

Identifying Best Practices of Hospitals Serving Minority Patients – Preliminary Findings

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Disparities in Hospital Quality

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Competing Hypotheses and Competing Policies

- Minority patients receive lower quality care because they are being served by low performing hospitals (Barnato et al 2005).
 - *Policy emphasis on improving quality among hospitals serving high proportions of minority and low income patients.*
- Disparities in hospital care are attenuated because minority and low income patients are served disproportionately by teaching, safety net and large urban hospitals (Kahn et al 1994).
 - *Policy emphasis on learning best practices from teaching, safety net, and large urban hospitals to reducing disparities to improve care for minority and low income patients in other hospitals.*

Research Objective

1. Do racial and ethnic disparities in quality of care exist within hospitals?
2. Do minority patients use lower quality hospitals?
3. What are the best practices of hospitals that serve minority patients?

Address Question #1

- Using three years of state inpatient discharge (SID) data, we computed for each hospital, race/ethnic specific quality measures using the AHRQ inpatient quality indicators (IQIs) and patient safety indicators (PSIs).
- We compared hospital-level observed and risk adjusted IQIs and PSIs for each minority group to whites in the same hospitals.

Ten Inpatient Quality Indicators

- Four inpatient procedure mortality rates
 - Abdominal aortic aneurysm repair
 - CABG
 - Craniotomy
 - Hip Replacement
- Six inpatient condition mortality rates
 - AMI
 - CHF
 - Stroke
 - GI hemorrhage
 - Hip Fracture
 - Pneumonia

16 Patient Safety Indicators

- Complications of Anesthesia (PSI 1)
- Decubitus Ulcer (PSI 3)
- Failure to Rescue (PSI 4)
- Iatrogenic pneumothorax (PSI 6)
- Infection due to Medical Care (PSI 7)
- Postop Hip Fracture (PSI 8)
- Postop Hemorrhage or Hematoma (PSI 9)
- Postop Physio and Metabolic Derangement (PSI 10)
- Postop Respiratory Failure (PSI 11)
- Postop PE or DVT (PSI 12)
- Postop Sepsis (PSI 13)
- Postop Wound Dehiscence (PSI 14)
- Accidental Puncture (PSI 15)
- Birth Trauma (PSI 17)
- OB Trauma vaginal with instr. (PSI 18)
- OB Trauma vaginal without instr. (PSI 19)

Data

- We used state inpatient discharge data from 13 thirteen states.
- 2001-2003 SID data from AZ, CO, FL, IA, MA, MD, MI, NC, NJ, NY, and WI (AHRQ, HCUP)
- 2001-2003 SID data from TX (TX DOH)
- 2000-2002 SID data from PA (PA DOH)

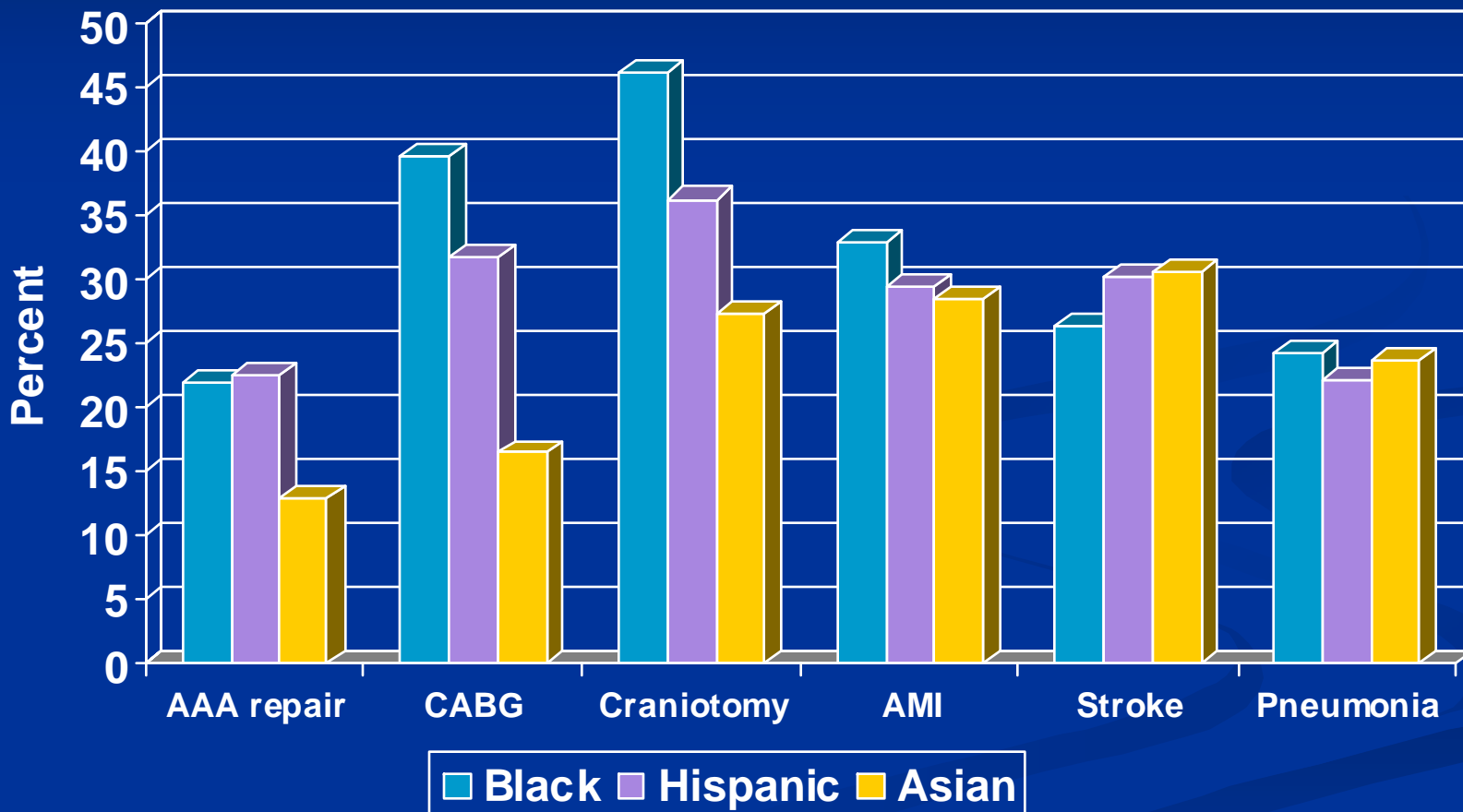
These states represent a large share of the US?

- 44% of the US population live in these states
 - 44.4% of whites
 - 46.0% of blacks,
 - 49.9% of Hispanics
 - 36.1% of Asians
- 37.8% of US hospitals are in these states
 - 45.2% of urban hospitals
 - 28.2% of rural hospitals

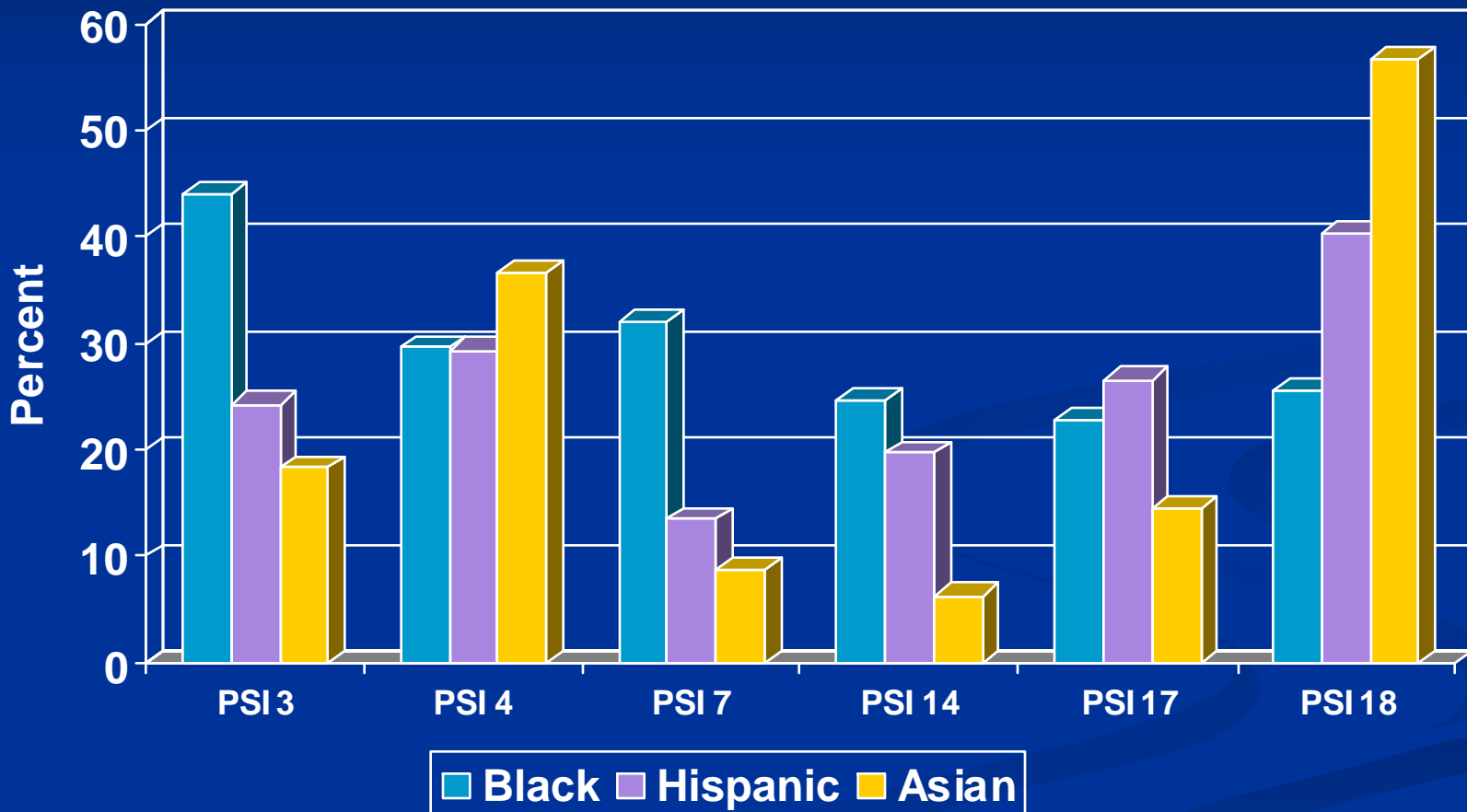
Statistical Analysis

- Compare observed rates by race/ethnicity
- Compare risk adjusted rates along with their respective confidence intervals
- Conduct pair-wise t-tests on both the observed rates and risk adjusted rates

How often do hospitals have higher observed IQIs for their minorities patients compared to their white patients?



How often do hospitals have higher observed PSIs for their minorities patients compared to their white patients?



- The percentage of hospitals where the minority patients had higher observed quality indicators than white patients ranges from
 - 5.5% to 46.1% for black patients
 - 5.6% to 40.2% for Hispanic patients
 - 0.7% to 56.6% for Asian patients

- Adjusted rates for minority patients are rarely statistically different from the corresponding adjusted rates for whites patients.
- Only 0 to 4.6 percent of hospitals had statistically higher IQIs for minority patients compared to white patients.
- Only 0.3 to 14.6 percent of hospitals had statistically higher PSIs for minority patients compared to white patients.

Results of Pairwise Comparisons

	Higher	No Difference	Lower
Observed IQIs	2	15	13
Risk Adjusted IQIs*	1	24	4
Observed PSIs	4	19	25
Risk Adjusted PSIs	5	26	17

* Sums to 29 because there were too few hospitals with a valid AAA risk adjusted rate for Asians

Summary

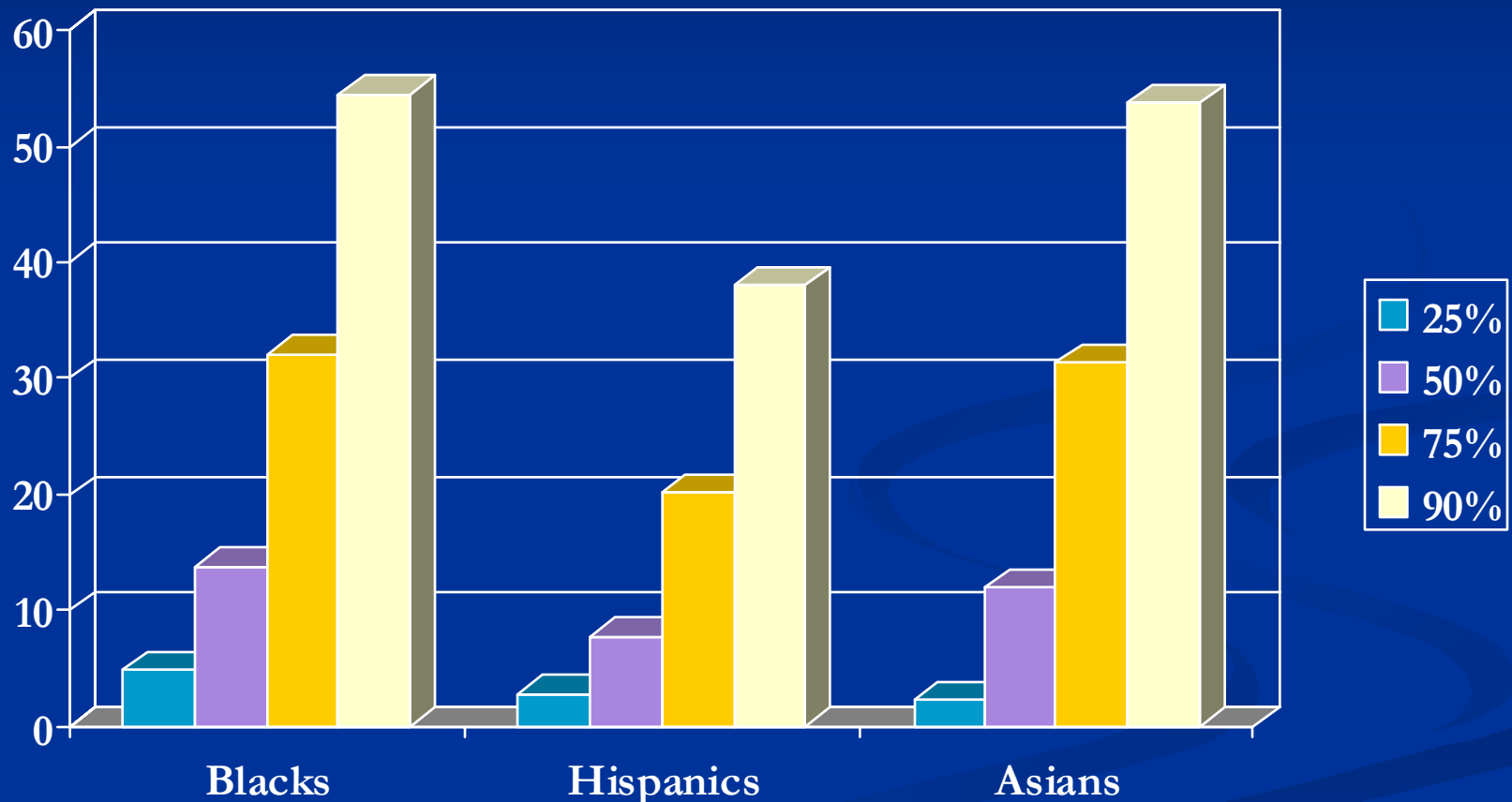
- We don't find any evidence to support the notion that hospitals are providing their minority patients with lower quality care than their white patients.
- In fact, the pairwise t-test suggest that whites receive worse care.

	Lower
Observed IQIs	13/30
Risk Adjusted IQIs*	4/29
Observed PSIs	25/48
Risk Adjusted PSIs	17/48

To Address the Question #2

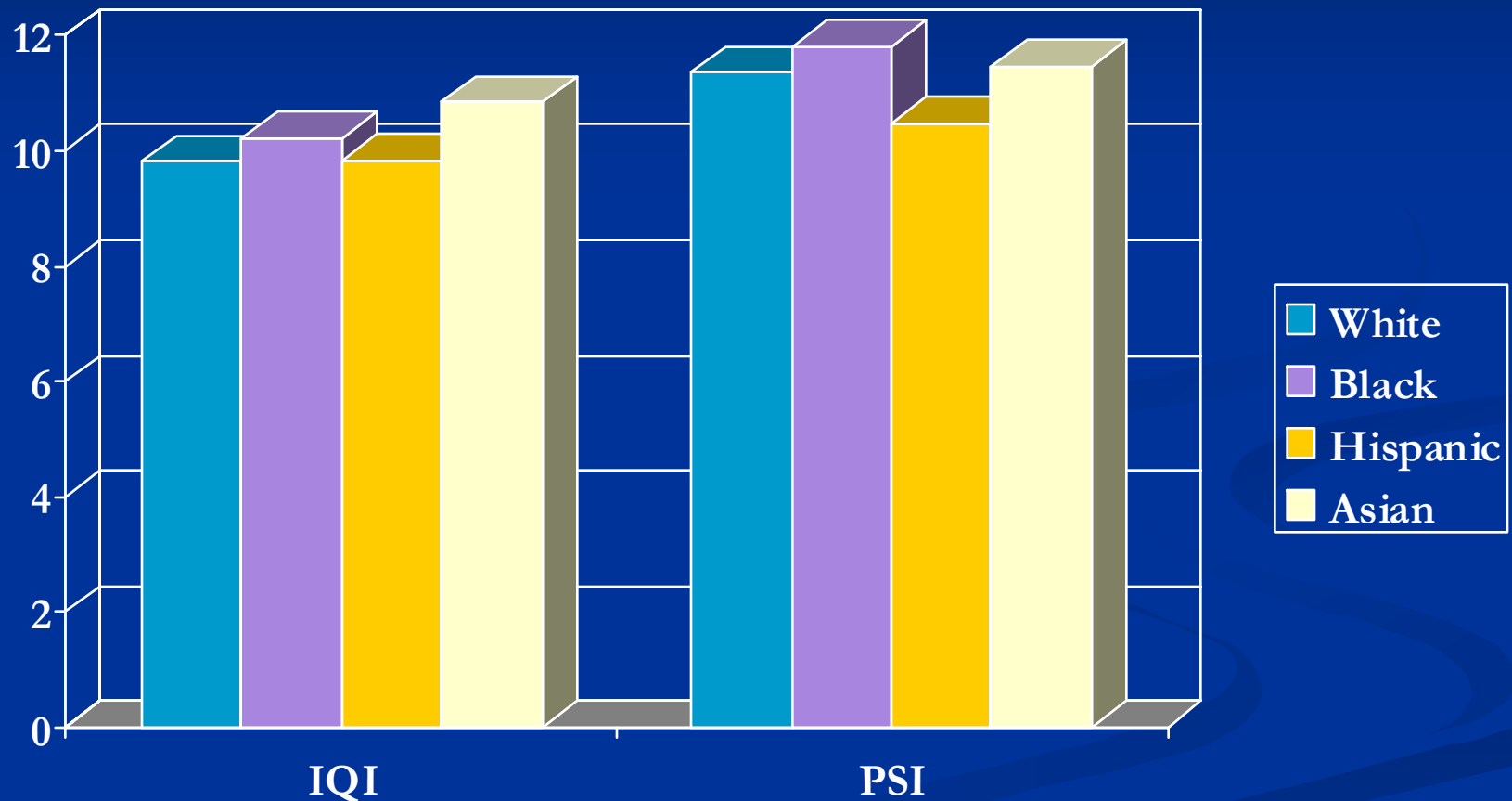
- Using three years of state inpatient discharge (SID) data, we computed for each hospital, quality measures using the AHRQ inpatient quality indicators (IQIs) and patient safety indicators (PSIs).
- We created composite IQI and PSI measures based on the weighted rankings for each measure. The weights were the number of patients subject to indicator.

Percentages of White Discharges that Were Served in Hospitals that Served Selected Percentages of Minority Discharges?



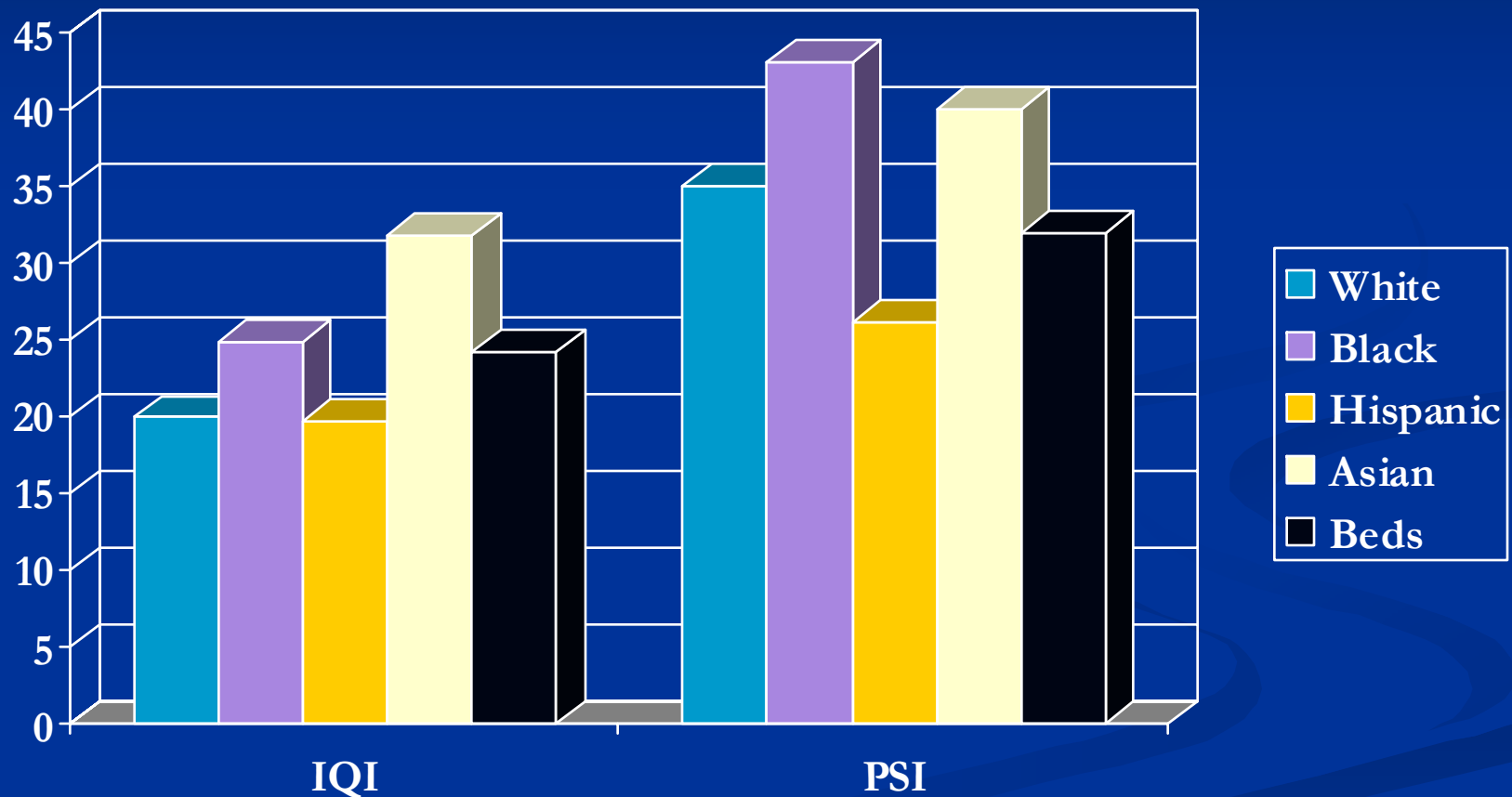
Based on SID data from 11 States

Are Minority Patients Using Lower Quality Hospitals?



Composite Ranking can range from 1 (best) to 20 (worst)

Are Minority Patients in the Lowest Performing Hospitals?



Within Each State, Which Race/Ethnic Group Was Most Likely to Use Low Performing Hospitals?

State	IQI	PSI
Arizona	Whites	Blacks
Colorado	Hispanics	Blacks
Florida	Blacks/Asians	Blacks
Maryland	Hispanics/Asians	Blacks
Massachusetts	Hispanics	Asians
Michigan	Hispanics	Blacks
New Jersey	Hispanics	Asians
New York	Blacks	Whites
Pennsylvania	Hispanics	Blacks/Asians
Texas	Blacks	Asians
Wisconsin	Blacks	Blacks

Who are the hospitals that are best IQI performers for minority patients?

- Compared to low performing IQI hospitals, high performing IQI hospitals are -
 - More likely a for profit hospital (36% vs 12%)
 - More likely a health system member (79% vs 71%)
 - Less likely to a safety net hospital (45% vs 59%)
 - More likely to be less than 200 beds (54 vs 36%)
 - Less likely to be a minor teaching (45% vs 61%)
 - Less likely to be a major teaching (9% vs 23%)

Who are the hospitals that are best PSI performers for minority patients?

- Compared to low performing PSI hospitals, high performing PSI hospitals are -
 - More likely a for profit hospital (39% vs 6%)
 - Less likely a health system member (77% vs 81%)
 - Less likely to a safety net hospital (56% vs 66%)
 - More likely to be less than 200 beds (62.5 vs 21%)
 - More likely to be a minor teaching (50% vs 33%)
 - Less likely to be a major teaching (10% vs 33%)

What are the best practices of hospitals that serve minority patients?

- Visits 8 hospitals selected from 13 states?
 - 2 with 50% African American Discharges
 - 2 with 50% Hispanic Discharges
 - 4 with 50% Minority Discharges
 - 6 high performers and 2 low performers
- We will conduct interviews with five hospital officials: CEO, CFO, Head of Nursing, Medical Director, and Quality Improvement Officer.
- We are interested in how organizational, workforce, external and technological factors affect the hospital's ability to provide quality of care to its minority patients.

Sample Site Visits Questions

1. Can you identify/describe any specific Quality Improvement Efforts/Programs that have been implemented by your hospital that have been particularly successful? Have these efforts/programs specifically addressed the needs of minority patients? If so, how?
2. Does the hospital have a strategy to recruit, retain and promote qualified, diverse and culturally competent administrative, clinical and support staff?
3. Has the hospital implemented cultural competency training programs? If so, who is required to participate in these programs? If not, how does the hospital ensure that care is delivered in a culturally competent manner?

Sample Site Visit Questions

1. Does the hospital provide all patients with limited English proficiency access to bilingual staff or interpretation services?
2. Does the hospital collect and analyze data on its patients by different racial/ethnic minority groups?
3. What do you think are the major challenges/impediments that hinder the hospitals' ability to provide quality care to its minority patients?

Policy Implications

- Eliminating disparities within institutions should focus on making sure patients receive care. Our data suggests that once in care, minority patients have similar if not better outcomes.
- More attention needs to be paid to eliminating disparities in quality across hospitals rather than disparities within hospitals.

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