Social Inequalities in Health: The Role of Tobacco Control

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Professor of African & African American Studies and of Sociology
Harvard University
We Are Not the Healthiest

- U.S. ranks near the bottom of industrialized countries on health, and we are losing ground
- 1980 = 11th on Life Expectancy
- 2006 = 33rd, tied with Slovenia
- U.S. Ranked behind Cyprus, United Arab Emirates, South Korea, Costa Rica and Portugal
- And it is not just the minorities doing badly!
- In 2006, White America would be 30th
- In 2006, Black America would be 58th
A Larger Context for Disparities

A 2013 IOM report indicated that the poorer health of Americans compared to people in other rich nations

- is evident at all ages, from birth to 75
- even the most advantaged Americans (high SES, healthy behaviors and health insurance) had worse health than their peers in other affluent countries

All Americans are far less healthy than we could, and should be

Relative Risks of All-Cause Mortality by Household Income Level: U.S. Panel Study of Income Dynamics

P. McDonough, Duncan, Williams, & House, AJPH, 1997
There are Large Racial/Ethnic Differences in SES
Median Household Income and Race, 2013

Racial Differences in Income are Substantial:

1 dollar  1.15 dollar  70 cents  59 cents

White  Asian  Hispanic  Black

U.S. Census Bureau (DeNavas – Walt and Proctor 2014)
Median Wealth and Race, 2011

For every dollar of wealth that Whites have,

- Asians have 81 cents
- Blacks have only 6 cents
- Latinos have only 7 cents

U.S. Census Bureau, 2014
Race and Health: Two Patterns

• Racial groups with a long history characterized by economic exploitation, social stigmatization, and geographic marginalization have markedly elevated levels of poor health outcomes:
  -- Blacks or African Americans
  -- American Indians and Alaskan Natives
  -- Native Hawaiians and other Pacific Islanders

• Immigrant groups tend to have better health than the U.S. average, but their health tends to worsen over time and across subsequent generations:
  -- Asians
  -- Hispanics or Latinos
## Allostatic Load

<table>
<thead>
<tr>
<th>10 biomarkers</th>
<th>High-risk thresholds *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Systolic blood pressure</td>
<td>127 mm HG</td>
</tr>
<tr>
<td>2. Diastolic blood pressure</td>
<td>80 mm HG</td>
</tr>
<tr>
<td>3. Body Mass Index</td>
<td>30.9</td>
</tr>
<tr>
<td>4. Glycated hemoglobin</td>
<td>5.4%</td>
</tr>
<tr>
<td>5. Albumin</td>
<td>4.2 g/dL</td>
</tr>
<tr>
<td>6. Creatinine clearance</td>
<td>66 mg/dL</td>
</tr>
<tr>
<td>7. Triglycerides</td>
<td>168 mg/dL</td>
</tr>
<tr>
<td>8. C-reactive protein</td>
<td>0.41 mg/dL</td>
</tr>
<tr>
<td>9. Homocysteine</td>
<td>9 μmol/L</td>
</tr>
<tr>
<td>10. Total cholesterol</td>
<td>225</td>
</tr>
</tbody>
</table>

* = < 25\textsuperscript{th} percentile for creatinine clearance; > 75\textsuperscript{th} percentile for others

Geronimus, et al., AJPH, 2006
Mean Allostatic Load, by Race & Nativity

<table>
<thead>
<tr>
<th>Race &amp; Nativity</th>
<th>Mean (30-44)</th>
<th>Mean (45-60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Born</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>2.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Black</td>
<td>3.2</td>
<td>4.8</td>
</tr>
<tr>
<td>Mexican</td>
<td>3.2</td>
<td>4.6</td>
</tr>
<tr>
<td>Foreign-born Mexicans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>2.9</td>
<td>4.5</td>
</tr>
<tr>
<td>0 to 10 years</td>
<td>2.8</td>
<td>4</td>
</tr>
<tr>
<td>11 to 20 years</td>
<td>2.9</td>
<td>4.2</td>
</tr>
<tr>
<td>21 or more years</td>
<td>3.1</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Kaestner, et al., Social Science Quarterly, 2009
Research & Policy Challenge

What interventions, if any, can reverse the downward health trajectory of immigrants with length of stay in the U.S.?
Massive Loss of Lives

265 Deaths Every Day

Levine et al., 2001
Mean Score on Allostatic Load by Age

Geronimus, et al., AJPH, 2006
Biological Weathering

- Chronological age captures duration of exposure to risks for groups living in adverse living conditions.
- U.S. blacks are experiencing greater physiological wear and tear, and are aging, biologically, more rapidly than whites.
- It is driven by the cumulative impact of repeated exposures to psychological, social, physical and chemical stressors in their residential, occupational and other environments, and coping with these stressors.
- Compared to whites, blacks experience higher levels of stressors, greater clustering of stressors, and probably greater duration and intensity of stressors.

Geronimus et al, Hum Nature, 2010 ; Sternthal et al 2011
Life Expectancy Lags, 1950-2010

Source: NCHS, Health United States, 2013
Racial/Ethnic Disparities in Health: More than just Socioeconomic Status
## Life Expectancy At Age 25

<table>
<thead>
<tr>
<th>Group</th>
<th>White</th>
<th>Black</th>
<th>Difference</th>
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<tbody>
<tr>
<td>All</td>
<td>53.4</td>
<td>48.4</td>
<td>5.0</td>
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Murphy, NVSS 2000
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</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-12 Years</td>
<td>50.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 12 Years</td>
<td>54.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Some College</td>
<td>55.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. College Grad</td>
<td>56.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>6.4</td>
<td></td>
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Murphy, NVSS 2000; Braveman et al. AJPH; 2010, NLMS 1988-1998
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Murphy, NVSS 2000; Braveman et al. AJPH; 2010, NLMS 1988-1998
Why Race Still Matters

1. Health is affected not only by current SES but by exposure to adversity over the life course.

2. All indicators of SES are non-equivalent across race. Compared to whites, blacks & Hispanics receive less income at the same levels of education, have less wealth at the equivalent income levels, and have less purchasing power (at a given income level) because of higher costs of goods and services.

3. Personal experiences of discrimination and institutional racism are added pathogenic factors that can affect the health in multiple ways.

4. Higher Exposure to multiple stressors
Tobacco: Weapon of Mass Destruction

SMOKING KILLS MORE THAN 5 MILLION EVERY YEAR.
SAY NO TO THE DEADLIEST WEAPON OF MASS DESTRUCTION.
Smoking and Health

- Worldwide 5 million die from tobacco each year
- In the US: Almost 500,000 deaths annually
- Tobacco causes 1 in 5 deaths in the US
- 21 Diseases caused by smoking … and counting
- Death rates are 2 to 3 times higher for smokers than non-smokers
- On average, smokers die more than 10 years earlier than non-smokers

Most Preventable Cause of Death

- Despite declines in cigarette use, smoking is still the single most preventable cause of death.
- Smoking causes more deaths than overweight and obesity, high cholesterol, alcohol, and the low intake of fruits and vegetables combined.
- The gap in overall mortality between smokers and non-smokers is larger than that between low and high SES groups of the same smoking status.

Lung Cancer

- The number one cause of cancer deaths in the US
- The number one cause of cancer deaths in the world
- Lung cancer is responsible for 80% of all deaths from tobacco-related illnesses
- Kills more Americans annually than breast, prostate, colon and pancreatic cancer combined!

Thun et al JNCI 2006; BWH 2010; ACS Facts & Figures 2009
Race and Cigarette Smoking, Men, 2012

Source: Morbidity and Mortality Weekly Report, Vol.63/No.2
Race and Cigarette Smoking, Women, 2012

Source: Morbidity and Mortality Weekly Report, Vol.63/No.2
Lung Cancer: Racial Disparities

- Lung Cancer kills more black men and women and Hispanic men than any other cancer
- Compared to whites, Blacks have a higher incidence of lung cancer (primarily among men, especially for younger age groups)
- Blacks, Hispanics, and low SES persons have lower stage-specific survival rates than Whites
- A given level of smoking more adversely affects Blacks than Whites

Challenges for Hispanics

- Incidence and death rates for Hispanics are lower than for non-Hispanic whites.
- The cancer burden for Hispanics in the U.S. is similar to that seen in their countries of origin.
- With increasing time in the U.S., cancer rates increase for Hispanics.
- Latinos are more likely to be diagnosed with advanced stage of disease.
- Hispanics have lower survival rates for most cancers.

ACS; Cancer Facts & Figures for Hispanics/Latinos
SES Disparities

- Low income men and women, regardless of race and ethnicity, are more likely to be current smokers than higher income persons.
- Differences in lung cancer mortality by education are markedly larger than those by race.
- White men with 8 or less years of education have a lung cancer mortality rate that is 9 times higher than their peers with 17+ years of education.
- Most of the decline in lung cancer mortality in recent years has occurred among highly educated individuals.

Haiman et al NEJM 2006; Ward et al CA Cancer JChin 2004; Albano et al JNCI 2007;
Smoking Rates Among Individuals Ages 25 and Older, by Education Level, 1960–2010

Source: DeWalque, 2004; National Center for the Health Statistics, 2009, table 61; NCHS 2014
Lung Cancer Death Rates, Men, 2001

Albano et al. 2007, JNCI
Lung Cancer Death Rates, Women, 2001

Albano et al. 2007, JNCI
Challenge of Tobacco:

How to reduce smoking in low SES, economically marginalized and socially stigmatized populations
We need to address the underlying conditions that give rise to smoking in the first place

Psychosocial Stressors
Psychosocial Stress and Odds of Current & Previous Smoking
Multinominal models estimated independently; Reference Group = Never smokers

Slopen, Dutra, Williams et al., Nicotine & Tob Res, 2012; adjusted for age, gender, education, & income.
Odds of Current and Previous Smoking
By Number of Stress Domains

Reference Group = Never smokers

Unadjusted for Negative Affect
- Current Smoker
- Past Smoker

Adjusted for Negative Affect
- Current Smoker
- Past Smoker

Slopen, Dutra, Williams et al., Nicotine & Tob Res, 2012;
adjusted for age, gender, education, & income

p<.05
Stress and Quitting Smoking

• National sample of adults followed for 9 to 10 years:
  • Persons high on 8 domains of stress (e.g., relationship, financial, work), at both interviews were more likely to be persistent smokers
  • Persons persistently high on stress who tried to quit in past 10 years, were less likely to succeed
• Stress keeps people smoking & makes it harder to quit
• Creating smoke free environments requires interventions that reduce modifiable stressors, and enhance individual & community-level resources to cope with stressors

Slopen, Kontos, ……Williams, Cancer Causes & Control, 2013
Expanding our Understanding of the role of stress in Health:

-- Early Life Adversity
-- Experiences of Discrimination
ACE Score, Smoking, and Lung Disease

Perceived Discrimination:

Experiences of discrimination are a neglected psychosocial stressor.
Chronic Stress: Every Day Discrimination

In your day-to-day life how often do the following things happen to you?

- You are treated with less courtesy than other people.
- You are treated with less respect than other people.
- You receive poorer service than other people at restaurants or stores.
- People act as if they think you are not smart.
- People act as if they are afraid of you.
- People act as if they think you are dishonest.
- People act as if they’re better than you are.
- You are called names or insulted.
- You are threatened or harassed.

What do you think was the main reason for these experiences?

Detroit Area Study 1995; Williams et al. 1997
Everyday Discrimination: positively associated with:

-- coronary artery calcification (Lewis et al., Psy Med, 2006)
-- C-reactive protein (Lewis et al., Brain Beh Immunity, 2010)
-- lower birth weight (Earnshaw et al., Ann Beh Med, 2013)
-- cognitive impairment (Barnes et al., 2012)
-- poor sleep [object. & subject.] (Lewis et al, Hlth Psy, 2012)
-- visceral fat (Lewis et al., Am J Epidemiology, 2011)
Perceived Discrimination and Health

- Discrimination is associated with elevated risk of
  - diabetes risk (Hemoglobin A1c)
  - substance use (smoking, alcohol, other drugs)
  - breast cancer incidence
  - uterine myomas (fibroids)
  - subclinical carotid artery disease (IMT; intima-media thickness)
  - Delays in seeking treatment, lower adherence to treatment regimes, lower rates of follow-up

- Discrimination accounts, in part, for racial/ethnic disparities in health, in U.S., and elsewhere

Williams & Mohammed, J Behav Med 2009
Addressing Stressors

- Outreach using (IVR) calls to low-SES/minority smokers from EHR
  - Nicotine replacement patches (NRT)
  - Phone-based counseling with tobacco treatment specialist (TTS)
  - Referrals to community resources (HealthSteps)

- Pragmatic trial

- Control patients referred to state quit line

- Outcome measure: 7-day tobacco abstinence @ 9 month follow-up

Haas, Linder, Gonzalez, ….. Williams, JAMA Internal Med, 2014
Primary Outcome: 7-day abstinence

% Abstinent at 9-Months

- **Intention to Treat**
  - Intervention: 17.8
  - Control: 8.1

- **Imputed Outcome**
  - Intervention: 28
  - Control: 12

- **Legend**
  - Yellow: Intervention
  - Blue: Control
We need to focus more on the equity impact of anti-smoking policies
Equity Impact: Tobacco Taxes

• Tobacco price increases is the intervention with the greatest potential to reduce SES gaps in smoking

• Low-income individuals are more responsive to price increases

• However, when the price of cigarettes increases, some low SES smokers may opt for lower cost or roll-your-own cigarettes

• The effectiveness of price increases may be diminishing over time as the baseline price of tobacco increases

Hill et al, Tobacco Control, 2014
Equity Impact: Smoking Bans

- Smoking restrictions (e.g. workplace) reduce tobacco including secondhand smoke exposure, and can lead to increased cessation.
- Workplace restrictions have been more likely to be implemented in professional than in manual workplaces.
- Some evidence that bans less likely to be enforced in disadvantaged areas and that bans could increase social isolation in older smokers.
- Little clear evidence of greater benefit to low SES groups.

Hill et al, Tobacco Control, 2014
Equity Impact: Media Campaigns

• Mass media campaigns against smoking or promoting quit lines tend to have similar effect by SES or greater benefit to high SES

• TV campaigns tend to have greater benefit for high SES but ads using personal testimony appear equally beneficial to all SES groups

• Internet campaigns less effective for low SES

Hill et al, Tobacco Control, 2014
The National Truth Campaign

- Developed and implemented with substantial involvement of youth
- Had a distinctive appeal to adolescents aged 12 to 17 years
- Focused on unmasking the deceptive practices and exploitative marketing strategies of the tobacco industry
- Greater effect on Blacks and Hispanics than on Whites

Farrelly et al., Am J Preventive Med, 2009
Equity Impact: Smoking Bans

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Hill et al, Tobacco Control, 2014
We need to create healthy living and working environments
Racism and Health: Mechanisms

- Institutional discrimination can restrict socioeconomic attainment and group differences in SES and health.
- Segregation can create pathogenic residential conditions.
- Discrimination can lead to reduced access to desirable goods and services.
- Internalized racism (acceptance of society’s negative characterization) can adversely affect health.
- Racism can create conditions that increase exposure to traditional stressors (e.g. unemployment).
- Experiences of discrimination may be a neglected psychosocial stressor.
Residential Segregation: Example of Institutional Discrimination

WE WANT WHITE TENANTS IN OUR WHITE COMMUNITY
How Segregation Can Affect Health

1. Segregation determines quality of education and employment opportunities.

2. Segregation can create pathogenic neighborhood and housing conditions.

3. Conditions linked to segregation can constrain the practice of health behaviors and encourage unhealthy ones.

4. Segregation can adversely affect access to high-quality medical care.

Source: Williams & Collins, 2001
Residential Segregation and SES

A study of the effects of segregation on young African American adults found that the elimination of segregation would erase black-white differences in

- Earnings
- High School Graduation Rate
- Unemployment

And reduce racial differences in single motherhood by two-thirds

Cutler, Glaeser & Vigdor, 1997
Racial Differences in Residential Environment

• In the 171 largest cities in the U.S., there is not even one city where whites live in equal conditions to those of blacks

• “The worst urban context in which whites reside is considerably better than the average context of black communities.” p.41

Sampson & Wilson 1995
### Our Neighborhood Affects Our Health

<table>
<thead>
<tr>
<th>Unhealthy Community</th>
<th>vs</th>
<th>Healthy Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe even in daylight</td>
<td></td>
<td>Safe neighborhoods, safe schools, safe walking routes</td>
</tr>
<tr>
<td>Exposure to toxic air, hazardous waste</td>
<td></td>
<td>Clean air and environment</td>
</tr>
<tr>
<td>No parks/areas for physical activity</td>
<td></td>
<td>Well-equipped parks and open/spaces/organized community recreation</td>
</tr>
<tr>
<td>Limited affordable housing is run-down; linked to crime ridden neighborhoods</td>
<td></td>
<td>High-quality mixed income housing, both owned and rental</td>
</tr>
<tr>
<td>Convenience/liquor stores, cigarettes and liquor billboards, no grocery store</td>
<td></td>
<td>Well-stocked grocery stores offering nutritious foods</td>
</tr>
<tr>
<td>Unhealthy Community</td>
<td>Healthy Community</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Streets and sidewalks in disrepair</td>
<td>Clean streets that are easy to navigate</td>
<td></td>
</tr>
<tr>
<td>Burned-out homes, littered streets</td>
<td>Well-kept homes and tree-lined streets</td>
<td></td>
</tr>
<tr>
<td>No culturally sensitive community centers, social services or opportunities to engage with neighbors in community life</td>
<td>Organized multicultural community programs, social services, neighborhood councils or other opportunities for participation in community life</td>
<td></td>
</tr>
<tr>
<td>No local health care services</td>
<td>Primary care through physicians’ offices or health center; school-based health programs</td>
<td></td>
</tr>
<tr>
<td>Lack of public transportation, walking or biking paths</td>
<td>Accessible, safe public transportation, walking and bike paths</td>
<td></td>
</tr>
</tbody>
</table>
Tip: Healthy Behaviors Travel Together

• Smokers drink more, eat worse & exercise less
• The gap in exercise progressively increased over 10 year period for smokers who quit compared to those who remained smokers
• Those who quit exercise more than continuing smokers
• Two factors:
  -- declining exercise among ongoing smokers
  -- increases in exercise among ex-smokers
• Engaging in other healthy behaviors enhances long-term success

Auer et al., Addiction, 2014
Community Resources and Smoking

• Poor, rural children at age 9 followed to age 17
• Poverty at age 9 predicts smoking and BMI at age 17
• Community youth resources markedly reduces this association

-- Community cohesion (social ties and interdependence)
-- informal social control (adult supervision and willingness to intervene)
-- Youth (9 yr olds) reports of supportive ties (I feel there are adults I can talk to for help or advice)

Evans & Kutcher, Psychological Sciences, 2011
Purpose Built Communities

Instead of addressing poverty, urban blight, failing schools, crime and unemployment piecemeal, community activists and philanthropists in Atlanta took them on at once (integrative strategies include cradle-to-college educational opportunities, mixed-income housing, early child development, recreational opportunities).

Atlanta’s East Lake District results:
- A 95% reduction in crime since its launch in 1995
- Employment rate of low-income: from 13% to 70%
- Striking school achievement: East Lake students at or above grade level increase from 5% at start to 96%
- Purpose Built Communities in Atlanta, New Orleans, Indianapolis, Charlotte, among others.
We need to start early
Carolina Abecedarian Project (ABC)

- 1972-77, economically disadvantaged children, birth to age 5, randomized to early childhood program
- Program offered a safe and nurturing environment, good nutrition and pediatric care
- At age 21, fewer symptoms of depression, lower smoking & marijuana use, more active lifestyle, & educational & vocational assets benefits
- In mid-30’s, lower levels of multiple risk factors for CVD and metabolic disease. Effects stronger for males

Carolina Abecedarian Project (ABC)

- Example: systolic BP 143 mm Hg in male controls vs. 126 mm Hg in the treatment group.
- One in 4 males in control group met criteria for metabolic syndrome compared to none in the treatment group.
- Lower BMI at zero to 5 yrs equals a lower BMI in their 30s.

Campbell et al. AJPH, 2008; Campbell et al, Science, 2014
Resilience and Protective factors
## Smoking among 12-17 year olds, 2006-2008

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
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<tbody>
<tr>
<td>NH White</td>
<td>11.3</td>
<td>12.4</td>
</tr>
<tr>
<td>Black</td>
<td>6.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5.2</td>
<td>5.6</td>
</tr>
<tr>
<td>AmI/AN</td>
<td>8.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Asian</td>
<td>16.7</td>
<td>17.8</td>
</tr>
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**Source:** CDC, MMWR 2011
Religion and Adolescent Risk Behavior

- Religious high school seniors less likely than non-religious to
  - Carry a weapon (gun, knife, club) to school
  - Get into fights or hurt someone
  - Drive after drinking
  - Ride with driver who had been drinking
  - Smoke cigarettes
  - Engage in binge drinking (5 or more drinks in a row)
  - Use marijuana

- Religious seniors were more likely to
  - Wear seat belts
  - Eat breakfast, green vegetables and fruit
  - Get regular exercise
  - Sleep at least 7 hours per night

Alameda County Study

- Began in 1965 with 6,928 adults aged 17-95
- Alameda County is on San Francisco Bay and includes Oakland and Berkeley
- 2,676 survivors from 1965 to 1994
- Examined the association of 1965 frequency of attendance with 1994 improved or maintained healthy behaviors
- Adjusted for age, sex, education, and self-rated health
**Improved Healthy Behaviors for Weekly Attenders**

<table>
<thead>
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<th>Behavior</th>
<th>Score</th>
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<tr>
<td>Quit smoking</td>
<td>1.78</td>
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<tr>
<td>Started physical activity</td>
<td>1.54</td>
</tr>
<tr>
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We need to build a science base that will guide us in developing the political will to support the needed policies to effectively address social inequalities in health.
Effective Communication Strategies are Vital
The Need to Build Empathy in order to Build Political Will
Recent research suggests that we think with our hearts.

The role of emotion is central in interracial interactions and preferences for policy.
“The most difficult social problem in the matter of Negro health is the peculiar attitude of the nation toward the well-being of the race. There have... been few other cases in the history of civilized peoples where human suffering has been viewed with such peculiar indifference”

Emotions: Consequences

• Across 4 countries in Europe, the absence of positive emotions was a strong predictor of opposition to policies regarding immigrant out-groups

• This measure of subtle contemporary prejudice was a stronger predictor than measures of traditional prejudice

• Feelings are a good covert indicator of subtle prejudice

Pettigrew and Meertens, European J Psych, 1995
Brief measure of No Positive Emotions

- Two questions captured the absence of positive emotions:
  
  How often do you feel *sympathy* for Blacks?
  How often do you feel *admiration* for Blacks?

Response options: 5-point scale of very often to never

Variable coded so that a high score equals a lack of sympathy and admiration

- The absence of positive emotions is an important component of subtle prejudice

Williams et al. Social Problems, 1999
Power of No Positive Emotions

• The absence of positive emotions for Blacks was the strongest predictor of White’s opposition to affirmative action in employment and opposition to an active role of government in reducing racial inequalities

• Other predictors considered included: age, gender, income, education, individual and group self interests, political party preference, stratification beliefs (economic individualism, social dominance), conservatism, traditional prejudice, modern racism scale

Williams et al. Social Problems, 1999
Stereotypes in Our Culture

• BEAGLE (Bound Encoding of the Aggregate Language Environment) Project contains about 10 million words from a sample of books, newspapers, magazine articles, etc.

• A good representation of American culture

• Equivalent to what the average college-level student has read in her lifetime

• Statistically analyzed the associative strength between pairs of words

• Provides estimate of how often Americans have seen or heard words paired over their lifetime

Verhaeghen et al. British J Psychology, 2011
## Stereotypes in Our Culture

<table>
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<th>Correlation</th>
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Verhaeghen et al. British J Psychology, 2011
### Stereotypes in Our Culture

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Verhaeghen et al. British J Psychology, 2011
Keys to Long-term Success

- Building the perspective of Health into all policy-making
- Including an explicit focus on health equity into policy-making
- Convening, enabling and supporting cross-sectoral collaborations
- Developing institutional mechanisms to provide policy coherence and the constant need for action
- Developing consensus-based standard data and methods for surveillance systems linking health, health equity and their determinants
- Ensure data is available at the local level
- Investing in strengthening community capacity and the potential for community advocacy
Sustaining Action

• Identify and nurture a core of champions in the public, private and voluntary sectors

• Develop and maintain a steady drumbeat of policy-relevant data and information with regards to how factors outside the healthcare system can improve population health and reduce shortfalls in health

• There should be explicit communication strategies targeted at policy-makers and the engaged public

• Emphasis should be given to highlighting interventions that are working now.
Scientific and Policy Opportunity

- Smokers at all levels of SES have elevated mortality risk
- Smokers at all levels of SES have poorer survival than never smokers
- Thus, the potential to reduce overall SES (and racial) disparities in health is limited unless low SES smokers can successfully quit smoking
- There is a unique opportunity to save millions of lives if we can effectively focus on both the causes and exemplar solutions to lung cancer

Gruer et al BMJ 2009
Conclusions

• Inequalities in health are created by larger inequalities in society.
• SES and racial/ethnic disparities in health reflect the successful implementation of social policies.
• Eliminating them requires political will for and a commitment to new strategies to improve living and working conditions.
• We need research that takes the complexity of the social context seriously.
• Our great need is to begin in a systematic and comprehensive manner, to use all of the current knowledge that we have.
A Call to Action

“Each time a man stands up for an ideal, or acts to improve the lot of others, or strikes out against injustice, he sends forth a tiny ripple of hope, and those ripples build a current which can sweep down the mightiest walls of oppression and resistance.”

- Robert F. Kennedy