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Health Care Leaders and the "Triple Aim"

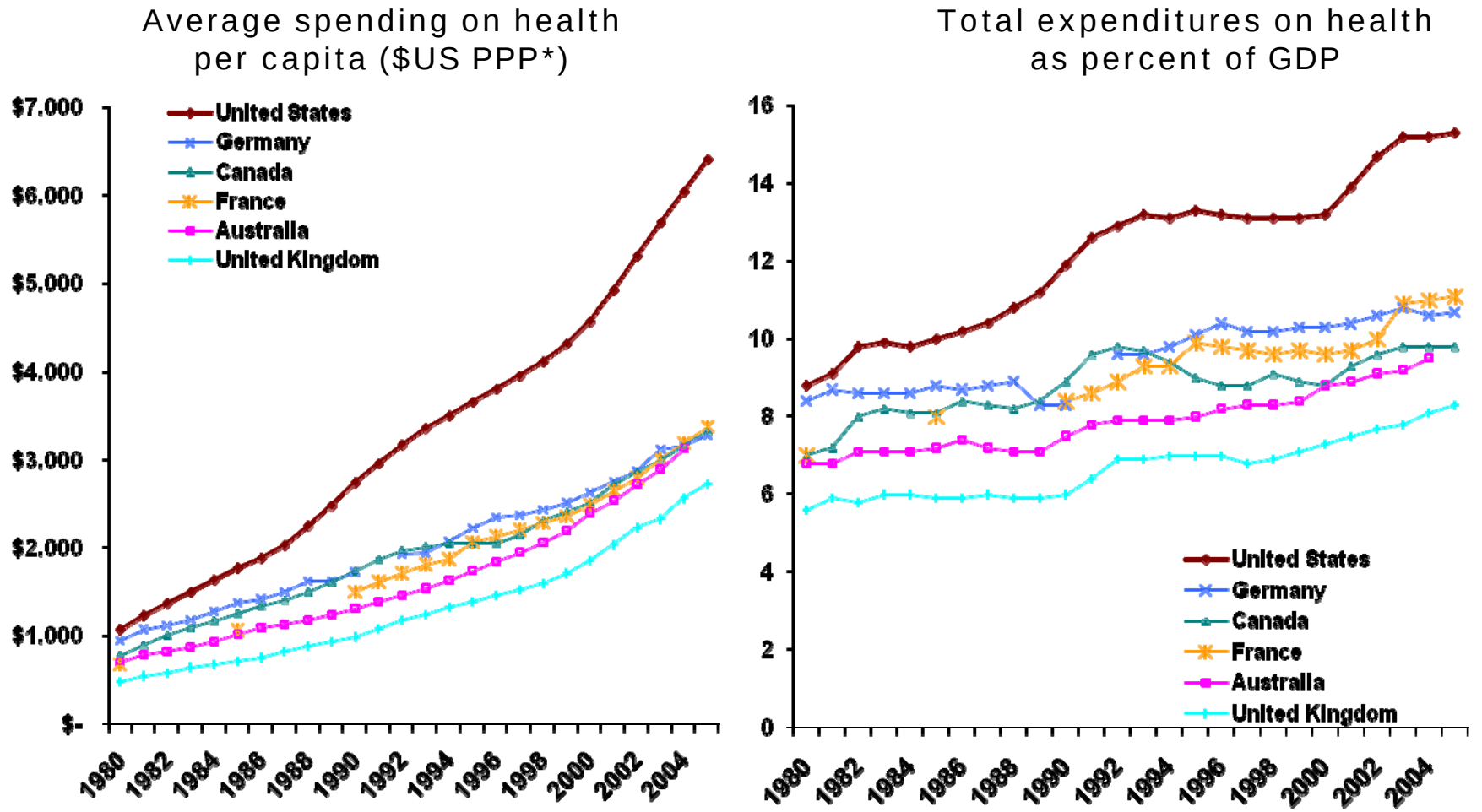
Donald M. Berwick, MD, MPP
Institute for Healthcare Improvement

Healthy Dialogues

Intermountain Health Care

Salt Lake City, UT: February 4, 2009

International Comparison of Spending on Health, 1980–2005

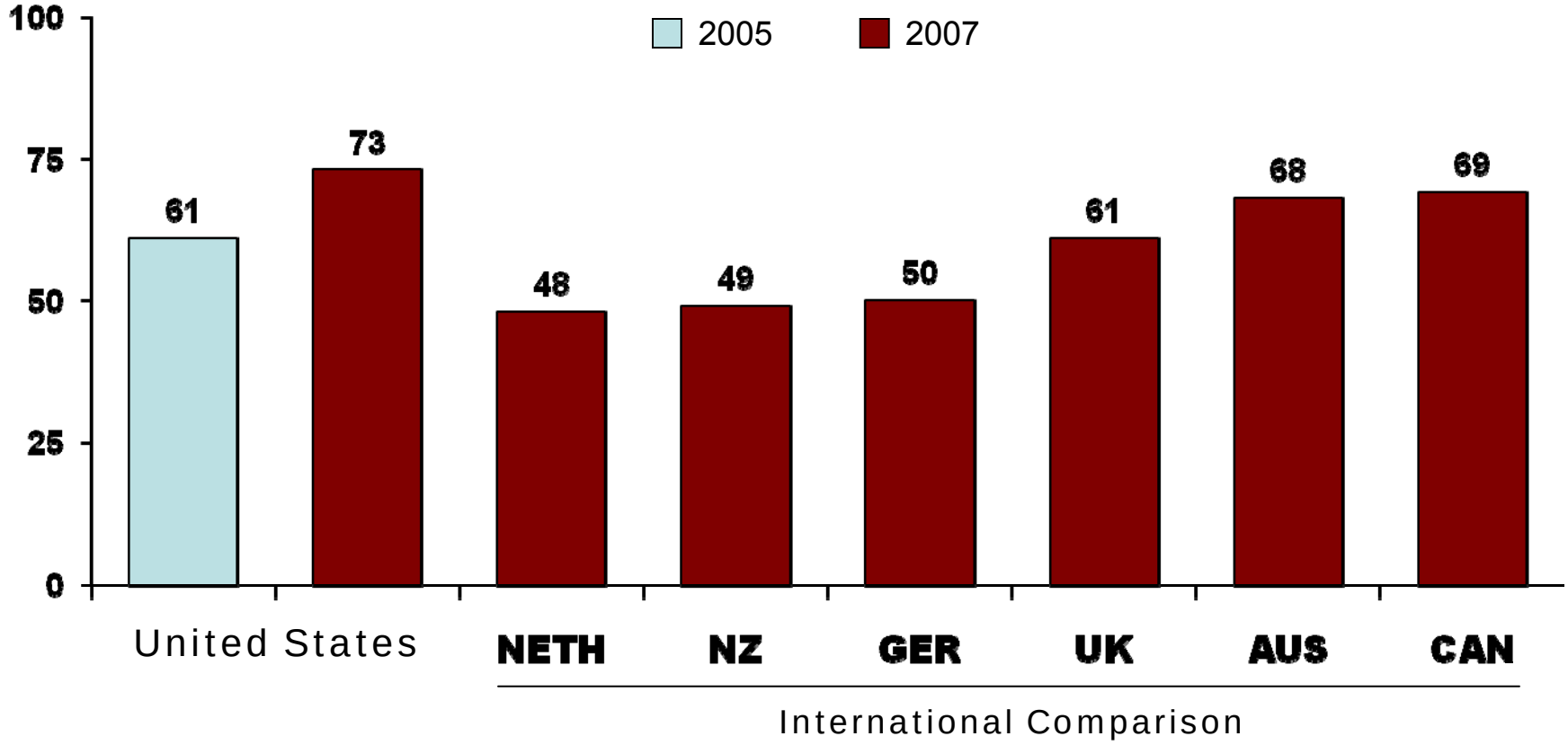


* PPP=Purchasing Power Parity.
Data: OECD Health Data 2007, Version 10/2007.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Difficulty Getting Care on Nights, Weekends, Holidays Without Going to the Emergency Room, Among Sicker Adults

Percent of adults who sought care reporting “very” or “somewhat” difficult

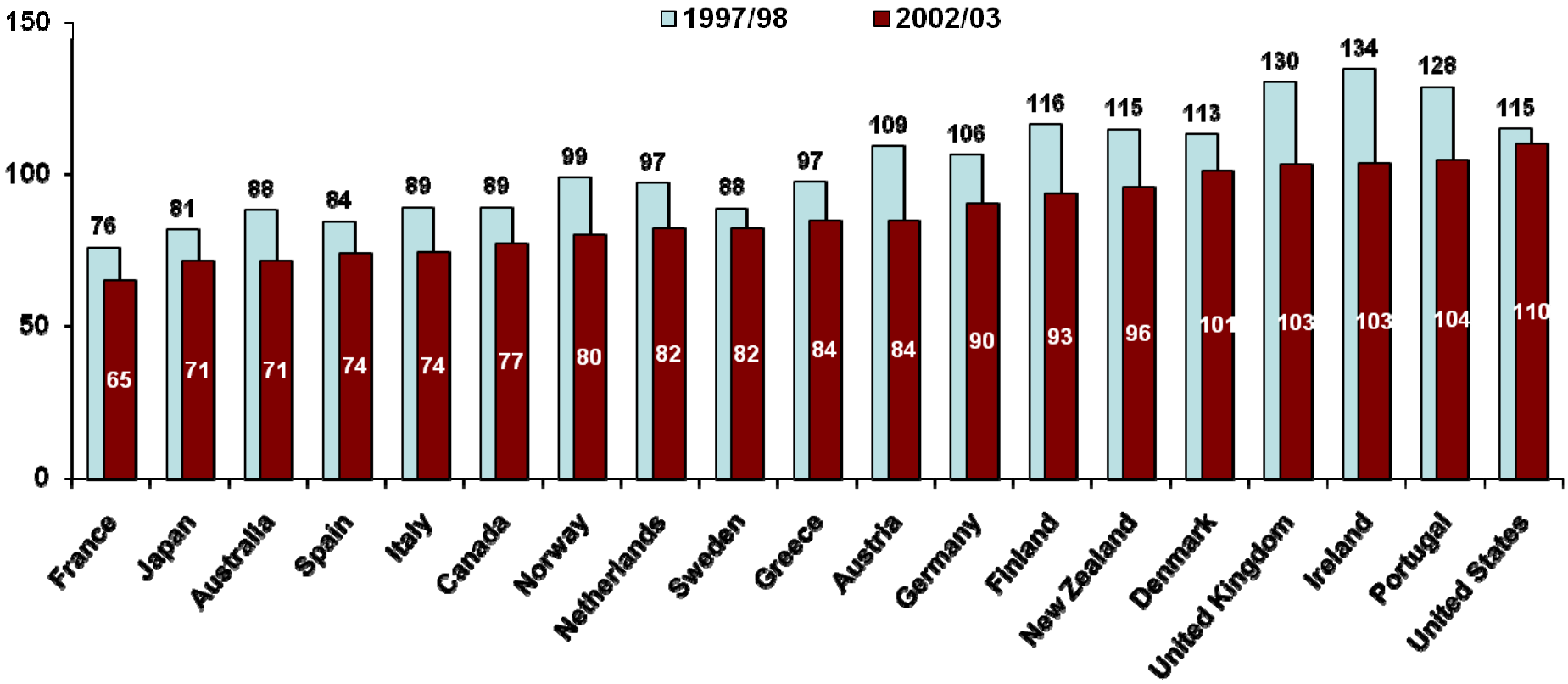


AUS=Australia; CAN=Canada; GER=Germany; NETH=Netherlands; NZ=New Zealand; UK=United Kingdom.
Data: 2005 and 2007 Commonwealth Fund International Health Policy Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Mortality Amenable to Health Care

Deaths per 100,000 population*



* Countries' age-standardized death rates before age 75; including ischemic heart disease, diabetes, stroke, and bacterial infections.

See report Appendix B for list of all conditions considered amenable to health care in the analysis.

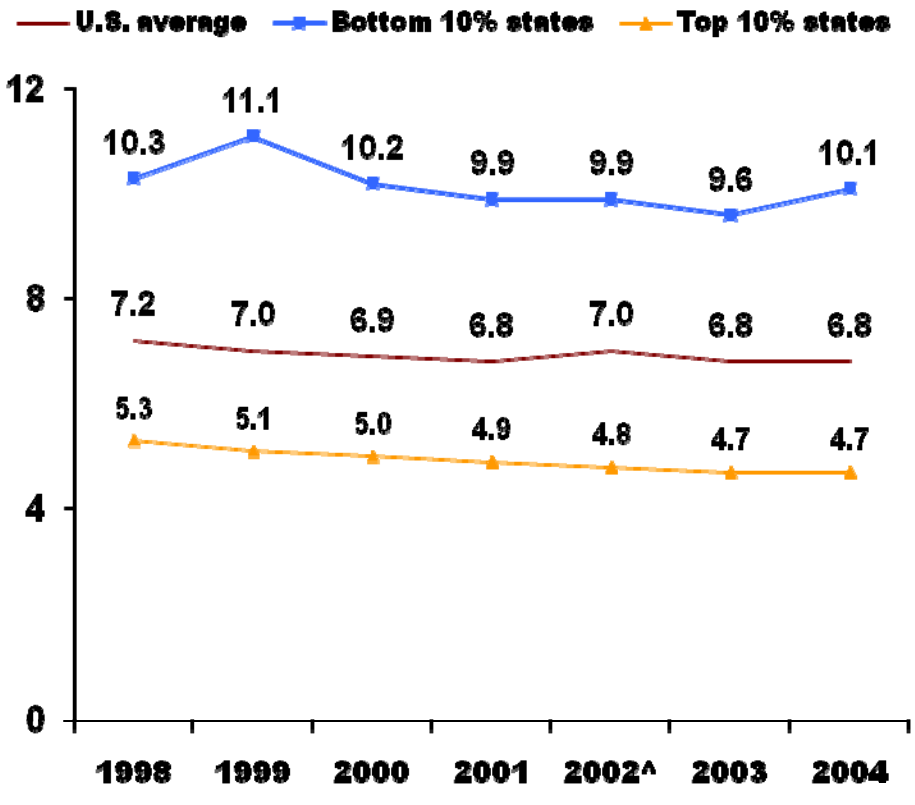
Data: E. Nolte and C. M. McKee, London School of Hygiene and Tropical Medicine analysis of World Health Organization mortality files (Nolte and McKee 2008).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

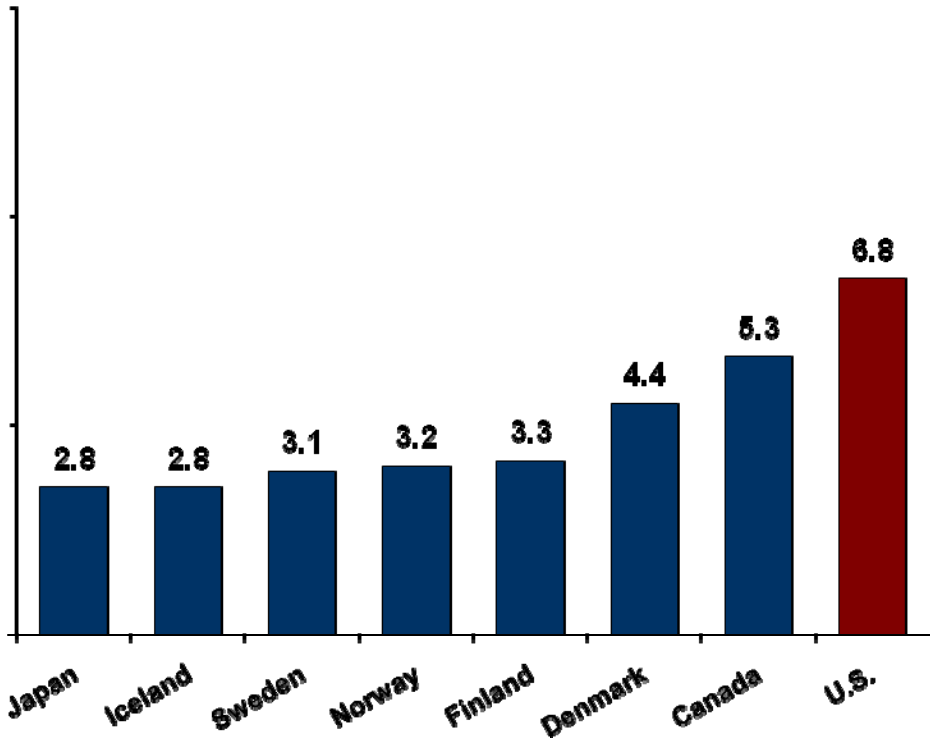
Infant Mortality Rate

(Infant deaths per 1,000 live births)

National Average and State Distribution



International Comparison, 2004

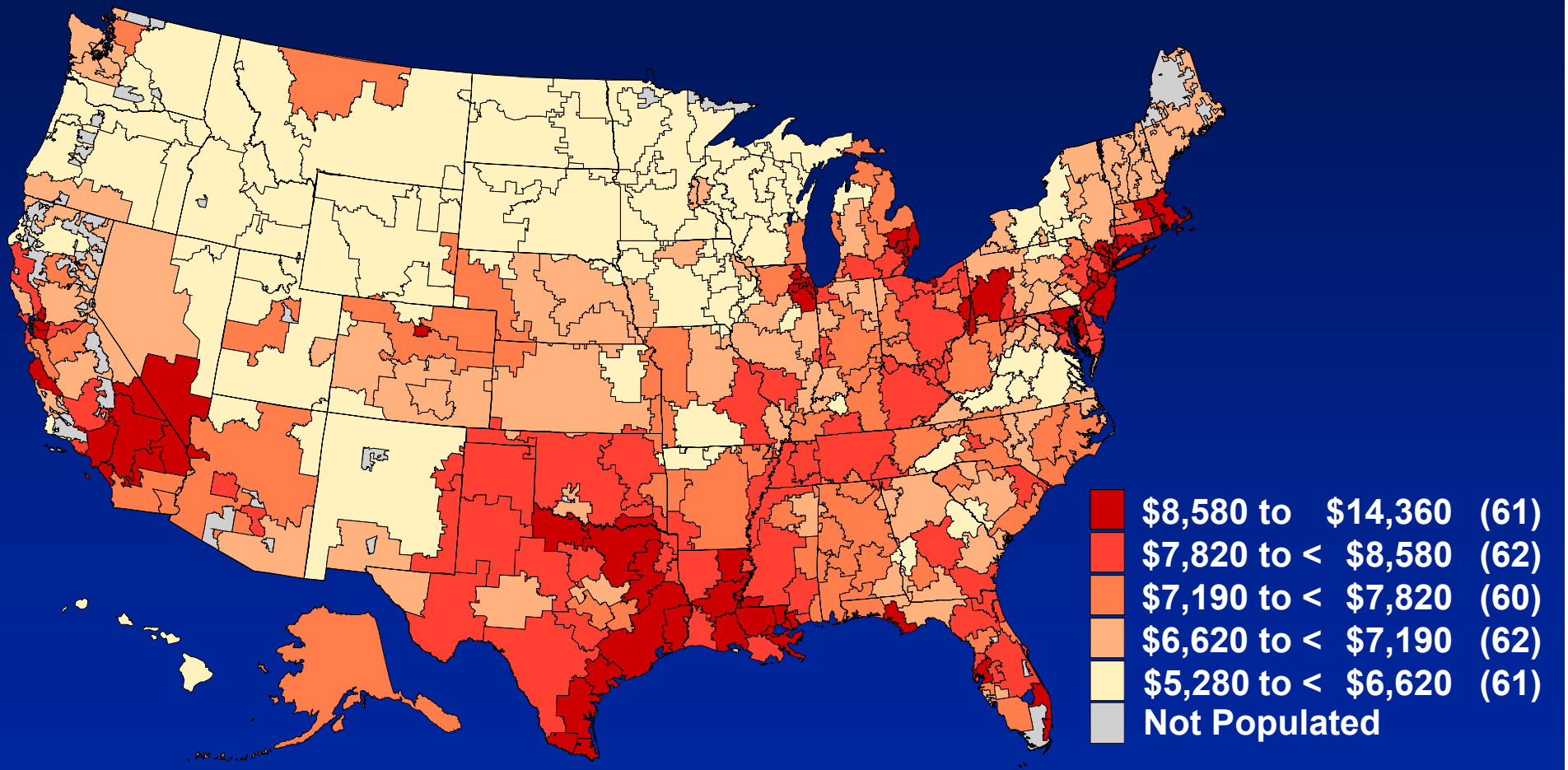


^ Denotes baseline year.

Data: National and state—National Vital Statistics System, Linked Birth and Infant Death Data (AHRQ 2003, 2004, 2005, 2006, 2007a); international comparison—OECD Health Data 2007, Version 10/2007.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Variations in Spending Across Regions (Elliott Fisher)



Source: The Dartmouth Atlas of Health Care 2005.

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What Do Highest Quintile Cost Regions Get for an $3000 Extra *per Capita* per Year?

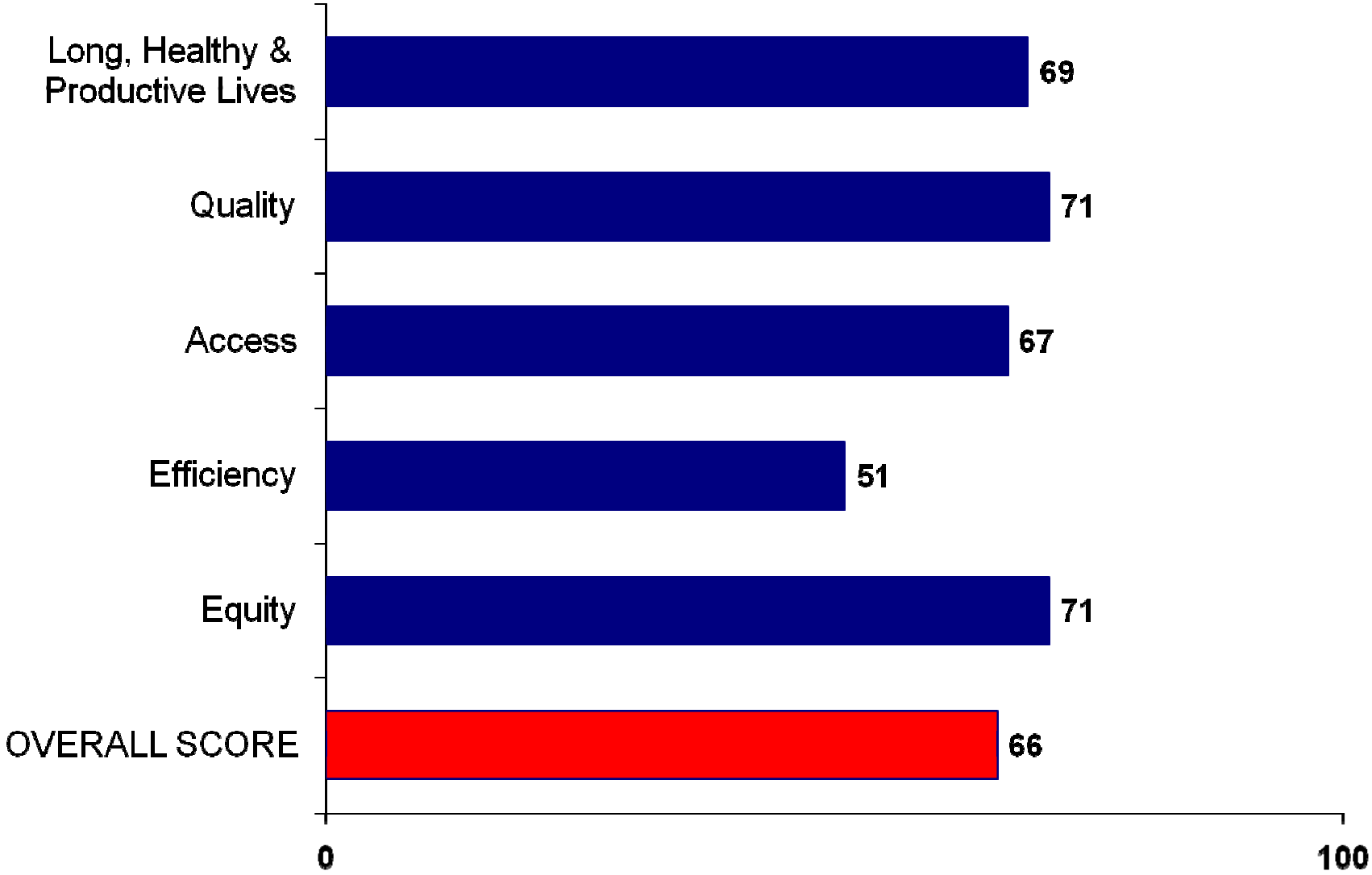
COSTS AND RESOURCE USE….

- 32% more hospital beds *per capita*
- 65% more medical specialists
- 75% more internists
- More rapidly rising *per capita* resource use

QUALITY AND RESULTS…

- Technically worse care
- No more major elective surgery
- More hospital stays, visits, specialist use, tests, and procedures
- Slightly higher mortality
- Same functional status
- Worse communication among physicians
- Worse continuity of care
- More barriers to quality of care
- Lower satisfaction with hospital care
- Less access to primary care
- Lower gains in survival

Scores: Dimensions of a High Performance Health System



Schoen C, Davis K, How SKH, Schoenbaum SC. US health system performance: A national scorecard. Health Aff. 2006;25(6):w457-w475.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CROSSING THE QUALITY CHASM
A New Health System for the 21st Century

What Should We Aim for?

- No Needless Deaths
- No Needless Pain or Suffering
- No Unwanted Waits
- No Helplessness
- No Waste

……For Anyone

Aims

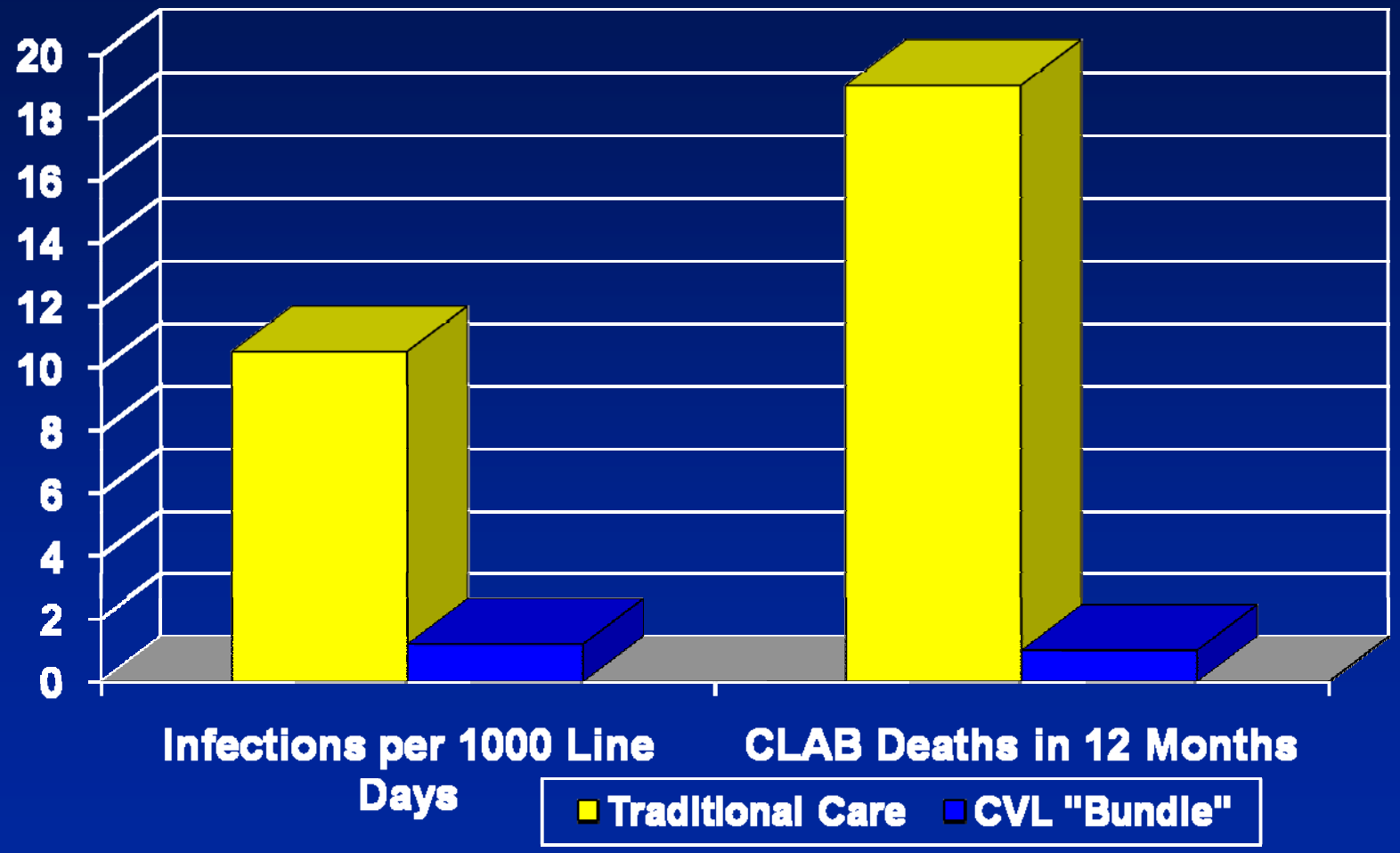
- Safety
- Effectiveness
- Patient-centeredness
- Timeliness
- Efficiency
- Equity

Preventing Central Line Infections

- Hand hygiene
- Maximal barrier precautions
- Chlorhexidine skin antisepsis
- Appropriate catheter site and administration system care
- Daily review of line necessity and prompt removal of unnecessary lines

Central Line Associated Bloodstream Infections (CLABs)

(from Rick Shannon, MD, West Penn Allegheny Health System)



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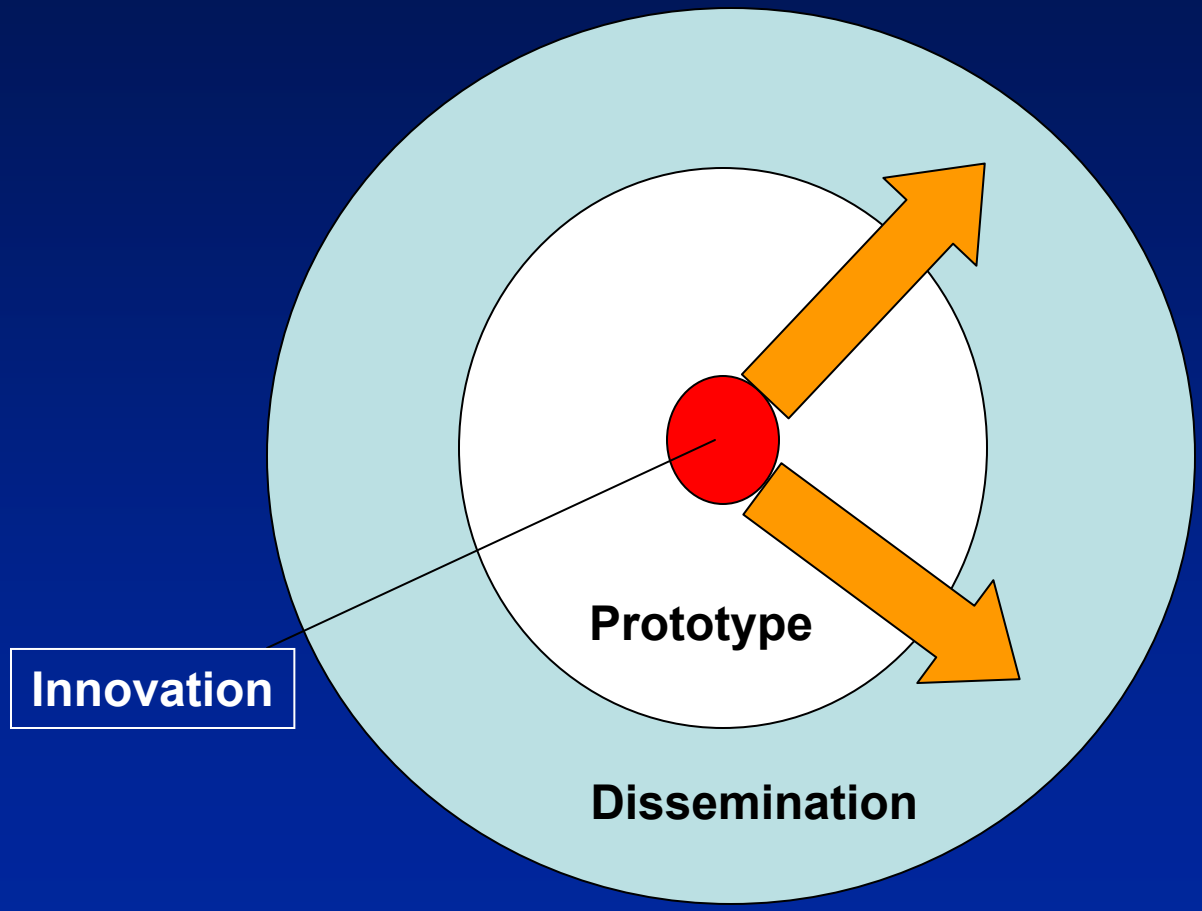
IHI's "Rings" of Activity



The “100,000 Lives Campaign”

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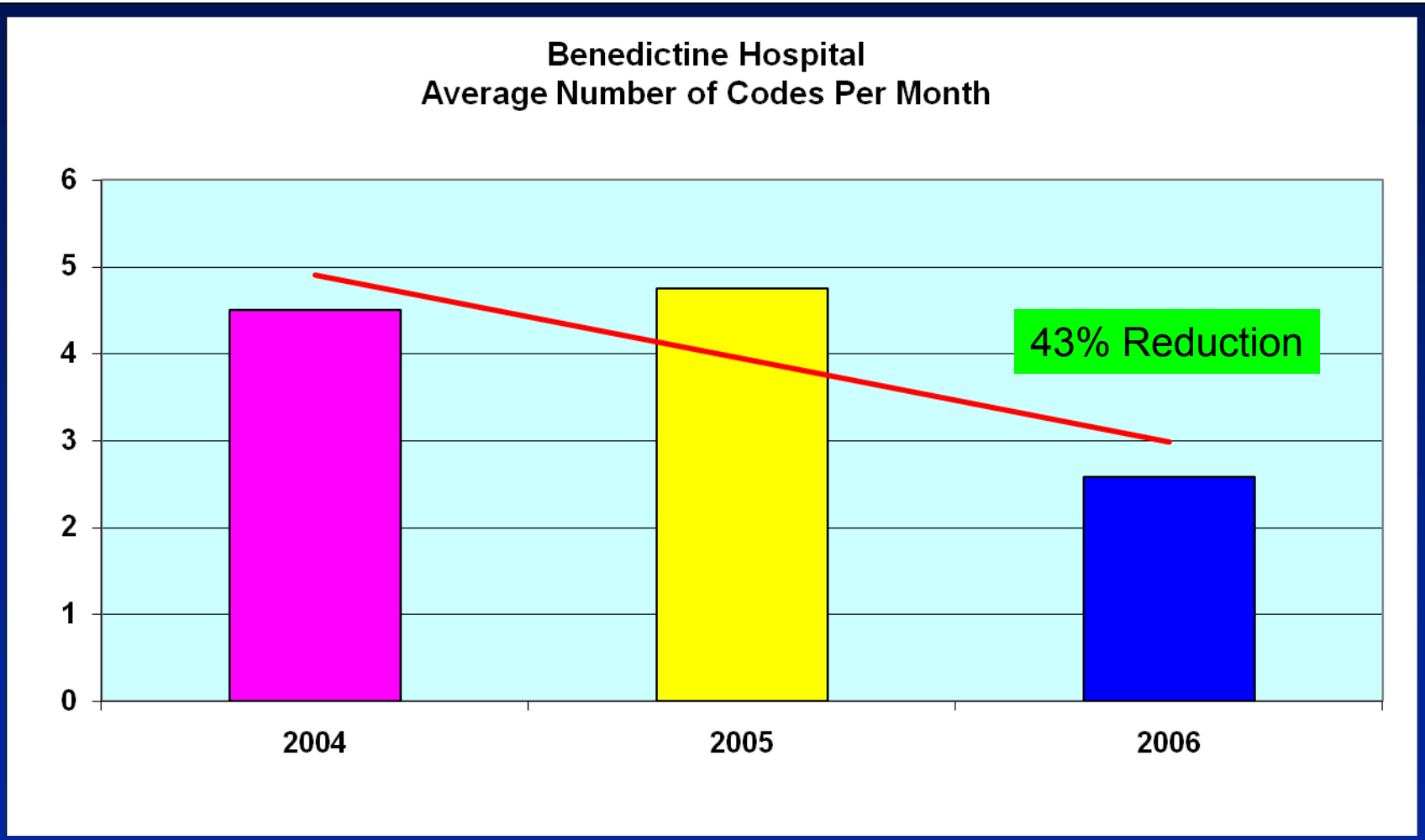
The Campaign "Planks" -- Six Changes That Save Lives

1. Deployment of Rapid Response Teams
2. Delivery of Reliable, Evidence-Based Care for Acute Myocardial Infarction
3. Medication Reconciliation
4. Prevention of Central Line Infections
5. Prevention of Surgical Site Infections
6. Prevention of Ventilator-Associated Pneumonias

Rapid Response Results: Benedictine Hospital



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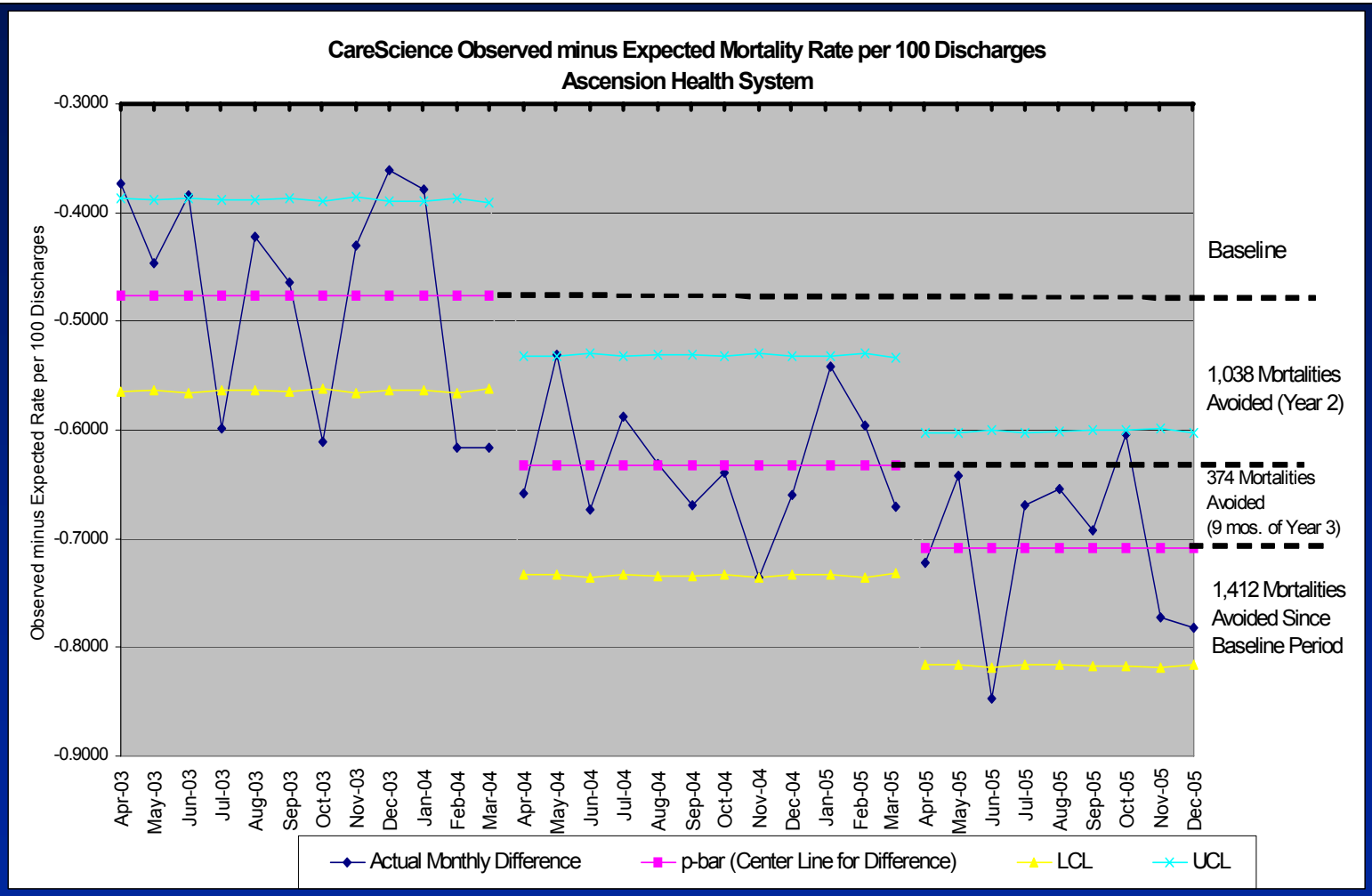
Ascension Health Mortality Reduction



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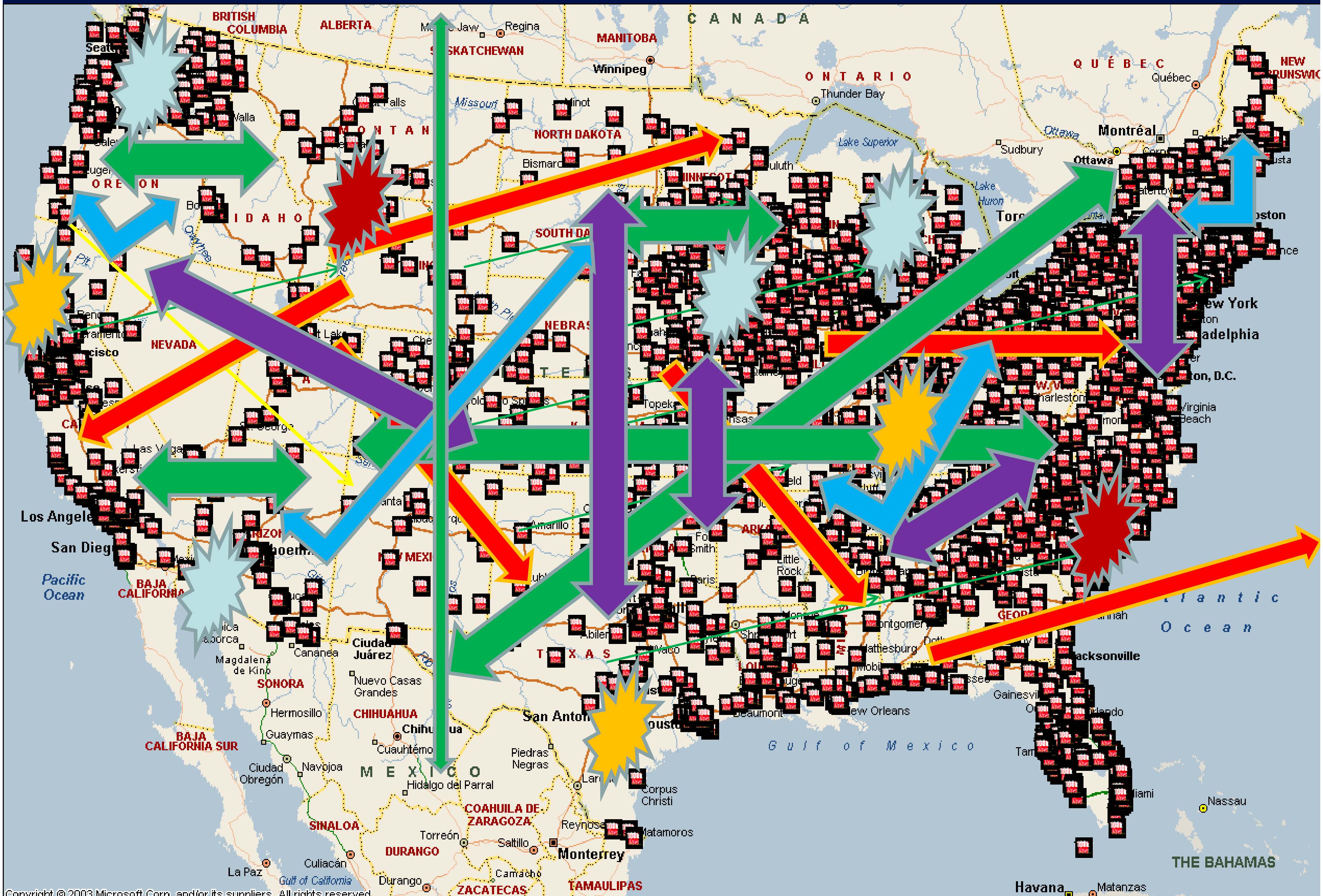
BRITISH COLUMBIA
ALBERTA
Regina
MANITOBA
Winnipeg
C A N A D A
O N T A R I O
Thunder Bay
Lake Superior
Q U É B E C
Québec
Sudbury
Ottawa
Montréal
NORTH DAKOTA
NEVADA
I D A H O
San Diego
Pacific Ocean
BAJA CALIFORNIA
Amarillo
Topeka
Little Rock
Paris
T E X A S
Ciudad Juárez
Cananea
Magdalena de Kino
SONORA
Nuevo Casas Grandes
CHIHUAHUA
Hermosillo
Guaymas
BAJA CALIFORNIA SUR
Ciudad Obregón
Navojoa
M E X I C O
Hidalgo del Parral
Piedras Negras
Corpus Christi
COAHUILA DE ZARAGOZA
Reynosa
Matamoros
Torreón
Saltillo
Monterrey
SINALOA
DURANGO
Culiacán
La Paz
Gulf of California
Durango
Camacho
ZACATECAS
TAMAULIPAS
Beaumont
New Orleans
Hattiesburg
G u l f   o f   M e x i c o
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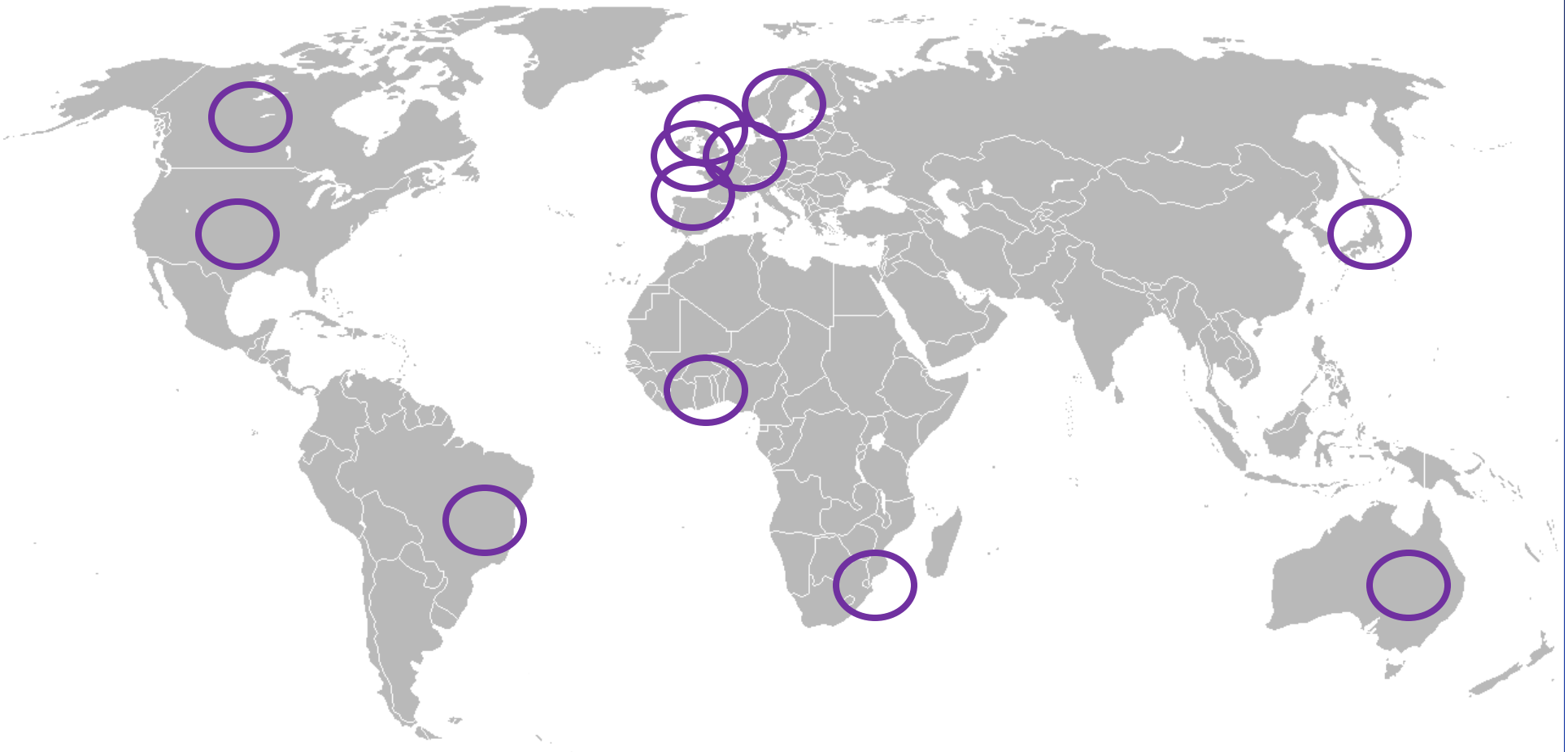
An International Movement of Movements?



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PROTECTING
5 Million
lives
FROM HARM
IHI.org

The Campaign "Planks" – Six Changes That Save Lives

1. Deployment of Rapid Response Teams
2. Delivery of Reliable, Evidence-Based Care for Acute Myocardial Infarction
3. Medication Reconciliation
4. Prevention of Central Line Infections
5. Prevention of Surgical Site Infections
6. Prevention of Ventilator-Associated Pneumonias

Six Additional Planks

7. Prevent Pressure Ulcers
8. Reduce Methicillin-Resistant *Staphylococcus Aureus* (MRSA) Infection
9. Prevent Harm from High-Alert Medications
10. Reduce Surgical Complications (the Surgical Care Improvement Project (SCIP))
11. Deliver Reliable, Evidence-Based Care for Congestive Heart Failure
12. Get Boards on Board

Significant Overlaps

- NQF-NPP National Priorities and Goals
  - Engage patients and families
  - Improve the health of the population
  - Improve safety and reliability
  - Ensure patients receive well-coordinated care
  - Guarantee appropriate and compassionate end-of-life care
  - Eliminate overuse

- CMS – QIO 9th Scope of Work
  - Pressure Ulcers
  - MRSA
  - SCIP
  - Drug Safety
  - Challenged providers…

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Medicare “No Pay” Hazards

- Object left in patient during surgery
- Air embolism
- Blood incompatibility
- Catheter-associated urinary tract infections
- Vascular-catheter-associated infections
- Pressure ulcers
- Mediastinitis after coronary-artery bypass grafting
- Falls from bed

What is Possible

- 150 New Jersey organizations reduced pressure ulcers by 70%
- More than 65 Campaign hospitals report going more than a year without a ventilator-associated pneumonia
- More than 35 report going a year without a central line infection
- Looking elsewhere…Drops in adverse event rates of 51%-75% in four Safer Patients Initiative hospitals

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What is Possible

It’s no longer possible to say it’s not possible…

…and that’s our first job.

Does Improving Safety Save Money?

SERIOUS PREVENTABLE INFECTIONS ("PURPLE BUGS")

BUG	CASES PER YR	DEATHS PER YR	LOS	COST PER CASE	TOTAL COST
MRSA	126,000	5,000	+9.1 DAYS	+$32,000	+$4 BILLION
C. DIFFICILE	211,000	6,000	+ 3 DAYS	+$3,500	+$1 BILLION
VRE	21,000	1,000		+$12,700	+$268 MILLION

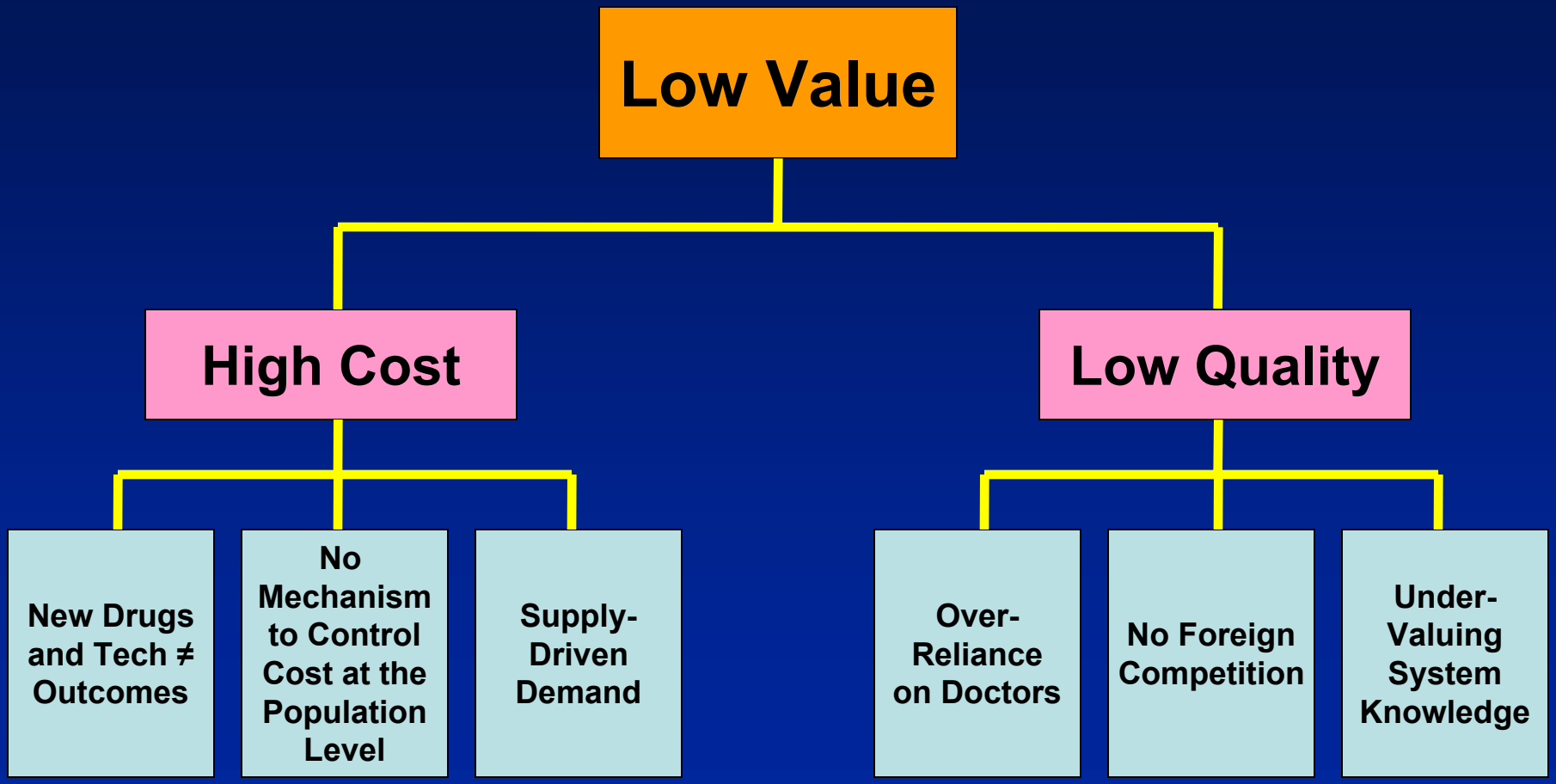
MRSA, C. difficile, and VRE combined annually infect at least 350,000 people, cause at least 12,000 deaths, and increase care costs by at least $5 billion

Does Improving Safety Save Money?

HENRY FORD HEALTH SYSTEM

IMPROVEMENT	COST	SAVINGS	NET
SURGICAL INFECTIONS	($110,000)	$540,000	$430,000
BLOODSTREAM INFECTIONS	($22,500)	$4,780,000	$4,757,500
VENTILATOR PNEUMONIAS	($1,268,500) (Reduced Revenue)	$1,166,400	($102,100)
RAPID RESPONSE TEAMS	($390,000)	?	($390,000)
TOTAL	**($1,791,000)**	**$5,320,000**	**$4,695,400**

Drivers of a Low-Value System



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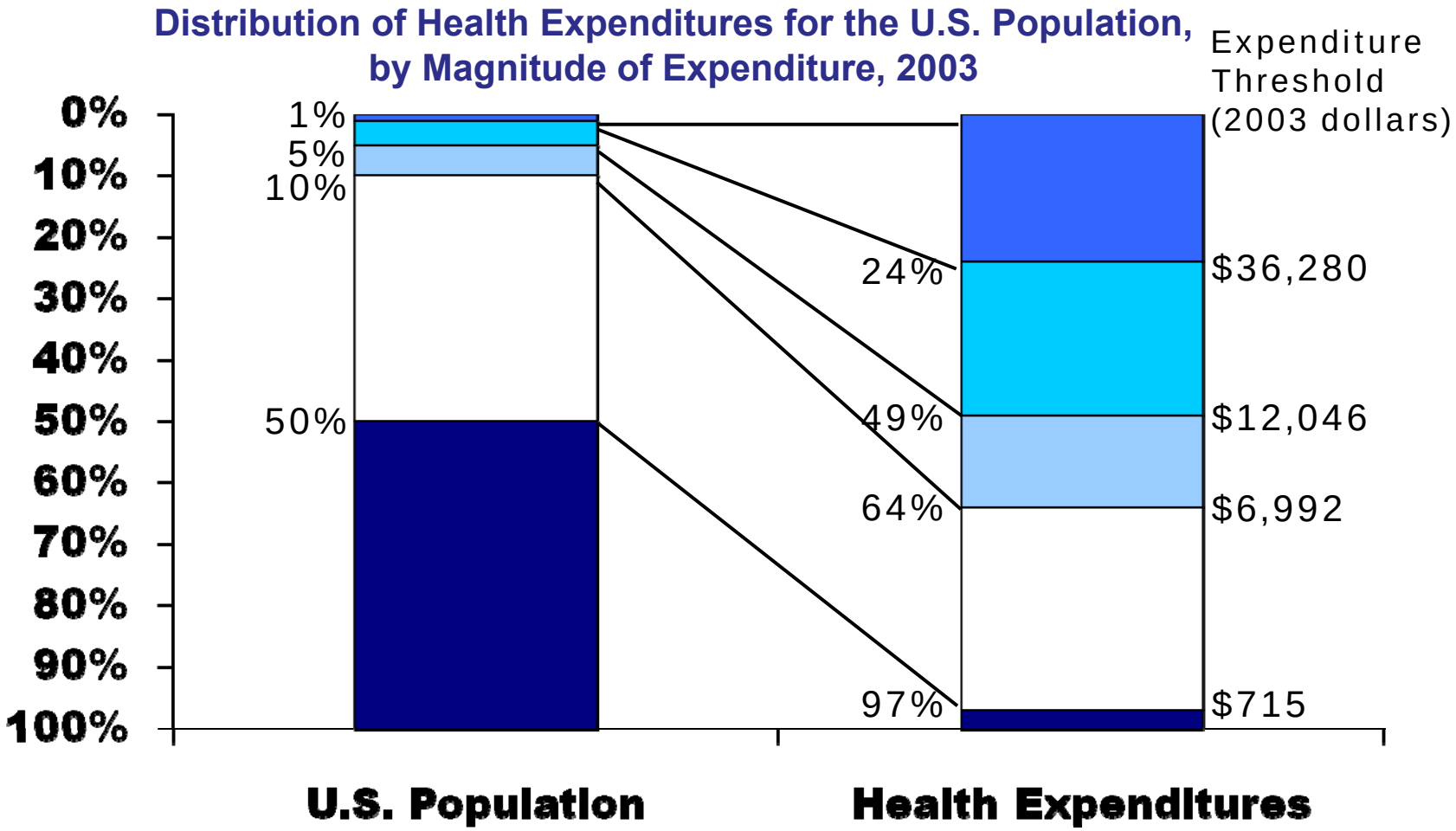
Health Care Costs Are Concentrated in Sick Few—The Sickest 10% Account for 64% of Expenses



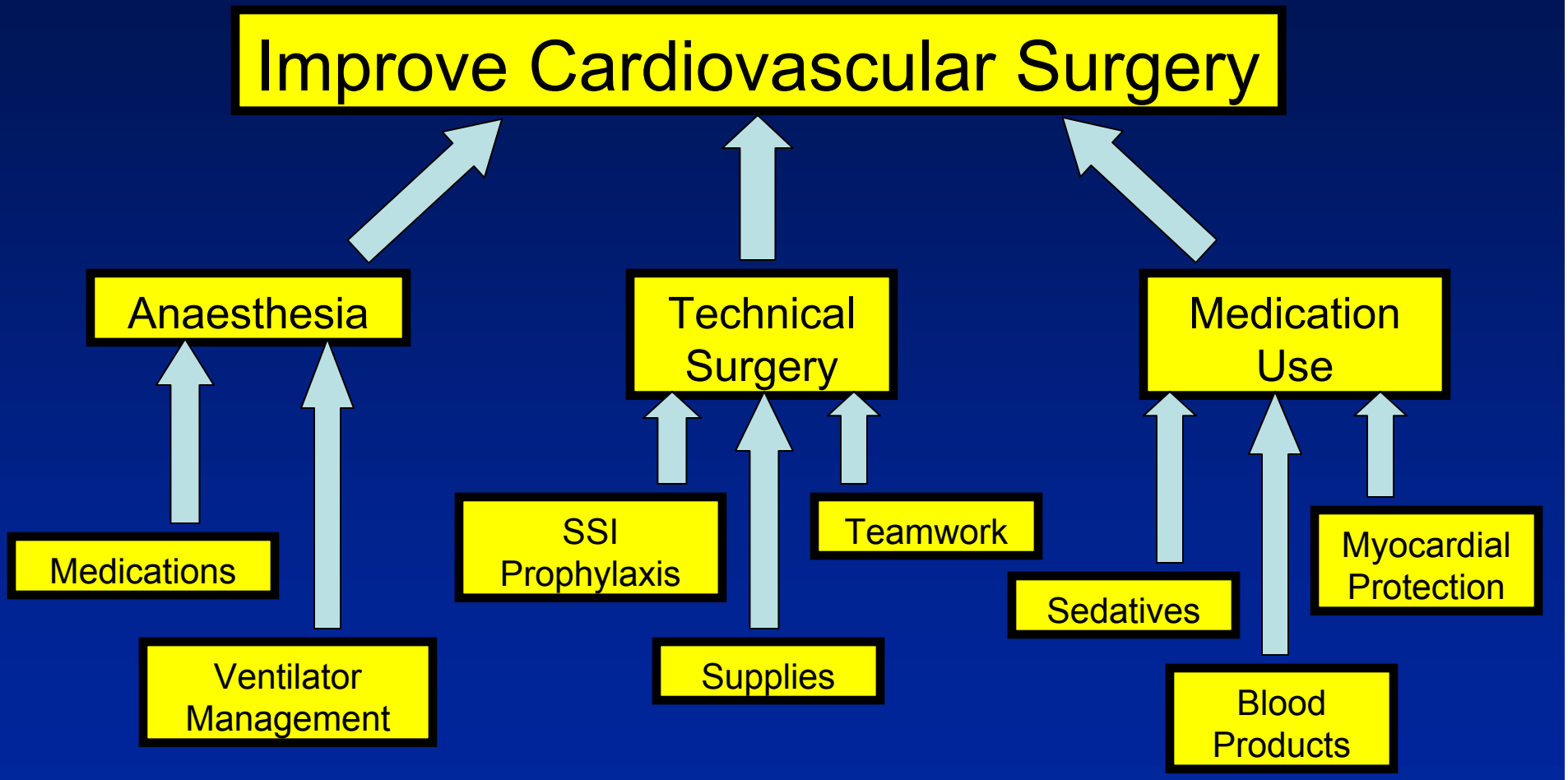
Zuvekas SH, Cohen JW. Prescription drugs and the changing concentration of health care expenditures. Health Aff. 2007;26(1):249–257.

ProvenCare℠:

Coronary Artery Bypass

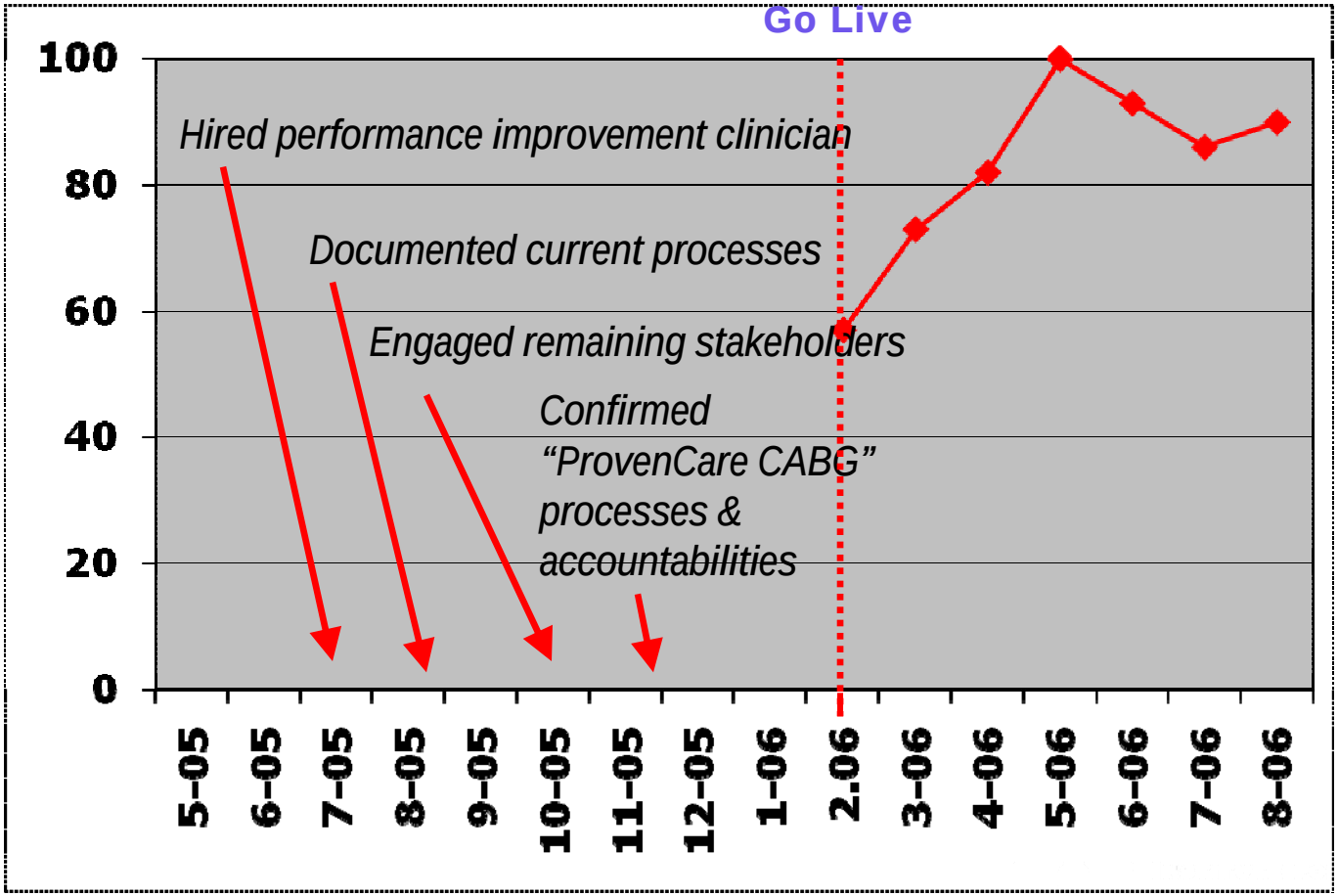
A Provider-Driven, Acute Episodic Care
"Pay-for-Performance" Initiative:

A Case Study at Geisinger

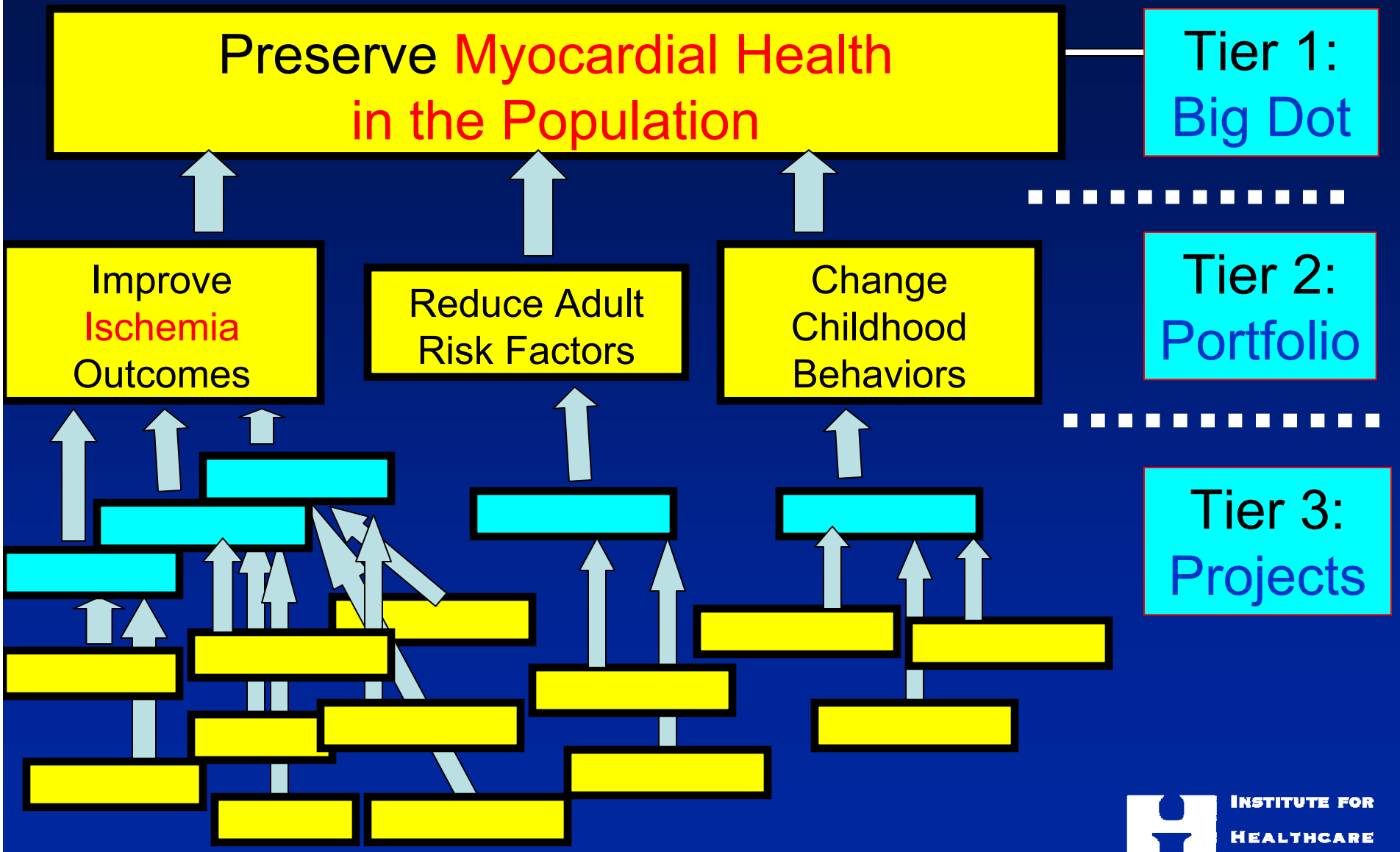


ProvenCare™:Coronary Artery Bypass

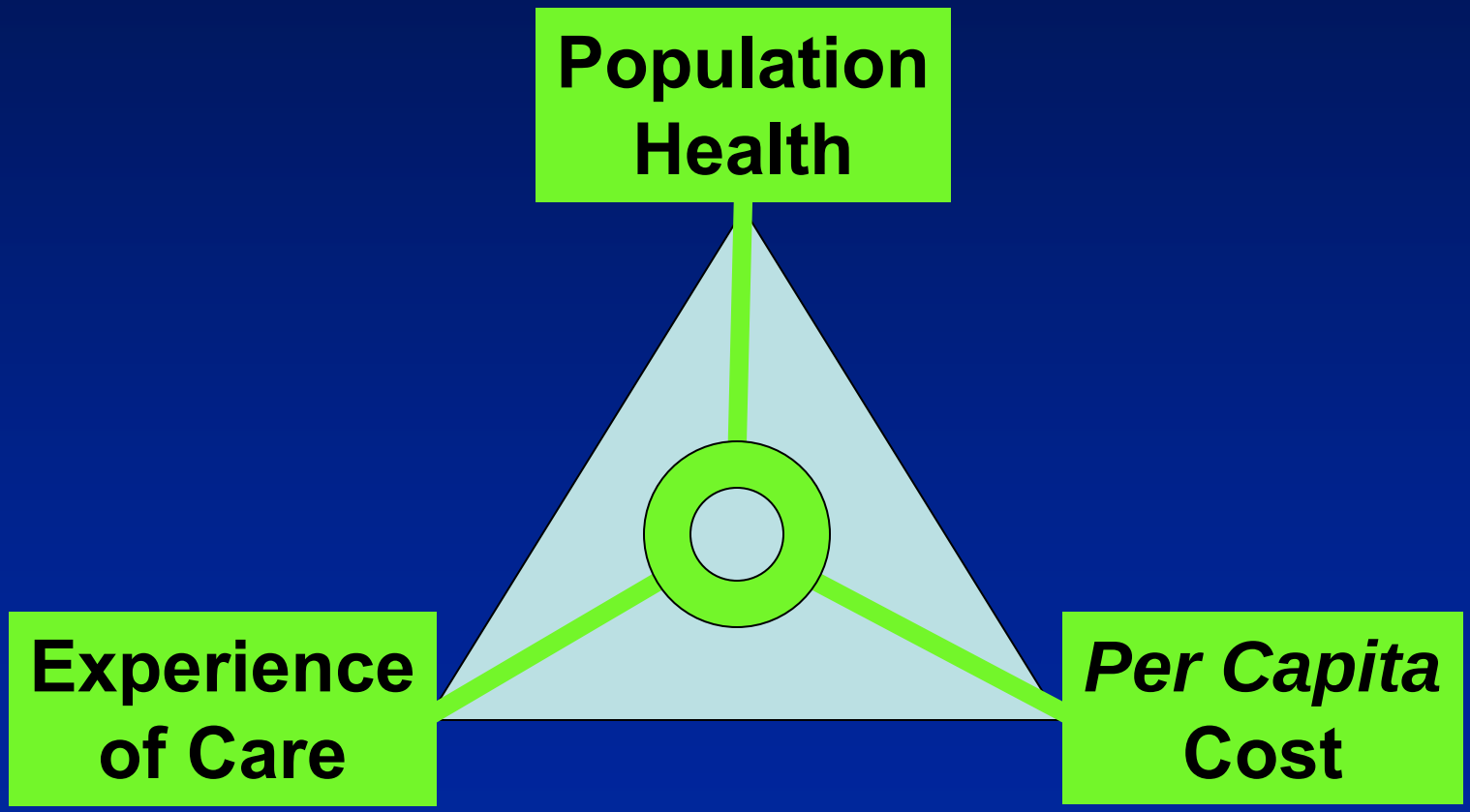
% of patients who receive all components of care



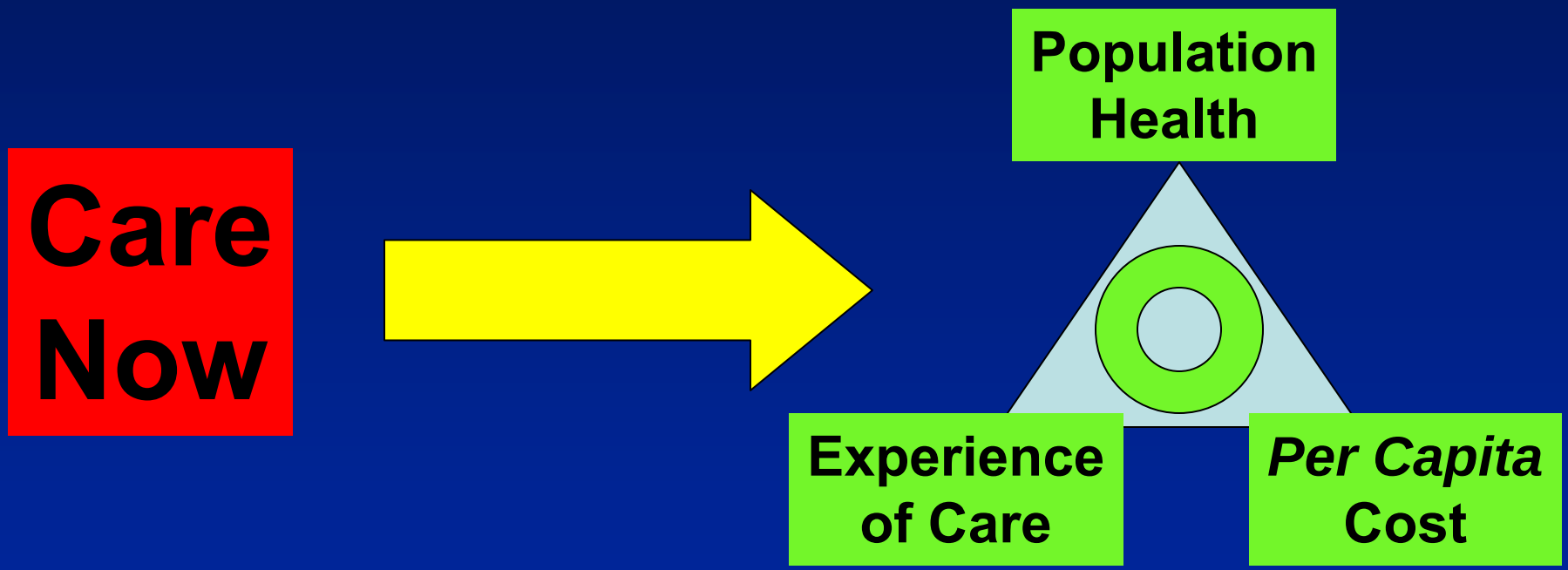
Improving a ***Population-Based*** System



The "Triple Aim"



A New Improvement Agenda That Matches the Societal Need



The “Triple Aim”

- Improve Individual Experience
- Improve Population Health
- Control Inflation of Per Capita Costs

The root of the problem in health care is that the business models of almost all US health care organizations depend on keeping these three aims separate. Society on the other hand needs these three aims optimized (given appropriate weightings on the components) simultaneously.

--- (Tom Nolan, PhD)

Some System Components to Accomplish the Triple Aim

- Focus on Individuals and Families
- Strong "Primary Care" Services and Structures
- Population Health Management
- Cost Control Platform
- System Integration

AND an "Integrator"

The “Integrator’s” Tasks

- **Design:**
  - Care and Finance Models
  - Ways to Engage the Population
- **Establish Essential Business Relationships:**
  - Specialty Care and High-Tech Care
  - Community-Based Services
- **Measure Performance in New Ways:**
  - Track People over Time
  - Measure Costs
- **Test and Analyze to Learn What Works**
  - A Learning Community
  - Managed Experiments
- **Develop and Deploy Information Technology**
  - To Integrate Across Boundaries
  - To Give Patients Knowledge and Control

Current Triple Aim Sites

- **Hospital-Based Systems**
  - Cape Fear Valley (NC)
  - Bellin Health (WI)*
  - Cincinnati Children's Hospital Medical Center (OH)*
  - Genesys Health (MI) (Ascension)*
  - ThedaCare (WI)
- **Health Plans**
  - Blue Cross Blue Shield of Michigan (MI)
  - CareOregon (OR)*
  - Eastern Carolina Community Plan (NC)
  - New York-Presbyterian System SelectHealth, LLC (NY)*
  - UPMC Health Plan (PA)
  - Independent Health (NY)
  - Wellmark (IA)
- **Integrated Health Systems**
  - Group Health (WA)*
  - HealthPartners (MN)*
  - Kaiser Permanente, Colorado Region (CO)
  - Kaiser Permanente, Mid-Atlantic Region (MD)
  - Martin's Point Health Care (ME)
  - Presbyterian Healthcare (NM)
  - Southcentral Foundation and Alaska Native Medical Center (AK)
  - Veterans Health System:
    - VISN 10—Cincinnati VAMC (OH)
    - VISN 20—Portland VAMC (OR)
    - VISN 23—Nebraska, Western Iowa VAMC (NE)
- **Public Health Department**
  - King County Department of Public Health (WA)
- **State Initiative**
  - Vermont Blueprint for Health (VT)*
- **Safety Net**
  - Colorado Access (CO)
  - Contra Costa Health Services (CA)*
  - North Colorado Health Alliance (CO)*
  - Primary Care Coalition Montgomery County (MD)*
  - Queens Health Network (NY)*
- **Employers/Businesses**
  - QuadGraphics/QuadMed (WI)*
- **International**
  - Blackburn With Darwen Primary Care Trust (England)
  - Bolton Primary Care Trust (England)*
  - Central East Local Health Integration Network (Canada)
  - East Lancashire Teaching Primary Care Trust (England)
  - Eastern and Coastal Kent Primary Care Trust (England)
  - Forth Valley (Scotland)
  - Herefordshire Primary Care Trust (England)
  - IMPACT BC (Canada)
  - Jönköping (Sweden)*
  - Tayside (Scotland)
- **Social Services**
  - Common Ground (NY)

* Sites that participated in the first phase of Triple Aim Prototyping.

Updated: December 5, 2008

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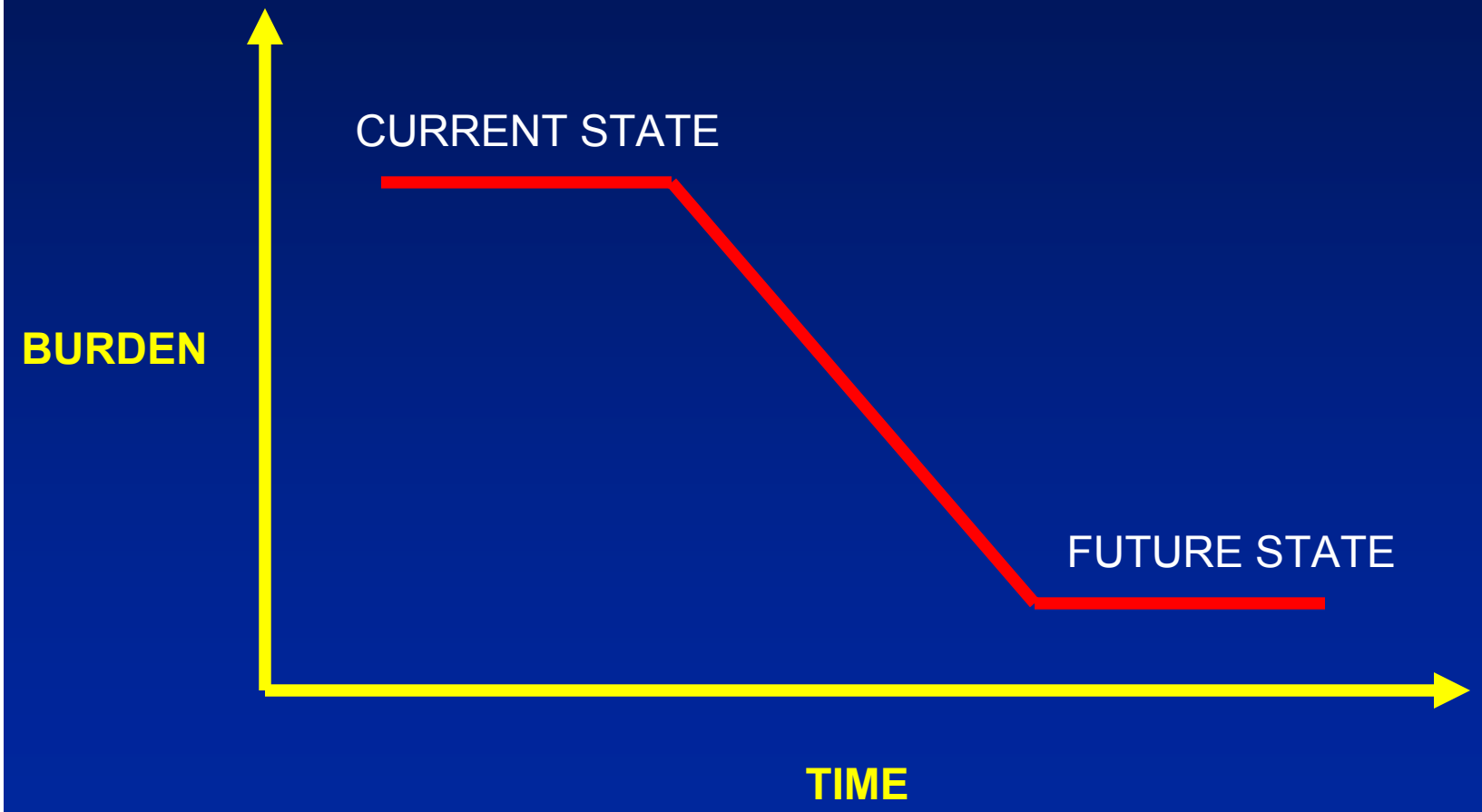
Conditions for Pursuing the Triple Aim

- Population budget
- Discipline of a cap on total budget
- Population view of health status and care needs
- Measurement capacity
- Capacity to integrate care experience through time and space
- Capacity for proactivity
- “Memory” of the person
- Capacity for system redesign and execution
- Leverage to mold the environment

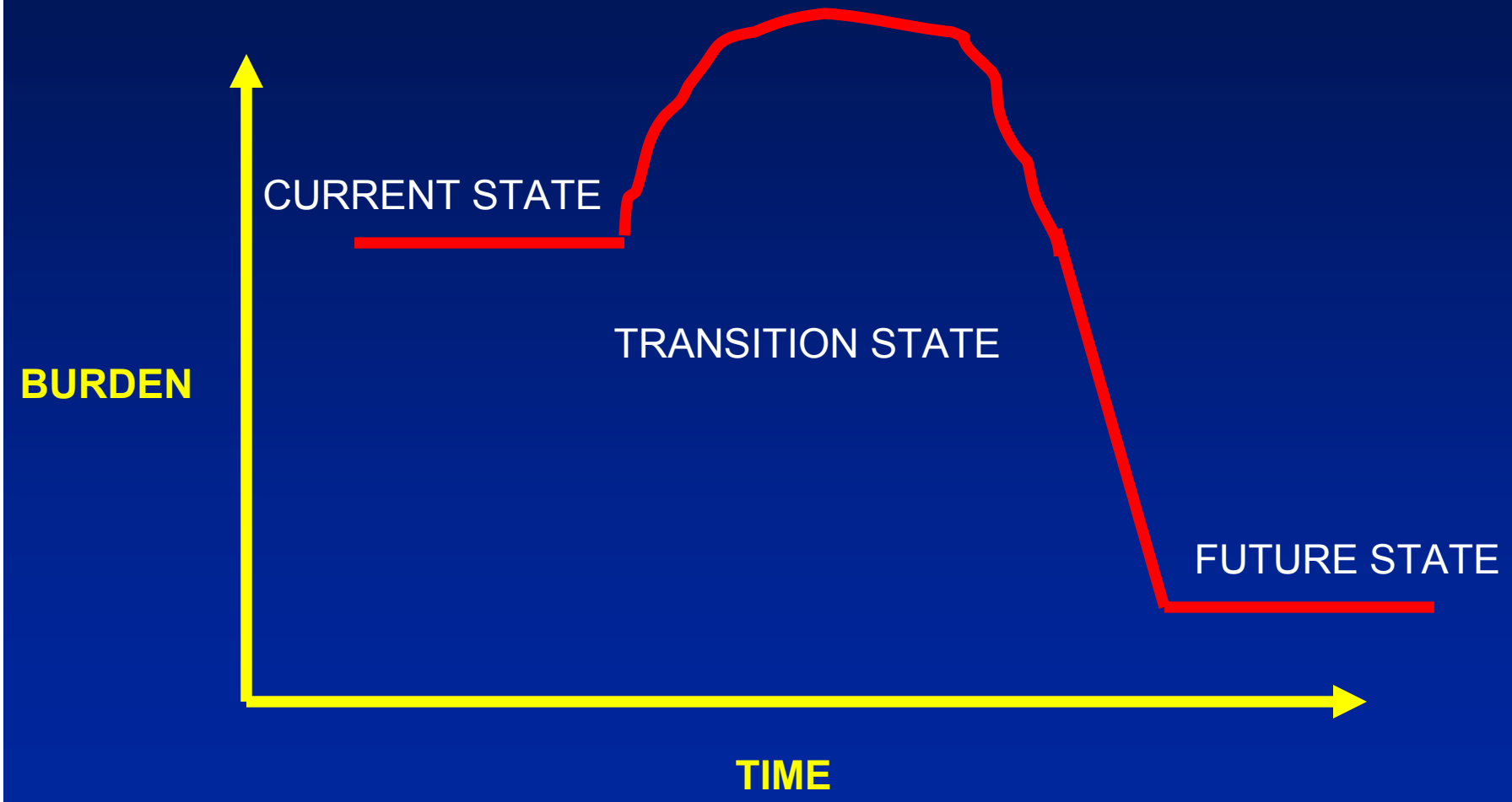
Some Early Experimentation…

- Vermont! (Blueprint for Health)
- HealthPartners (reduced cost for imaging by using evidenced based prompts in EMR)
- Bellin Health(Primary Care Access Platform)

The Future State – Most Can Be Winners



The Transition State – Hard for All



Key Question for Health Care Systems

Do you intend to solve these problems, and produce a truly high-value care system?

- ***For the Sick?***
- ***For Populations?***

“The Tragedy of the Commons"

“Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush...”

- Garrett Hardin