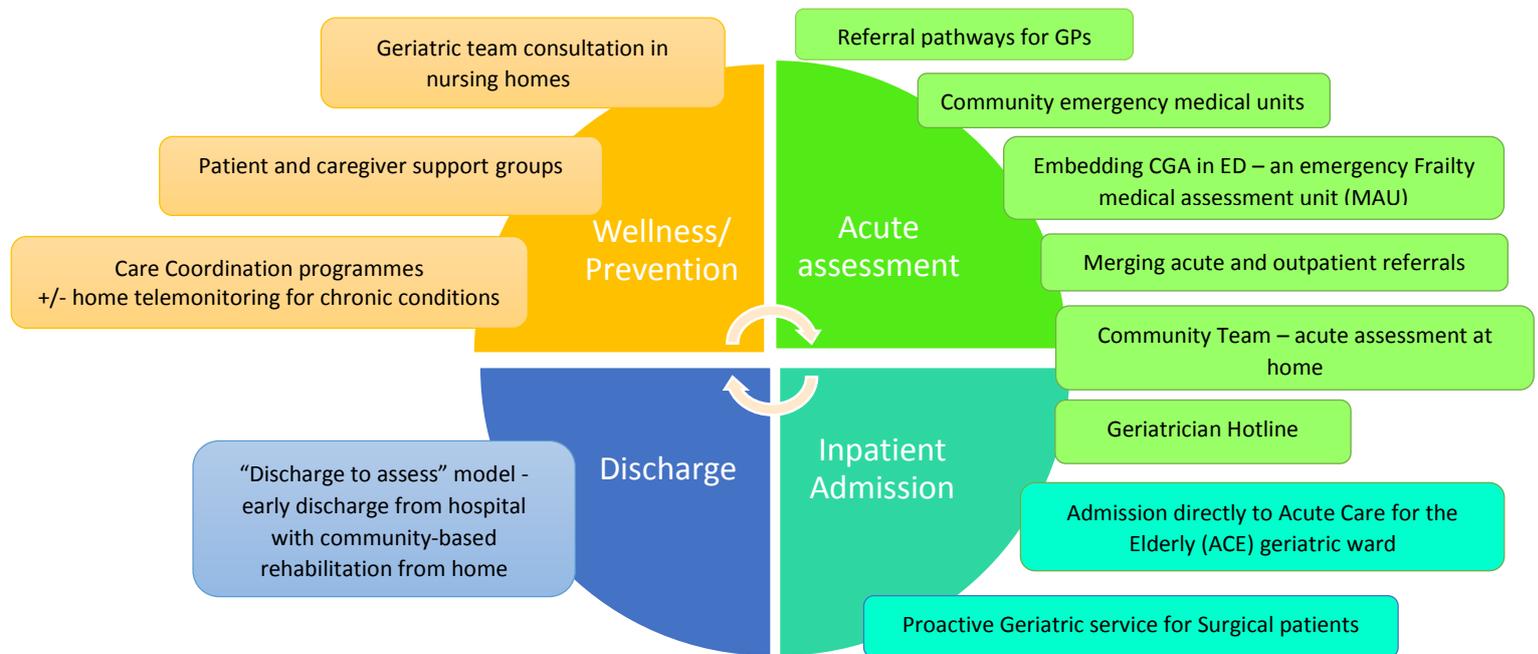


# FRAIL ELDERLY - INNOVATIVE MODELS OF CARE



## BRIEF DESCRIPTION OF THE CARE MODELS

### 1. Care Coordination programmes +/- home telemonitoring for chronic conditions

*Personalised care coordinator / case manager; post-discharge support – for seamless transition between hospital and home; emphasis on promoting patient self-management - maximizing health/quality of life at home for as long as possible, and delaying the need for long-term residential care. Daily home telemonitoring of patient symptoms and vital signs (BP, weight, blood glucose etc) may be incorporated for selected high risk patients.*

Examples:

- South Warwickshire NHS Foundation Trust – uses 3rd sector (Age UK assessors) to facilitate integrated care across hospital and community. Preventive emphasis involves early identification of the concerns the older person has relating to their health, independence and wellbeing – and a tailored, personalised response to the top 2 or 3 priorities the older person has for support, information and advice. Trained Age UK staff complete a personalised assessment of the patient’s needs with the older person, and share this information with the professionals involved. A shared electronic record records the assessment that health and social care providers make. Between 30-40% of patients >75yrs, have taken up the offer of the service. Patient feedback has been positive. Outcomes resulting from the assessment not measured by RCT here, but a similar service in the Netherlands produced an extra 1 quality adjusted health year to life to each patient for a cost of €600.
- Massachusetts General Hospital (MGH) Care Management Program – uses nurse case managers as the patient point of contact - serving as liaisons between the patient and other members of the care team; monitoring health needs with home visits, office appointments and

phone calls; and developing customized health care plans with input from the program's other staff, including social workers, pharmacists and community resource specialists. The program has yielded a sustained 7% net cost and a 4% mortality reduction.

- The VHA CCHT program incorporates home telemonitoring into its care coordination program for high risk elderly with chronic conditions. The program has produced a 19% reduction in hospital admission rate, 25% reduction in length of inpatient stays, 86% patient satisfaction, and significantly reduced cost compared to standard home-based primary care services (see case study).
- Rush University Medical Center, Chicago – developed and implemented “Virtual Integrated Practice” (VIP), where primary care practices organise interdisciplinary teams which collaborate virtually (using email, phone) to plan and deliver coordinated care for geriatric patients with chronic disease. A comparison of 4 primary care practices using VIP with 4 similar practices not using the program, found VIP frail elderly patients (with lower levels of functioning) were 42% less likely to visit ED, reported increased patient satisfaction with their care, and improved knowledge about their conditions and medications. Physicians in VIP practices were more likely to report understanding the reason for their patients’ visits. There was also a substantial change in the pattern of referrals made - in particular, an increase to the designated team dietician.

## 2. Geriatric team consultation in resthomes

- “Paper rounds” – for rest home GPs/RNs - may be telehealth enabled*
- Realtime patient consultations – in person / video teleconsult - to reduce avoidable hospitalisation of nursing home residents.*
- Rest home staff ongoing education*

Examples:

- Project ECHO – a US model of regular teleconferencing between hospital specialist (geriatric team) and a network of primary care providers (resthome GPs, RNs, managers) – for case discussion, specialist advice, and education (see case study)
- Video-telemedicine links between rural rest homes and the ED at The Medical College of Georgia Health Medical Center allow ill residents to be assessed by a physician, to prevent unnecessary transfers to the emergency department. During the first year of operation, 20 telemedicine consults took place and in 10 cases, the hospital physician concluded that the patient did not need to come to the ED.
- Nurse Practitioner role in Aged Care - an innovative NZ model, developed as a collaboration between MidCentral District Health Board (DHB), Central Primary Health Organisation (PHO) and three aged residential care facilities in Levin, in response to problems of access and inequality arising from GP shortages in that community. The Nurse Practitioner (NP) is a joint appointment for the aged facilities and the Health of Older Persons team in the PHO, and works in partnership with the GPs allocated to each facility. The NP has weekly scheduled times in each facility to provide direct care - including assessing residents’ levels of health independence, ordering diagnostic tests, and prescribing and reviewing medications. The NP also provides clinical leadership for residential care staff and advances the team’s evidence-based practice. As well as responding to acute clinical events as needed, the NP provides Health of Older Persons services through the PHO and responds to community referrals. An evaluation report completed in April 2013, found the model has resulted in increased timely access to primary healthcare services; statistically significant decreases in presentations to ED and number of hospital admissions; a reduction in polypharmacy - with the nurse practitioner able to prescribe some medications increasing prompt access to interventions; highly collaborative care between nurse practitioner, GPs, hospital specialists and aged care staff; advanced clinical nursing leadership, timely advice and support, that has increased staff

confidence and decreased anxiety of the aged residential care workforce; as well as a positive impact on the recruitment and retention of GPs, who reported they were more attracted to working in the sector knowing they had the clinical support provided by the NP role.

- The “Wellspring Program” in the US has been shown to improve the quality of rest home care and reduce staff turnover, through group training for both management and frontline staff. Several nursing homes are brought together in a learning collaborative, known as an “alliance”. A team of clinical consultants develops and regularly updates educational training modules on best practice related to clinical issues (eg, dementia, incontinence). This training is provided throughout the year and, on completion, participants form implementation teams that include both nursing home leaders and frontline staff. A leadership module aims to encourage culture change among facility leaders – enabling staff to overcome hierarchy-driven barriers, and teaching techniques to help leaders support the work of their frontline teams. Frontline staff also attend a session on leadership, communication, time management, guest relations and self-care skills. Each month, all collaborative rest homes collect and share clinical data including number of falls, weight loss prevalence, incontinent episode prevalence, staff turnover, and other performance indicators. This data is aggregated and analytical reports are distributed at quarterly meetings – allowing nursing homes to compare their performance against others and national benchmarks. A geriatric nurse consultant travels to each rest home at least four times per year to support implementation of concepts and practices, and is available at all times for as-needed consultations by telephone or email. A monthly e-newsletter is sent to all rest homes sharing available resources, relevant research and news. Over 4 year study period, the Wellspring model improved staff retention from 70% to 76% (compared to fall in retention from 74% to 68% in non-Wellspring rest homes in the area); there was a 50% decline in care deficiencies after introduction of the program, with severe deficiencies (making up 22% of deficiencies before implementation) effectively eliminated. Qualitative improvement in residents’ perceived quality of life and interaction with staff was found, although no clear evidence of quantitative benefit to health outcomes. There was no increase in overall cost to the collaborative nursing homes, with several reporting lower costs due to, for example, reductions in laundry and continence supplies resulting from better-scheduled toileting.

### 3. Patient and caregiver support groups / courses

*For those living with chronic conditions, support groups can provide valuable tips and insights from “expert patients” and socialisation. Meetings can be at a local community venue, at the hospital outpatient clinic, or an on-line forum – facilitated by a member of the multidisciplinary geriatric team, with relevant educational talks.*

Examples:

- The NHS Expert Patients Programme (EPP) is a 6 week self-management programme for people who are living with chronic (long-term) conditions. It is run by 2 tutors who both have a chronic condition. Topics cover dealing with pain and tiredness, coping with depression, relaxation techniques and exercises, healthy eating. The aim is to support people by increasing their confidence, improving their quality of life, and helping them manage their condition more effectively. Patients report valuing the social aspect of the weekly group sessions as much as the educational benefit. Disease-specific courses are also offered.
- Essentia Health and Vascular Center (Minnesota) runs group support and education sessions for its chronic heart failure patients - designed in response to patient focus group recommendations. Support groups are held 6 times a year and are led by CHF program staff. Topical presentations include medication management (taught by a pharmacist), grief support

(led by a grief counsellor), diet management (given by a dietician) and living with the disease (led by a life coach).

#### 4. Referral pathways for GPs

*Locally agreed detailed guidelines clarifying patient criteria, who to refer to and when, with what work-up completed (to address current confusion identified by Waitemata GPs)*

Example: HealthPathways Canterbury DHB

#### 5. Community emergency frailty units

*Decentralised, focused, patient-centred, acute care. Provides rapid comprehensive geriatric assessment and treatment, short-term admission (up to 72hrs), and 'hospital at home' nursing for patients sent home to recover.*

Example: The Emergency Multidisciplinary Unit (EMU) at Abingdon Community Hospital, UK; reportedly 65% of patients assessed at the EMU are able to stay in their own home. Only 17% require acute hospital admission for care. Lengths of acute inpatient stay have been reduced by more than 40% and the number of admissions from the Abingdon area to the general hospital (John Radcliffe Hospital) has reduced by 12% (see case study).

#### 6. Embedding CGA in ED – an Emergency Frailty Medical Assessment Unit (MAU)

*Dedicated Frailty MAU (usually within an ED). Early, real time geriatrician review → clear care plan on admission so treatment starts earlier – enabled by extended specialist cover. Embedded CGA pathway with co-location of multidisciplinary team members as a "front door response team" working alongside medical staff - reducing unnecessary inpatient admission for those able to return home with support.*

*Efforts to integrate geriatric medicine and emergency medicine through: (i) care pathways guiding the care of frail elderly within the main ED; (ii) geriatricians actively fulfilling an in-reach function to the major receiving area of ED in addition to their daily ward round of patients admitted overnight; (iii) shared clinical assessments and decision making; (iv) joint governance meetings; (v) joint education and training meetings*

Examples:

- Frailty Unit at Northern General Hospital, Sheffield – has shown a 37% decrease in patients discharged on the same day or day after admission with no increase in re-admission rate. See: <http://www.health.org.uk/publications/improving-patient-flow/>
- Leicester Royal Infirmary Emergency Frailty Unit (EFU) – study of the EFU's first 2 years, showed a significant fall in ED conversion rate (from 69.6% to 61.2%) for patients aged >85yrs; a fall in the 90 day readmission rate following discharge from the ED (from 26.0% to 19.9%). However, the mean length of inpatient stay was increased (from 8.9days to 11.1 days); possibly explained by only the sickest of elderly patients being admitted to hospital. ED conversion rates fell across all age groups and were thought to be related to the time freed up for emergency physicians to care for younger patients.
- "Hot Clinics" – Older Person's Assessment Units at King's College and Guy's Hospitals – provide same day or next-day CGA for older people with complex needs, aimed at avoiding unnecessary ED attendance or inpatient admission. Patients attending ED can be diverted to

the unit, GPs refer patients they think would benefit from rapid specialist assessment, and inpatients receiving medical care may also access it.

#### 7. Merging acute and outpatient referrals

*Combining outpatient referrals and emergency patients into a single system of care – within the Frailty MAU/acute model. Rationale is realising the divide between outpatient and emergency referrals is often artificial– with little difference in clinical severity between patients referred acutely or as outpatients (particularly if outpatient waiting list is lengthy) and no difference in the process of care required.*

Example: Frailty Unit at Northern General Hospital, Sheffield (see ref above)

#### 8. Community Geriatric Team – acute assessment and treatment at home

*Acute referrals from GPs are assessed by an interdisciplinary community geriatric team – often enables home-based treatment and rehab, so as to avoid hospital admission altogether.*

Examples:

- Community Rehabilitation Enablement Support Team (CREST), Canterbury DHB (see (12)).
- London’s Southwark and Lambeth NHS urgent care model for older people - “HomeWard” care – provides short term clinical care, including intravenous therapy, blood monitoring, care relating to catheters such as PICC lines and Hickman lines, anticoagulation therapy, complex wound management, and oxygen therapy (nebulisers). Care is coordinated by the HomeWard matron, working closely with the team (GP, nurses, OT, physio, pharmacist, social worker)

#### 9. Geriatrician Hotline

Example: The TALK service at King’s College Hospital, London

*24/7 access to telephone advice for GPs and other healthcare professionals to specialist geriatric providers (geriatrician, geriatric registrar, or senior geriatric nurse) – aims to avoid the patient attending ED – discuss alternatives which include arranging a Hot Clinic appointment for geriatric assessment (same day or next working day). The service is also used to access rapid specialist assessment by hospital doctors in other specialties and therapists.*

A study of a similar geriatric hotline in Bordeaux, providing GPs with direct line to a geriatrician Monday to Friday 9am – 7pm, over 16 months (Nov 2010 – Feb 2012) resulted in only 4.3% of the 230 patients discussed over the hotline proceeding to ED admission. The remainder calls were dealt with by advice only (38%), organised geriatric consultations (5.3%), day hospital (9.2%) or hospitalisation in geriatric medicine (42.9%). The reasons for calls to the hotline involved management of behavioural disorders (29.5%), unexplained asthenia (17%), repeated falls (13%) and complex social problems (10.3%).

#### 10. Admission directly to Acute Care for the Elderly (ACE) geriatric ward

*High acuity ACE unit targeting frail elderly with delirium and dementia. Rapid identification for entry; a safe and appropriate environment; rapid investigations and interventions for the acute illness; interdisciplinary geriatric assessment within 24 hours of admission to the unit, care plan and interventions that promote independence to maintain optimal function; medication review; well planned early discharge.*

Examples:

- North Memorial Medical Center, Minnesota CACE (Collaborative Acute Care for the Elderly) unit; ACE Unit at Highland Hospital, Rochester, NY;
- ACE at the Royal North Shore and Ryde Health Service, North Sydney: re-admissions within 28 days reduced from 12.4% to 3% for ACE patients, fewer ACE patients require a stay within a rehabilitation facility prior to discharge, and, if an ACE patient does require rehab, the average length of stay (ALOS) is 11 days compared to a Non-ACE patient ALOS = 21 days.  
See: [http://www0.health.nsw.gov.au/resources/nursing/pdf/moc\\_06/ace.pdf](http://www0.health.nsw.gov.au/resources/nursing/pdf/moc_06/ace.pdf)
- Also see South Australia state-wide plan to implement ACE units:  
<http://www.sahealth.sa.gov.au/wps/wcm/connect/4e0357004e5a82178814fcfe3fa04f/Acute+Care+of+the+Elderly+Unit+Model+of+Care.pdf?MOD=AJPERES&CACHEID=4e0357004e5a82178814fcfe3fa04f&CACHE=NONE>

## 11. Proactive geriatric service for surgical patients

*Geriatric team service supporting older people (> 65yrs) undergoing surgery - helping with medical problems, emotional and practical needs. Aims to improve outcomes by optimising physical, psychosocial and functional well-being, prior to and following surgery. Referrals are made by GPs, the surgical team/consultant, pre-assessment nurses or clinical nurse specialists. Preoperative screening using CGA, based on validated screening methods/tools. Identified problems are then managed to optimise fitness for surgery. Education on exercise, nutrition and pain management. Therapy input for anticipated needs at hospital discharge and proactive provision of equipment. Postoperative review on the surgical wards by geriatrician and nurse - providing direct intervention and staff education in early detection and treatment of medical complications, delirium, early mobilisation, pain management, bowel-bladder function, nutrition and discharge planning. Follow-up therapy home visit post-discharge for patients with functional difficulties, and outpatient clinic review for those with on-going medical problems. Thereafter, patients linked with pre-existing services as needed, for example falls programmes, continence service, outpatients and the voluntary sector.*

Example: the Proactive Care of Older People Undergoing Surgery (POPS) service at Guy's and St Thomas' and King's College Hospitals. The POPS team consists of geriatricians, junior doctors (FY2 and registrar), clinical nurse specialists, occupational therapist, social worker, health care assistant, administrator. The pilot study of POPS service examined elderly elective orthopaedic patients. Despite higher comorbidities in the POPS cohort, they displayed reductions in medical complications (pneumonia 20% vs 4% [p=0.008], delirium 19% vs 6% [p=0.036]), multidisciplinary issues (pressure sores 19% vs 4% [p=0.028], delayed mobilisation 28% vs 9% [p=0.012]) and length of inpatient stay (4.5 days) as compared to the cohort receiving standard ward care.

## 12. Early discharge from hospital with community-based rehabilitation from home

*Patients are discharged as soon as they are medically fit – they then have their intermediate and social care needs assessed in their own home. Care packages are put in place directly with the patient at home. This enables patients to access the right level of home care and support much faster than keeping them in hospital for these assessments to be completed, and shortens the length of inpatient stay.*

Examples:

- Community Rehabilitation Enablement Support Team (CREST), Canterbury DHB: a community-based supported discharge team that facilitates earlier discharge from hospital to appropriate home-based rehabilitation services. CREST provides interdisciplinary support for up to 6 weeks

which may involve: nursing services; occupational therapy and physiotherapy; daily support until the patient can manage on their own or with assistance from their usual service provider; home-based rehabilitation; continuing clinical assessment to detect any deterioration; development of agreed individualised care plans for long-term use in the patient's home; improved education and information for patients, their carers, and families; and liaison with general practice. A Case Manager, linked to the referring GP practice, is identified for each referral. Over July and August 2012, 354 referrals were made to CREST, up from 151 in the same months the previous year. CREST appears to be succeeding in keeping people in their homes and out of residential care where possible; for the 2010-11 financial year, the DHB spent \$22.25 million on aged care, compared with \$21.9m for the 2011-12 financial year. Demand for aged-care dementia services increased by 6.6 per cent last financial year, while demand for rest home-level care fell 6.7 per cent and hospital-level care remained stable.

- “Discharge to assess” model at Sheffield Teaching Hospitals NHS Trust – this was part of several geriatric service changes to improve patient flow at Sheffield which resulted in a 37% decrease in patients discharged on the same day or day after admission, no increase in re-admission rate, reduced bed occupancy allowing two hospital wards to be closed (68 beds), and decreased mortality.
- HomeWard service, Southwark and Lambeth NHS.

If you would like more information on any of these innovative models, please contact Kim Fong at: [c.fong@auckland.ac.nz](mailto:c.fong@auckland.ac.nz)