MOVE iT/MOVE ON
Mobilization of Vulnerable Elders and Local Implementation at SHSC

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RGP Workshop

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Objectives

- To review the rationale behind a provincial early mobilization strategy
- To provide an overview of the implementation and identify the QI and KT principles on which it is built
- Describe the experience and unique features of implementation at SHSC
RGP Senior Friendly Hospital Framework

- Processes of Care
- Emotional & Behavioural Environment
- Ethics in Clinical Care & Research
- Organizational Support
- Physical Environment

What we do | How | Who | Why | Where
• Describes existing state of SFH care in Ontario based on self reports from 155 hospitals
• Identifies promising practices
• Recommends priority areas for action
Functional Decline
- Implement interprofessional early mobilization protocols across hospital departments to optimize physical function

Delirium
- Implement interprofessional delirium screening, prevention, and management protocols across hospital departments to optimize cognitive function

Transitions In Care
- Implement practices and developing partnerships that promote interorganizational collaboration with community and post-acute services
Alignment and momentum

Patient & Care Team

Hospital Priorities

LHIN improvement plans HSAA

LHIN priorities

Provincial Senior Friendly Hospital Strategy

Provincial Improvement Priorities

Sustain

Accreditation Canada
A web of hospital-acquired complications and inter-related risk factors

Risk Factors
- Foley
- Dehydration
- Poor nutrition
- Underlying cognitive impairment
- Comorbidities
- Polypharmacy

Iatrogenesis
- Complications
- Safety Issues
- Processes of Care
- Quality Improvement
- Psychotropic drugs
- Falls / Injuries
- Deconditioning
- Pressure ulcers
- Mortality
- Human Resources
- Increased LOS
- ALC/LTCH

Solutions
- Early Mobilization
- Sleep Management
- Optimizing Hydration / Nutrition
- Managing Challenging Behaviors
- Sensory Optimization Social Stim’n
Complications of Immobility

**Respiratory System**
- Decreased lung volume
- Pooling of mucous
- Cilia less effective
- Decreased oxygen saturation
- Aspiration
- Atelectasis

**Gastrointestinal System**
- Reflux
- Loss of appetite
- Decreased peristalsis
- Constipation

**Musculoskeletal System**
- Weakness
- Muscle atrophy
- Loss of muscle strength by 3-5%
- Calcium loss from bones
- Increased risk of falls due to weakness

**Psychological**
- Anxiety
- Depression
- Sensory deprivation
- Learned helplessness
- Delirium

**Circulatory System**
- Loss of plasma volume
- Loss of orthostatic compensation
- Increased heart rate
- Development of DVT

**Genitourinary System**
- Incomplete bladder emptying
- Formation of calculi in kidneys and infection
"...rest in bed is anatomically, physiologically and psychologically unsound. Look at a patient lying long in bed. What a pathetic picture he makes! The blood clotting in his veins, the lime draining from his bones, the scybala stacking up in his colon, the flesh rotting from his seat, the urine leaking from his distended bladder and the spirit evaporating from his soul."
Brown, C et al JAGS 2009;57:1660
- 83% of measured hospital stay spent in bed

- Median time spent standing or walking = 43 minutes or 3% of day

Brown, C et al JAGS 2009;57:1660
Baseline Data

% in bed unit 1

Time of Observation = TOTAL

% in bed Unit 2

Time of Observation = TOTAL
### Selected RCT evidence for early mobilization

<table>
<thead>
<tr>
<th>Surgical Dx</th>
<th>Many RCTs</th>
</tr>
</thead>
</table>
| Pneumonia   | ↓ LOS 5.8 vs. 6.9 days  
(Mundy Chest 2003;124:883-889) |
| Stroke      | ↑ Barthel Index at 3 months  
Earlier return to walking 3.5 vs. 7 days P=0.03  
(Cumming TB Stroke 2011; 42 :153) |
| Cochrane Review (2009) | ↑ Discharge to home, NNT=16  
↓ LOS by 1.08 days (-1.93 to -0.22) |
Barrier assessment

- **Family**
  - Don’t want patient to fall
  - “Better to rest”

- **Patient related**
  - Doesn’t want to
  - Too sick
  - Confused

- **Corporate**
  - Staffing ratio
  - Competing priorities

- **Physical environment**
  - Clutter in hallway
  - Lack of assistive devices
  - No where to walk
  - No where to sit

- **Treatment**
  - Negative attitude
  - Not my job
  - No time
  - Lack of confidence

- **Staff**
  - IV/Catheter

**Patients are left in bed**
Overview of the implementation
Goals of intervention

1. Encourage mobilization three times a day
2. Mobilization should be progressive and scaled
3. Mobility assessments should be implemented within 24 hours of the decision to admit
4. Interprofessional team collaboration
Educational Interventions

- Interprofessional group education/in-service
- 1:1 knowledge-to-practice coaching
- Huddles
- Fairs
- Education days
- E-modules
Knowledge-to-practice coaching
**Early Mobilization Assessment Algorithm**

**Mobilization Assessment Algorithm**

- **Environment Check:**
  - Chair/wheelchair is set up beside the bed on patient’s stronger side (as applicable)
  - Chair is against a firm surface
  - Brakes are on the bed and the chair (if applicable)
  - Lines and tubes are positioned properly

- **Patient position/set-up:**
  - Patient is seated at the edge of the bed with 1/3 of patient’s thigh on bed surface
  - Bed height is high enough that patient’s hips are just above their knees with feet on the floor
  - Patient’s feet are hip-width apart and are behind their knees
  - Patient is wearing appropriate footwear to prevent slipping
  - Appropriate gait aid available (if necessary)
  - Considerant referral for cognitive, visual, perceptual and impaired AAO issues affecting mobility

- **Transfer to Chair:**
  - Have a firm hold on the patient – hands around patient’s buttocks, hips, or holding their hand
  - Avoid pulling up through patient’s shoulders
  - Block patient’s weaker leg (if applicable) while transferring to chair to avoid knees giving out

**Mobility Level A**

- Can they walk a short distance?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

**Mobility Level B**

- Can they stand? (with or without gait aid)
  - Independent
  - Supervision or 1 assist
  - 2+ assist

**Mobility Level C**

- Can they sit on all edge of bed?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they straighten 1 or both legs while sitting at edge of bed?
  - 2 legs
  - 1 leg
  - Try 1 person to assist to stand
  - Try 2 person to assist to stand

- Can they rise to sit?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they sit to rise?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they roll to sit?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they roll to lie?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they turn in bed?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they sit up on own?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they sit up with assistance?
  - Independent
  - Supervision or 1 assist
  - 2+ assist

- Can they sit on own?
  - Independent
  - Supervision or 1 assist
  - 2+ assist
Simplified Mobility Assessment Algorithm

1. Can they respond to verbal stimuli?
2. Can they roll side to side?
3. Can they sit at edge of bed?
4. Can they straighten one or both legs?
5. Can they stand?
6. Can they transfer to a chair?
7. Can they walk a short distance?

Mobility Level

C

Develop an individualized mobility care plan

B
A

moveON
Enabling Tools

Mobility Care Plan

<table>
<thead>
<tr>
<th>Mobility Level (A, B, C)</th>
<th>Staff Role</th>
<th>Volunteer Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Ambulates Independently</td>
<td>Ambulate 3x/day or more</td>
<td>Ambulate up to 1x/day</td>
</tr>
<tr>
<td>A2 Ambulates with assistance</td>
<td>Ambulate 3x/day or more with assist/gait aid if appropriate</td>
<td>Simple Exercises</td>
</tr>
<tr>
<td>B Bed to Chair Transfers</td>
<td>Ensure up to chair 3x/day</td>
<td>Simple Exercises</td>
</tr>
<tr>
<td>C Cannot stand to transfer</td>
<td>Encourage to participate in care</td>
<td>Active ROM/Daily stretching</td>
</tr>
</tbody>
</table>

Early Mobilization Assessment Algorithm

1. Can they bear weight on each leg?
2. Can they bear weight on each foot?
3. Can they walk on their heels?
4. Can they straighten one or both legs?
5. Can they stand?
6. Can they transfer to a chair?
7. Can they walk a short distance?

A Message for Patients and Families

Benefits of getting out of bed while in hospital

- **Skin**
  - Getting out of bed can help prevent bed sores
  - Improved skin
  - Improved sleep

- **Musculoskeletal**
  - Prevents loss of muscle tone

- **Lungs**
  - Improved breathing
  - Improved ability to cough up secretions
  - Improved ability to fight infections

- **Nutrition**
  - Improved appetite
  - Improved caloric intake

- **All-System**
  - Improved immune response
  - Increased mobility

Strategies

- Sit up for all your meals
- Sit up in a chair when you have visitors
- Walk around the unit either with help or if able to do so by yourself
- Do bed exercises on your own throughout the day

If you are not sure what you are safe to do, ask a member of your healthcare team.
Mobility Volunteer Program
MVP
New Support Partners
MVP supported Exercise Routines

Specially trained volunteers will remind and encourage the patient to do:

1. Bed/Chair Exercises
2. Ambulate

While providing social stimulation
**Arm Over and Out**
1. Sit up straight in a firm chair or, if necessary, lie on back as flat as is comfortable.
2. Hold arm straight out from side a

**Arm Lift**
1. Sit up straight in a firm chair or, if necessary, lie on back as flat as is comfortable.
2. Place an arm at side with palm down.
3. Keep elbow straight and slowly lift arm to shoulder

**Elbow Bends**
1. Sit up straight in a firm chair or, if necessary, lie on back as flat as is comfortable.
2. With elbow bent at 90 degrees, lift arm to shoulder
3. Keep arm as straight as possible.

**March on the Spot**
1. Lift your right leg, then your left leg.
2. March on the spot for up to 5 minutes

**Ankle Bends**
1. Sit up straight in a firm chair or, if necessary, lie on back as flat as is comfortable.
2. Bend the ankle as far as is comfortable to point toes up.
3. Slowly straighten ankle and then bend as far as is comfortable to point toes down.
4. Complete 5-10 repetitions. Repeat with other ankle.

**Heel Slides**
- At the start of your shift, connect with the MVP Unit Coordinator to develop your patient list
- Check with the nurse before seeing the patient
- Introduce yourself and your role
- Encourage the patient to participate
- Gently wake the patient up if they are sleeping
- Document appropriately in the mobility volunteer binder
- Consult with nurse or

---

**Do's**
- On isolation precautions
- Maintain your role

**Don’ts**
- Do not visit patients who are:
- or do exercises
- with nurse or
MVP Don’t’s

- MVP Volunteers do not see patients who are:
  - Palliative care or dying
  - On isolation precautions
  - Aggressive or violent
  - Unable to follow instructions
- Will NEVER feed a patient
- Will not physically support a patient to mobilize
  - If a patient requires more than a light touch of a hand ask the patient’s nurse or team leader
Physical Environment
Reducing Clutter
PCU Plan

Designated space for stretchers (up to 3)

Linen hampers

Storage room for wheelchairs, walkers

3 small linen carts

Vernacare supply cart

Crash Cart

Phlebotomy Cart
Providing Feedback
Unit chart audits

- Short loop feedback to staff
- Supplementary data that is patient-specific
- Includes measures related to documentation
Feedback to Units

Meeting the Standard 3X/day

- **baseline**
- **End of Intervention Period**

% of charts audited

<table>
<thead>
<tr>
<th>Unit</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>baseline</td>
<td>10</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>End of Intervention Period</td>
<td>90</td>
<td>80</td>
<td>90</td>
<td>80</td>
</tr>
</tbody>
</table>

**Your unit**
<table>
<thead>
<tr>
<th>Item</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Linen cart is stored in the recessed portion of the wall next to room D362]</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>No linen carts in the hallways</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Three small linen carts outside rooms D536, D551 and D526</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>No idle wheelchairs and walkers in hallways</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Phlebotomy cart is stored in front of servery near D519</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Crash cart is stored opposite room D561</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Maximum of three stretchers stored in the back end of the unit</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>No medical supply carts stored in the hallways</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Equipment awaiting repair (beds, wheelchairs, etc) are pushed down to Plant Operations &amp; Maintenance and not left in the hallways</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

= Yes
= No

29/02/2012
## Clinical Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients out of bed on visual audit</td>
<td>13%</td>
<td>44%</td>
</tr>
<tr>
<td>Falls / Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delirium Incidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge destination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interrupted time series

% in bed unit 1

% in bed

Pre Intervention period Post

Time

Intervention id

Pre Post

Per i o d

34

moveON
Is it feasible to mobilize frail older patients on medical units?
First step is to dangle

To Chair

Respiratory ICU
Intermountain Medical Center
Salt Lake City, Utah
Respiratory ICU
Intermountain Medical Center
Salt Lake City, Utah
Reference: “Helping hospitalized seniors get moving”

This article could very well have been the story of my father. My father is a W.V.1 vet. He served in the Canadian army in the Italian Campaign. He is 93 years of age. He suffers from dementia.

Your research is dead-on. There must be thousands of stories out there. If you should need specific data, we would be more than happy to assist. We so regret moving from Toronto. If Dad had met you in Sunnybrook, he would be home by now.

With tremendous respect,
Mobilization of patients is a good thing and we need to do more of it

Successful template for implementation

Supported by process and outcome indicators
- Positive changes in process of care
- Positive changes in interprofessional collaboration & teamwork
- Positive changes in unit culture
- Positive changes in physical environment / clutter

Senior friendly care is a continuous quality improvement strategy
Acknowledgements

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Mobilization of Vulnerable Elders in Toronto/Ontario

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