
Re-Capturing our Vision: Focus on Mission

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One Nation Under Stress, 2007

- 79% live under higher than healthy levels of stress
- 32% are living under extreme stress
- 48% believe that their stress has increased in the last 5 years
- 49% say that stress has a negative impact on both their personal and professional lives

Leading Causes of Stress

- Work 74%
- Money 73%
- Workload 66%
- Children 64%
- Family Responsibilities 60%
- Health Concerns 55%
- Health (Spouse, kids) 55%
- Health (Parents, other) 53%
- Housing Costs 51%
- Intimate Relationships 47%

Mental Health Crisis

- Mental illness- one of three most costly conditions in the U.S. (\$160 Billion in 1999)
- Worldwide, among the top 5 causes of disability days
- Half of U.S. adults experience one serious mental illness before age 55
- By age 18, 20% of youth have a case of clinical depression
- Remission of mental illness is typically partial or short lived

Stress and Health Behavior

Because of feeling stressed:

- 18% drank more
- 36% skipped a meal
- 43% ate too much
- 48% lay awake at night
- 66% of smokers, smoked more

Alcohol: A Major Health Problem

- Alcohol is a major cause of premature mortality
- Major contributor to deaths from liver cirrhosis, accidents, suicide & homicide
- Half of deaths from cirrhosis, traffic fatalities and fires are alcohol-related
- 40% of all hospital patients are there because of problems linked to alcohol

Alcohol: Bottom-line

- Alcohol is the 3rd leading preventable cause of death in the U.S.
- Alcohol kills about 100,000 Americans annually
- Annual economic costs for alcohol-related social, legal and health problems are more than \$185 Billion
- Problem drinkers average 4 times as many days in the hospital as non-drinkers

Health Benefits of Alcohol-I

- Overwhelming evidence from prospective, observational studies that persons who drink alcohol moderately (1-2 drinks/day) have a lower rate of overall mortality than heavy drinkers and non-drinkers
- Over 100 prospective epidemiologic studies have documented this J-shaped curve between alcohol and CHD mortality. Lowest rates of CHD mortality are observed at two drinks of alcohol per day
- Most authorities now attribute a causal role to the relationship: moderate alcohol consumption is presumed to reduce the risk of heart disease

Mechanisms

- Moderate consumption of alcohol is associated with increases in (good) HDL-cholesterol
- Moderate consumption of wine or beer is associated with lower levels of systemic inflammatory markers (CRP, fibrinogen, plasma viscosity, & white blood cell count)
- Alcohol has anti-thrombotic effects: affects platelet function, coagulation and fibrinolysis in ways that protect against bleeding and clot formation

Obesity: A Global Challenge

- About 1 billion people worldwide are overweight or obese
- US leads the world in obesity, but several Latin American countries are only a decade or less behind
- Mexico: 20% of men & 32% of women obese
- China: 200 million people are overweight
- Worldwide, 10% of children are overweight or obese
- High levels of physical inactivity in India

Pandemic of Diabetes

- 60-70% of diabetes cases due to weight gain
- Risk of developing Type 2 diabetes increases by 25% for each additional BMI unit over 22
- 27% of new cases of diabetes due to adult weight gain of 11 pounds or more
- Worldwide, people with diabetes projected to increase from 175 million in 2000 to 353 million in 2030. China and India lead the way
- 1 in 3 hospital bed-days in Latin America are for diabetes-related causes. Costs for treating diabetes higher than for non-diabetics

Type 2 Diabetes in Children

- 20 years ago: 1-2% of diabetes cases in children was Type 2 diabetes
- In some countries, Type 2 is now 80% of all diabetes cases in the pediatric population
- Starts before birth: mother's BMI, child's birthweight and growth trajectories are risks
- Child of overweight mother 3 times more likely to be overweight by age 7
- Nearly half of all women of child-bearing age are overweight or obese

Costly to Society

In addition to health care costs, there are also:

- Lower returns on education
- Decreased household income
- Lost productivity
- Increased premature retirement and unemployment
- Higher dependence on welfare

Challenge for Developing Countries

- Have imported a Westernized lifestyle
- More ominously, following a Westernized medical response to diabetes (acute reactionary medical care rather than cost-saving preventive approaches)
- High-priced tertiary and specialist-care treatments are driving growth in spending and are ill-suited for developing country health systems

Obesity & Diabetes: Byproducts of Social Progress

Inactivity & unhealthy diets reflect changes in social and economic conditions:

- More job opportunities for women
- More food consumption away from home
- Rising costs of healthy food
- Declining prices of unhealthy food
- Decreased activity: occupational and environmental
- Unhealthy choices and lifestyles appear incentivized and economically smarter

An Uphill Task: Increasing Activity

- More people with sedentary jobs
- Energy-saving devices that decrease activity
- Fewer people biking
- Fewer people walking to work and elsewhere
- Fewer people engaged in leisure time activity
- TV, computers, central air and heat have increased appeal for indoor activity
- Physical activity eliminated in schools
- Real and perceived danger of outdoor activities in some neighborhoods

An Uphill Task: Healthy Eating

- Increased access to good-tasting, inexpensive food that requires little or no preparation
- \$33 Billion spent annually to promote high calorie, high sugar, high fat foods
- Advertising promotes taste, accessibility, convenience and cost of unhealthy foods
- Unhealthy foods ubiquitous: restaurants, convenience stores, vending machines, gas stations, bookstores, museums, and even hospitals
- Healthy foods: more prep. & cost, perishable

Unhealthy Eating: Bottom-line

- Average caloric consumption increased from 1826/day in 1980 to 2002/day in 1999
- Fresh fruits and vegetables more costly than high fat, high sugar products, which are also palatable and easy to prepare
- Opting to reduce food costs allow many low and modest income families to purchase other goods and services
- Higher income families have healthier diets

The Logic of Prevention

- Most major chronic diseases amenable to prevention
- Almost 40% of U.S. deaths attributed to 4 behaviors:
 - Smoking, poor diet, inactivity, alcohol
- Weight loss and exercise can curb the progression of diabetes by 50%
- By limiting the increase in chronic diseases prevention can reduce healthcare costs and contribute to a healthier workplace.

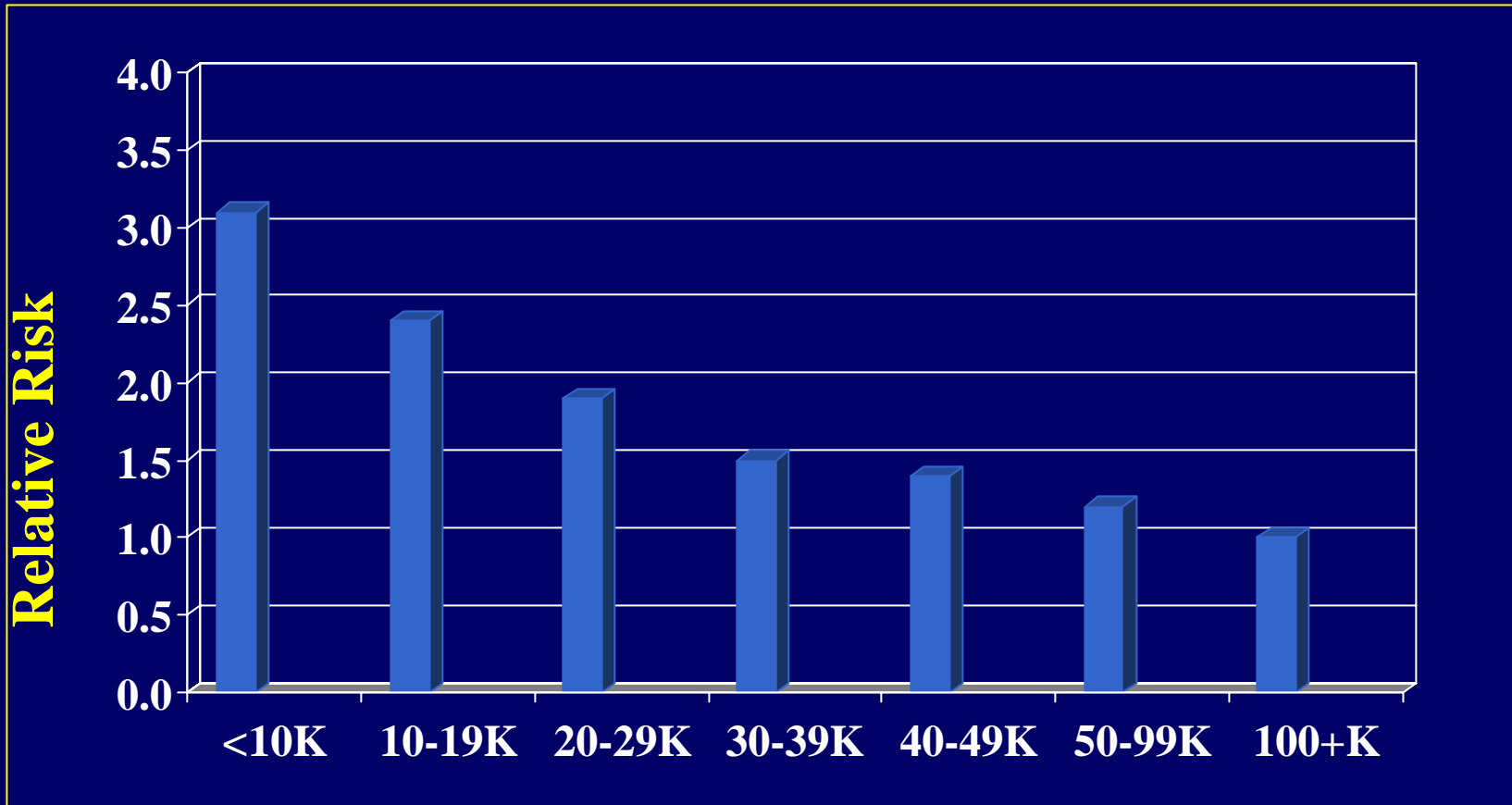
Prevention Neglected

- U.S. spends more on health care per person (16% of GDP) than any other country.
- But only 2% to 3% of health spending is on prevention.
- 25% of Medicare expenditures are for care in the last year of life (late-stage disease emphasis)

SES: A Key Determinant of Health

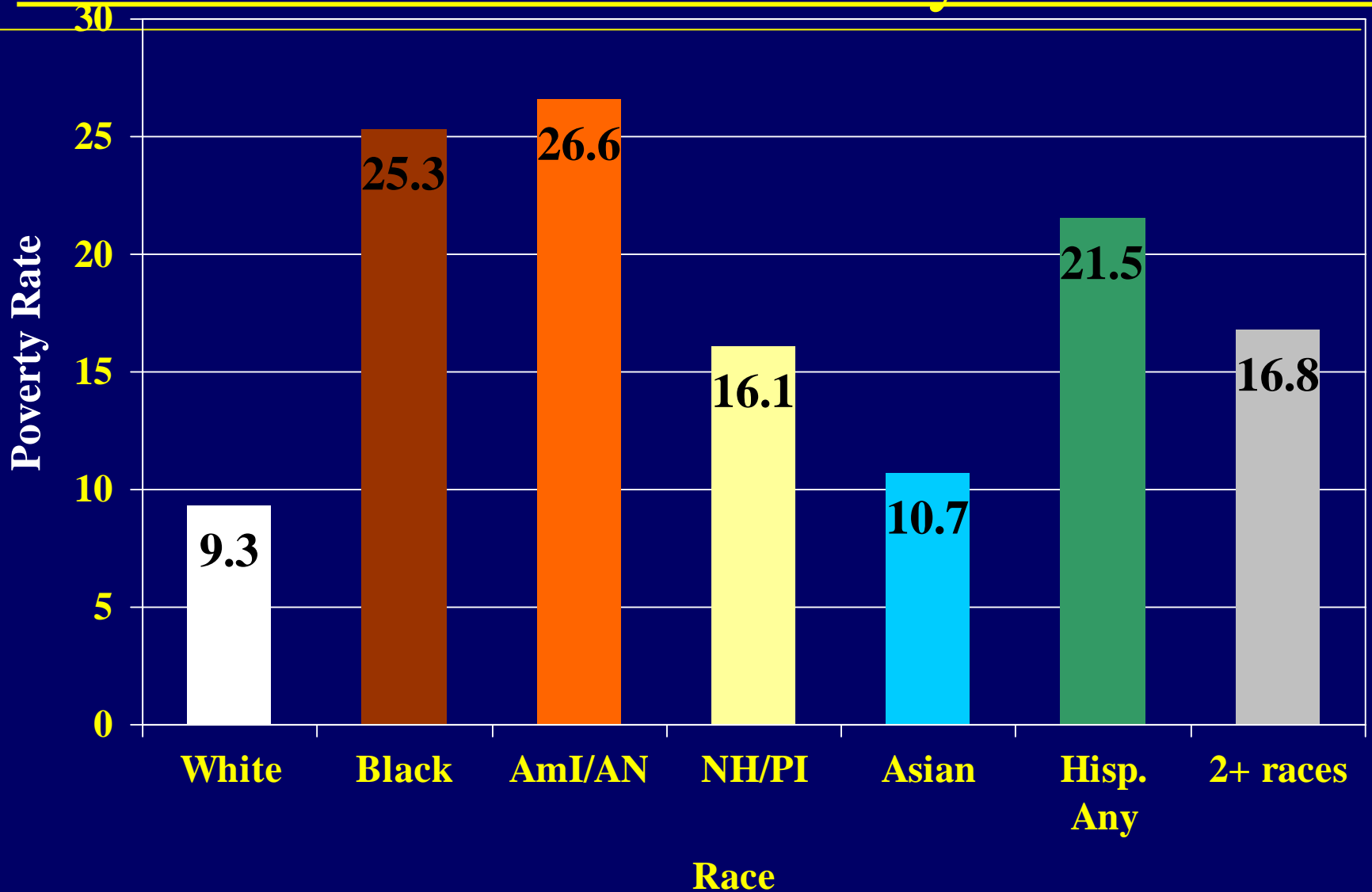
- **Socioeconomic Status (SES) usually measured by income, education, or occupation influences health in virtually every society.**
 - **SES is one of the most powerful predictors of health, more powerful than genetics, exposure to carcinogens, and even smoking.**
 - **The gap in all-cause mortality between high and low SES persons is larger than the gap between smokers and non-smokers.**
 - **Americans who have not graduated from high school have a death rate two to three times higher than those who have graduated from college.**
 - **Low SES adults have levels of illness in their 30s and 40s that are not seen in the highest SES group until after the ages of 65-75.**
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Relative Risk of Premature Death by Family Income (U.S.)

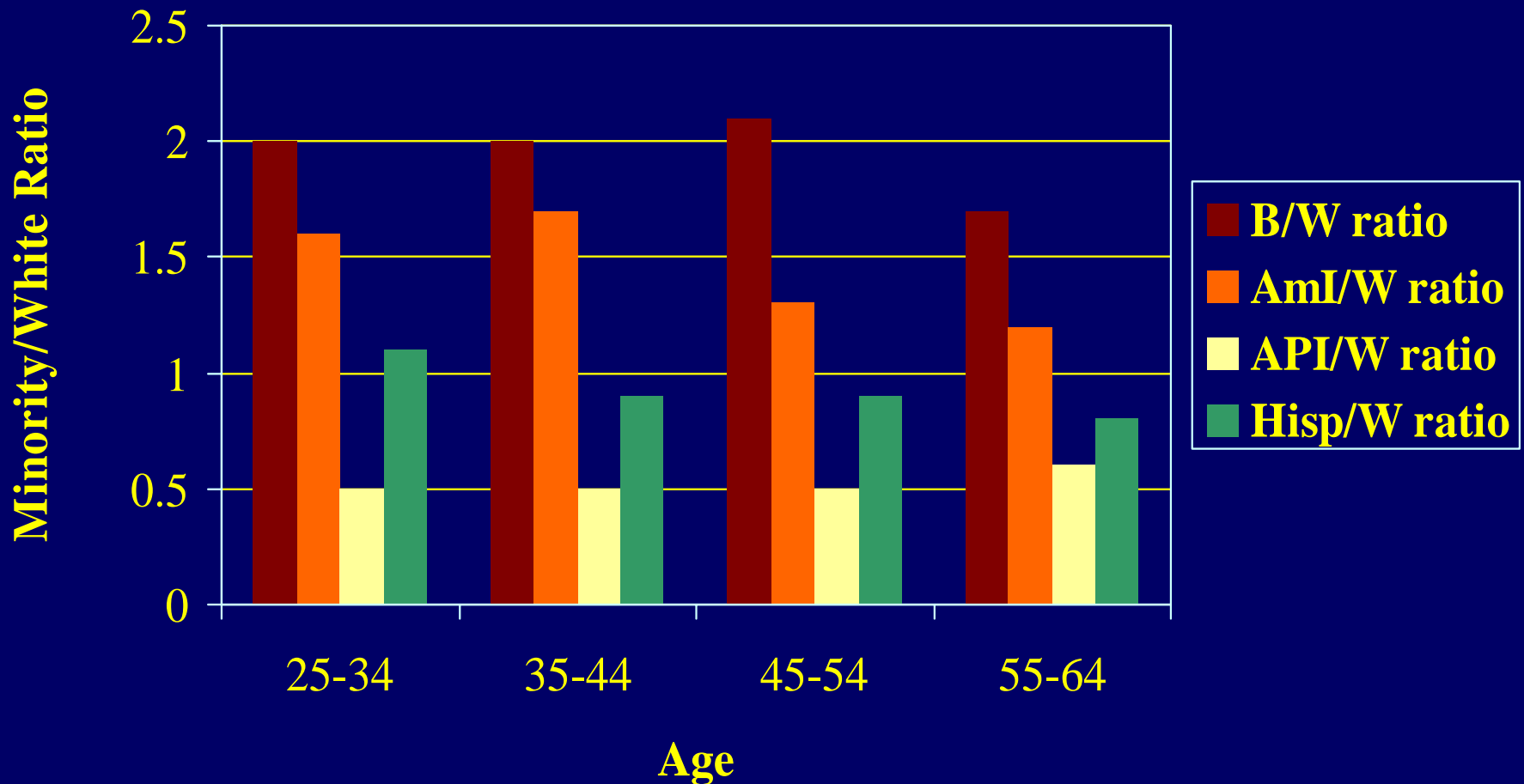


Family Income in 1980 (adjusted to 1999 dollars)

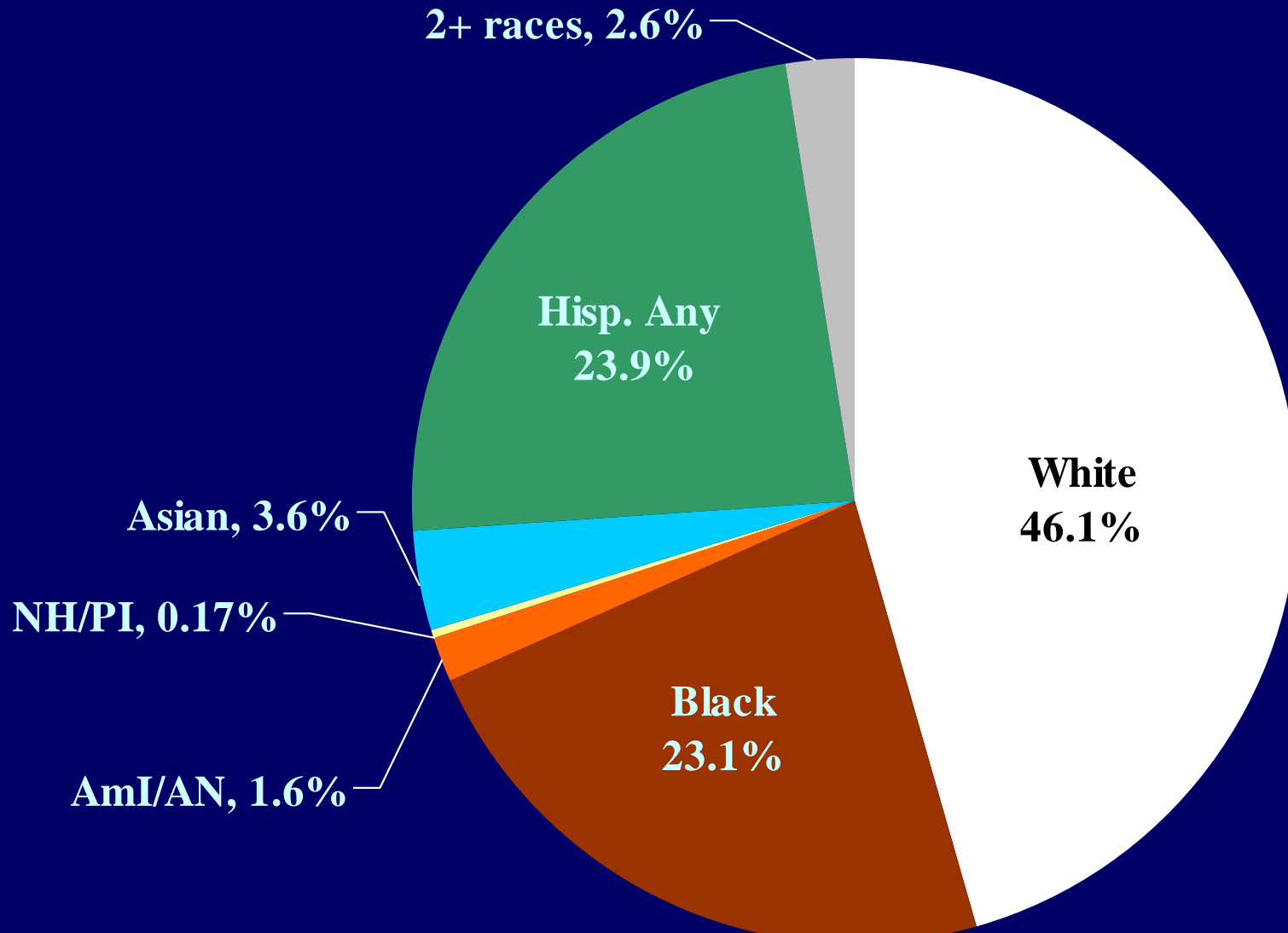
Percentage of Persons in Poverty by Race and Ethnicity



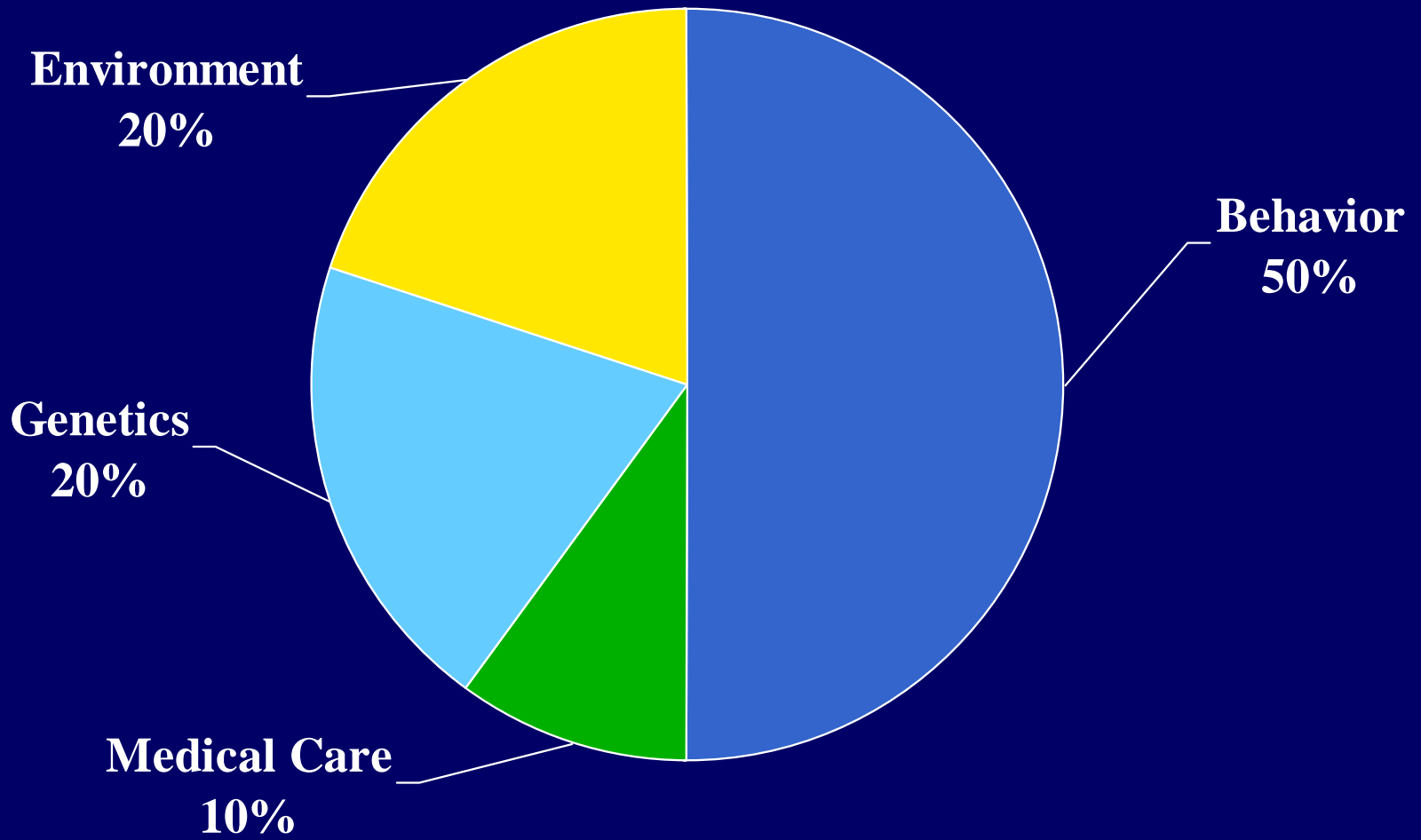
There Is a Racial Gap in Health in Mid Life: Minority/White Mortality Ratios, 2000



Racial/Ethnic Composition of People in Poverty in the U.S.



Determinants of Health in the U.S.



Causes of Death in the U.S., 2000

Leading Causes	Actual Causes
1. Heart Disease 710,760	1. Tobacco 435,000
2. Cancer 553,091	2. Diet & Inactivity 400,000
3. Stroke 167,661	3. Alcohol 85,000
4. Respiratory 122,009	4. Microbial Agents 75,000
5. Accidents 97,900	5. Toxic Agents 55,000
6. Diabetes 69,301	6. Motor Vehicle 43,000
7. Flu & Pneumonia 65,313	7. Firearms 29,000
8. Alzheimer Disease 49,558	8. Sexual Behavior 20,000
9. Kidney Disease 37,251	9. Illicit drug use 17,000
10. Septicemia 31,224	

SES and Health Risks

SES is linked to:

- *Exposures to health enhancing resources
- *Exposures to health damaging factors
- *Exposure to particular stressors
- *Availability of resources to cope with stress

Health practices (smoking, poor nutrition, drinking, exercise, etc.) are all socially patterned

The Social Determinants of Health

- **Economic deprivation and Inequality**
 - **Social Inclusion and Exclusion**
 - **Job Security and Working Conditions**
 - **Employment and Underemployment**
 - **Early Childhood Care and Conditions**
 - **Quality of Education**
 - **Housing Quality**
 - **Food Security and Insecurity**
 - **Neighborhood Conditions**
-

Moving Upstream

Effective Policies to reduce inequalities in health must address fundamental non-medical determinants.

WHY?

WHY?

WHY?

Centrality of the Social Environment

An individual's chances of getting sick are largely unrelated to the receipt of medical care

Where we live, learn, work, play and worship determine our opportunities and chances for being healthy

Social Policies can make it easier or harder to make healthy choices

Making Healthy Choices Easier

Factors that facilitate opportunities for health:

- Facilities and Resources in Local Neighborhoods
 - Socioeconomic Resources
 - A Sense of Security and Hope
 - Exposure to Physical, Chemical, & Psychosocial Stressors
 - Psychological, Social & Material Resources to Cope with Stress
-

Improving Health/Reducing Inequalities

Reducing Negative Health Behaviors?

- *Changing health behaviors requires more than just more health information. “Just say No” is not enough.**
- *Interventions narrowly focused on health behaviors are unlikely to be effective.**
- *The experience of the last 100 years suggests that interventions on intermediary risk factors will have limited success in improving health & reducing social inequalities in health as long as the more fundamental social determinants themselves remain intact.**

Changes in Smoking Over Time -I

Successful interventions require a coordinated and comprehensive approach:

- The active involvement of professionals and volunteers from many organizations (government, health professional organizations, community agencies and businesses)
- The use of multiple intervention channels (media, workplaces, schools, churches, medical and health societies)

Changes in Smoking Over Time -2

The use of multiple interventions –

- Efforts to inform the public about the dangers of cigarette smoking (smoking cessation programs, warning labels on cigarette packs)
- Economic inducements to avoid tobacco use (excise taxes, differential life insurance rates)
- Laws and regulations restricting tobacco use (clean indoor air laws, restricting smoking in public places and restricting sales to minors)

Even with all of these initiatives, success has been only partial

Addressing Health Behaviors

***Health Behaviors are not simply a matter of personal choice, but they are shaped by social forces operating at multiple levels**

***Initiating and sustaining long-term behavior change requires addressing other factors such as family relationships, work conditions, social norms, as well as, other community and societal factors**

***Systems oriented approaches are needed.**

***George W. Albee: “No epidemic has ever been resolved by paying attention to the affected individual”**

Key

Renewed focus needed on the “right arm” of the message

A Clear Goal

“The Savior made each work of healing an occasion for implanting divine principles in the mind and soul.” MH 20

Mission Outlined: Isaiah 58:6-8

- 6 Is this not the fast which I choose,
To loosen the bonds of wickedness,
To undo the bands of the yoke,
And to let the oppressed go free
And break every yoke?
- 7"Is it not to divide your bread with the hungry
And bring the homeless poor into the house;
When you see the naked, to cover him;
And not to hide yourself from your own flesh?
- 8"Then your light will break out like the dawn,
And your recovery will speedily spring forth;
-

Mission Outlined: Isaiah 58:9-10

And your righteousness will go before you;
The glory of the LORD will be your rear
guard.

9"Then you will call, and the LORD will answer;
You will cry, and He will say, 'Here I am '
If you remove the yoke from your midst,
The pointing of the finger and speaking
wickedness,

10And if you give yourself to the hungry
And satisfy the desire of the afflicted,
Then your light will rise in darkness
And your gloom will become like midday.

The Only Key To Success

“Christ’s methods *alone* will give true success in reaching the people:

- The Savior mingled
 - as one who desired their good
 - He showed His sympathy
 - ministered to their needs, and
 - won their confidence.
 - *Then* He bade them, ‘Follow Me.’” MH 143
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Christ's Compassion

“Christ feels the woes of every sufferer. When evil spirits rend a human frame, Christ feels the curse. When fever is burning up the life current, He feels the agony. And He is just as willing to heal the sick now, as when He was personally on earth. Christ's servants are His representatives, the channels for His working. He desires through them to exercise His healing power.” DA 823

Every Member, Every Church

“We have come to a time when every member of the church should take hold of medical missionary work. . . . Everywhere people are perishing for lack of knowledge of the thoughts that have been committed to us. The members of the church are in need of an awakening, that they may realize their responsibility to impart these truths.” 7T 61

“The medical missionary work should be a part of the work of every church in our land.” 6T 289

Prevention is Central

“There is sickness everywhere, and much of it might be prevented by attention to the laws of health. The people need to see the bearing of health principles upon their well being, both for this life and for the life to come.” EV 525

Need for Prevention

- 20% of U.S. adults smoke (32% with less than 12 years of education)
- Only 30% of adults exercise
- 17% of children and adolescents are overweight
- 66% of U.S. adults are overweight or obese

Power of Prevention

- Risk factor reductions in the U.K., accounted for 79% of the lives gained between 1981 and 2000 (is medical treatment).
- 44% to 72% of the fall in heart disease mortality between 1970 to 2000 in the U.S. due to change in risk factors (eg. Smoking, lipids, BP).
- Regular physical activity could reduce U.S. incidence of diabetes by 50%.
- Improved CVD risk factors in the U.K. could cut CHD mortality by in half.

Neglect by Health Professionals

A study of physicians found that only half of MDS or fewer, routinely

- Counsel patients who smoke about quitting smoking
- Treat patients with elevated blood lipids for the condition
- Treat hypertensive patients for their high blood pressure
- Screen patients for diabetes

Deeper Reasons for Prevention

“It is impossible for men and women, with all their sinful health destroying, brain-enervating habits, to discern sacred truth, through which they are to be sanctified, refined, elevated, and made fit for the society of heavenly angels in the kingdom of glory.”

CH 22,23

“Every violation of principle in eating and drinking, blunts the perceptive faculties, making it impossible for them to appreciate or place the right value upon eternal things.” CH 38, 39

Human NEEDS

Medical Missionary Work begins
with human needs and meets people
where they are

Physical Symptoms due to Stress

- Fatigue 51%
- Headache 44%
- Upset stomach or indigestion 34%
- Muscular tension 30%
- Change in appetite 23%
- Teeth grinding 17%
- Change in sex drive 15%
- Feeling faint or dizzy 13%

Psychological Symptoms due to Stress

- Irritability or anger 50%
- Feeling nervous or sad 45%
- Lack of interest, motivation or energy 45%
- Feeling as though you could cry 36%
- None of these 16%

What Motivates Changes in Behavior?

- Desire to feel better 60%
- Desire to reduce amount of stress in my life 45%
- Desire to improve self-image or self-esteem 41%
- Encouragement from my spouse/partner 38%
- Doctor recommendation 38%
- Desire to look better 37%

Comprehensive in Focus

Medical Missionary Work is
wholistic and addresses the broad
human needs that people have

Address Underlying Issues

“In ministry to the poor there is a wide field of service for women well as for men. The efficient cook, the house-keeper, the seamstress, the nurse- the help of all is needed. Let the members of poor households be taught how to cook, how to make and mend their own clothing, how to nurse the sick, how to care properly for the home. Let the boys and girls be thoroughly taught some useful trade or occupation.” MH 194

Instruction in Practical Lines

“By Instruction in practical lines, we can often help the poor most effectively. As a rule, those who have not been trained to work, do not have habits of industry, perseverance, economy, and self-denial. They do not know how to manage. Often through lack of carefulness and right judgment, there is wasted that which would maintain their families in decency and comfort if it were carefully and economically used.” MH 194, 195

Job Training

“Attention should be given to the establishment of various industries so that poor families can find employment. Carpenters, blacksmiths, and indeed everyone who understands some line of useful labor should feel a responsibility to teach and help the ignorant and the unemployed.” MH 194

10 Tips For Better Health - Donaldson, 1999

1. Don't smoke. If you can, stop. If you can't, cut down.
2. Follow a balanced diet with plenty of fruit and vegetables.
3. Keep physically active.
4. Manage stress by, for example, talking things through and making time to relax.
5. If you drink alcohol, do so in moderation.

10 Tips For Better Health - Donaldson, 1999

6. Cover up in the sun, and protect children from sunburn.
7. Practice safer sex.
8. Take up cancer screening opportunities.
9. Be safe on the roads: follow the Highway Code.
10. Learn the First Aid ABC : airways, breathing, circulation.

Alt. 10 Tips for Better Health - Gordon, 1999.

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1. Don't be poor. If you can, stop. If you can't, try not to be poor for long.
 2. Don't have poor parents.
 3. Own a car.
 4. Don't work in a stressful, low paid manual job.
 5. Don't live in damp, low quality housing.
 6. Be able to afford to go on a foreign holiday and sunbathe.

Alt. 10 Tips for Better Health - Gordon, 1999.

7. Practice not losing your job and don't become unemployed.
8. Take up all benefits you are entitled to, if you are unemployed, retired or sick or disabled.
9. Don't live next to a busy major road or near a polluting factory.
10. Learn how to fill in the complex housing benefit/ asylum application forms before you become homeless and destitute.

Churches as Health Promotion Centers -I

- Churches are sites for health screening and health interventions.
 - Church-based interventions have:
 - Increased fruit and vegetable consumption (Resnicow et al. 2001; Campbell et al. 1999, 2000).
 - Reduced outdoor advertising for alcohol and tobacco (Hackbarth et al. 2001).
 - Increased weight loss (Quinn et al. 2001; Oexmann et al. 2001; Yanck et al. 2001; McNabb et al. 1997; Kumanyika & Charleston, 1992).
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Churches as Health Promotion Centers --II

- Church-based interventions have:
 - Lowered blood pressure (Ocxmann et al. 2001; Yanck et al. 2001; Kumanyika & Charleston, 1992).
 - Reduced energy intake, dietary fat and sodium intake (Yanck et al. 2001).
 - Increased screening for breast, cervical, colon, and prostate cancer (Mann et al. 2000; Erwin et al. 1999).
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Promoting Healthy Eating in Detroit

Goal: Increase access to, and use of, healthy foods (fruits, vegetables, whole grains, low-fat dairy)

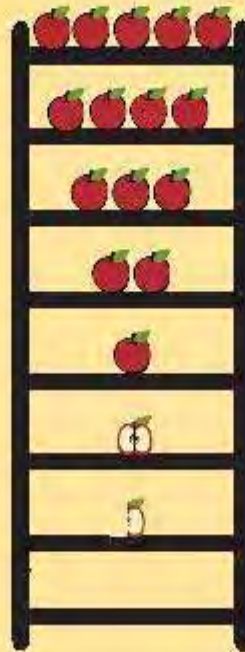
- 1. Develop and disseminate healthy food access information**
- 2. Fruit and Vegetable mini-markets**
***fresh produce at wholesale prices**
- 3. Increase number of stores offering healthy foods**
- 4. Social Support groups for Healthy Eating**
***healthy potlucks, recipe swaps**

Promoting Healthy Eating in Detroit

- 5. Healthy Cooking/Tasting Demonstrations**
 - *Healthy Latino foods, Healthy Soul Food**
- 6. Health on the Menu: Assist organizations in offering Healthy Foods at meetings**
- 7. Restaurant & Catering Nutrition Program**
 - *Free Menu Analysis**
 - *Free Recipe Consultation**
 - *Free Publicity for business**
 - * Free staff training**

REACHING FOR A HEALTHIER LIFE

Facts on Socioeconomic Status and Health in the U.S.





UNNATURAL CAUSES

Is Inequality Making Us Sick?

A 7-part documentary series & public impact campaign

www.unnaturalcauses.org

Produced by California Newsreel with Vital Pictures

Presented on PBS by the National Minority Consortia of Public Television
Impact Campaign in association with the Joint Center Health Policy Institute

SCHEDULE

- PBS broadcast: Begins March 27, 2008
(check local listings)
- DVD release (March, 2008)
- Web site launch: March 15, 2008
(temporary site now up:
www.unnaturalcauses.org)

THREE ARENAS FOR USE

A Tool to...

- **Educate**
 - Raise awareness of the extent and root causes of health inequities and demonstrate that we as a society can make different policy choices
- **Organize**
 - Reach out to and build alliances with other stakeholder groups and connect people to health equity initiatives
- **Advocate**
 - Bring mobilized constituencies together to educate public officials and advocate for health equity

Outreach Campaign Examples

- NACCHO:100 Town-Hall Meetings nationwide organized by LPHDs
- Black Women's Agenda—18 national organizations mobilizing members around a racial justice framework for infant health
- ISAIAH / Gamaliel central Minnesota interfaith health justice coalition-80 congregations-Lent kick-off
- Sonoma County (CA) Board of Supervisors-Health Equity Advisory Committee
- HPI "Place Matters" teams—winning buy-in for new initiatives in 26 counties

Service Delivery and Social Context

244 low-income hypertensive patients, 80% black (matched on age, race, gender, and blood pressure history) were randomly assigned to:

- 1. Routine Care:** Routine hypertensive care from a physician.
- 2. Health Education Intervention:** Routine care, plus weekly clinic meetings for 12 weeks run by a health professional.
- 3. Outreach Intervention:** Routine care, plus home visits by lay health workers*. Provided info on hypertension, discussed family difficulties, financial strain, employment opportunities, and, as appropriate, provided support, advice, referral, and direct assistance.

* Recruited from the local community, one month of training to address social and medical needs of persons with hypertension.

Service Delivery and Social Context: Results

After seven months of follow-up, patients in the Outreach group:

- 1. Were more likely to have their blood pressure controlled than patients in the other two groups.**
- 2. Knew twice as much about blood pressure as patients in the other two groups. Those in the outreach group with more knowledge were more successful in blood pressure control.**

Service Delivery and Social Context: Results -II

After seven months of follow-up, patients in the Outreach group:

3. Were more compliant with taking their hypertensive medication than patients in the health education intervention group. Moreover, good compliers in the outreach third group were twice as successful at controlling their blood pressure as good compliers in the health education group.

Making Sense of Apparent Conflict

•“ Rightly understood, science and the written word agree, and each sheds light on the other. Together they lead us to God by teaching us something of the wise and beneficent laws through which He works.”
CT 426

•“Rightly understood, they (science and the Bible) are in perfect harmony... All truth, whether in nature or in revelation, is consistent with itself in all its manifestations.--PP 114

Alternative Explanation

Stress Reduction?

- Alcohol is widely used in society to reduce stress
 - Could it be the negative effects of small amounts of alcohol are less damaging to the human organism than the negative effects of unresolved stress?
-

Alcohol and Stress Reduction

Experimental and non-experimental studies show that low and moderate doses of alcohol:

- Can have tension-reducing and fear-reducing effects
- Can have mildly analgesic and sedative effects
- Reduce self-consciousness
- Reduce magnitude of physiologic response to stressful stimuli
- Increase mood (affective expression, happiness, euphoria, pleasant and care-free feelings)
- Can reduce negative effects of stress on mental health

Alcohol and Stress Reduction

Lessons

- Chronic unresolved stress is a major contributor to ill-health in our society
 - Partial amelioration of stress may have some negative effects, but stress that is unaddressed in any way may be even more damaging to human health
 - A call to “Cast all of our cares on Him”?
 - A reminder that “earth has no sorrow that heaven cannot heal”
 - Invitation: “Come unto Me all ye that labor and are heavy laden and I will give you rest”
-

Alternative Explanation

Personality?

- The ability to drink two drinks or less consistently may be reflective of an underlying psychological characteristic of moderation
 - This consistent self-regulation evident in the use of alcohol could be a more general orientation that is reflected in many other aspects of life (and this leads to lower levels of multiple forms of risk-taking behavior)
-

Support for Moderation

- Protective effect of moderate alcohol is more a function of frequency of use than of volume
- Risks associated with 1-2 drinks per day is not equivalent to the risk associated with drinking the same weekly amount in one or two days.

Moderation: Example

- Men and women with one or two days of binge drinking had a higher CHD risk than abstainers even though their weekly total use of alcohol was low
- Case-control study of 11,511 acute MI or coronary deaths and 6,077 controls in the NSW (Australia) site of the MONICA study

Alcohol and Personality

Lessons

- A reminder of the role of balance and “temperance” in life
 - A lifestyle characterized by the principle of moderation may avoid a broad range of risk factors for poor health outcomes.
 - Temperance or self-control is a fruit of the Spirit
-

MAJOR Methodological Limitation

Confounding

The apparent effect of some exposure (e.g. alcohol) and health is distorted because there is some other factor(s) that is related to both alcohol and health and accounts for some/all of the observed relationship between the two.

Are moderate drinkers and abstainers different on other health-related factors?

Residual Confounding—Evidence I

Compared to moderate drinkers, non-drinkers:

- Were older, widowed or never married, non-white
- Had less education and income
- Had less access to medical care and preventative screenings
- Were more likely to be overweight & physically inactive
- Had poorer psychological well-being
- Were more likely to have diabetes and hypertension

(U.S. probability sample of 116,841 non drinkers and 118,889 moderate drinkers (BRFSS))

Residual Confounding—Evidence II

- 90% (27 of 30) of CVD-associated risk factors more common in nondrinkers
- Moderate drinkers and abstainers are two very different populations and alcohol use is unlikely to be the cause of most of these differences
- Thus, at least some of the reported protective effects of moderate drinking are likely due to residual confounding (other unmeasured factors)

MAJOR Methodological Limitation

Misclassification of Drinking Categories

Does the “abstainer” category contain high-risk drinkers?

Many older people reduce or terminate drinking due to increased illness, disability, frailty, and/or medication use

- Former drinker misclassification error
- Occasional drinker misclassification error

Such bias would exaggerate the risk of “abstainers”

Misclassification of Drinkers — Evidence

A recent meta-analysis of 54 all-cause mortality studies and 35 CHD mortality studies examined the effect of misclassifying as abstainers many people who had reduced or stopped drinking:

- The pooled studies showed the traditional J-shaped curve with higher risks for abstainers than moderate drinkers
- Studies with only former drinker classification also showed protective effects of moderate consumption
- Studies in which both classification errors were accounted for showed no protective effects of moderate consumption

Special Properties of Wine?

- Wine contains Phenols (flavonoids and non-flavonoids) that are powerful antioxidants that destroy free radicals in the body
- There has been much attention to “resveratrol”- a non-flavonoid (stilbene) which is unique to grapes. Red wine contains more than white wine.
- However, wine is not a good source of antioxidants: the fermentation process removes most of it from the wine; and, as wine ages, the number of antioxidants increases but their bioavailability decreases
- So to get your supply of resveratrol, consume grapes

The Other Side of The Coin

*Moderate alcohol Use has a
broad range of other
Negative Effects*

Moderate Alcohol --Negative Effects

Meta-analysis of 123 high quality studies (selected from 397) found a dose-response relationship between alcohol and:

- Liver cirrhosis, cancers of the respiratory and digestive tracts, hemorrhagic stroke and injuries and adverse effects
- Weaker but significant associations for colorectal, liver and breast cancers, essential hypertension and chronic pancreatitis
- That is, for all of these conditions, moderate alcohol consumption is related to increased risk

Risk of Progression

- A “low estimate” is that 5-7% of current abstainers and/or infrequent drinkers would develop diagnosable problems linked to alcohol use (a percentage similar to the overall population)
- development of dependence tends to occur within 5 to 10 years of first regular use.

NIH Position Paper on the Health Risks & Potential Benefits of Moderate Alcohol Use

Gunzerath et al. 2004; Alcoholism: Clin & Exp Res.

Alcohol & Young Adults

The negative consequences of alcohol use are especially marked among young adults

- The increased risk of accidents, violence, suicide and fetal alcohol syndrome linked to alcohol use is heavily concentrated in this group
- No data support a benefit of alcohol in young adults. The CVD benefits are found in middle-aged and older populations

“.... Probably No Free Lunch”

“ ... likely explanation for an artifactual association – uncontrolled confounding – has been too readily dismissed by many researchers including ourselves....

“Any coronary protection from light to moderate drinking will be very small and unlikely to outweigh the harms. While moderate to heavy drinking is probably cardio-protective [relatively “clean” coronary arteries in autopsies of alcoholics], any benefit will be overwhelmed by the known harms”

Caution

- “ If alcohol were a newly discovered drug... no pharmaceutical company would develop it to prevent cardiovascular disease. Nor would many physicians use a therapy that might reduce the rate of myocardial infarction by 25 to 50 percent, but that would result in thousands of additional deaths per year due to cancer, motor vehicle accidents, and liver disease.”
 - “substituting one disease for another is not a medical advance”
-

When Evidence and Profits Clash

“Alcohol industry advocacy groups also like to emphasize the protective health effects of alcohol consumption for older adults. These benefits have been contested, and even if they exist, they are small, at best, and much smaller than the overall harm.

...the alcohol industry cannot afford to reduce the risky alcohol consumption that generates most of its profits. Conservatively estimated, two thirds of all alcohol consumption in Australia (and 90% of that consumed by young men) is consumed in ways that put drinkers’ and others’ health and wellbeing at risk.”

Summary on Moderate Alcohol - I

- A large body of scientific evidence finds an association between moderate drinking and reduced CVD & mortality risk.
 - This association is unlikely to be causal. It is likely due to other unmeasured factors, and to other methodological problems
 - Moderate alcohol use increases the risk of several diseases
 - Moderate alcohol use increases the risk of accidents, suicides, violence, etc.
-

Summary on Moderate Alcohol - II

Moderate alcohol use can lead to

- loss of inhibition,
- impairment in judgment
- reduced physical coordination and mental alertness

The scientific evidence suggests that any purported benefits of alcohol use do not appear to outweigh the many costs to both the individual and the society

Religion and Adolescent Risk Behavior

- Religious high school seniors are less likely than their non-religious peers 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