Are we doing harm to our patients?

Importance of motivation, support and consistent messages for falls prevention

Part 2

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Reasons to focus on frailty as a long term condition

• Falls are most obvious symptom
• Only half receive effective health care interventions
• Risk of significant harm to patients with frailty by health interventions
  – starting a new drug
  – going to emergency department and being hospitalised
  – having elective surgery
Frailty and Length of stay in orthopaedic unit
Manju Krishnan et al. Age Ageing 2014;43:122-126

[Diagram showing mean length of stay in days for different groups labeled as Low, Intermed., and High for Acute LOS and Total LOS]
meet Thomas Sharkey

Age 75, Independent with cane, lives with his wife

Crianlarich (58 miles to nearest hospital)

Fell and broke his hip

Spent 2 months in hospital

Left with left leg hip and knee contracture, wheelchair bound
Are we doing harm to older patients?

- On average patients are in an **upright** position for only 70 minutes per day

- Stroke Patients in a **rehabilitation ward** spent only 8.3% of their day in an upright position

- Are we allowing the deconditioning of patients and residents to reach epidemic proportions?

Barber (2014) *JAPA*; Egerton T et al. (2006) *Hong Kong Physio J*
Skelton (2014) *Agility* (CSP); Grant et al (2010) *JAPA*
Hospital harm

• Hospital admission in past 12 months single most predictive risk for functional decline in community dwelling older people (fall of 10 points on the Barthel Index and/or 2 instrumental activities of the Lawton Index)

• Rates of functional decline after hospital discharge range from 10% to 50%.

Arnaua et al. 2016 Arch Geront Geriat
Buurman et al. Plos One 2011;
Helvik et al. Arch Geront Geriat 2013)
Hospital harm

• Approximately 30% of adults aged 70 and above who are hospitalised for medical illness are discharged with an ADL disability that they did not have before the onset of the acute illness

Gill et al. JAMA 2010
Comparisons of functional assessment at baseline and day 2 of hospitalization in 71 patients over the age of 74 years demonstrated declining ability in mobility, transfer, toileting, feeding, and grooming.

Use of a walker was associated with a 2.8 times increased risk for decline in ADL function by the time of hospital discharge.

Shelton et al. Am J Manag Care 2000
Which patients?

• 47% of patients > 60 years are at risk for functional decline during hospitalization
  – presence of four or more risk factors, including home care, history of falls, polypharmacy, weight loss (more than one kilogram in the past month), and psychiatric symptoms (anxiety, depression)
  – i.e fallers!!

  de Vos et al. BMC Geriatrics 2012
Table 1. Effects of Bed Rest

<table>
<thead>
<tr>
<th>System</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>↓ Stroke volume, ↓ cardiac output, orthostatic hypotension</td>
</tr>
<tr>
<td>Respiratory</td>
<td>↓ Respiratory excursion, ↓ oxygen uptake, ↑ potential for atelectasis</td>
</tr>
<tr>
<td>Muscles</td>
<td>↓ Muscle strength, ↓ muscle blood flow</td>
</tr>
<tr>
<td>Bone</td>
<td>↑ Bone loss, ↓ bone density</td>
</tr>
<tr>
<td>GI</td>
<td>Malnutrition, anorexia, constipation</td>
</tr>
<tr>
<td>GU</td>
<td>Incontinence</td>
</tr>
<tr>
<td>Skin</td>
<td>Sheering force, potential for skin breakdown</td>
</tr>
<tr>
<td>Psychological</td>
<td>Social isolation, anxiety, depression, disorientation</td>
</tr>
</tbody>
</table>

What’s happening?

- Flexion contracture
- Cartilage degeneration
- Fusion
- Synovial atrophy
- Fibrofatty connective tissue infiltration
- Osteoarthritis
- Bone loss / muscle loss
Why?

- Patients spent most of the time in bed – 83% of hospital stay & 13% sitting by the side of the bed!
- Lack of optimal treatment in the hospital, inadequate rehabilitation, and community support after discharge
- Optimizing physical activity of patients was a low priority for the nurses with patient safety taking precedence
- Some felt movement was unsafe without physiotherapy input
- No mobility action plans

Krumholz, NEJM 2013; Resnick et al. Inter J Ortho Trauma Nurs 2015; Brown et al. JAGS 2009
Why?

• Nursing staff may encourage sedentary behaviour as a way in which to prevent falls
• Given that up to 10% of older adults experience a fall during hospitalisation this concern is well founded....but
• activity restriction may instead result in increased fall risk by contributing to deconditioning and functional loss (revolving door!)

McCarter–Bayer et al., J Geront Nurs 2005
(Friedman et al., JAGS 2002).
Immobility effects on psychological health

- Depression
- Loss of control
- Loss of motivation
- Feeling of helplessness

- This is normal? So why should I move when I go home?
Prolonged bed rest in hospital

- Leads to a reduction in voluntary physical activity after bed rest - percentage of time spent inactive increased

- Increases fear of falling

Edmonds & Smith, Age Ageing 2014
85% of people are worried about fracturing again.

1 in 3 people who have fractured have difficulty with domestic chores.

1 in 2 people who have experienced fractures have given up sport or exercise or reduced what they do.

1 in 3 people who have fractured are seeing friends and relatives less than they used to.

42% of people said their osteoporosis has made them feel socially isolated.

‘I have lost confidence in myself and feel that I’m a burden on others.’
Table Task

• Stand up 😊

• Speak to the person next to your left side

• One idea to help older adults mobilize in residential settings more often?
Function Focused Care

Table 1  Function Focused Care for Acute Care (FFC-AC). Function Focused Care for Acute Care exposes staff nurses and patients to the following three components. Although initiated sequentially they are provided simultaneously throughout the implementation process.

<table>
<thead>
<tr>
<th>Components of the intervention</th>
<th>Description of Function Focused Care components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component I: Education and Training</td>
<td>- Education and training included two classes done a week apart. The classes provided an overview of Function Focused Care and how to evaluate and establish function focused care goals for patients. The second class provided information about motivation among older adults and techniques to optimize motivation and safely engage older adults in function and physical activity while hospitalized.</td>
</tr>
<tr>
<td></td>
<td>- Classes were held for approximately 20 minutes at times that were convenient for the nursing staff across all shifts and schedules.</td>
</tr>
<tr>
<td>Component II: Environmental and Policy Assessment</td>
<td>- The Research Function Focused Care Nurse worked with identified unit champion(s) to complete an assessment of the Environment and Policies.</td>
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<td>- Findings from the assessments were reviewed with appropriate individuals within the administration so that interventions could be implemented to optimize the environment and alter policies to facilitate functional and physical activity among patients.</td>
</tr>
<tr>
<td>Component III: Ongoing Training and Motivation of Nurses</td>
<td>- Following education of nurses, the Research FFC Nurse mentored champions and staff nurses to integrate FFC into routine patient care. This included oversight during patient admissions to help evaluate function and physical activity, establish patient goals and engage the patients in functional and physical activity during the course of the admission.</td>
</tr>
<tr>
<td></td>
<td>- Nurses who engaged in function focused care activities with patients were recognized in contests and received positive reinforcement for these activities.</td>
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Boltz et al. Geriatr Nurs 2012
Function Focused Care (FFC)

• FFC measured by the Restorative Care Behavior Checklist - a continuously scaled observed measure of patient involvement in activities associated with functional independence and physical activity.

• When nurses encouraged patients to be physically active there was less functional decline than found among patients not exposed to this type of encouragement.

Boltz et al. Geriatr Nurs 2012
## Prevention and Reactivation Care Program (PReCaP)

<table>
<thead>
<tr>
<th>Prevention and Reactivation Care Program</th>
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<tbody>
<tr>
<td><strong>Hospital care</strong></td>
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<tr>
<td>Identification of vulnerable elderly patient within 48 h Assessment of risk factors for functional decline Start reactivation treatment within 48 h Clinical geriatrician Geriatric nurses</td>
</tr>
<tr>
<td><strong>Hospital replacement care</strong></td>
</tr>
<tr>
<td>Prevention and Reactivation Centre Part of treatment plan Continuation of (in hospital started) treatment focused on six domains of functional status Availability of (para)medical disciplines</td>
</tr>
<tr>
<td><strong>Home care</strong></td>
</tr>
<tr>
<td>Geriatric care chain agreements with general practitioner and home care Case management with geriatric expertise</td>
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<table>
<thead>
<tr>
<th>Multidisciplinary approach</th>
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<tbody>
<tr>
<td>Weekly multidisciplinary team meeting Treatment and care focused on medical condition and functioning in six domains (i.e. physical, mental, social, financial, home, and care) Goal-oriented approach</td>
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<table>
<thead>
<tr>
<th>Patient</th>
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<tbody>
<tr>
<td>Patient oriented integrated treatment plan Discussion treatment with patient during entire treatment path Problem solving</td>
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<table>
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<tr>
<th>Informal caregiver</th>
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<tbody>
<tr>
<td>Part of treatment plan</td>
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</table>

*De Vos et al. BMC Geriatrics 2012*
Staircase to Independence

PROGRESSIVE MOBILIZATION

A slow long climb

Stair Climbing

Walking

Standing

Transferring

Sitting

Bed Activities

With thanks to Coleen Campbell
Achieving activity guidelines

Increased benefits

Meeting the guidelines

Increased physical activity

Sedentary

Moving

Moving More Often

Moving regularly and frequently

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Motivation to exercise – consistent messaging from everyone!

“Man does not cease to play because he grows old.

Man grows old because he ceases to play”

George Bernard Shaw
Support and Encouragement

A programme is more than a series of exercises

- Examples from successful falls and exercise programmes
- A range of strategies that support participants eg.
  - Goal setting and self monitoring
  - Overcoming obstacles and difficulties
  - Educating the participant
  - Highlighting successes
  - Providing individual and group support
Not considered priority for home rehabilitation -‘would not walk again’

Health system wanted him to move to a care home

Family refused, purchased a hoist, got him out to the pub occasionally

I visited and ‘prescribed’ exercise – his daughter was ‘the instructor’
“Life in your years”

- requires more than just stamina and energy, requires strength and balance to feel confident in all other activities you go on to do.... Its never too late!
First we worked on his contractures
Took 2 months but he was able to straighten his leg!

Worked on ankle, thigh and upper body strength – resistance bands and ankle weight – all seated
Took 3 months

They don’t need the hoist anymore!

Work in progress!!
Successes:
Someone to motivate him and give him hope and some control over his situation (self-efficacy & autonomy)

Someone with him everyday to remind him to regularly move! (significant others)

Me visiting every few weeks to progress the exercises and support his daughter (achievable & progressive)
Consistent Messaging – why balance training?

• If you avoid activities that make you feel ‘wobbly’ you will get more ‘wobbly’
• You can only improve balance if you do things that make you feel ‘wobbly’
  – so that your brain and body practice at keeping you upright
• Practice makes perfect
  – Standing on one leg for 3 mins per day for 6 months not only improves balance but also bone density at the hip (if you are over 70!)
Consistent Messaging – why do we need strength?

- We need strong muscles to
  - Maintain independence
  - Play with our grandchildren
  - Care for someone
  - Fight infection
  - Protect our joints and bones
  - Protect our brains and memory
  - Stay warm

- Pain is NEVER good but muscle discomfort after exercise is 😊

- Need to continue….. Use it or lose it!

Acknowledgment: John Sheerin
Older people as role models and mentors – ‘someone like me’

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Functional Fitness MOTs

- For older people
- Awareness raising on components of fitness
- Comparison to peers in a variety of functional tests and practical advice

Using the Functional Fitness MOT with older people
A one day practical seminar for physical activity, exercise and active ageing professionals
Keep on Walking..

Put strength and balance ‘on the map’ with walk leaders

A simple guide to strength and balance for you to...

...KEEP ON WALKING

Calf Raises with Support:

Stand tall facing a bench or table.
Hold on and look straight ahead.
Position your feet hip width apart. Slowly and with control come up onto your toes and lower your heels back down.
Repeat this exercise 5 times, building up to 10 or more.
This exercise strengthens your calf muscles and toe joints. It helps you manage everyday activities such as hanging out washing or reaching up into high cupboards.

WALK YOUR WAY TO BETTER STRENGTH AND BALANCE

A set of simple exercises for older adults who want to live life to the full!
We need it to be **socially and culturally normal** for older people to move more often.

We all need to **believe that older people benefit** from moving more often.

**Older people (& family/gatekeepers) need to believe** they will benefit from moving more often.

We need to stop wrapping older people up in cotton wool.

We need to involve older people who have benefitted from rehabilitation to help us empower other older people.
Physical Activity Literacy Model

“the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life”

Highlighted in the Canadian Sport for Life Long-term Development Model
‘I’ Statements for Older People

• I am recognised for what I can do rather than making assumptions about what I cannot

• I am supported to be independent

• I can do activities that are important to me

• My family are recognised as being key to my independence and quality of life

BGS, Fit for Frailty, 2014
• I can maintain social contact as much as I want
• I can make my own decisions, with advice and support from family, friends or professionals if I want it
• I can build relationships with people who support me
• I can plan my care with people who work together to understand me and my carer(s), allow me control, and bring together services to achieve the outcomes important to me
• Taken together, my care and support help me live the life I want to the best of my ability
Scaling up to reduce frailty and falls?

• All ‘contacts’ with older people need to reinforce the move more often message
  – Move more often and improve your strength and balance
  – Lets stop compounding the problem by not taking every opportunity (eg. Hospital wards and care homes!)

• Raise awareness of physical activity guidelines
  – Amongst professionals and older people!

• Increase opportunities for primary prevention
  – Effective improvement of strength and balance in all settings
  – Map out what’s there and where people can access this
Scaling up to reduce frailty and falls?

- Work effectively with those in transition - Frailty and falls
  - Safe and effective exercise for those in transition and those who are frail
  - Transitions and progressions
  - Qualified trainers
- Change cultural ‘norms’! – sit less, move more
- Involve older people in engaging other older people
Conclusions

• To reduce falls – work hard, feel challenged, progress in intensity for at least 50 hours, keep going for life!

• Ineffective dose and duration may mean increasing risk through improving confidence but not ability for the frailest

• Prolonged periods of sitting are bad – stand up as regularly as possible (cheat sit to stand exercises!)

• Provide a consistent message (stand up, be steady) and encourage all who come into contact with an older person to do the same
Questions?

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http://www.gcu.ac.uk/seniorsusp/  http://profound.eu.com/