Polypharmacy & risk of iatrogenesis**
Multiple comorbidites	**DM, HT, CHF, IHD, CRF, CVA, AF, COAD Fall with hx of # Joint pain**		**Deal with multiple drug - disease and drug – drug interactions by multidisciplinary approach**

Fast Track Clinic



GDH Data

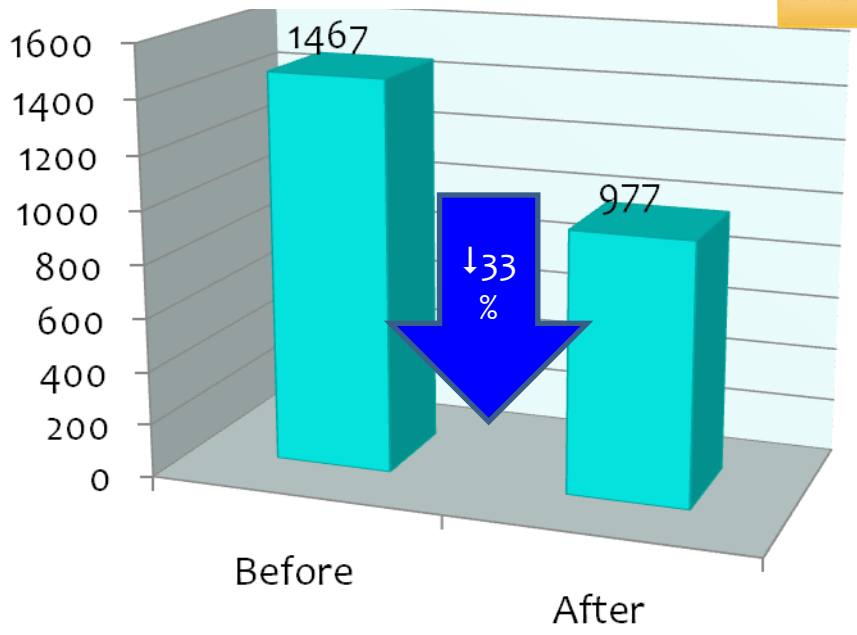
Month/ Year	PYNEH (27)		RH (13)	
	GDH referral	GDH attend	GDH referral	GDH attend
Apr-15	13	8	5	3
May-15	8	6	13	10
Jun-15	19	13	13	11
Jul-15	12	18	7	6
Aug-15	14	12	14	13
Sep-15	15	13	11	8
Oct-15	7	6	8	7
Nov-15	13	8	15	10
Dec-15	9	8	20	9
Jan-16	7	7	14	5
Feb-16	9	7	10	5
Mar-16	8	6	16	7
Total	134	112 (83.6%)	146	94 (64.4%)

Unplanned Readmission of patients aged >=60 (within 28 days) PY Medical

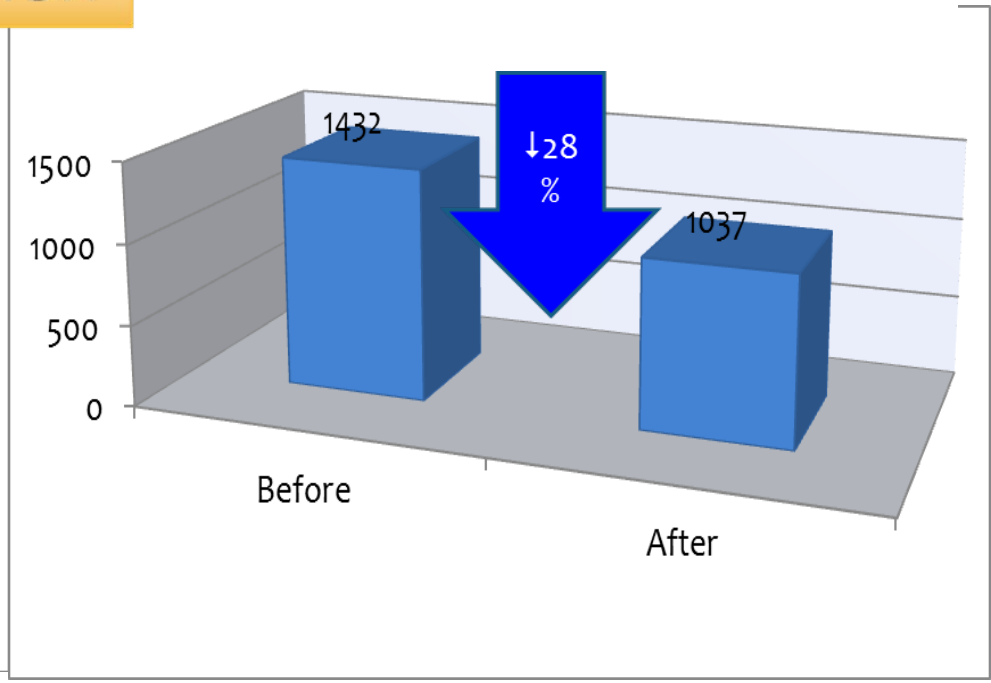
	2010-2011	2012-2013	2013-2014	2014-2015	2015-2016
Unplanned Readmission of PYNEH Medical patients (Admitted to any HA Medical Department)	18.6%	19%	18.2%	18.1%	15.5%
Unplanned Readmission of patients under PYNEH ICM service (Admitted to any HA Medical Department)	-	14.7%	11.3%	13.2%	12.9%

RHTSK

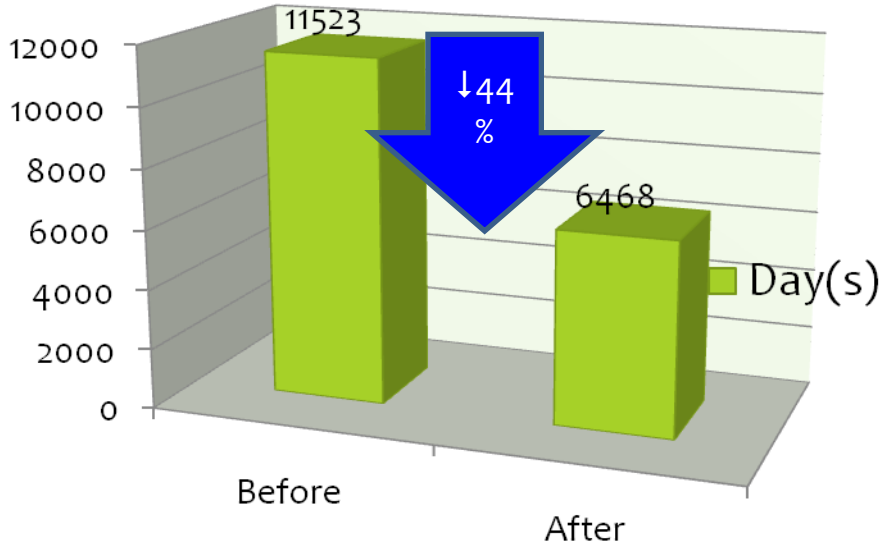
AED Attendance



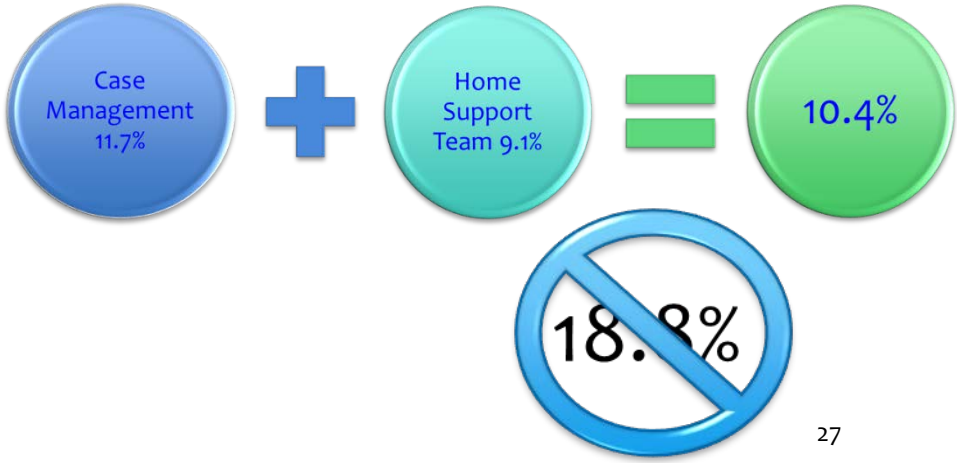
Number of Admission



Length of Stay



Unplanned re-admission rate



RH CQI & Special Program
Congestive Heart Failure

CHF Program

- Target Cases , N = 30
- Study Period

  Aug 2014 to Mar 2015
- Total number of cases recruited: 30

  Completed CHF program case = 23

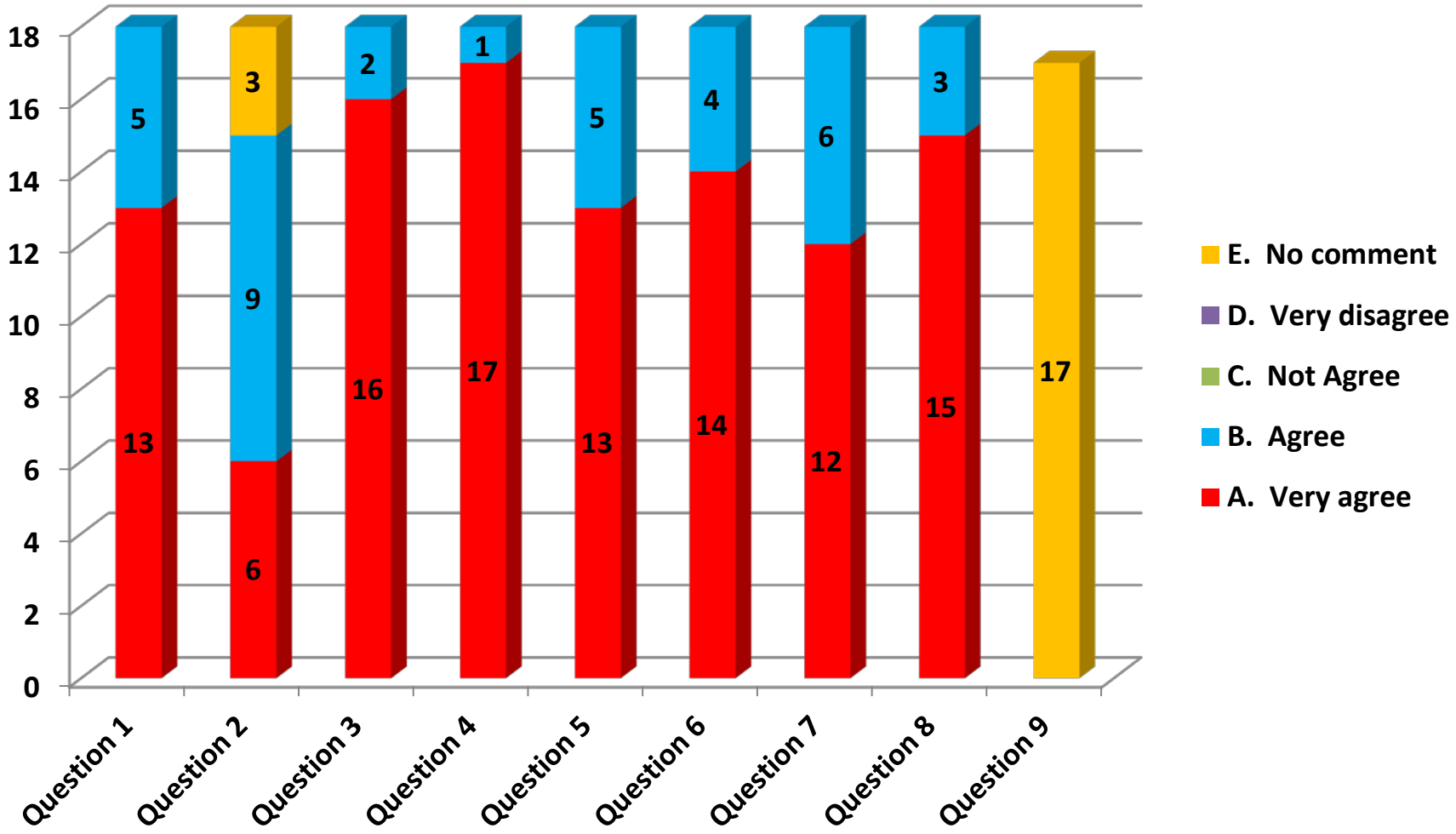
Preliminary Result of CHF Program (4)

Paired Samples Statistics

Variables	Pre (Mean)	Post (Mean)	Significance
Compliance (Self monitoring) Total marks: 36	25.04	32.74	**P<0.001**
Knowledge total marks: 20	7.00	9.48	**P<0.001**
Unplanned Admission Rate (3 mths pre & post)	1.5	0.45	**P<0.001**
QOL Total: marks: 15	42.57	56.52	**P<0.001**

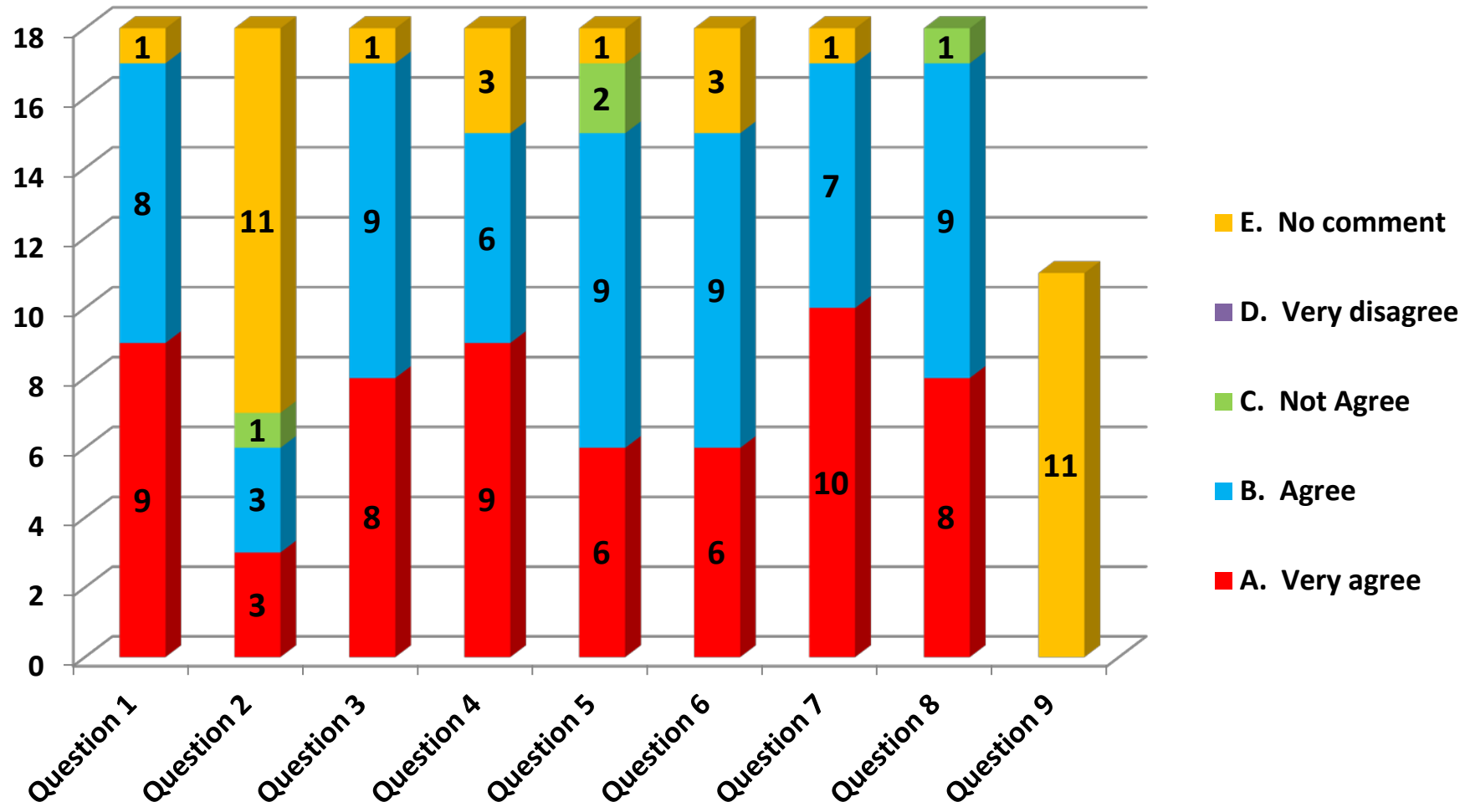
RH CM Satisfaction Survey

(From Nov 2015 – Mar 2016) - Total No: 15

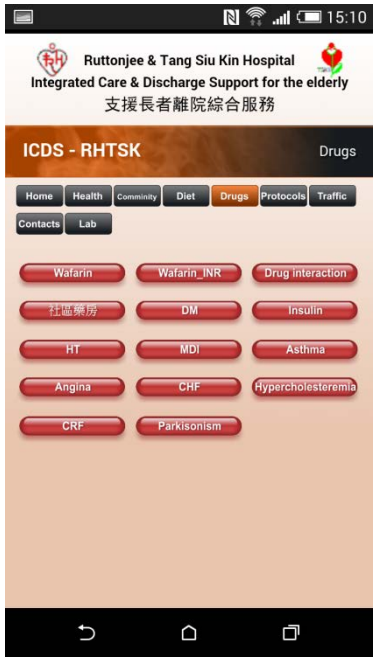


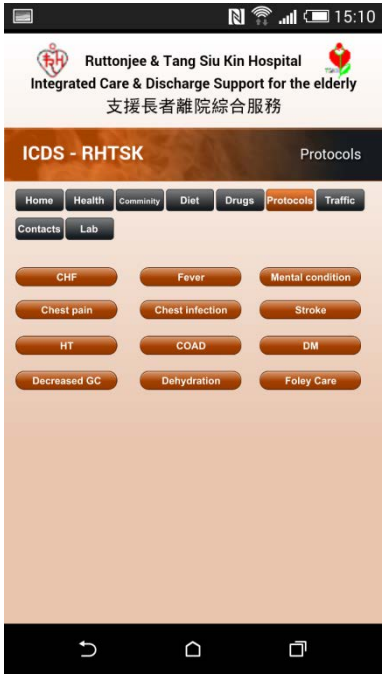
RH HST Satisfaction Survey

(From Nov 2015 – Mar 2016) - Total No: 15



Mobile Web Link
(android & i-phone users)





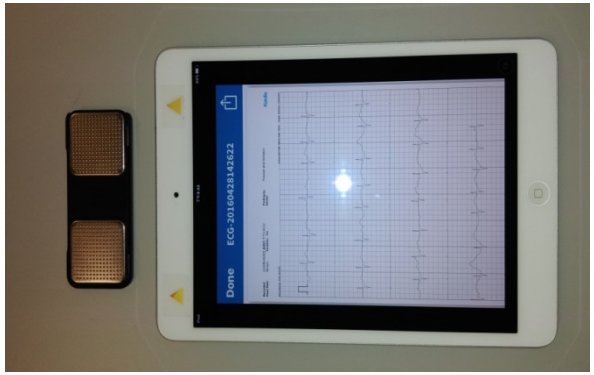
Tele Rehab device to monitor cardiac condition of HF elders

HF Program

- Study Period
  May 2016 to Sept 2016

1) Garmin Watch
Apps: Garmin Connect

2) ECG
Apps: AliveCor

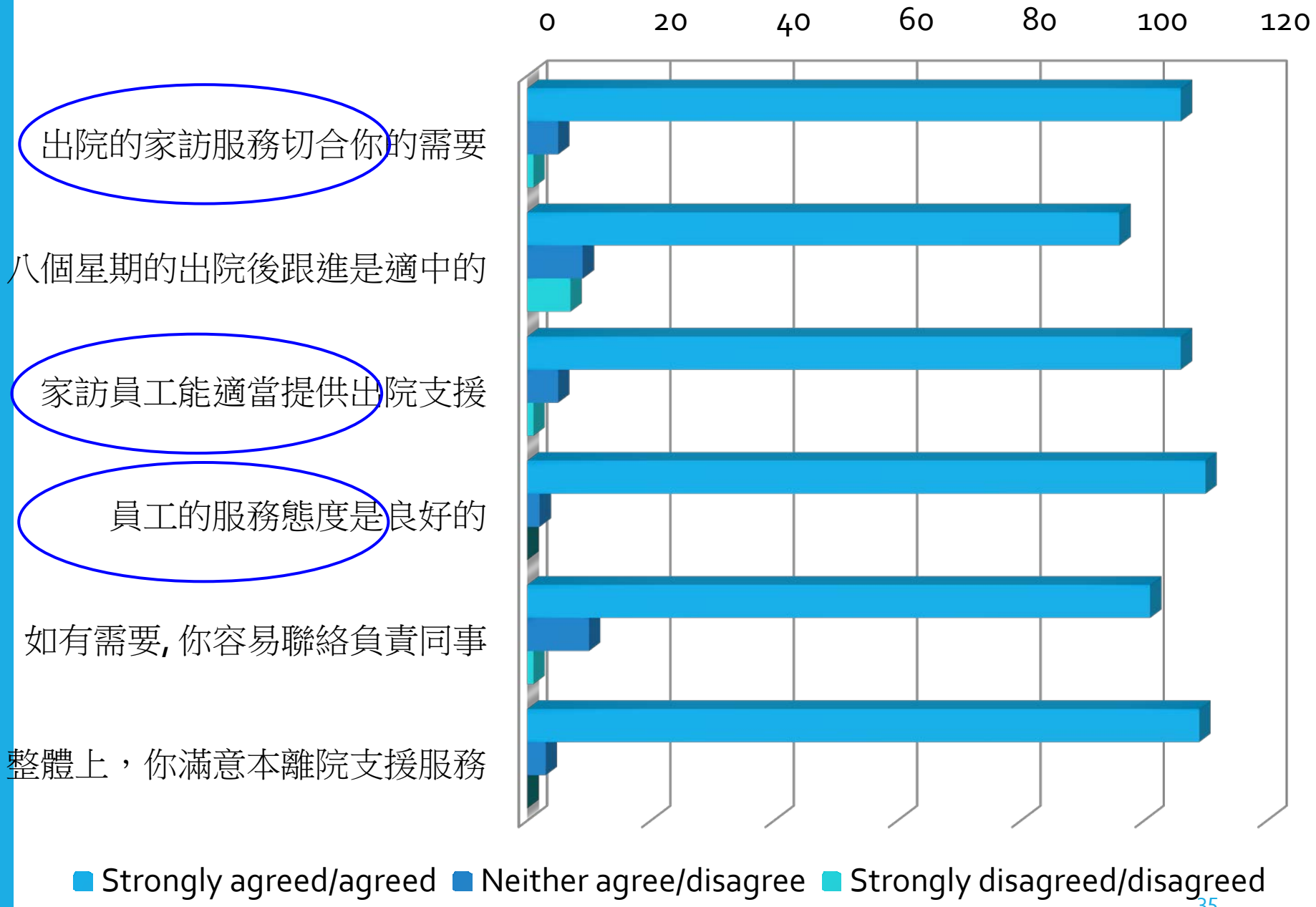


PYICM PATIENT SATISFACTION SURVEY

16/6/2015 - 27/7/2015

Total 113 patients

(1 refused to answer)


出院的家訪服務切合你的需要
八個星期的出院後跟進是適中的
家訪員工能適當提供出院支援
員工的服務態度是良好的
如有需要, 你容易聯絡負責同事
整體上，你滿意本離院支援服務
0
20
40
60
80
100
120
Strongly agreed/agreed
Neither agree/disagree
Strongly disagreed/disagreed

每月問卷調查

(訪問月份 2015年11月- 2016年3月)

	非常同意	同意	不同意	非常不同意	沒有意見	平均分
Q1	7/30	22/30	0	0	1/30	3.24
Q2	2/30	26/30	1/30	0	1/30	3.03
Q3	8/30	21/30	0	1/30	0	3.20
Q4	12/30	17/30	0	1/30	0	3.33
Q5	4/30	25/30	0	0	1/30	3.14
Q6	4/30	25/30	1/30	0	0	3.10
Q7	12/30	17/30	1/30	0	0	3.37
Q8	4/30	25/30	1/30	0	0	3.10

Q4:個案經理能有效跟進及回應個案之查詢
Q7:您對ICM整體服務感到滿意

HST Data

Month/ Year	PYNEH (721)		RH (360)	
	HST referral by ICM	Open cases by HST	HST referral by ICM	Open cases by HST
Apr-15	49	48	25	21
May-15	74	61	35	29
Jun-15	71	63	47	35
Jul-15	45	44	32	34
Aug-15	62	49	32	31
Sep-15	80	74	41	33
Oct-15	66	64	32	30
Nov-15	70	59	39	30
Dec-15	98	88	31	33
Jan-16	83	71	40	38
Feb-16	65	62	42	42
Mar-16	79	70	48	37
Total	842	753 (89.3%)	444	393 (88.5%)

Methodist – service statistics

Type of Services	Apr - Jun 2015	Jul - Sep 2015
	No. of elders served	No. of elders served
(1) Nursing care: Vital signs monitoring	179	164
(2) Nursing care : simple wound dressing	25	25
(3) Personal care : e.g. transfer, food-feeding, bathing, hair washing, hair cutting, shaving, nail cutting, changing of clothes, toileting, disposal of urine and bowel waste, etc.	25	17
(4) Elderly sitting	2	1
(5) Home rehabilitation : e.g. restorative and maintenance rehabilitation / therapeutic exercise or activities	64	68
(6) Home-making services	13	14
(7) Home modifications / occupational intervention	98	95
(8) Provision of meals	84	96
(9) Transportation and escort services	41	53
(10) Referral to social services	61	63
(11) Residential/centre-based respite services	17	6











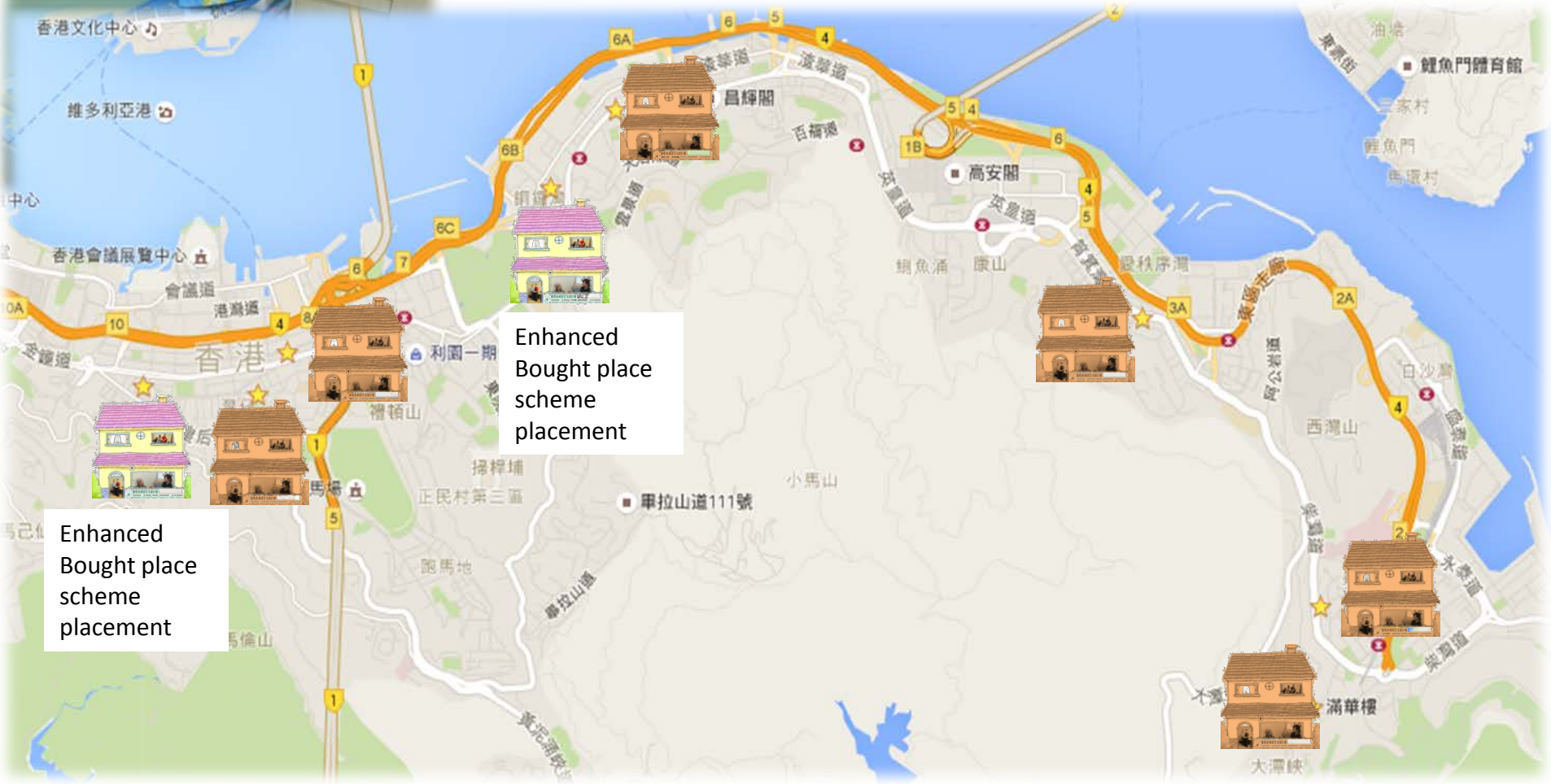
HONG KONG EAST CLUSTER
港島東醫院聯網
支援長者離院綜合服務

Integrated Post-discharge Care Home Support Team

Methodist – service statistics

Type of Services	Apr - Jun 2015	Jul - Sep 2015
	No. of times	No. of times
(14) Telephone calls made to and received from patients / carers under HST within office hour	1141	1129
(15) Number of calls received for out-of-hour emergency support from patients/carers	4	14
Number of counseling sessions to (e.g. psychosocial counselling and emotional support) :		
(i) Participants	274	290
(ii) Carers	199	191
Total	473	481
Number of training classes organised		
(i) classroom training	0	0
(ii) on site training	186	169
Total	186	169
Number of attendances by carers :		
(i) classroom training	0	0
(ii) on site training	264	231
Total	264	231

Transitional Residential Care Service



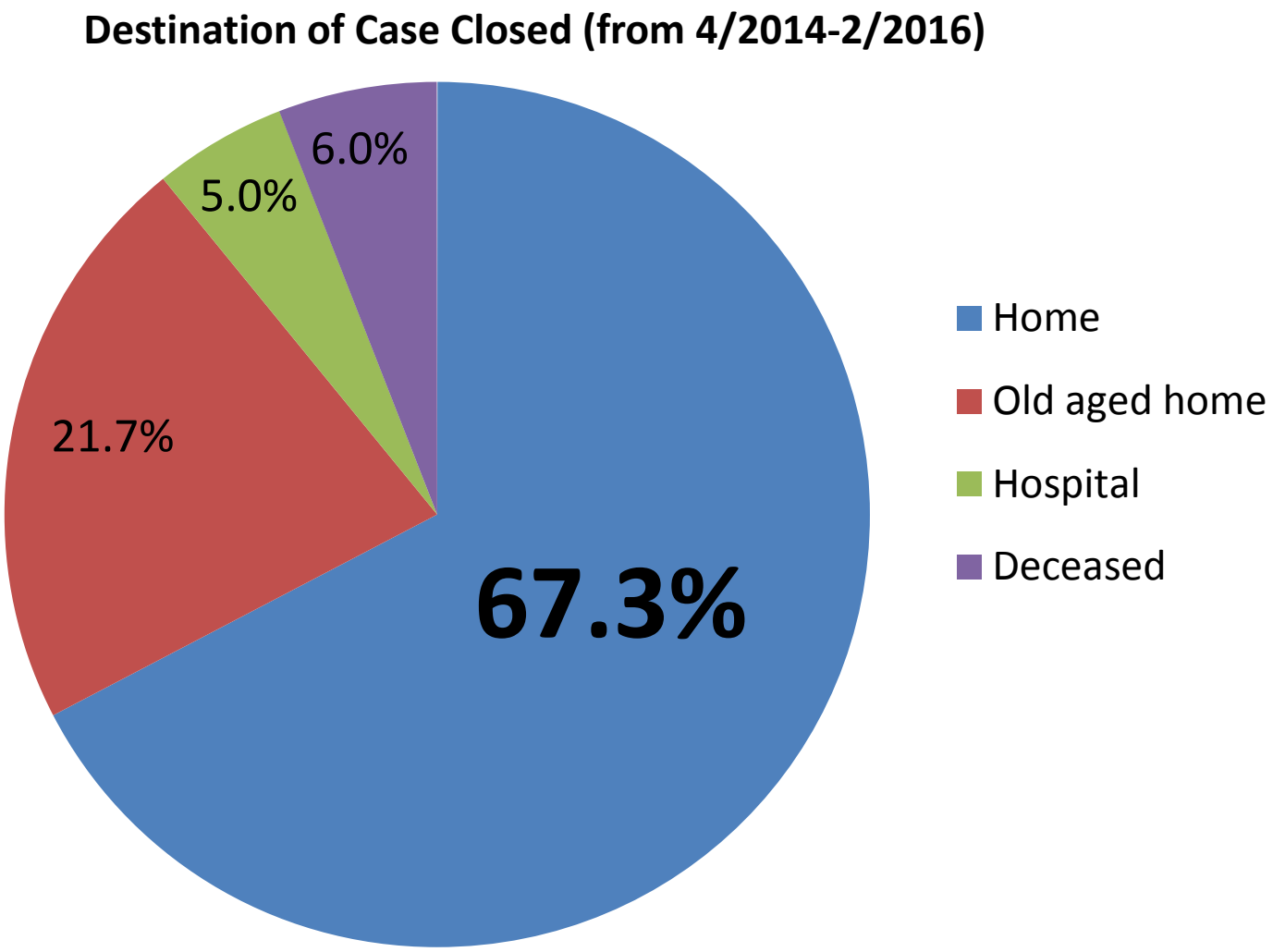
HONG KONG EAST CLUSTER
港島東醫院聯網

支援長者離院綜合服務

Transitional Residential Bed Data

Month/ Year	PYNEH (36)		RH (18)	
	TR request	TR provide	TR request	TR provide
Apr-15	3	3	0	0
May-15	3	3	2	0
Jun-15	5	2	2	2
Jul-15	4	2	1	1
Aug-15	0	0	0	0
Sep-15	4	3	2	1
Oct-15	7	3	6	3
Nov-15	3	2	3	4
Dec-15	5	3	4	5
Jan-16	3	2	2	0
Feb-16	5	3	4	3
Mar-16	10	8	4	3
Total	52	34 (65.4%)	30	22 (73.3%)

Transitional Residential Care Service



RH Training and Development

- Fire safety
- DSE training
- Workplace Violence
- Review course on BCLS
- Overseas Corporate Scholarship Program 2016/2017

HKEC ICM (INTEGRATED CARE MODEL)

Introduction of ICM service FORUM 2016

Fast Track Clinic Data Analysis

Case sharing ICM achievements

Date: 11 Apr 2016 (Mon)

Time: 12:45 – 14:00 **(Light lunch will be provided at** 12:15)

Videoconferencing will be arranged to RHTSK and TWEH

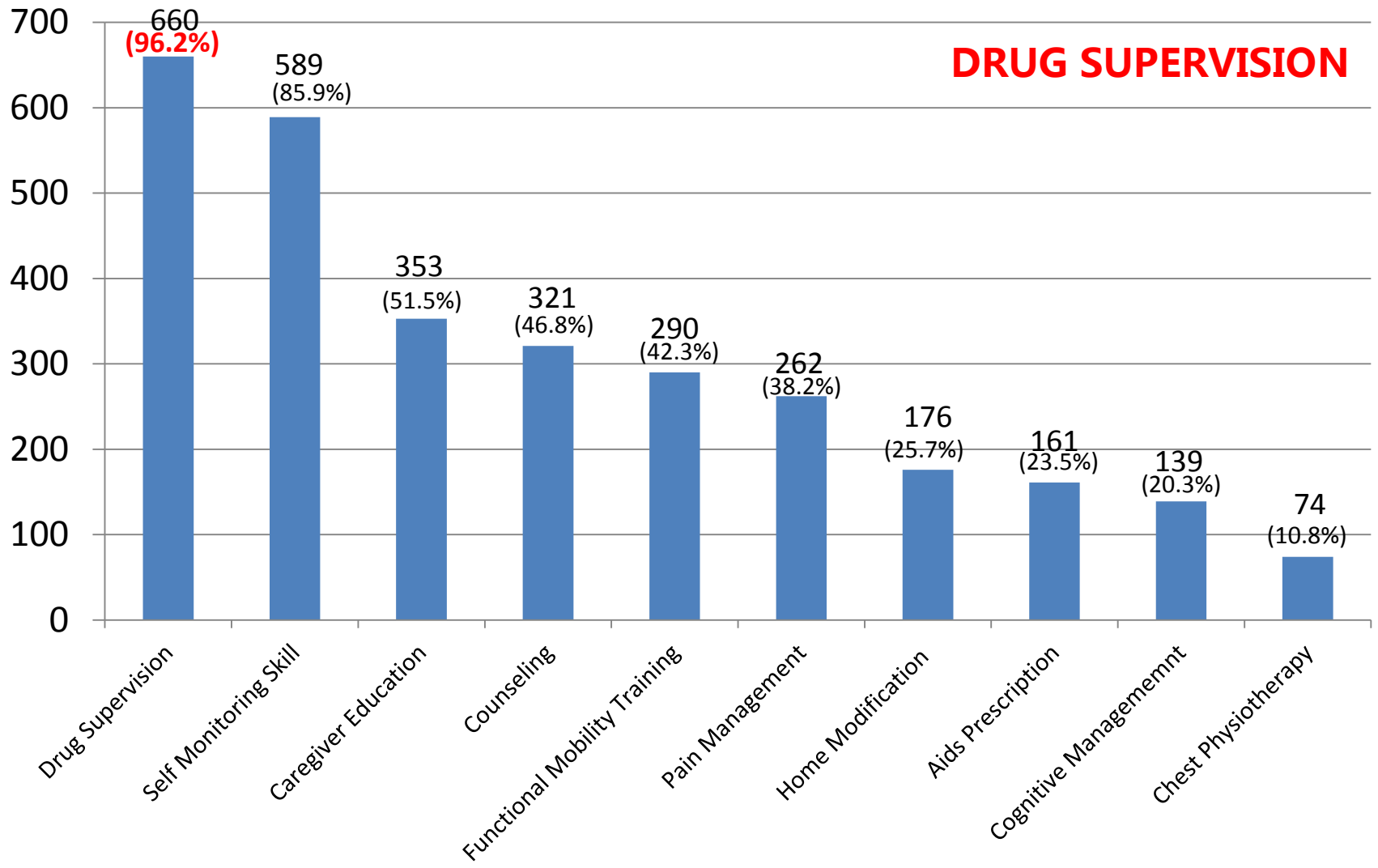
	Venue	Hospital contact person
PYNEH	Host Site: Lecture Theater, Seminar 1 & 2, G/F, HKEC Training Center, PYNEH	Ms. Crystal LEUNG, EAIIIA (NSD), PYNEH
RHTSK	LG1, Lecture Theatre, RHTSK	Ms. Cecilia Y C CHAN, APN (NSD), RHTSK
TWEH	Multi-function Room, 9/F, Ophthalmic Block, TWEH	Ms. Aileen YANG, SNO (NSD), TWEH

Please enroll through your respective hospital contact person by 29 Mar 20

Enquiry: Mr. KL PUN, APN (NSD), PYNEH, Tel: 2595 6367

Service Provided By ICM Case Managers from April 15 to March 16

(Total Number of Patients : 686)



Our Research Work

- The research "*Effect of case manager-delivered Post- discharge home visit on medication adherence among community – dwelling elderly*", started from 27th July 2015.
- Jointed research study with Chinese University concerning the "*ICM fall pathway*", started from 1st November 2015.

Integrated Post-discharge Care
Case Manager – Drug Management

Clinical pathway for prevention of fall, PYNEH

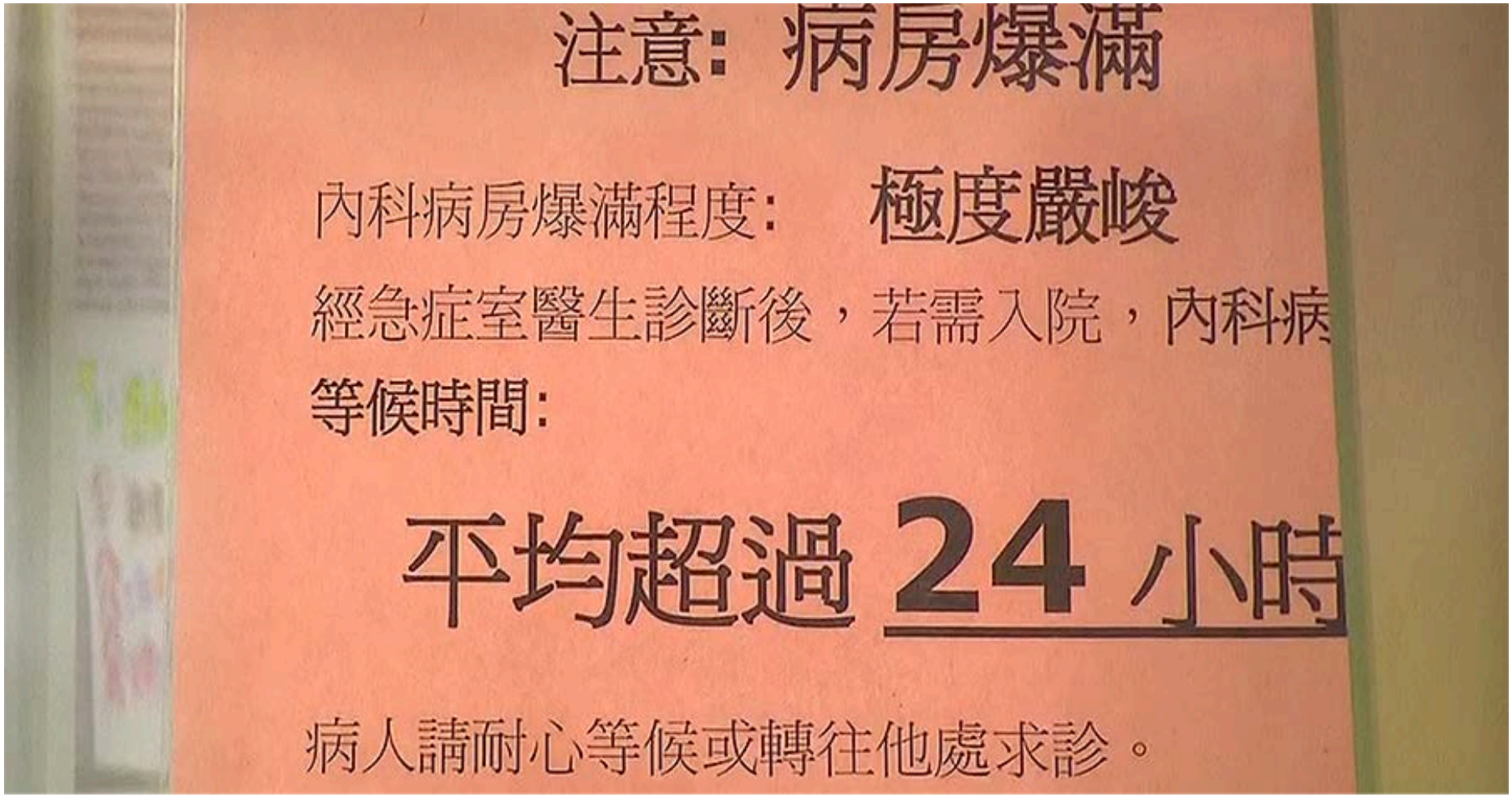
Period	Details	
In-Patient	Assessment:	1) Assess for any history of fall (e.g. any fall incident within the last 3 months) 1) Assess for any incident of fall (e.g. accident, while walking/ transfer, syncope) 1) Assess for any injurious fall (e.g. soft tissue injury, head injury, fracture) 1) Assess for any postural hypotension 2) Simplified Barthel Index 3) Drug aspects: polypharmacy, drug compliance 4) Mental aspect by using AMT
	Intervention:	1) In-patient PT referral for mobility training, walking aid advice if appropriate 2) In-patient referral to geriatrician or fall team if appropriate 3) Outpatient MDW or GDH referral on discharge if appropriate

Integrated Post-discharge Care
Case Manager – Patient Empowerment

Self monitoring

Patient education

公立醫院爆滿


注意：病房爆滿
內科病房爆滿程度：
極度嚴峻
經急症室醫生診斷後，若需入院，內科病
等候時間：
平均超過 24 小時
病人請耐心等候或轉往他處求診。

Public Hospitals Key Statistics during Winter Surge
公立醫院冬季服務高峰期重點服務數據

Highlights of activities covering 00:00-23:59 on 7 March 2016 are set out below:
二〇一六年三月七日 0 時 0 分至 23 時 59 分的重點數據如下:

Cluster 醫院聯網	Hospital 醫院	No. of A&E first attendance per day 急症室每天首次求診數字	No. of inpatient admission to Med via A&E per day 經急症室入內科每天數字	Medical inpatient bed occupancy rate at midnight 內科住院病床於午夜時的佔用率
HA Overall 醫院管理局公立急症醫院		*7,454	#1,025	118%
Hong Kong East 港島東	Pamela Youde Nethersole Eastern Hospital 東區尤德夫人那打素醫院	450	73	110%
	Ruttonjee & Tang Shiu Kin Hospitals 律敦治及鄧肇堅醫院	262	46	112%
Hong Kong West 港島西	Queen Mary Hospital 瑪麗醫院	438	89	101%
Kowloon Central 九龍中	Queen Elizabeth Hospital 伊利沙伯醫院	636	78	124%
Kowloon East 九龍東	Tseung Kwan O Hospital 將軍澳醫院	439	51	117%
	United Christian Hospital 基督教聯合醫院	617	93	124%
Kowloon West 九龍西	Caritas Medical Centre 明愛醫院	509	80	123%
	Kwong Wah Hospital 廣華醫院	427	89	110%
	^North Lantau Hospital 北大嶼山醫院	355	–	–
	Princess Margaret Hospital 瑪嘉烈醫院	416	81	117%
	Yan Chai Hospital 仁濟醫院	460	74	124%
New Territories East 新界東	Alice Ho Miu Ling Nethersole Hospital 雅麗氏何妙齡那打素醫院	487	34	111%
	North District Hospital 北區醫院	359	49	113%
	Prince of Wales Hospital 威爾斯親王醫院	454	55	126%
New Territories West 新界西	Pok Oi Hospital 博愛醫院	422	46	131%
	Tuen Mun Hospital 屯門醫院	723	87	118%

Note: Above figures are provisional and subject to further update
註：上述為臨時數字，日後可能有所更新

Issued by Hospital Authority on 8 March 2016
醫院管理局於二〇一六年三月八日發布

* During non-surge period, the no. of A&E first attendance per day of HA Overall is around 5,900 (Reference period is 2Q & 3Q 2014)
醫院管理局於非服務高峰期，整體急症室每天首次求診數字約為 5,900 (參考時期為二〇一四年第二及三季)

\# During non-surge period, the no. of inpatient admission to Med via A&E per day of HA Overall is around 850 (Reference period is 2Q & 3Q 2014)
醫院管理局於非服務高峰期，整體經急症室入內科每天數字約為 850 (參考時期為二〇一四年第二及三季)

^ There is currently no acute medical ward in North Lantau Hospital
北大嶼山醫院暫時不設急症內科病房

7 March 2016

- HA 118%
- PYNEH 110%
- RH 112%

RH Winter Surge

EMW Ward

- Proactively assess case in EMW by link nurse
- Access case by EMW referral
- Total Referral (13 cases) + Proactive recruited case(4 cases) + Harrpe Case: (1 Case) : Total : 18 cases (since 12/2015 to 3/2016)

Sharing of practice in Winter Surge

- COPD/ CHF telephone FU by volunteers
- Fast track clinic : proactive approach for high risk elderly esp. COAD/CHF
- Vaccination promotion

Date	No . of attendance	No of vaccinated elderly
2/2/2015	28	12
11/11/2015	35	23

Program Difficulties Encountered

- **Manpower** constraints due to recent long sick leave or IOD
- Current **Contingency plan** in limited manpower:
  - doctor visits to continue post-discharge care of ICM patients
  - service target of home visits was achieved after extra effort and work of all ICM team members
  - Intermittent joint home visits with case managers and HST for quality assurance and training of clinical assessment skills
- **Time** & Travel
- Fast track clinic with improved **NEATS** support ; but sometimes patients cannot attend fast track clinic on the same day after cut-off time of NEATS before noon.

Complacency?

- ICM - very heterogeneous high risk elders with multiple comorbidities
- What is working ? Priority?
- Polypharmacy and Drug management
- Community from one NGO pros and cons
- What next after ICM? Continuity of care?
- Case management vs clinical management
- Transitional Bed Utilization Vs Old Age Home
- New technology
- A&E – EMW
- Frailty and ICM


Thank you…
Thank you…
Thank you…
Thank you…
Thank you…


TEAM