



# Reducing Healthcare-Associated Infections (HAIs) in California: The Quality Improvement Organization's Experience

Health Services Advisory Group

Suzanne R. Anders, MHI, RN

# XO2020 Recap

(ZERO Preventable Patient Deaths by 2020)



Joe Kiani  
Chairman/CEO  
Masimo

- Third annual Patient Safety, Science and Technology Summit, Irvine, CA, January 2015
- Joe Kiani, founder of the Patient Safety Movement Foundation
- <http://patientsafetymovement.org/>

# President Bill Clinton—Key Points



- Creative collaboration
- People are dying to be asked to make a difference
- Drug companies and the government need to figure this out. The big challenges will not be met by investments.
- Not enough actionable data—co-resistance on both sides

# Vice President Joe Biden—Key Points



- Presidential healthcare issues for 2015
  1. Information technology (IT) and healthcare must talk to each other
  2. Affordable Care Act
  3. Financial incentives for hospitals

# Michael Bell, MD—Key Points



Michael Bell, MD  
Deputy Director  
Centers for  
Disease Control  
and Prevention  
(CDC)

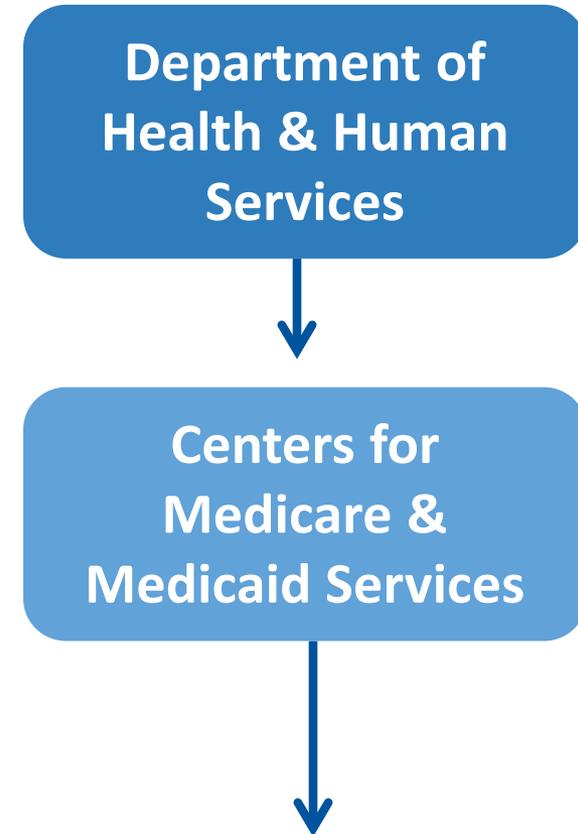
- Intersection of demand and capability
- Antibiotic resistance is a national priority and a national security issue
- When did we decide we don't need to worry about infections?
- Dr. Peter Pronovost: "Do what you are supposed to do."
- Effective oversight

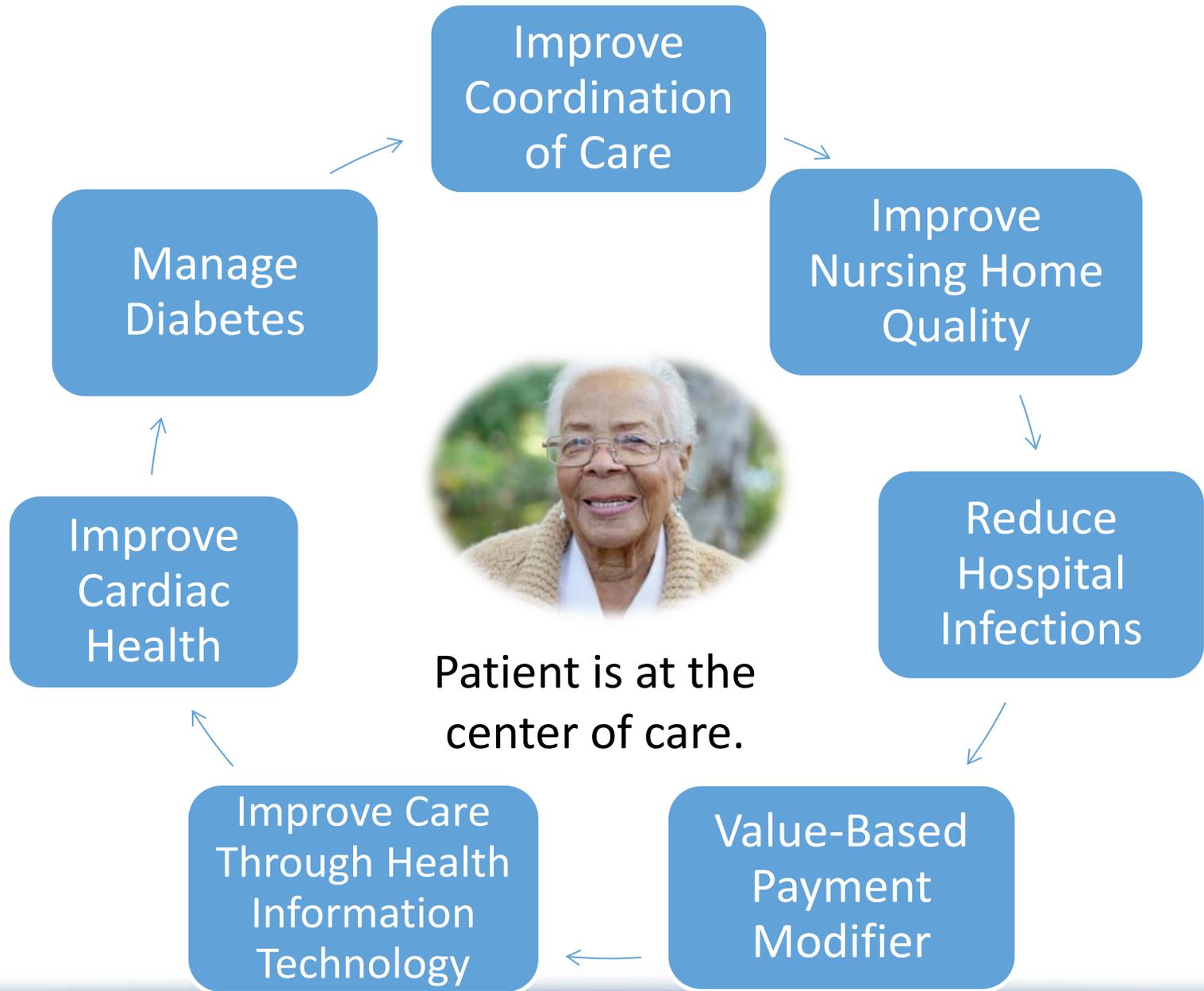


# Quality Innovation Network- Quality Improvement Organization (QIN-QIO) Areas of Focus

# What is a QIN-QIO?

- Funded by the Centers for Medicare & Medicaid Services (CMS)
- Tasked with implementing the National Quality Strategy
  - Safer care
  - Ensure patient and family engagement
  - Support coordination of care
  - Advocate for disease prevention
  - Promote best practices of healthy living
  - Make care affordable





# Collaboration and Partnership

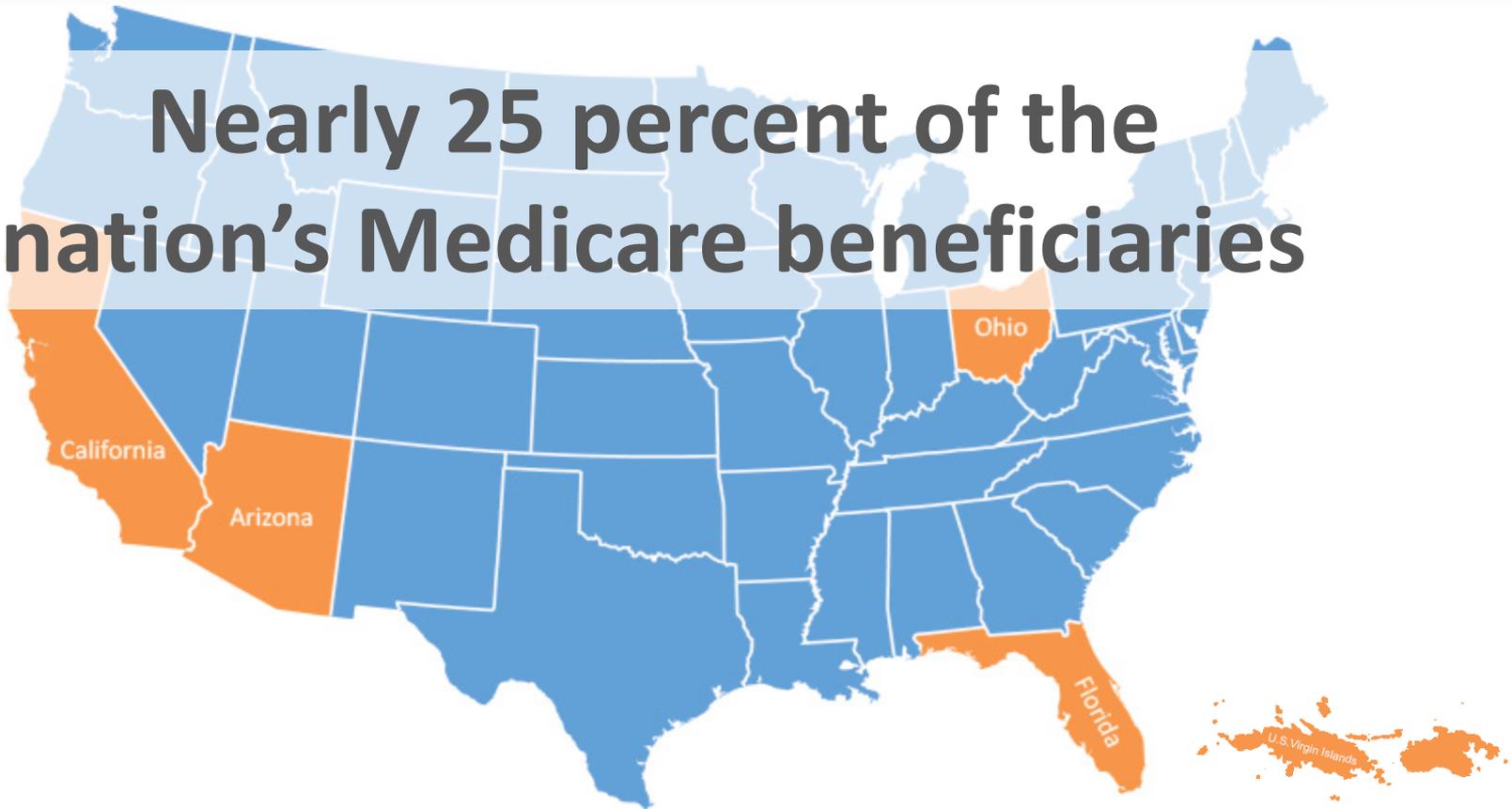


# About Health Services Advisory Group (HSAG)

- Committed to improving quality of healthcare for more than 35 years
- Provides quality expertise to those who deliver care and those who receive care
- Engages healthcare providers, stakeholders, Medicare patients, families, and caregivers
- Provides technical assistance, convenes learning and action networks, and analyzes data for improvement

# HSAG's QIN-QIO Responsibility

**Nearly 25 percent of the nation's Medicare beneficiaries**



**HSAG is the Medicare QIN-QIO for California, Arizona, Florida, Ohio, and the U.S. Virgin Islands.**

# At the End of This Presentation



Identify the value of the “Final Rule.”



Explain the financial difference between a Hospital-Acquired Condition (HAC) and the Hospital Value-Based Purchasing (HVBP) Program.



Describe how participation with HSAG’s Healthcare-Associated Infection (HAI) Collaborative Program can positively affect a hospital in multiple ways.



# Final Rule

# Final Rule Process

- Used by federal agencies to share meeting notices, changes to federal regulations, and new rules and regulations
- Offers the public an opportunity to comment on the proposed regulation
- Fulfills agencies' requirement to address the public comments when the final rule is published

# Final Rule 2014

Response: We acknowledge that there is some overlap in quality measures between the Hospital VBP Program and the HAC Reduction Program. While we are aware that commenters object to the possibility of scoring hospitals on certain measures under both programs, we note that these measures cover topics of critical importance to quality improvement in the inpatient hospital setting, and to patient safety. We selected these quality measures because we believe that HAC measures comprise some of the most critical patient safety areas therefore justifying the use measures in more than one

program. We have selected S. aureus Bacteremia and C. difficile Infection measures that we have proposed. Section 1886(d)(4)(D) of the Act, which addresses certain hospital-acquired

conditions (HACs), including infections. Section 1886(d)(4)(D) of the Act specifies that, by October 1, 2007, the Secretary was required to select, in consultation with the Centers for Disease Control and Prevention (CDC), at least two conditions that: (a) are high cost, high volume, or both; (b) are assigned to a higher paying MS-DRG when present as a primary diagnosis (that is, conditions under the MS-DRG when present as a primary diagnosis) or comorbidities (CCs) or major secondary diagnosis (that is, conditions under the MS-DRG when present as a secondary diagnosis); and (c) are reasonably preventable.

Methodology

b. Measure Risk Adjustment

c. Measure Calculation

d. Applicable Time Period

e. the Total HAC/Score for FY 2016

f. the Use of Electronically Specified Measures



# HVBP

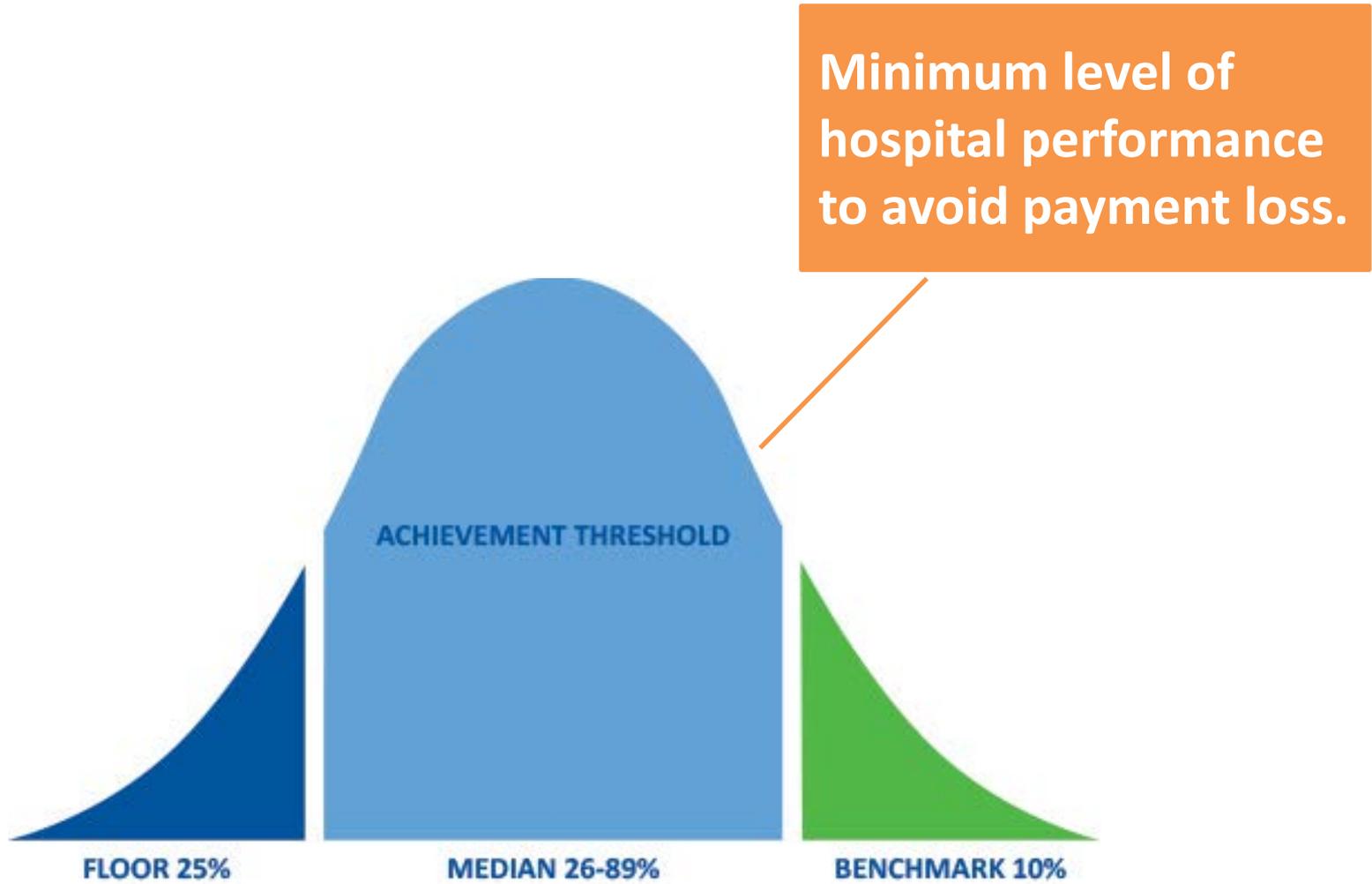
- Established through the 2003 Medicare Modernization Act, the 2005 Deficit Reduction Act, and the 2010 Affordable Care Act
- Incentive-based program that rewards hospitals with payments for the **quality of care** they provide to beneficiaries.

# Performance Standards

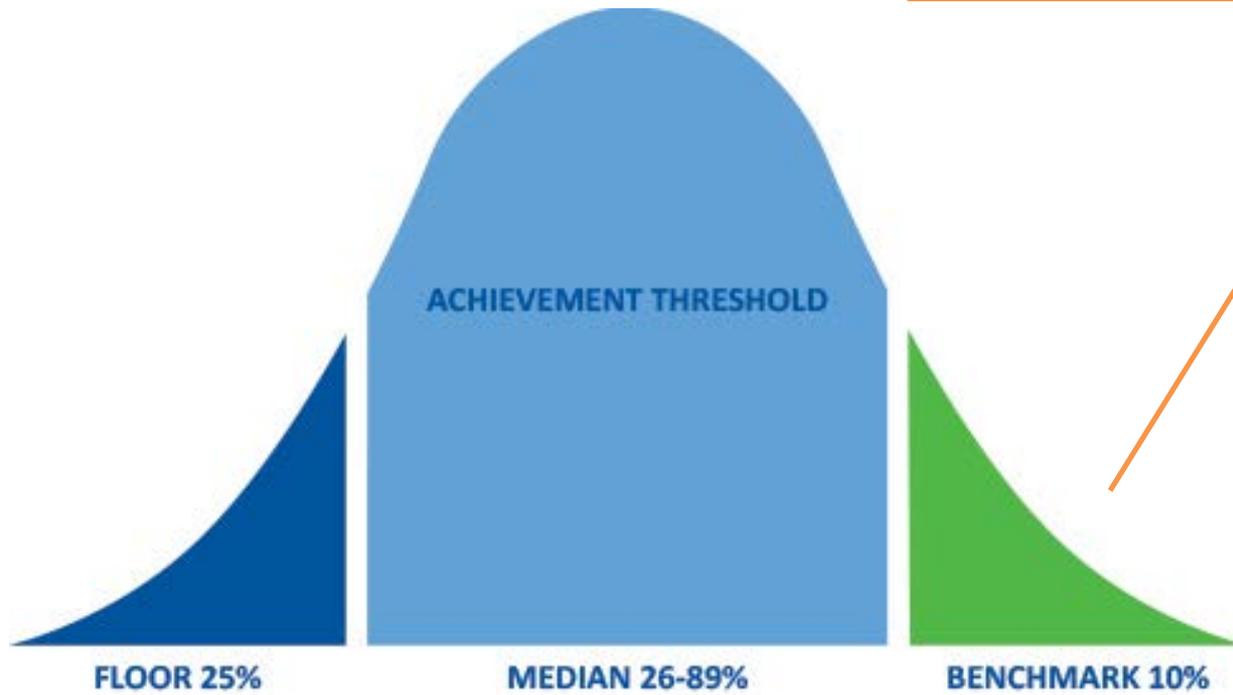
Point where a hospital loses reimbursement.



# Performance Standards (cont.)



# Performance Standards (cont.)

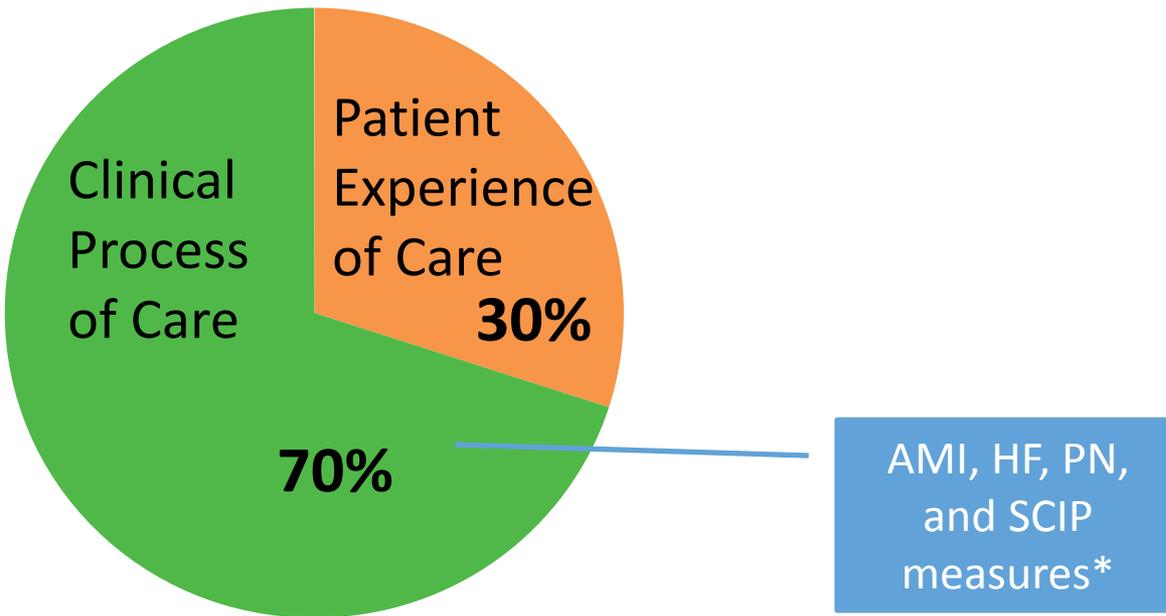


# HVBP Mixed Message

Fiscal Year (FY)	Withholding Percentage
2013	1.00%
2014	1.25%
2015	1.50%
2016	1.75%
2017 and beyond	2.00%

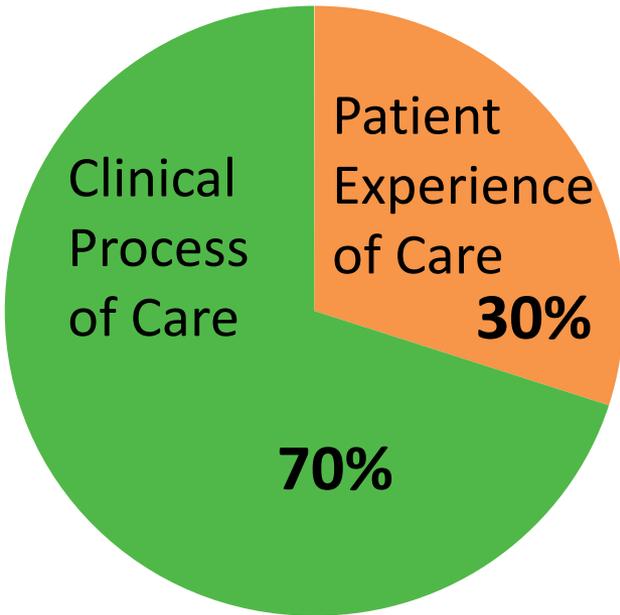
Hospitals are paid for the **quality** of services provided, **not the quantity** of services.

## HVBP Weights FY 2013

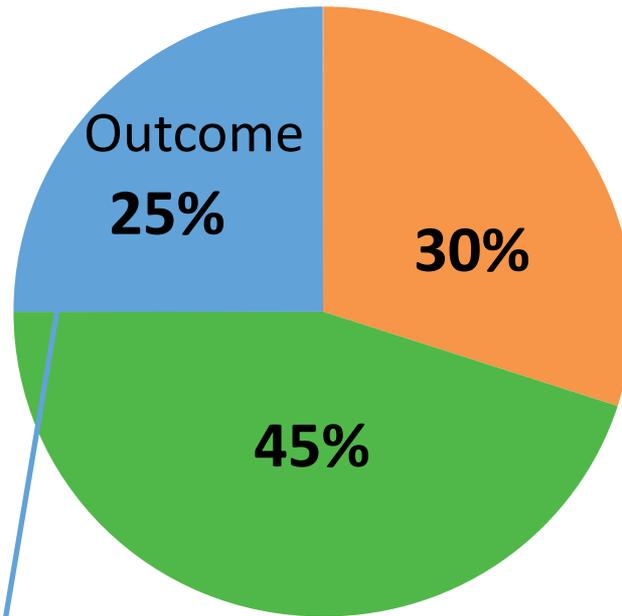


\*AMI=Acute Myocardial Infarction; HF=Heart Failure; PN=Pneumonia; SCIP=Surgical Care Improvement Project

**HVBP Weights FY 2013**

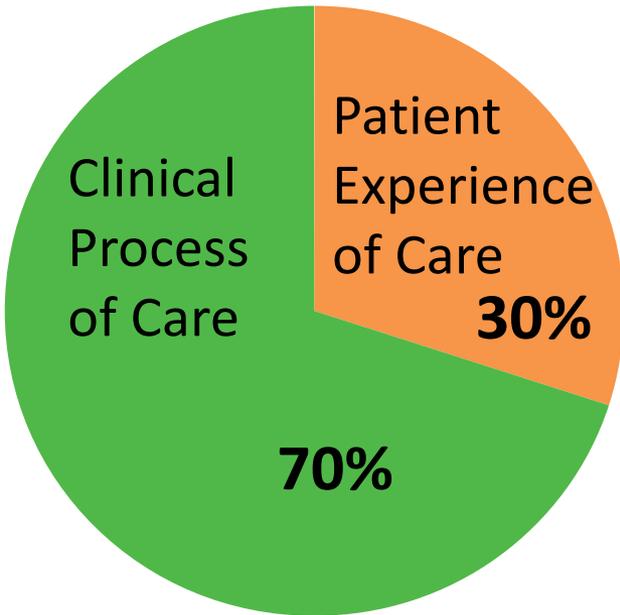


**HVBP Weights FY 2014**

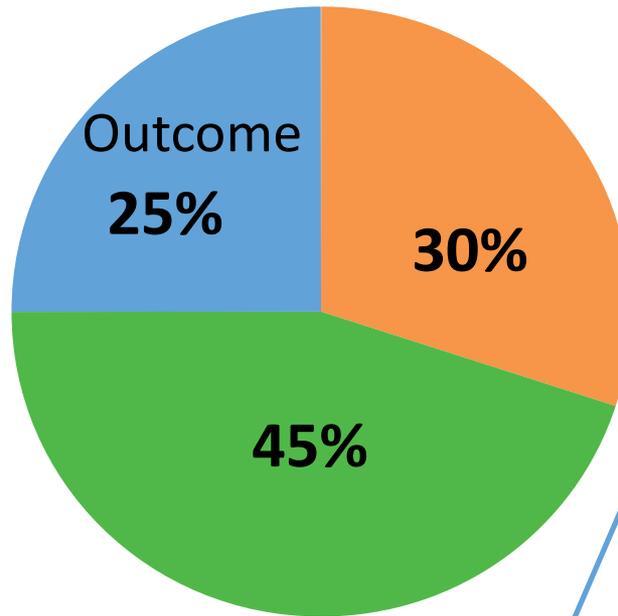


Mortality  
(30 days, AMI, HF, PN)

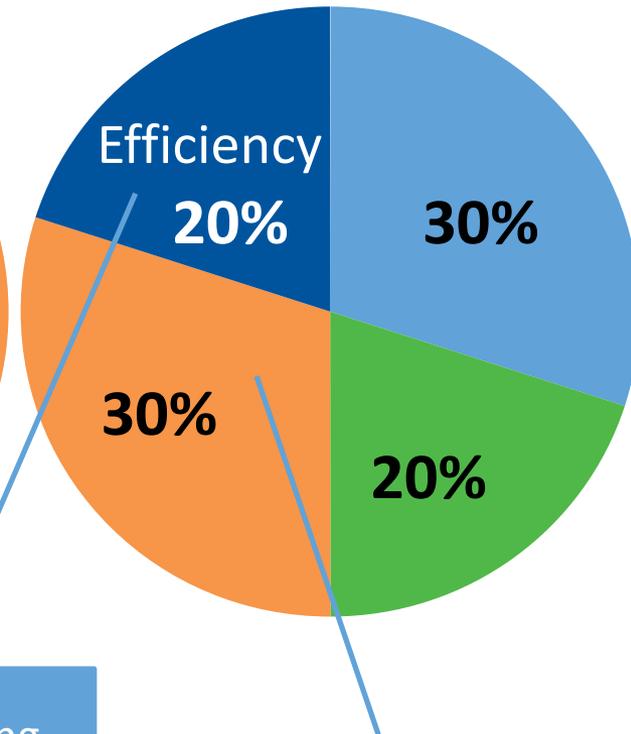
**HVBP Weights FY 2013**



**HVBP Weights FY 2014**



**HVBP Weights FY 2015**



Medicare spending per beneficiary

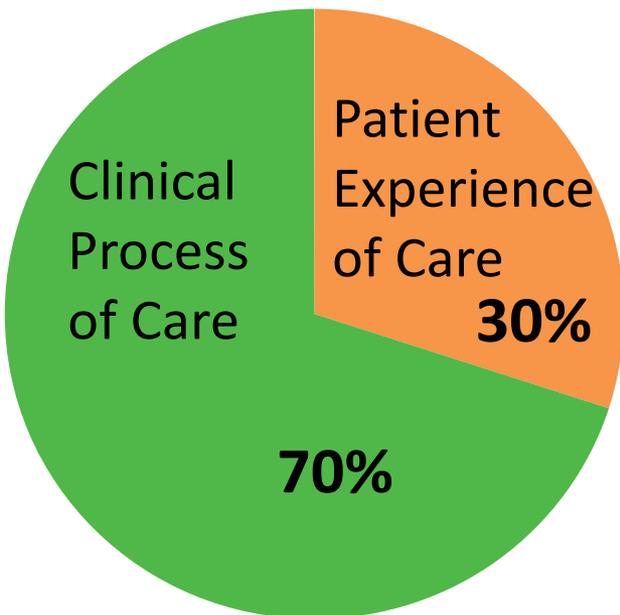
Added Agency for Healthcare Research & Quality Patient Safety Indicator (AHRQ PSI) Composite Score and CLABSI\*\*

\*\*CLABSI=Central Line-Associated Blood Stream Infections

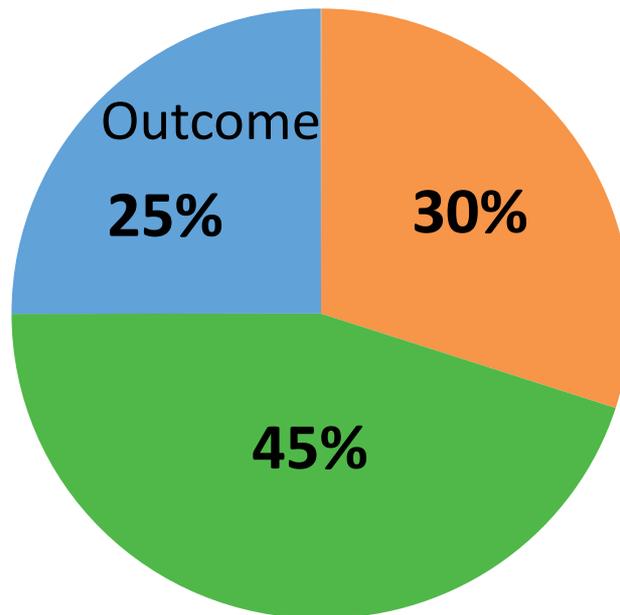
# Patient Safety Indicators (PSIs) 90

- 03—Pressure Ulcer Rate
- 06—Iatrogenic Pneumothorax Rate
- 07—Central Venous Catheter-Related Bloodstream Infection Rate
- 08—Postoperative Hip Fracture Rate
- 12—Postoperative Pulmonary Embolism or Deep Vein Thrombosis (DVT) Rate
- 13—Postoperative Sepsis Rate
- 14—Postoperative Wound Dehiscence Rate
- 15—Accidental Puncture or Laceration Rate

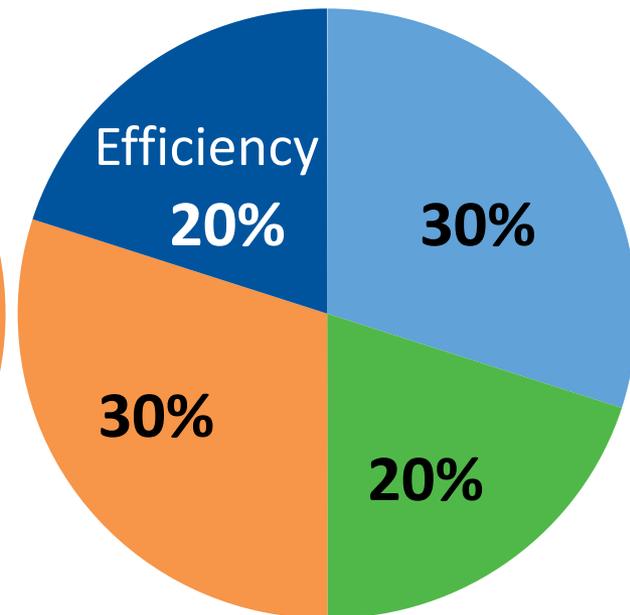
**HVBP Weights FY 2013**



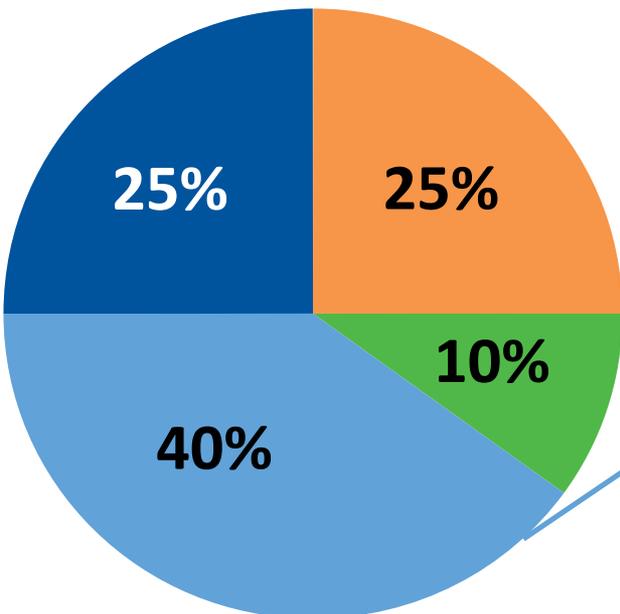
**HVBP Weights FY 2014**



**HVBP Weights FY 2015**



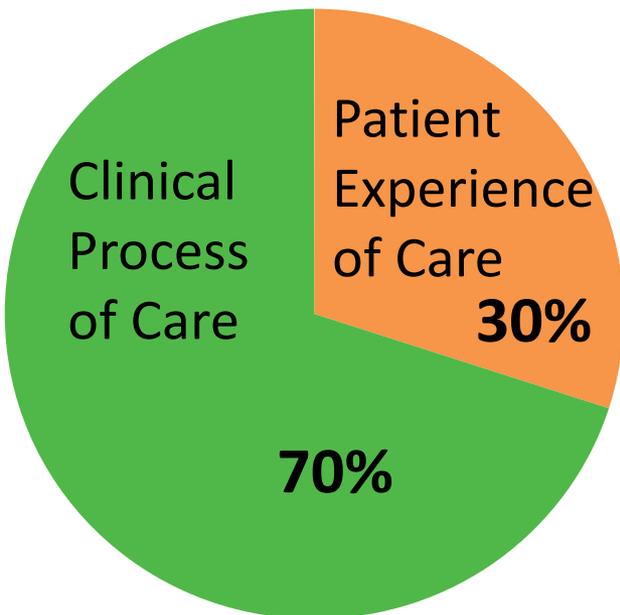
**HVBP Weights FY 2016**



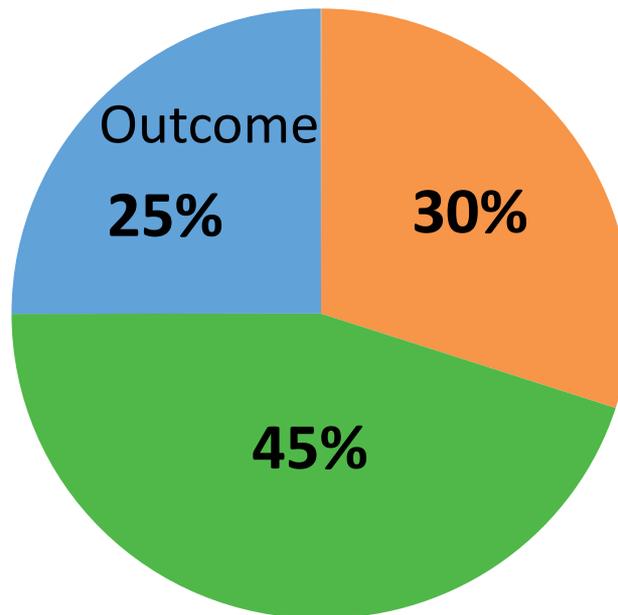
CAUTI, SSI Colon, and SSI Abd Hyster added to the measure score\*\*\*

\*\*\*CAUTI=Catheter-Associated Urinary Tract Infections; SSI Abd Hyster=Surgical Site Infection Abdominal Hysterectomy

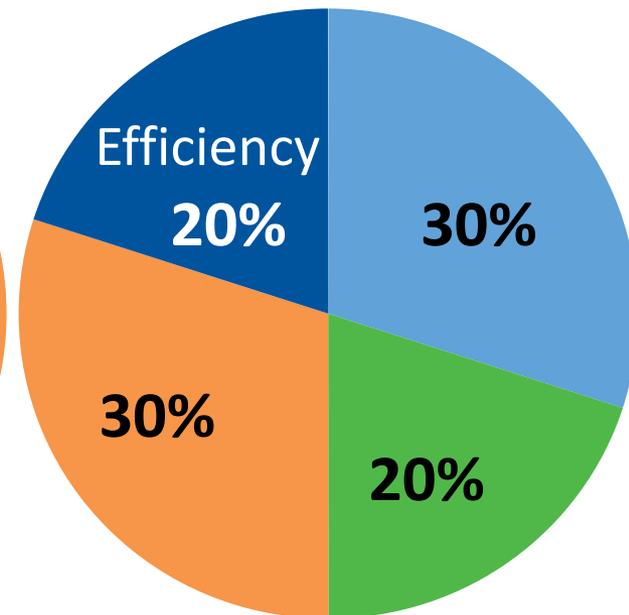
**HVBP Weights FY 2013**



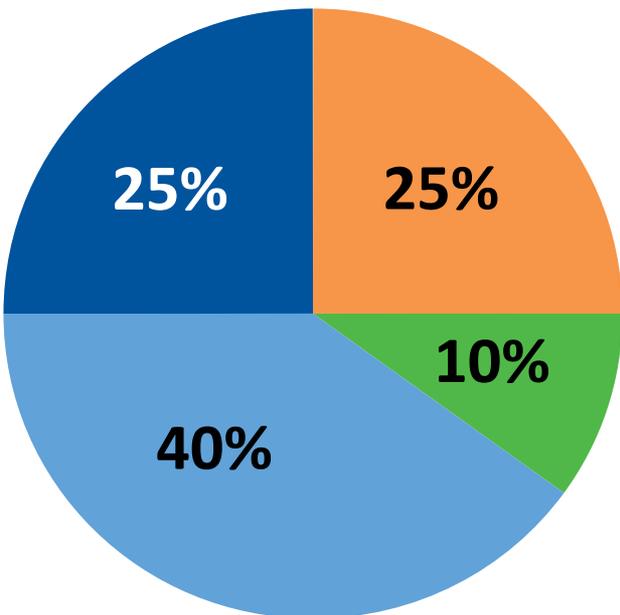
**HVBP Weights FY 2014**



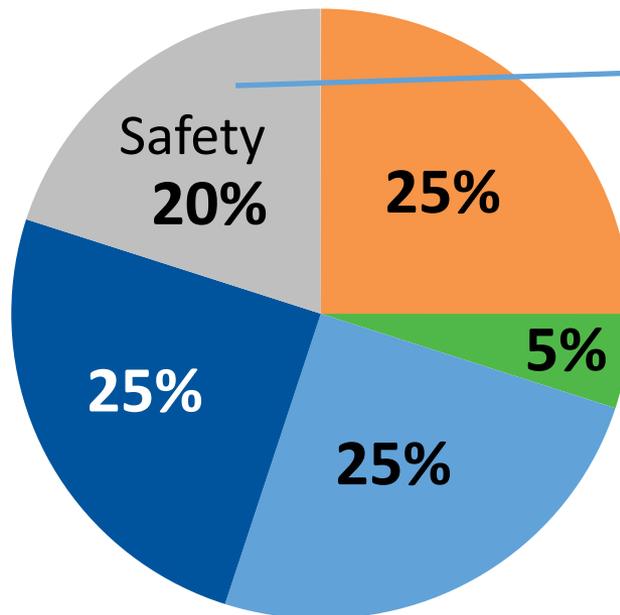
**HVBP Weights FY 2015**



**HVBP Weights FY 2016**



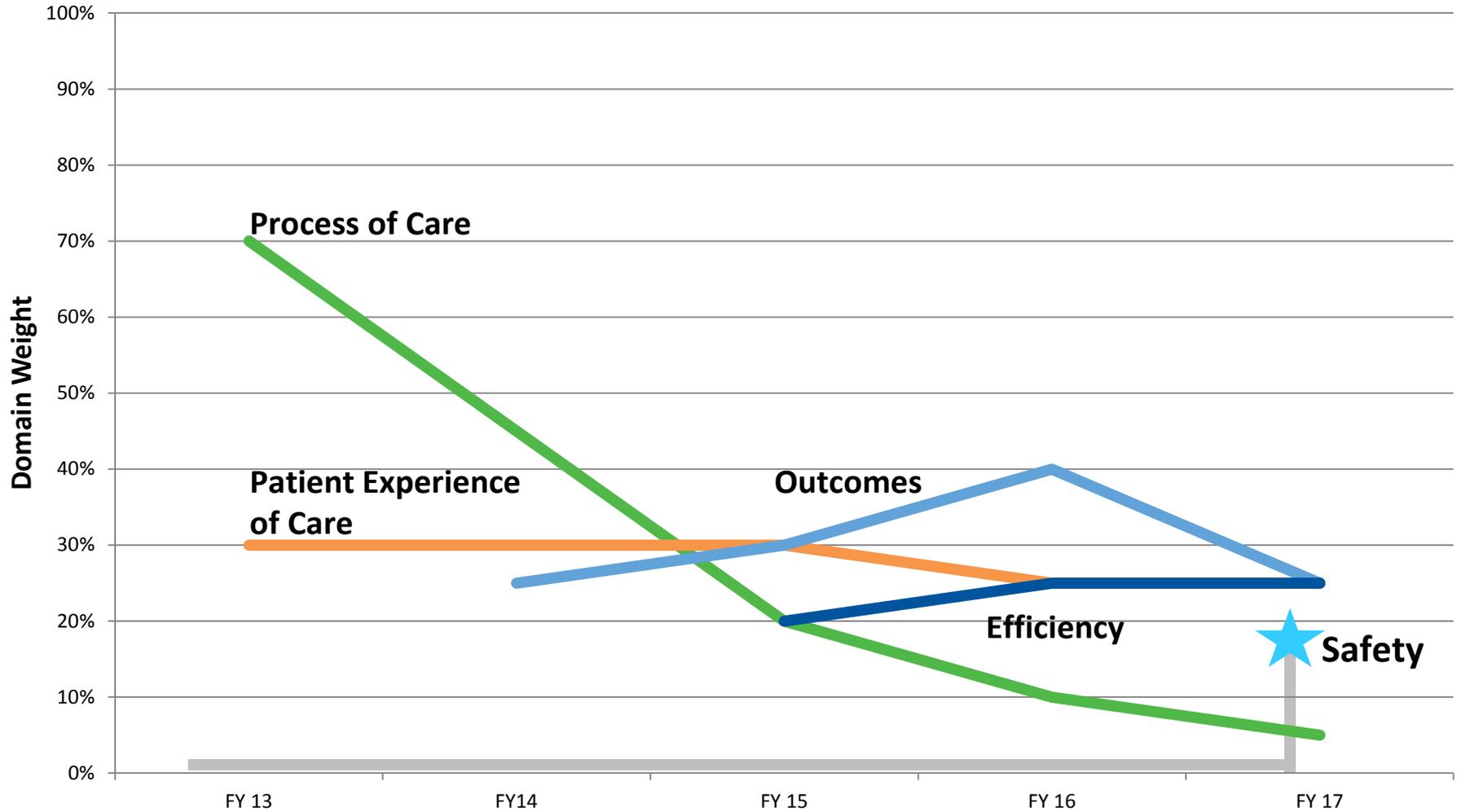
**HVBP Weights FY 2017**



CAUTI, CLABSI, CDI,  
MRSA bacteremia,  
SSI, PSI \*\*\*\*

\*\*\*\*CDI=Clostridium difficile infection;  
MRSA=methicillin-resistant  
Staphylococcus aureus

# Changes in HVBP Domain Weights FY 2013 to 2017



# HVBP in California

Search:

State ▼	Pct. Of Hospitals Receiving Bonus	Pct. Of Hospitals Receiving Penalty	Pct. Of Hospitals Breaking Even	Total Number of Assessed Hospitals
Alabama	59%	39%	1%	76
Alaska	100%	0%	0%	8
Arizona	47%	53%	0%	58
Arkansas	49%	51%	0%	45
California	48%	52%	1%	283
Colorado	57%	43%	0%	44
Connecticut	38%	59%	3%	29
Delaware	50%	50%	0%	6
District of Columbia	0%	100%	0%	7
Florida	44%	56%	0%	162

# HVBP Program FY 2017

## HAI Performance Standards

### Baseline period:

PSI 90: Oct. 1, 2010–June 30, 2012

All others: Calendar Year 2013

### Performance period:

PSI 90: Oct. 1, 2013–June 30, 2015

All others: Calendar Year 2015

Domain	Measure ID	Benchmark	Achievement Threshold	Floor
Safety	CAUTI	0.0000	0.8371	N/A
	CLABSI	0.0000	0.4483	N/A
	C. difficile	0.0000	0.7927	N/A
	MRSA bacteremia	0.0000	0.8613	N/A
	PSI-90	0.397051	0.577321	N/A
	SSI – Colon	0.0000	0.7117	N/A
	SSI – Abdominal Hysterectomy	0.0000	0.7509	N/A

PSI 90 is a composite score.  
Infection scores are reported as  
Standardized Infection Ratios (SIRs)



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## How Will Quality Metrics Impact a Hospital's Credit Rating?

Written by Quintin Harris, Vice President, Lancaster Pollard | June 30, 2014

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### Which ratings matter most to hospitals?

The article below is reprinted with permission from *The Capital Issue*, a quarterly newsletter published by Lancaster Pollard.

The number of groups evaluating and awarding top grades to healthcare organizations is growing. Consumers can pick from the government's website Medicare Hospital Compare or a handful of assessments from private and nonprofit organizations, such as *U.S. News and World Report*, *Consumer Reports*, Truven Health Analytics and the Joint Commission, among others. Hospital ratings vary widely as each rater uses a different methodology that can provide vastly different results.

As the Patient Protection and [Affordable Care Act's](#) provisions are implemented, quality metrics will become a bigger agenda item in a hospital's board room. Medicare's quality incentive program has sent a large signal to other insurers and the healthcare industry at large with its risk-based contracts to achieve quality and cost targets via incentives, or in some cases, financial penalties. Additionally, both payers and purchasers have stepped up their demand for high-value healthcare with the start of mandated insurance changes this year. Those agencies and organizations that rate hospital

performance are paying particular attention to the sea change and currently are determining how to incorporate quality measurements into their methodologies.

### Evolving credit ratings

In the near future, quality measures could impact a hospital's cost of capital as healthcare reform focuses on transitioning from a fee-for-service to a fee-for-value model, with hospitals expected to take on risk and deliver measurable quality of care. From a capital markets perspective, the ability to access capital at low rates and competitive terms often depends on the evaluation that matters most to investors — the investment grade rating assigned to the bond issue by one of three credit rating agencies. The group, often dubbed the Big Three, consists of [Moody's Investors Service](#), [Fitch Ratings](#) and [Standard & Poor's](#).

Traditionally, each CRA has its own criteria and methodology, with varying degrees of transparency, to determine a

“In assessing quality measures for hospitals, credit rating agencies will be gauging whether a hospital has the clout (scale) to deliver the metrics when needed along with each’s own mix of quantitative and qualitative indicators.”

- **Moody’s Investor Service:**  
Risk-based revenues
- **Fitch Rating Service:**  
Estimate future CMS penalties



# HACs

# About Errors



## To Err is Human: Building A Safer Health System

**Released:** November 29, 1999

### REPORT AT A GLANCE

- [Report Brief \(PDF\)](#)

This report lays out a comprehensive strategy by which government, health care providers, industry, and consumers can reduce preventable medical errors. Concluding that the know-how already exists to prevent many of these mistakes, the report sets as a minimum goal a 50 percent reduction in errors over the next five years.

In its recommendations for reaching this goal, the committee strikes a balance between regulatory and market-based initiatives, and between the roles of professionals and organizations.

# What is the CMS Perspective of HACs?

- Adverse event for the patient
- A significant economic burden
- Preventable



87 percent of hospitals have not followed **evidence-based guidelines** that could have prevented the adverse event.

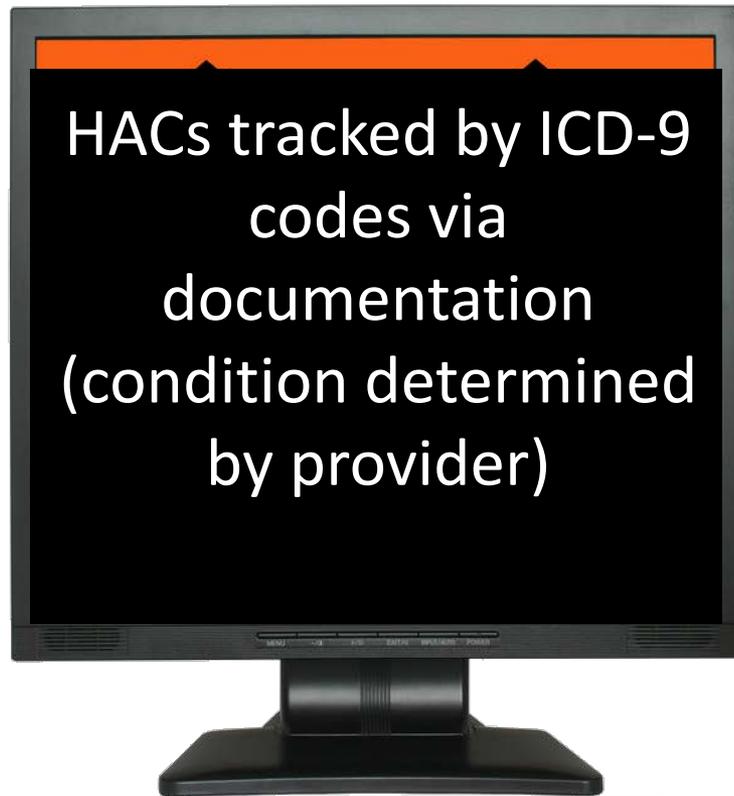
# How Were HACs Established?

- Congress to Health and Human Services via Section 5001 of the 2005 Deficit Reduction Act 2005, identify at least two conditions that:
  - Are high cost, high volume, or both
  - Resulted in a higher weighed Diagnosis Related Group (DRG)
  - Could reasonably have been prevented through the application of evidence-based guidelines
- Affordable Care Act 2010—payment adjustments
- CMS may revise the list of HACs

# HACs in California Hospitals

<u>State</u>	<u>Penalized Hospitals</u>	<u>% Of Assessed Hospitals Penalized</u>
Alabama	11	13%
Alaska	2	22%
Arizona	13	21%
Arkansas	8	18%
California	79	27%
Colorado	15	33%
Connecticut	14	45%
Delaware	2	33%
District of Columbia	5	71%
Florida	31	19%

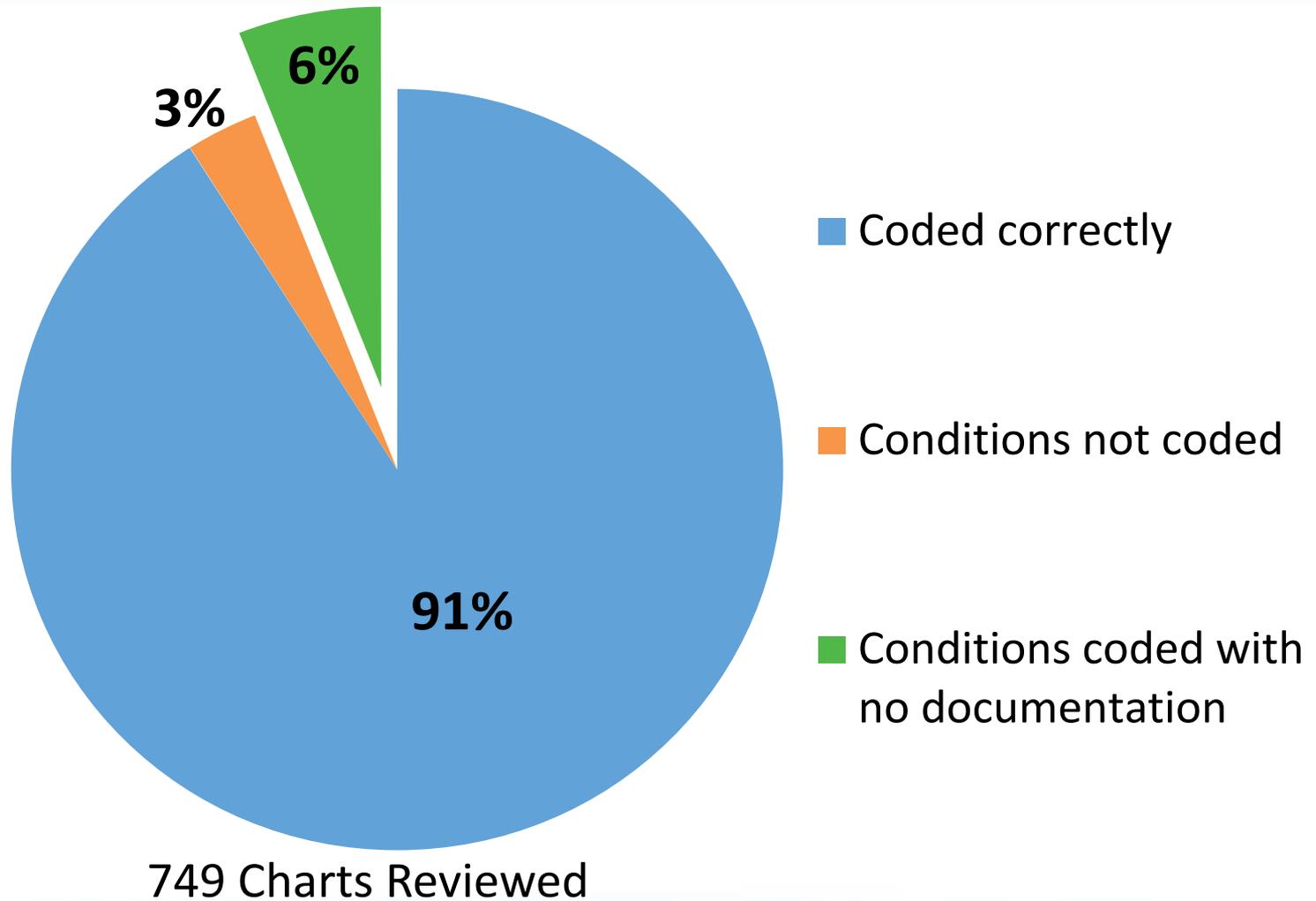
# What are the Consequences of Mistakes in HAC Documentation?



Once a chart is submitted to CMS, ICD-9 codes CANNOT be changed.

A blue rounded rectangular box containing white text. The text reads: "Once a chart is submitted to CMS, ICD-9 codes CANNOT be changed."

# How Accurate is HAC Reporting?



# The Exponential Cost of an Infection

**INFECTION:** Vascular catheter-associated infection HAC

**One Infection = Three Penalties**

**PENALTIES:**

**HAC**

**Patient  
Safety  
Indicators**

**Readmissions**

(This infection is associated with a 33 percent increase in the odds of being readmitted within 30 days).

# HAC Penalty

- Hospitals scoring in the 74th percentile or below will not lose or gain reimbursement money.
- A total HAC score greater than the 75th percentile will subject a hospital to a payment reduction.
- Currently 1 percent reduction in total Medicare reimbursement

# HAC Scoring for Payment (FY 2015)

Measure	Domain	Score
AHRQ PSI 90	One	35%
CLABSI SIR*	Two	65%
CAUTI SIR*	Two	

ICU Patients Only

There are processes if a hospital does not have data for either CLABSI, CAUTI, or both.

# HACs in the Future

Measure	FY 2015 and Beyond	FY 2016 and Beyond	FY 2017 and Beyond
AHRQ PSI 90	✓	✓	✓
CLABSI SIR	✓	✓	✓
CAUTI SIR	✓	✓	✓
SSI SIR		✓	✓
CDI SIR			✓
MRSA SIR			✓

# Comparison of HVBP and HACs

	<b>HVBP</b>	<b>HACs</b>
<b>Program Type</b>	<b>Incentive</b>	<b>Penalty</b>
Metrics contributing to score	HCHAPs, NHSN data, PSI, and Core Measure*	PSI and NHSN data
Monies at risk	Incremental increase, currently at 1.25 percent of total reimbursement	1 percent of total Medicare payment for fiscal year
Monies for quality of care	Varies based on amount of money collected from penalties (based on a performance curve)	Penalty only



# Opportunities to Reduce HAIs

## California HAI Reduction Collaborative

# Common Characteristics: High Performers

- Support and encourage transparency
- Engage executive leadership, physicians, and clinical leaders
- Willing to invest resources to resolve the problem (people and materials)
- Use evidence-based interventions, supported by national guidelines and associations

# Common Characteristics: Non-high Performers

- Assign the responsibility of infection reduction programs to the infection control department
- Lack of senior leadership engagement with the initiative
- Are not likely to hold nurses or physicians accountable for their practices
- Are not likely to invest in resources (materials) needed for HAI reduction

# Lessons Learned

- Without constant vigilance, hospitals do not stay on track to improve.
- Written implementation plans and infection investigations are not automatically completed.
- Lack of improvement, or an upward trend in the number of infections, requires immediate attention.

Celebrate:  
Mentors

**Monitoring  
Results**

**Investigation and  
Monthly Reporting**

**Evidence-based  
Interventions**

**Implementation Plan**

**Recommendations**

**Assessment**

# Foundation of Improvement

HOSPITAL ASSESSMENT / CATHETER ASSOCIATED URINARY TRACT INFECTIONS			TASK C.1 REDUCING HAIs CENTRAL LINE INFECTIONS
PRIMARY QUESTION CAUTI TEAM LEADER	NOTES	DEEP DIVE QUESTIONS	ADDITIONAL INFORMATION
<p>What is the organization's CAUTI rate?            What is the organization's CAUTI target?            What is the organization's CAUTI benchmark?</p>		<p>How does your rate compare to the state CAUTI rate?            How does your rate compare to the national rate?</p>	<p>CDC Report January 2015: National SIR 1.06            CA SIR .90 (this is a 7% increase from 2013)            The goal of an effective prevention program should be the elimination of CAUTI from all patient care areas. Targets are set rather than benchmarking against high-performers.</p>
<p>What is your process for sharing information about CAUTI Team activities?</p>		<p>How are activities shared?            How often are results shared with the executive team?            Unit managers? Bedside clinicians?</p>	<p>Feedback is a key component of a multifaceted approach to successful reduction of CAUTI.            The Joint Commission.</p>
<p>How does the CAUTI team function?</p>		<p>How often does your CAUTI team meet?            How long has it been meeting?            What has the team accomplished?            Does the team report to another team? E.g. PI?            Who are the members of your CAUTI team?            Do members regularly attend?            How were the members chosen?            Does your team have:</p> <ul style="list-style-type: none"> <li>• A team charter</li> <li>• An implementation plan</li> </ul>	<p>CAUTI reduction efforts should be multidisciplinary involving professionals who insert and those who maintain catheters, ICP, managers, CEO (executive champion), clinical champions, and opinion leaders.</p>

# Recommendations

<p style="text-align: center;"><b>Findings</b></p> <p><i>(These findings are based on on-site observations, policy review, and interviews with staff during an on-site visit January 15, 2015)</i></p>	<p style="text-align: center;"><b>Recommendations</b></p>
<p><i>Best Practices</i></p>	
<ul style="list-style-type: none"> <li>i. There is robust executive support for improvement.</li> <li>ii. The hospital has a strong culture that supports the use of evidence-based resources.</li> <li>iii. There is willingness, capacity and capability for change.</li> <li>iv. There is a well-established process in place for concurrent data review.</li> <li>v. The device team has a strong commitment to decreasing HAIs.</li> <li>vi. The organization is willing to direct resources to address safety concerns.</li> <li>vii. Improving hand hygiene compliance is an organization wide priority.</li> </ul>	
<p><i>Leadership</i></p>	
<ul style="list-style-type: none"> <li>i. Device Team lacks executive representation.</li> <li>ii. There is no formal process to hold care team members accountable for tasks and processes.</li> <li>iii. Currently there is no consistent and formalized process to ensure patients/family members are included in the care process to prevent HAIs.</li> </ul>	<ul style="list-style-type: none"> <li>i. Appoint an executive champion.</li> <li>ii. Accountability should be included with all tasks associated with the improvement project. An implementation plan should be developed to include responsibilities, interim metrics, outcome goals and due dates.</li> <li>iii. Empowering patients may be beneficial in reducing HAIs and improving outcomes. Patients/family members should be informed about HAI risk, prevention, and hospital policies to empower them to act as partners in care.</li> </ul>

# Implementation Plan

## Implementation Plan for Improvement

Outcome Goal	Use a "SMART" goal format to complete the goals.			
Interim Goal #1				
Interim Goal #2				
Interim Goal # 3				
<b>Priority</b>	<b>Leadership</b>	<b>Action to Improve</b>	<b>Accountability</b>	<b>Due Date</b>
	Appoint an executive champion.			
	Ensure that patients/family members are informed about HAI risk, prevention, and hospital policies to empower them to act as partners in care.			

# Observation Bundle

Return form to:

Observer name:

Patient Room Number			
Observation Elements	Y/N	Y/N	Y/N
Does the patient meet evidence-based criteria for a urinary catheter?*			
Is the original catheter/bag connection (red or yellow seal) intact?			
Is the catheter secured to the leg (e.g., leg strap, stat lock, or tape)?			
Is the urine flow in the catheter tubing unobstructed?			
Is the collection bag off the floor?			
Is the collection bag below the			

Tool mirrors the CUSP bundle

# Learning from Defects— Investigating What Happened

<b>Catheter-Associated Urinary Tract Infection (CAUTI) Investigation Tool</b>		
<p>Instructions: Complete the items below for each CAUTI through medical record review, interviews with bedside staff and direct observation of the patient and the urinary catheter (UC), if possible. As investigators progress through each item, keep the question “Why?” in mind when an explanation is required. “Why?” questions help investigators dig deeper to identify causes. Investigation of CAUTI should begin within 3 days of identifying the infection.</p>		
Date(s) of investigation:	Person(s) conducting investigation:	
Patient Initials:	Ethnicity:	Age:
MR #:	M/F	Admit Date: Discharge Date: <u>Died during this hospitalization?</u> Y/N
Diagnosis:	Patient’s location/room number(s) and transfer dates within the 3 days prior to the date of CAUTI:	
Patient factors that may have contributed to CAUTI (eg, concurrent infections, hyperglycemia, obese, agitated):		
Date urine culture obtained:	Causative Organism:	
Number of days UC was in place prior to date the positive urine culture obtained:	Date of UC discontinuation (if applicable):	
UC insertion/re-insertion date(s), unit, type, notes regarding insertion process within the 3 days prior to date of CAUTI:	Name/credentials of person inserting UC prior to CAUTI:  Does this person have documented competency to insert UC? Y/N	

# Additional Efforts to Reduce HAIs

- Partner with cross-aim tasks
  - Readmissions (30 percent of the patients with CLABSI will be readmitted within 30 days)
  - Nursing homes can be a major source of CDI
- Actively participate with California Department of Public Health
- Collaborate with the California Hospital Association

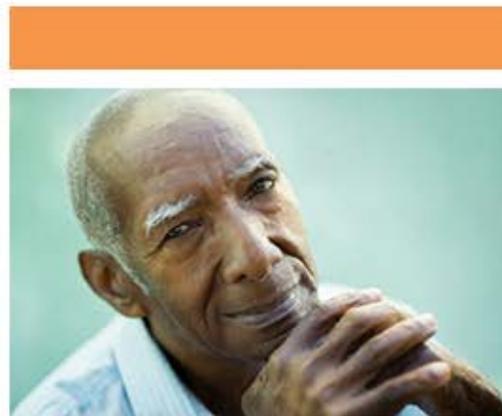


Thank you!

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