Hip fracture rehabilitation: important program and outcome characteristics

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Disclosure

• None
Goals and objectives

• Compare and contrast hip fracture rehabilitation programs offered in hospitals, nursing homes, home health, and ambulatory settings
  – Differentiate key features of each setting
  – Describe effect of intensity of rehabilitation service on outcomes
  – Review International Classification of Function

Medical rehabilitation

• Health programs and services that reduce impairment, activity limitation, and participation restriction
• Medical rehabilitation originated the team concept in health care in the 1950s
• Functional goal attainment critical piece of medical rehabilitation
International Classification of Function

World Health Organization disability construct

- Impairment: loss of function at organ system level
- Activity limitation: loss of function in daily life activities
- Participation Restriction: loss of function in social role

Modified by social/environmental and personal factors

ICF example: stroke

- Impairment: hemiplegia, hemisensory loss, visual field loss, aphasia, dysarthria, dysphagia
- Activity restriction: can’t dress, toilet, walk, move in bed, move from chair to bed
- Participation restriction: can’t work, function as grandparent, volunteer in community
ICF example: hip fracture

- Impairment: discontinuity of bone, loss of strength and ROM about hip, pain
- Activity limitations: potentially quite similar to stroke example
- Participation restrictions: potentially quite similar to stroke example

Characteristics of rehabilitation teams

- Multidisciplinary: PT, OT, SLP, TR, MD, RN, RD, pharmacy, with little interaction between teams or shared goal setting
- Interdisciplinary: team participants retain disciplinary expertise but share goal setting, treatment planning and execution
- Transdisciplinary: team participants blur traditional expertise boundaries with overarching focus on person served
Multi < Inter < Trans

- Transdisciplinary teams are believed more efficacious, but require trust, effective communication channels, and continuous education and training to function well
- EHRs don’t transform teams

Need for hip fracture rehabilitation

- Common condition whether fall → fracture or fracture → fall
- Substantial data about unnecessary and persistent disability after hip fracture
- While still substantial mortality, increased survival due to surgical excellence and improved acute care
- Increasing incidence of risk factors such as imbalance, cognitive disturbance, sarcopenia, poor bone health, sensory deficits
So because hip fracture is so common, we must have great evidence about best components of rehab programs

WRONG!
• Frequency/duration/intensity
• Team components
• Outcome measurements

Do we have some evidence?
• Yes, more therapy, earlier is better long term for decreasing disability
• Davanzo and Dobson: when patients are matched on demographic and clinical characteristics, rehabilitation in hospital-based rehabilitation facilities leads to
  – lower mortality,
  – fewer readmissions and ED visits, and
  – more days at home
than care in a nursing home for the same condition
Characteristics of after med-surg (post acute) care environments

<table>
<thead>
<tr>
<th></th>
<th>Physician</th>
<th>Therapy</th>
<th>Nursing</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient</td>
<td>No-low</td>
<td>Low-high</td>
<td>No-Low</td>
<td>Voluntary FOTO</td>
</tr>
<tr>
<td>Home Health</td>
<td>No-low</td>
<td>Low-medium</td>
<td>Low-medium</td>
<td>OASIS</td>
</tr>
<tr>
<td>Long-term acute care hospital (LTAC)</td>
<td>High (daily, multiple specialities)</td>
<td>Low-medium</td>
<td>High (staffing similar to ICU)</td>
<td>LTRAx; LTCH data set</td>
</tr>
<tr>
<td>Inpatient rehabilitation</td>
<td>Medium-high (typically daily; at least 3 days/week)</td>
<td>High (3 hour minimum)</td>
<td>Medium-high (staffing similar to med-surg)</td>
<td>Functional Independence Measure (FIM); IRF-PAI</td>
</tr>
<tr>
<td>Nursing home</td>
<td>Low-medium</td>
<td>Low-medium</td>
<td>Low-medium</td>
<td>Minimal Data Set (MDS)</td>
</tr>
</tbody>
</table>

Is there a way to standardize this crazy scheme?

- **Coming:**
  - Shared data outcome elements
  - Unified, site-neutral payment

- **Between now and then:**
  - Challenging to compare processes and outcomes
Choosing the best post med/surg program for your patient

• Make sure rehabilitation is happening (therapy does not equal rehabilitation)
• Programs and services need to address post-fracture disability and pre-fracture risk factors
• Don’t fall for the brochure. Ask to see recent quality and experience data:
  – Falls, CAUTIs, LOS
  – Disposition outcomes
  – Patient experience
  – Health and functional outcomes

So you’ve decided your patient should come to hospital rehab

• Likelihood for meaningful improvement in reasonable period of time
  – Meaningful = level of function at end of program that allows home discharge
  – Reasonable period hip fracture = 8 days
• All acute rehabilitation patients need to have preadmission screening, potentially prior authorization, and a discharge plan
• Mild or worse cognitive impairments are a confounder
• PM&R consult can help you when you are not sure about disposition type
• Your work is cut out for you if hip fracture patient is Medicare advantage or commercial insurance
What does acute care documentation look like to develop rationale for therapy at rehabilitation hospital intensity?

- Mobility domain: minimally assisted or worse in bed mobility, transfers, gait (also <50 feet)
- Self-care domain: minimally assisted or worse in functional transfers, dressing, hygiene
- Vector of progress from one treatment day to another
- Activity tolerance at least “fair” (P-F-G-E)
- Patient agreeable to acute care therapy

What does acute care documentation look like to develop rationale for daily MD at rehabilitation hospital?

- It does not look like long list of comorbidities
- There is medical record evidence that the primary diagnosis and comorbidities are stable enough to allow safe therapy but not so stable as to not require daily physician thought and action about interventions to increase benefit of rehabilitation program
Hip fracture POD 1


Could patient go directly from hospital to outpatient or home health?

- Would substantially depend upon environmental and psychosocial factors
  - Does she have family who can come and stay with her and provide physical assistance as she currently needs?
  - Whose job is it in your system to figure out these what ifs?
  - How are we going to get these carers trained to avoid injury prior to acute discharge?
Therapy need: substantial

- Substantial deficit in mobility and self-care
- Substantial way to go to become independent
- Nothing stated in vignette about ability to tolerate and benefit from therapy

For this patient, what should therapy be?
- Hours/day? Days/week?
- Delivered individually? In group?
- How much by therapist compared to aide?

Does she need a daily doctor?

- Need to consider transfusion should she desire robust therapy
- Standing orders for pain meds may not be adequate in robust therapy context
- Diabetic control may be suboptimal using standing orders if activity varying
- Might robust rehabilitation program tax her mood and she needs SSRI

Did someone figure out if she has DM retinopathy or neuropathy as risk factors for past and future falls? How is she coping with widowhood?
So picking a disposition from acute is hard and takes work

• Post-acute environments are different
• Within post-acute environments, rehabilitation hospitals and units are the most standardized
• Star rating systems are invalid and unreliable
• Time crunches for decision making
• Families overwhelmed

References

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