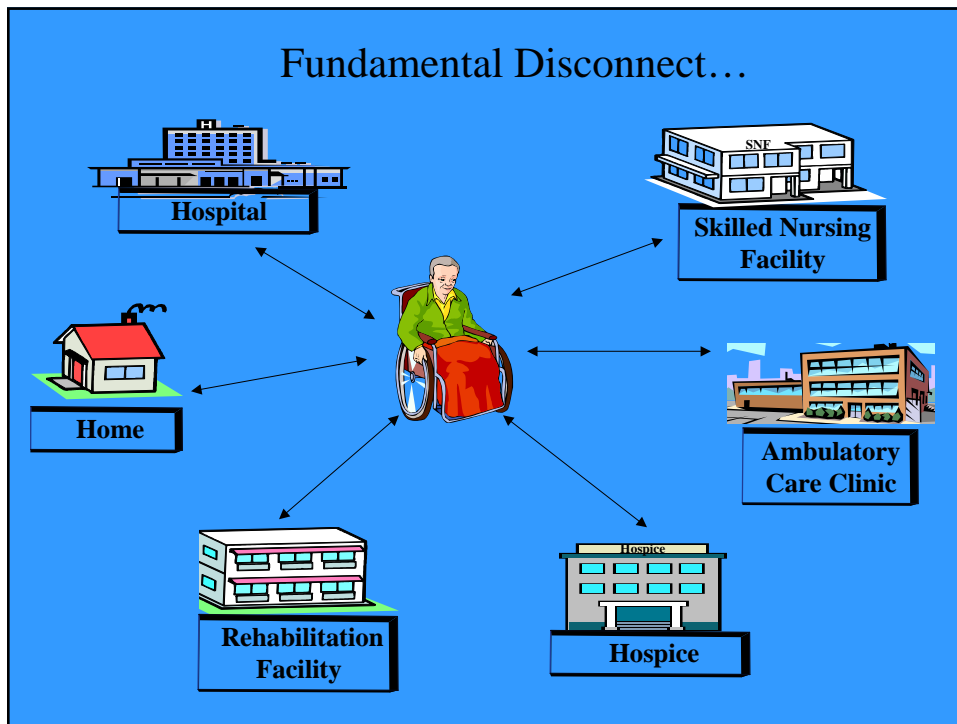


## Improving the Quality of Care Coordination Across Settings

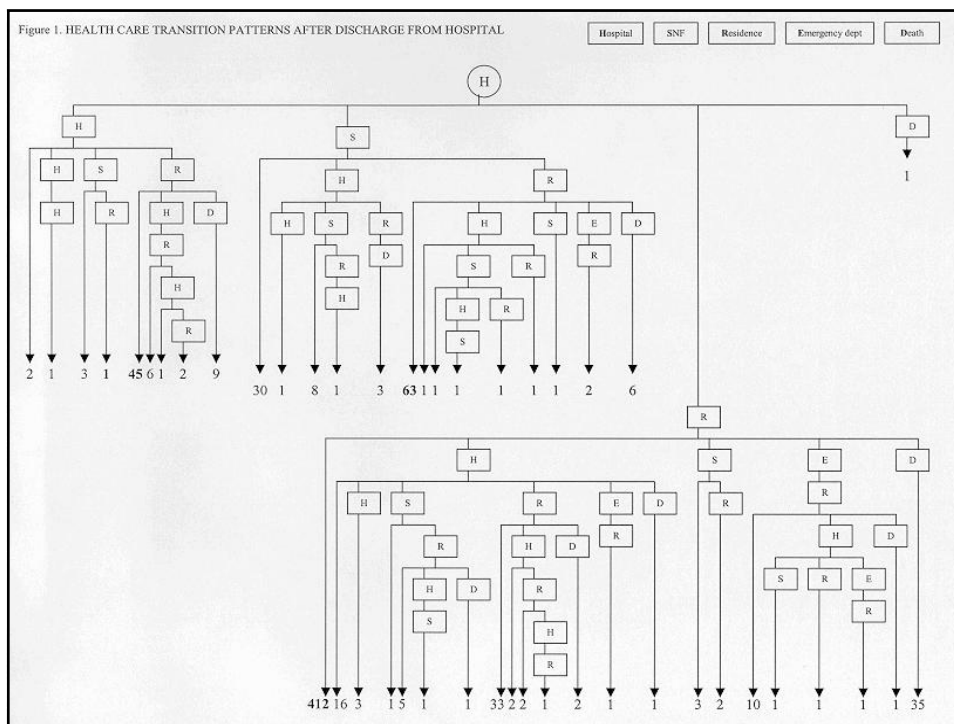
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## A Road Map

1. Understand how common transitions are
2. Recognize that serious quality problems exist
3. Size up the challenges to improving quality
4. Highlight promising innovations
5. Tie into national efforts



Care Transitions Are Common...



## 45 Unique Care Patterns

Single transfer	61.2 %
Two transfers	17.9 %
Three transfers	8.5 %
≥ Four transfers	4.3 %
Deaths	8.1 %

## Evidence of Serious Quality Problems



### Qualitative Studies

- Inadequately prepared for next setting
- Conflicting advice for illness management
- Inability to reach the right practitioner
- Repeatedly completing tasks left undone

## California Health Care Foundation

- 30,000 patient experiences at 200 hospitals
- Transition to home received lowest ratings



## Adverse Events after Discharge

- Defined as an injury resulting from medical management rather than underlying disease
- 19 % had 1+ adverse events within 3 weeks
- Many were preventable
- Adverse drug events most common (66%)

Forster et al. Annals of Internal Medicine 2003;138:161-7

## Information Transfer

- Discharge/transfer information inadequate or not conveyed to next setting (*TNTC*)
- Hospital => NH Transfer, documentation was not legible 28% of time (Foley et al.)

10. Diet: <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Other		To Be Filled Out by Nurse		
11. Activity: <input type="checkbox"/> No Restrictions <input type="checkbox"/> As Tolerated		12. Seek medical attention for:		
<input checked="" type="checkbox"/> Other <i>No heavy lifting</i>		13. Instruction sheets given:		
Medication	Dose	Instructions (Do not use Med Abbrev)	Times	Purpose
1. Tylox		1-2 tabs every 4 hrs as needed		Pain
2. Colace	100mg	1 tab 2-3 times		Stool Softener
3.				
4.				
5.				
6.				
7.				
8.				
9.				
Additional instructions per physician (e.g., home oxygen, dressing changes, etc.):		Additional instructions per nurse:		
Foley 1x by eoc JP care O/C to shower (no bathing, sun, soaks) Change dressings over suprapubic tube etc as				
Sign above if you understand the above instructions and have been given a copy of these instructions. Patient's/Significant Other's Signature: _____		Patient's Phone #: _____		
Please bring this form with you to return appointments. Chart Copy = White		Patient Copy = Yellow	Agency Copy = Pink	
NUR 11894 (R-0399)				

## Medication Errors



## Medication Errors

- In 46% of hospitalized patients, 1+ regularly taken medications are omitted without explanation  
Potential for harm estimated for 39% cases  
*Cornish Arch Int Med 2005 (165) 424-9*
- Transfers NH=> hospital, average 3 medications changes; 20% lead to ADE  
*Boockvar Arch Int Med 2004 (164) 545-50*

## Ultimately Higher Health Care Costs

- Inefficiencies/duplication of services
- Greater hospital and ED use
- Litigation/negative press

## Challenges to Improving Quality

## Challenges Occur at Multiple Levels

- Patient
- Practitioner
- Health care institution
- Information technology
- Payment
- Performance measurement

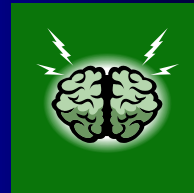
## Patient Level



- Institutions fosters dependency and complacency
- This changes abruptly on transfer when expected to assume major role in self-care
- Rising prevalence of cognitive impairment intensifies this challenge

## Maybe it's not her heart that is responsible for CHF admits...

- 1) Working memory (remember)
- 2) Semantic learning (remember to remember)
- 3) Executive cognitive capacity for behavioral self-regulation (do the task you remembered) (>30% older adults impaired)



## Practitioner Level

- Rare for one clinician to orchestrate care across multiple settings
- Many practitioners have never practiced in settings to which they transfer patients

## Health Care Institution Level Barriers



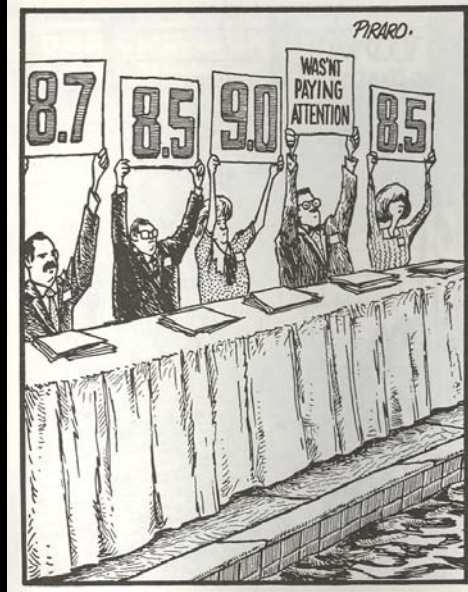
## Information Technology

- Health Information Technology infrequently extends from hospital or clinic into post-acute care settings and long-term care settings
- Widespread interoperability worthy goal but remains on the horizon

## Payment

- Perceived as providing little financial incentive for collaboration across settings
- Most prevailing payment approaches do not exact financial penalties for poorly executed transfers

## Performance Measurement



## Performance Measurement

- Lack of quality measures for transitional care is a significant barrier to quality improvement
- Majority of hospitals receive JCAHO's highest rating for continuity and discharge measures



## Promising Innovations

- Patient/Caregiver
- Practitioner
- Health System/Med Reconciliation
- Health Information Technology
- Performance Measurement

## Promising Innovations: Patients and Caregivers

### The Care Transitions Intervention:

Would an intervention designed to encourage older patients and their caregivers to assert a more active role during care transitions reduce rates of re-hospitalization?

## Key Elements of Intervention

- “Transition Coach” (Nurse or Nurse Practitioner)
  - Prepares patient for what to expect and to speak up
  - Provides tools (Personal Health Record)
- Follows patient to nursing facility or to the home
  - Reconcile pre- and post-hospital medications
  - Practice or “role-play” next encounter or visit
- Phone calls 2, 7 and 14 days after discharge
  - Single point of contact; reinforce, ensure follow up

**My Medications are:**

Medication	Dose	Reason

**Personal Health Record**

The Personal Health Record of:  
**Josephine Patient**

**Personal Information:**  
Address: \_\_\_\_\_  
Home Phone#: \_\_\_\_\_  
Birth Date: \_\_\_\_\_  
Patient ID# \_\_\_\_\_  
PCP Name: \_\_\_\_\_  
Advanced Directives?: \_\_\_\_\_


**Hospitalization Information:**  
Admitted:   /  /   Discharge:   /  /    
Reason for Hospitalization: \_\_\_\_\_

**Caregiver Information:**  
Name: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Relation to Patient: \_\_\_\_\_

**Personal History**

Please check any illnesses or health problems listed below that you have ever experienced.

- Arthritis
- Abnormal Heart Rhythm

**Remember**  to take this Record with you to all of your doctor visits.

**Before I leave the hospital....**

- I have the instructions I need to keep my health condition from becoming worse.
- I know what symptoms to watch out for.
- I know the name and phone number of who to call if I see any of these symptoms.
- My family or someone close to me knows what I will need once I leave the hospital.
- I know what medications to take, how to take them, and possible side effects.
- I will schedule a follow up appointment with my primary care doctor.
- I will have a clear and complete copy of my discharge instructions.

**After I leave the hospital...**

1. I will write down questions I have about my condition.
2. I will take all bottles of medicine I am using to each doctor visit.
3. I will call \_\_\_\_\_ immediately at (XXX) XXX-XXX if I experience any of the following:
  - Temperature above 101° F
  - Uncontrollable pain
  - Increased confusion
  - Increased redness or drainage around wound
  - Questions about which medications to take



## Key Attributes of the Coach

- Able and willing to make the shift from doing things for patients to encouraging them to do as much as they can for themselves
- Competency with medication reconciliation
- “Empowered” enough to activate a patient to ask questions and not be easily intimidated

## Study Population

- Community-dwelling
- Age 65 years +
- Non-elective hospital admission
- CHF
- COPD
- CAD
- Diabetes
- Stroke
- Hip fracture
- PVD
- Spinal stenosis
- Arrhythmias

Variable	Intervention	Control	P-Value
Age (years)	76.0	76.4	0.52
Female (%)	48.2	52.3	0.26
Married (%)	58.2	53.8	0.23
Lives alone (%)	30.9	30.8	0.99
Sad or Blue (%)	30.3	26.4	0.24
CHF (%)	16.5	12.9	0.17
COPD (%)	17.0	18.5	0.61
Arrhythmia (%)	12.8	19.0	0.02
CAD (%)	14.1	13.5	0.81
Chronic Disease Score	6.8	7.1	0.31

Variable	Intervention	Control	P-Value
Prior Hosp (%) 1+ past 6 mo	29.3	26.1	0.36
Prior ED (%) 1+ past 6 mo	40.3	38.9	0.69
D/C Destin.			0.71
Home (%)	50.8	52.9	
Homecare (%)	24.7	25.9	
SNF (%)	21.0	19.3	
Other (%)	3.5	1.9	

<b>Variable</b>	<b>Intervention</b>	<b>Control</b>	<b>Adjusted P-value</b>
<b>Re-hospitalized w/in 30 days</b>	<b>8 %</b>	<b>12 %</b>	<b>0.05</b>
<b>Re-hospitalized w/in 90 days</b>	<b>17 %</b>	<b>23 %</b>	<b>0.03</b>
<b>Re-hospitalized w/in 180 days</b>	<b>26 %</b>	<b>31 %</b>	<b>0.09</b>

<b>Variable</b>	<b>Intervention</b>	<b>Control</b>	<b>Adjusted P-value</b>
<b>Readmit for Same Dx w/in 30 days</b>	<b>3 %</b>	<b>5 %</b>	<b>0.04</b>
<b>Readmit for Same Dx w/in 90 days</b>	<b>5 %</b>	<b>10 %</b>	<b>&lt;0.01</b>
<b>Readmit for Same Dx w/in 180 days</b>	<b>9 %</b>	<b>14 %</b>	<b>&lt;0.01</b>

<b>Variable</b>	<b>Intervention</b>	<b>Control</b>	<b>P-value</b>
<b>Non-elective mean hospital costs 30 days</b>	<b>\$784</b>	<b>\$918</b>	<b>0.03</b>
<b>Non-elective mean hospital costs 90 days</b>	<b>\$1519</b>	<b>\$2016</b>	<b>0.01</b>
<b>Non-elective mean hospital costs 180 days</b>	<b>\$2058</b>	<b>\$2546</b>	<b>0.03</b>

## Number Needed to Treat (NNT)

On average, for every 17 patients that works with the Transition Coach, one re-hospitalization will be prevented

## Goal Attainment

*“What is one personal goal that is important for you to achieve one month after you get home?”*

## Findings

Patients who worked with the Transition Coach were more likely to achieve their goals around symptom control and functional status

## How to Pay for the Transition Coach?

- Under capitation, incentives are aligned and Transition Coach pays for her/himself
- Under DRG payment, hospitals may invest:
  - 1) to improve JCAHO accreditation scores
  - 2) to better transition “complex older patients (AKA “DRG Losers”) making more capacity for higher revenue patients
- Clinics may invest to improve efficiency
- In some states, APN Transition Coaches can bill for their visits

## Conclusion

- The Care Transitions Intervention appears to improve the quality of care transitions
- Patients who worked with the Transition Coach were able to get their needs met
- Facilitating adoption within leading health care systems

Promising Innovations-Practitioners

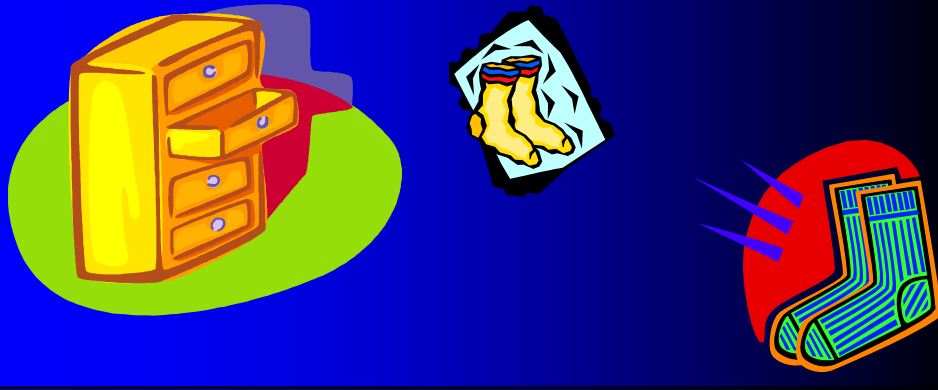
## Promising Innovations-Practitioners

- Society for Hospital Medicine
  - Core competencies for transitional care
  - Delphi Consensus on the ideal hospital discharge
  - AHRQ grant on a discharge “bundle”

## Promising Innovations: Health Care System

## Can Medication Reconciliation Be Done in a Single Setting?

- A warped sock drawer analogy



A New Tool to Characterize  
Transition-Related Med Problems

## Developing a New Tool: Guiding Principles

- Patient-centered
- Applicable across a variety of health settings
- Identify patient- and system-level factors
- Items need to be actionable at point of care

## Introducing the Medication *Discrepancy* Tool (MDT)

- Patient-level factors
- System-level factors
- Steps taken to resolve

## Study Results

- Post-hospital medication review
- Compare what hospital told patient to take versus what patient was actually taking
- One MDE completed for each discrepancy

## 14 Percent Experienced 1+ Med Discrepancies

- 62 percent experienced one
- 25 percent experienced two
- 8 percent experienced three
- 5 percent experienced four or more

## Two Important Terms

- *Intentional non adherence*
  - Patient understands what has been recommended but chooses not to follow advice
- *Non-intentional non adherence*
  - Patient did not know what medications to take (aka knowledge deficit)

## Patient-Level Contributing Factors

Non-intentional non-adherence	34%
Money/financial barriers	6%
Intentional non-adherence	5%
Didn't fill prescription	5%
Other	1%
Subtotal	51%

## System-Level Contributing Factors

D/C instructions incomplete/illegible	16%
Conflicting info from different sources	15%
Duplicative prescribing	8%
Incorrect label	4%
Other	7%
Subtotal	49%

## 30-Day Hospital Re-Admit Rate

Patients with identified med discrepancies	14.3%
Patients with <u>no</u> identified med discrepancies	6.1%

P=0.041

## Conclusion

- New insights into types of medication problems that occur during transitions
- Important implications for patient safety, quality of care, and cost containment
- National patient safety efforts should extend to patients receiving care across settings

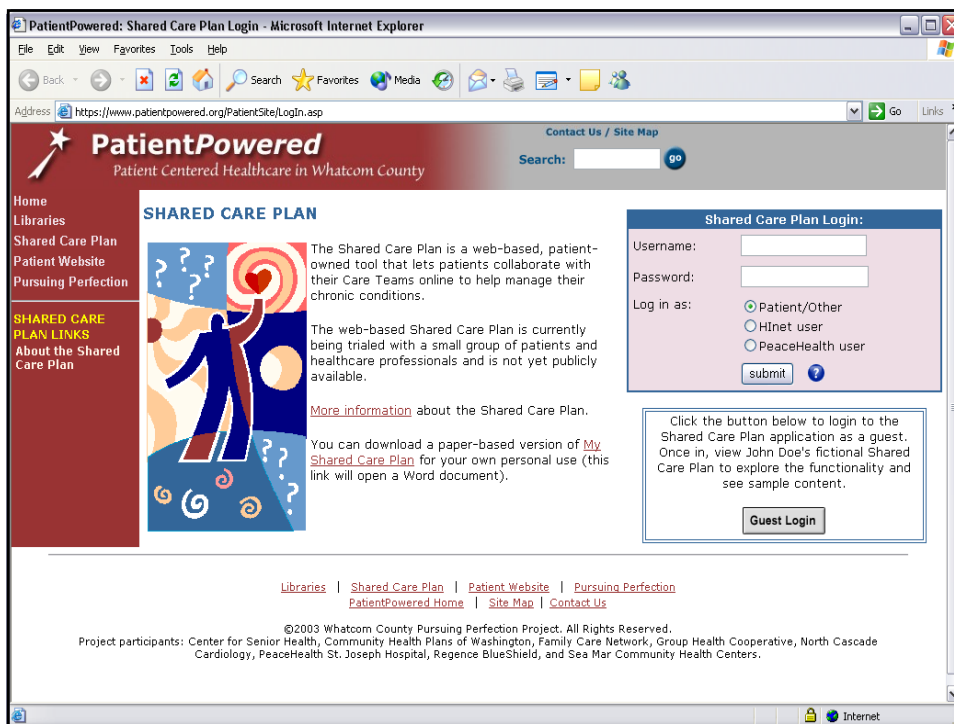
## Promising Innovations-HIT

## Health Information Technology

- Necessary but not sufficient
- Potential for improving safety and quality
- Need to extend beyond the hospital and clinic

## Pursuing Perfection Whatcom County

- Shared care plan on a secured Web site accessible by clinicians and the patient
- <http://www.patientpowered.org/login.aspx>



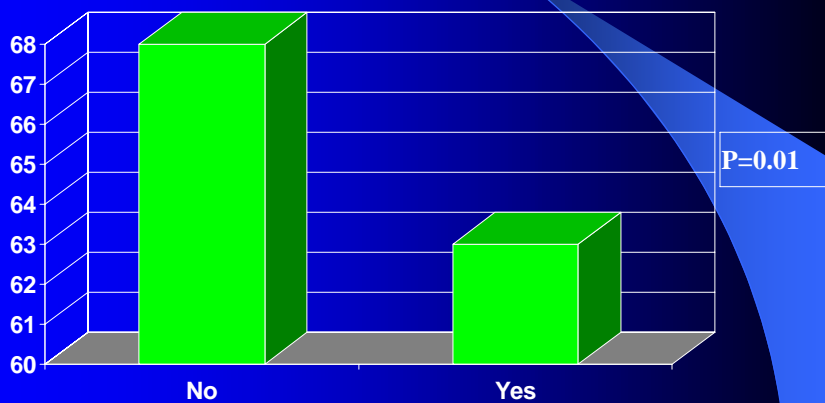
## Care Transitions Measure (CTM)

- Items derived from focus groups
- Items predict recidivism and discriminate among hospitals
- At least 6 QI projects are using the measure
- To date, over 400 requests for permission

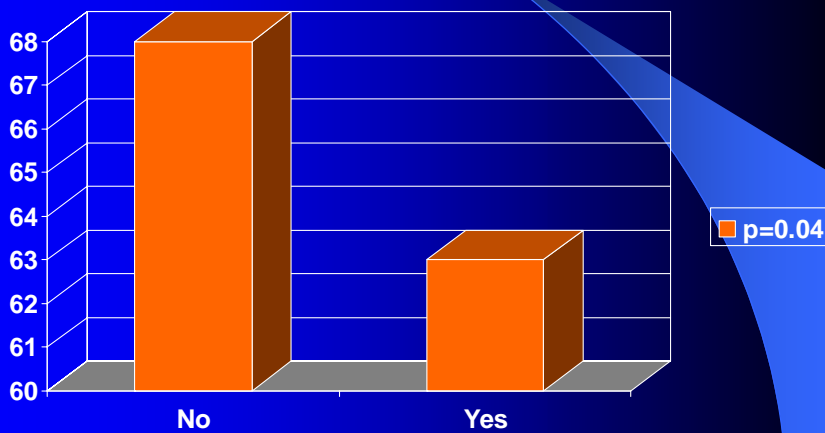
## CTM Items

- *When I left the hospital, I had a good understanding of the things I was responsible for in managing my health*
- *When I left the hospital, I clearly understood the purpose for taking each of my medications*
- *The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital*

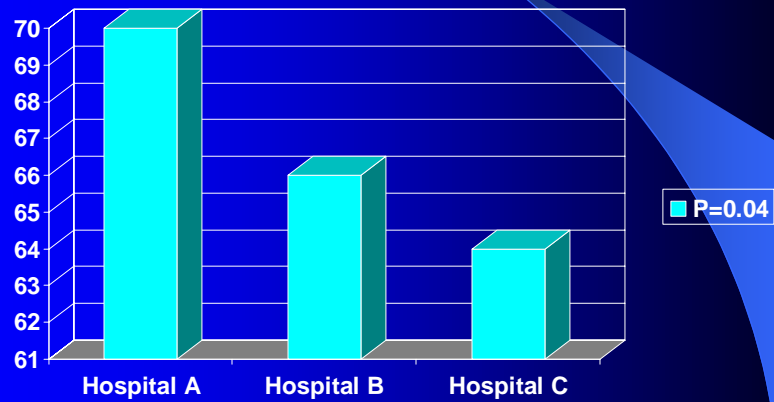
## Return to the Emergency Department for the Same Problem



## Return to the Hospital for the Same Problem



## CTM Scores by Facilities Known To Differ in Care Coordination



Tie into National Efforts

## National Efforts

1. Health Information Technology
2. JCAHO
3. National Quality Forum
4. Institute of Medicine
5. Centers for Medicare and Medicaid Services (CMS)

## Health Information Technology

- Need to articulate unique needs of older adults
  - Prominently feature family caregivers
  - Physical and cognitive function
  - Access to care delivered in other settings
- Federal study underway examining extension of HIT to post-acute and long-term care settings (UCHSC)

## CMS Conditions of Participation

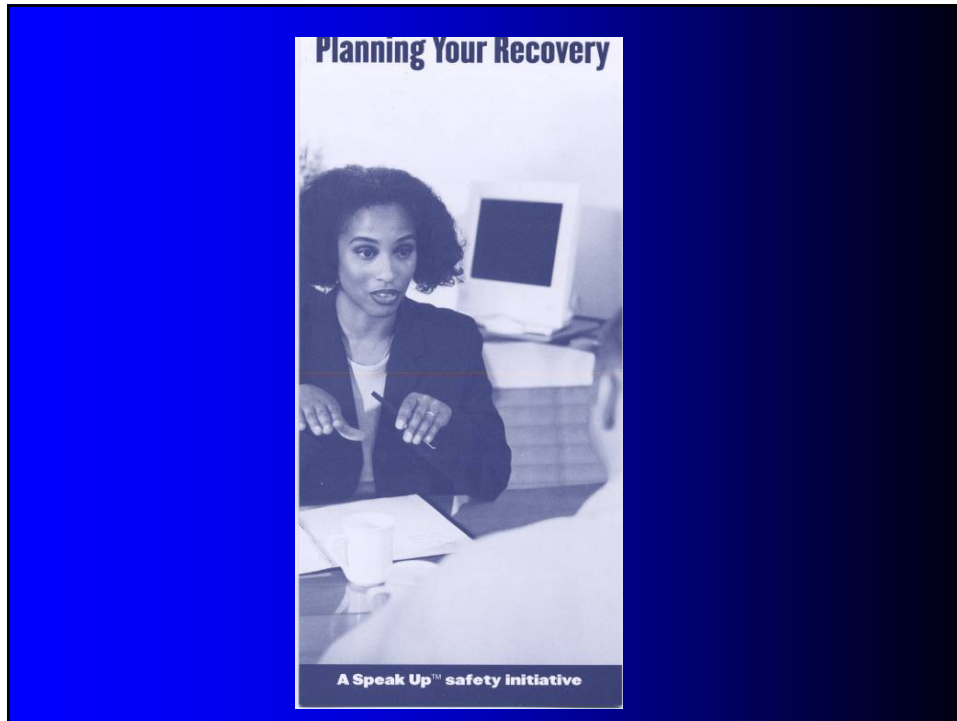
*As needed, the patient and family members or interested persons must be counseled to prepare them for post-hospital care.*

*The hospital must arrange for the initial implementation of the patient's discharge plan.*

*The hospital must transfer or refer patients, along with necessary medical information, to appropriate facilities, agencies, or outpatient services, as needed, for follow-up or ancillary care.*

## JCAHO

- Patient Safety Goal—medication reconciliation
- Tracer Methodology
  - Observe discharge process
  - Assess patient's experience once home
- “Speak Up” campaign



## Institute of Medicine and National Quality Forum

- IOM Report chose Transitional Care as one of three priority areas (target is CMS)
- NQF issued call for care coordination measures
- We now have a critical mass of measures
- Health systems are starting own P4P

## CMS Uniform Assessment Tool

- Mandated by Congress
- Vision paper submitted to CMS
- Focus hospital discharge to post-acute care
- Three primary purposes:
  - Facilitate transfer to appropriate setting
  - Improve information transfer
  - Longitudinal outcomes assessment

## [www.caretransitions.org](http://www.caretransitions.org)

- Care Transitions Measure (CTM)
- Care Transitions Intervention
  - Manual
  - Video clips/ Order DVD
  - Tools for patients and caregivers
- Medication Discrepancy Tool (MDT)
- Much much more....