Promoting Mobility Among Acutely Ill Hospitalized Older Adults: From the Evidence to Practical Bedside Tips

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Outline

• Hospital-Associated Disability

• STRIDE: A Supervised Walking Program for Hospitalized Older Adults

• Promoting Mobility in the Hospital

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Hospital Associated Disability

• Loss of ability to complete 1 or more ADLs

• ADLs = Bathing, dressing, rising from bed or a chair, using the toilet, eating, or walking across a room

• 30-35% of patients ≥ 70 discharged with new ADL disability

Boyd et al. JAGS 2008
Gill et al. JAMA 2004
### Adverse Events Associated with Hospital Associated Disability

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Post-Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Falls</td>
<td>• Readmission</td>
</tr>
<tr>
<td>• Delirium</td>
<td>• Falls</td>
</tr>
<tr>
<td>• Aspiration</td>
<td>• Institutionalization</td>
</tr>
<tr>
<td>• Longer length of stay</td>
<td>• Death</td>
</tr>
<tr>
<td>• Discharge to skilled nursing facilities</td>
<td>30-50% recover to pre-illness function within 1 year</td>
</tr>
</tbody>
</table>

Functional Trajectories Across a Hospitalization

- Stable function 45%
- Hospital recovery 20%
- Hospital decline 12%
- Failed to recover 18%
- Pre- and hospital decline 5%
Risk Factors for Hospital-Associated Disability

**Low Functional Reserve**
- Advanced age
- Depression
- Cognitive dysfunction
- Difficulty walking
- ADL dependence

**Illness/Hospital Factors**
- Severity of acute illness
- Poor nutrition
- Polypharmacy
- Delirium
- Low mobility

Zisberg JAGS 2011
Covinsky et al. JAMA 2011
Immobility during Hospitalization

Culture of immobility

Negative physical effects

Adverse outcomes

Covinsky JAMA 2011 306(16); Kommuri Arch Med Res 2010 41(5); Zisberg JAGS 2011 59(2); Brown JAGS 2009 57(9); Murphy Arch Int Med 2011 171(3)
Not a newly recognized problem

THE EVIL SEQUELAE OF COMPLETE BED REST

WILLIAM DOCK, M.D.

LOS ANGELES

agent of disaster. The physician must always consider complete bed rest as a highly unphysiologic and definitely hazardous form of therapy, to be ordered only for specific indications and discontinued as early as possible.
Toward a Solution

• Walking can mitigate functional decline in hospitalized adults
  – Supervised walking reduced length of stay by 1 day
  – Participants in a walking program maintained community mobility 30 days after discharge

Mundy. Chest. 2003
STRIDE: A Supervised Walking Program for Hospitalized Older Adults

Objective: Optimize the physical function by increasing the amount of time spent walking during hospitalization

Key Program Elements

(1) Proactive, no baseline functional deficits required
(2) Early enrollment, ideally within 24 hours of admission
(3) Supervised walking, daily until discharge
(4) Dedicated STRIDE staff to perform initial evaluation and daily walks
Target Population
Hospitalized Older Adults

Targeted gait and balance assessment by PT

STRIDE Program
1-2 daily walks for duration of hospitalization supervised by Mobility Assistant

NOT ELIGIBLE
Bedrest order
Unable to follow 1 step command
Non-ambulatory
STRIDE Team Roles

**Physical Therapist**
- Screens consults
- Performs baseline balance and gait assessment
- Recommends assistive devices and/or gait belt if needed
- Identifies activity goals with patients

**Mobility Assistant**
- Works with Nursing to plan timing of daily walks
- Supervises walks for safety
- Reviews activity goals
- Provides motivation and encouragement
Length of Stay

## Outcomes

<table>
<thead>
<tr>
<th></th>
<th>STRIDE, N=92</th>
<th>Usual Care, n=35</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge home, %</td>
<td>92.3</td>
<td>74.3</td>
<td>0.007</td>
</tr>
<tr>
<td>Inpatient falls, %</td>
<td>1.1</td>
<td>2.9</td>
<td>0.48</td>
</tr>
<tr>
<td>30-day ED visits, %</td>
<td>23.1</td>
<td>20</td>
<td>0.71</td>
</tr>
<tr>
<td>30-day readmissions, %</td>
<td>17.6</td>
<td>14.3</td>
<td>0.66</td>
</tr>
<tr>
<td>Deaths, %</td>
<td>4.4</td>
<td>5.7</td>
<td>0.67</td>
</tr>
</tbody>
</table>

* 90% of STRIDE participants reported feeling **better** immediately after their walk

Financial Summary

Costs

- Personnel (1.0 FTE PT, 1.0 FTE Mobility Assistant salary and benefits): $154,652

Costs avoided

- Anticipating reduced LOS by 1 day for 500 patients annually and using average cost of 1 day of care for this population: $2,226 - 500*1*2226 = $1,113,000 reduced costs for Inpatient Bed Days of Care Annually

Overall annual cost savings = $958,348

- Based on reduced inpatient BDOC alone
- Anticipated additional cost savings based on reduced LTC bed days
“Everybody should use [STRIDE] that’s here for an extended stay. I think that’s gonna benefit everybody...the way it works [is] to keep you moving while you’re here. That way it has less impact when you go home. And that’s the goal...to go home.”
STRIDE Network is Growing

STRIDE 18 sites

VISN 6: 6
Function QUERI: 8
Other: 2
2018 VHA Shark Tank: 2
Promoting Mobility in the Hospital

• **Address barriers to ambulation**
  - Overly restrictive activity orders
  - Urinary catheters
  - IV poles
  - Pain
  - Nutritional compromise
  - Dehydration
  - Adverse effects of medications
  - Delirium

• **Consistent messaging to patients and families**
  - Encourage patients to walk and be as independent with self-care as possible
  - Ambulatory assistive devices from home
Promoting Mobility in the Hospital

• Leadership buy-in and front-line clinical champions
  – Definition of success

• Competing demands on staff time
  – Flexibility around staffing model

• Interdisciplinary communication is critical
  – Physical Therapy – Nursing
  – Falls committee, Safe Patient Handling Mobility Coordinators

• Provide tools
  – Competency checklists, EHR templates

• Platform for broader culture change around mobility
Thank you!

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