



HARVARD
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BRIGHAM AND
WOMEN'S HOSPITAL

Racial disparities in readmissions: What we know and what we don't know

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Outline

- ▶ Health disparities
- ▶ Readmission disparities
- ▶ Factors underlying these disparities
- ▶ What can we do about disparities in readmissions?





Outline

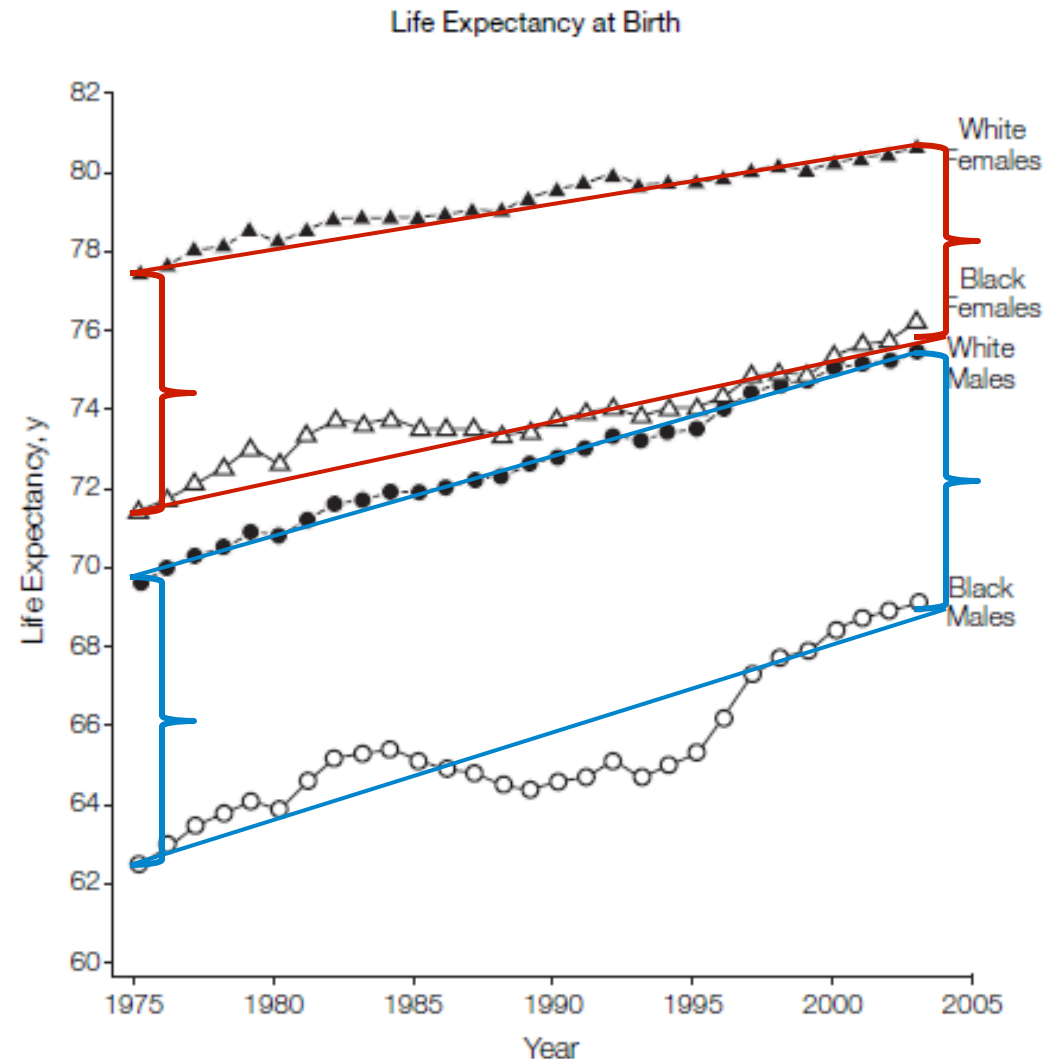
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Health Disparities

- ▶ Disparities in health outcomes are pervasive and persistent
- ▶ Black Americans have lower life expectancy
 - ▶ The gap is not closing





Healthcare and Health Disparities

- ▶ Many factors contribute to disparities
- ▶ Healthcare likely plays a significant role
- ▶ Black patients have higher mortality rates
 - ▶ Cardiovascular disease and diabetes
 - ▶ Many cancers
- ▶ Minority patients receive lower quality care
 - ▶ Why this is the case is unclear





Concentration of care

- ▶ Care for black patients is concentrated
 - ▶ 25% of hospitals: 87% of black patients
- ▶ These hospitals provide lower quality care
 - ▶ Performance on HQA quality metrics
- ▶ Could worse outcomes for black patients be because they are at worse hospitals?





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Why readmissions matter

- ▶ Readmissions are a key clinical outcome:
 - ▶ Failure of care at discharge
 - ▶ Clinical and financial consequences
- ▶ Readmissions are a major policy issue:
 - ▶ Preventable
 - ▶ At least sometimes
 - ▶ Common
 - ▶ 30-day readmission rates ~ 20% in Medicare
 - ▶ Costly
 - ▶ \$15 billion in excess spending annually





Health Disparities: Readmissions

- ▶ Less is known about disparities in readmissions
 - ▶ Do they exist?
 - ▶ How big is the gap?
 - ▶ What underlies these disparities?
 - ▶ How might we intervene?





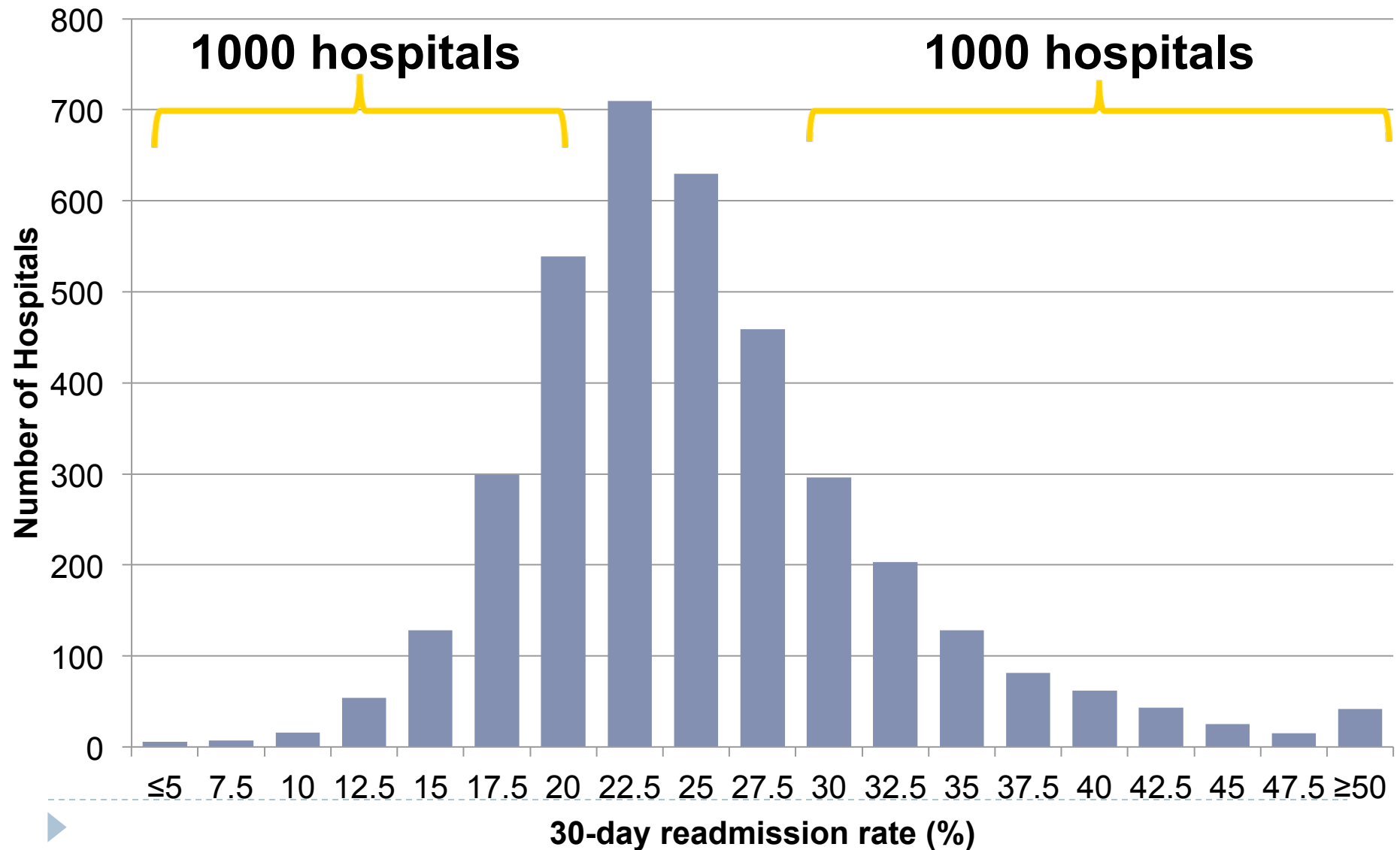
Health Disparities: Readmissions

Variable	Hazard Ratio (95% Confidence Interval)
Race†	
Black	1.057 (1.053–1.061)
Other	1.00

- ▶ All-condition readmissions higher for black patients
 - ▶ Readmissions higher for black HF patients
- ▶ We don't know why these gaps exist



Variability of CHF readmission rates





Health Disparities

- ▶ Do black patients have worse outcomes because of race, or because they are cared for at lower quality hospitals?





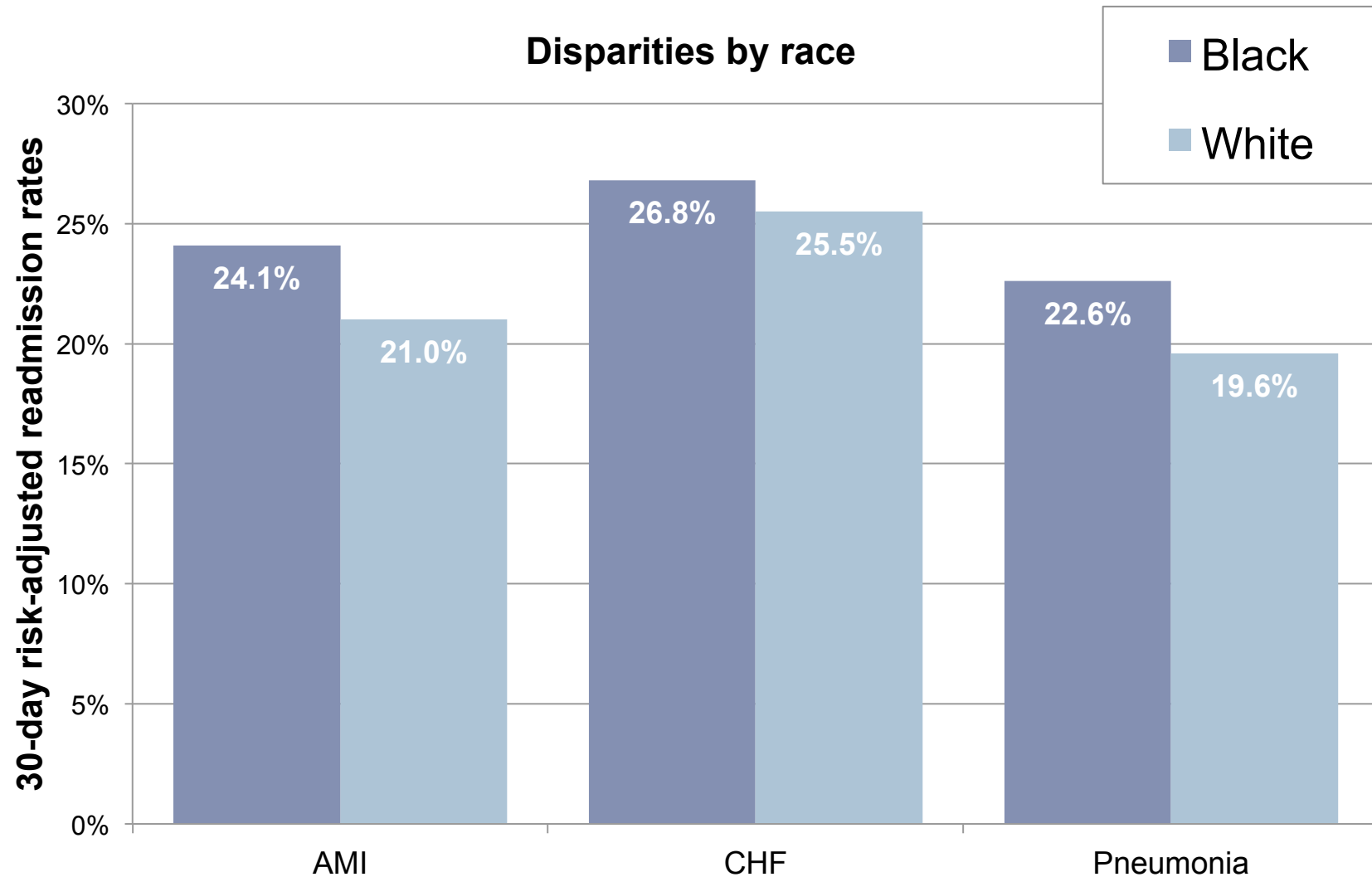
Health Disparities: Readmissions

- ▶ National sample of Medicare patients
- ▶ Common medical conditions
 - ▶ AMI
 - ▶ CHF
 - ▶ Pneumonia
- ▶ Examine both race and site of care
- ▶ Minority-serving hospitals
 - ▶ Top 10% of proportion black patients



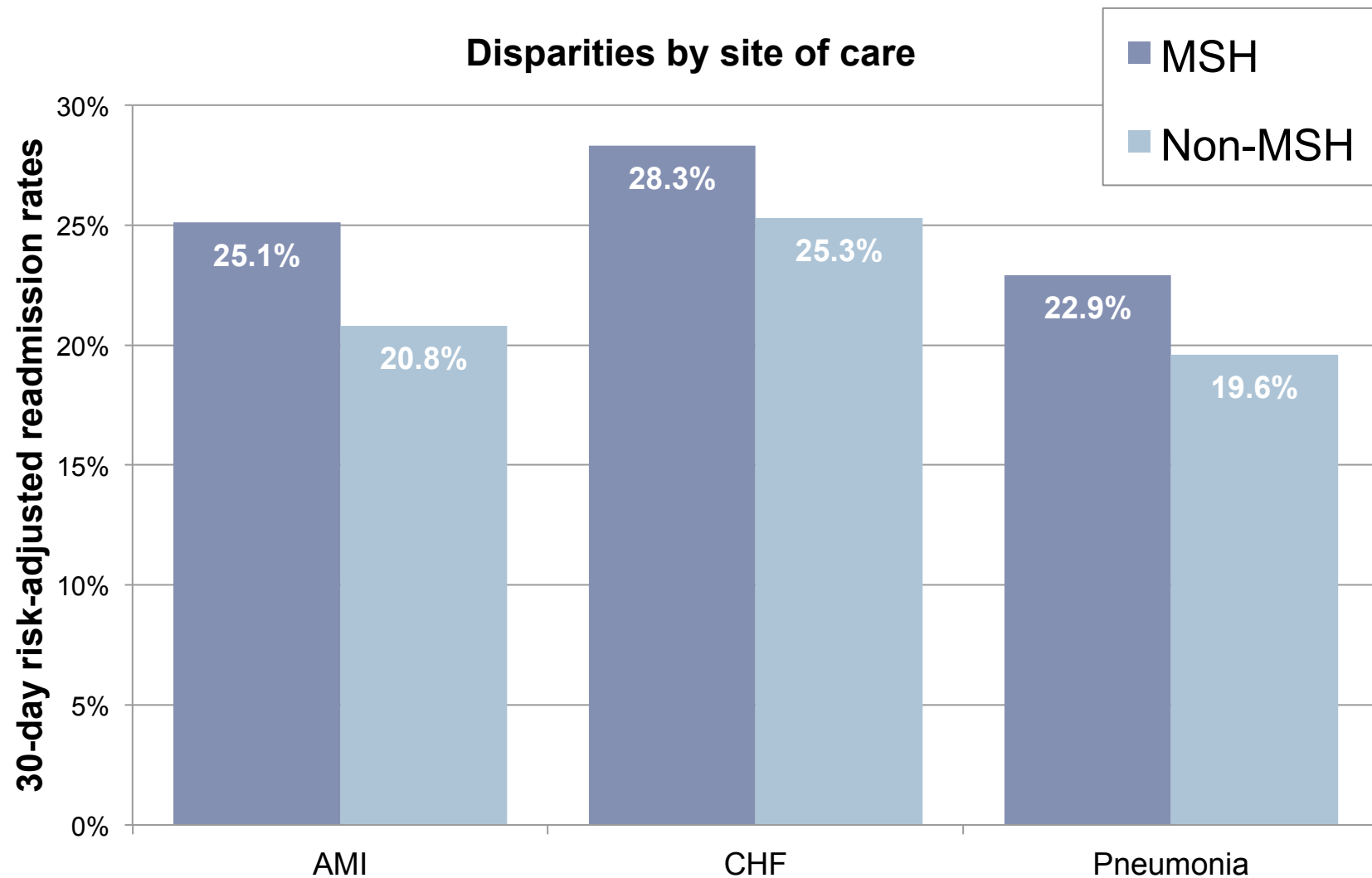


Readmissions: black vs. white



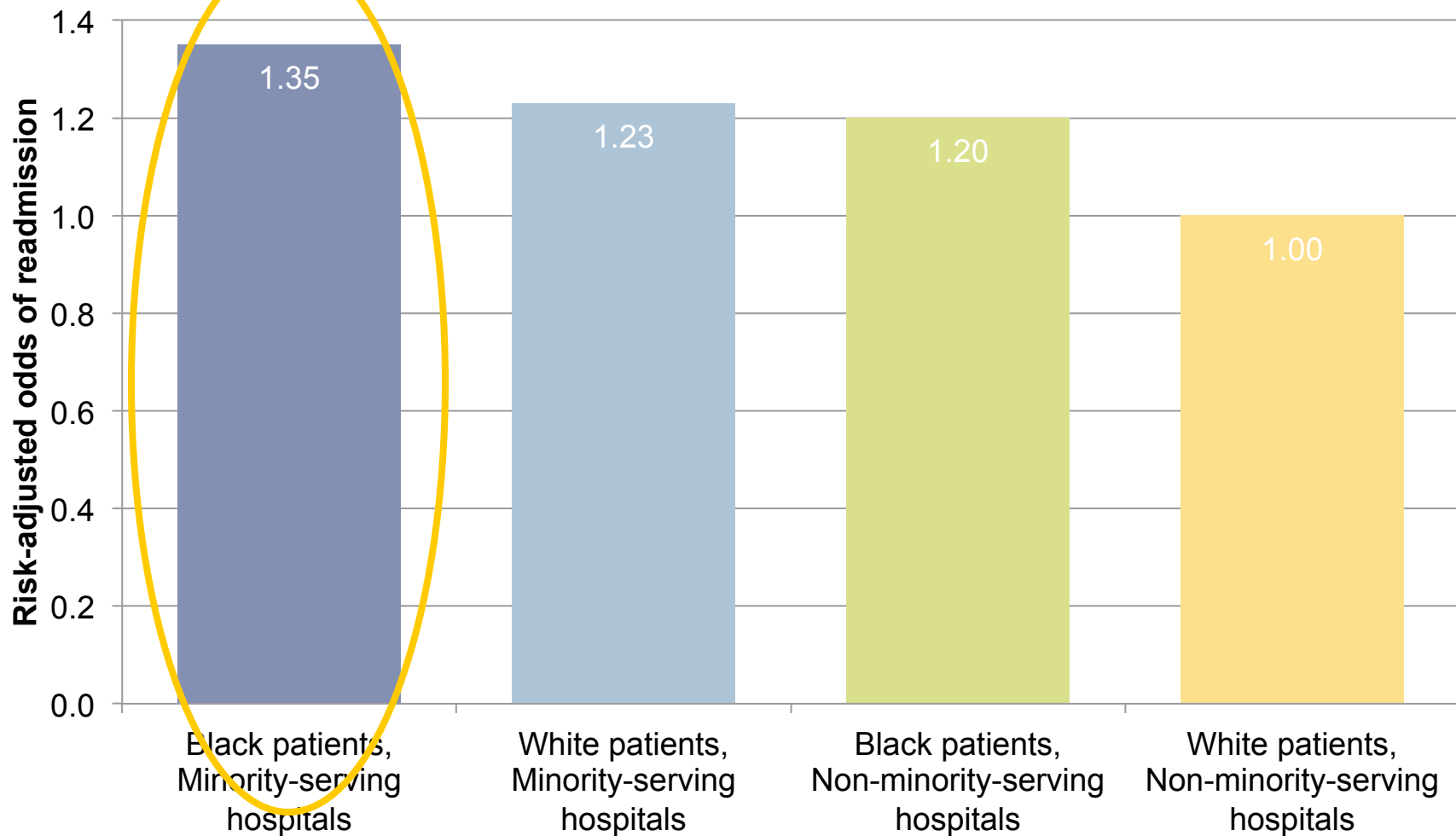


Readmissions: MSH vs. Non-MSH



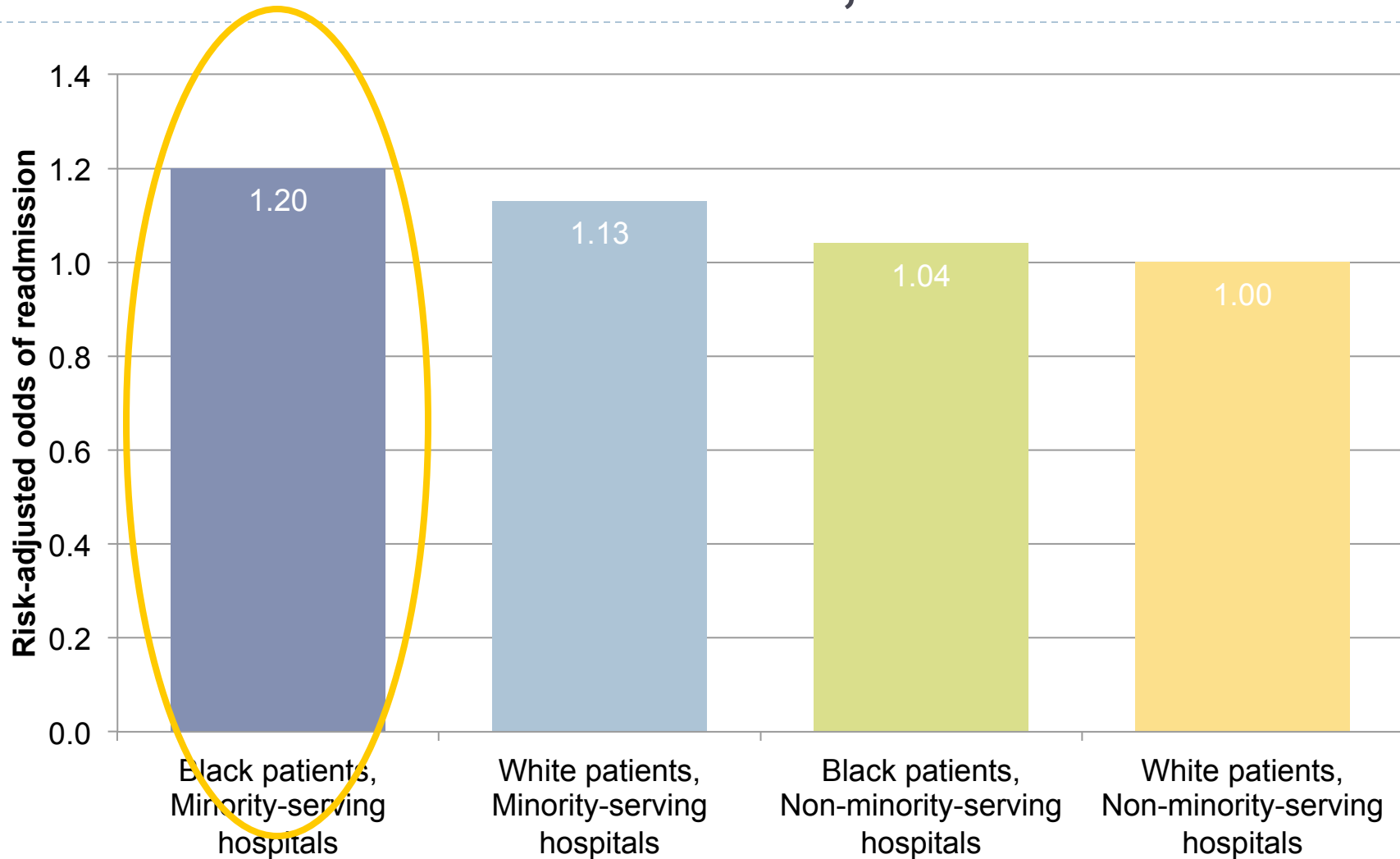


Race and site of care, AMI



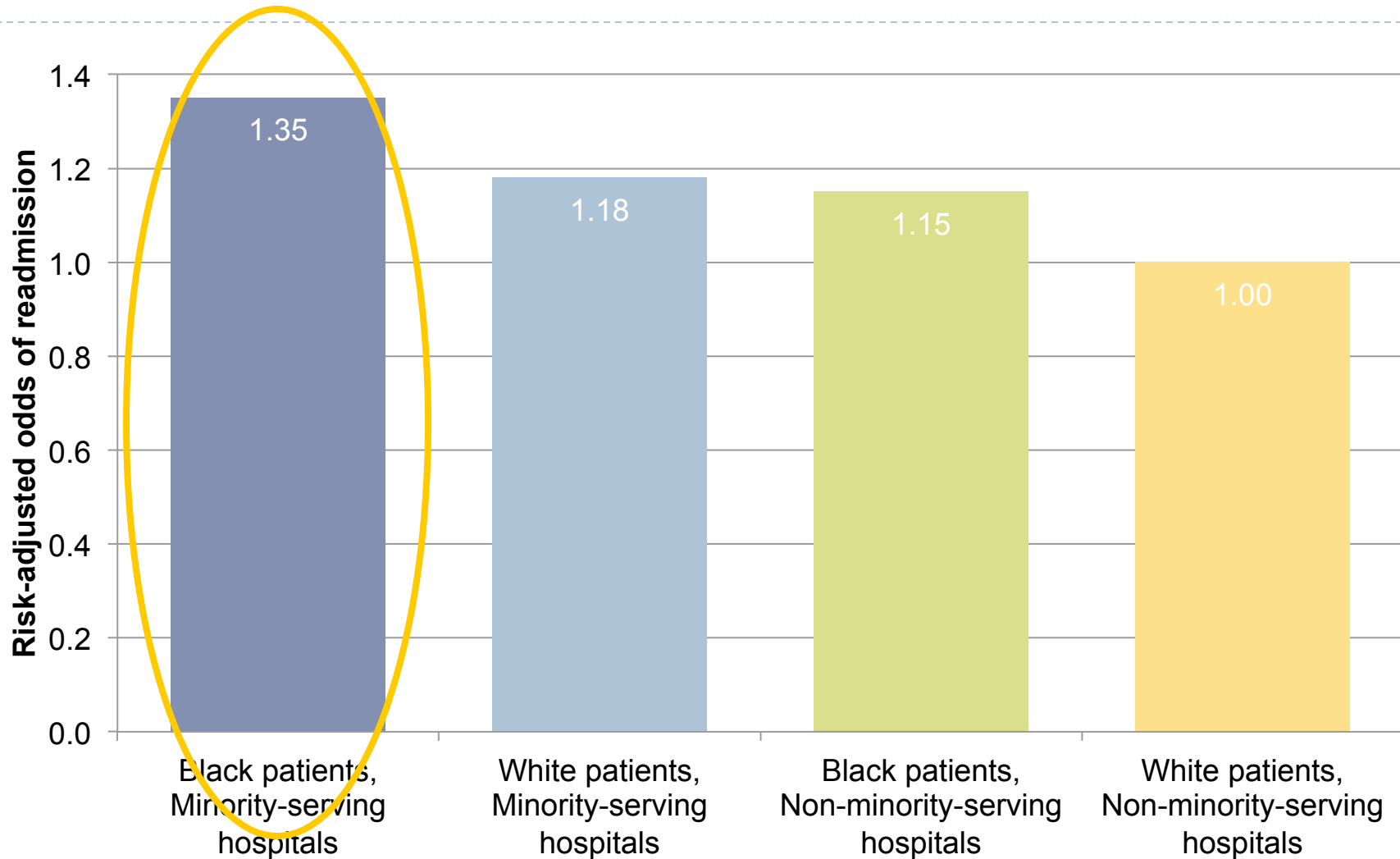


Race and site of care, CHF





Readmissions: race and site of care





Disparities in readmissions

- ▶ In summary:
 - ▶ Black patients had higher readmission rates than white patients
 - ▶ Minority-serving hospitals had higher readmission rates than non-minority-serving hospitals
 - ▶ Both factors were important, and additive





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Disparities in readmissions: Why?



Patient

- Quality of care received
- Medical comorbidities
- Socioeconomic status
- Access to care
- Health literacy



Hospital

- Quality of inpatient care delivered
- Leadership
- Effective discharge planning
- Timely follow-up
- Connections with community
- HIT



Community

- Availability of primary care
- Availability of specialty care
- Integration of hospital and outpatient settings
- Built environment

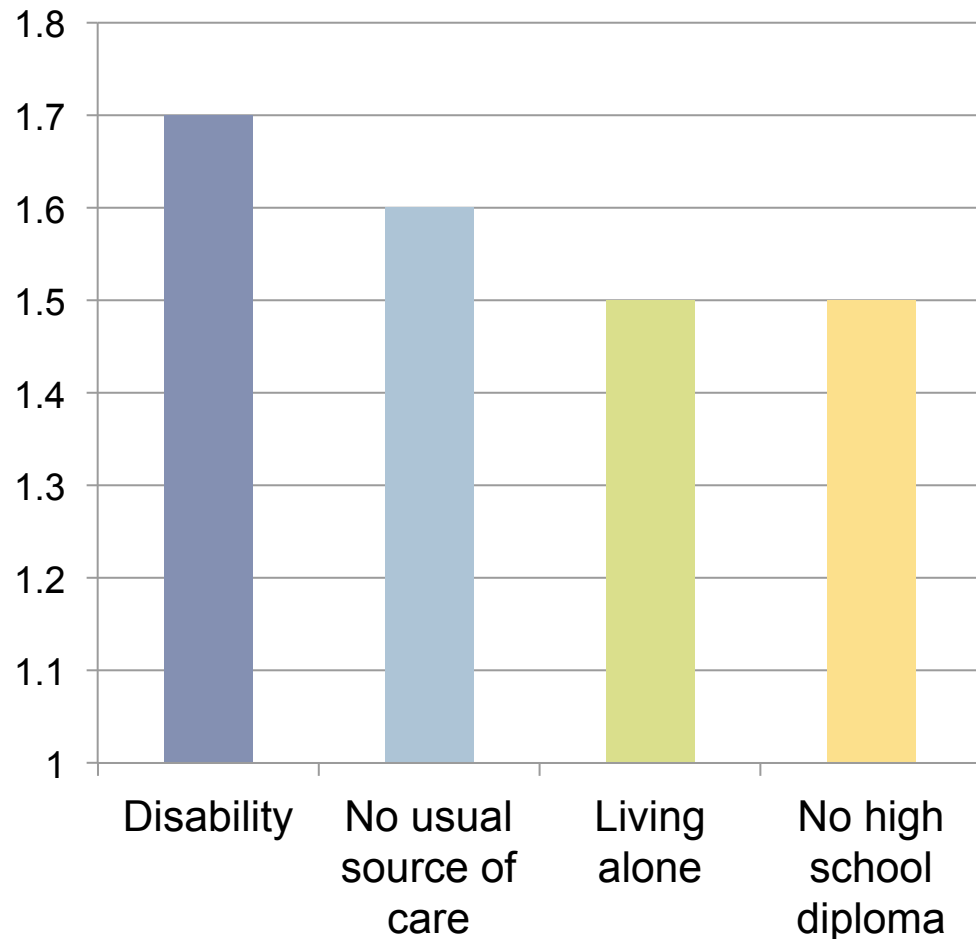
Continuum of Care



Patient factors

- ▶ Quality of care received
- ▶ Medical comorbidities
- ▶ Socioeconomic status
- ▶ Access to care
- ▶ Health literacy
- ▶ If factors are unevenly distributed by race, they may explain disparities

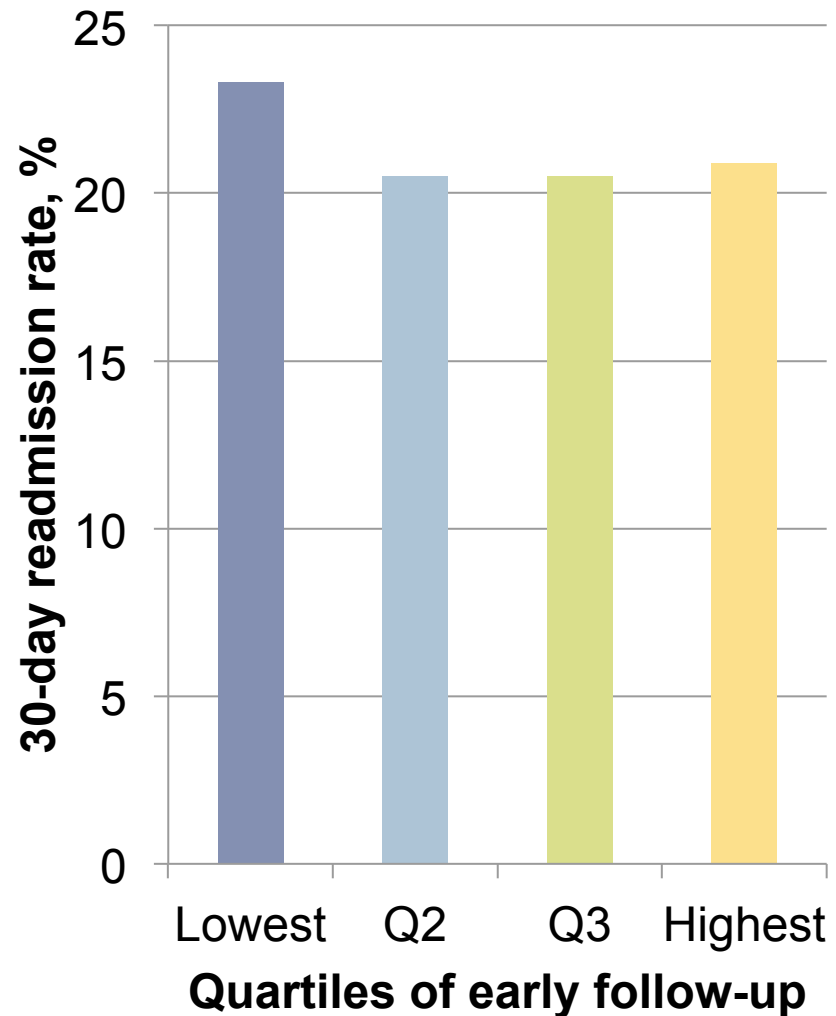
Odds of Readmission





Hospital factors

- ▶ Quality of inpatient care
- ▶ Leadership engagement
- ▶ Effective discharge planning
- ▶ Timely follow-up
- ▶ Connections with community
- ▶ Electronic health records
- ▶ If factors are unevenly distributed by hospital racial makeup, they may explain disparities





Community factors

- ▶ Availability of care
- ▶ Fragmentation of care
- ▶ Health information exchange
- ▶ Built environment and neighborhoods
- ▶ If factors are unevenly distributed by community, they may explain disparities

Neighborhood income	Hazard ratio for all-cause rehospitalization
Low	1.4 (1.1, 1.8)
Medium	1.1 (1.0, 1.4)
High	Ref
Controlling for race, Medicaid status, study community, sex, age at index event, hypertension, body mass index, smoking status, alcohol intake, and educational attainment	



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Impact of national policies

- ▶ Patient Protection and Affordable Care Act
 - ▶ Penalizes hospitals that perform “worse than expected” on 30-day readmissions
 - ▶ AMI, CHF, and pneumonia
- ▶ Minority-serving and other vulnerable hospitals more likely to be penalized
 - ▶ May worsen disparities





How might hospitals respond?

- ▶ Factors likely under hospitals' control
 - ▶ Inpatient treatments
 - ▶ Scheduling outpatient follow-up
- ▶ Factors likely beyond hospitals' control
 - ▶ Outpatient management
 - ▶ Patient education and self-care programs
 - ▶ Patient resources and compliance
- ▶ Need to understand these before holding hospitals solely accountable





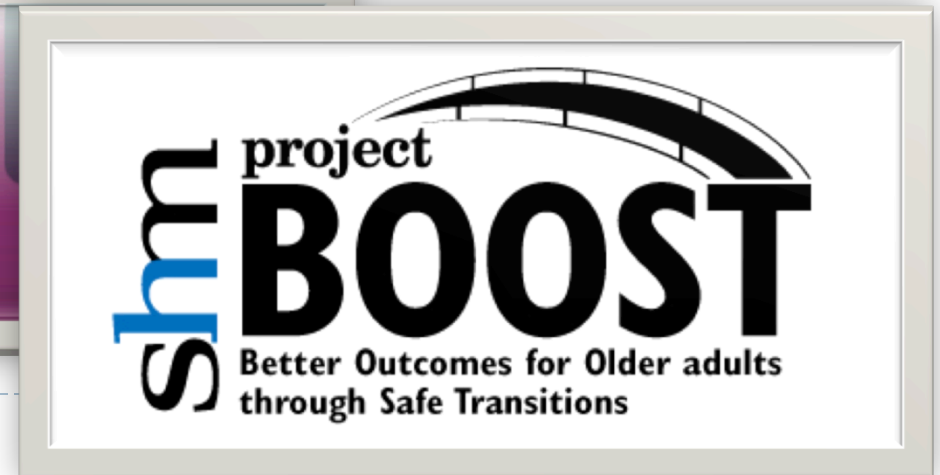
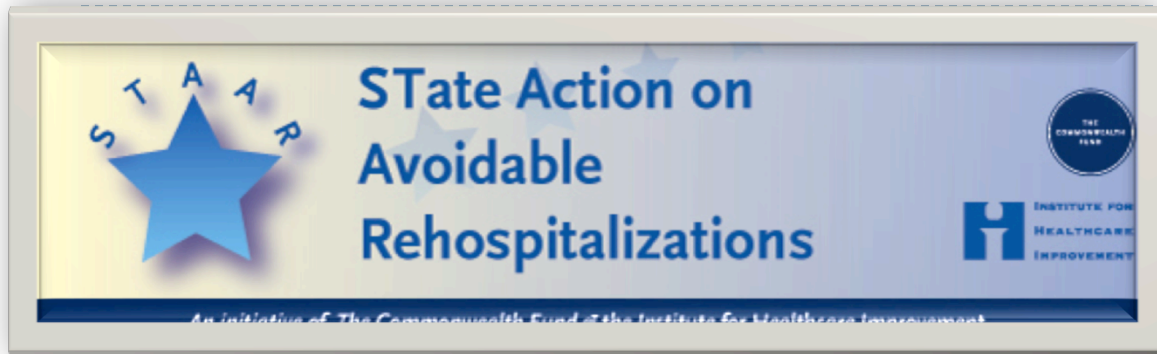
Response to hospital penalties

- ▶ Hospitals could respond by:
 - ▶ Better discharge planning
 - ▶ Creating transitional care programs
 - ▶ Strengthening links to outpatient resources
 - ▶ Increasing length of stay
- ▶ Responses might depend on resources
 - ▶ Avoiding sick patients, minority patients, non-English speakers...





Rapidly changing field





Ongoing initiatives

- ▶ **Common elements**
 - ▶ Comprehensive discharge planning
 - ▶ Post-discharge support
 - ▶ Team-based management
 - ▶ Patient education
 - ▶ Remote monitoring
- ▶ **Will these programs reduce disparities?**
 - ▶ If they focus on factors that disproportionately impact minorities, they could





Conclusions

- ▶ There are racial disparities in readmissions
 - ▶ Sizeable
 - ▶ Across multiple conditions
- ▶ We need to understand why:
 - ▶ Patient factors
 - ▶ Hospital factors
 - ▶ Community factors
- ▶ We need to identify targets for intervention
 - ▶ Ensure current efforts don't worsen disparities





Acknowledgements

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