



The
COMMONWEALTH
FUND

The Commonwealth Fund's 18th Annual International Symposium on Health Care Policy, Dec 2015

GeriCare: The Singapore Model

Dr. James Low

Senior Consultant

Department of Geriatric Medicine, Khoo Teck Puat Hospital

Gericare Programme

Email: low.james.yh@alexandrahealth.com.sg



The GeriCare Vision

Developing partnerships between restructured hospitals and nursing homes to enhance care.

The GeriCare Mission

Leveraging on knowledge, skills and technology to enhance training and care in NHs.

Empower residents to communicate their wishes pertaining to care.

Creating a network of clinical staff working in and those supporting NHs.

Supporting end-of-life care emphasizing the principles of good palliative care in NHs.



Our “Soft” Approach

CHAMPION WITH ABUNDANCE MINDSET

Staying true to the vision
Well-defined strategy

EMPOWERMENT & OWNERSHIP

NHs contributed to the overall direction, vision and strategy and felt increased ownership

BUILDING TRUST

Sensitive to nursing homes and respect their privacy
Gained acceptance in adapting telemedicine

INCLUSIVE RELATIONSHIPS

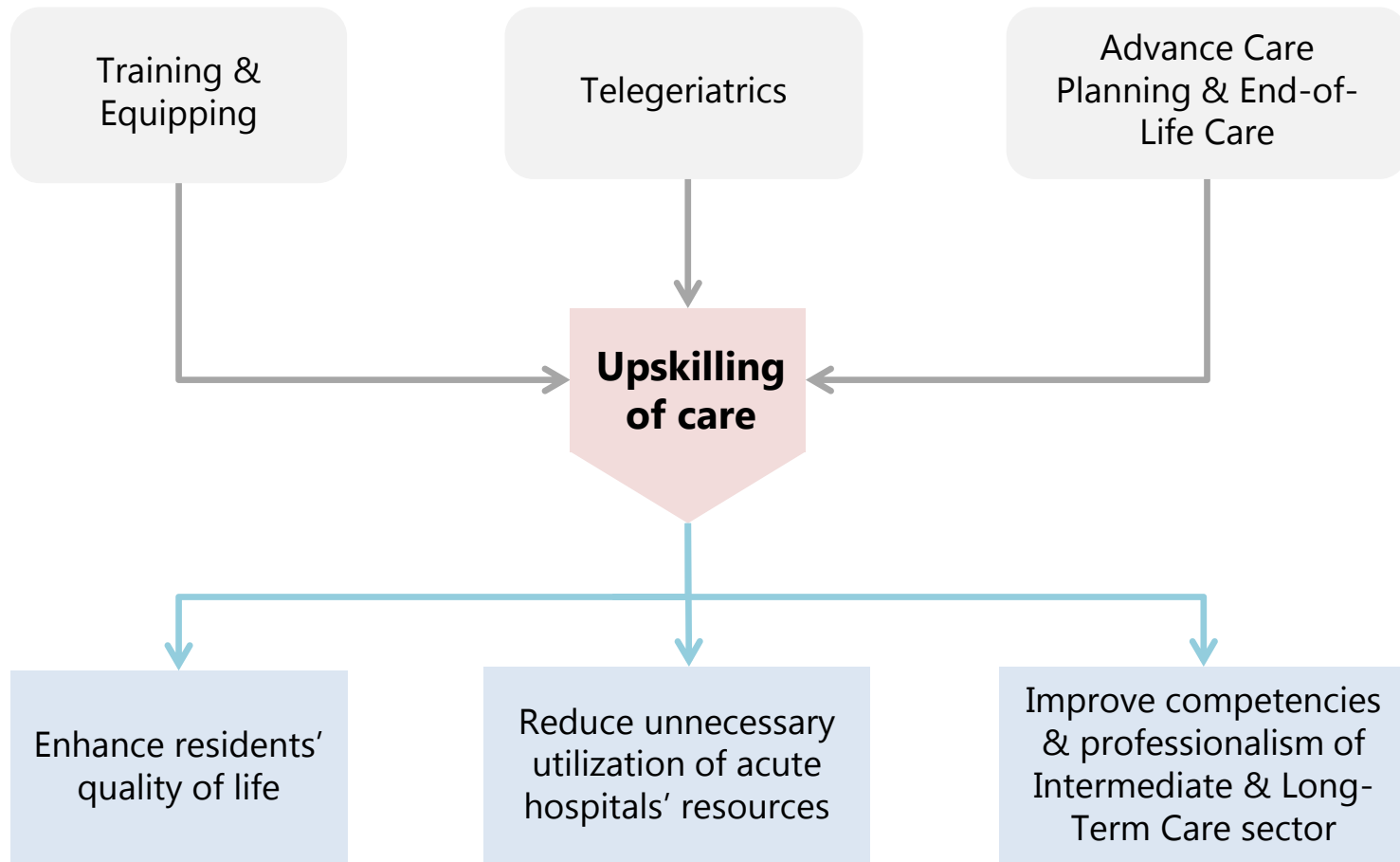
Engaged key nurses who are able to further champion GeriCare@North

SPACE & TIME FOR LEARNING

Introduced new skills and capabilities
Allocated sufficient resources and time in early stages of implementation



The GeriCare Thrusts





Telemedicine Consultation



26" LED monitor
screen



10x HD Videoconferencing
Camera



Microphone with
touch-screen
interface



Remote control



Start-Up Costs

	Year 2010	Year 2015	
TV 26 inch	USD\$255 (LCD)	USD\$180 (LED)	↓
Videoconferencing system	USD\$9,100	USD\$4,600	↓
Trolley	USD\$3,000	USD\$2,900	↓
Subscription services (Nursing Home)	USD\$420	USD\$150	↓
Subscription services (Hospital)	USD\$200	USD\$200	
IT Support manpower (per man day)	USD\$440	USD\$440	
Total	USD\$13,415	USD\$8,470	↓



Continuing Training & Nurse Education

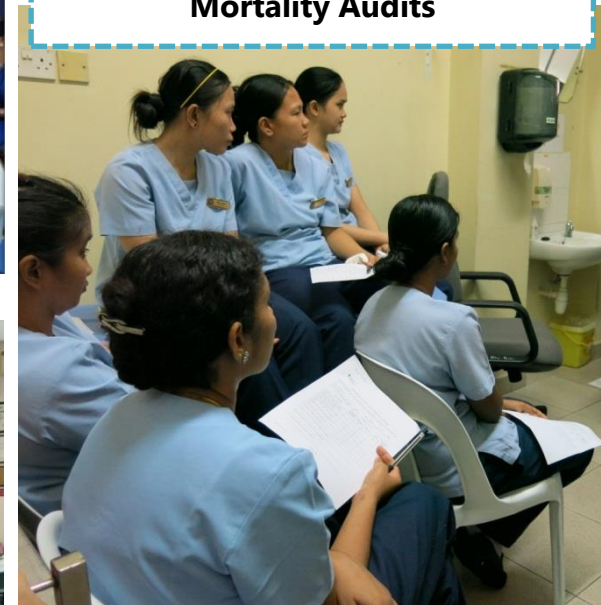
Tele- Continuing Nurse Education



Telegeriatrics Nurse Training Course



Mortality Audits



Tele- Multidisciplinary Meeting

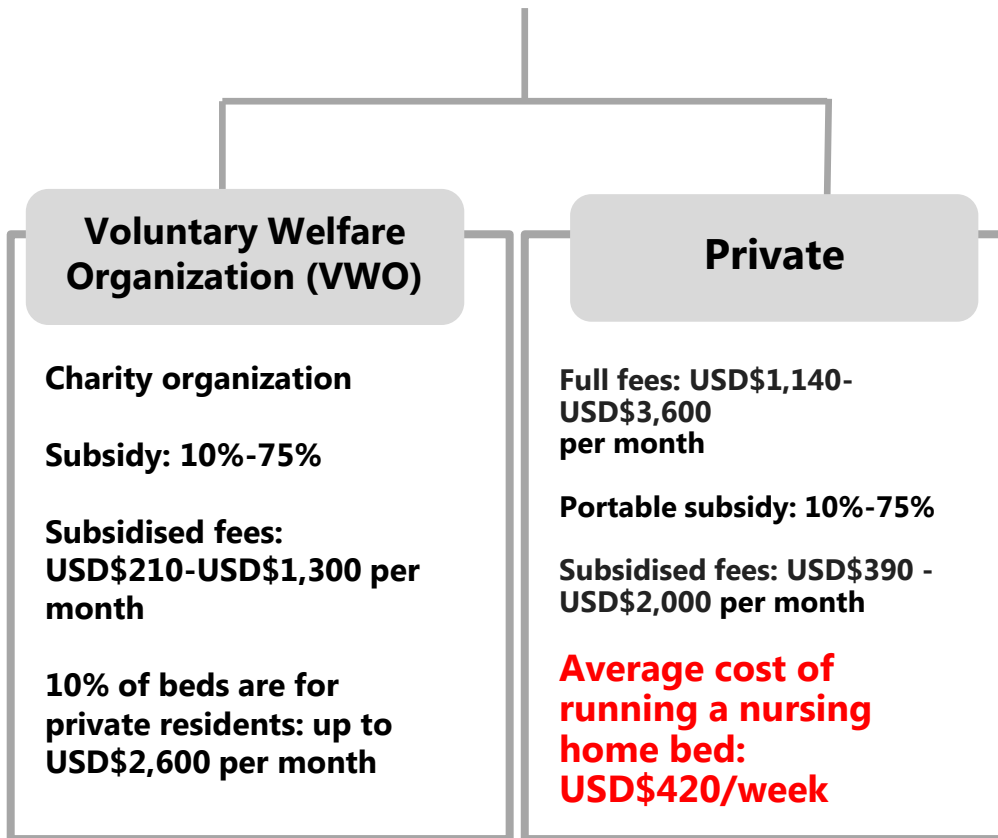


Advance Care Planning Training



Nursing Homes

- 66 nursing homes
- 10,780 beds in 2014
- 17,150 beds by 2020
- Residents are wheelchair-bound or bed-bound without caregivers at home.



Acute Hospital

- 26 hospitals & specialty centers
- 11,230 beds in 2014

For any case of hospital admission in elderly

Average Length of Stay: 7 days

**Cost to government:
USD\$2015***

*Wong WC, Sahadevan S, Ding YY, Tan HN, Chan SP (2010). Resource consumption in hospitalised, frail older patients. *ANNALS Academy of Medicine Singapore*, 39(11): 830-836.



Consult : 1 Nursing Home Resident

	Telemedicine consultation	Visit to Specialist Outpatient Clinic	Visit to Emergency Department
NH staff involvement (in NH)	NH Nurse x1 30 min No waiting time spent away from the NH	NH Nurse x1 5 hr 20 min Driver + Ambulance x1 1 hr 0 min Total time spent away from nursing home for one nurse accompanying one resident 5 hr 20min	NH Nurse x1 1 hr 0 min Driver + Ambulance x1 1 hr 0 min No time spent away from nursing home
Acute hospital staff involvement	Admin Assistant 10 min for administration 15 min per consultation Consultant 15 min per consultation 1 hr for 4 consults (1 NH) 2 hrs for 8 consults (2 NHs)	Clinic Nurse x1 15 min Consultant x1 15 min Pharmacist x1 10 min Administrative staff x2 20 min	ED Nurse x1 30 min Healthcare Assistant x1 15 min Administrative staff x1 10 min Medical Officer x1 20 min Consultant x1 15 min
NH resident	15 min to be assessed by a consultant No travelling and waiting time Remains in nursing home	Going for SOC visit & back to nursing home Stress in an unfamiliar environment Time spent going to SOC 2 hr	6 hr 10 min (excluding procedure) in an unfamiliar environment alone
Total time spent on 1 NH resident	25 min (USD\$45)	1 hr (USD\$199) (Does not include clinic overhead costs)	1 hr 30 min (USD\$191) (Does not include ED overhead costs)



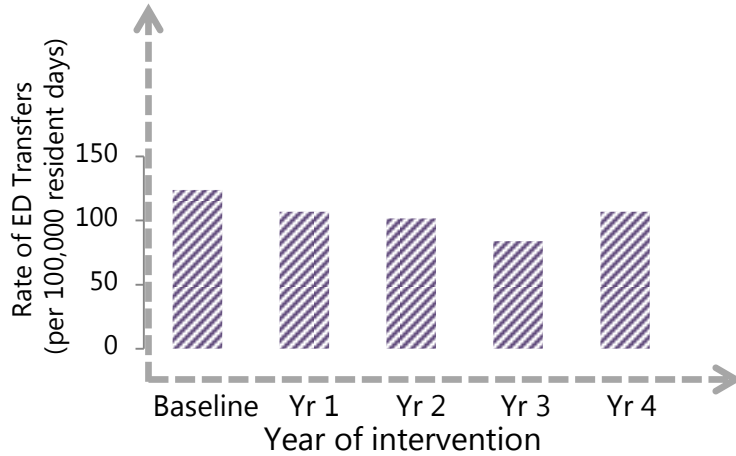
Consult: Residents in 2 Nursing Homes in one afternoon

	Telemedicine consultation	Physical visit to nursing home
NH staff involvement (in NH)	NH Nurse x1 30 min No waiting time spent away from the nursing home	NH Nurse x1 30 min No waiting time spent away from the nursing home
Acute hospital staff involvement	Admin Assistant 10 min for administration 15 min per consultation Consultant 15 min per consultation 1 hr for 4 consults (1 NH) 2 hrs for 8 consults (2 NHs)	Consultant 30 min travelling to nursing home 15 min per consultation 2 hrs for 8 consults (1st NH) 60 min travelling to next nursing home & back to hospital 2 hrs for 8 consults (2nd NH)
NH resident	15 min to be assessed by a consultant No travelling and waiting time Remains in nursing home	15 min to be assessed by a consultant No travelling and waiting time Remains in nursing home
Total time spent per consult	15 min	21 min

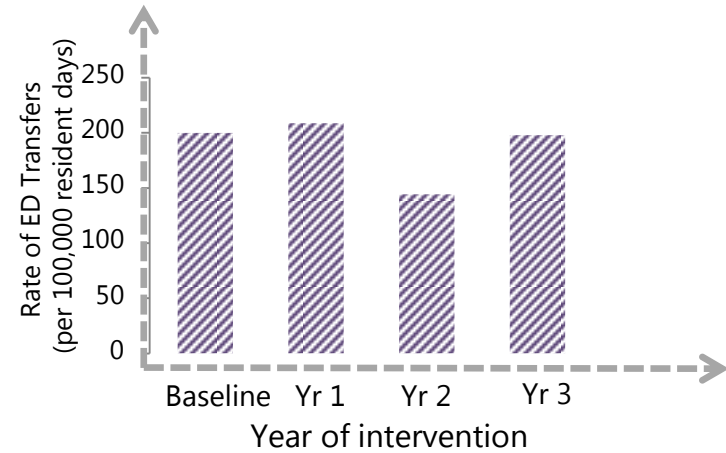


Emergency Department Transfers: Mid-term stats

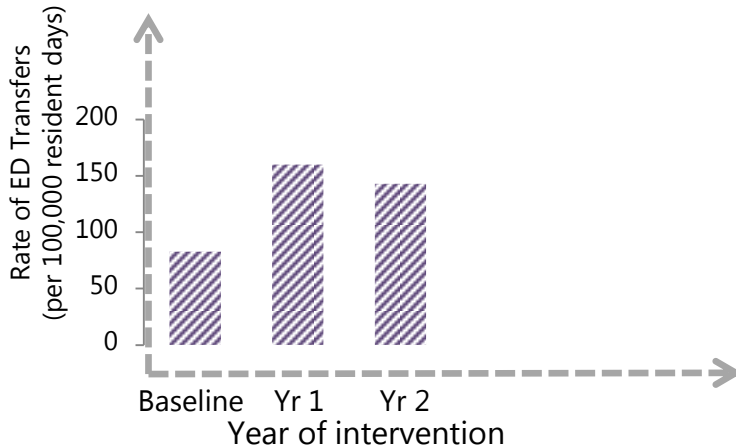
Nursing Home 1



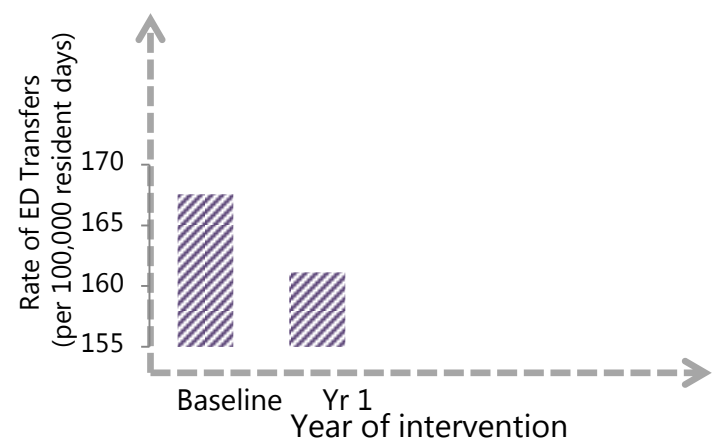
Nursing Home 2



Nursing Home 3



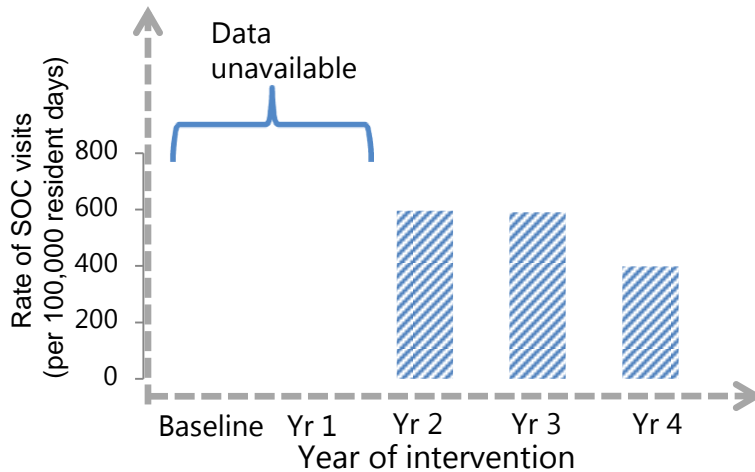
Nursing Home 4



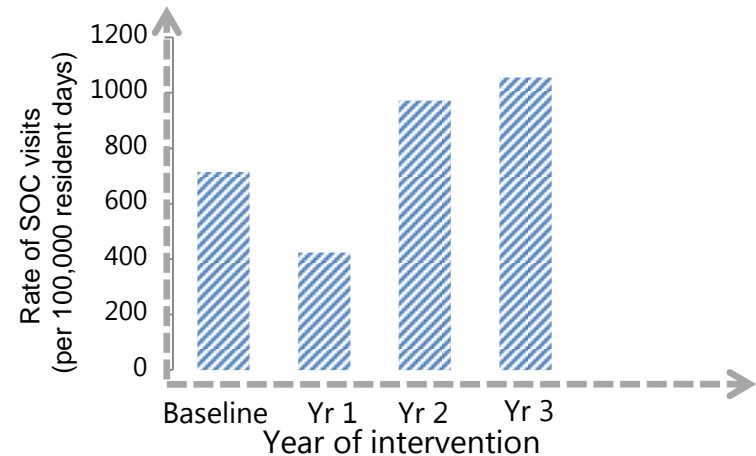


Specialist Outpatient Clinic Visits: Mid-term stats

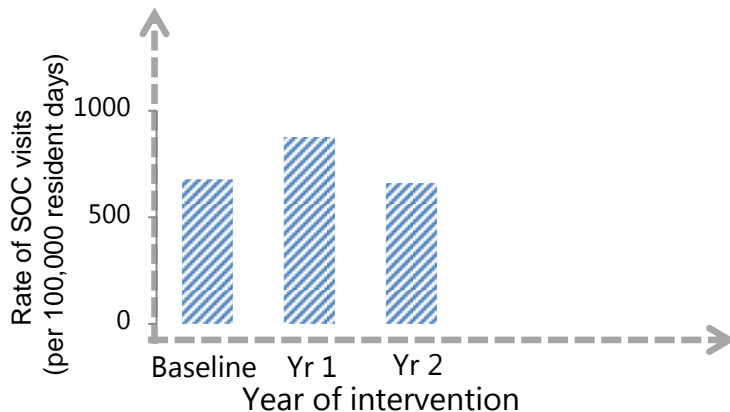
Nursing Home 1



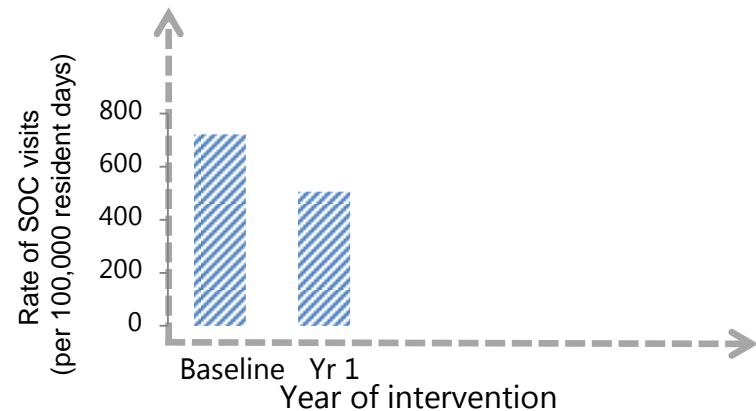
Nursing Home 2



Nursing Home 3



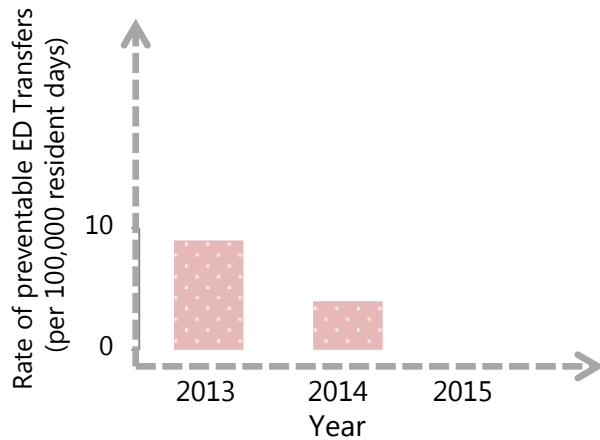
Nursing Home 4



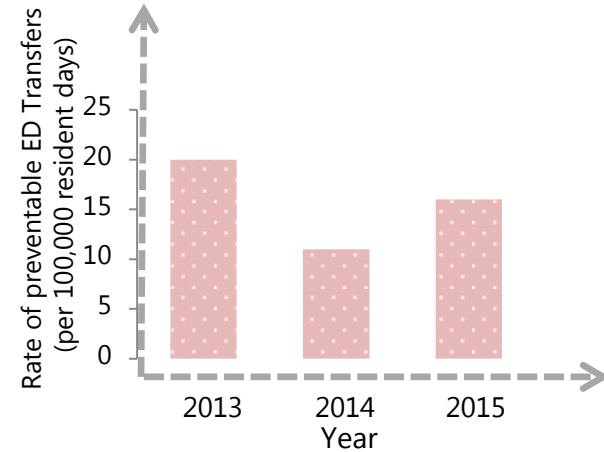


Preventable Emergency Department Transfers: Mid-term stats

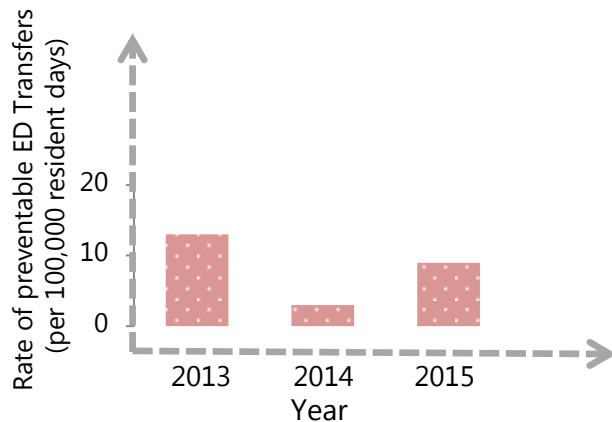
Nursing Home 1



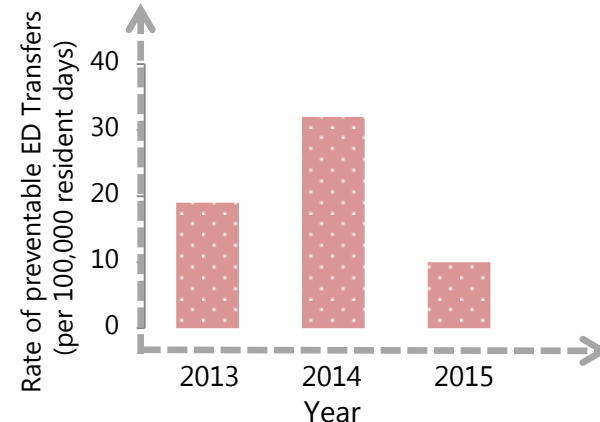
Nursing Home 2



Nursing Home 3



Nursing Home 4





Challenges in Implementation



Diverse standards, practice, philosophy, & motivation



No full-time resident specialists
Few resident doctors



Resistant to change



Mainly run by **OVERSEAS** nurses



High staff turnover rate & shortage of manpower



Data collection problems – self-reported



The GeriCare Team:

James Low, Programme Director
Joanne Chia, Programme Manager
Elizabeth Ho, Clinical Educator
Cindy Koh, Clinical Educator
Magpantay Gerlie, Clinical Educator
Christine Ripotola, Clinical Educator
Toh Hui Jin, Research Executive
Lynn Lee, Operations Executive
Linda Koh, Admin Assistant
Siti Zaleha, Admin Assistant

Publication:

**Last moments of life: can
telemedicine play a role?**

<http://www.ncbi.nlm.nih.gov/pubmed/23388081>

Thank You!