A Tale of Two Projects: RED & BOOST

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Boston Medical Center
Care Transitions Seminar
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Westborough, MA

Rehospitalizations among Patients in the Medicare Fee-for-Service Program

Stephen F. Jencks, M.D., M.P.H., Mark V. Williams, M.D.,
and Eric A. Coleman, M.D., M.P.H.

30 Day Rehospitalization Rates

All discharges	19.6%
Medical discharges	21.1%
Surgical discharges	15.6%

N Eng J Med 2009;360:1418-28

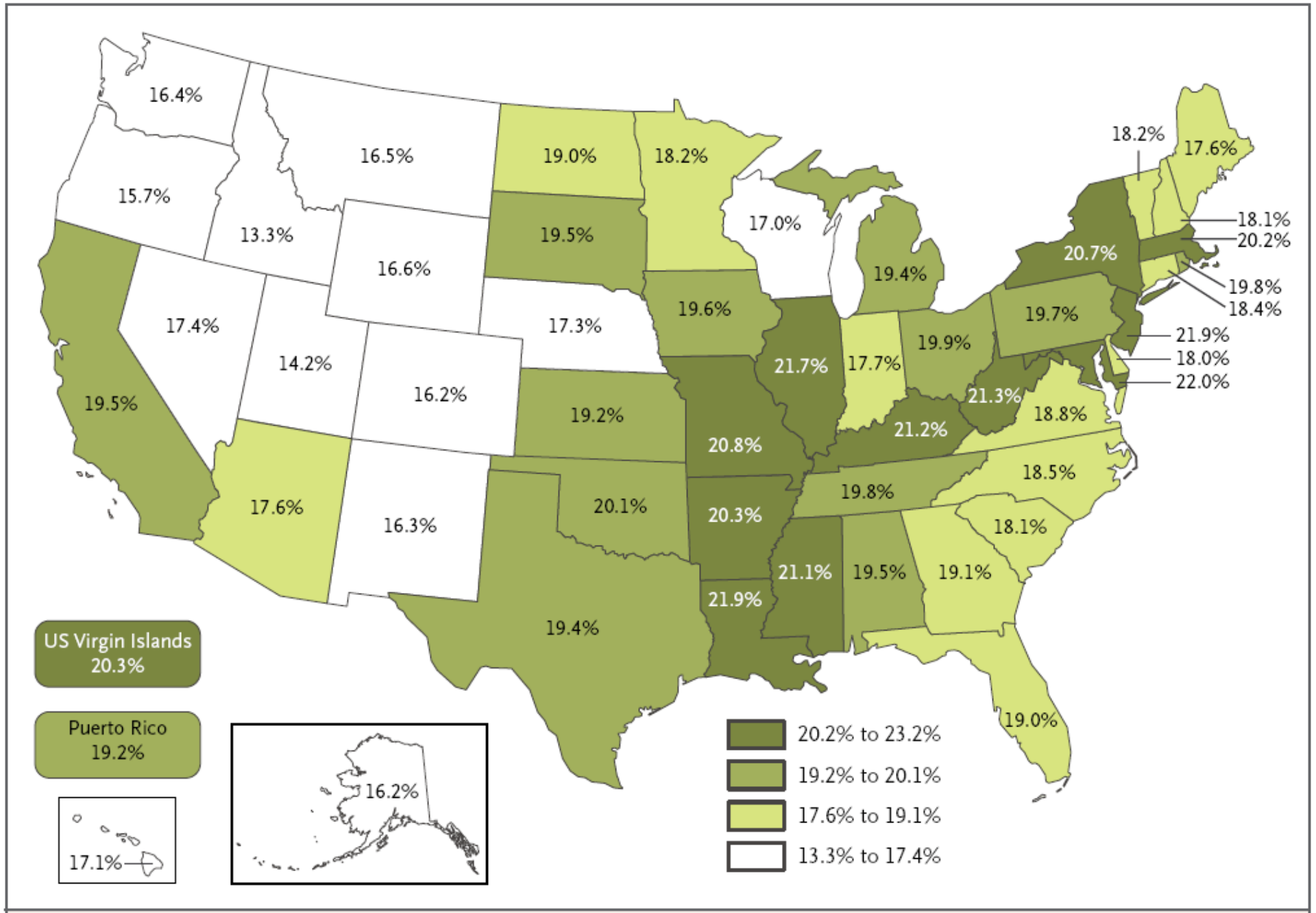
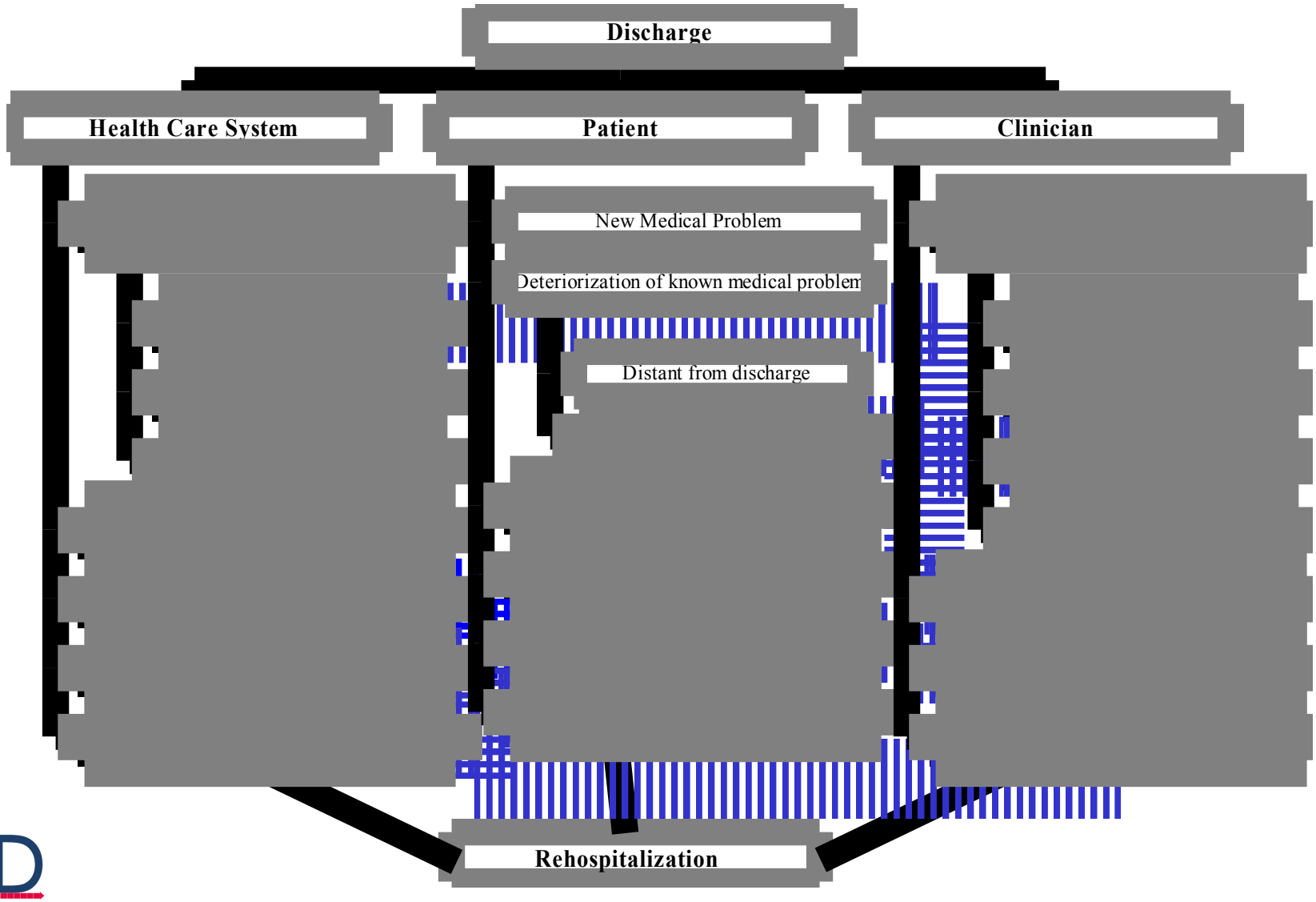


Figure 1. Rates of Rehospitalization within 30 Days after Hospital Discharge.

N Eng J Med 2009;360:1418-28

Is readmission a marker of poor quality care?



PROJECT RED
Re-Engineered Discharge

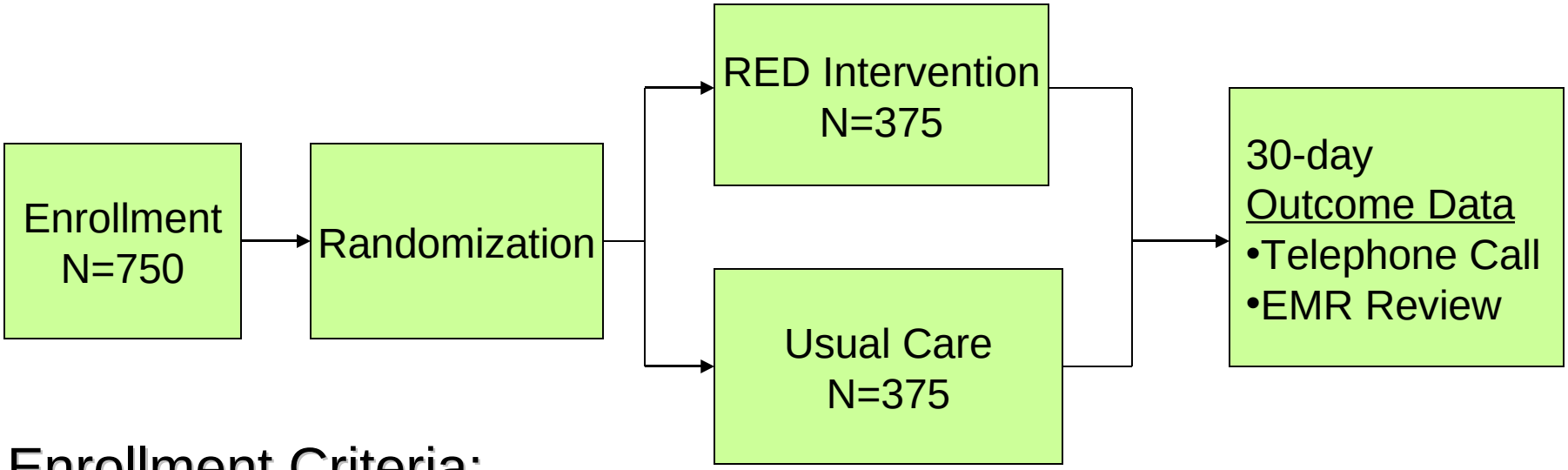
Introducing Project RED

- AHRQ Funded
- Brian Jack, MD = Principle Investigator
- Boston University School of Medicine/ Boston Medical Center
- Principle results published in *Annals of Internal Medicine*, Feb 3, 2009.

Slides courtesy of Brian Jack, MD

PROJECT RED
Re-Engineered Discharge

Methods- Randomized Controlled Trial



Enrollment Criteria:

- English speaking
- Have telephone
- Able to independently consent
- Not admitted from institutionalized setting
- Adult medical patients admitted to Boston Medical Center (urban academic safety-net hospital)

3 Components of RED Intervention

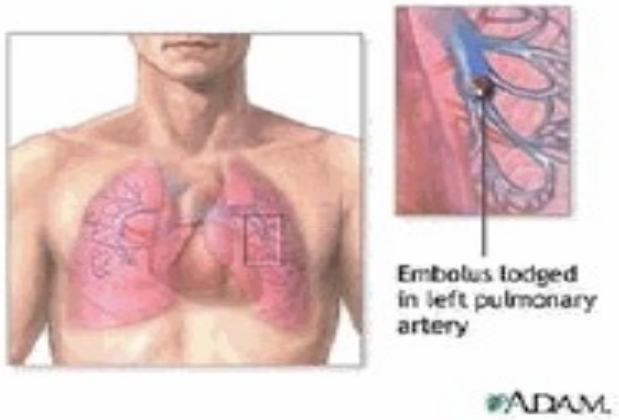
- In Hospital – Nurse Discharge Advocate (DA)
  - Interacts with care team: medication reconciliation and national guidelines
  - Patient preparation for discharge
- Prepare After Hospital Care Plan (AHCP)
- After Discharge – Clinical Pharmacist Call
  - Follow-up call @ 2-4 days
  - Reinforce dc plan and review medications

After Hospital Care Plan

My Medical Problem:

Pulmonary Embolism

A pulmonary embolism is a blood clot in your lungs.



Please remember it is best to:

- Take walks, get exercise.
- Eat healthy food.
- Watch for signs of swelling in your legs.
- Take your medications as prescribed and carry them with you.
- See your doctor and ask questions.

Analysis

Primary outcome:

- Total hospital utilization (readmissions plus ED visits)
  - Intention-to-treat
  - Poisson tests for significance
  - Cumulative hazard curves generated for time to multiple events

Secondary outcomes:

- PCP follow-up rate, identified dc diagnosis, identified PCP name, self-reported preparedness for discharge
  - Proportions tests for significance

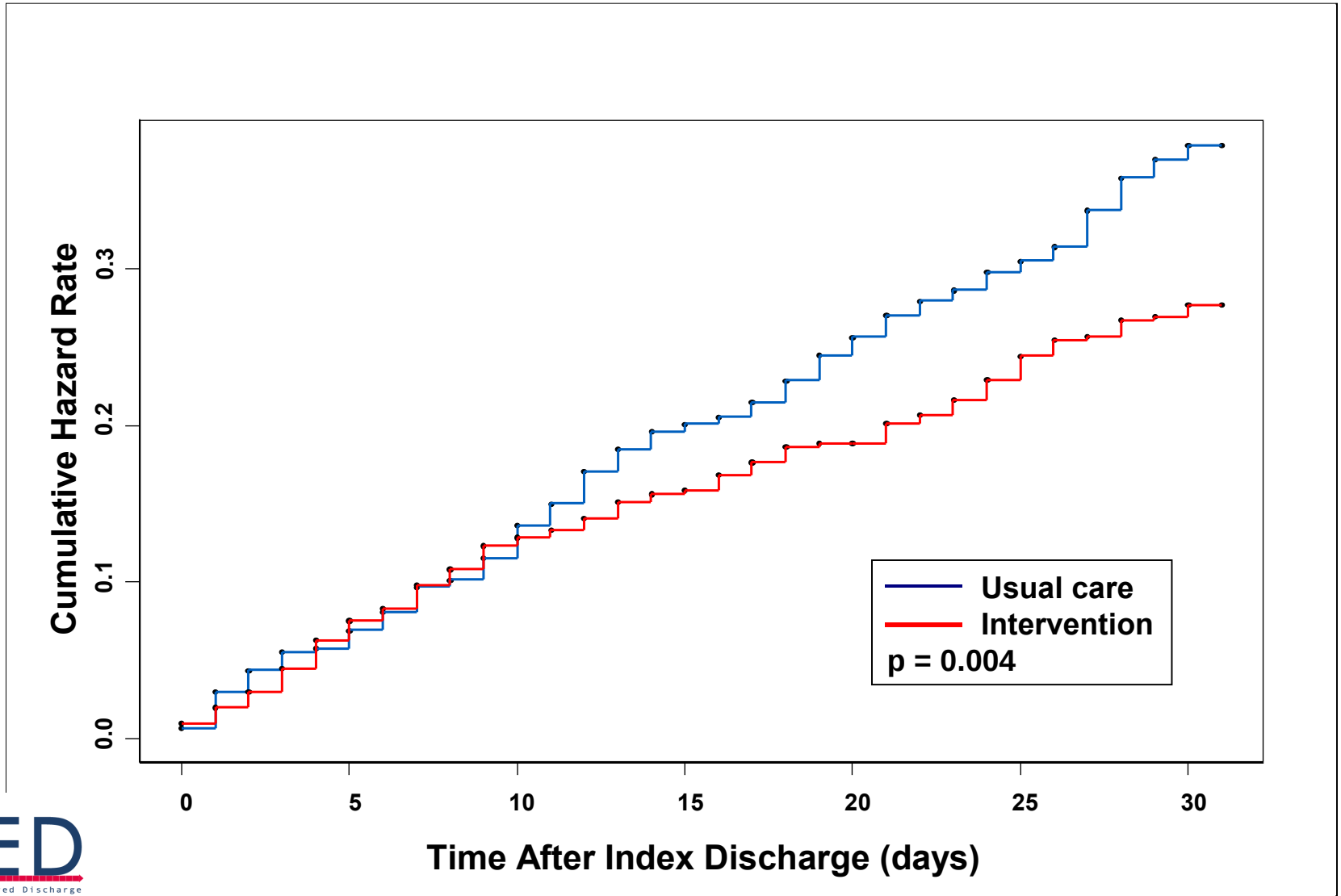
Primary Outcome:

Hospital Utilization within 30d after discharge

	Usual Care (n=368)	Intervention (n=370)	P-value
Hospital Utilizations *			
Total # of visits	166	116	
Rate (visits/patient/month)	0.451	0.314	0.009
ED Visits			
Total # of visits	90	61	
Rate (visits/patient/month)	0.245	0.165	0.014
Readmissions			
Total # of visits	76	55	
Rate (visits/patient/month)	0.207	0.149	0.090

* Hospital utilization refers to ED + Readmissions

Cumulative Hazard Rate of Patients Experiencing Hospital Utilization 30 Days After Index Discharge



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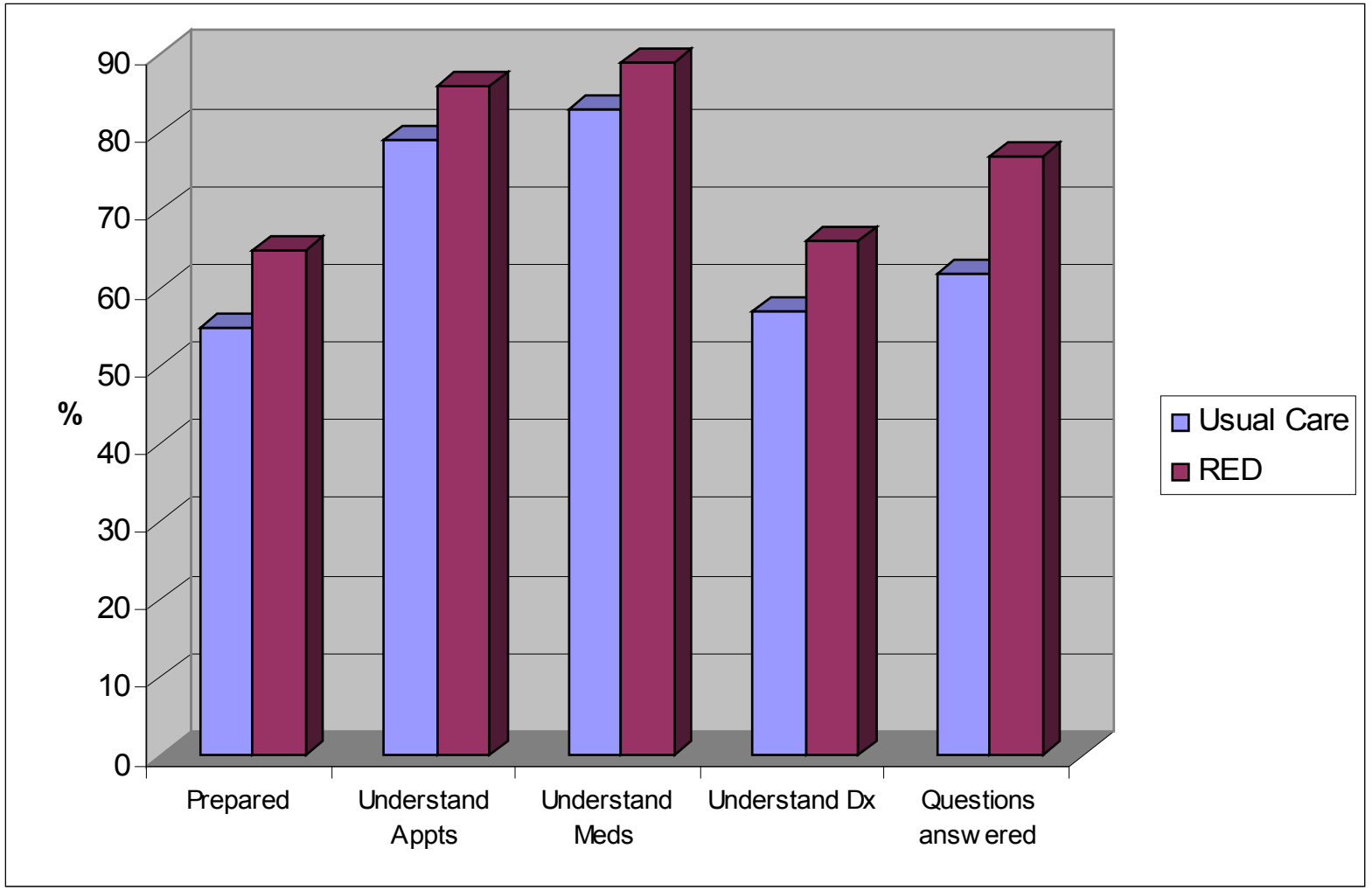
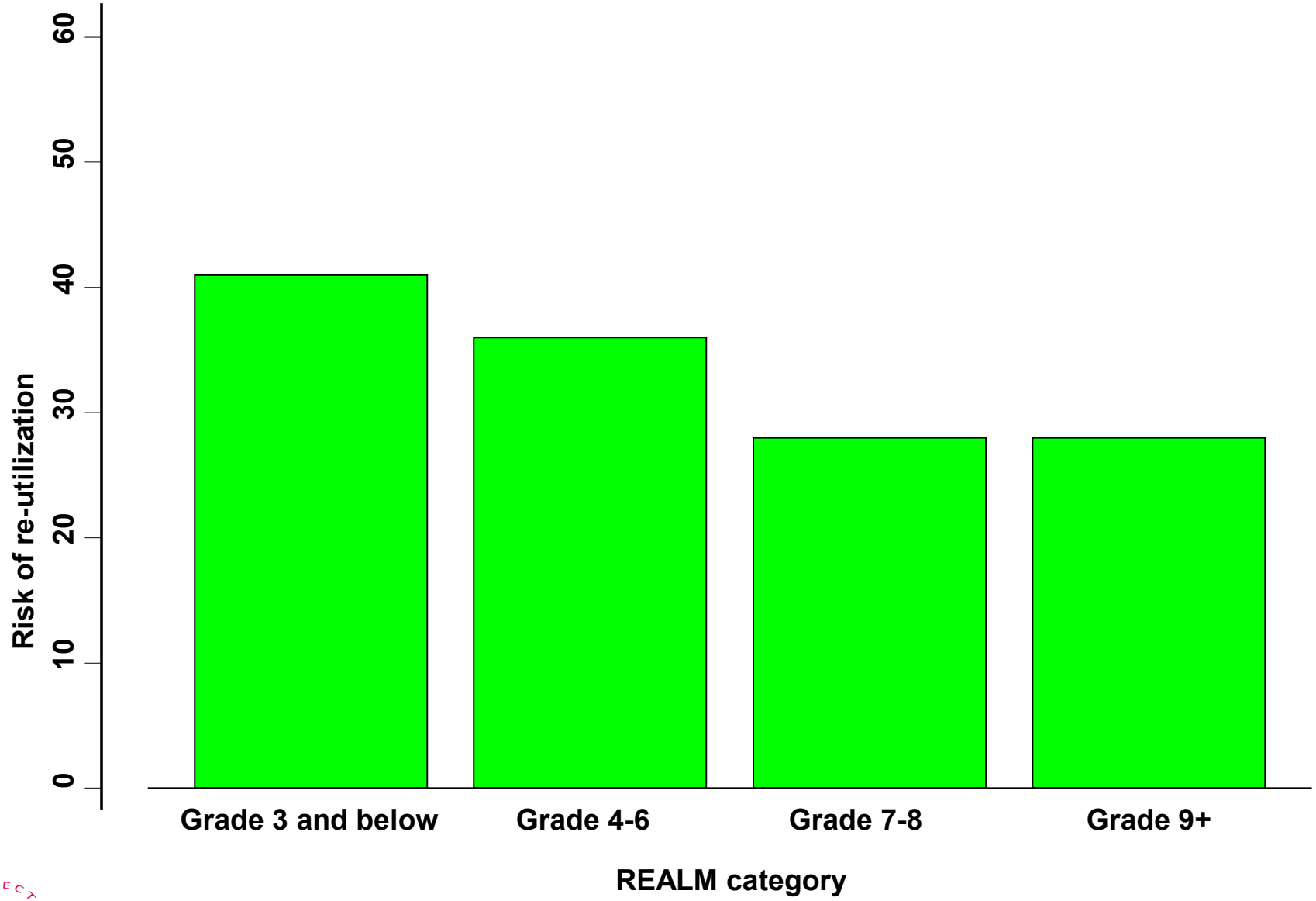
Re-Engineered Discharge

Self-Perceived Readiness for Discharge

(30 days post-discharge)



Risk of hospital re-utilization by health literacy category



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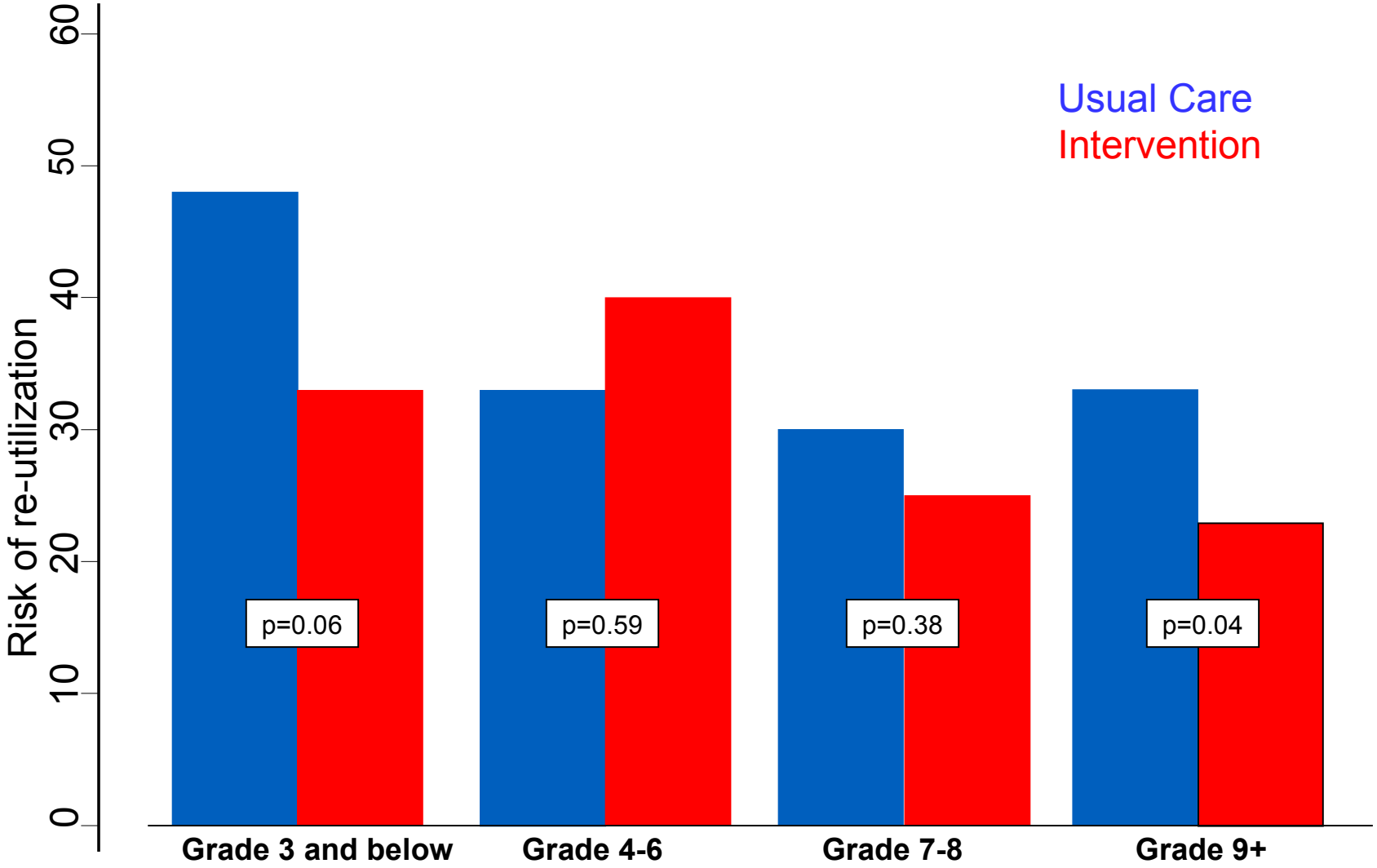

PROJECT RED
Re-Engineered Discharge

Conclusions or the RCT

The Re-Engineered Discharge:

- Was successfully delivered using:
  - RED protocols
  - AHCP
- Improved ‘Readiness for Discharge’
- Improved PCP follow-up rate
- Decreased hospital use
  - 30% overall reduction
  - NNT = 7.3

Implications

The components of the RED should be provided to all patients as recommended by the National Quality Forum, Safe Practice #11.

Introducing Project BOOST

- Funded by the John A Hartford Foundation
- Grant to the Society of Hospital Medicine
- Principle Investigator = Mark Williams, MD
- Implementation project

Society of Hospital Medicine

project BOOST
Better Outcomes for Older adults through Safe Transitions

Project BOOST

- Developed a project team and national advisory board
- Developed a toolkit and implementation guide with web resources
- Rolled out via mentored implementation to 6 pilot sites across USA
- Now in phase 2: full roll out to 24 total sites

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September 22,2008
Los Angeles, CA

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Quality Improvement Resource Rooms

Leading Hospital Quality: Resources to Improve Inpatient Outcomes

The Quality Improvement (QI) Resource Rooms present the information and tools needed to lead quality improvement projects. This stepwise guide begins with setting goals and continues through post-implementation tasks including analyzing outcomes and sustaining improvements. Content is arranged so you can freely navigate to and within sections, review what others have done, exchange ideas with teams doing similar QI work, and pose questions to subject matter experts.

Each room includes information on:

- How to use the resources
- Getting started
- Project planning and implementation
- Monitoring & learning
- Continuing to improve
- Sample protocols, order sets, and other tools

Intervention Areas

Acute Coronary Syndrome
BOOSTing Care Transitions
Glycemic Control
Heart Failure
Venous Thromboembolism
Antimicrobial Resistance*
Stroke*

QI Basics

QI Primer
QI Web Resources
Core Competencies

Professional Development

Quality Pre-Course
VTE Prevention Collaborative

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Overview

The BOOSTing (Better Outcomes for Older adults through Safe Transitions) Care Transitions resource room provides a wealth of materials to help you optimize the discharge process at your institution. We developed this through support from the John A. Hartford Foundation (Read more about Project BOOST). We based the approach and tools on principles of quality improvement, evidence-based medicine as well as personal and institutional experiences. Of note, we are piloting the contents at multiple hospitals and will be constantly revising the resource room based on this invaluable experience.

This resource room will help you to:

- Analyze current workflow processes
- Select effective interventions
- Redesign work flow and implement interventions
- Educate your team on best practices
- Promote a team approach to safe and effective discharges
- Evaluate your progress and modify your interventions accordingly

Each section of this resource is described below.

Principal BOOST Intervention Tool: The TARGET

- TARGET: Tool for Adjusting Risk: A Geriatric Evaluation for Transitions
  - 7P Risk Scale
    - Prior hospitalization
    - Problem medications
    - Punk (depression)
    - Principal diagnosis
    - Polypharmacy
    - Poor health literacy
    - Patient support

Each associated with risk specific interventions

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Better Outcomes for Older adults through Safe Transitions

Universal Patient Discharge Checklist

- GAP assessment
- Medications reconciliation
- Medication use and side effects reviewed*
- Confirm understanding of prognosis, self-care, and symptoms requiring immediate medical attention*
- Best Practice guidelines assessment
- Discharge plan completed, taught, and provided to patient/caregiver
- Discharge communication provided to post-hospitalization care provider
- Documented receipt of discharge information from principal care providers

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Better Outcomes for Older adults through Safe Transitions

*Using Teach Back with patient/caregiver

The General Assessment of Preparedness: The GAP

- Caregivers and social support circle for patient
- Functional status evaluation completed
- Cognitive status assessed
- Abuse/neglect
- Substance abuse
- Advanced care planning addressed and documented

On Admission

- Functional status
- Cognitive status
- Access to meds
- Responsible party for ensuring med adherence prepared
- Home preparation for patient's arrival
- Financial resources for care needs
- Transportation home
- Access (e.g. keys) to home

Nearing Discharge

- Understanding of dx, treatment, prognosis, follow-up and post-discharge warning S/S (using Teach Back)
- Transportation to initial follow-up

At Discharge

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Better Outcomes For Older Adults Through Safe Transitions

Patient PASS

Patient Preparation to Address Situations (after discharge) Successfully

I was in the hospital because _____

If I have the following problems ...

1. _____
2. _____
3. _____
4. _____
5. _____

I should ...

1. _____
2. _____
3. _____
4. _____
5. _____

Important contact information:

1. My primary doctor:
   _____
   (____) _____
2. My hospital doctor:
   _____
   (____) _____
3. My visiting nurse:
   _____
   (____) _____
4. My pharmacy:
   _____
   (____) _____
5. Other:
   _____
   _____

My appointments:

1. _____
   On: __/__/___ at __:__ am/pm
   For: _____
2. _____
   On: __/__/___ at __:__ am/pm
   For: _____
3. _____
   On: __/__/___ at __:__ am/pm
   For: _____
4. _____
   On: __/__/___ at __:__ am/pm
   For: _____

Tests and issues I need to talk with my doctor(s) about at my clinic visit:

1. _____
2. _____
3. _____
4. _____
5. _____

I understand my treatment plan. I feel able and willing to participate actively in my care:

_____
Patient/Caregiver Signature

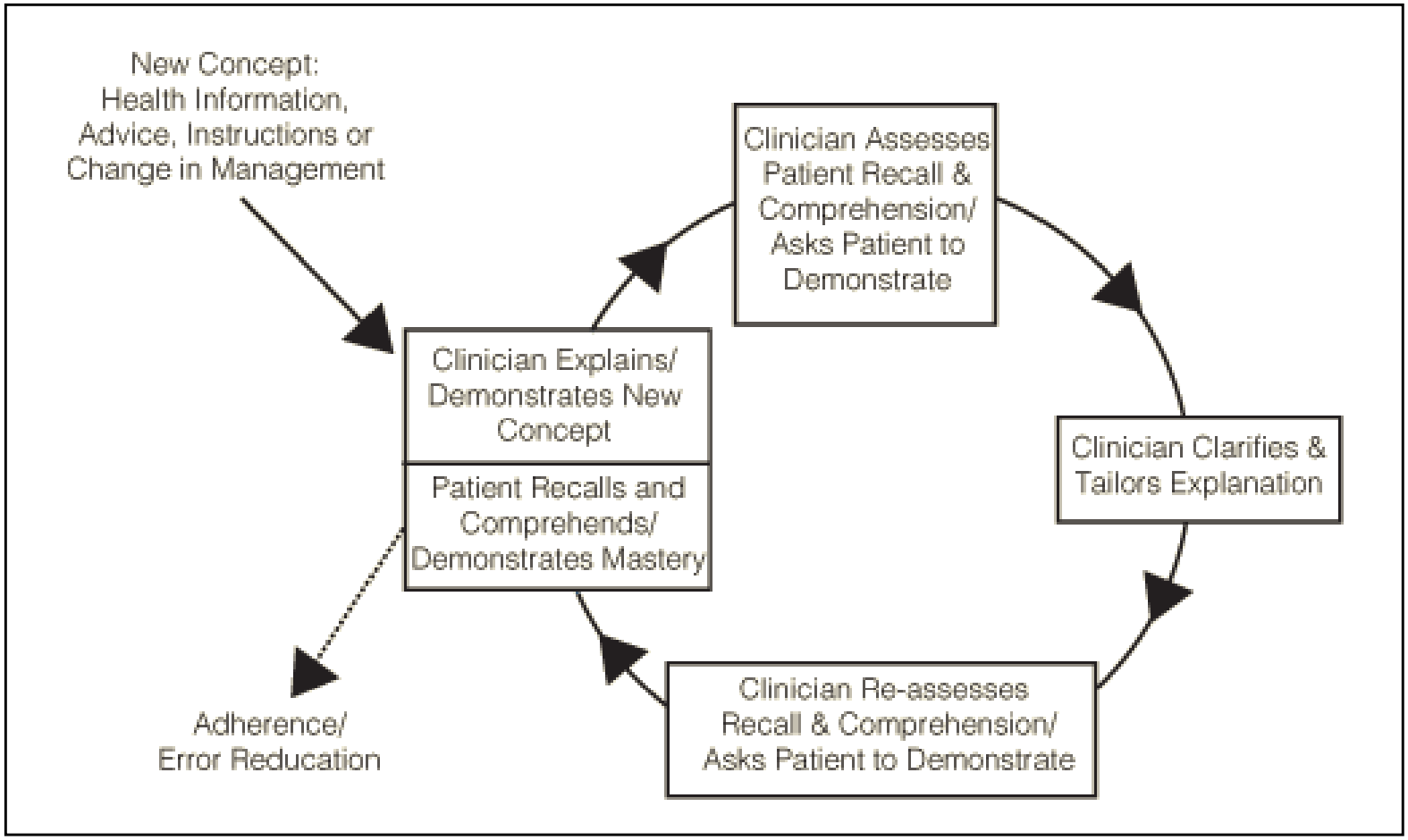
_____
Provider Signature

____/____/_____
Date

Other instructions:

1. _____
2. _____
3. _____

Teach Back



Schillinger D et al. Closing the loop: physician communication... *Arch Intern Med.* 2003;163:83-90.

Thanks to my RED and BOOST colleagues!