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A SYSTEMATIC APPROACH TO THE DETERIORATING OLDER PERSON LIVING IN THE COMMUNITY



Plan

- Community Acute Post Acute Care (CAPAC)
 - Healthy at Home Program
- Describe a systematic approach to support the investigation and management of an undifferentiated deteriorating older person in the community
 - Case study

Newcastle Community Health Centre




Community Acute Post Acute Care

- Programs:
 - Hospital in the Home
 - Rehabilitation in the Home
 - Transitional Aged Care Program
 - Healthy at Home

Program	Age Group	Timeframe	Plan upfront
HITH	> 16 years	< 7 days	Yes
RITH	< 65 years	12 weeks	Yes
TACP	≥ 65 years	12 weeks	Yes
HAH	≥ 65 years	6 weeks	No



CAPAC: Virtual hospital

- Prevent admission
 - Referrals from the Emergency Department
 - e.g. Rapid response, cellulitis, anticoagulation
 - Facilitate early discharge
 - E.g., HITH Heart Failure; HITH COPD
 - Hospital avoidance
 - Healthy at Home
 - Facilitate rehabilitation in the home
 - RITH, TACP
- 

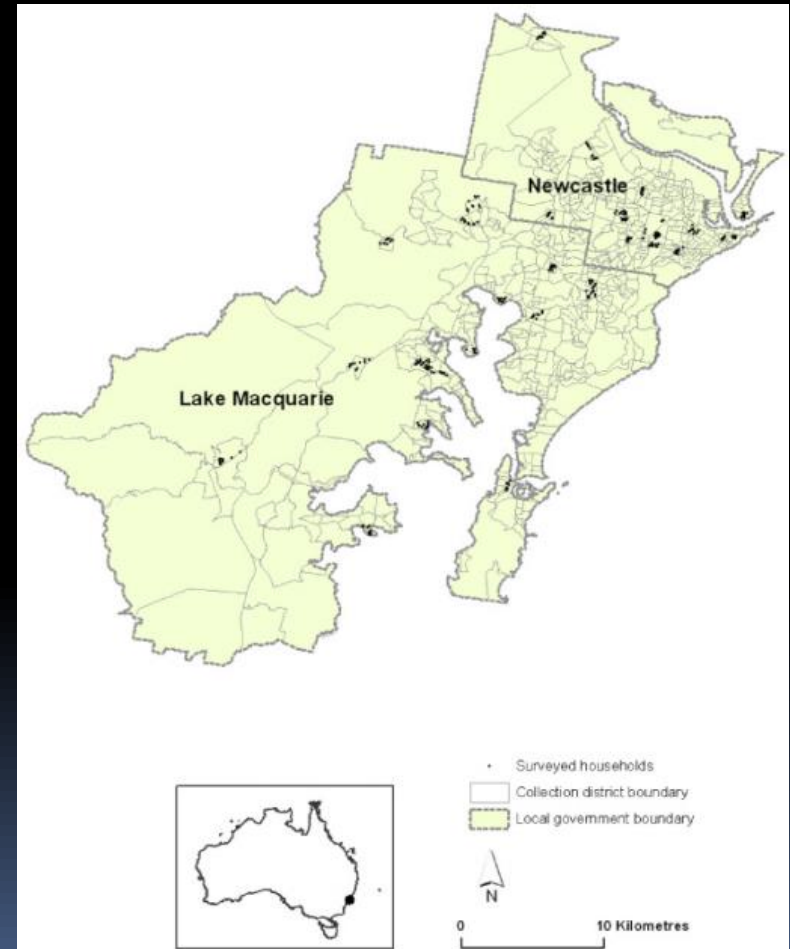


CAPAC

- ~ 150 patients admitted at any time
- < 10% aged < 65 years
- Virtual wards
 - E.g. HITH: Cellulitis; Anticoagulation
 - HAH
- Levels of dependency
- Risk
- Discharge planning is important


HEALTHY AT HOME

- Geography
 - 4 x ACAT Areas
- Demographic
 - Population of ~ 75,000 of total population ~ 500,000 are aged 65 years and older
- Virtual HAH Ward:
 - 35 to 45 patients at any one time



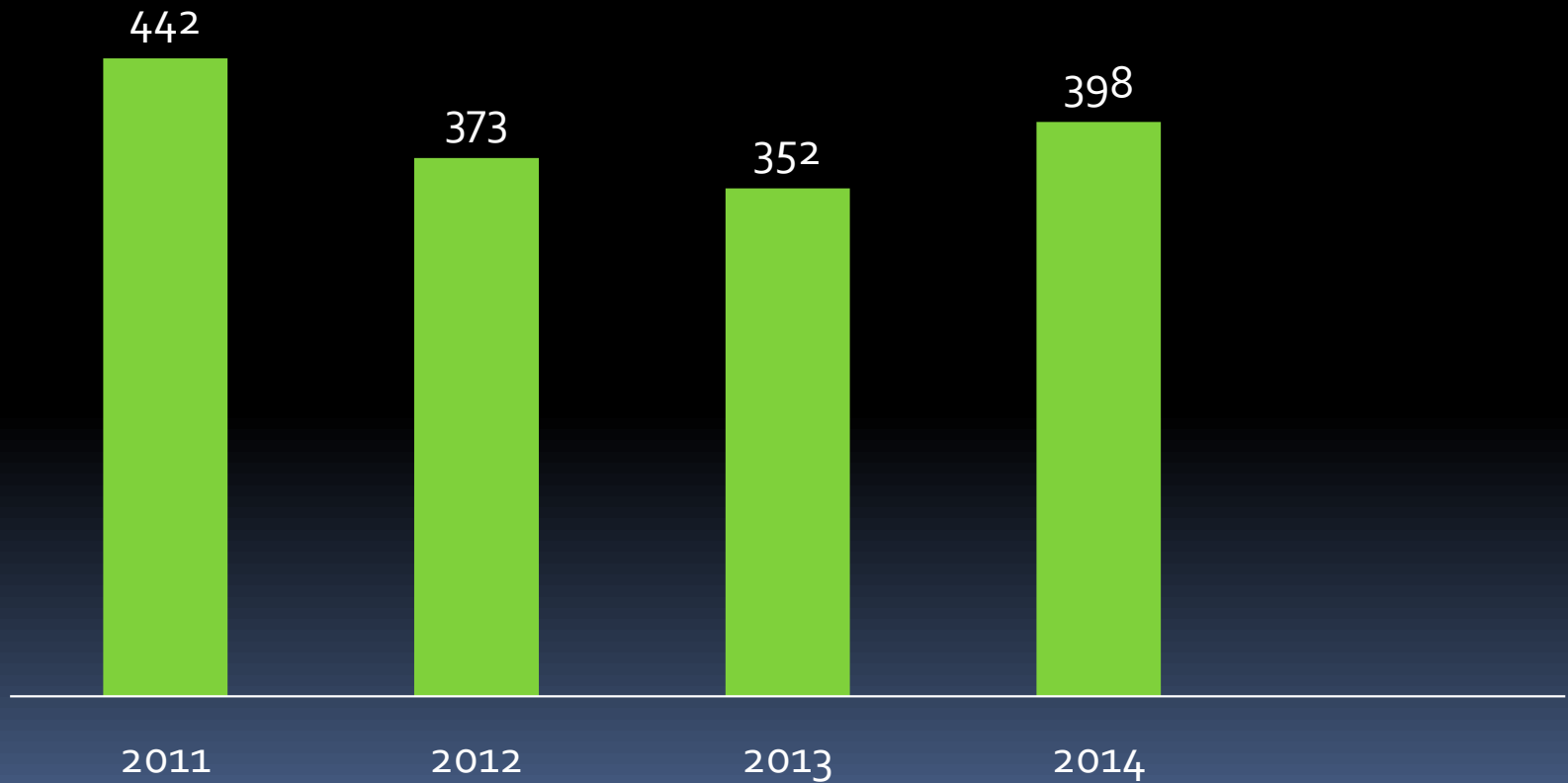


Referral criteria for Healthy at Home

- Aged ≥ 65 years
 - Aged ≥ 50 years if ATSIC
 - Live in the Newcastle or Lake Macquarie Local Government Areas
 - Judged to be at risk of hospitalisation
 - The HAH Paradox
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Referrals to Healthy at Home

Referrals, n = 1565

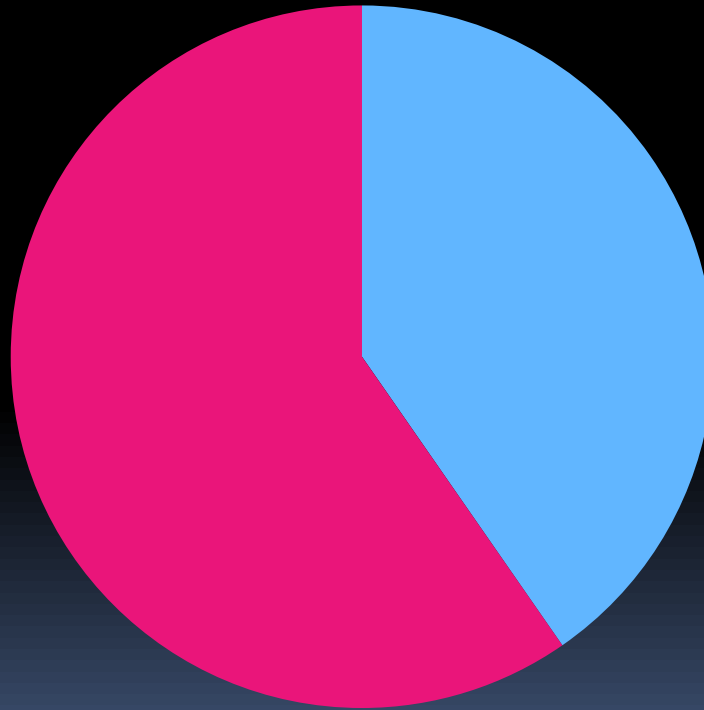


Healthy at Home Program

- Multidisciplinary team
- Integrated model: nurses, allied health, medical
- Economy of scale with TACP
- Collaborative model with primary care practitioners, ACAT, dementia support services
- Program Manager
- Nurses
- Physiotherapists
- Occupational Therapists
- Social Worker
- Dietician
- Geriatrician
- RMO

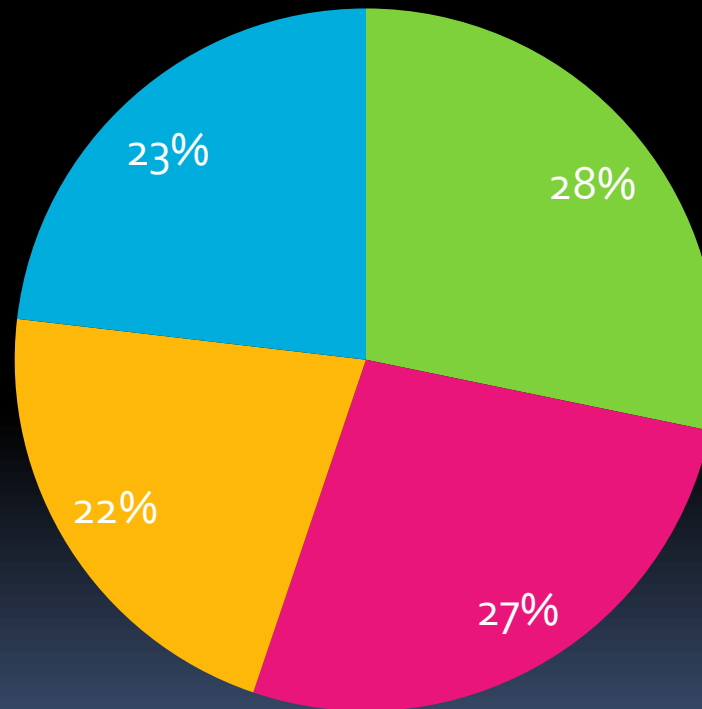
Gender: Males = 190; Females = 281

■ Males ■ Females

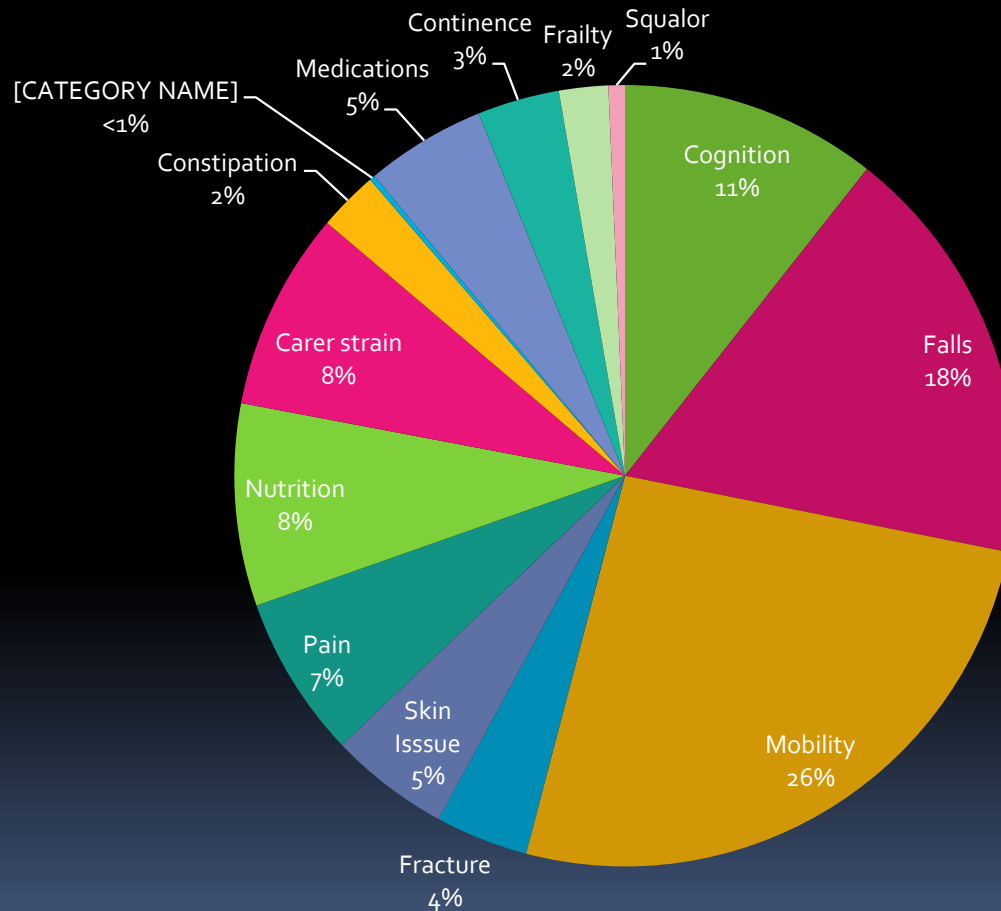


HAH covers four ACAT areas

■ Eastlakes ■ Newcastle East ■ Newcastle West ■ Westlakes



Referrals to HAH



Review of referrals


- 1485 referrals over 3 years
- 270 (21%) closed due to hospitalisation
- Assumptions for estimate of benefit:
 - Average length of hospitalisation for people aged 65 to 74 years is 7.2 days
 - Average cost per hospital admission (2008 – 2009)
= \$4471.00

Discharge due to Admission: ~ 21% (Range 17 – 25%)

1/09 – 12/11	100% admitted	50% admitted	21% admitted
Admissions	1485	743	270
Bed days	10692	5350	1944
Cost over 3 years @ \$4471/admission	\$6,639,435	\$3,321,953	\$1,207,107
Cost per year	\$2,213,145	\$1,107,318	\$402,390
Inpatient bed days avoided over 3 years = 5350 – 8748 bed days			
Inpatient bed days avoided over 1 year = 1783 – 2916 bed days			
Cost benefit per year = \$1,107,318 to \$1,810,755			
Net gain per year \$607,318 to \$1,310,755			




Advantages of Healthy at Home

- Multidisciplinary team
 - Review the person in the reality of their home environment over time
 - Warts, clutter, squalor and all
 - Observation of family dynamics over time
 - Tolerance for difficult environments and complex social dynamics
 - Timeframe
 - Liaison with service providers
 - ACAT, Community Options, Compacts ...
- 



Issues relating to hospital avoidance

- Triage
 - Is the person suitable for the program?
 - Should the person be in hospital?
 - Clinical assessment of a person in their home can be challenging e.g. access to equipment, nothing is at the right height, animals ...
 - Access to information and information gathering
 - Access to investigations, support in the community
 - Can be less accessible: Time, transport
 - Complex networks of collaboration and communication
 - Carers, GPs, other community health services, Supportive services, hospital personnel
 - Need for ongoing risk benefit analysis
- 

The undifferentiated referral

- no plan upfront

- Need a simple, systematic approach
 - Can be used within a limited resource
 - Efficient
 - Effective
 - Evidence based
 - Age appropriate
 - Acceptable to the person, their carers
 - Supports the work of the multidisciplinary team






PRINCIPLES UNDERLYING THE APPROACH




Older people

- Functional age is more important than chronological age
 - Need to take into account changes in physiology due to ageing
 - In context:
 - Accumulation of comorbidity & disability over a lifetime
 - Social and environmental challenges
 - Manifestations of underlying illness can be subtle
 - Presentations often occur in syndromes
 - Falls
 - Confusion
 - Not coping
 - The question is WHY???
- 



The presentation

- Presentations may be in a social context
 - Stressed carer
 - Unusual behaviour
 - Services up in arms
 - Everything out of control
 - May be many judgements
 - Tendency to attribute problems to old age, senility
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Functional age

- Increased heterogeneity between individuals
- Function (and QOL) are much more important than chronological age



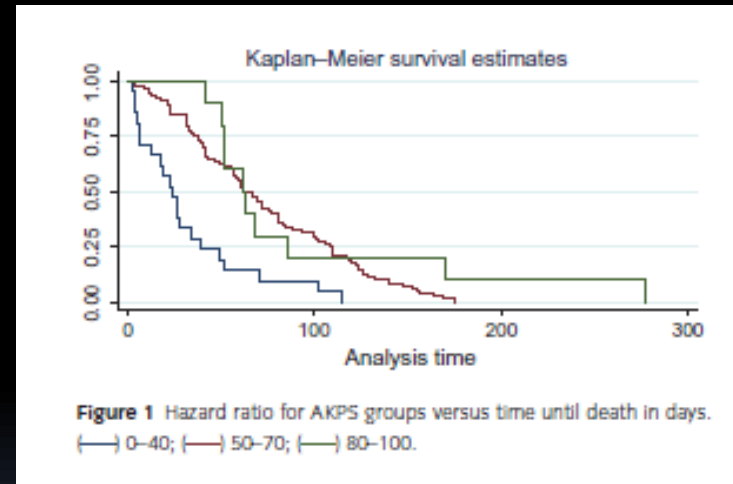
Karnovsky Performance Scale (KPS) is a simple validated tool

100%	Normal, no evidence of disease
90	Able to perform normal activity with only minor symptoms
80	Normal activity with effort, some symptoms
70	Able to care for self but unable to do normal activities
60	Requires occasional assistance, cares for most needs
50	Requires considerable assistance
40	Disabled, requires special assistance
30	Severely disabled
20	Very sick, requires active supportive treatment
10%	Moribund

Prognosis using KPS

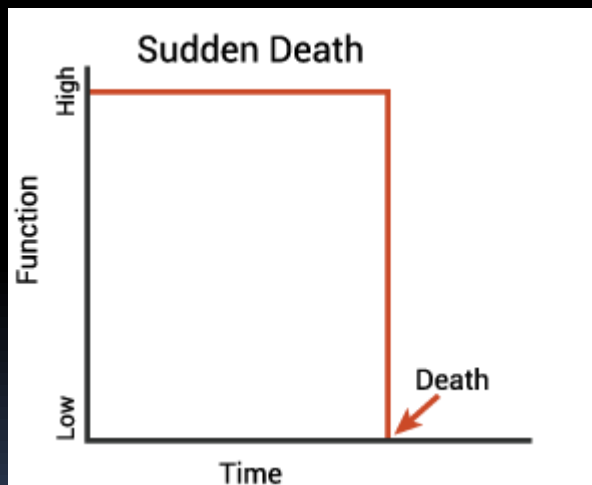
Chapman et al. IMJ 2012

- Older population
- Community dwelling
- > 65 years
- Australian data

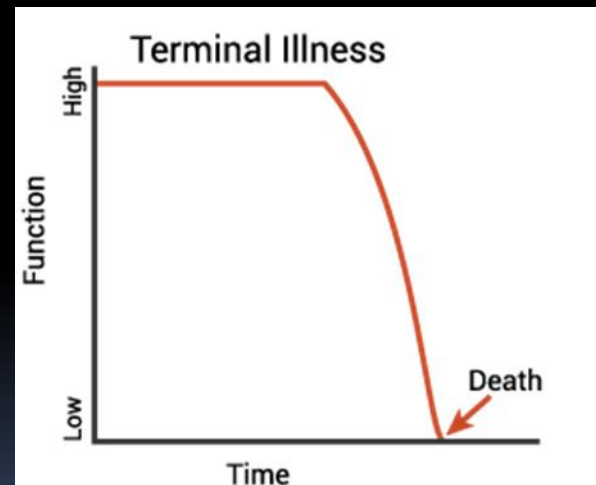


Disease trajectories

Sudden death

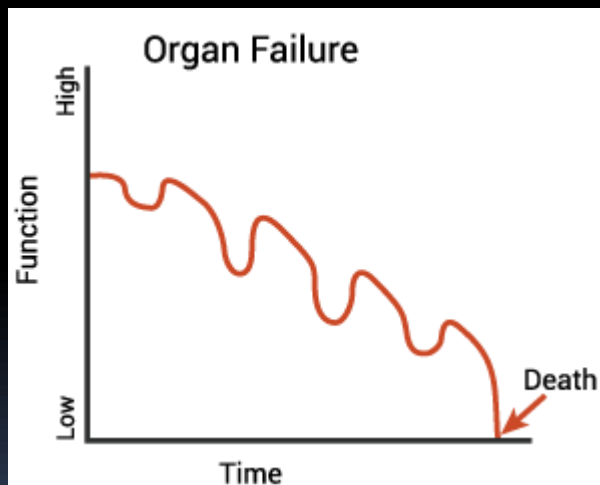


Deterioration over a relatively short time, e.g. UTI with delirium, fall and # NOF, malignancy

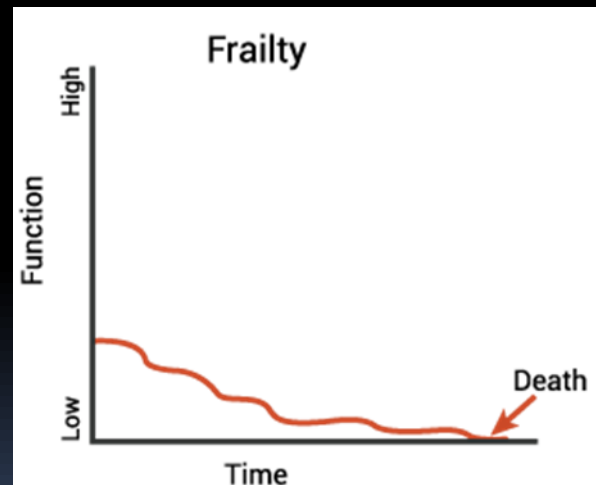


Disease trajectories cont.

Organ failure: Repeated acute episodes of deterioration which may lead to death, but mostly don't
e.g. COPD, CCF



Chronic complex illness with a very slow deterioration, decline
e.g. dementia




Importance of the collaborative history

- Generally older people have a past
 - Medical records and databases
 - CAP
 - DMR
 - CHIME – Community services, ACAT, MH
 - GP Databases
 - Over 75 assessments
 - Clinician letters
 - Family, carers or neighbours
 - Service providers



Challenges to the evaluation of older people

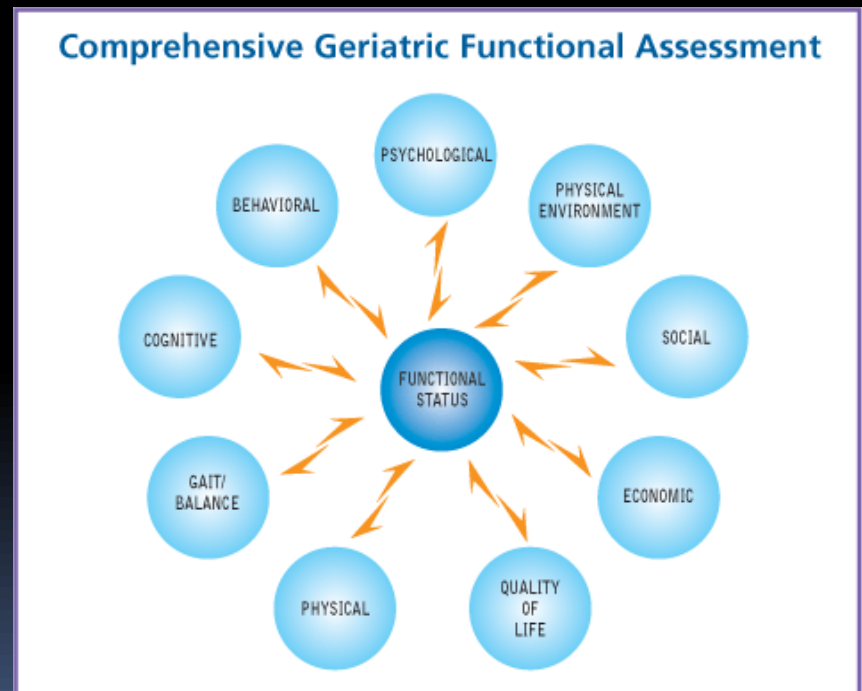
- Takes longer:
 - History taking
 - Physical examination
 - Polypharmacy
 - Background issues
 - Multiple disorders co-exist
 - Pre-existing disability and dependence
 - Carer issues/social isolation
 - Environmental
- 

Approach to assessment

Traditional medical model


- Take a history
- Examine the patient
- Make a plan

Comprehensive geriatric assessment






Comprehensive Geriatric Assessment

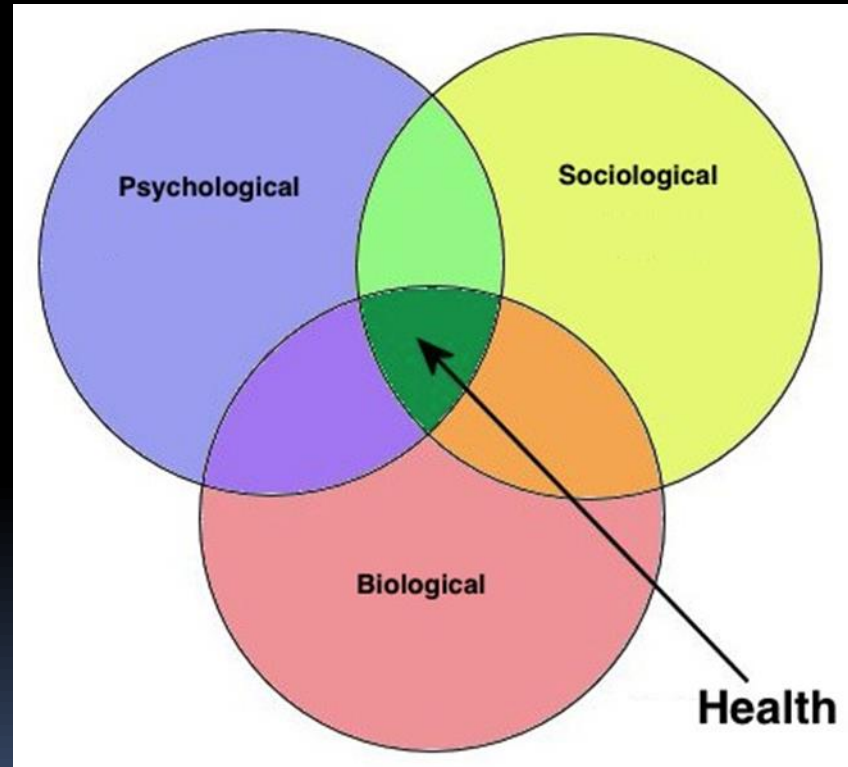
- Recognises that the health problems of older people
 - Often complex
 - An older person has adapted to physiological, psychological and social stressors over their lifetime
 - Requires consideration based on the biopsychosocial model of health, i.e., an individual's medical and psychological issues arise in a social context of differing supports and stressors
- 




Trajectory


- What was your patient like before?
 - i.e. Premorbid function
 - Where they are on life's trajectory
 - What is your patient like now? WHY?
 - How good can they get?
 - Ask your self the Surprise question
 - Would I be surprised if my patient died in the next 6 to 12 months?
- 

Develop a problem list using the biopsychosocial model of health






Develop a Problem List using the biopsychosocial model of health

- What is going on in:
 - Biological domain
 - New process
 - Context of comorbidity and accumulation of disability
 - Psychological domain
 - Depression
 - Delirium
 - Dementia
 - Grief and bereavement. Loss.
 - Social domain
 - Carer issues
 - Social isolation
 - Include environment
- 



ASK THE WHY QUESTION

- Arises when someone's clinical course does not reflect the known course of the illness
 - Is this because something else is going on or is it an unusual manifestation of the disease?
 - Is this an expected or an unexpected deterioration?
- 





The next question

- Can and should you do for something about the problem?
- Does the presenting problem arise from:
 - the life limiting illness
 - the complications of treatment
 - exacerbation of a known inter-current problem
 - a totally unrelated problem presenting for the first time
- Is the problem reversible or not?




Advanced Care Planning

- What are the patient's wishes under these circumstances?
 - If the patient is not able to provide guidance currently, what has been their previous expressed wished?
 - Who is the Person Responsible or surrogate decision maker if the patient is unable to tell us what they wish
- 



Then consider what needs to be done:


- Now
 - In 1 to 2 weeks
 - In a month
 - In the longer term
- 

Back to the HAH Model






TRIAGE

- Referral and Information Centre
 - Consent
 - All referrals reviewed by
 - Program manager
 - Geriatrician
- 




Initial assessment: Registered Nurse

- Existing information
 - CAP
 - GP
 - Chime
 - History
 - Collaborative history
 - Examination
 - Physical , Social and Cognitive Function
 - Environment
 - Investigations: Bloods; UA/MSU; other
- 



Ongoing assessment


- Nurses and therapists
 - Medical review
 - GPs
 - Geriatrician
 - Virtual ward rounds weekly
 - MDT meeting review at 4 weeks
 - Discharge planning
- 

Case study: Janice





Case Study: Janice

- Referral from GP
 - “Sudden onset of osteoarthritis in both knees causing rapid deterioration of mobility. Increased pain causing increased anxiety and escalation of cognitive impairment. Client has stress incontinence with frequency at night and also decreased appetite. GP had given IA cortisone. Husband is primary carer.”
- 

Further information on referral


- PMHx: Cognitive impairment, severe OA knees; L4/5 discectomy; GORD; urinary stress incontinence
- Social: Supportive husband and family
- Living arrangements: DOH unit on third floor of block of units. No lift. Daughter lives upstairs
- Mobility: 4WW
- Cognition: Strong family Hx dementia, STML, not diagnosed

Janice: Problem list following initial assessment, initial investigations, & MDT

Domain	Issue	Plan
Physical	Poorly controlled pain Mobility Falls risk Access – stairs Symmetrical joint aches & pains, proximal weakness, stiff improving with exercise. ESR 66, CRP 30 Severe Vitamin D deficiency < 15 KPS 50% Fried Frailty Criteria 5/5 = Frail	Analgesia, monitor response OT Physio Geriatrician review Investigate for possible rheumatological disorder XR hands, knees and feet CT Brain Replace Vit D
Psychological	? Delirium ? Dementia: MMSE = 16/30, Recall = 0/3 ? Depression	Serial CAM IQCODE, CBI-R Chase previous neuropsychological review
Social	Carer strain No current services or access to respite care Environment challenge - stairs	ComPACK ACAT ? Respite DOH DAS/CDN?




Janice: Progress


- Dx
 - Polymyalgia Rheumatica
 - Severe Vitamin D deficiency
 - Mixed Vascular and Alzheimer's Dementia
 - Carer strain
 - Rx
 - Prednisolone
 - Vitamin D
 - Donepezil; DAS; CDN; Socialisation
 - Services
- 

Janice: 1 year later

- Remains on low dose prednisone
- Has gained weight
- Janice is mobile, can access the stairs
- They remain living in their preferred location on the 3rd floor
- Janice and Charles are enjoying a good QOL
- Supportive services
- MMSE 18/30
- KPS 60 to 70%
- Fried Frailty Criteria 2/5 = Pre-Frail
- No hospitalisations



Development a systematic approach to the assessment of a deteriorating older person in the community

- Referrals can be
 - Undifferentiated with no plan upfront
 - Complex medical, environmental and social issues
 - Need to identify people who are safe to remain in the community or who need to go to hospital
 - Need to use available resources efficiently and effectively
- 

A systematic approach is useful

- Functional age is more important than chronological age
- Trajectory is important:
 - What was this person like before?
 - What are they like now and why?
 - Is there potential for reversibility? i.e. How good can they get?
- Constructing a problem list based on the biopsychosocial model of health is a useful approach in the context of complexity

