

Addressing Health Disparities: From Theory to Practice

Olveen Carrasquillo, MD, MPH
Chief, Division of General Int Medicine
University of Miami

What are disparities

- Disparities in Health
 - Differences in the health of racial or ethnic minorities versus non Hispanic whites
- Disparities in Access to Care
 - Differentials in access to health care by racial or ethnic minorities versus non Hispanic whites
- Disparities in Health Care
 - Differences in quality of health care received by racial or ethnic minorities versus non Hispanic whites

More Disparities Groups

- Socio-economic / Class
- Gender
- Age
- LGBT
- Rural/ urban
- Obesity
- Disabilities

What do Latinos Think of Race???

Table 10.
Hispanic and Not Hispanic Population by Race for the United States: 2000

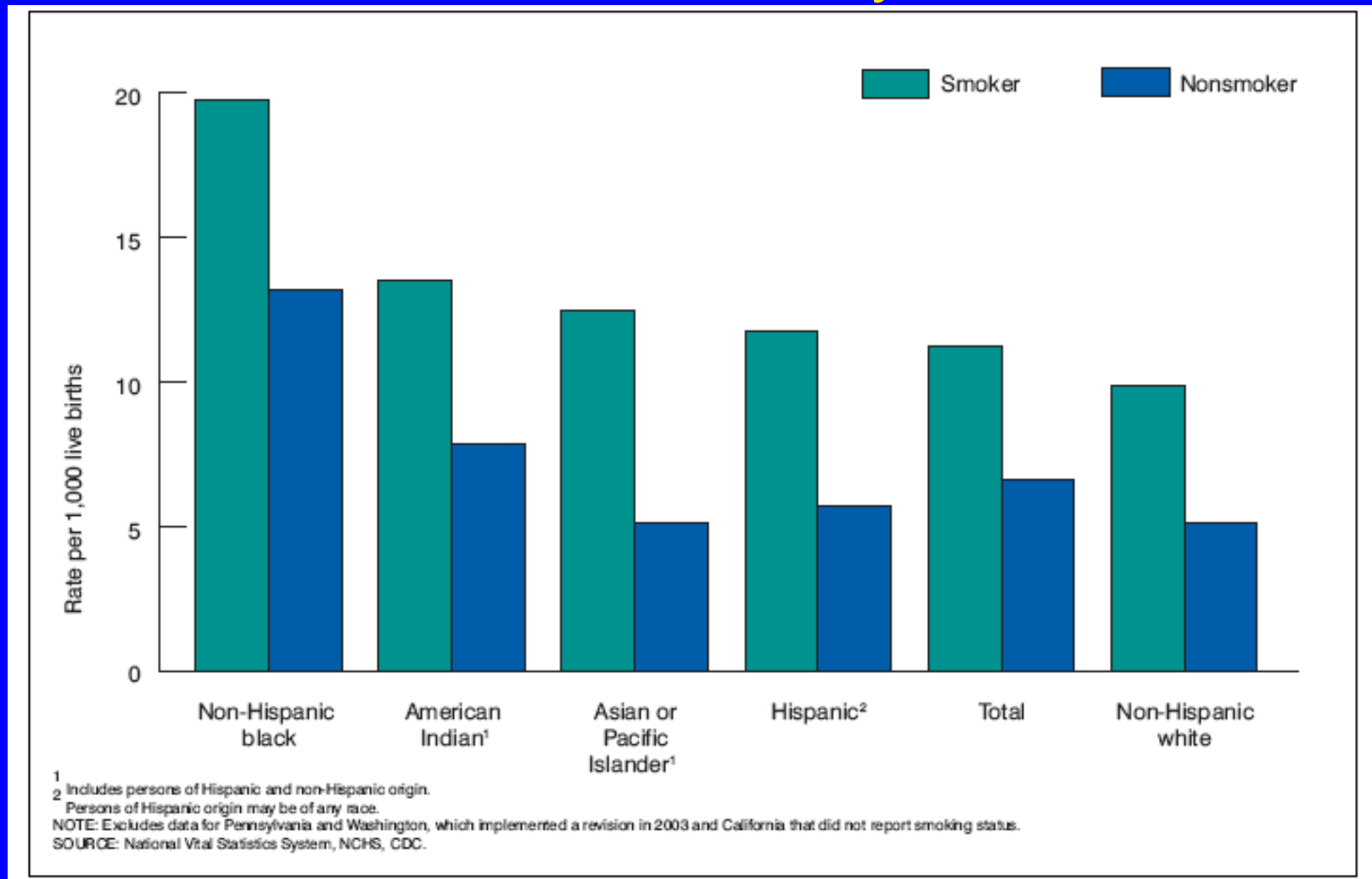
Race	Hispanic or Latino			Not Hispanic or Latino		
	Number	Percent of Hispanic population	Percent of total population	Number	Percent of non-Hispanic population	Percent of total population
Total	35,305,818	100.0	12.5	246,116,088	100.0	87.5
One race	33,081,736	93.7	11.8	241,513,942	98.1	85.8
White	16,907,852	47.9	6.0	194,552,774	79.1	69.1
Black or African American	710,353	2.0	0.3	33,947,837	13.8	12.1
American Indian and Alaska Native	407,073	1.2	0.1	2,068,883	0.8	0.7
Asian	119,829	0.3	-	10,123,169	4.1	3.6
Native Hawaiian and Other Pacific Islander	45,326	0.1	-	353,509	0.1	0.1
Some other race	14,891,303	42.2	5.3	467,770	0.2	0.2
Two or more races	2,224,082	6.3	0.8	4,602,146	1.9	1.6

- Percentage rounds to 0.0.

Source: U.S. Census Bureau, Census 2000 Redistricting (Public Law 94-171) Summary File, Tables PL1 and PL2.

48% of all Latinos consider themselves white and
 42% of all Latinos refused to classify themselves as white or black

Disparities in Health Infant Mortality



National vital statistics reports; vol 54 no 16. NCHS. 2006.

Health: CV Dz

	NHWs	blacks	Hispanics
CV disease	239	308	181
Stroke	55	76	41

Source: NCHS, 2002 mortality data Age adjusted death rates/ per 100,000
<http://www.cdc.gov/nchs/data/hus/hus04trend.pdf#topic>

Cancer Mortality Rates Women

	Breast	Cervical	Colon	Lung
African American	31.0	5.7	19.6	33.6
White	24.3	2.4	13.9	34.6
Asian/P.I.	11.0	2.7	8.9	15.1
Latina	14.8	3.3	8.0	10.9
Am. Indian/Alaska Native	12.4	2.9	8.9	20.9

Per 100,000

Age Adjusted Death Rates

- NHW 855 / (per 100,000)
- Black 1,126
- Hispanic 670
- Asian 517

US Health, 2003

Latino paradox

- Many studies link poverty to poor health
- Latinos are poorer than African Americans but have lower overall mortality rates, death from cancer and heart disease, infant mortality than AAs/ whites
- Latino Paradoxes
 - Infant mortality
 - Cardiovascular disease
 - Cancer

Latino paradox

- What causes the paradox? Theories:
- “Healthy immigrant”; “salmon” hypotheses
- Strong social/family networks
- Low tobacco and ETOH use especially in women
- Religiosity
- Traditional healing practices
- Traditional diet
- ? Dancing

Salmon Hypothesis: Mortality of Latinos vs NHWs

Age, y	US-Born Latinos vs US-Born Whites, Hazard Ratio (95% CI)	Foreign-Born Latinos vs US-Born Whites, Hazard Ratio (95% CI)
Men		
25–44	0.59 (0.44, 0.80) ^b	0.56 (0.37, 0.85) ^b
45–64	0.60 (0.51, 0.71) ^b	0.27 (0.18, 0.41) ^b
≥65	0.62 (0.53, 0.72) ^b	0.62 (0.49, 0.79) ^b
Women		
25–44	0.49 (0.33, 0.73) ^b	0.45 (0.23, 0.85) ^b
45–64	0.65 (0.52, 0.79) ^b	0.31 (0.19, 0.52) ^b
≥65	0.59 (0.49, 0.71) ^b	0.60 (0.46, 0.78) ^b

Prevalence of DM and IFG

	NHWS	Blacks	Mex-AM
Diag DM	5.2	11.0	10.4
UnDX DM	2.7	3.6	3.0

NHANES 99-02 data Adjusted for gender and age
Source: **Diabetes Care** 29:1263-1268, 2006

Diabetes Prevalence- diagnosed/undiagnosed

Whites	12%
Blacks	19%
Mexicans	24%
Puerto Ricans	26%
Cubans	16%

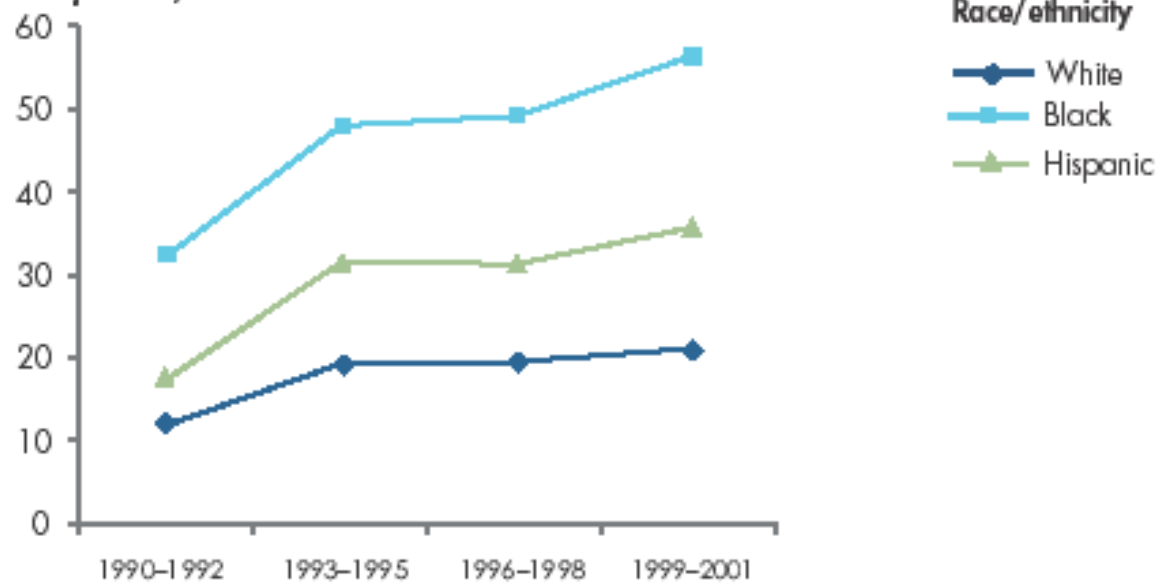
- Even after adjust weight, SES, Hispanics 2-3 times more likely have DM

- Africans Americans 1.5 times more likely to have Diabetes

Luchsinger J. "Diabetes" in Health Issues in the Latino Community, 2001

Deaths due to diabetes — racial/ethnic disparities are widening

Deaths per 100,000 adults



Rates are age-adjusted.

Sources: Bureau of Vital Statistics, NYC DOHMH; U.S. Census 1990 and 2000/NYC Department of City Planning

WHICAP Study

	NHWs	Blacks	Hispanics
Dementia Prevalence	11%	24%	18%
Incidence AD/prob AD	3%	11%	8%

Source : JAMA.1998;279:751-755

Is the USA bad for your health??

6

Advance Data No. 369 • March 1, 2006

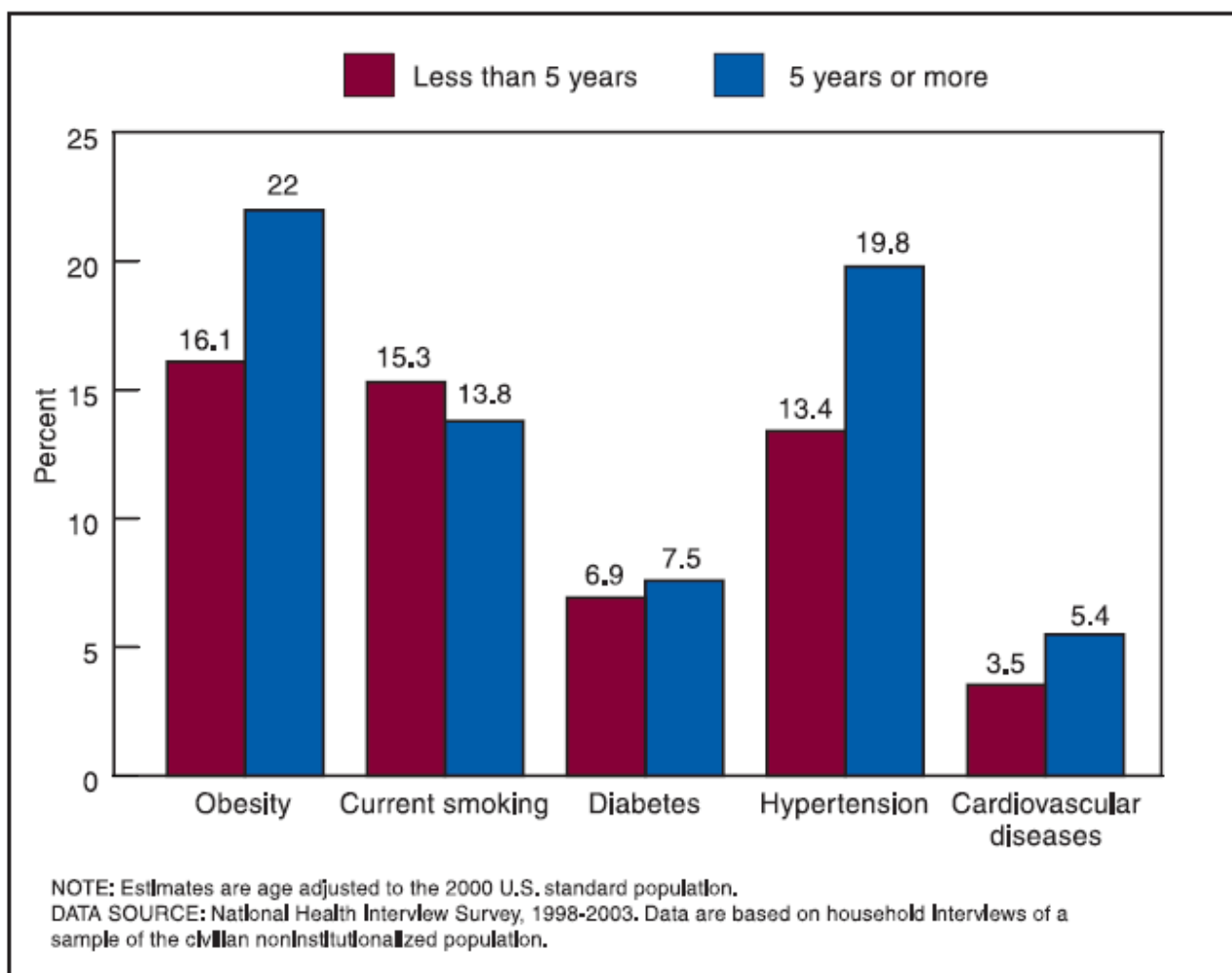


Figure 4. Percent of selected risk factors/chronic diseases among foreign-born Hispanic adults, by length of stay: United States, 1998–2003

Dey AN, Lucas JW. Physical and mental health characteristics of U.S.-and foreign-born adults: United States, 1998–2003. Advance data from vital and health statistics; no 369. Hyattsville, MD: National Center for Health Statistics. 2006.

Adjusted Effect on HbA1C*

Category	Predicted Marginal	Std Error
Low	5.54	0.06
Inter	5.53	0.06
High	5.68	0.13

- N=1689, R squared = 0.13,
- * NS

Adjusted Effect on LDL*

Category	Predicted Marginal	Std Error
Low	122	2.9
Inter	109	2.2
High	104	3.8

- R squared = 0.15
- * P < .05

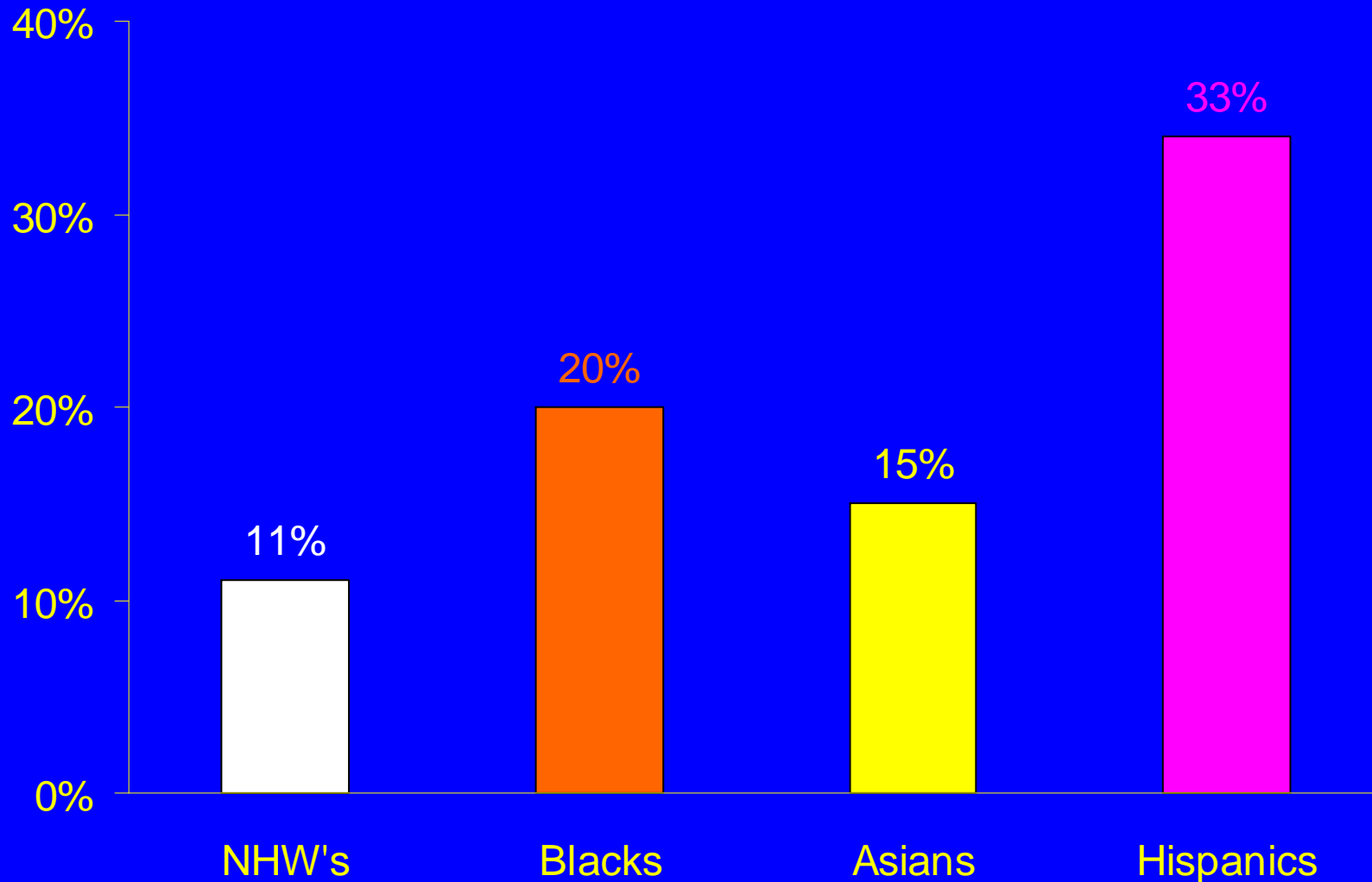
N = 721

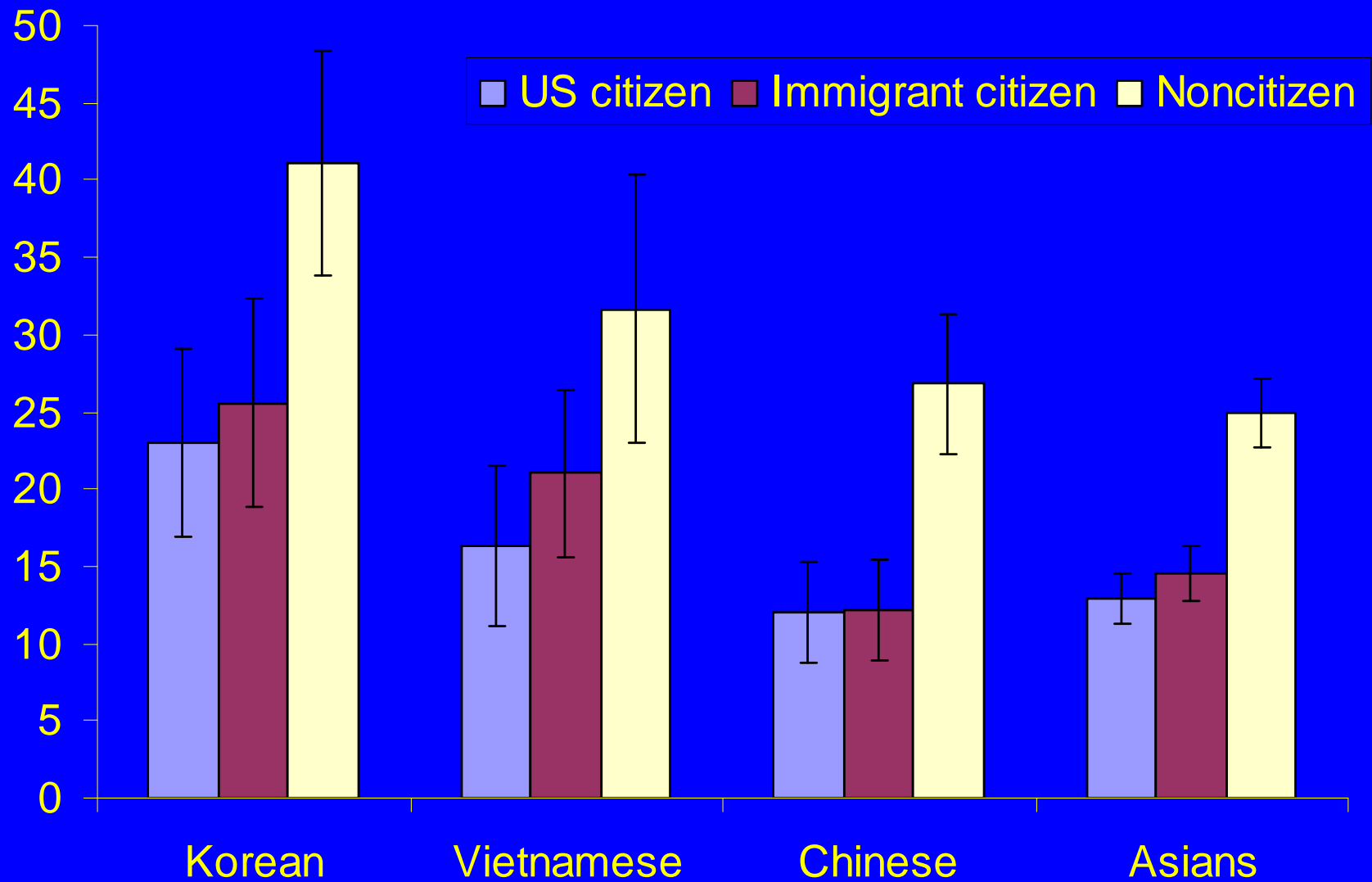
Disparities in Health Care

- Disparities in Access to Care
 - Health Insurance
 - Regular Provider
- Disparities in Receipt of Quality Health Care

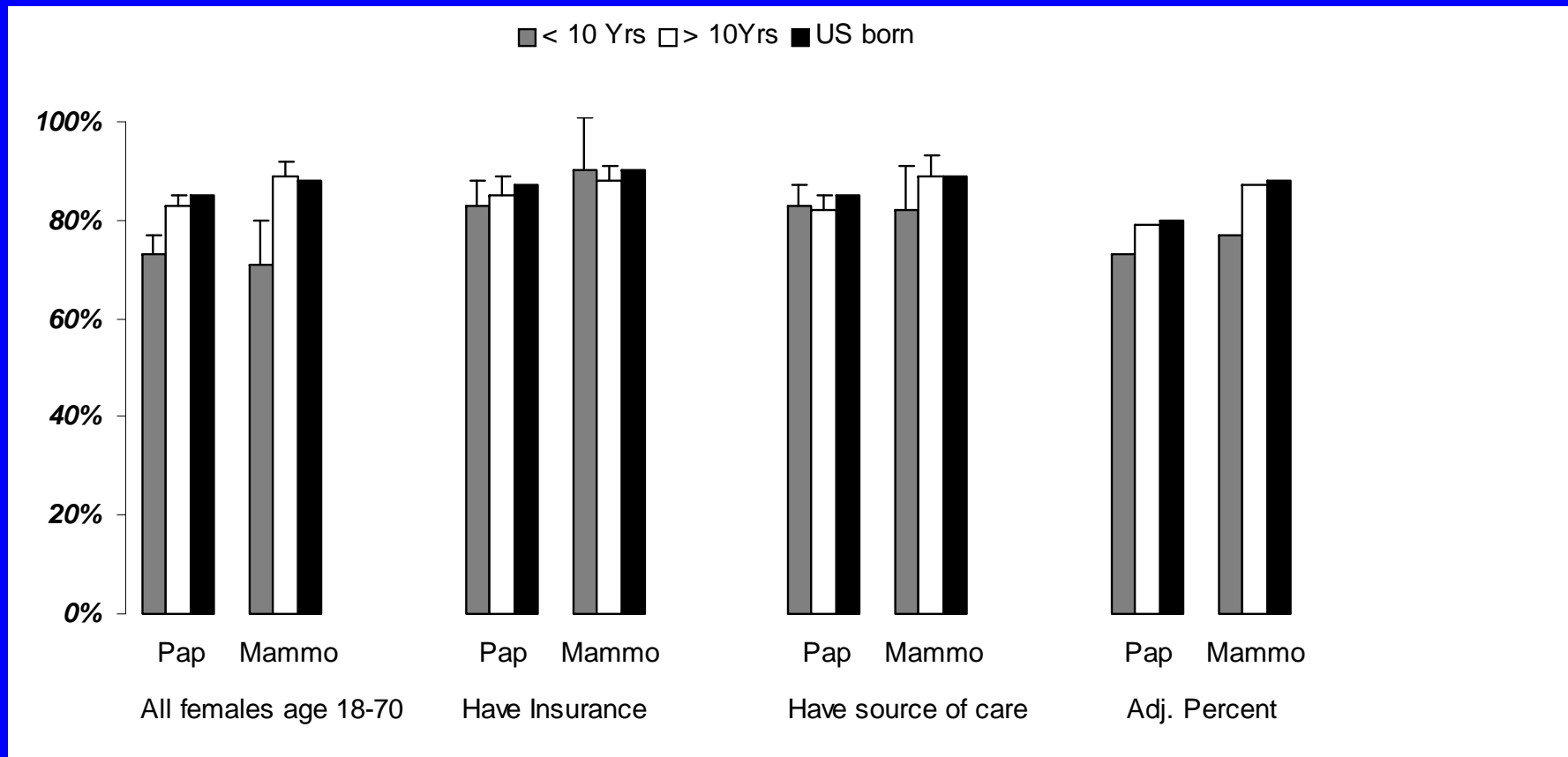
Disparities in Access

Health Insurance Coverage :2006





Cancer Screening



Disparities In Health Care

Racial/Ethnic Disparities in access to Cardio-Vascular procedures

- 27 studies using administrative data
 - OR for blacks getting cath (.41-.94)
 - CABG (.23-.68)
- 28 studies with detailed clinical data
 - Cath (.03-.85)
 - CABG (.22-.68)
- 14 studies examining why not done
 - Some due to pt refusal –education imp
 - Physician bias still caused a lot of variation

Racial Trends in the Use of Major Procedures among the Elderly NEJM 2005; 353:683-91

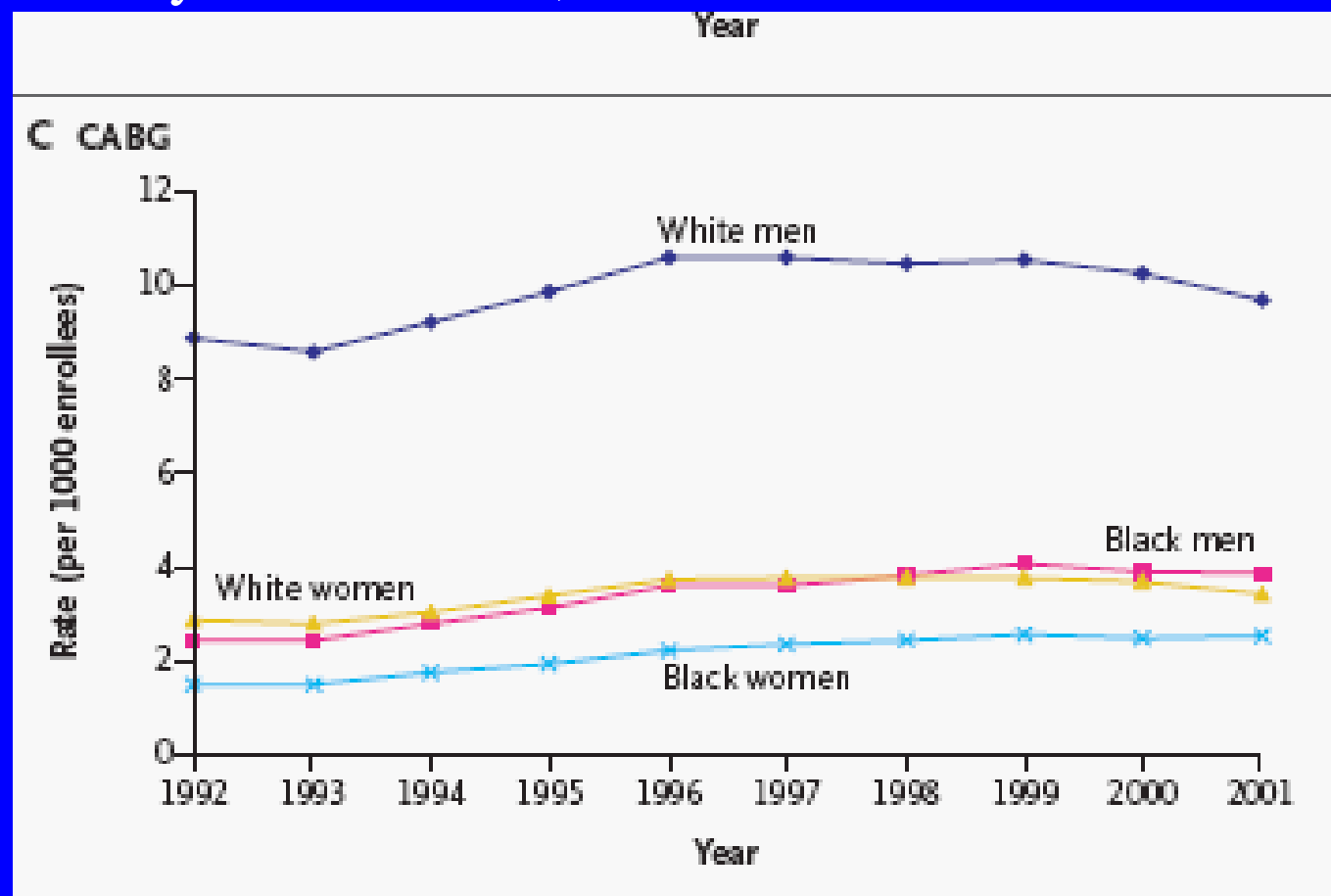


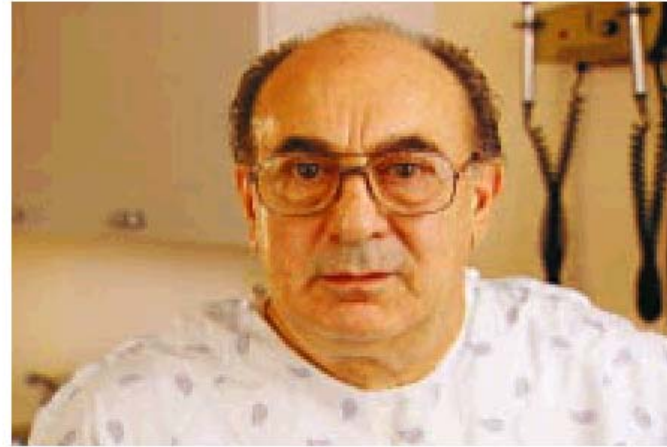
Figure 1. Age-Adjusted National Rates of Total Hip Replacement (Panel A), Carotid Endarterectomy (Panel B), and Coronary-Artery Bypass Grafting (CABG) (Panel C) per 1000 Persons Enrolled in Medicare, 1992 through 2001.

Disparities in Health Care Quality

EFFECT OF RACE AND SEX ON PHYSICIANS' RECOMMENDATIONS FOR CARDIAC CATHETERIZATION



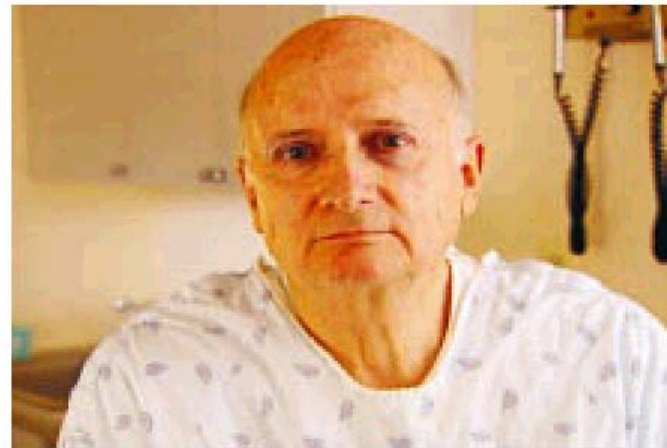
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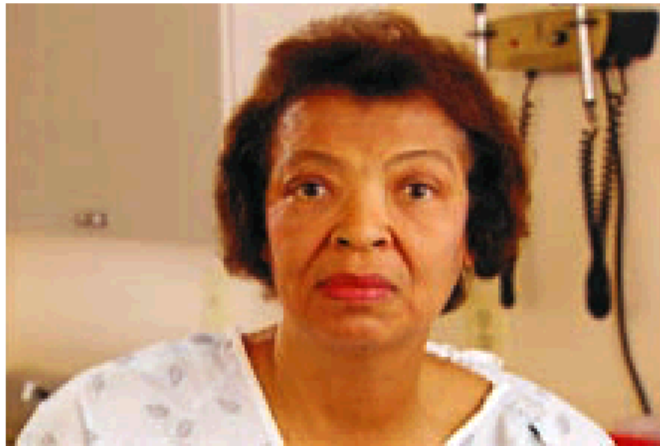
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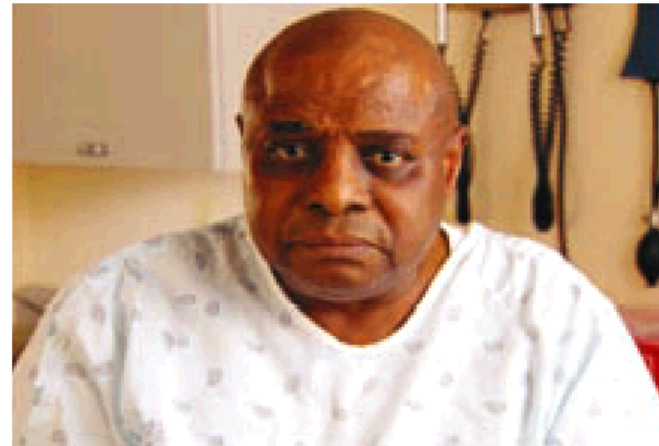
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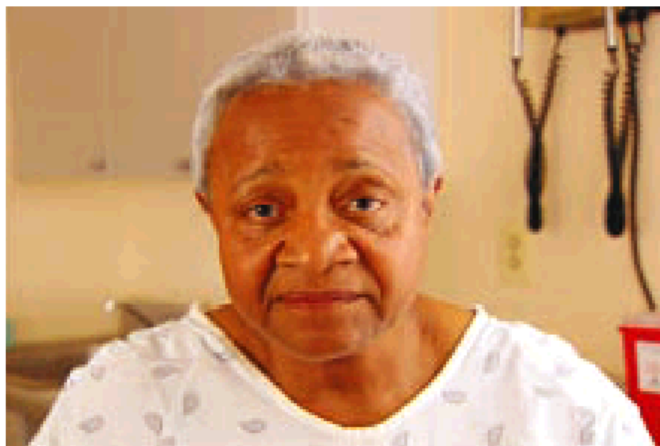
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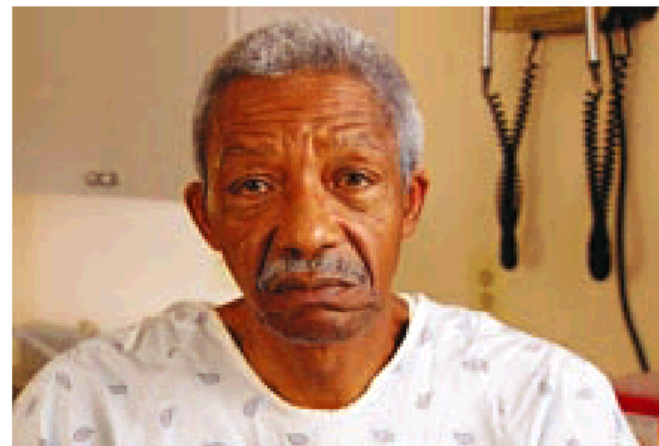
A



B



C



D

Figure 1. Patients as Portrayed by Actors in the Video Component of the Survey.

Panel A shows a 55-year-old black woman, Panel B a 55-year-old black man, Panel C a 70-year-old black woman, Panel D a 70-year-old black man, Panel E a 55-year-old white woman, Panel F a 55-year-old white man, Panel G a 70-year-old white woman, and Panel H a 70-year-old white man.

Trends in Opioid Prescribing by Race/Ethnicity for Patients Seeking Care in US Emergency Departments

- NHWs patients with pain were more likely to receive an opioid (31%) than black (23%), Hispanic (24%), or Asian/other patients (28%) ($P < .001$ for trend)
- Differential prescribing by race/ethnicity was evident for all types of pain visits, was more pronounced with increasing pain severity, and was detectable for long-bone fracture and nephrolithiasis as well as among children
- Statistical adjustment for pain severity and other factors did not substantially attenuate these differences

JAMA. 2008;299(1):70-78.

Another way to Quantify Disparities

TABLE 4—Adjusted Per Capita Health Care Expenditures Among US-Born Persons and Immigrants of All Ages, by Race/Ethnicity^a

Race/Ethnicity	Per Capita Expenditures, \$	
	US-Born Persons (SE)	Immigrants (SE)
Non-Hispanic White	3117 (40)	1747 (115)***
Non-Hispanic Black	2524 (80)	1030 (123)***
Hispanic	1870 (60)	962 (53)***
Asian/Pacific Islander	1460 (198)	1324 (82)

Note. Data are from the 1998 Medical Expenditure Panel Survey and the 1996-1997 National Health Interview Survey.

^aMean per capita expenditures were predicted by a 2-part model with adjustments for age, poverty level, insurance status, and patient-reported health status.

*** $P < .001$ (for comparison with US born).

Addressing Disparities

Which one do you want to fix?

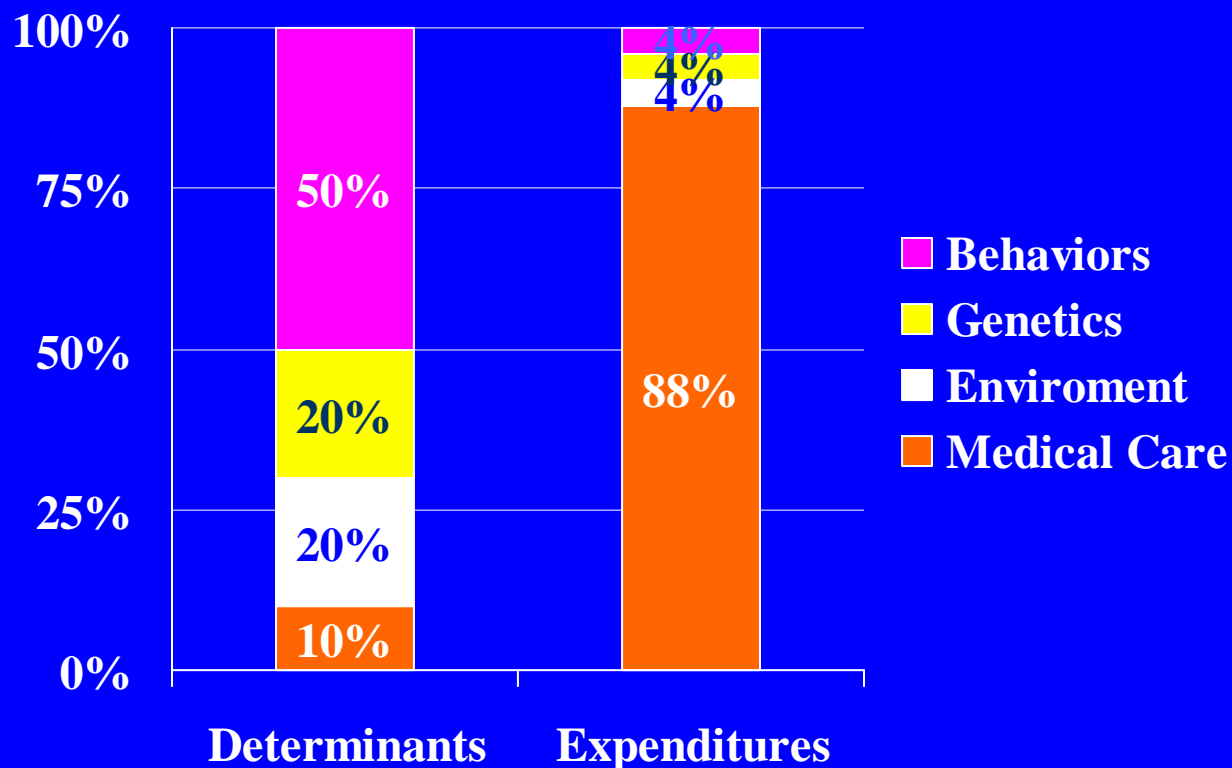
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Addressing Disparities

- What is the Goal
 - Improve Minority Health
 - Eliminate Disparities
 - To same mediocre level as everyone else?
- At what level is intervention possible
- What works?

Addressing Disparities in Health

Factors That Influence Health Status

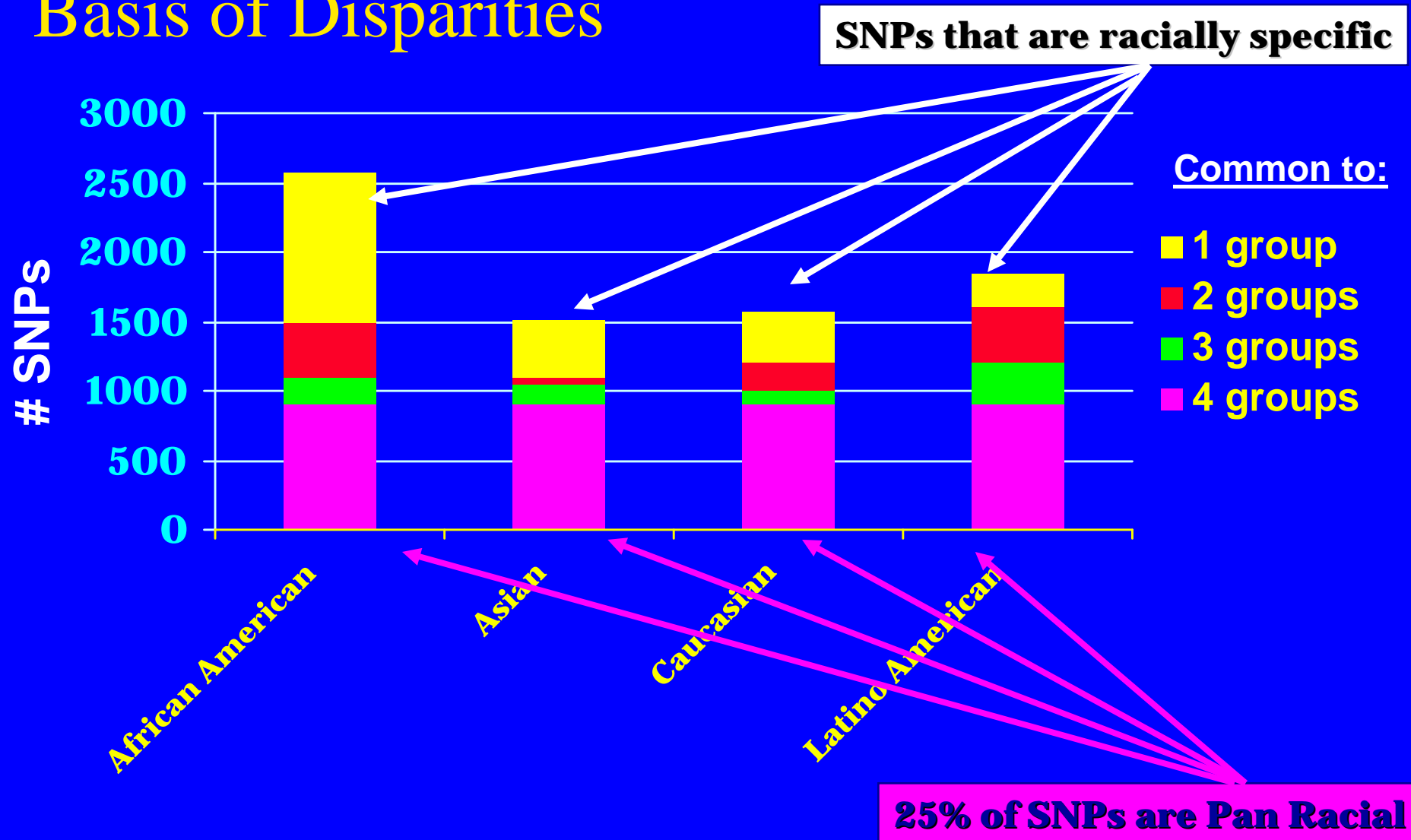


As IOM report indicates discrimination is a way of life :environmental factors and factors that affect behavior are unequally distributed

Addressing Disparities in Health

- Address social determinants of health
 - Poverty
 - Education
 - Housing
 - Environment
 - social welfare issues

What else: Addressing the Genetic /Biologic Basis of Disparities



Stephens, *et al* Science 2001

Biological Determinants of Disparities

Genes or Environment

- Hypertension in blacks
 - Why are Africans not hypertensive
 - Differences is K channels due to Na intake
- Diabetes in Pima Indians
 - In Mexico much lower risk of DM in Pimas
- In the case of Mexican-Americans, genetic admixture seems to have a clear role
 - American indigenous people have very high prevalences of diabetes compared to Whites
 - Diabetes much more prevalent in those in Barrios than those in wealthy neighborhoods
 - So what is it in PRs?

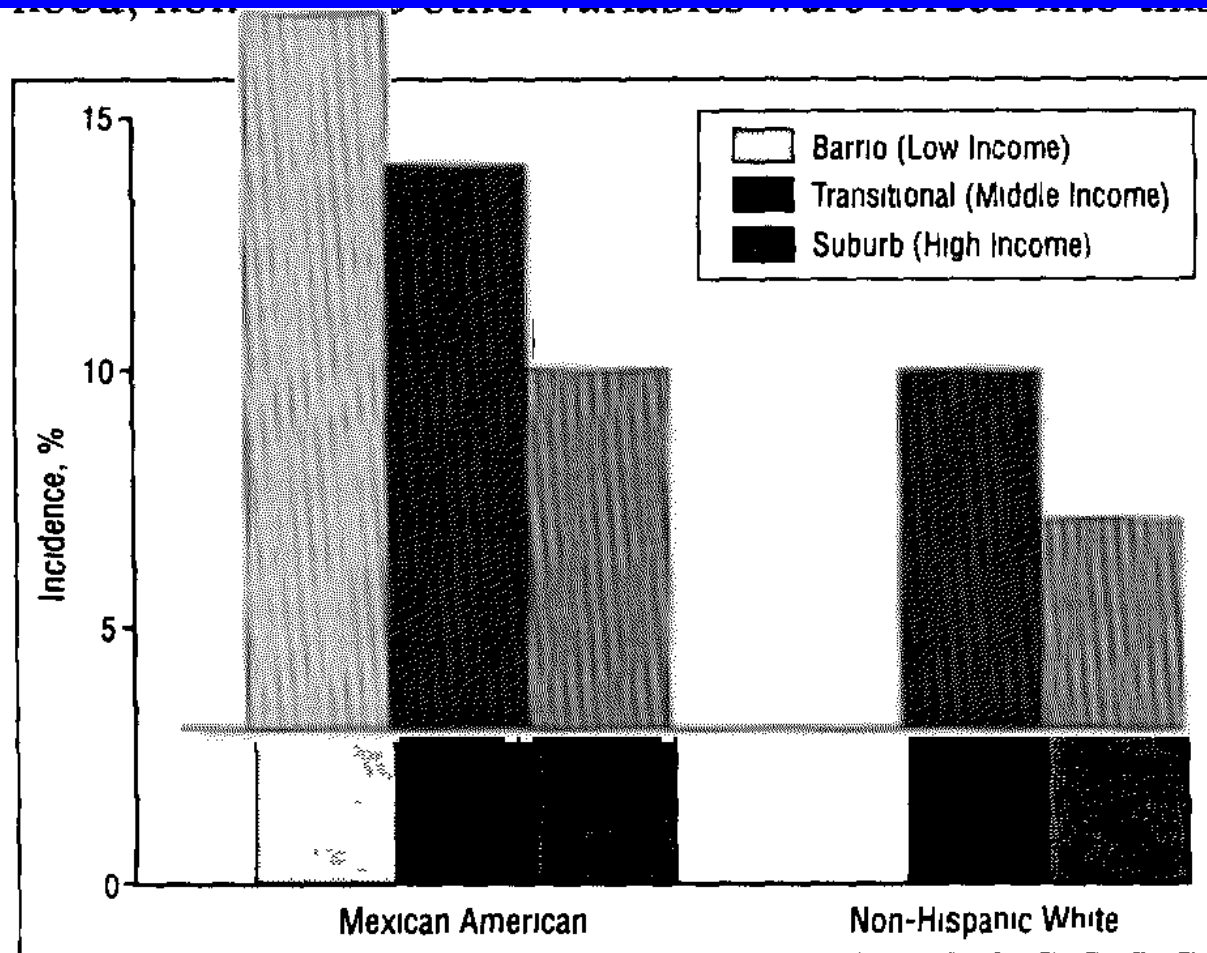


Figure 3. Seven- to 8-year incidence of type 2 diabetes by ethnicity and type of neighborhood $P = .001$, Mexican American group, $P = .01$, non-Hispanic white group (χ^2 test).

The Latino Gene?

- There is no Latino SNP!
 - Latinos as a genetic group not c/w modern concepts of biology and evolution
- Latinos very genetically homogeneous
 - PRs very different from Mexicans
 - Mexican Spaniards very diff from Mayans

<http://www.latinosnhi.org/>

Latinos
for National Health Insurance



Working Together For Equality In Healthcare

All over this country the crisis in our healthcare system is a burning issue, and people are demanding that politicians resolve it.

The Latino community is suffering greatly because of health disparities and lack of coverage. We have 47 million uninsured - 15.5 million of them are Latinos.

There are over 50 million with inadequate coverage, and millions more declare bankruptcy every year unable to pay mounting medical bills.

Latinos must get involved in seeking a solution to this crisis that is just to all; fair to the needs of our community. Latinos need to be sure our demands are not ignored.

That solution, we believe, is a national health insurance system: publicly financed, privately delivered. We believe that the first step to end health disparities is to ensure that everyone has coverage.

Join us in our efforts to guarantee good, quality health insurance for every person in this nation from the time they are born, and regardless of prior health problems and immigration status.

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Why was LNHI on the sidelines

- Coverage was inequitable
- What else was bad
 - 50% of Uninsured Latinos not eligible
 - Does not eliminate 5 year rule
 - PR and territories still get ripped off by Medicaid and Medicare
 - Public Option not included
- The good
 - Medicaid expansion to adults
 - CHC funding
- Ended up neither supporting nor endorsing

What is Medicare for All

- Medicare for ALL
 - Publicly financed but private delivery system under local control.
 - One entity through regional offices pay all bills
 - Hospitals not owned by government
 - Doctors not salaried by government
 - Through admin savings slash health care costs
- AKA
 - National health insurance
 - Single payer health insurance

Medicare for all

- All individual's residing in US (+ territories) are covered
- Coverage that is permanent and irrevocable
- Coverage should not be tied to employment
- Coverage that is equitable
 - Poor do not get Medicaid
 - They get what every one gets
 - Does one size fit all?

Addressing Disparities in Health Care

- Health and access to care are too hard to fix
- We should be able to address disparities in health care

2002 IOM Disparities Report

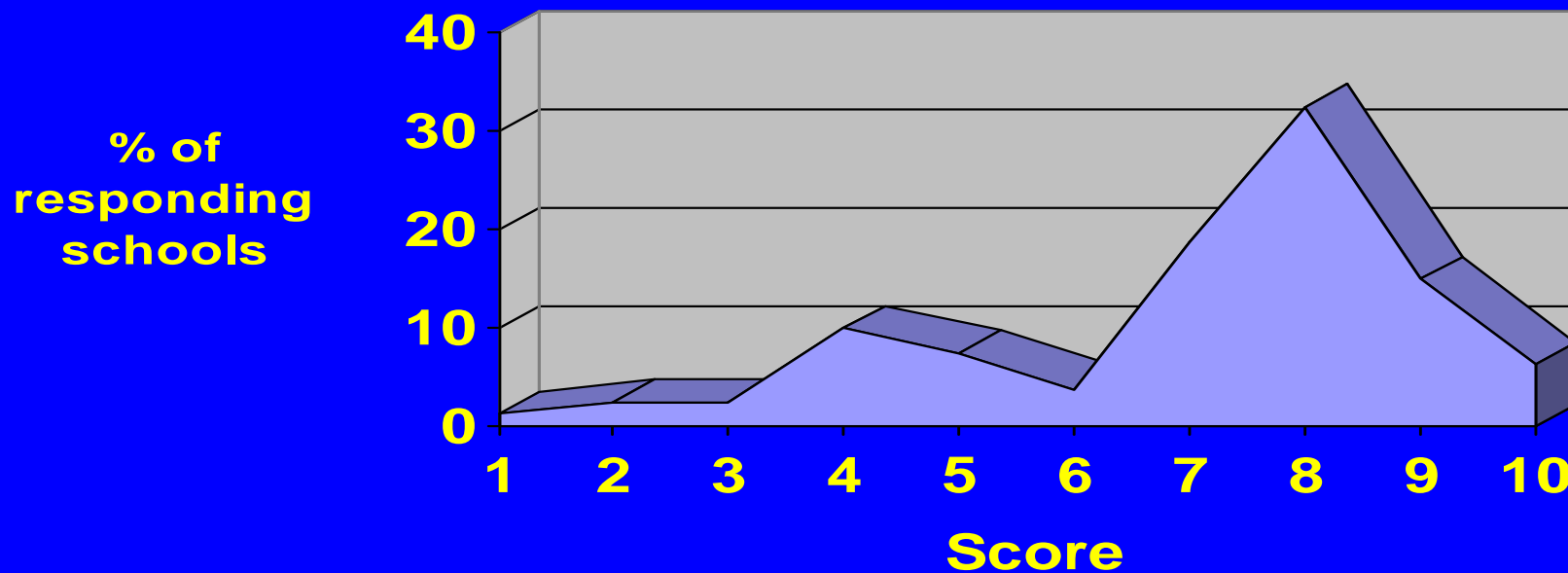
- Increase Awareness of Disparities
- Increase Disparities Research
- Increase workforce diversity
- Increase cultural competency training

Increase awareness

- 55% of physicians agree with the statement, “Across the United States, minority patients generally receive lower quality care than white patients”
- 33% of cardiologists believed that disparities in cardiac care occurred nationally and even fewer (5%) believed they might exist in their own practices

Schools Self-Assessment of Success in Meeting Diversity Goals

1 - least successful; 10 - most successful



Conceptual model for factors assoc with racial variations in procedure use

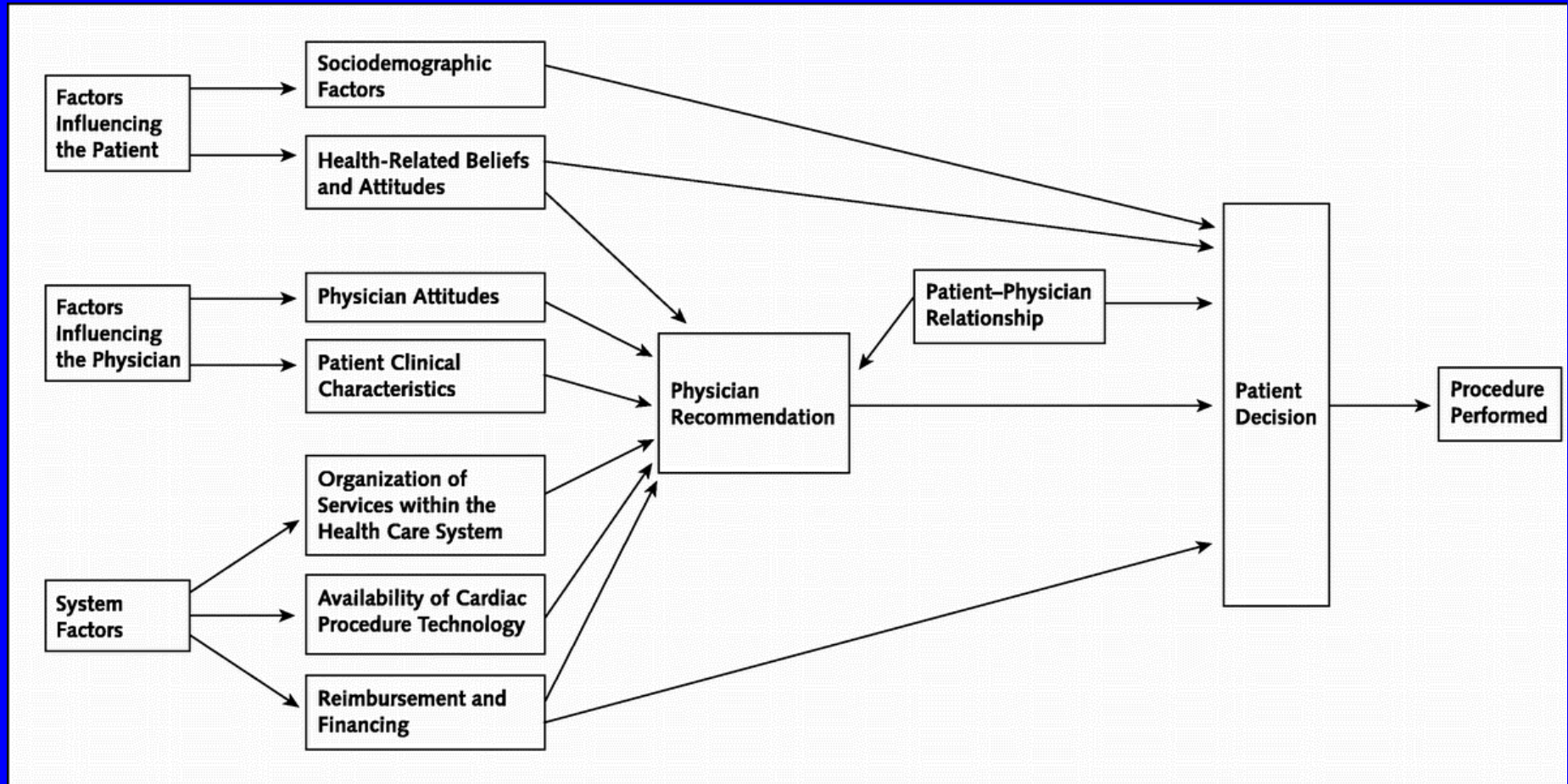
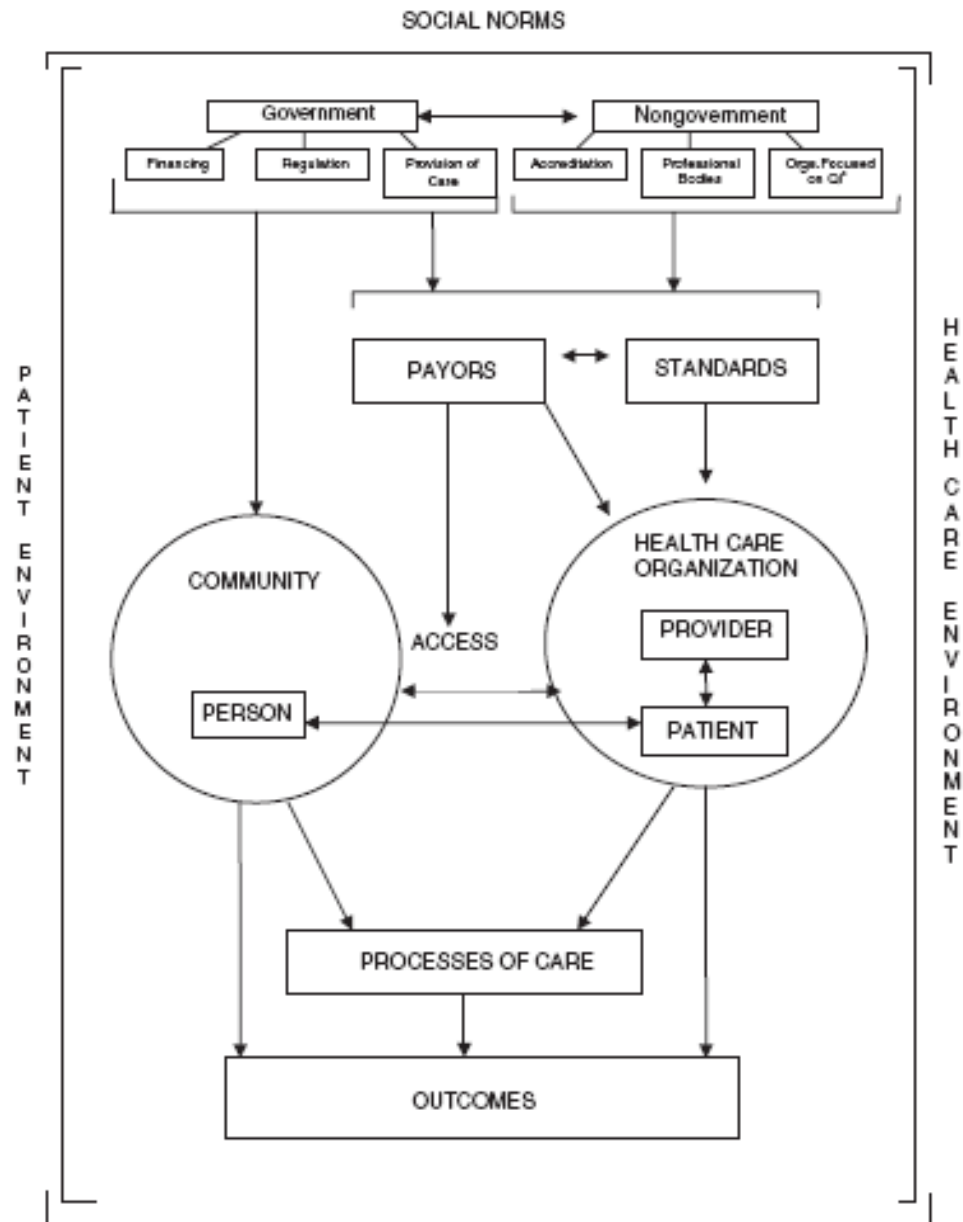


Figure 1
Conceptual Model for Racial and Ethnic Disparities in Health Care



a. Orgs. Focused on QI = Organizations Focused on Quality Improvement.

Interventions to Reduce Disparities in Health Care

- Looked at CV dz (htn, lipids, smoking), diabetes, depression, cancer
- Multifactorial interventions that address patient, provider, organization and community factors most effective
 - Simple magic bullets are elusive
- Culturally tailored approaches
- Multi-disciplinary interventions (nurse led, CHWs, pharmacists)

Chin et al, Medical Care Research and Review 2007; 64;7 (supplment)

A Systematic Review of Interventions to Improve Diabetes Care in Socially Disadvantaged Populations

- 7 databases searched for articles 1986- 2004, 17 studies found
- Interventions that were consistently associated with the largest negative outcomes:
 - those that used mainly didactic teaching
 - focused only on diabetes knowledge.

What works?

- Features most consistent positive effects
 - cultural tailoring of the intervention
 - community educators or lay people leading the intervention
 - one-on-one interventions with individualized assessment and reassessment
 - incorporating treatment algorithms
 - focusing on behavior-related tasks
 - providing feedback
 - high-intensity interventions (>10 contact times) delivered over a long duration (6 months)



The Columbia Center for the Health of Urban Minorities (CHUM)





CHUM HTN Research

- Improving BP control in older minority adults with poorly-controlled HTN.
- MINT is a directive, participant-centered, counseling approach for initiating and maintaining behavior change,
- Test the effect on BP reduction, of a senior center-based MINT-TLC intervention, delivered through group-based counseling and motivational interviewing in a randomized controlled trial (RCT).

NOCHOP:

Northern Manhattan Diabetes Community Outreach Project

- A randomized controlled clinical trial (RCT) of 360 poorly controlled diabetic patients aged 35-70 to examine the effectiveness of a community based Community Health Worker (CHW) intervention in addressing the **ABCs** of diabetes care (HgA1c, **B**lood Pressure[BP], **C**holesterol).



Miami Health Heart Initiative

- Among Latino patients with poorly controlled diabetes determine if community health workers are an effective complement to help improve cardiovascular risk factors
 - Blood pressure
 - Lipids

RC1 Challenge grant

- After minority patients undergo coronary artery stent procedure, they are much less likely to adhere to taking medications that prevent these stents from clotting.
- Randomized study to examine the impact of a phone based behavioral intervention at improving adherence among minority patients after such a procedure.

Use one grant to get more

- Disparity in adherence to statin medication
- Use insurer claim files to design intervention to improve statin adherence
- Nurse led phone based MI intervention
- Able to trouble shoot issues/ case worker role

ACS Award

- Standard letters sent to patients after an abnormal mammogram are often at a literacy level too complex for many patients to understand.
- Conducting research on ways mammography centers can improve how they communicate these results to such patients.
- Fu with an RCT of revised mammogram recall letters

Help others see if what they did worked

- Large minority serving health organization
- A1C and LDL only 50% at goal
- Have an EMR and claims data
- QuikMeds automated point of care medication dispensing system
- Pre-post design see if intervention improved proportion reaching target

What can be done

- Studies must involve multi-disciplinary approaches
- Test approaches that help bypass barriers minorities may face
- These novel and complex community participatory interventions are being tested through rigorous clinical trial designs

Will that be enough? NO!!!

- Social determinants of health
 - Poverty
 - Education
 - Housing
 - Environment
 - Racism
- Equitable Universal Insurance
- Address these and will eliminate disparities

E-mail me

oc6@columbia.edu