



Disparities in Critical Care at Home and Abroad

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Disclosure

- **No conflicts in relation to this presentation**
- **Advisory board: Decision Health, Inc.**
- **Research grant: Merck**



Objectives

- **Identify the factors contributing to health disparity in critical illness and how they affect the continuum of critical illness**
- **Define factors and types of disparities in the critical care team**

Definitions

- **Difference**
- **Disparity**
- **Bias**
- **Health disparity**
- **Health care disparity**



Definitions

- **Difference:** the degree to which one person is not the same as another



- **Disparity:** a condition of being unequal; a difference
 - Usually in context of being unfair



Definitions

- **Bias: prejudice in favor of or against a person, or group compared with another, usually in a way considered to be unfair**
 - **Feelings**
 - **Opinions**
 - **Preconceptions**
- **Bias can lead to disparity**

Types of Disparity

- Racial/ethnic
- Socioeconomic status (SES)
- Age
- Talent
- Professional rank
- Quality
- Political views



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Health Disparity and Health Care Disparity

- **Health (health status) disparity**
 - **Difference in burden of illness, injury, disability or mortality in one group relative to another**
 - **Population-specific differences in presence of disease, health outcomes or access to healthcare**
 - **Inequalities that occur in the provision of healthcare and access to healthcare across different racial, ethnic and socioeconomic groups**

Health Care Disparity

- Differences in the quality of health care that are not due to access-related factors or clinical needs, preferences or appropriateness of intervention (*Institute of Medicine*)
- Differences between groups in insurance, access and use of care, and quality of care (*Kaiser Family Foundation*)
- Differences which systematically and negatively impact less advantaged groups

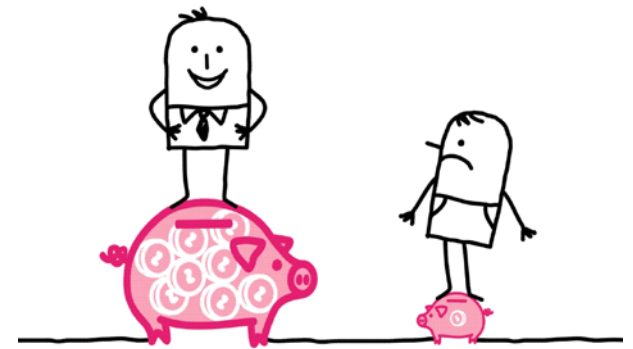
Disparity in Health Care

- Differences due to genetic influences
- Differences remediable by social, policy, and practice interventions



Factors in Health Disparities

- Race/ethnicity
- Socioeconomic status
- Gender
- Sexual orientation
- Age
- Disability
- Geographic location (rural vs urban)
- Disease



Challenges in Health Disparity

- **Definitions (Office of Management and Budget, 1997)**
 - **Race: Black, White, Asian, American Indian/Alaskan native, Native Hawaiian**
 - **Ethnicity: Hispanic/Latino, non-Hispanic/Latino**
- **Socioeconomic status: income, education, wealth, childhood income level, parental education**

Health Disparity Knowledge

- Descriptive research identifying disparities
- Research on underlying causes of disparities
- Research to address and resolve disparities
- Where is Critical Care in determining and addressing health disparities?



Disparity Across the Continuum of Critical Illness

- Incidence of illness
- Clinical presentation
- Clinical management
- Outcomes
- Research





Which one of the following factors is associated with disparity in clinical management of patients in the ICU?

- a. Race**
- b. Comorbid conditions**
- c. Gender**
- d. Genetics**

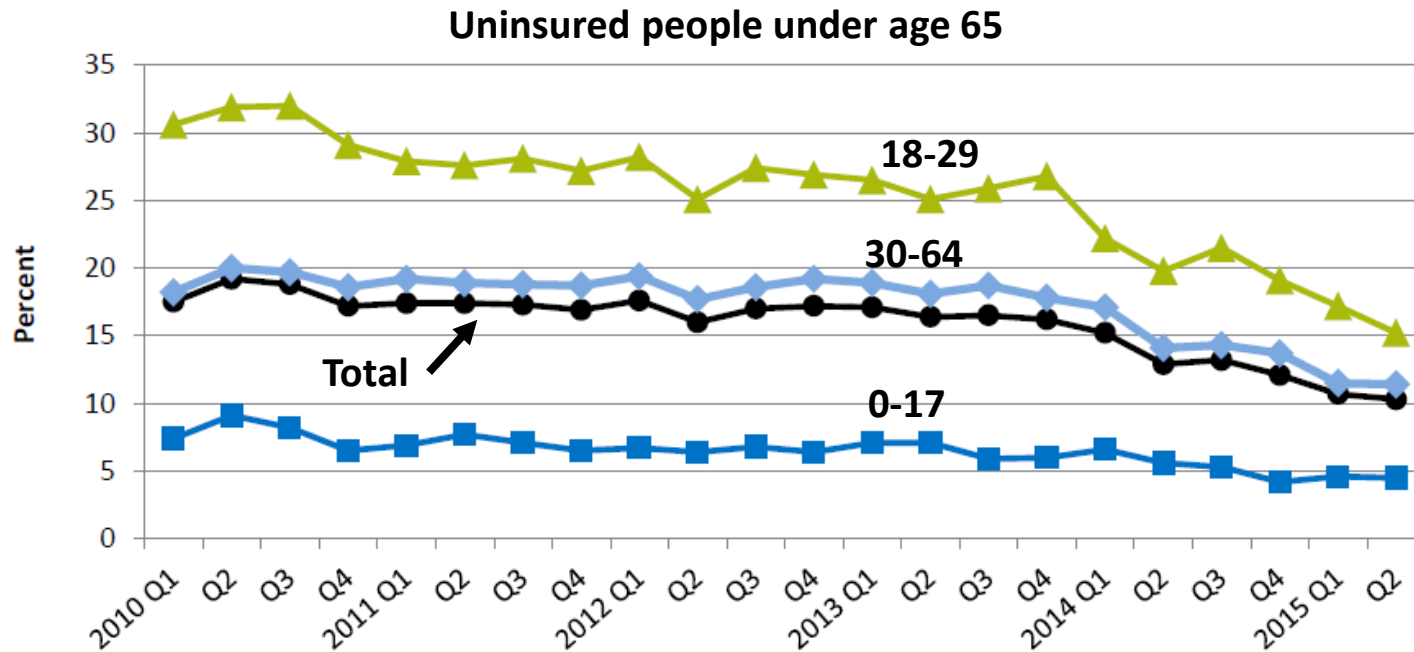
Disparity in Incidence of Critical Illness

- **Male gender and black race have higher incidence of ICU conditions**
 - **Observed in sepsis, cardiac arrest, ALI**
- **Contributing factors**
 - **Genetic susceptibility**
 - **Chronic comorbid conditions**
 - **Socioeconomic status, access to care**

Disparity in Clinical Presentation

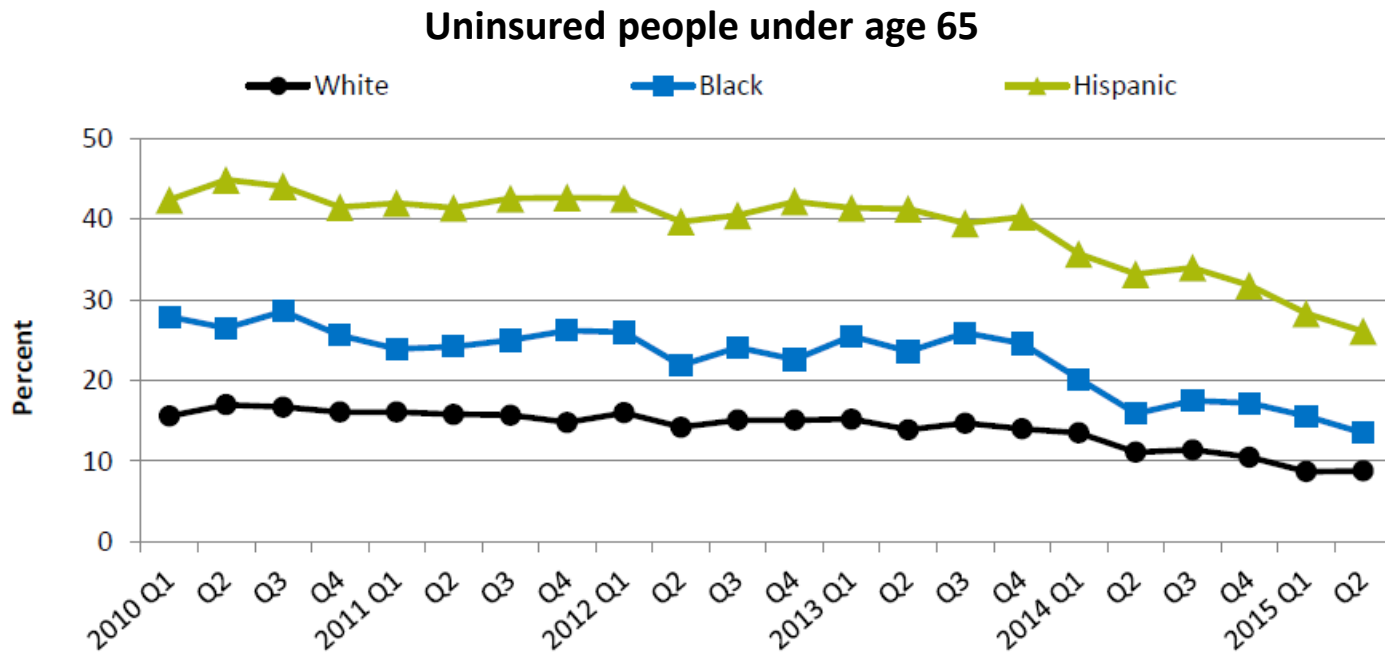
- **Gender and race differences found**
 - **Males more likely to have sepsis from Gram (+) organisms**
 - **Cardiac arrest at younger age in blacks**
- **Factors**
 - **Access to care**
 - **Preventive health**
 - **Chronic comorbid conditions**

Disparity in Access to Health Care



- Implications for critical care
 - Poorly controlled chronic illness
 - Later presentation/more severe disease

Disparity in Access to Health Care



Disparity in Clinical Management

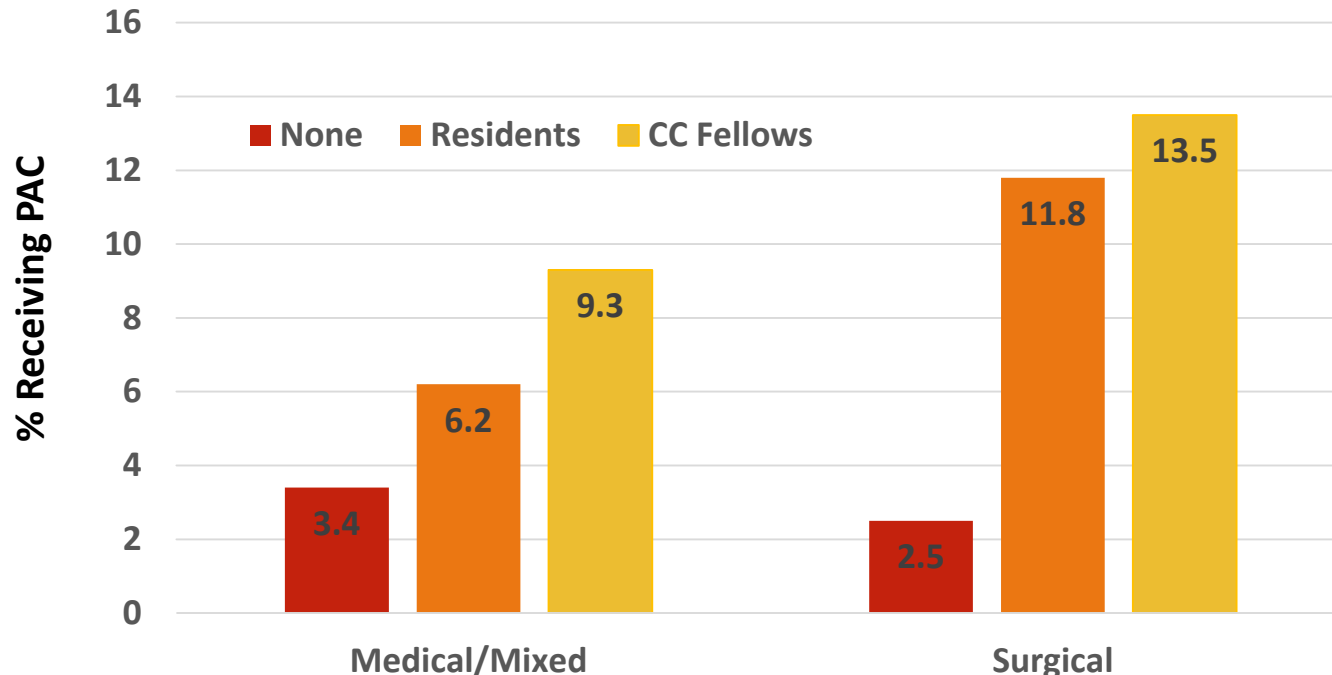
- **Women prescribed less β -blockers, anti-platelet therapy for cardiovascular disease (US)**
- **Women less often offered surgery for vascular disease (US)**
- **Less revascularization in MI for women (US, UK)**
- **Lower probability of listing women for renal transplant (France)**

Disparity in Clinical Management

- **Differences associated with race and gender in critical care**
 - **Admission to ICU**
 - **Interventions (tracheostomy, dialysis, central lines)**
- **Factors**
 - **Healthcare delivery (safety net hospitals)**
 - **Insurance/socioeconomic status**
 - **Preferences for care**

Disparity in the ICU

- Pulmonary artery catheter use, 1998
 - Higher use with white race, private insurance and admission to surgical ICU



Disparity in the ICU

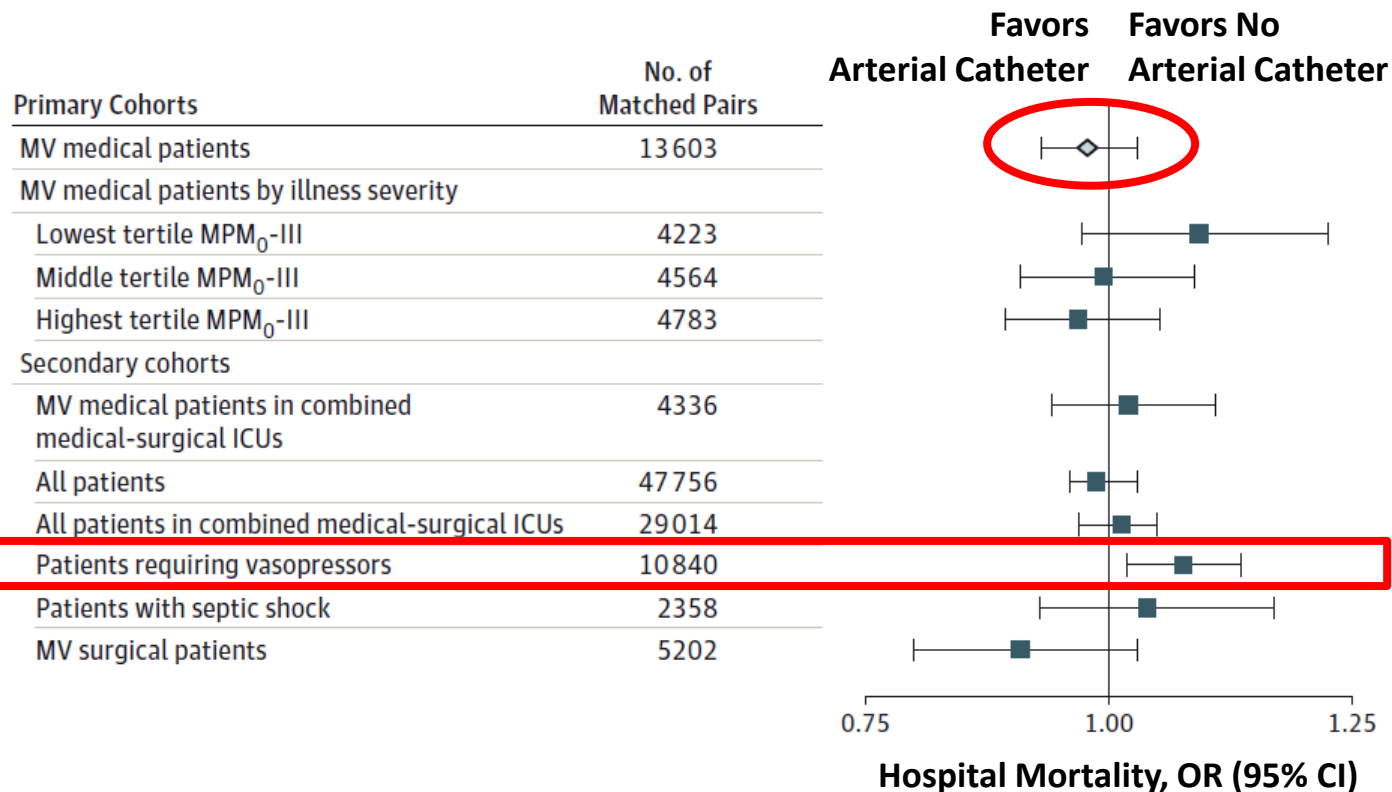
- Effect of insurance status on mortality and procedures in the critically ill (Pennsylvania)
- Adjusted for patient characteristics

Uninsured

	Odds ratio	P value
Mortality, 30 day	1.25	0.020
Central line	0.81	0.005
Tracheostomy	0.42	<0.001
Hemodialysis	0.55	0.005
Bronchoscopy	0.78	0.176

Is Disparity in the Eye of the Beholder?

- Arterial catheters in medical patients on mechanical ventilation (139 ICUs)



Disparity in Outcomes

- **Mortality**
 - Differences associated with gender and race
 - Likelihood of dying once critically ill and hospitalized does not differ
- **Functional outcomes**
 - Limited data
 - Non-white patients less likely to be discharged to LTACH

Global Disparity in Critical Care

- Resources
- Personnel
- Training
- Protocols/processes



If you would lift me up you must be on higher ground.

--Ralph Waldo Emerson

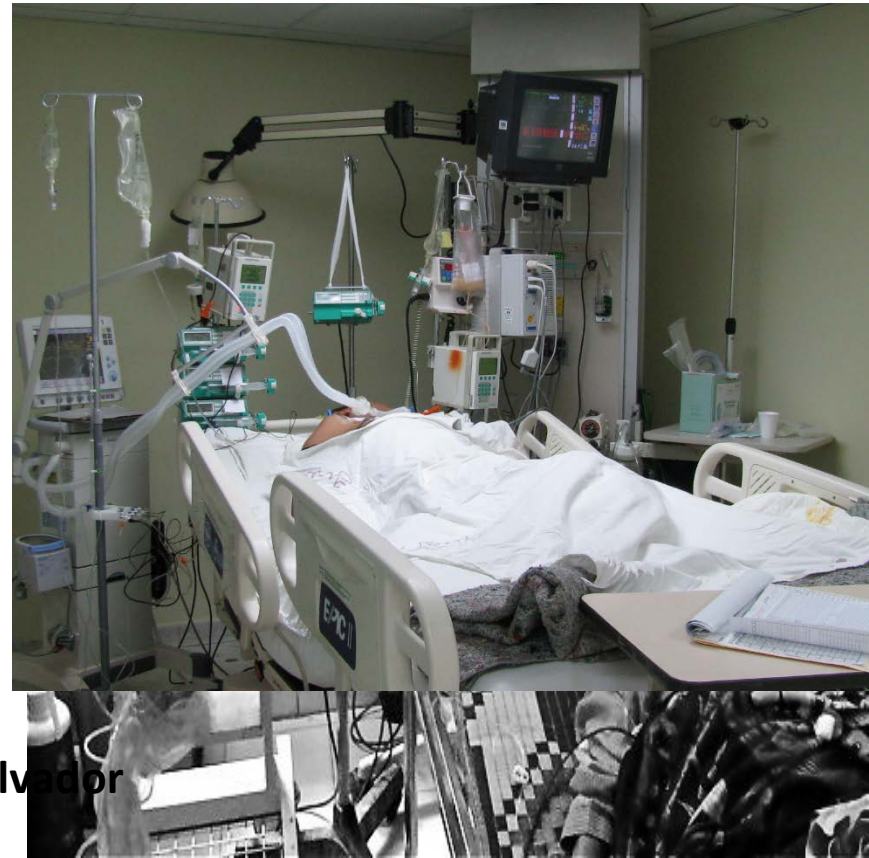
Global Healthcare

Country	Expenditure/person (US \$)	% of GDP
US	9403	17
UK	3935	9
Canada	5292	10
Australia	6031	9
Cuba	817	11
Mexico	677	6
El Salvador	280	7
South Africa	570	9
Sudan	130	8
India	75	5

What is an ICU?



El Salvador



Vietnam

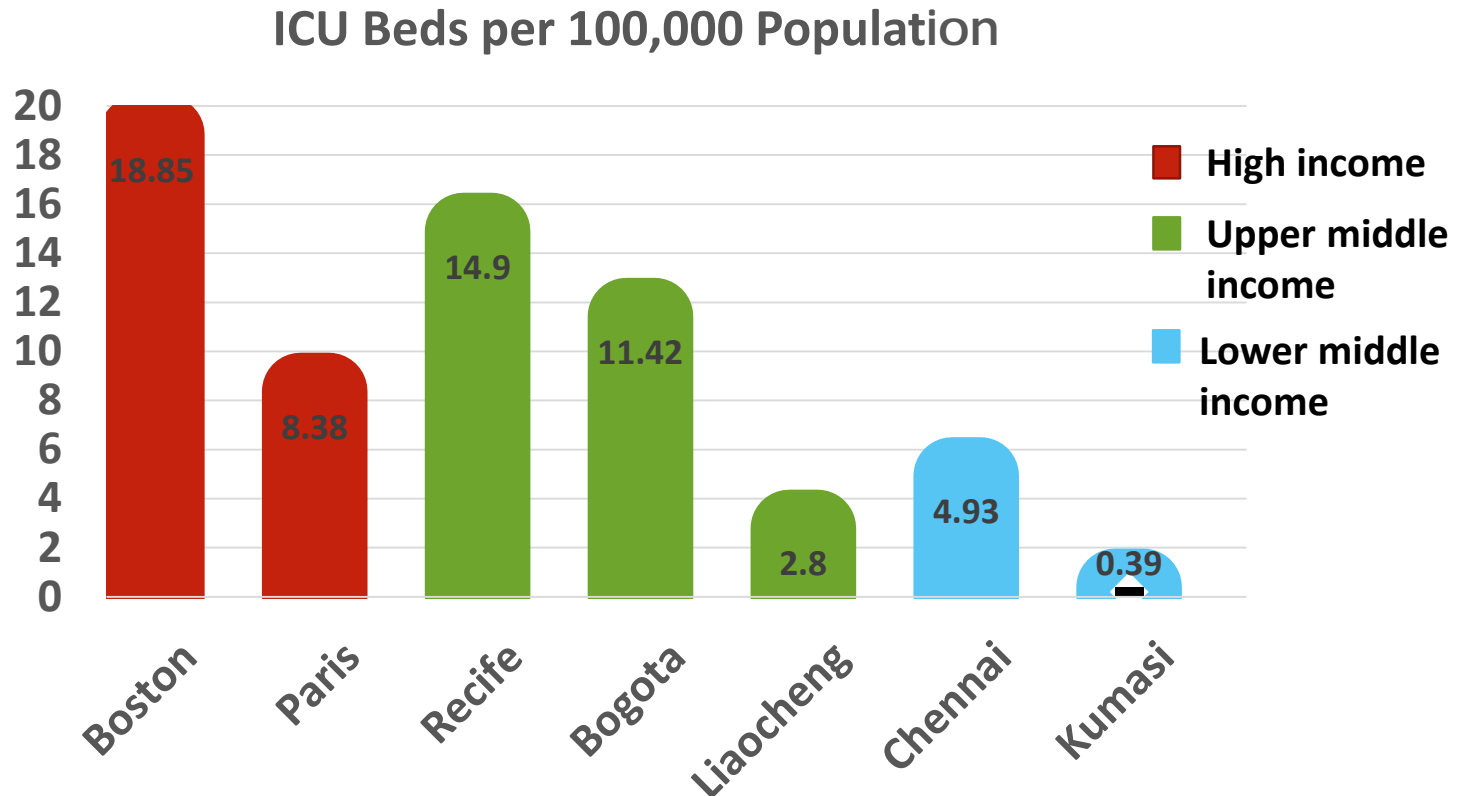
Global Disparity



Havanna, Cuba



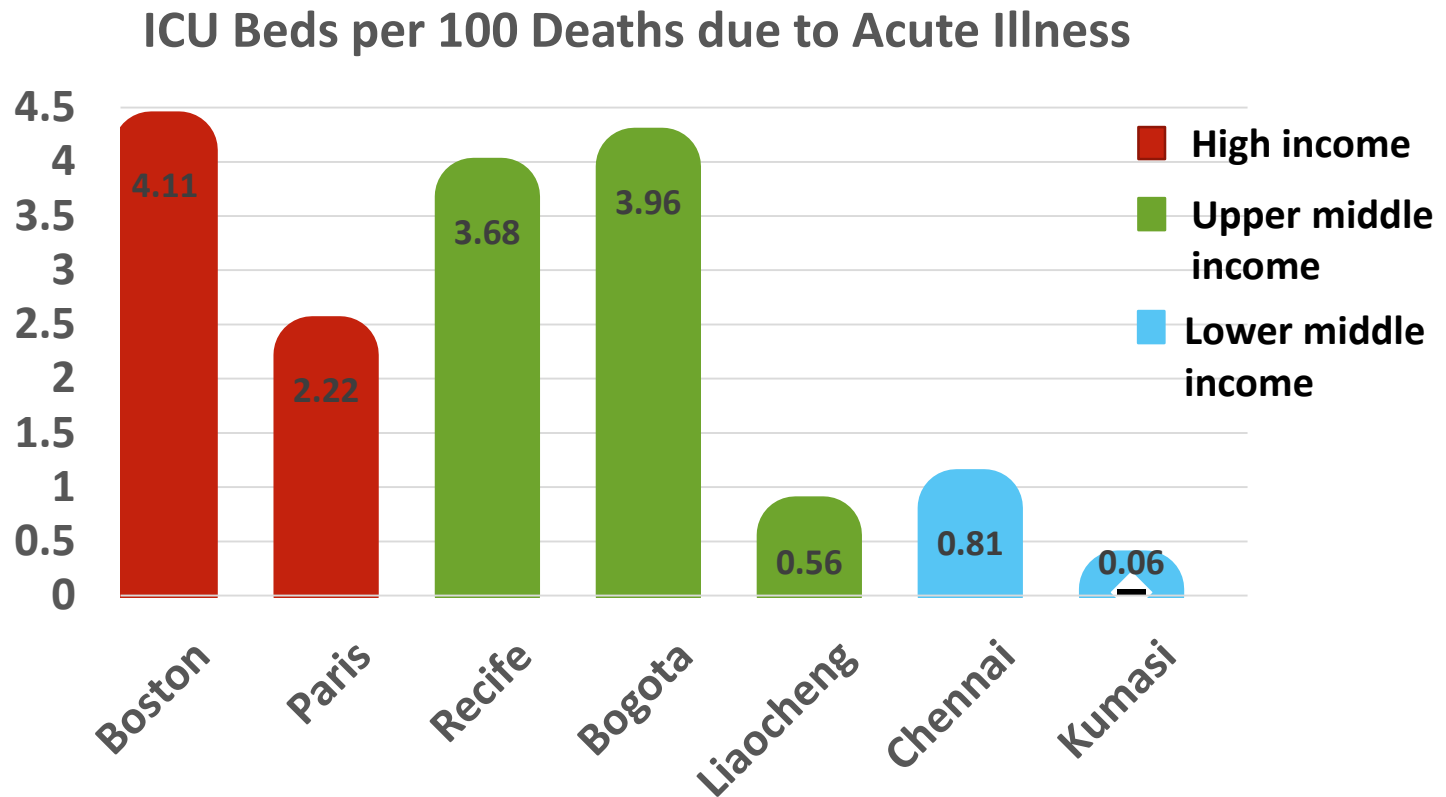
Disparity in Access to ICU Care



- ICU beds did correlate with GDP

Disparity in ICU Access

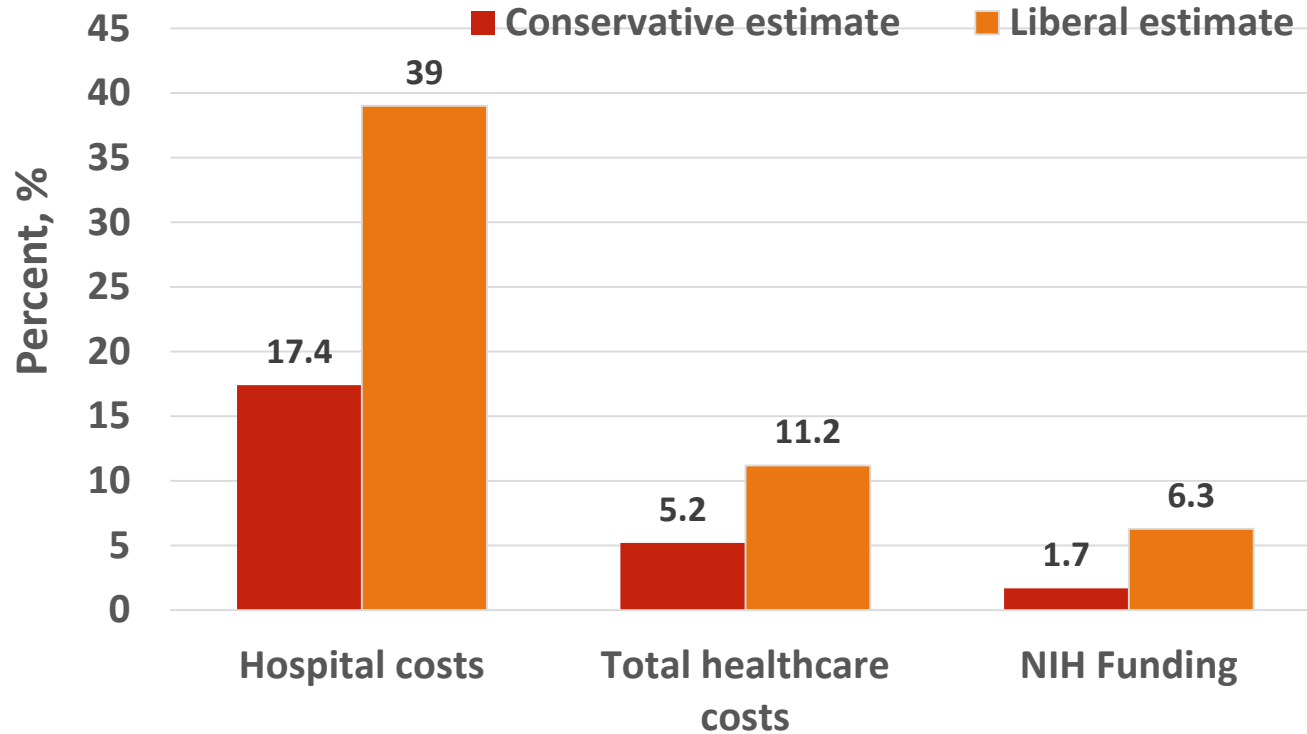
- ICU beds based on estimated need



Disparity in Critical Care Research

- **Is there disparity in funding critical care research in the US?**
- **Is there disparity in clinical trial enrollment, reporting, representativeness?**
 - **Ethnicity**
 - **Age**
 - **Gender**
 - **Negative trials**

Critical Care Costs and Research Funding



Clinical Trial Issues

- **Data for new sepsis definitions**

	UPMC	Kaiser
White	76%	66%
Black	14%	9.3%
Other	10%	24.4%

- **ProCESS trial: 68% white, 25% black**
- **ARDSNet trial: 73% white, 18% black, 6% Hispanic**
- **NICE-SUGAR trial: no ethnic information**

Disparities in the Critical Care Team

- **Types**
 - **Compensation**
 - **Promotion**
 - **Workload**
- **Factors**
 - **Age**
 - **Gender**
 - **Ethnicity**





Intensivist compensation is highest in which of the following regions of the US?

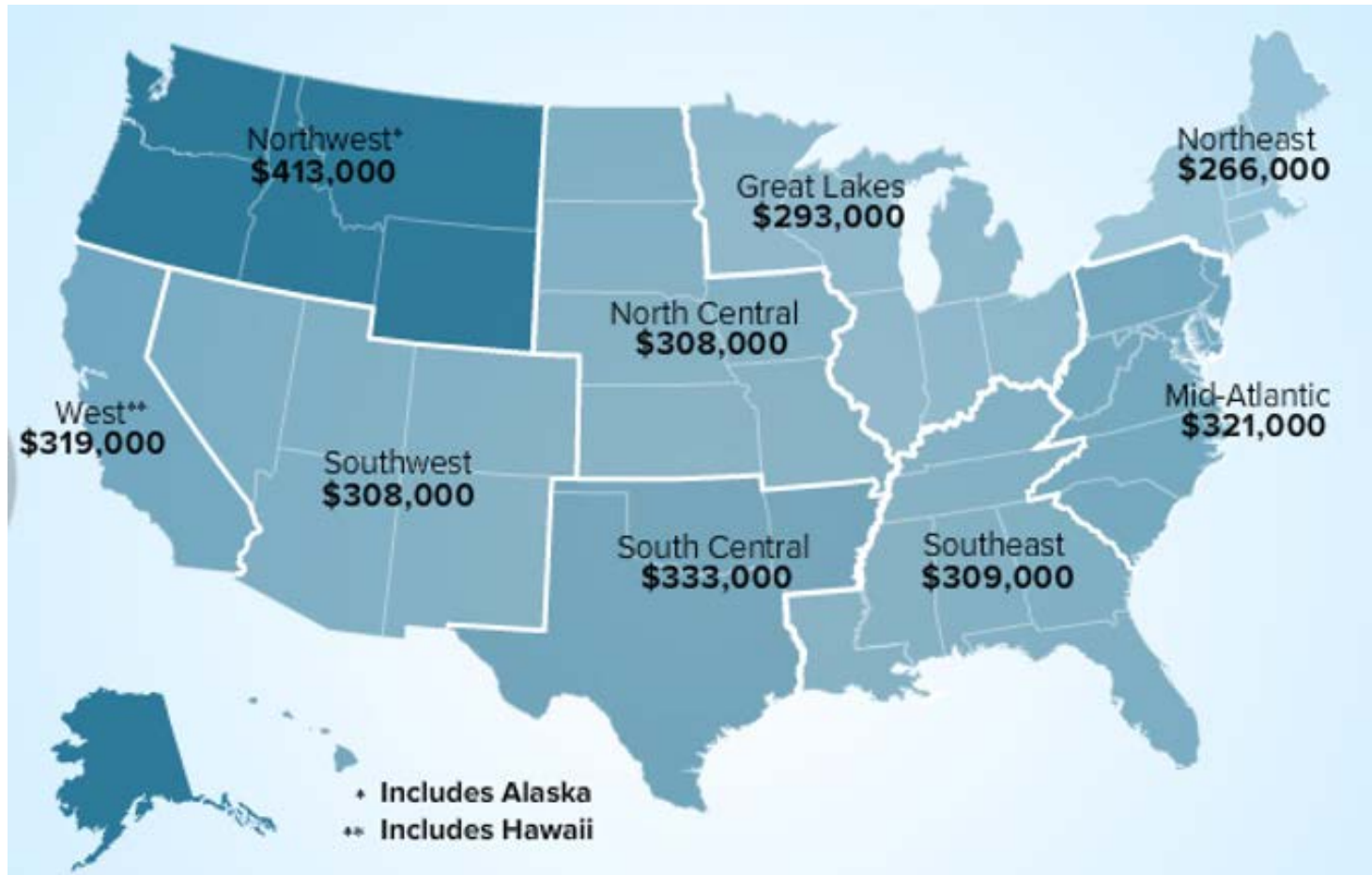
a. South central (Texas, Oklahoma)

b. West (California)

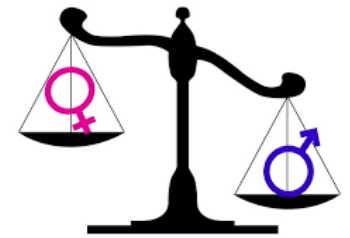
c. Northwest (Washington, Idaho, Montana)

d. Northeast (New York, Maine, Massachusetts)

Intensivist Compensation



Intensivist Gender Disparity



--Medscape 2016

Age Disparity

- Doctors age 46 to 55 work more hours than older and younger peers
- Doctors age 36 to 45 work fewer hours



Disparity in the Critical Care Team



Disparity Exists in Critical Care

- What can we do about it?



Don't judge each day by the harvest you reap but by the seeds that you plant.

— Robert Louis Stevenson

Reducing Health Disparities in Critical Care

- **Personal level**

- Increase cultural competence
- Awareness of unconscious bias



- **Institution level**

- Standardized admission criteria
- Guidelines/protocols
- Ascertainment of patient preferences



It is not the mountain we conquer but ourselves.
--Edmund Hillary

Reducing Health Disparities in Critical Care

- **Community level**
 - Immunization programs
 - CPR training
 - Volunteer-run clinics
 - Access to post acute care facilities
- **National level**
 - Access to care
 - Guideline/protocol development
 - Quality and safety measures
 - Research agendas



Reducing Health Disparities in Critical Care

- **Globally**
 - **Guidelines/protocols for resource-limited areas**
 - **Sharing of knowledge**
 - **Giving**
 - **Time**
 - **Money**
 - **Equipment**



Reducing Health Disparities in Critical Care

- **Globally**
 - **Advocacy**
 - **Reduced costs of medications, supplies**
 - **Global perspective for research**
 - **Sponsor attendance at conferences for those with few resources**
 - **Sponsor colleagues from resource-limited areas at your institution**

If your lactate is elevated, please raise your hand...



Pilot Project

- Sepsis initiative at Gitwe Hospital, Rwanda
- Identify essential aspects of sepsis care
- Focused training
- Usefulness of “Sepsis First Aid” kit (1+1+1)
 - 1 L fluid
 - 1 antibiotic
 - 1 hour



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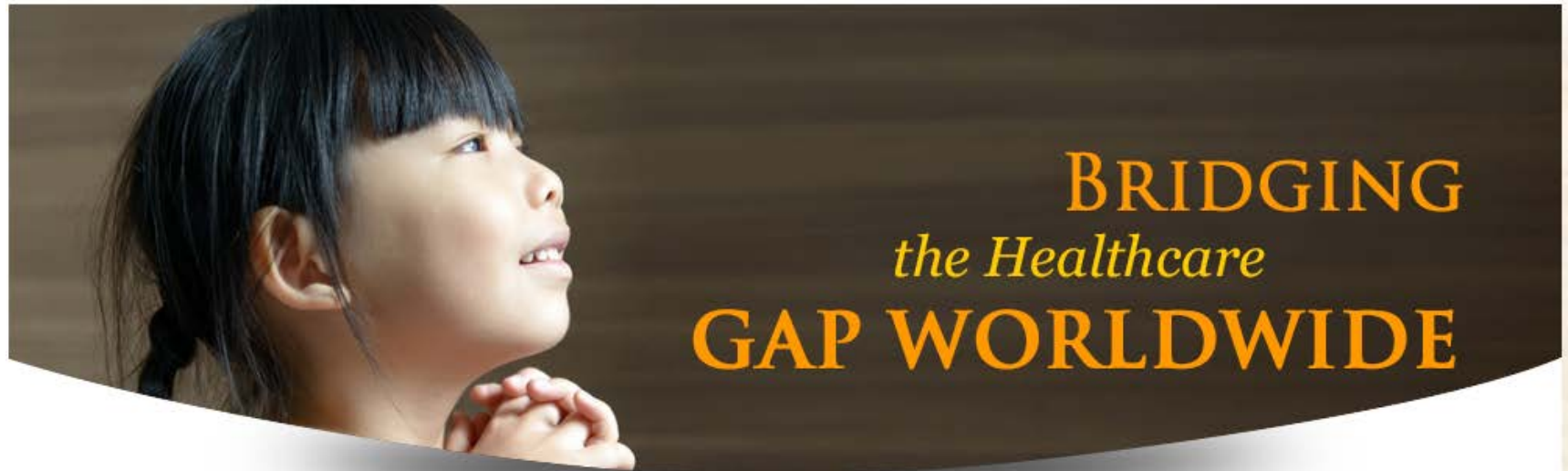
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- Waste Management

The Bright Side

- We are more alike than we are different!



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**Thank you for your
attention**

