



Acute Hospital Care of the Elderly

Robert M. Palmer, MD, MPH
Visiting Professor of Medicine
Division of Geriatric Medicine
University of Pittsburgh

Objectives

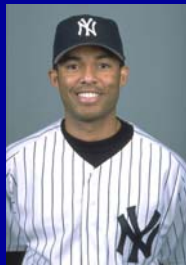
At the end of this session the participant should be able to:

- Identify the elements of hospitalization that contribute to functional decline
- Summarize the evidence (models of care) showing improved outcomes of hospitalization
- Translate this evidence to geriatrics practice

Transitions



Hospital Starter



Postacute Reliever

CASE STUDY



82 year old woman is admitted to hospital from home for treatment of community acquired pneumonia

- Past history: HTN (controlled), mild CHF (controlled), generalized osteoarthritis with slowed gait, and mild visual and hearing impairments
- Medications: Beta-blocker, ACEI, acetaminophen prn, ASA qd, antioxidant supplements
- Lives alone
- **Will she be able to go home?**

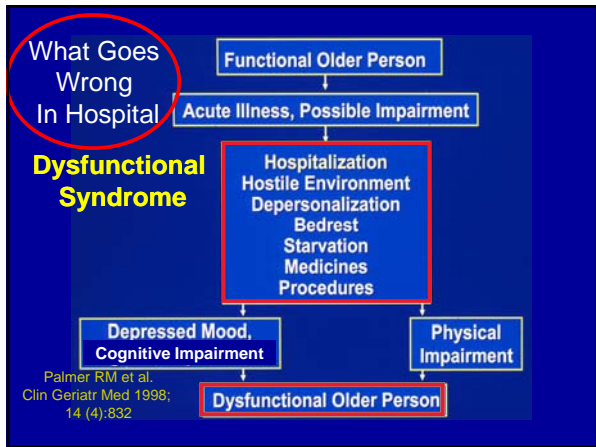
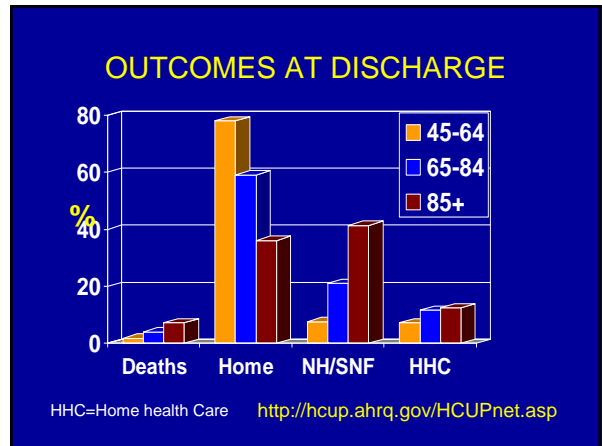
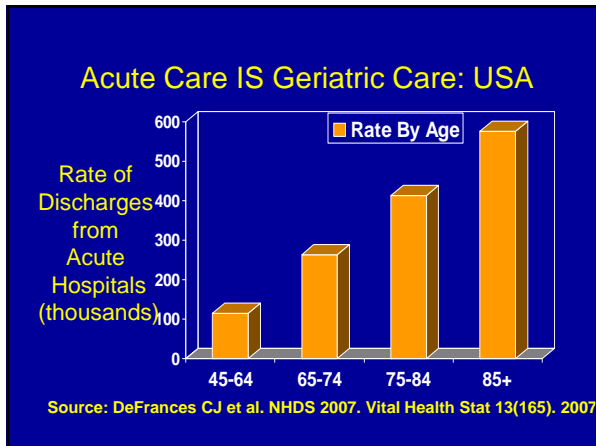
CASE STUDY (Tabloid version!)



- Intravenous fluids and antibiotics are begun; she is placed in soft wrist restraints
- Urinary incontinence occurs--an indwelling catheter is inserted in her bladder
- She becomes confused
- By the third hospital day she is afebrile but too weak to sit or stand, or eat (NG tube considered)
- A sacral pressure sore occurs on the fourth day
- On day 7 she is discharged to a nursing home

“The Disease is Better but the Patient is Worse”

- Delirium
- Undernutrition
- Immobility (restraints, weakness)
- Pressure ulcer
- Incontinence
- Nursing home placement
- “Functional Decline”—Is this inevitable??



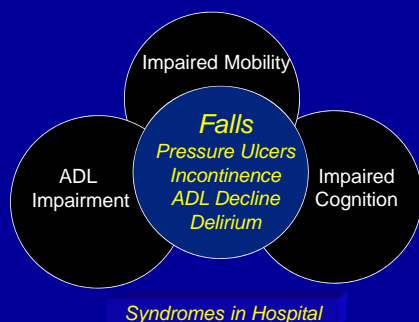
- ### Correlates of Functional Decline: Adverse Outcomes
- Prolonged hospital length of stay
 - Greater risk of nursing home transfer
 - Greater costs of care per admission
 - Reduced quality of life (e.g., mood, ADL, cognition)
 - Reduced satisfaction with hospital care
 - Possibly: increased risk of readmission and death

Preventing Functional Decline

The Starter

- ### Hospital Care: Leadership Opportunities
- Expertise in quality improvement
 - Implementing models of acute care
 - Care transitions (continuum)
 - Pre-transition the **Starter** should:
 - Reduce risks of functional decline
 - Create a "Care Transitions" record
-

Reducing Decline: Shared Risk Factors



Risk of New Onset Disability at Discharge

- Advanced age
- IADL dependence 2 weeks before admission
- Mobility impaired 2 weeks before
- ADL dependence on admission
- Severe cognitive impairment
- Albumin ≤ 3.0
- Others: metastatic cancer; stroke

Mehta KM et al. Unpublished

Reducing Decline: Improving Transitions

- Lessons learned from Models of Care
- Geriatric principles
 - Geriatric assessment drives care
 - Patient values and goals of therapy underscore medical care
 - Optimizing patient independence and QOL
- Consistency across continuum of care

Applying Core Principles

- Functional assessment before and after admission drives patient-centered care
- Goal is to send patient back home
- Interdisciplinary care improves outcomes (geriatric issues, care transitions, length of stay, costs)
- Patient and family involvement is desirable

Established Models Of Acute Care

- Hospital Units: ACE
- Delirium prevention (HELP)
- Comprehensive (interdisciplinary) Discharge Planning
- Transitional Care Intervention

Acute Care for Elders (ACE)

- Prepared environment
- Nursing guidelines to maintain ADL
- Medical care review
- Interdisciplinary team care, comprehensive discharge planning

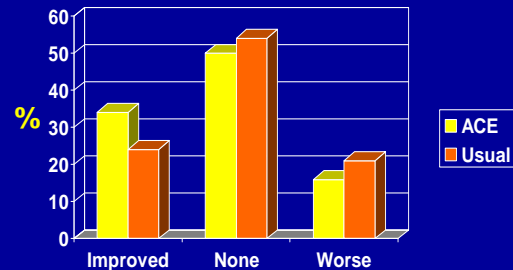
--Palmer RM et al. JAGS 1994;42:545
--Landefeld CS et al. NEJM 1995; 332:1338
--Counsell SR et al. JAGS 2000; 48:1572

PREVENTIVE AND RESTORATIVE GUIDELINES

- Bathing/dressing
- *Mobility
- *Toileting/continence
- Undernutrition
- Delirium
- Depression
- *Falls
- *Skin care

*NPSG/HAC

ADL Change: Admission to Discharge

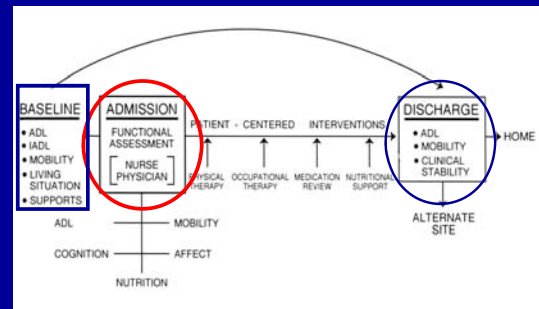


Landefeld CS, Palmer RM et al. NEJM 1995; 332:1338

ACE OUTCOMES

Outcome	ACE (%)	UC (%)
Discharge		p=0.01
Home	86	78
LTC	14	22
LTC 90 Days		p=0.03
No	78	70
Yes	22	30

ACE Pathway: Functional Trajectory



Palmer RM. Acute Hospital Care. In: Yoshikawa TT, Norman DC, Eds. *Acute Emergencies and Critical Care of the Geriatric Patient*. New York: Marcel Dekker, Inc, 2000.

Virtual ACE: Your Patient

- Create functional trajectory
- Begin planning for discharge to home on day 1 (care manager, primary nurse)
- “Drop-down” list of “patient-centered” interventions
- Enable self care/mobility (activity orders, meals), limit tethers/sedating meds
- Define and respect patient values and goals

Personalizing Care: Patient Values and Goals

- **Advance Directives**--review
- **End-of life** preferences; CPR, ICU care, nutritional support
- **Proxy** medical decision-making
- **Family/proxy meetings**: diagnosis, prognosis, therapies, care transitions

Hospital Elder Life Program (HELP)

- Patients age 70 years and older
- One or more *risk factor* for *incident* delirium: cognitive impairment, vision/hearing impairment, dehydration (↑BUN/creatinine)
- Protocols for 6 risk factors
- Nursing coordinator
- Volunteers provide most of intervention

Inouye SK et al. NEJM 1999; 340:669
Inouye SK et al. J Am Geriatr Soc 2000; 48:1697

DELIRIUM PREVENTION ELDER LIFE PROGRAM

RISK FACTORS

Visual Impairment

Hearing Impairment

Dehydration

PROTOCOL

Visual aids, adaptive equipment

Amplifying devices, ear wax disimpaction

Early detection, volume repletion

(Inouye SK, et al. NEJM1999;340:669)

Matching controlled trial

ELDER LIFE PROGRAM

RISK FACTORS

Cognitive Impairment

Sleep Deprivation

Immobility

PROTOCOL

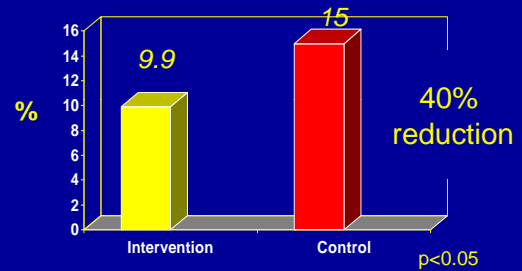
Orientation, therapeutic activities

Non-drug therapies: warm drink, relaxation tapes/music, back massage

Early mobilization: ambulate, ROM exercises, avoid restraints

(Inouye SK, et al. NEJM 1999; 340:669)

ELDER LIFE PROGRAM RESULTS



Inouye SK et al. NEJM 1999; 340:669

HELP REPLICATION IN A COMMUNITY HOSPITAL

- Quality improvement study of 4,763 older patients at UPMC Shadyside Hospital
- Delirium rate decreased by 14.4% (35.3% relative risk reduction) P=.002
- Total costs reduced > \$1.2 million in one year
- High rate of nursing and family satisfaction

Ref: Rubin FH et al. JAGS 2006;54:969

Virtual HELP

- Feed and hydrate patients
- “Walk Rounds”
- Sensory aids/devices
- Reorientation
- Appropriate meds



Potentially Inappropriate Medications



Independent of diagnoses or conditions

- Long-acting benzodiazepines
- GI antispasmodics (anticholinergics)
- Diphenhydramine
- Meperidine
- Amiodarone

Considering diagnoses or conditions

- NSAIDs (ulcers)
- Anticholinergics (cognitive impairment)
- Long-acting benzos (COPD)
- Metoclopramide (Parkinson's)
- Tricyclic Antidepressants (falls, syncope)

Fick DM et al. Arch Intern Med 2003; 163:2716

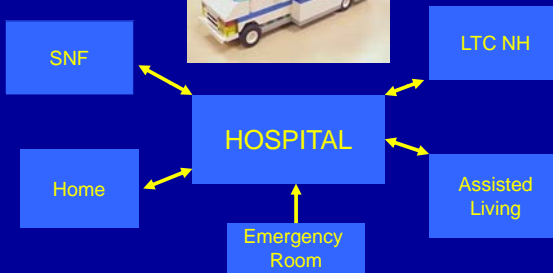
TRANSITIONAL CARE: Turning it Over to the Reliever

TRANSITIONAL CARE

“The set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or levels of care”

Coleman EA et al. Ann Intern Med 2004;140:533

Care Transitions



TRANSITIONAL CARE: POTENTIAL PITFALLS

- Fragmented care (poor handoffs)
- Poorly coordinated discharge planning
- Inadequate communication between health professionals
- Confusing medication changes
- Changes in patient cognition and functional status.
- Marginal social support network

Adverse Events

- Discontinuation or changes in medications
- Disability in those with impaired cognition and mobility in hospital



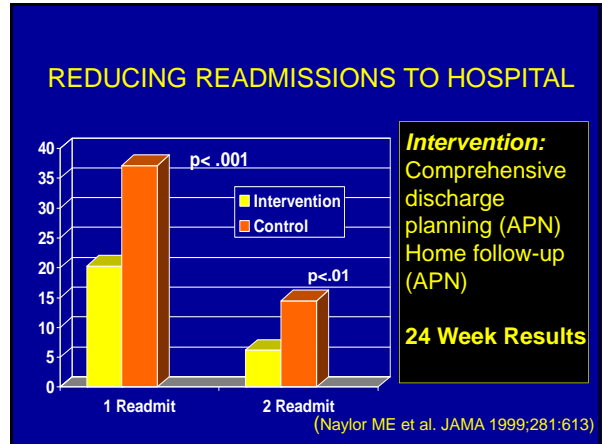
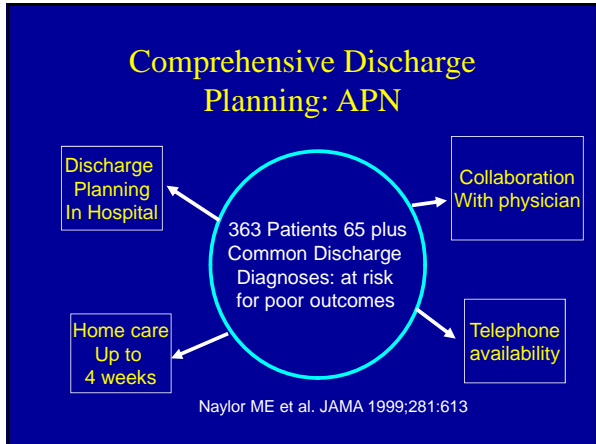
--Boockvar K et al. Arch Intern Med 2004; 164:545
--Hansen K et al. JAGS 1999; 47:360

Care Transitions: How Good are We?

Systematic review through 2006

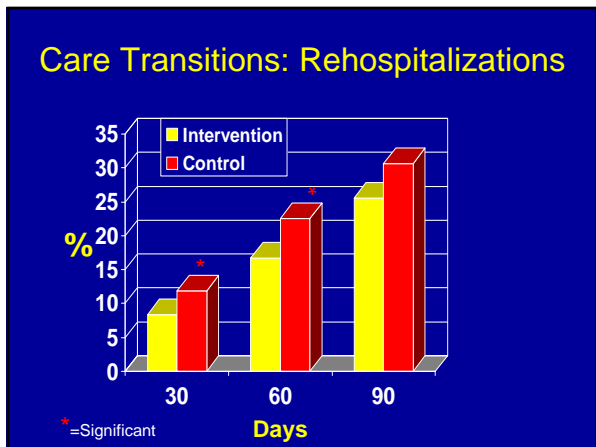
Measure	%
• <i>Direct doc-doc communication</i>	3-20
• <i>Discharge summary</i>	
– Available (1 st visit)	12-34
– By 4 weeks	51-77
– Lacked test results	33-63
– Lacked discharge meds	2-40
– Lacked patient counseling	90-92
– Lacked F/U plans	2-43

Kripalani S et al. JAMA 2007;297:831



- ### Care Transitions Intervention Four Pillars
- Assistance with medication self-management
 - Patient-centered record owned and maintained by the patient to facilitate cross-site information transfer
 - Timely follow-up with primary or specialty care
 - List of "red flags" indicative of a worsening condition and instructions on how to respond
- Coleman EA et al. JAGS 2004;52:1817

- ### Care Transitions Intervention: RCT (N=750)
- Intervention Implemented through:
 - Personal health record
 - Series of visits and telephone calls with a transition coach
 - Outcomes: rehospitalization and costs
- Coleman EA et al. Arch Intern Med 2006; 166:1822



- ### Virtual Care Transitions
- Communication
 - Coordination
 - Continuity
 - Discharge Planning
 - Goals of care
 - Patient education
 - **Discharge summary**

Discharge Summary: NQF (2006) and Joint Commission(2009)

- Reason for hospitalization
- Significant findings
- Procedures performed
- Condition at discharge
- Information provided to patient/family
- Comprehensive and reconciled medication list
- List of acute medical issues and pending tests and studies
- Patient's progress toward goals

Transition Record (24 hours)

- Reconciled medication list received by discharged patient
- Transition record with specified elements received by discharged patients
- Timely transmission of transition record
- Transition record with specified elements received by discharged patients (ED)

--AMA-PCPI Care Transitions Work Group, 2009

Specified Elements

- Reason for admission
- Major procedures/tests/summary
- Principal diagnosis at discharge
- Current medication list
- Studies pending at discharge
- Patient instructions
- Advance directives or surrogate documented
- 24 hour/7 day contact info
- Plan for f/u care
- PCP or other site

--AMA-PCPI 2009

CASE STUDY: The Starter's Approach



- Intravenous fluids and antibiotics are begun: she is up in chair near the nurses' station
- Physical therapy performs ROM and weight bearing exercises
- Toileting schedule is started; bedside commode
- Thickened liquids and pureed foods are given
- By the third hospital day she is afebrile
- By day 4 she can eat and walk, and is discharged to home (sorry SNFists!)

A HAPPY ENDING



Maybe next year!
(With some good starters and relievers!)

