Hospitalization of the Elderly

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The Dangers of Going to Bed

Look at the 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.

Dr. Richard Asher, British Medical Journal, 1947
Demographics

• Population over age 65 is now 13%, and projected to be 20% by 2030.
• 38% of hospital admissions
• 49% of hospital days
• Severity of illness rising
• Rates of hospitalization are twice as great in pts over age 85
Consequences of Hospitalization

• 23.3% risk of being unable to return home and require nursing home placement
• 35% decline in some basic ADL
• One study showed 50% of elderly patients experienced some kind of complication related to hospitalization
Key factors that affect hospitalization outcomes

Baseline Frailty

Hospitalization Outcome

Acute illness severity

Hazards of the Hospitalization
Hazards

• Functional decline
• Immobility
• Delirium
• Depression
• Restraints
• Adverse drug reaction
• Nosocomial infections
• Incontinence
• Malnutrition
• Pressure Ulcers
Functional decline

Hansen, et al., JAGS, 47: 360-365, 1999
Functional Decline

- Data of five studies combined
- 19% decline at 3 month follow up
- If declined in hospital, 41% failed to return to preadmission status
- 40% declined in IADL function at three months
Functional Decline-Independent Predictors

• Hospital Admission Risk Profile
• Increasing Age
• Lower MMSE
• Lower preadmission IADL scores

IDENTIFY FRAILITY AND VULNERABILITY ON ADMISSION

Hazards

- Functional decline
- **Immobility**
- Delirium
- Depression
- restraints
- Adverse drug reactions
- Nosocomial infections
- Incontinence
- Malnutrition
- Pressure ulcers
Immobility

• Review of studies showed that bed rest was associated with worse outcomes after medical or surgical procedures, or primary treatment of medical conditions

*Lancet 1999; 354: 1229-33*
Hazards

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Delirium

• Most common hazard of hospitalization
• Multifactorial
• 14-56% have it on admission
• 12-60% acquire it
• 32%-67% go unrecognized
• Misdiagnosed as dementia
• Longer length of stay, increased morbidity and mortality, and institutionalization
Figure 1: Diagnostic Algorithm for the Confusion Assessment Method (CAM)
Factors in Delirium

- **Predisposing**
  - Age
  - Impaired cognition
  - Dependence in ADLS
  - High medical comorbidity

- **Precipitating**
  - >6 meds, >3 new
  - Psychotropic meds
  - Acute medical illness
  - Vascular or cardiac surgery
  - Hip fx
  - Dehydration
  - Environmental change
Medications and Delirium

- Opioids (especially meperidine)
- Anticholinergics: antidepressants, antihistamines, antipsychotics, antispasmodics
- Benzodiazepines
- Cardiac drugs: digoxin, amiodarone
- Any drug with action in CNS
Management efforts

- Adequate CNS oxygen delivery
- Fluid/electrolyte balance
- Treat severe pain
- Nutritional intake
- Early mobilization and rehab
- Early identification on post op complications
- Eliminate unnecessary meds
- Environmental stimuli
Agitated delirium

• Appropriate diagnostic evaluation
• Calm reassurance, family, sitter
• If absolutely necessary: haldoperidol 0.25-0.5 mg every 4 hrs as needed
Hazards

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Depression

- Major depression: 10-21%
- Minor depressive symptoms 14-25%
- Underrecognized
- Poorer outcomes
- Higher mortality rate, unrelated to severity of medical illness
- More likely to deteriorate in hospital, and less likely to improve at discharge or at 90 days
Depression and mortality

follow-up, months

survival %

0 6 12 18 24 30 36

<5 symptoms
>6 symptoms

Ann Intern Med 1999; 130: 563-9
Hazards

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Restraints

• In 1992, 7.4%-17% of medical pts were restrained
• In 1998, 3.9%-8.2%
• Reasons: prevent disruption of therapy, reduce falls, and confine confused patients
• Evidence does not support this
• Serious negative outcomes result
Hazards

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Adverse drug reactions

• Most frequent iatrogenic complication
• Increased length of stay, higher costs, doubling of risk of death
• Risk increases exponentially with number of medications
• High risk: greater than 4 or 5 drugs
Prescribing guidelines

- Know medications that pt is taking
- Individualize therapy
- Reevaluate daily
- Minimize dose and number of drugs
- Start low, go slow
- Treat adequately; do not withhold therapy
- Recognize new symptoms as potential drug effect
- Treatment adherence
Medications to avoid

- Antihistamines
- Narcotic analgesics
- Benzodiazepines
- Tricyclic antidepressants
- Histamine-2 receptor antagonists
Important Problem drugs

- Warfarin
- Digoxin
- insulin
Polypharmacy

• No single tool can identify the cause
• Many medications are often necessary to treat multiple diseases (DM, CHF, hyperlipidemia)
• Some causes: multiple prescribers, multiple pharmacies-drug interactions, and drug duplications
Polypharmacy Prevention

- Know indication of each medication
- ASK: safer non pharmacologic alternative
- ASK: treating a side effect of another med
- ASK: Do contraindications exist
- ASK: duplicate side effects of other meds
- ASK: Interact with other meds
- ASK: Increase complexity of regimen
Hazards

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- **Nosocomial infections**
- Incontinence
- Malnutrition
- Pressure ulcers
"The most important step hospitalists can take to prevent transmission of antimicrobial-resistant organisms is to perform excellent hand hygiene..."
Nosocomial infections

- 50% of cases are in elderly patients
- Urinary tract, lungs and gastrointestinal tract
- Risks: older age, catheters, antibiotics, fecal or urinary incontinence, glucocorticoids
- Resistant organisms: Get records of cultures from nursing homes
Prevention measures

• Hand washing
• Limit use of broad spectrum antibiotics
• Discharge patients as soon as possible
• Limit use of in-dwelling catheters as much as possible
• Reassess need for in-dwelling catheters daily
Hazards

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Urinary incontinence

- 35% of hospitalized patients
- 5% acquire it in the hospital
- Remember transient causes: DIAPPERS
- Not an indication for a catheter
- Void q 2 hours
- Falls occur with patients trying to get to the bathroom
Nutrition

- Independent risk factor for mortality
- Assess at admission
- Minimize NPO orders
- Consequences of malnutrition: pressure ulcers, impaired immunity, and longer length of stay
Nutrition

Covisky, et al. JAGS, 47: 532-538
What the admitting care team can do

- Establish baseline
- Compare baseline
- Prevent iatrogenic illness
- Understand patient values
- Initiate discharge planning
- Make walk rounds with nurse
- Hold family conferences
- Immunize
Establish baseline

- ADLS
- IADLS
- Mobility
- Living situation
- Social support
- Discuss and obtain advance directives
Compare baseline

- Functional assessment-current ADL level
- Assess mobility
- Assess cognition
- Estimate length of stay
- Expected discharge site
Daily rounds

- Catheters
- Central lines
- Medications
- Nasal cannulas
- Telemetry
- restraints
- Therapies needed?
- Target discharge date
Discharge

• Reassess ADLS
• Check mobility
• Do not discharge if: new fever, delirium, hypotension or severe hypertension
• Assess home needs to be sure they are met
Improve transitions of care

- Medications
- Transportation
- Medical Supplies
- Home or transition setting
- Pt participation
- Food and meals
- Financial concerns
Readmission

• 12-66% elderly patients readmitted 1-6 months post discharge
• Frequently premature and poorly structured
Complex Discharge Planning

- 70 years of age of older and living alone
- Admitted from nursing home
- Comatose
- Complex medication regimen
- Disorientation, confusion, forgetfulness
- History of repeat admissions
- In need of special therapies
Complex discharge Planning

- Lack of social support
- Limited activities of daily living
- Multiple medical diagnoses
- Previously or newly diagnosed as disabled
- Requiring wound care
- Victim of severe accident
“Physicians cannot assume they can identify patients with limited health literacy because most individuals with this problem try to hide their inadequacies.”
Table. Steps to enhance patients’ understanding and compliance

- Slow down and assess health literacy skills
- Use “living room language”
- Show or draw pictures
- Limit information; repeat instructions
- Use a “teach back” or “show me” approach to confirm understanding
- Be respectful, caring, and sensitive
Comprehension

• Study of 125 patients’ comprehension of 50 of the most common health words found in transcripts of interviews
  • 98% understood “vomit”
  • 13% understood “terminal”
  • 18% understood “malignant”
  • 22% understood “nerve”
Systematic Approaches

• Acute Care for the Elderly Units (ACE units)
• Hospital Elder Life Program (HELP)
• Study results vary
• Some with dramatic reduction in loss of functional status
• Substantial interdisciplinary team interaction
ACE UNIT

• Focuses on 4 components:
• 1. Prepared environment for mobility and orientation
• 2. Primary nurse assessment and protocols
• 3. Early SW intervention
• 4. Geriatrician review
HELP

• Multicomponent intervention to prevent decline
• Not unit based
• Volunteers used extensively
• Broad admission screen
• Targeted interventions
Home Hospital Care

- Patient preferences
- Potential to avoid hazards of hospitalization
- Guidelines issued for pneumonia care at home by ACCP

*Chest* 2007; 127: 1752-63
Palliative care and end of life issues

- Resuscitation status
- Advance Directives
- Rehospitalize?
- What treatments?
Summary

• The hospital can be a hazardous place for elders
• Don’t assume delirium is dementia
• Start discharge planning on day 1-know your patient and their circumstances
• COMMUNICATE-particularly goals of care
• MOBILIZE!
• Do no harm-avoid iatrogenic illness if possible
Key References

- Society of Hospital Medicine
- 1-800-843-3360, ext. 2437
- CD-ROM with a compendium of resources for inpatient care of the elderly