HARVATH HEALTH ASSOCIATES

Hospital Readmission Issues

Past & Present

3rd National Medicare Readmissions Summit

June 13, 2011

Washington, DC

How long have we been talking about readmissions?

- " Utilization and quality control (groups) are required to randomly select specific potential problematic cases for review (for example, readmissions within 15 days)"

What year was this published in the federal register?

Recent SG2 Survey

Over the next year, how important will it be for your organization to reduce 30-day readmissions?

- 94% - Very important
- 6% - Moderately important
- 0% - Not important

The Buzz around 30-Day

- AHRQ/ HCUP report suggests that in 2006, hospitals spent $30.8 billion on 4.4 million hospital admissions that might have been avoidable. The report used its prevention quality indicators to decide when a hospital stay might have been preventable with good enough outpatient care. Medicare patients accounted for $20.1 billion of the full amount spent on possibly preventable admissions, while privately-insured patients were responsible for $4.7 billion of the $30.8 billion total. The report concluded that congestive heart failure and bacterial pneumonia were the two most common reasons for inpatient stays, mounting up $15.6 billion in costs.
- In 2006, hospital costs for potentially preventable conditions totaled nearly $30.8 billion—one of every 10 dollars of total hospital expenditures. As many as 4.4 million hospital stays could possibly have been prevented with better ambulatory care, improved access to effective treatment, or patient adoption of healthy behaviors.
- Congestive heart failure and bacterial pneumonia were the two most common reasons for potentially preventable hospitalizations, accounting for half of the total hospital costs ($8.4 billion and $7.2 billion, respectively) for all preventable hospitalizations.
- One in five (18 percent) Medicare admissions was for a potentially preventable condition. Medicare patients contributed to $20.1 billion (67 percent) of total hospital costs for potentially preventable hospitalizations among adults.
- Hospitalization rates for potentially preventable conditions were highest among residents in poorer communities and lowest among residents from wealthier communities. This disparity was particularly evident for diabetes without complications, where the admission rate in the poorest communities was more than 400 percent higher than the rate in the wealthiest communities.

The 30-Day Activity 2009

Boost	ARHQ	CMS	NC3
Better Outcomes for Older adults through Safe Transitions	HCUP – 2009 Report	Proposed Rules 4/08	The Promise of Care Coordination Report 2009
Select Sites to pilot and mentor for 1 year	Report using 2006 CMS claims data $4.4 mil preventable 2 DRGs = 50%	14 regions selected using care coordination to reduce Readmissions Project through 2011	Transitional Care Eric Coleman & Mary Naylor (Chad Boult)
Education and Tool kit	RED Toolkit and Education	Test Runs of Reporting measures occurred in 2008 and 2009, 2010 legislation requires several $bil in savings	Self-Management Kate Lorig & Ed Waggner Coordinated Care CMS demos 2002 Brown Report
lvalentino@hospitalmedicine.org (267-702-2672). http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/project_boost_background.cfm	http://www.hcup-us.ahrq.gov/reports/statbriefs/sb72.jsp	Federal Register Vol. 73 No. 84 04/30/08 http://www.cfmc.org/caretransitions/	http://www.socialworkleadership.org/nsw/Brown_Full_Report.pdf

The 30-Day Activity 2009 - 2011

BOOST	ARHQ	CMS	NC3
Update: Robyn Golden		*Update: Barry Straube*	
Better Outcomes for Older adults through Safe Transitions	HCUP – 2009 Report	Proposed Rules 4/08	The Promise of 2009
	Update: Carolyn Clancy		
Select Sites to pilot and mentor for 1 year	Report using 2006 CMS claims data $4.4 mil preventable 2 DRGs = 50%	14 regions selected using care coordination to reduce Readmissions Project through 2011	Transitional Care Eric Coleman & Ma (Chad Boult)
Education and Tool kit	RED	Test Runs of Reporting measures occurred in 2008 and 2009, 2010 legislation requires several $bil in savings	Self-Management Kate Lorig & Ed W Coordinated Care CMS demos 2002
	Update: Brian Jack		
lvalentino@ho talmedici .org (267-702-267 http://www. spi lm icine.org/ Reso ce on edesign/RR_Care Transi ns/html_CC/project_boo st_backg und.cfm	http://www.hcup-us.ahrq.gov/reports/statbriefs/sb72.jsp	Federal Register Vol. 73 No. 84 04/30/08 http://www.cfmc.org/caretransitions/	http:/ w/Bro

HEALTHCARE REFORM

Commonwealth Fund/IHI: STAAR *Amy Boutwell*

Commonwealth Fund/PHI: *Barbara Harvath*

VHA: 6 Leading Practices Blueprint to Reduce Readmissions

VNA Transitional Care: Robert Rosati

Payor Reform: *Humana, Aetna, BCBS CIGNA's Douglas Hadley*

Reform Advocates: *AMA, AHA,*

What we've learned about Readmissions

- Readmission rates and spending are significant
  - ~18% of patients readmitted within 30 days of discharge = $15B in 2005
- Reducing readmission rates is both important and feasible
  - Wide variation: ~12% to ~22% by city in 2005
  - Medicare estimated savings > $100B over 10 years if high-cost areas brought to national average
- Many readmissions are preventable
  - 75% of all 30-day Medicare readmissions were potentially preventable, with potential savings of $12B to Medicare, according to Medicare Payment Advisory Commission
- CMS is initially targeting readmissions for three diagnoses:
  - Congestive heart failure (CHF), Pneumonia (PN), and Acute Myocardial Infarction (AMI):
    - In the top 10 diagnoses for Medicare hospital discharges (CHF #1, PN #2, AMI #8)
    - These 3 makeup ~13% of total Medicare hospitalizations in 2006
    - 2008 CMS began collecting information on these readmissions
    - 2009 CMS began reporting back readmission data to selected hospitals
    - 2010 CMS plans to expand readmission data collection and reporting COPD, CABG etc.
    - CMS is tasked with accomplishing the billions in savings earmarked in the Affordable Healthcare legislation passed in 2009.

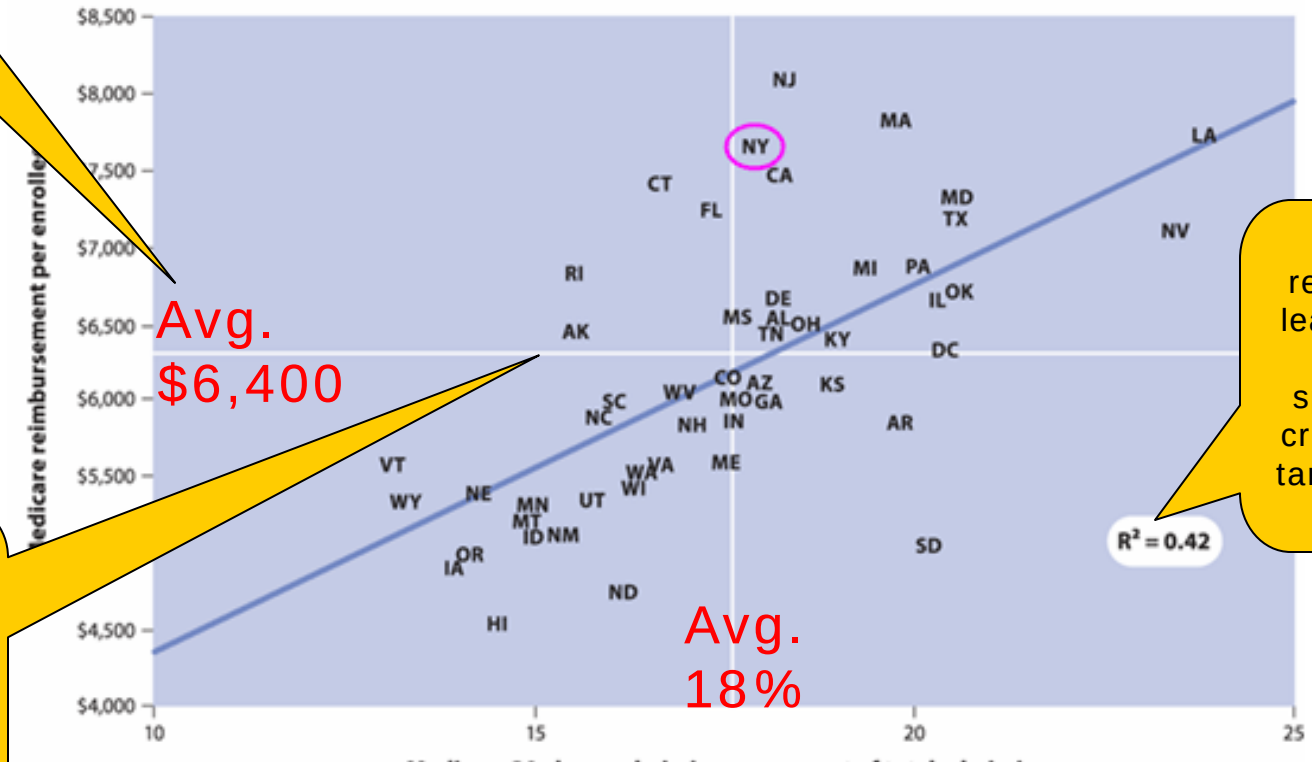
Readmissions are linked to total Medicare spend, with wide variation by state

HARVATH HEALTH ASSOCIATES

Cost per Medicare Enrollee not per readmission

Large variation across states suggests opportunities for improvement

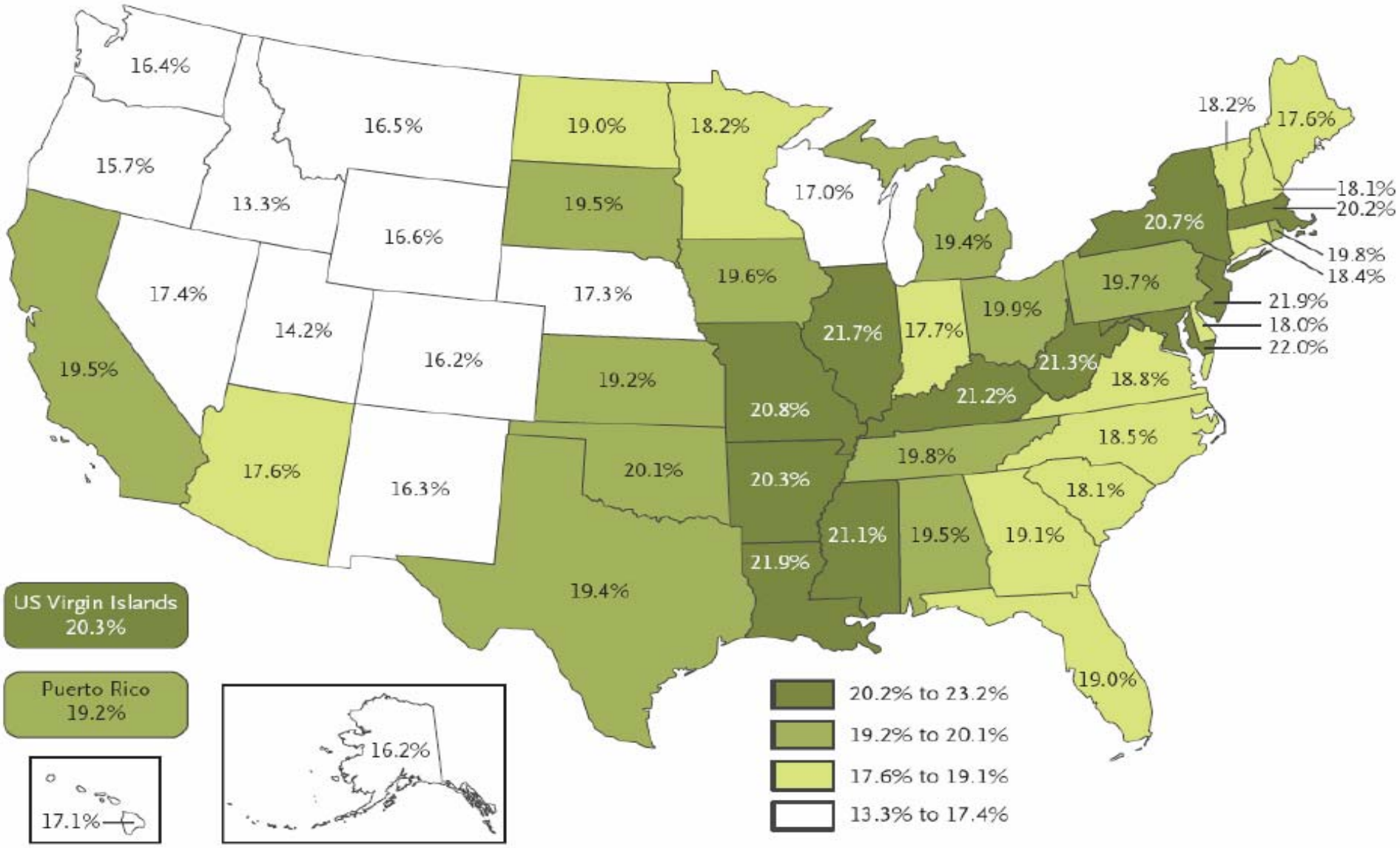
Higher readmissions lead to higher Medicare spend – and create a large target for CMS



Source: Commonwealth Fund

State Variation in Readmission Rates

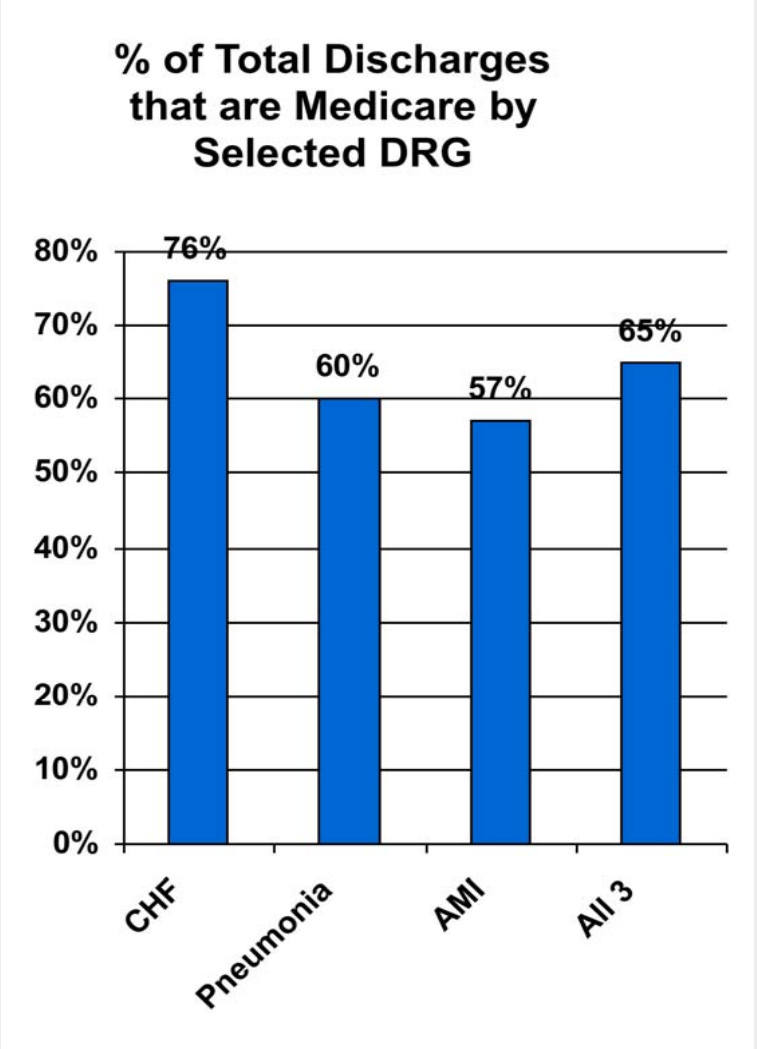
HARVATH HEALTH ASSOCIATES



CMS targeting readmissions in three diagnoses

HARVATH HEALTH ASSOCIATES

- Congestive heart failure (CHF), Pneumonia, and Acute Myocardial Infarction (AMI) are targeted under recently published CMS proposed rules
  - In 2010 three readmission measures may be calculated using Medicare administrative claims data: Heart failure (HF) 30-day risk standardized readmission measure, Pneumonia (PN) 30-day risk standardized readmission measure, Heart Attack (AMI) 30-day risk standardized readmission measure (for Medicare patients) (pg 23648)
  - CMS has suggested 2 payment penalties and 1 public reporting option for reducing readmissions and is currently taking public comment. (pg 23674)
- These diagnoses represent substantial volume and financial significance in the Medicare system
  - These 3 DRGs are in the top 10 of Medicare hospital discharges (CHF #1, Pneumonia #2, AMI #8)
  - These 3 DRGs made up ~13% of total Medicare hospitalizations in 2006
  - These 3 DRGs had 15-day readmission rates of 10-13% in 2005
    - 2005 Medicare spending on 15-day readmissions*: CHF #1, Pneumonia #3, AMI #4



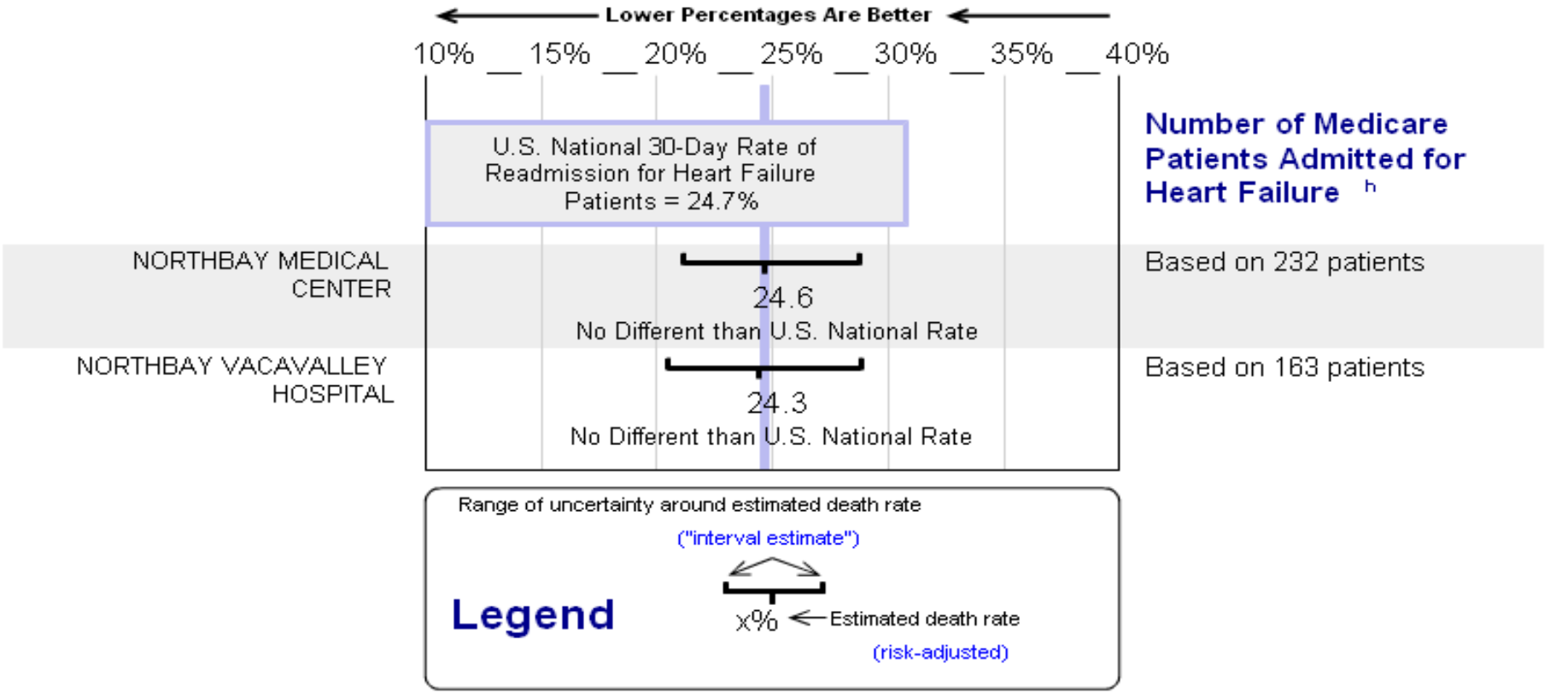
*Rank order refers to medical, not surgical conditions

Source: 2006 HCUP data; 2005 MedPAC data (15-day readmission data)
CMS Proposed Rules Federal Register (April 30, 2008)

CMS's Hospital Compare posting June 2011

These percentages were calculated from Medicare data on patients discharged between July 01,2006 and June 30, 2009. They don't include people in Medicare Advantage Plans (like an HMO or PPO) or people who don't have Medicare.

Rate of Readmission for Heart Failure Patients



d

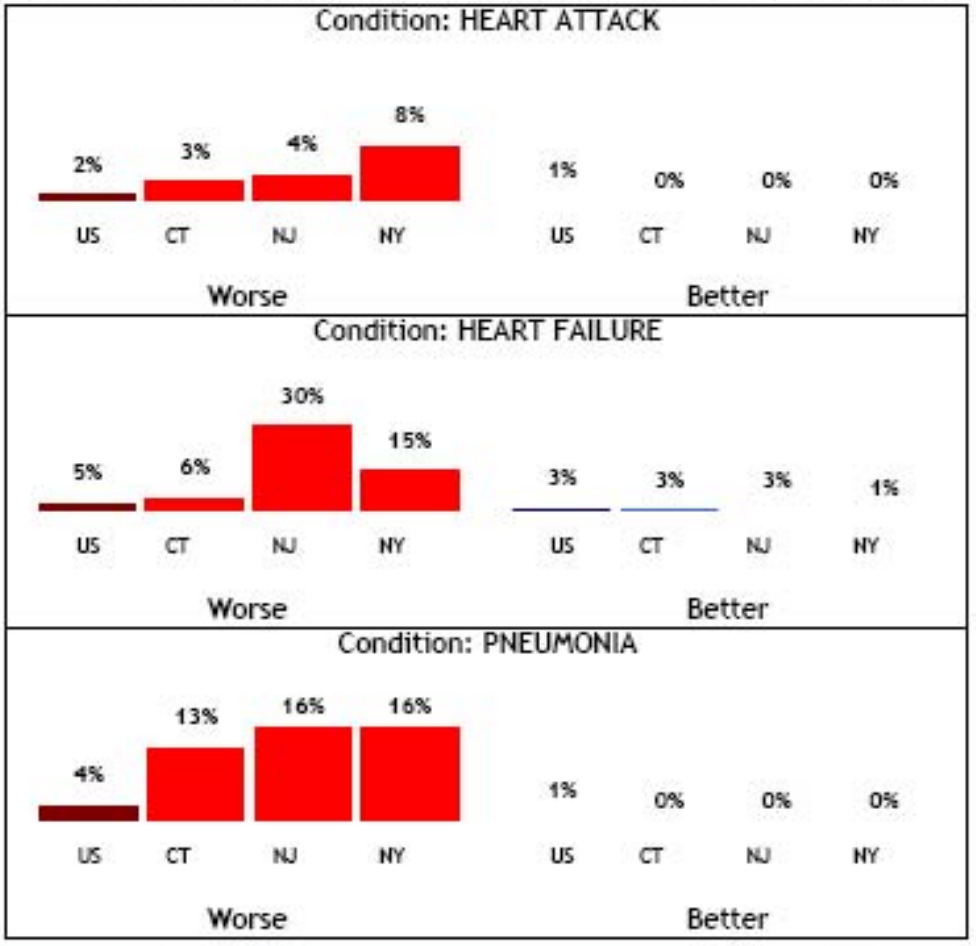
CMS "Hospital Compare" Data Not Actionable

Risk adjustment methodology is not replicable

Re-hospitalizations to other hospitals not available

No way to target specific patient populations

Tri-State Share of Best/Worst Performing Hospitals



Source: Hospital Compare, June 2010
Data July 2006-June 2009

What will CMS's solution be?

CHQPR nrhi

Four Basic Types of Solutions

- Don't pay for readmissions
- Pay bonuses/penalties based on rate of readmissions
- Pay for care with a limited warranty from the provider (i.e., provider does not charge for readmissions meeting specific criteria)
- Make a comprehensive care (global) payment to cover all care the patient needs (regardless of how many hospitalizations or readmissions are needed)

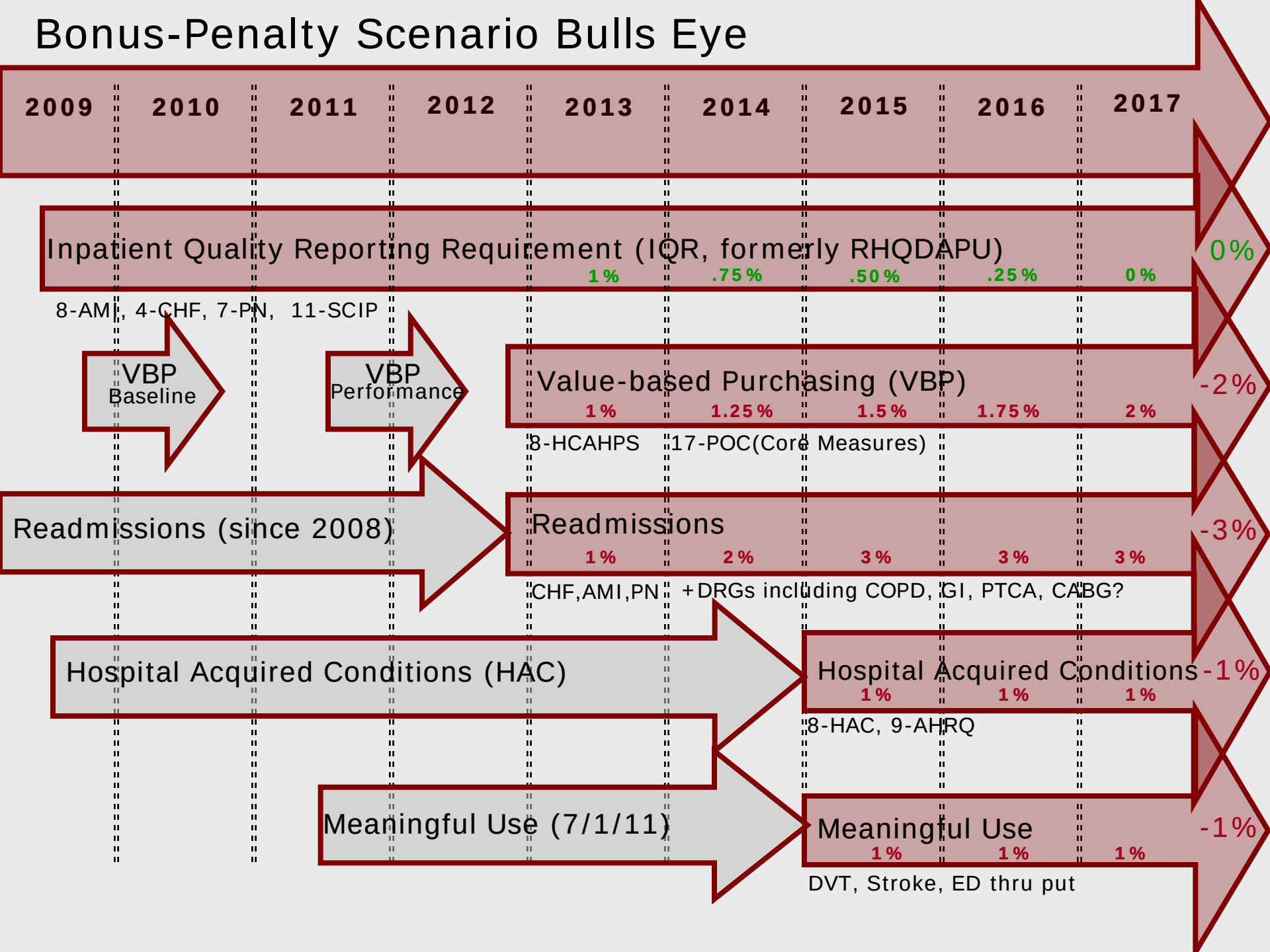
Source: Harold Miller, nrhi

Potential Losses from CHF in a Typical Hospital in the Don't Pay Scenario

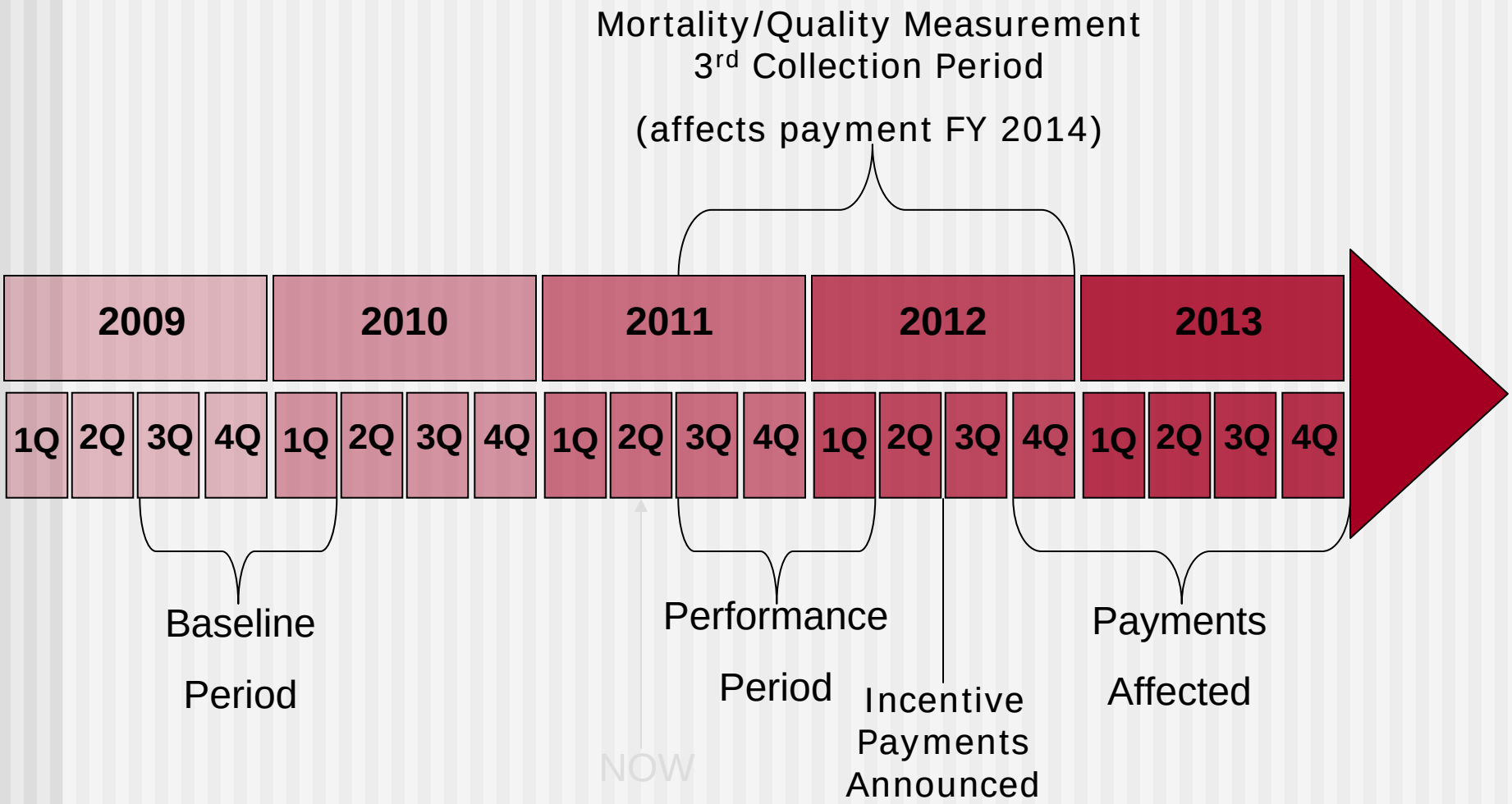
Harvath Health Associates

Metric	Assumptions	Volume	Costs
Admits per year	250 bed hospital at 90% occupancy	21,000/yr	
CHF admits per year	5.7% of admissions are for CHF The average reimbursement for CHF is -$500-$1000/admission average loss to cost of care	1,150/year	$575,000
CHF 30-day readmissions per year	CHF DRG-specific 23% readmission rate Median CMS reimbursement for CHF is $6,000/discharge *-with more than a 3 fold variation not attributable to clinical condition*	265/year	$1,590,000
Total Annual Loss			$2,165,000

Bonus-Penalty Scenario Bulls Eye

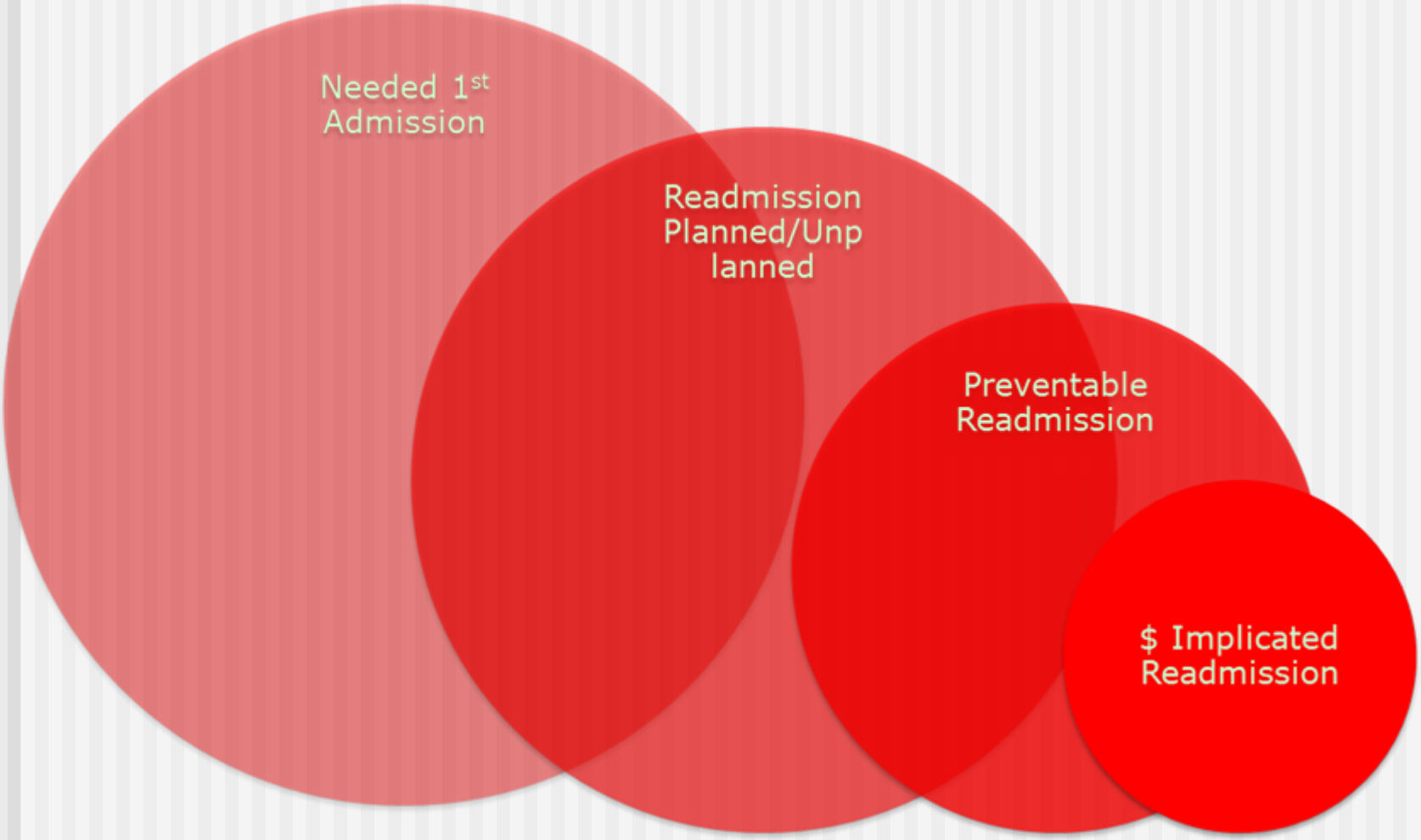


Example of VBP Proposed Timeline



HARVATH HEALTH ASSOCIATES

Anatomy of a Readmission



Harvath Health Associates

Understanding readmissions starts before the first admission

HARVATH HEALTH ASSOCIATES

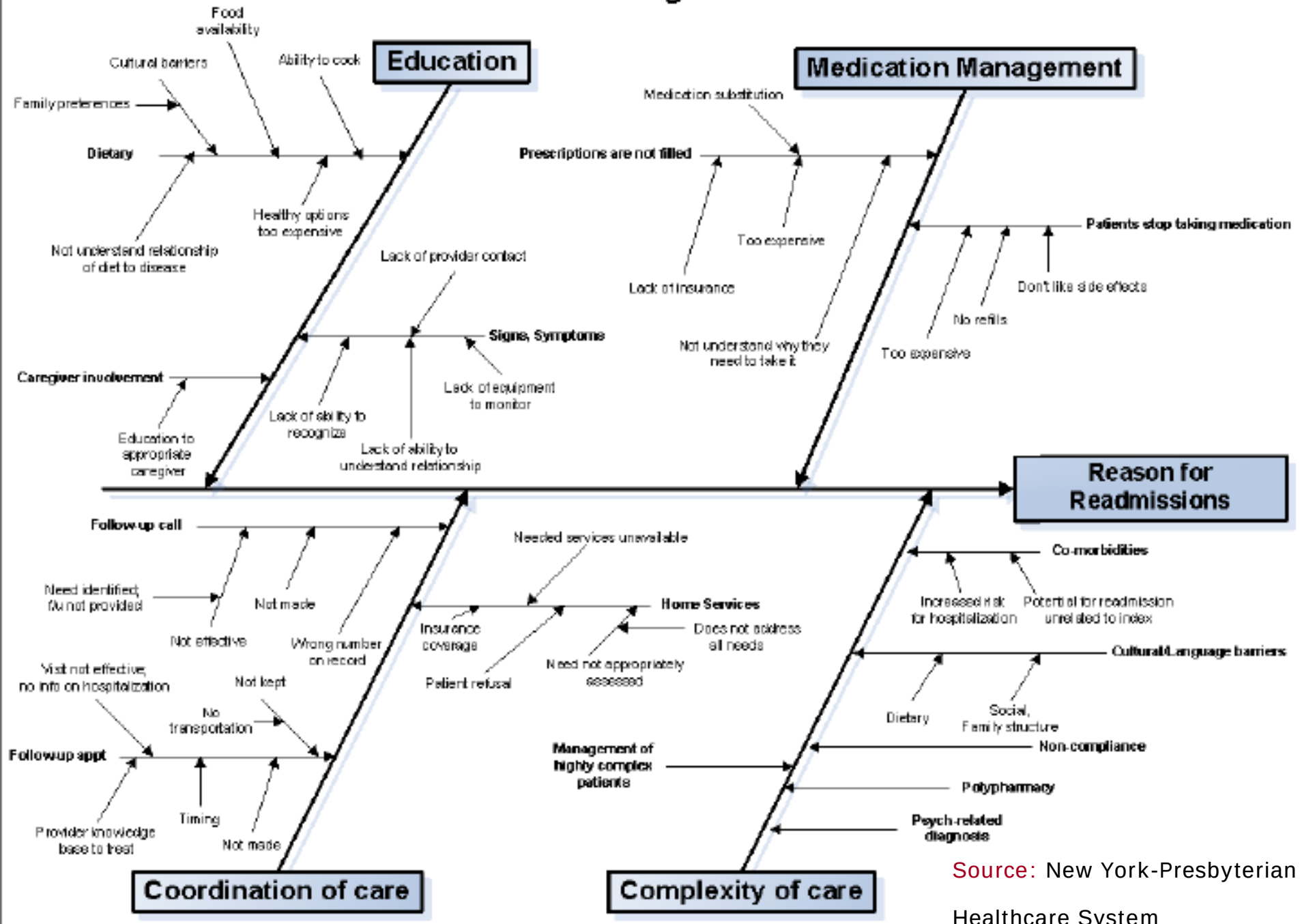
- 19% of 30-day readmissions are from admissions that didn't need to happen in the first place." AHRQ
- Severity and complexity of underlying chronic problems contribute significantly to preventable readmissions.
- At home deaths from medication mistakes saw a 7 fold increase between 1984 and 2004
- Known deficits that impair a patient's ability to follow through on a discharge plan
  - Economics
  - Transportation
  - Mental (ie. depression)
  - Cognitive (ie. memory)
  - Physical (ie. seeing, hearing)
  - Language (non-English speaking, illiterate)
  - Social supports

Top 3 issues for patient medication compliance failure

Most DC Planners would target lack of social support as the top issue in readmissions

- A recent study looking at 150,000 patients with diabetes on medications found that 50% of patients had medication issues but of those:
  - 20% were patient issues (Economics and transportation issues, and depression accounting for the most)
  - 80% were provider issues (failure to intensify treatment to optimal range being the largest issue)
- This changes how we need to start looking at compliance failure and what solutions we might implement

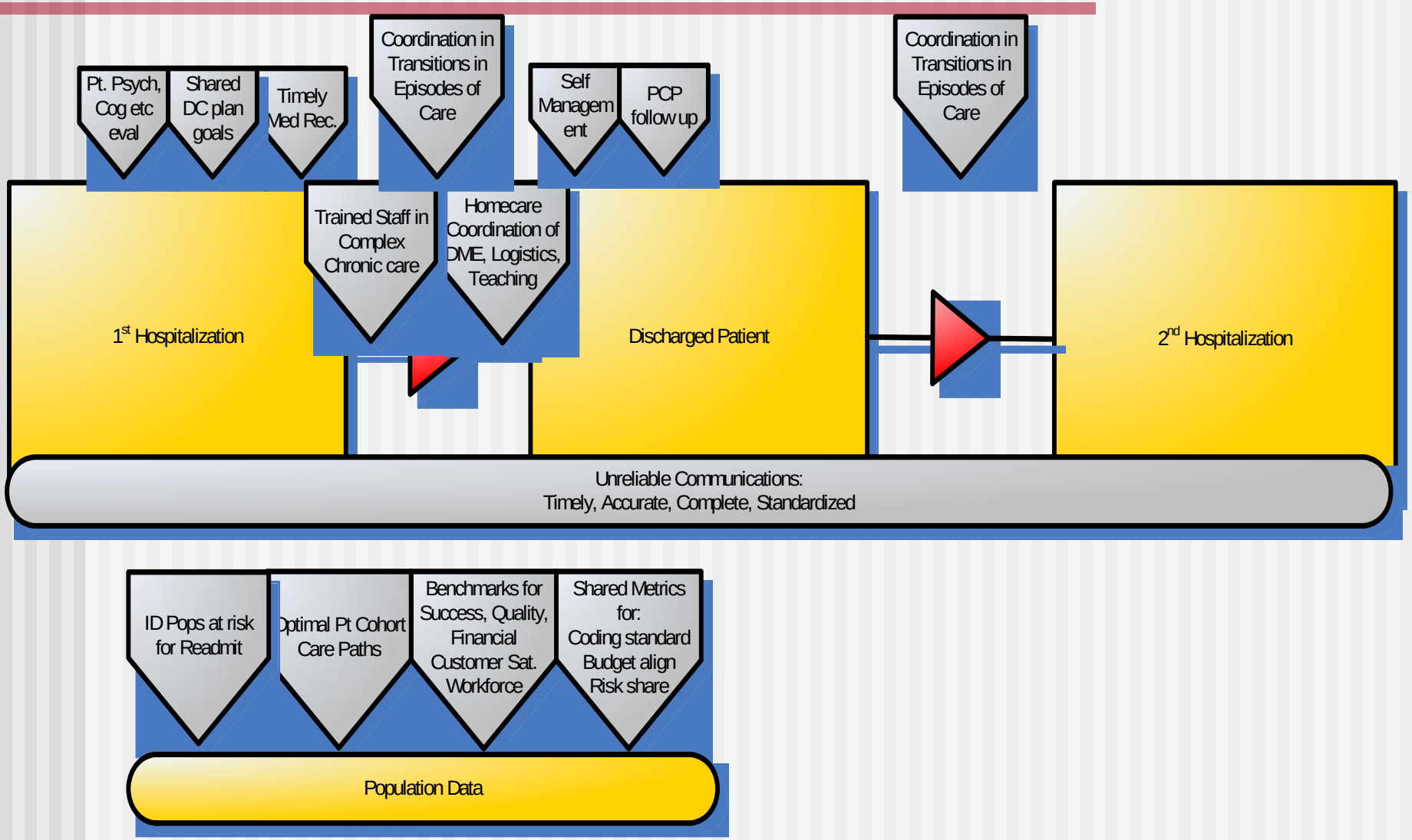
Cause & Effect Diagram: Readmissions



Source: New York-Presbyterian Healthcare System

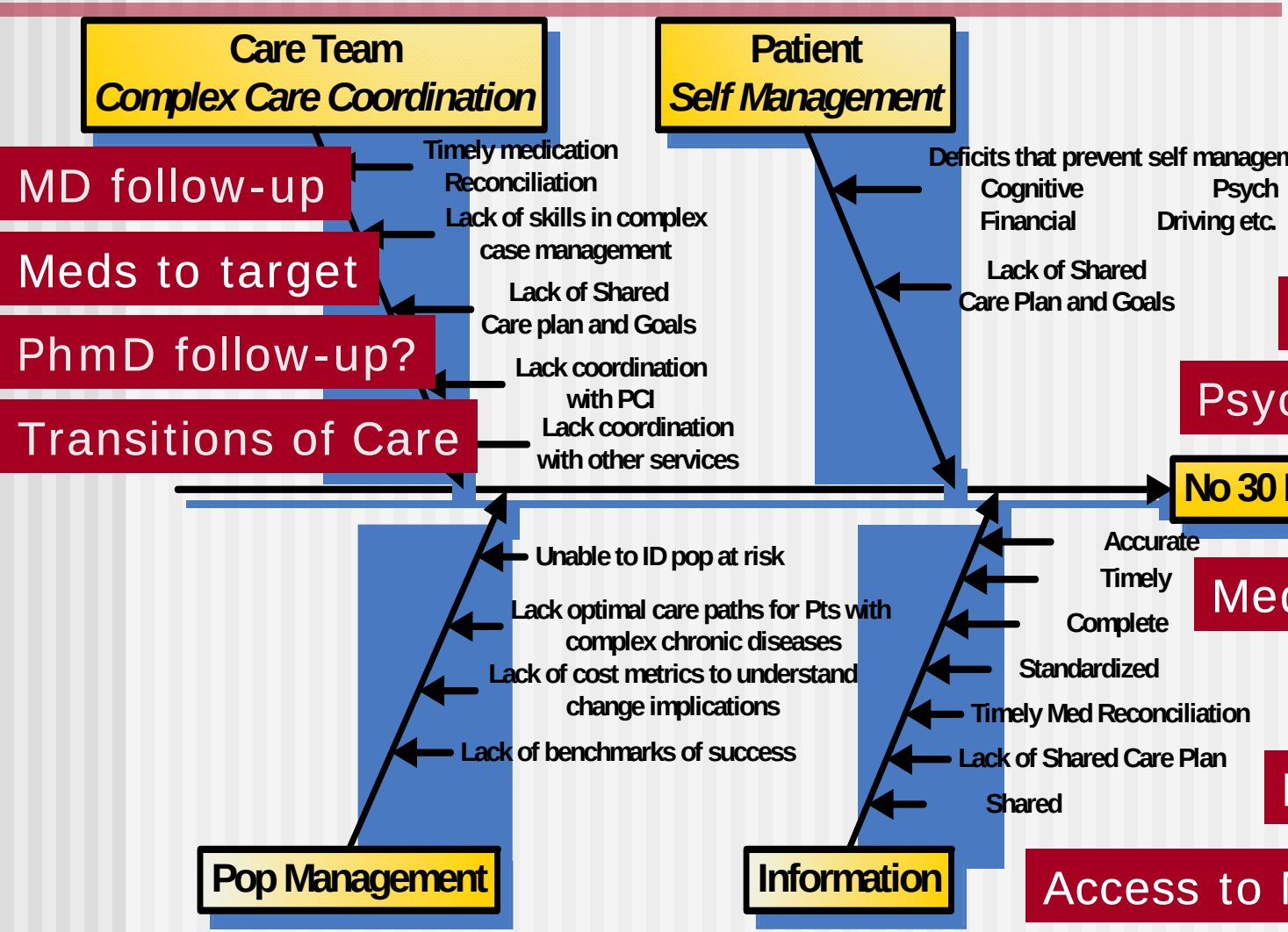
Issues surrounding readmissions by process steps

HARVATH HEALTH ASSOCIATES



Research surrounding readmissions Issues

HARVATH HEALTH ASSOCIATES



MD follow-up

Meds to target

PhmD follow-up?

Transitions of Care

Polypharmacy

Age

Race

Socioeconomic

Psych & Depression

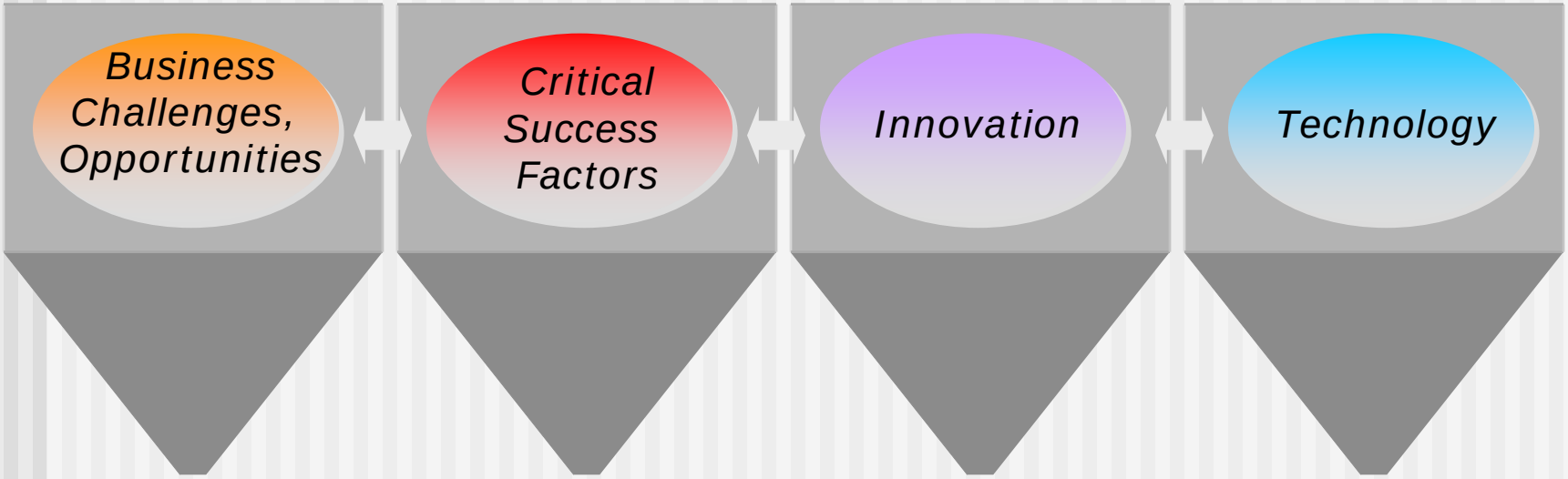
Med Reconciliation

EHR c/MU

RPM & Telemed

Access to Medical Records

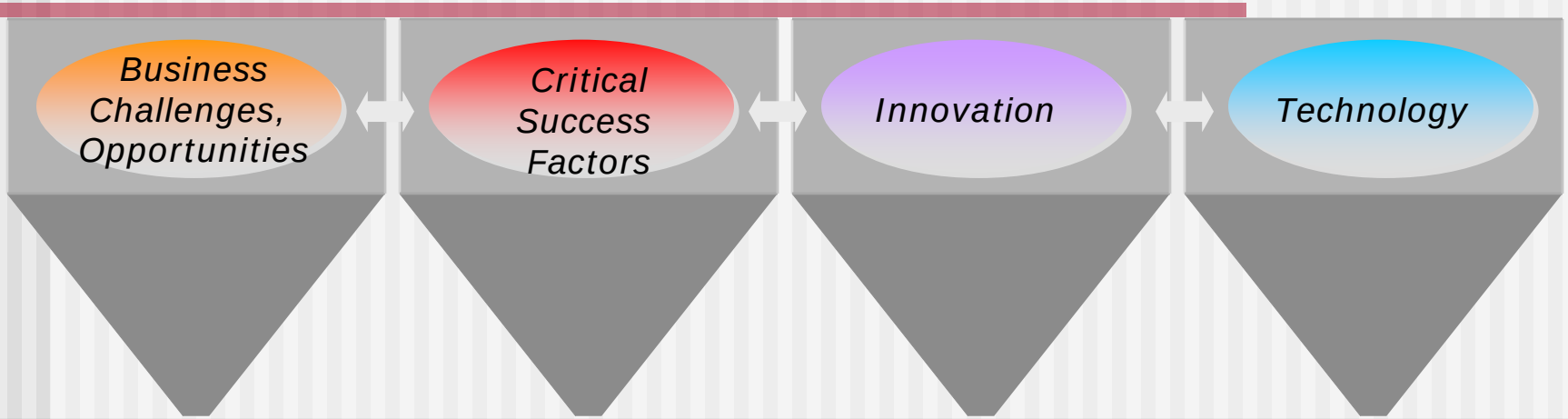
Connecting the Dots?



Healthcare Challenges & Business Problems	Critical Success Factors & Metrics	Innovations	Technologies
Home care visits labor intensive (rural visits-travel, time, weather, cost)	Number of in person visits needed for appropriate care per episode	Use of telecommunications and remote monitoring to substitute for in-person home visits	*Two-way video *Remote sensor devices *Remote disease monitoring
Unable to identify populations at greatest risk for readmit	Decrease in readmissions rates	Automation of risk profiling and readmission analysis	*Computer algorithms *Data integration/mining software *Predictive Modeling
Lack of shared care plan and structures to advance self management *Clarity of Provider goals	*Patient compliance with care plan *Decreased readmissions *Fewer calls to management team	Customized discharge care plan protocols for complex home care management	*PHR *Provider and patient teleconferencing *Shared care plan

Integrated System use of Telemedicine and RDM to reduce readmissions

HARVATH HEALTH ASSOCIATES



Veteran's Administration: • Aging veterans • Lifetime care commitment • Chronic disease burden increasing • Shrinking resources	Plans to increase use of RDM by 66% in 3 years Goal of up to 60% of chronic illness will be managed by RDM (Small group outcomes) ↓ 15%-70% ED visits ↓ 13%-68% Admits ↓ 13%-71% LOS	Use telecommunications and remote disease monitoring (RDM) to manage chronic illness at home	Use remote disease home monitoring equipment to manage 30 chronic conditions

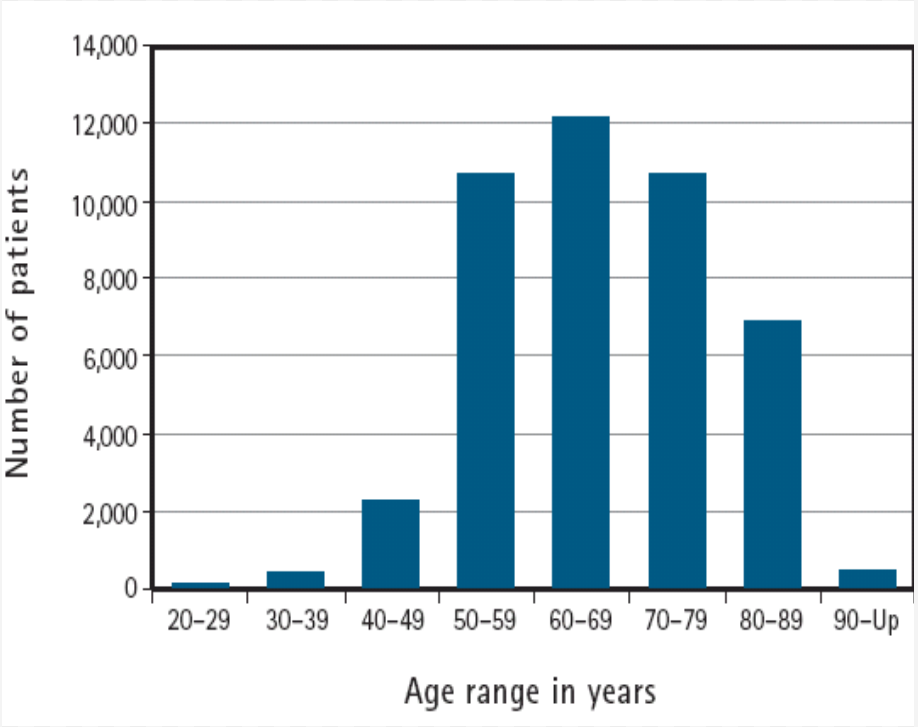
HealthBuddy by HealthHero Remote Chronic Disease Management System

Source: http://www.liebertonline.com/doi/pdfplus/10.1089/tmj.2008.0021

The Early Adopter Experience: Veterans Health Administration

- The cost of the program is $1,600 per patient/year. This compares with direct cost of VHA's home-based primary care services of $13,121 per patient/year, and market nursing home care rates that average $77,745 per patient/year.
- Since VHA implemented CCHT, a total of 43,430 patients have been enrolled in the program. CCHT patients increased from 2,000 to 31,570 from 2003 to 2007. VHA plans to increase its NIC services 100% above 2007 levels to provide care for 110,000 patients by 2011, or 50% of its projected NIC needs.
- VHA attributes the rapidity and robustness of its CCHT implementation to the "systems approach" taken to integrate the elements of the program. Wherever possible, CCHT incorporated existing business processes to reduce the program's overhead costs and increase efficiency.

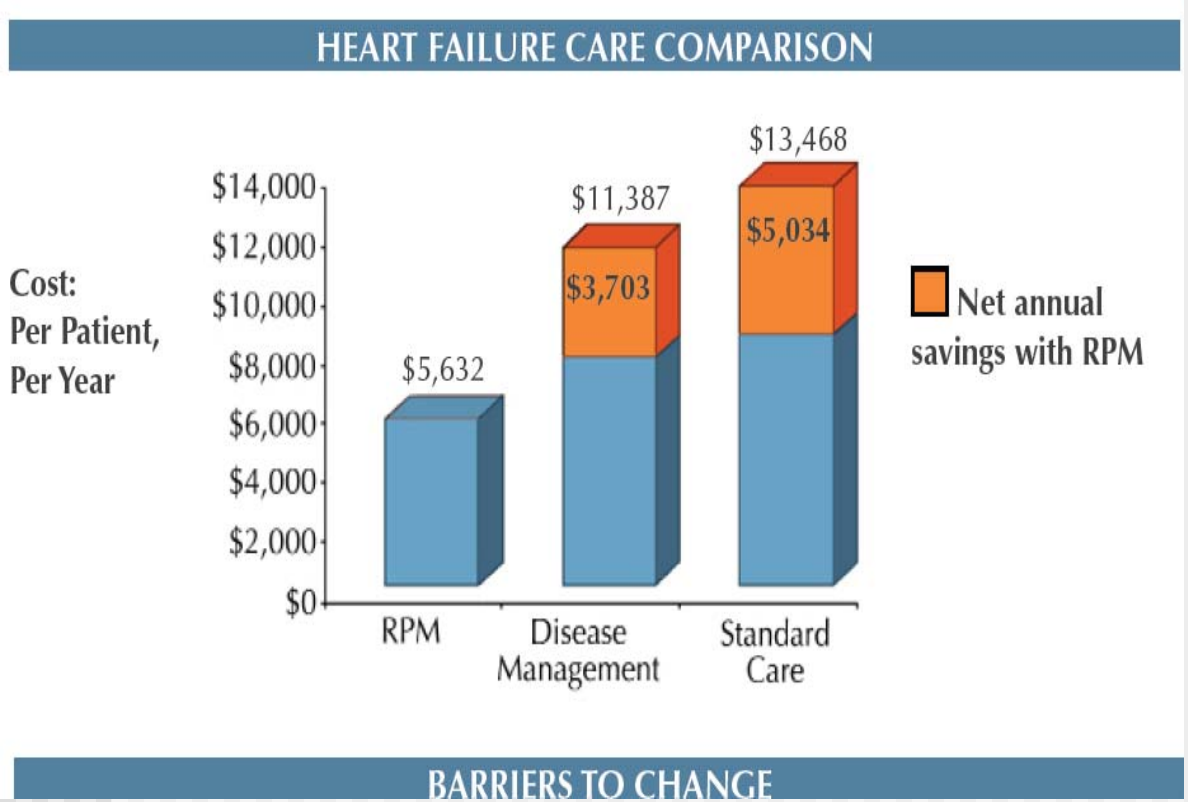
Age Distribution of all CCHT Patients



The Opportunity: RPM of patients with congestive heart failure

HARVATH HEALTH ASSOCIATES

- The New England Healthcare Institute's Research Update: *Remote Physiological Monitoring* reports the following cost savings for all Class III and Class IV heart failure patients, assuming that 80% of the 1.59 million patients in these two classes, or 1.27 million patients, will be hospitalized in a year, at an annual cost of $2,052 per patient for the monitoring technology ($2,802 with DM software):
  - 60% reduction in hospital readmissions compared to standard care and a 50 percent reduction in hospital readmissions compared to disease management programs without remote monitoring.
  - Based on the potential to prevent between 460,000 and 627,000 heart failure-related hospital readmissions each year, NEHI estimates an annual national cost savings of up to $6.4 billion dollars.



- The annual cost of a heart-failure related hospitalization per patient ranged from $5,632 for RPM patients to $11,387 for disease management without RPM patients to $13,468 for standard care patients.
- The net savings of RPM technology (i.e. savings after the costs associated with interventions) were $3,703 per patient per year for those with disease management programs and $5,034 for those with standard care.

Policy Change To Support Broad RPM Diffusion Will Drive Cost Savings

HARVATH HEALTH ASSOCIATES

- Analyzing data from the remote monitoring program at the VA, as well as other smaller programs, Better Health Care Together finds the US health care system could reduce costs by nearly $200 billion during the next 25 years if remote monitoring tools were utilized much more widely and supported by specific policy adjustments that include reimbursing health care organizations for remote care and encouraging continued investment in broadband infrastructure.

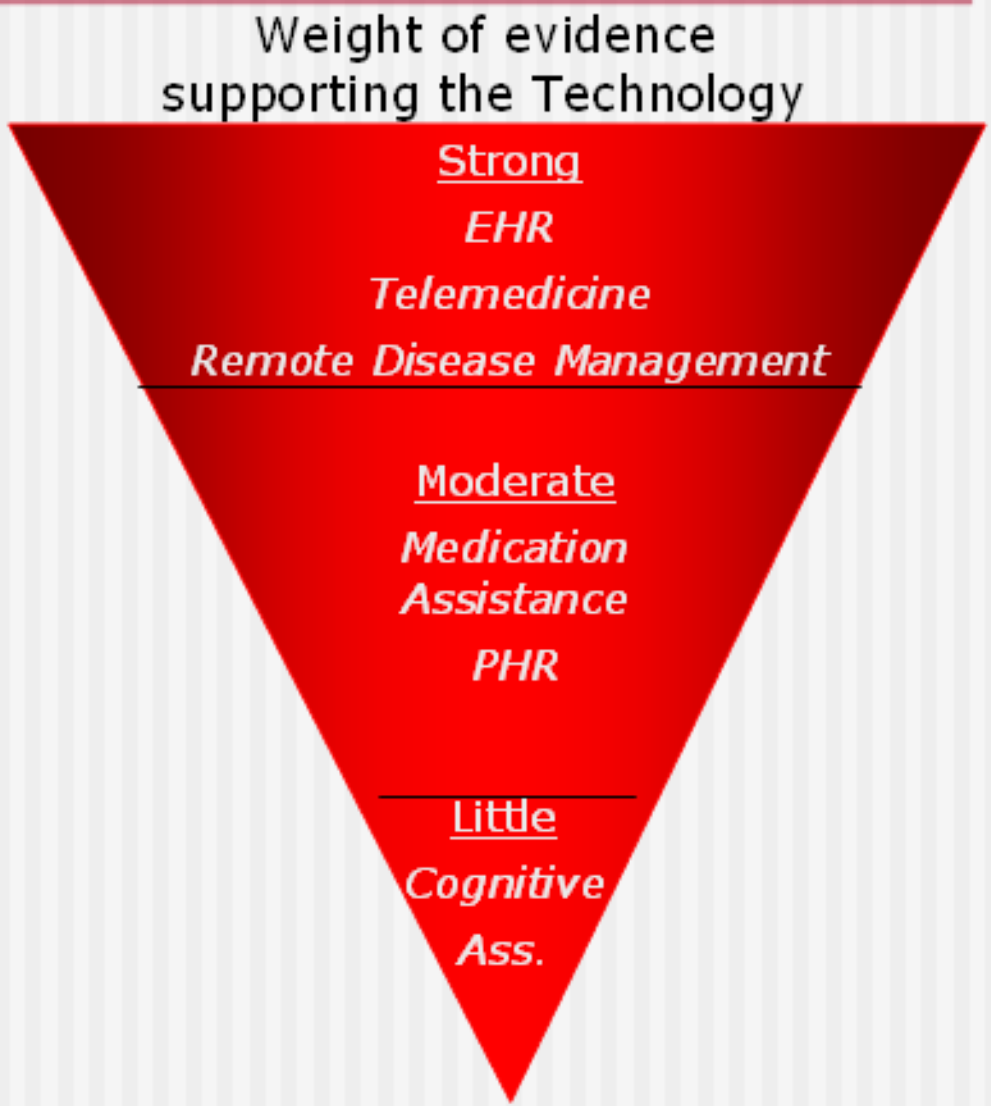
Estimated Savings and Gain from Policy Implementation, by Condition

	Net Present Value of Savings – Baseline Case	Net Present Value of Savings – Policy Case	Gain From Policy Change
CHF Patients	$79.7 Billion	$102.5 Billion	$22.8 Billion
Diabetes Patients	$42.3 Billion	$54.4 Billion	$12.1 Billion
COPD Patients	$18.7 Billion	$24.1 Billion	$5.4 Billion
Chronic Skin Ulcer Patients	$12.5 Billion	$16.0 Billion	$3.5 Billion
Total	$153.2 Billion	$197 Billion	$43.8 Billion

Source: *Vital Signs via Broadband: Remote Health Monitoring Transmits Savings, Enhances Lives*

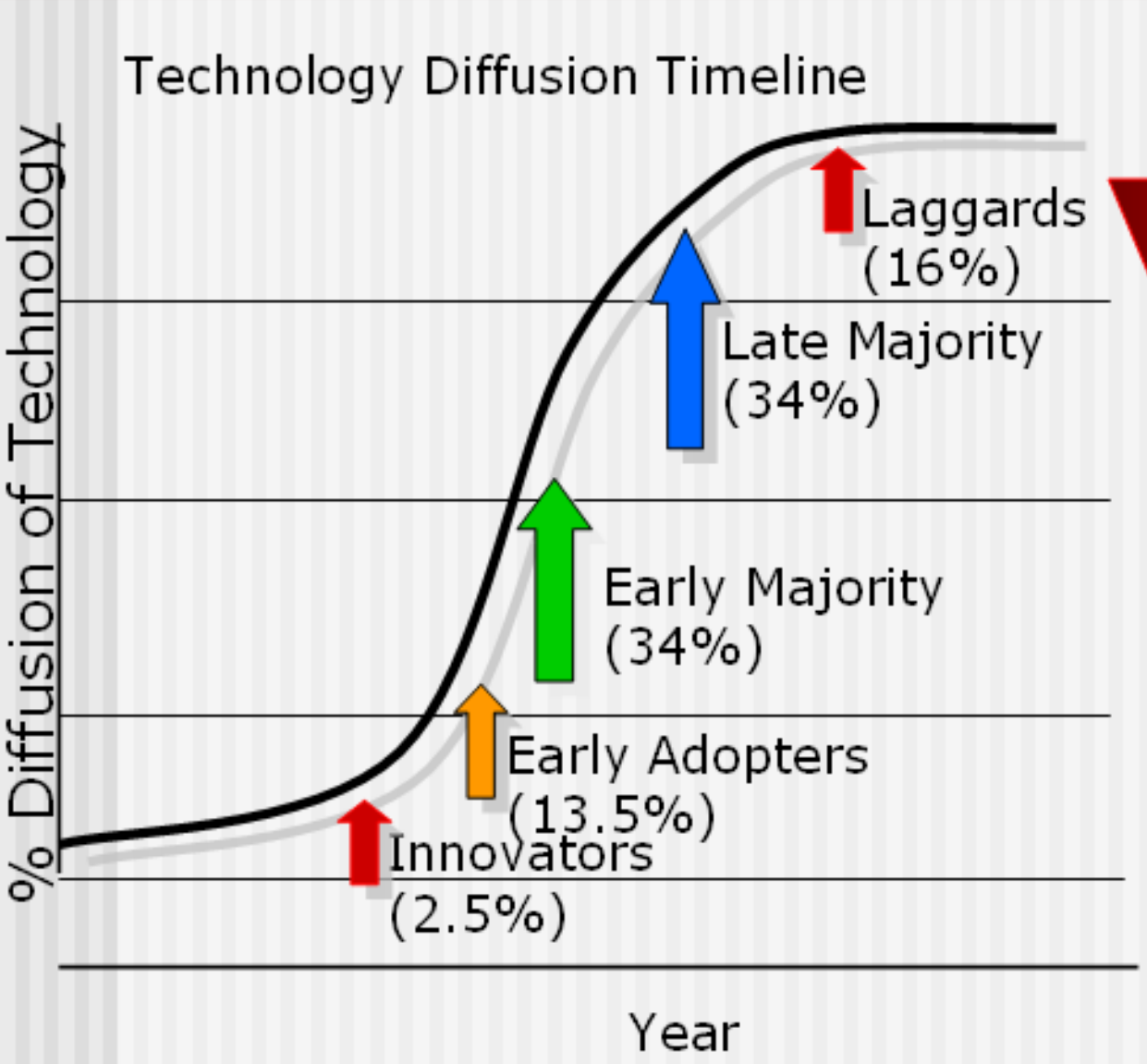
Some High Value Technologies in Preventing Readmissions

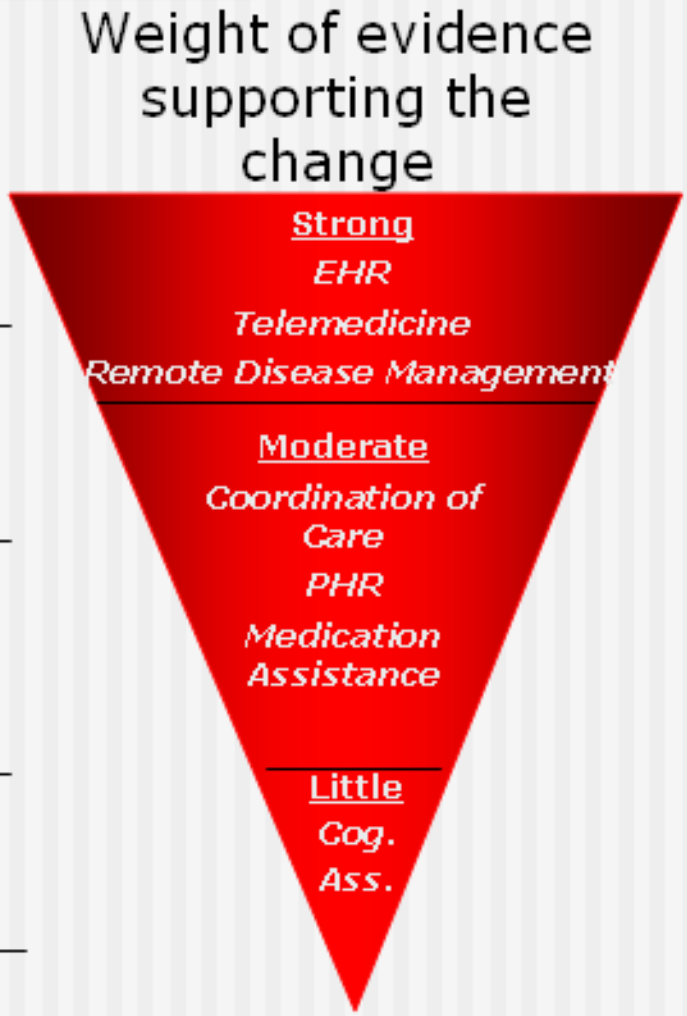
Harvath Health Associates



Need for Evidence versus Adoption

HARVATH HEALTH ASSOCIATES





Source: Everett Rogers Diffusion of Innovations, 1995

In Summary

HARVATH HEALTH ASSOCIATES

- We've been talking about readmissions for over 50 years
- Payment Penalties will begin 4Q 2012
- Reduction of avoidable readmissions is possible and there is research and efforts to prove it
- Technology may be of assistance in reducing readmissions
- We need to understand what technologies will work within the confines of our own organizational culture

HARVATH HEALTH

ASSOCIATES

Thank You

Barbara S Harvath

Harvath Health Associates
1852 East 2700 South
Salt Lake City, UT 84106

Mobile: 415.730.3753
Message/Fax: 888.415.6987
Barbaraharvath@yahoo.com