Improving Transitions of Care – Project BOOST and more

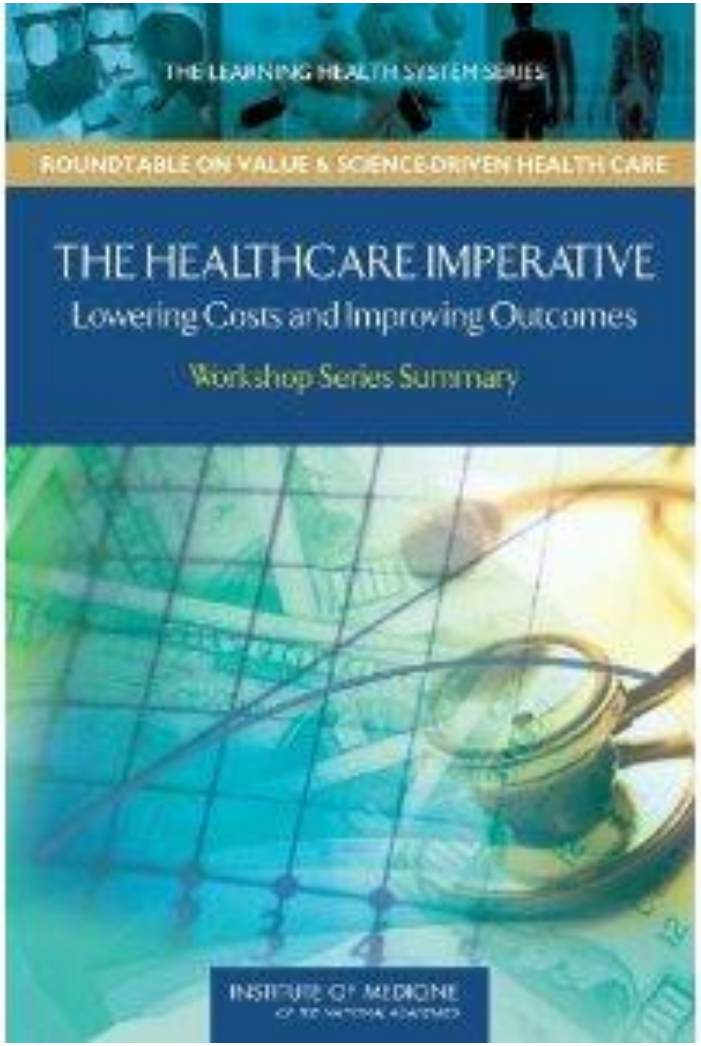
Greg Maynard MD, MSc
Clinical Professor of Medicine
Director, Center for Innovation and Improvement Science
University of California, San Diego

CMO, Society of Hospital Medicine

NSW Ministry of Health Master Class – Thursday, November 14th, 2013

UC San Diego Health System

Transforming the Health Care System, Why?



http://www.iom.edu/Reports/2011/The-Healthcare-Imperative-Lowering-Costs-and-Improving-Outcomes.aspx

UC San Diego
HEALTH SYSTEM

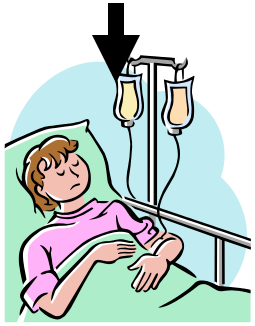
Every system is perfectly designed to get the results it gets.

- Dr. Paul Batalden

UC San Diego
HEALTH SYSTEM

Why Patients Get Readmitted: A **DESIGN** RCA

Adapted from Chris Kim, MD



On Admission:

- Poor communication with prior providers
- Redundant testing
- Inadequate medication information
- Limited efforts to identify risks and barriers to successful transition

During Hospitalization:

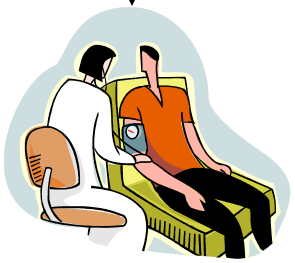
- Poor communication among members of care team, including outpatient
- Delays in initiating interventions to improve transitions
- Insufficient involvement of patient/caregiver in discharge education/plan
- Failures to clarify goals of care

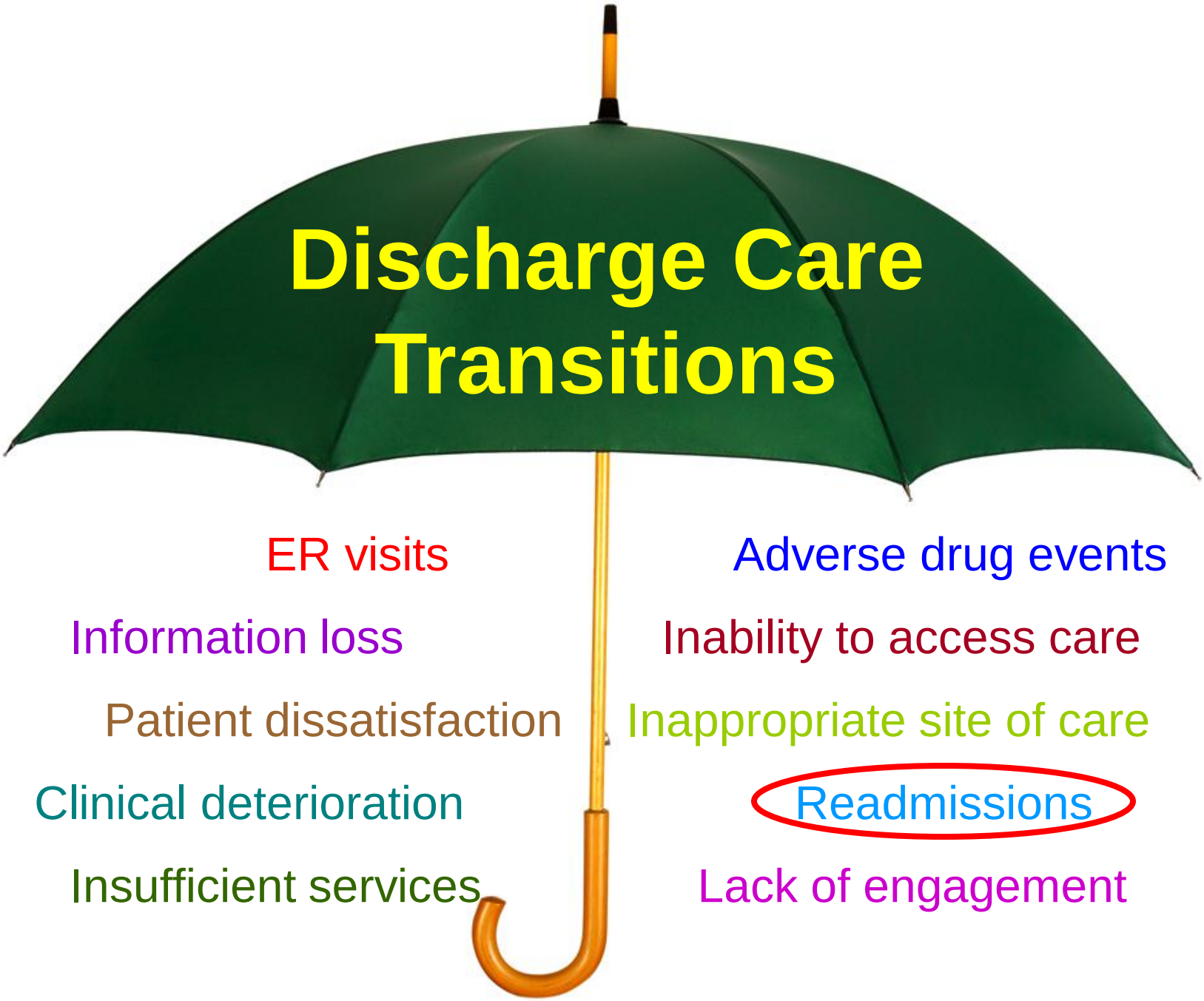
At Discharge:

- Appointments made when patient/caregiver cannot attend
- Discharge instructions cumbersome
- Inadequate information handoffs
- Error prone med rec
- Rushed education

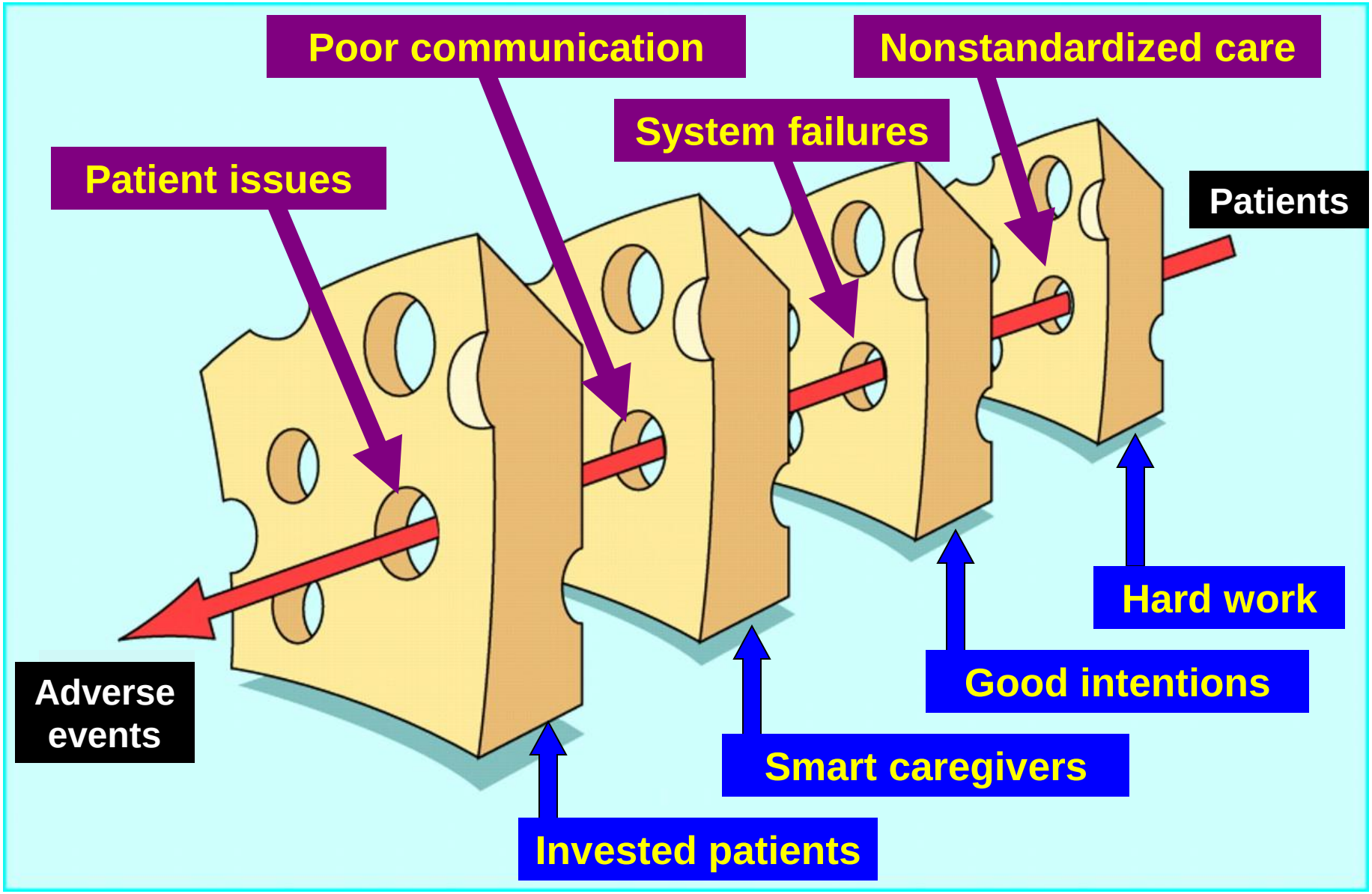
Post-Discharge:

- Little/Late/No contact with patient post-discharge (hospital/PCP or other caregiver)
- Patients/caregivers unaware of how to manage acute problems
- ***LIFE HAPPENS* (social, financial, logistical, clinical barriers)**




Discharge Care Transitions
ER visits
Adverse drug events
Information loss
Inability to access care
Patient dissatisfaction
Inappropriate site of care
Clinical deterioration
Readmissions
Insufficient services
Lack of engagement

Traditional Care Transitions



Modified from Reason, J. BMJ 2000

A Brief Primer on BOOST

- 2006 to SHM from the John A. Hartford Foundation.
- Better Outcomes for Older Adults Through Safe Transitions
- Identifies risk factors for failed discharge care transitions, standardizes interventions, improves patient preparation for discharge, and ensures access to appropriate and timely aftercare.
- Mentored implementation
- Initial 6 sites enrolled 2008
- Now over 200 sites
- Partnerships with Beacon, BC/BS, QIOs
- Better Outcomes by Optimizing Safe Transitions

Key Components of BOOST Toolkit

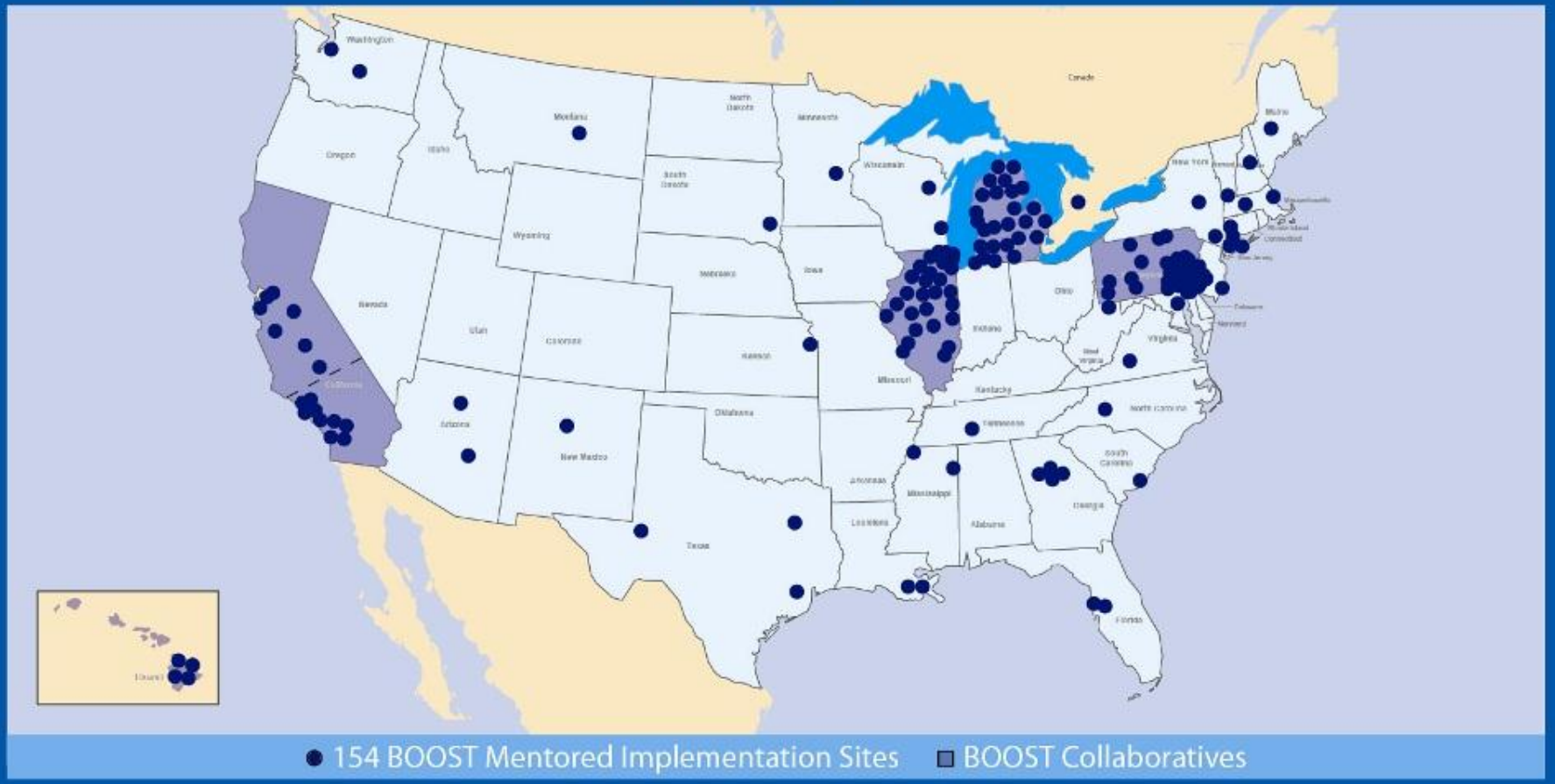
- **Standardized Risk Assessment: Tool for Identification of High Risk Patients (8Ps)**
- **Patient-centered Preparation for Discharge**
  - Checklists- GAP, Universal Patient Checklist
  - Use of Teachback Technique
  - Medication Reconciliation
  - Patient-friendly discharge forms
    - Principal Care Provider identification
    - Who to contact with questions/concerns
    - Warning signs/symptoms and how to respond
    - Outpatient appointments
    - Pending tests
- **Standardized PCP communication**
- **72 hour follow-up call for high risk patients**

- **Mentored Implementation**

UC San Diego
HEALTH SYSTEM

SHM PROJECT BOOST MENTORED IMPLEMENTATION SITES

As of February 2013



shm project BOOST
Better Outcomes by Optimizing Safe Transitions

www.hospitalmedicine.org/boost

What It Means to Be BOOST!

Official BOOST Sites get:

- Kickoff training (2-day)
- Access to free and “firewalled” resources
- 12-18 months of mentorship
  - Longitudinal 1:1 coaching, e-mail access
- Group webinars
- Robust community
- Data and Reporting Center
- A site visit

BOOST Tools/Resources

Tools

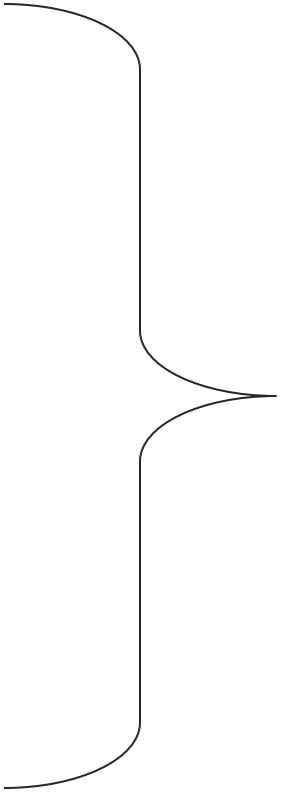
- Risk assessment tool
- Discharge preparedness assessment
- Patient-centered discharge education tools
- Teach Back

Resources

- Workbook
- Data collection tools
- Webinars
- Listserv access
- Online community
- Web-based resources
- ROI calculator
- Newsletters
- Teach Back Curriculum
- Mentors

8P Risk Assessment

- Prior hospitalization
- Problem medications
- Psychological
- Principal diagnosis
- Polypharmacy
- Poor health literacy
- Patient support
- Palliative Care



IDENTIFY

MITIGATE

COMMUNICATE

UC San Diego
HEALTH SYSTEM

Risk for Readmission Assessment and Intervention Checklist (Revised 2/6/12)

Date of Assessment_____ Date of Discharge _____ ☐ Discharge Advocate List

Risk for Readmission Score: _____ ☐ CTI Referral ☐ Accepted CTI

Patient Label Here

Score Possible/Earned	Risk	Need / Complete	Risk Specific Interventions
3 points (30d), 2 points (60d), 1 point (6m)/	**Prior Hospitalization** (non-elective in the last 6 months) **# Hospitalizations** _____ **Last Discharged** _____ **# ED Visits** _____	☐☐	Identify reasons for re-hospitalization in the context of prior hospitalization in interdisciplinary rounds ☐☐ Referral to Case Management
1 point or automatic high risk for CHF/	**Principal Diagnosis** (Stroke, Diabetes, Heart Failure, COPD, Cancer, CAP Pneumonia, Acute MI)	☐☐	Stroke Education with Teach Back ☐☐ Diabetes Education with Teach Back ☐☐ Heart Failure Education with Teach Back ☐☐ COPD Education with Teach Back ☐☐ Cancer Education with Teach Back ☐☐ Pneumonia Education with Teach Back ☐ Vaccination Not Needed ☐ Vaccination Declined ☐☐ Acute MI Education with Teach Back
1 point/	**Problem Medications** (Insulin, oral hypoglycemics, anti-coagulation, high dose narcotics)	☐☐	Pharmacy Consult ☐ Referred ☐☐ Pain Consult ☐ Referred ☐☐ Prophylaxis for Narcotic Side Effect ordered at Discharge
1 point/	**Polypharmacy** (>8 routine medications) **# Medications** _____	☐☐	Pharmacy Consult ☐ Referred
1 point/	**Psychiatric Complications** (acute psychiatric issues, history of psychiatric disease that hinders self-care abilities, history alcohol/drug abuse)	☐☐	Prior to Admission Psychiatric Medications Reconciled ☐☐ Psychiatric Consult for Acute Psychiatric Needs ☐☐ Community Resources Provided for Psychiatric Follow-up ☐☐ Social Work Consult for Alcohol/Drug Abuse Resources ☐ Patient Accepts ☐ Patient Declines
1 point/	**Poor Health Literacy** (literacy screening tool) How often do you need to have someone help when you read instructions or other written material from your doctor or pharmacist? 1. Never 2. Rarely 3. Sometimes 4. Often 5. Always. *If more than 2. (sometimes or greater, 1 point is earned)*	☐☐	Identify Barriers to Learning ☐☐ Identify Key Learner _____ ☐☐ Identify Co-Learner _____ ☐☐ Aftercare 1:1 Teach Back Coaching at discharge
2 points/	**Patient Support** (absence of a caregiver to assist with discharge and home care)	☐☐	Patient Meeting (MD/interdisciplinary team @bedside to collaborate)
1 point/	**Palliative Care**	☐☐	Howell Service Consult

High Risk for Readmission Universal Interventions	
☐ PCP Verification	☐ PCP Confirmed ☐ PCP Documented in AVS ☐ PCP Incorrect ☐ Correct PCP Updated (x36331) ☐ No PCP ☐ Care Coordination Provides PCP List ☐ New PCP Selected
☐ Follow-up Appointment Scheduled	☐ Within 7 Days Post Discharge and Documented in AVS ☐ Within 14 Days Post Discharge and Documented in AVS
☐ Med reconciliation verified	☐ Pharmacist Verification ☐ RN Verification No Duplicates
☐ Day of Discharge Checklist	☐ Day of Discharge Checklist Complete ☐ 1:1 Teach Back Coaching at Discharge
☐ 72 hour post discharge call back	☐ Referred to Care Coordination
☐ Discharge Summary Sent to PCP	☐ Valid Fax # in EPIC ☐ MD Notified to Send Discharge Summary ☐ No Valid Fax # in EPIC ☐ Authorization for Release of PHI Faxed to x37128

UC San Diego Health System

Interventions to mitigate risk

- GENERAL
  - Early follow up, making appointment in conjunction with patient
  - Follow up phone call within 24 hours
  - Teach back

- RISK-SPECIFIC
  - Pharmacy / medication management consultation for polypharmacy of problem medications
  - Triggering pre-existing protocols
    - (eg, make sure CHF discharge module is utilized)

UC San Diego
HEALTH SYSTEM

The Teach Back Method

NEW CONCEPT: Health information, advice, instructions, or change in management

Assess patient comprehension / Ask patient to demonstrate

Explain new concept / Demonstrate new skill

Patient recalls and comprehends / Demonstrates skill mastery

Clarify and tailor explanation

Re-assess recall and comprehension / Ask patient to demonstrate

Adherence / Error reduction

Modified from Schillinger, D. et al. *Arch Intern Med* 2003;163:83-90

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

Patient-friendly Discharge Document

- Form, plus a patient-centered med list, goes home with the patient
- Use as guide for discharge teaching

- Includes several key components:
  - Hospital Diagnosis
  - Warning signs
  - F/u information
  - Who to contact with issues

UC San Diego
HEALTH SYSTEM

project BOOST
Better Outcomes For Older Adults Through Safe Transitions

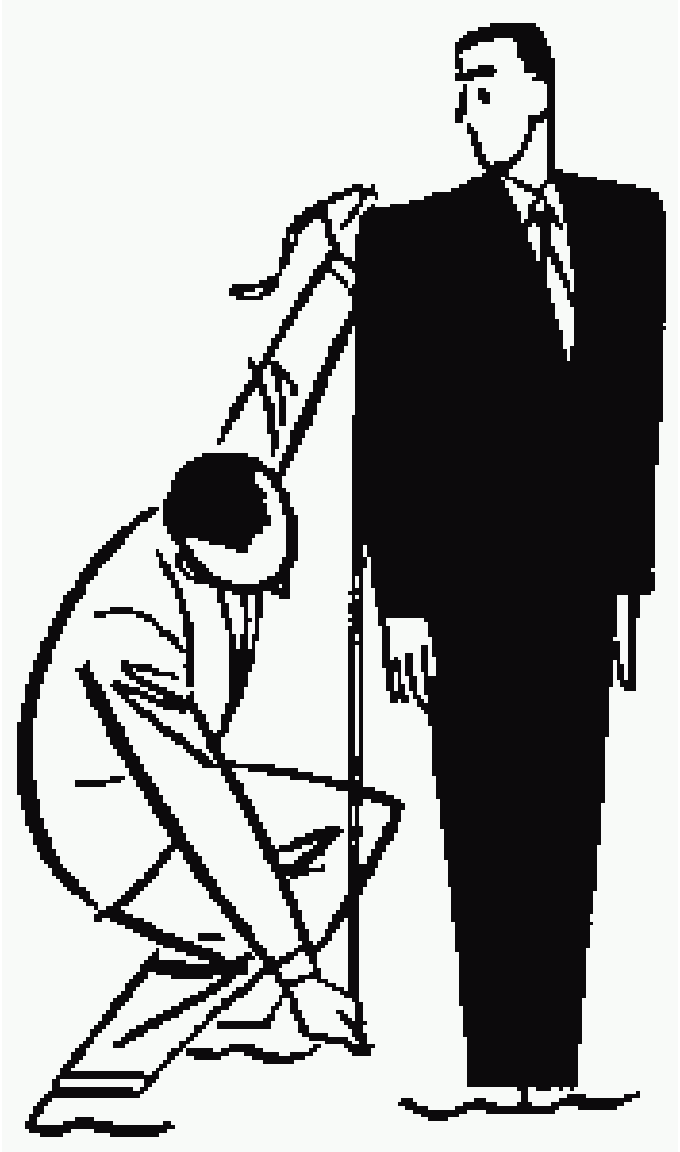
Patient PASS

Patient Preparation to Address Situations (after discharge) Successfully

I was in the hospital because _____

If I have the following problems ...	I should ...	Important contact information:
1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____	1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____	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. _____



BOOST tools are not intended to worn right “off the rack.”

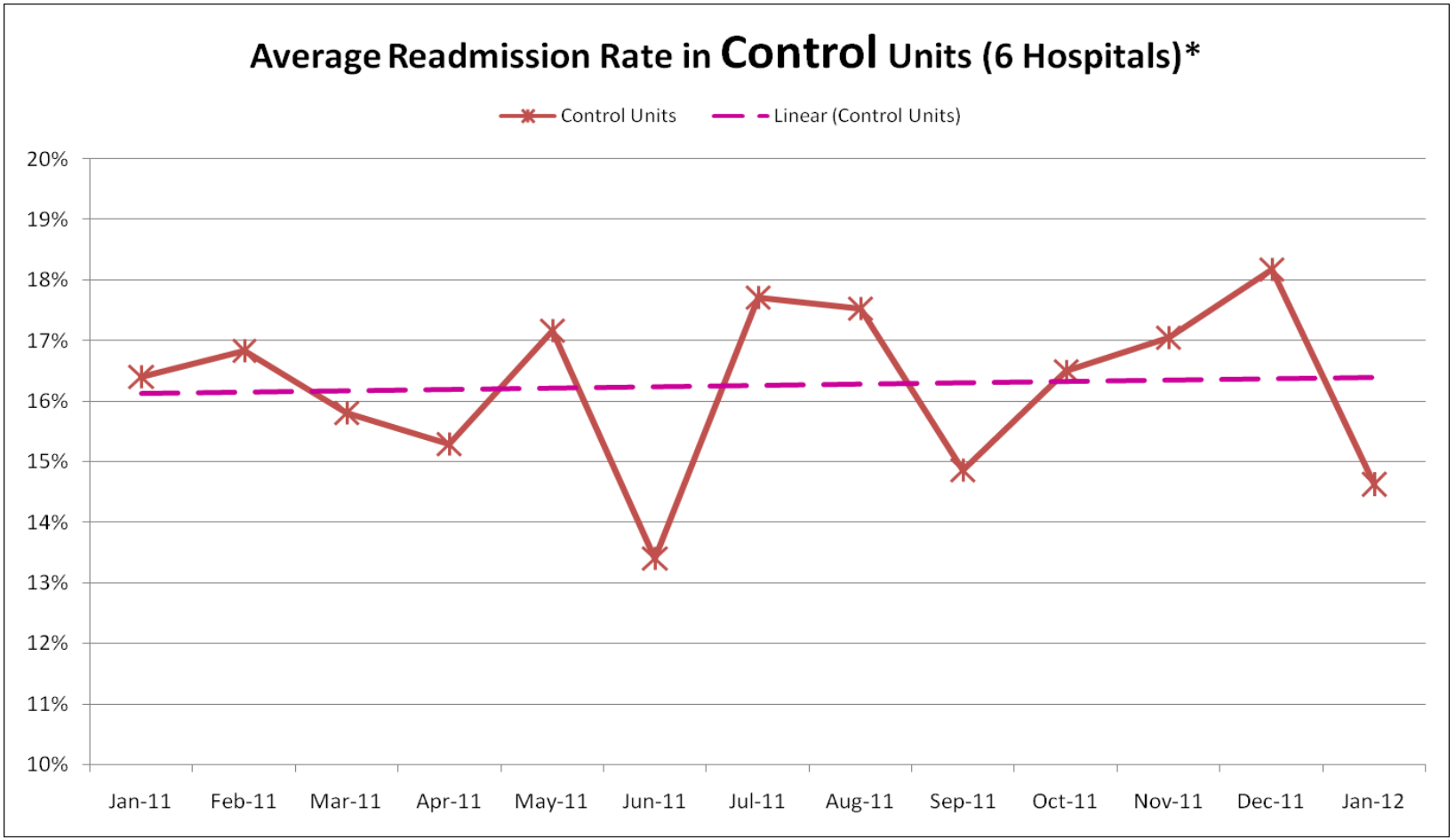
They are to be tailored to your own institutional needs and resources.

Does it work?

- Volunteer sample of 11 out of 30 hospitals
  - Vary in geography, size and academic affiliation
- Pre-post changes in same hospital readmission rates – BOOST vs Control Units
- BOOST unit readmission rate: 14.7% to 12.7% in 12 months
  - Relative reduction of 13.6%
- No change in control units (14.0 vs 14.1%)

Hansen et al, JHM 2013

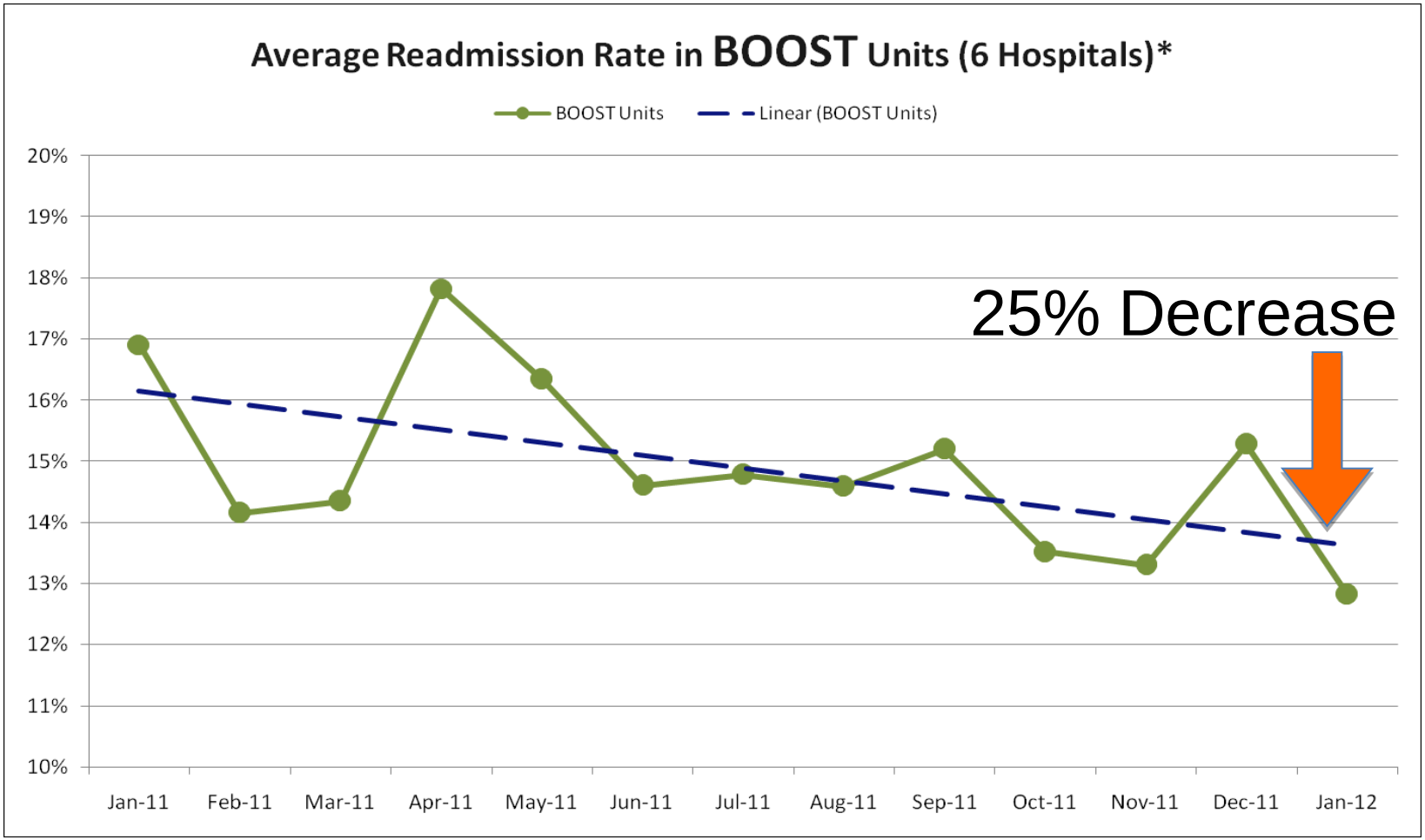
Readmission Rate
(Illinois Cohort)



* 7th hospital's control unit had less than 10 monthly discharges and not included in the analysis. All units included in analysis had 60 or more monthly discharges.

Preliminary

Readmission Rate
(Illinois Cohort)



* 7th hospital's control unit had less than 10 monthly discharges and not included in the analysis. All units included in analysis had 60 or more monthly discharges.

Preliminary

project BOOST
Better Outcomes for Older adults through Safe Transitions

Who We Are

- UC San Diego Health System
  - The only academic health system in San Diego
  - 2 campuses, totaling 600 beds
- Level I Trauma Center
- Certified Stroke Center
- Magnet Hospital
- Named one of the nation's "Most Wired" for the sixth consecutive year in 2011

- Employees
  - 850 physicians
  - 2500 nurses
- Fiscal 2011 year key statistics
  - 61,446 ED visits
  - 25,742 discharges
  - 54,013 total outpatient visits
- Project BOOST

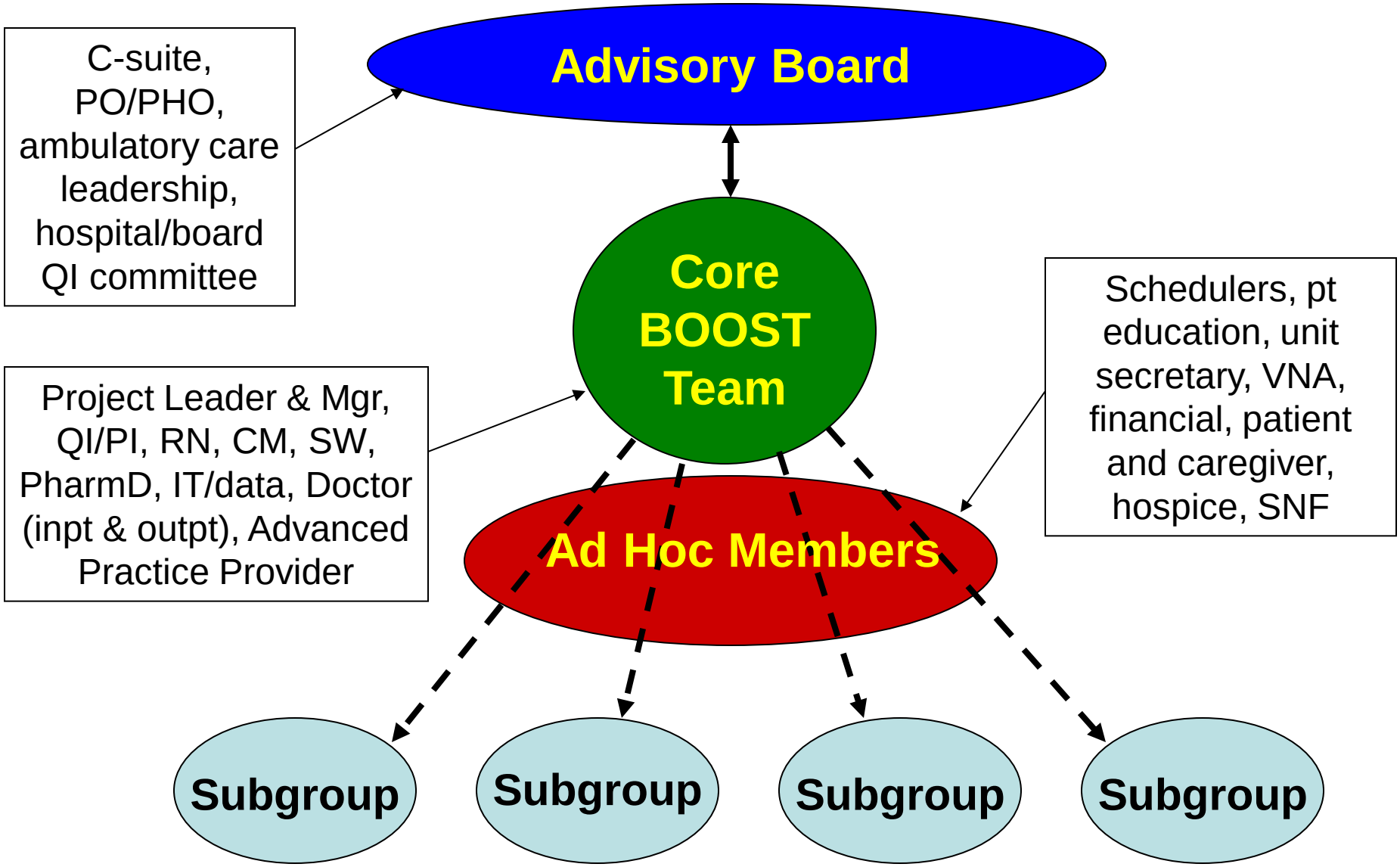

UC San Diego Transitions of Care Efforts

- BOOST Framework PLUS

- CTI (Care Transitions Intervention)
- CCTP (Community Based Care Transitions Program)
- Medication Management

UC San Diego
HEALTH SYSTEM

Building a BOOST Team



The Care Transitions Intervention

Results of a Randomized Controlled Trial

Eric A. Coleman, MD, MPH; Carla Parry, PhD, MSW;
Sandra Chalmers, MPH; Sung-joon Min, PhD

Arch Intern Med 2006

- Elderly patients transitioning to SNF/home
- Randomized: Intervention group paired with "Transition Coach" (TC) vs. standard care
- Empowerment and education: 4 pillars
  - Facilitate self management/adherence
  - Maintain a personal health record
  - Timely follow-up
  - Knowledge and management of complications
- Education during hospitalization
  - including meds and med reconciliation
- Phone calls and personal visits by TC post discharge
- N=750

UC San Diego
HEALTH SYSTEM

The Care Transitions Intervention

Results of a Randomized Controlled Trial

Eric A. Coleman, MD, MPH; Carla Parry, PhD, MSW; Sandra Chalmers, MPH; Sung-joon Min, PhD

Table 3. Utilization Outcomes*

Variable	Intervention Group (n = 379)	Control Group (n = 371)	2-Sided *P* Value†		OR (95% CI)
			Unadjusted	Adjusted‡	
Rehospitalization					
Within 30 d	8.3	11.9	.11	.048	0.59 (0.35-1.00)
Within 90 d	16.7	22.5	.05	.04	0.64 (0.42-0.99)
Within 180 d	25.6	30.7	.15	.28	0.80 (0.54-1.19)
Rehospitalization for same diagnosis as index hospitalization					
Within 30 d	2.8	4.6	.21	.18	0.56 (0.24-1.31)
Within 90 d	5.3	9.8	.03	.04	0.50 (0.26-0.96)
Within 180 d	8.6	13.9	.045	.046	0.55 (0.30-0.99)

Abbreviations: CI, confidence interval; OR, odds ratio.
*Data are given as percentages unless otherwise indicated.
†To test statistical significance between the intervention and control groups, χ^2 test was used for unadjusted utilization outcomes, and logistic regression analysis was used for adjusted use outcomes.
‡Adjusted for age, sex, education, race/ethnicity, self-reported health status, chronic disease score, prior hospitalization and emergency department utilization, and discharge diagnosis.

Coleman, E. A. et al. Arch Intern Med 2006

The Care Transition Coach

Key Attributes of a CTI Coach

- Model & Facilitate New Behaviors & Skills
- Promote Patient Self-Activation
- Competent in Medication Review & Reconciliation
- Bridge between Staff and the Patient and/or Family

UC San Diego
HEALTH SYSTEM

Key Elements of the Care Transitions Intervention (CTI)

- Referral Process
- Hospital Visit

- Phone call to patient after discharge from hospital

- Home visit within 2 days after discharge

- Phone calls to patient 7 days and 14 days after the home visit
- Enhanced CTI will provide additional services to a subset of patients

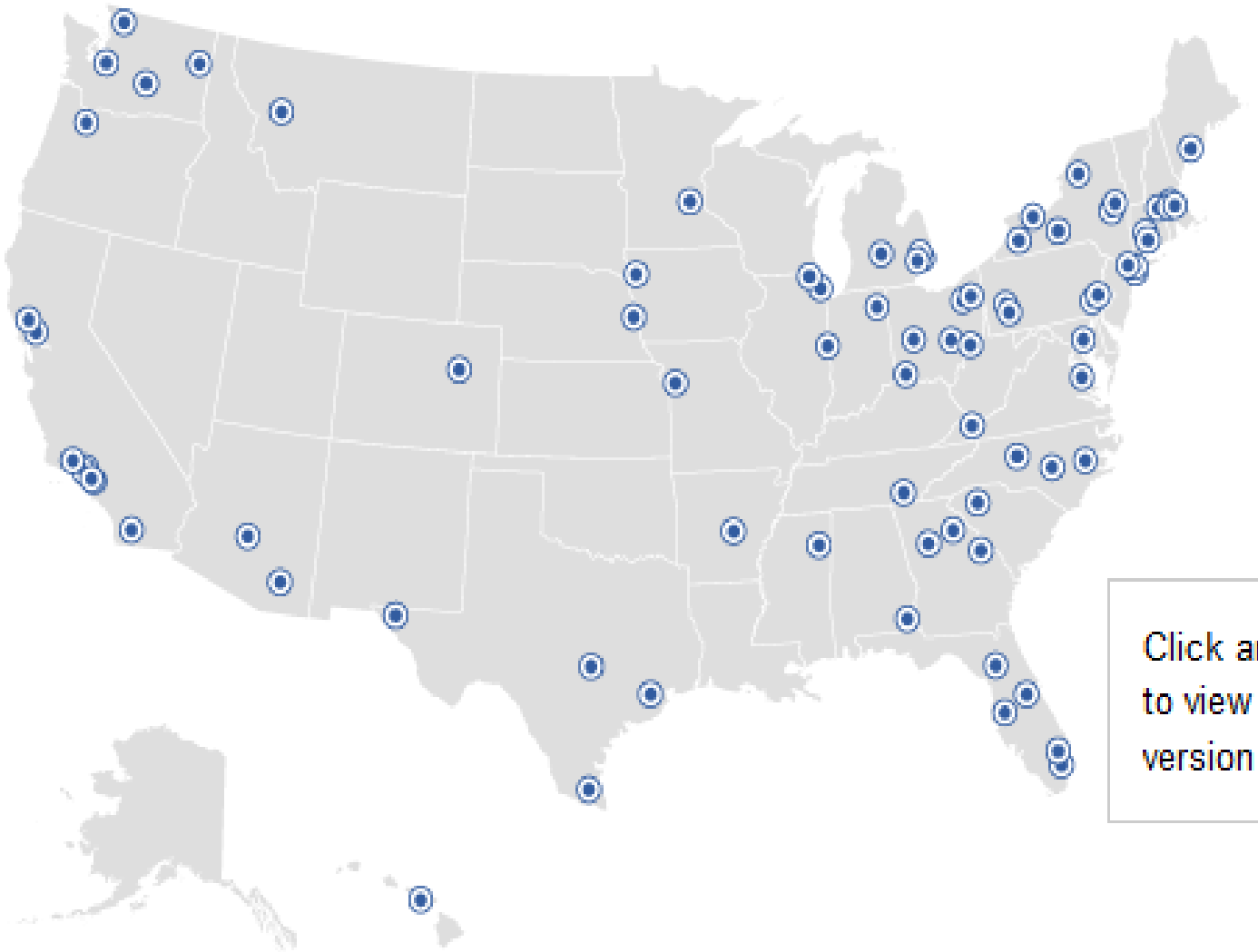
UC San Diego
HEALTH SYSTEM

Community-based Care Transitions Partnership (CCTP)

- Mandated from the Affordable Care Act
- Part of larger Partnerships for Patients initiative
- Goals-
  - improve patient care, reduce cost, reduce readmissions by 20%
- Target population - High Risk Medicare FFS inpatients
- $500 million in funding from 2011 – 2015
- Community Based Organizations (CBO) partner with hospitals and others in community
- Competitive process to obtain funding
- Currently 82 groups funded after four rounds

UC San Diego
HEALTH SYSTEM

The CCTP Partners



Click anywhere on the map to view the interactive version

Source: Centers for Medicare & Medicaid Services

County AIS, Scripps, Sharp, Palomar, UCSD

- 11 hospitals targeting over 21,000 high risk patients
- UCSD interventions
  - Phone call, medication management, Transition Nurse Specialist
  - AIS Interventions
    - Care Transitions Intervention (CTI), Enhanced CTI

San Diego Care Transitions Partnership

Transforming Care Across the Continuum

UC San Diego
HEALTH SYSTEM

Transitions Nurse Specialist (TNS)

- ✓ Blended role: nurse educator, case manager, community health nurse
- ✓ Bridge patients from inpatient to outpatient
- ✓ Available to patients for up to 30 days post discharge
- ✓ Manages high risk patient populations
- ✓ Average daily caseload of 8 patients

UC San Diego
HEALTH SYSTEM

Transitions Nurse Specialist Daily Workflow

- Receives list of patients who are high risk
  - (captured in PADB and Epic report)
- Uses Project BOOST 8 P's as a tool: In-depth patient/family interview, assessment
- Develops patient-centered discharge plan
- Uses teach back for patient/family education
- Communicates discharge plans and patient education needs with physician and multidisciplinary team
- Arranges post-discharge follow up appointment with primary care physician
- Communicates important updates with patient's primary care provider
- Reviews discharge instructions with patients
- Requests additional interventions, as appropriate:
  - Pharmacy
  - CTI Coach

UC San Diego
HEALTH SYSTEM

Patient Follow Up Post Discharge

- Completes follow up phone call within 72 hours on a subset of patients
- Reviews Discharge Summary with patients: Reason for admission, medications, follow up appointments, and red flags that would require follow up
- Provides number to call should patient have questions/concerns
- Refers any questions or concerns to patient's primary care provider, as appropriate

UC San Diego
HEALTH SYSTEM

Additional Interventions:
CTI Transition Coach (provided by community partner)

On identified subset of patients

- Hospital visit
- Personal Health Record
- Home visit
- Follow up phone calls

CTI Advanced intervention

- Homemaker, personal care attendants, transportation

✓ Communicates any concerns or problems to UC San Diego Transition Nurse Specialist (TNS)

UC San Diego
HEALTH SYSTEM

Pharmacist Interventions

- Pharmacist-performed medication reconciliation and patient education in the inpatient setting:
  - Decreases errors
  - Improves patient drug knowledge
  - Reduces readmission rates
- Pharmacist interventions in the outpatient setting:
  - Reduce readmissions
  - Reduce mortality
  - Increase adherence
  - Increase medication knowledge

Source: Al-Rashed et al. *J Clin Pharmacol*. 2002.
Murphy et al. *Am J Health-Syst Pharm*. 2009.
Ponniah et al. *Journal of Clinical Pharmacy and Therapeutics*. 2007.
Anderson et al. *CHF*. 2005.

UC San Diego Health System

Transitional Care Pharmacist Model

Admission/Inpatient

- Medication reconciliation
- Interdisciplinary rounds
- Address adherence/compliance to medications

Discharge

- Medication reconciliation
- Medication education with patient friendly tools
- Coordination of medication acquisition

Post Discharge

- 48 hour telephone follow-up
- 7-day clinic visit

Transitions of Care: Medication Management Program

- Medication Reconciliation
  - Admission
  - Discharge
- Discharge counseling with MedAction Plan
- Post discharge follow up
  - 48-72 hour phone call +/-
  - 7 day clinic visit

MedActionPlan™

My Daily Schedule

2/13/2012 5:54:00 PM
Revised by: Michelle Schlueter

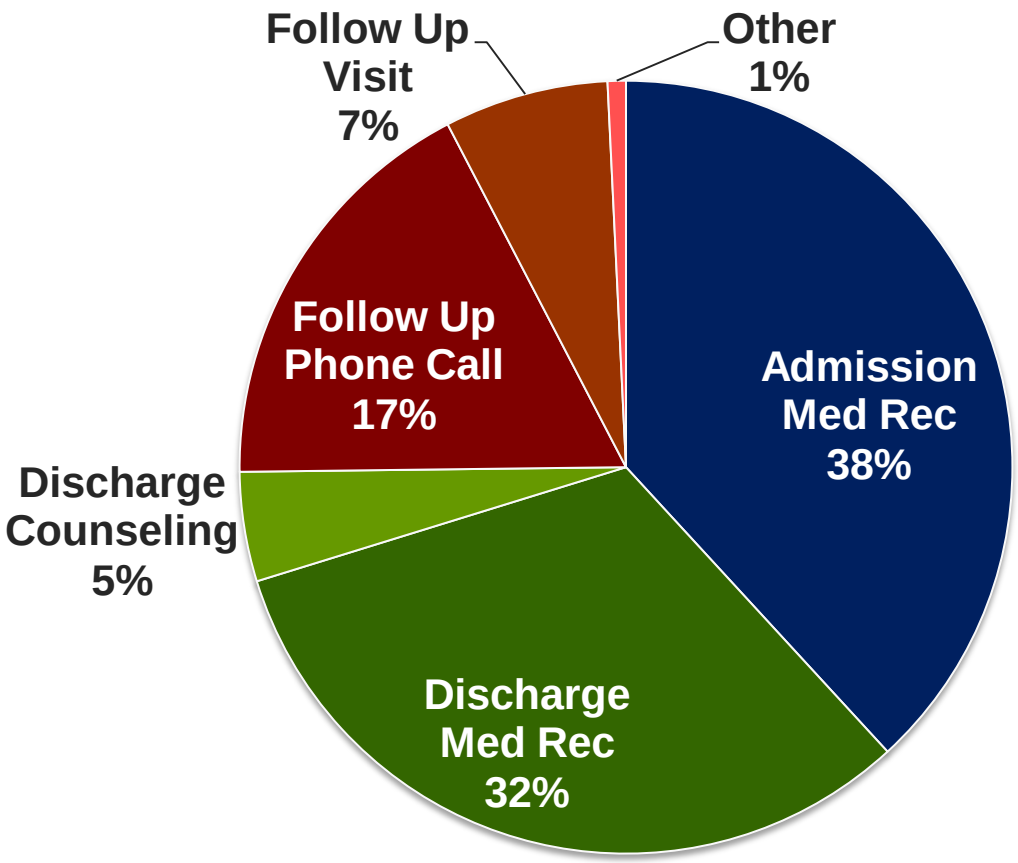
Example, Heart Failure DOB: **05-19-1900** MRN: **00000000**
Allergies: **No Known Drug Allergies**

Take These Medications	At These Times				Purpose
	9am	3pm	6pm	9pm	
Bumex® (Bumetanide) 2 mg Tablet(s) By mouth	1 Tablet(s)	1 Tablet(s)			Water pill
Coreg® (Carvedilol) 6.25 mg Tablet(s) By mouth	1 Tablet(s)		1 Tablet(s)		Controls blood pressure; Heart medicine. Take with breakfast and dinner.
Prinivil® (Lisinopril) 10 mg Tablet(s) By mouth	1 Tablet(s)				Controls blood pressure; Heart medicine
Aldactone® (Spironolactone) 25 mg Tablet(s) By mouth	1 Tablet(s)				Water pill
GENERIC **Hydralazine** 25 mg Tablet(s) By mouth	1 Tablet(s)	1 Tablet(s)		1 Tablet(s)	Controls blood pressure
Imdur® (Isosorbide Mononitrate) 30 mg Tablet(s) By mouth	1 Tablet(s)				Treats angina
GENERIC **Digoxin** 0.125 mg Tablet(s) By mouth			1 Tablet(s)		Treats irregular heart beat and heart failure

http://medactionplan.com

UC San Diego Health System

Pilot results:
Point of Pharmacist Intervention



Admission: 38%

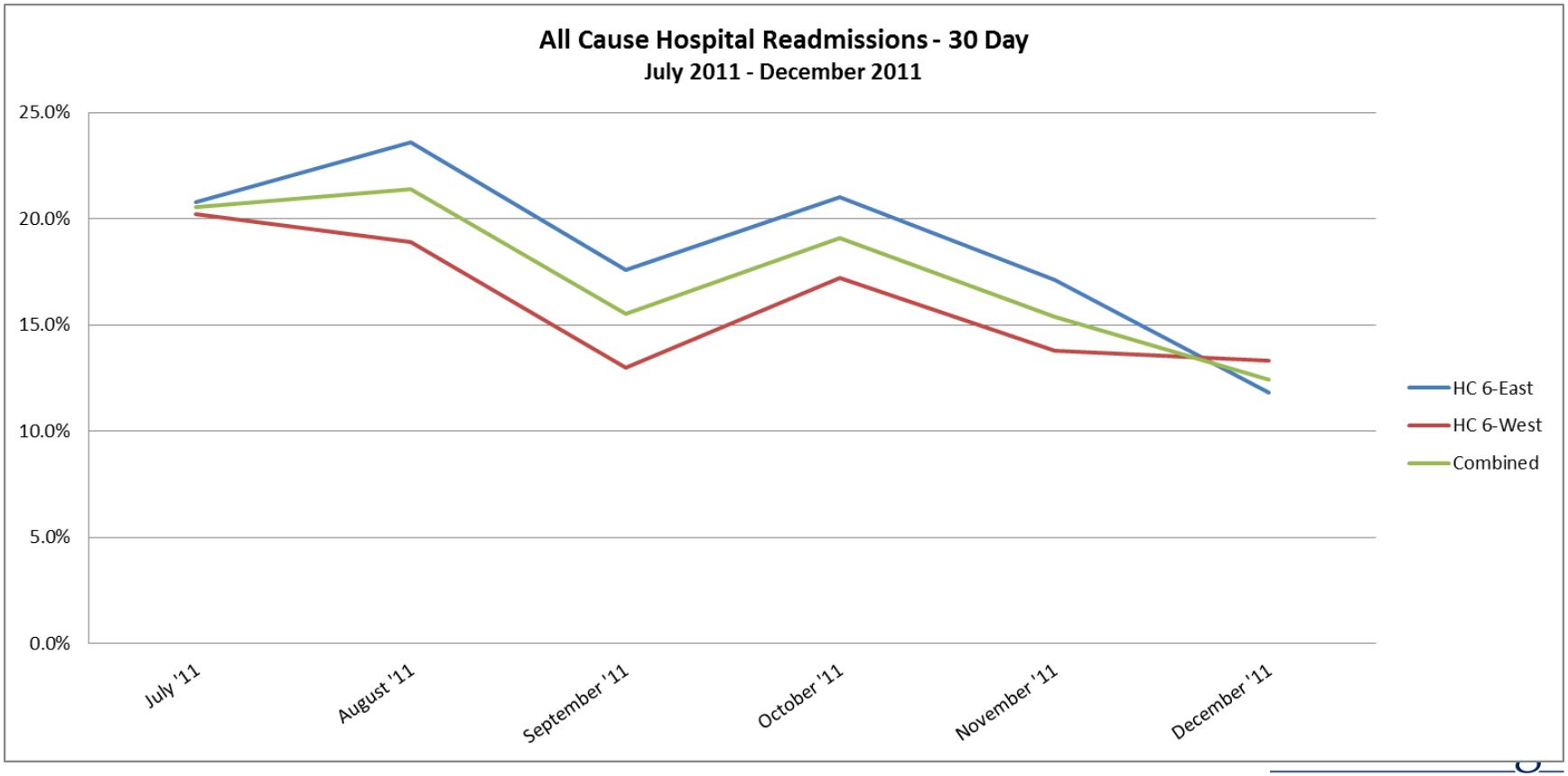
Discharge: 37%

Post Discharge: 25%

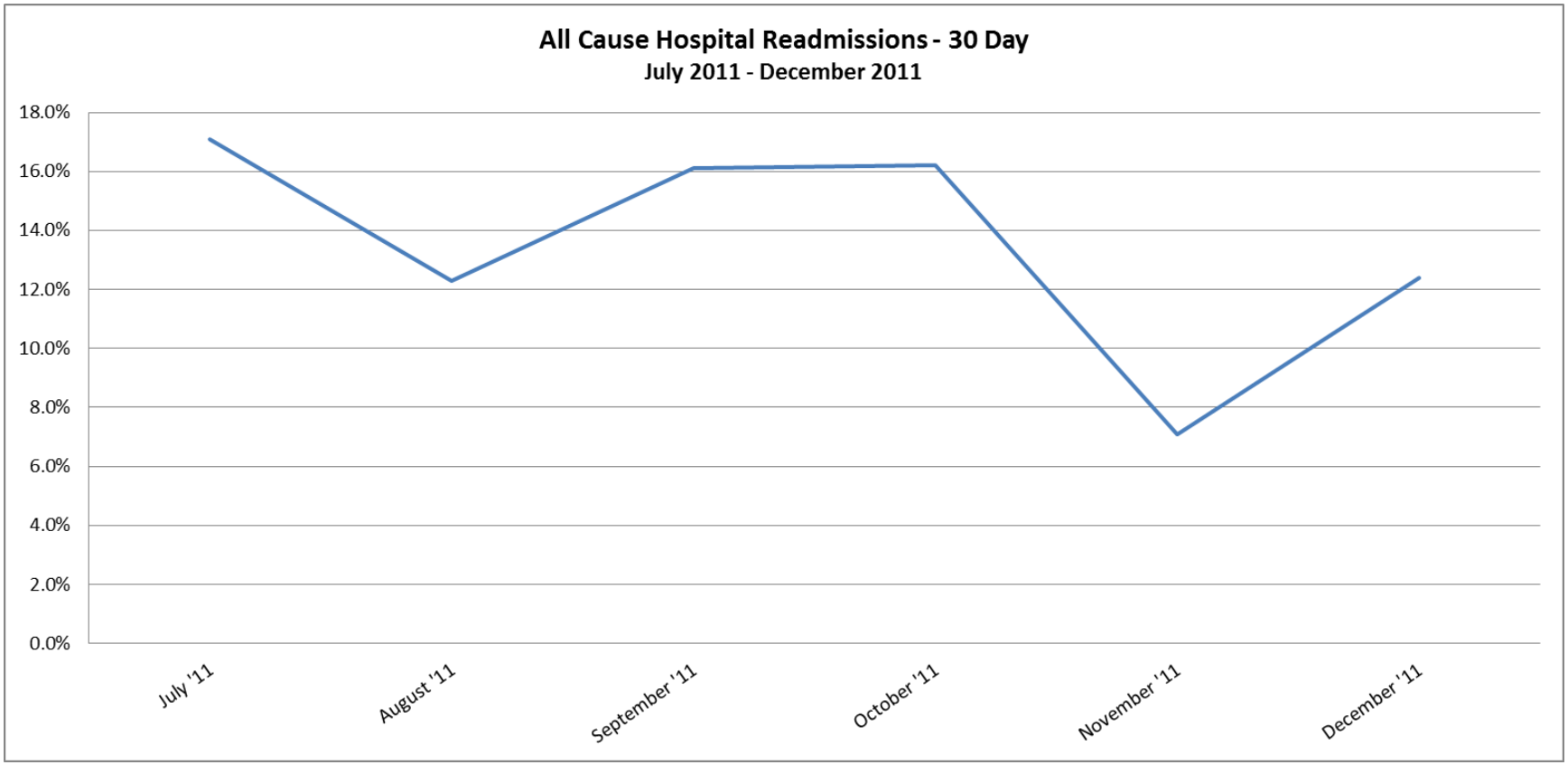
N=131

UC San Diego Health System

UCSD Hillcrest 6-East/6-West (BOOST Pilot Unit) 30-day Readmission Rates



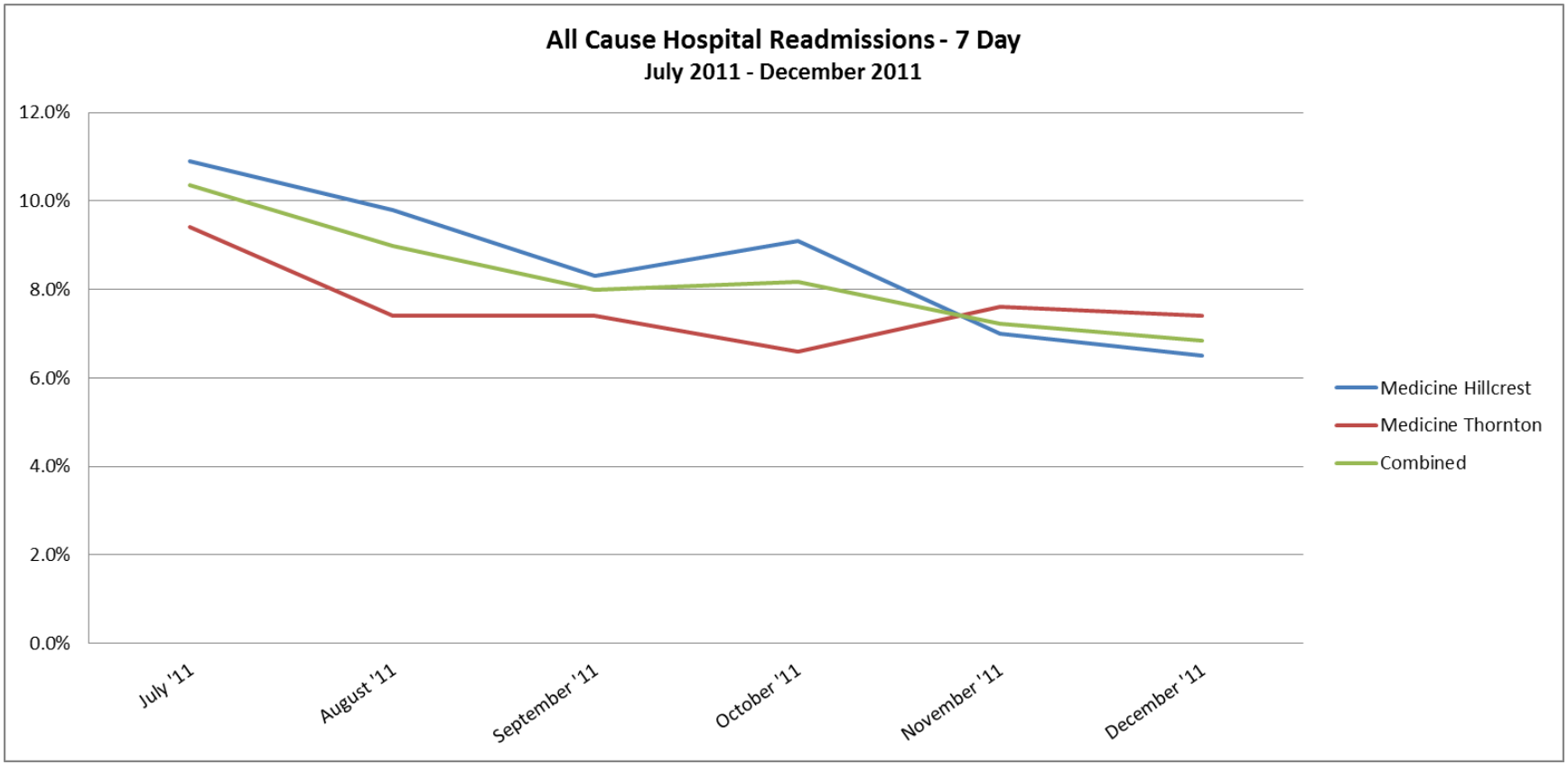
UC San Diego Cardiology Services
30 day readmission rates



Baseline Heart Failure Readmission Rate 36.1% (May 2010 – April 2011)
Current Heart Failure Readmission Rate 17.9%

UC San Diego
HEALTH SYSTEM

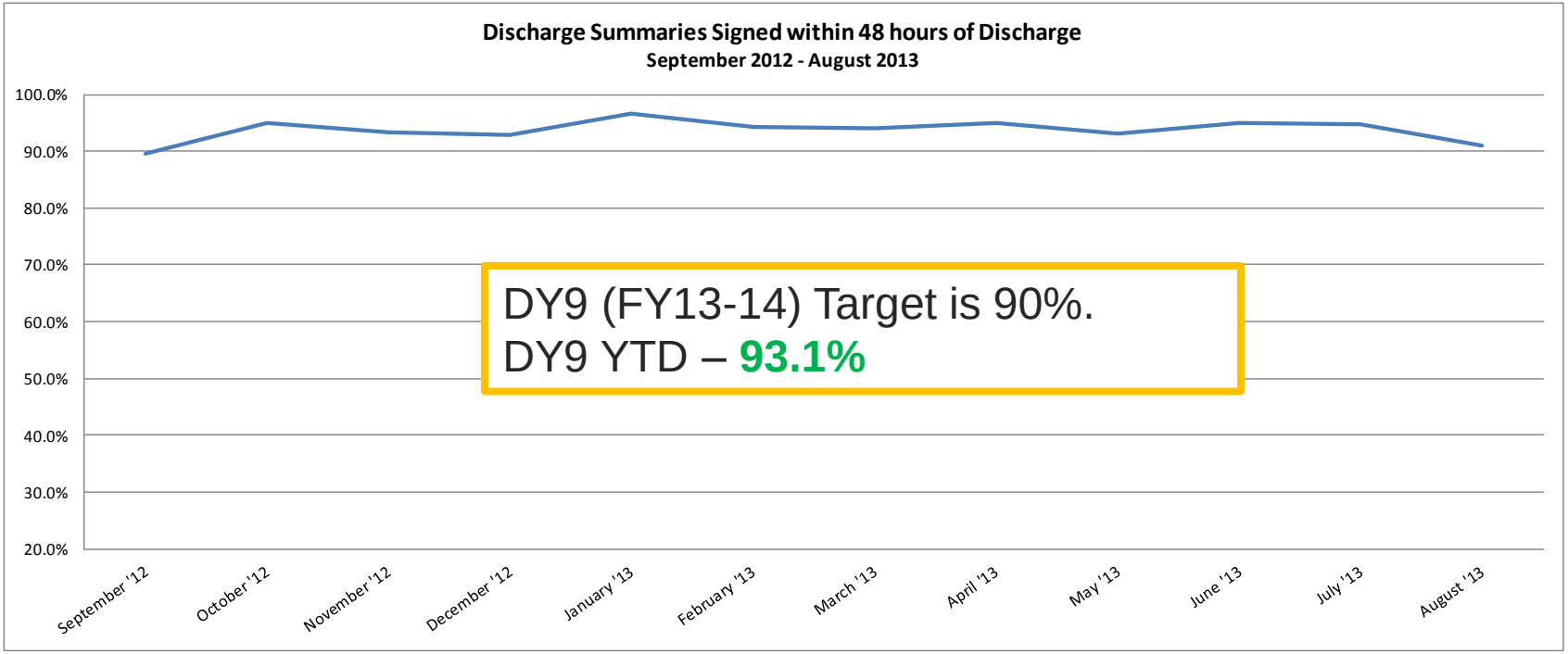
UCSD Hospital Medicine Services
7 day readmission rates



UC San Diego
HEALTH SYSTEM

DC Summaries – Hospital Medicine

UC San Diego Hospital Medicine Service Lines



		September '12	October '12	November '12	December '12	January '13	February '13	March '13	April '13	May '13	June '13	July '13	August '13	FY YTD
Hospital Medicine	Total DC Summaries	551	573	529	508	583	532	580	566	605	584	587	460	1047
	Dc Summaries win 48 hrs	493	544	494	472	564	501	545	537	563	555	556	419	975
	Percent	89.5%	94.9%	93.4%	92.9%	96.7%	94.2%	94.0%	94.9%	93.1%	95.0%	94.7%	91.1%	93.1%

* Baseline data - 7/1/2011 - 6/30/2012

UC San Diego Health System

project BOOST
Better Outcomes for Older adults through Safe Transitions

Lessons Learned

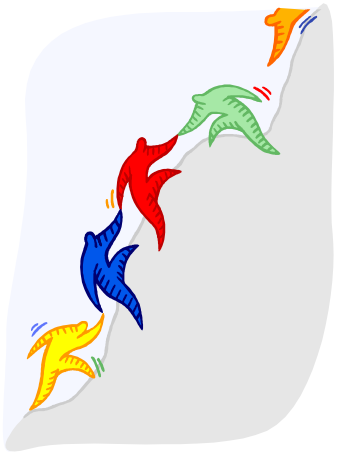
- Transitions in Care are not medical events
- Responsibility for the patient does not disappear when the patient disappears
- The entire continuum of care needs to be committed to improving transitions of care
- Focus on the patient not the disease
- Executive Support

HEALTH SYSTEM

Keep the patient at the center

- Vision – Provide best quality service to all patients, regardless of payer
- Go outside of boundaries to accommodate our patients
- CCTP / CTI give us payment mechanism and opportunities to collaborate
- If you aren't part of the solution…..

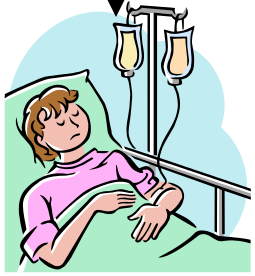
- Identify, mitigate, communicate



UC San Diego
HEALTH SYSTEM

BOOST Future State

Adapted from Chris Kim, MD



On Admission:

- Readmission risk factor screen
- Discharge needs analysis
- General assessment of preparedness
- Medication reconciliation
- Input from outpatient caregivers
- Readmit RCA (if needed)

During Hospitalization:

- Interprofessional rounds to develop patient-centered, safe transition plan
- Initiate readmission risk reduction interventions
- Educate patient & caregiver using Teach Back
- Clarify goals of care

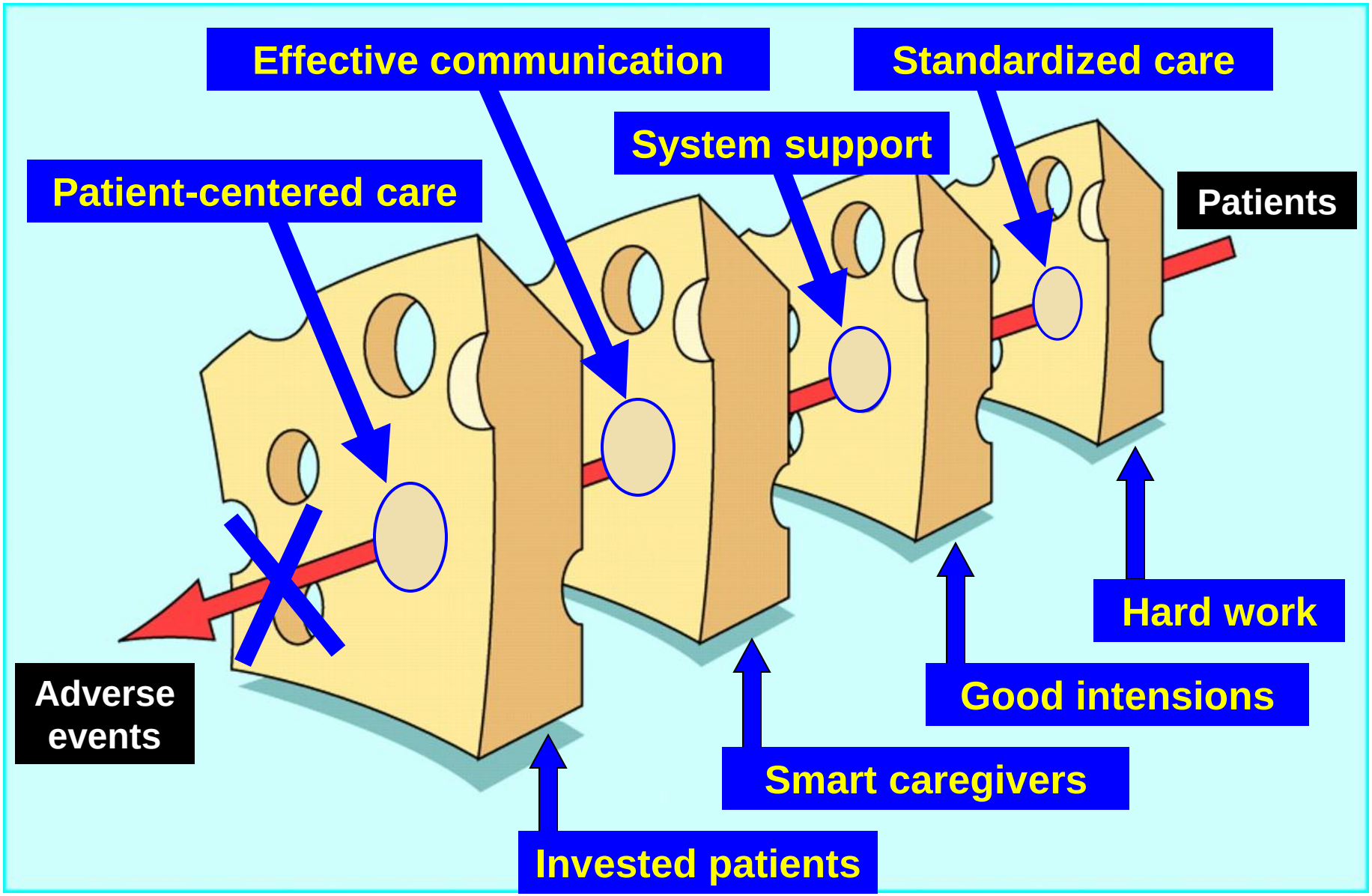
At Discharge:

- Schedule post-discharge appointment
- Patient friendly discharge instructions
- Handoffs (hospital to aftercare)
- Medication reconciliation
- Reinforce education

Post-Discharge:

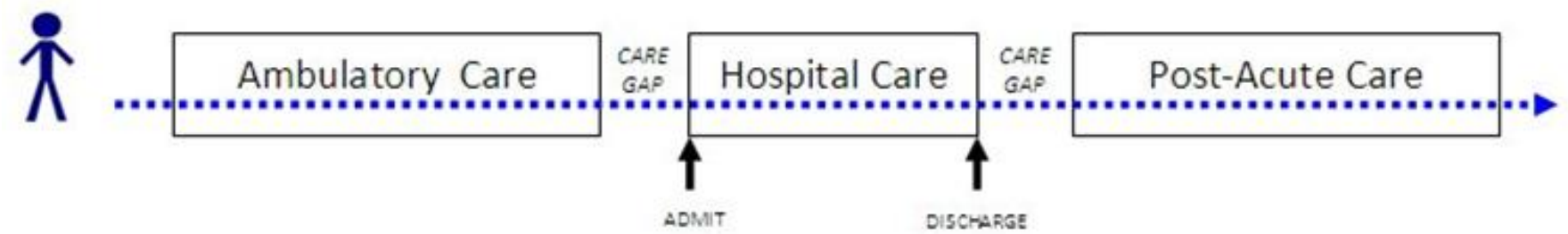
- Post-discharge call
- Follow-up appointment
- Transmit accurate discharge summary
- Family/caregiver support
- Appropriate services
- Transitional support

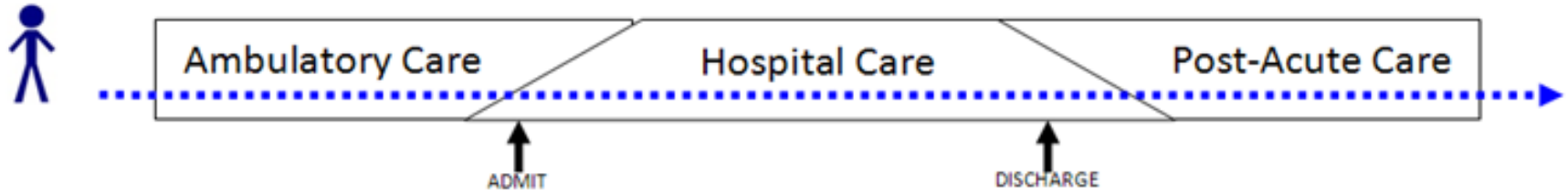
Improved Care Transitions



Modified from Reason, J. BMJ 2000;320

The Future is Coming





What questions do you have?

Greg Maynard MD, MSc, SFHM

gmaynard@ucsd.edu

Thank you …

UC San Diego
HEALTH SYSTEM