

BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit

BUILDING A
HEALTHY
North Dakota

Wellness

Dr. Terry Dwelle

North Dakota Department of Health



Wellness

Vietnamese

- Traditional beliefs regarding TB
 - Lao truyen (hereditary TB) - handed down from generation to generation
 - Lao luc (physical TB) - caused by hard work
 - Lao tam (mental TB) - caused by too much worrying
 - Lao phoi (lung TB) - caused by TB germs

Cote d'Ivoire

■ Alladin people

- Tb is translated as “Pisa”
- Pisa is a disease of guilt that expresses the result of a breach of social rules. Adultery is often it's cause but there are many others.
- Pisa spreads through a circuit of 3 people, two men and woman. In adultery it would be the wife, her husband and the lover. It can happen years after the adultery was committed

What is Health or Wellness?

- Western Definition – “Absence of Disease”

1978 WHO – UNICEF Conference

- **Declaration of Alma - Ata – “Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector?”**

Alma – Ata Conference

■ Includes

- Prevention of common diseases
- Treatment of common diseases
- Mental health
- Agriculture
- Enterprise – economic development
- Education
- Housing

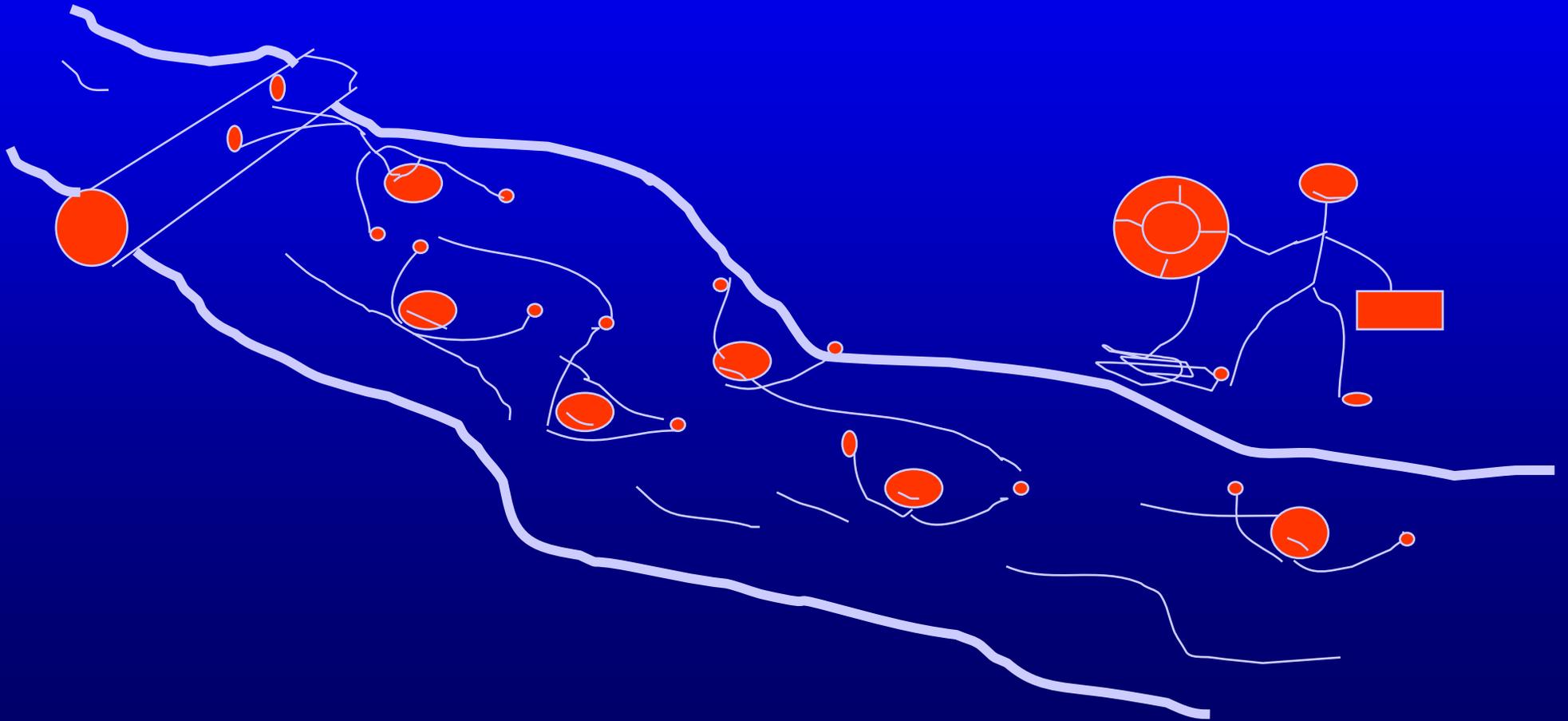
Health

- African complaint of missionaries – “you often dissect us into pieces”
- Balance or Harmony – self, others, environment and spiritual needs or God.

Medicine Wheel

- Everything in life is circular
- Balance , Harmony and self discovery
- Cardinal directions
 - East – knowledge “...enables us to see the miracles and harmony of creation”
 - South – growth “...taste the ripe fruit of appreciation and not take what we have for granted”
 - West – reflection and spiritual insight “... to go within and appreciate yourself and your Creator”
 - North – purity “... secret to many cures for healing”

Prevention



3 Levels of Prevention

- Primary - alters susceptibility / risk factors
- Secondary - curative / clinical care
- Tertiary - rehabilitation

Primary Vs Secondary / Tertiary

- Primary - less expensive, more effective, more sustainable than secondary and tertiary prevention

UNAIDS Prevalence Data - 2000

- SSA Average national prevalence – 8.8%
- In 16 countries – 10%
- In 7 countries – 20%
- Botswana – 36% (highest prevalence)

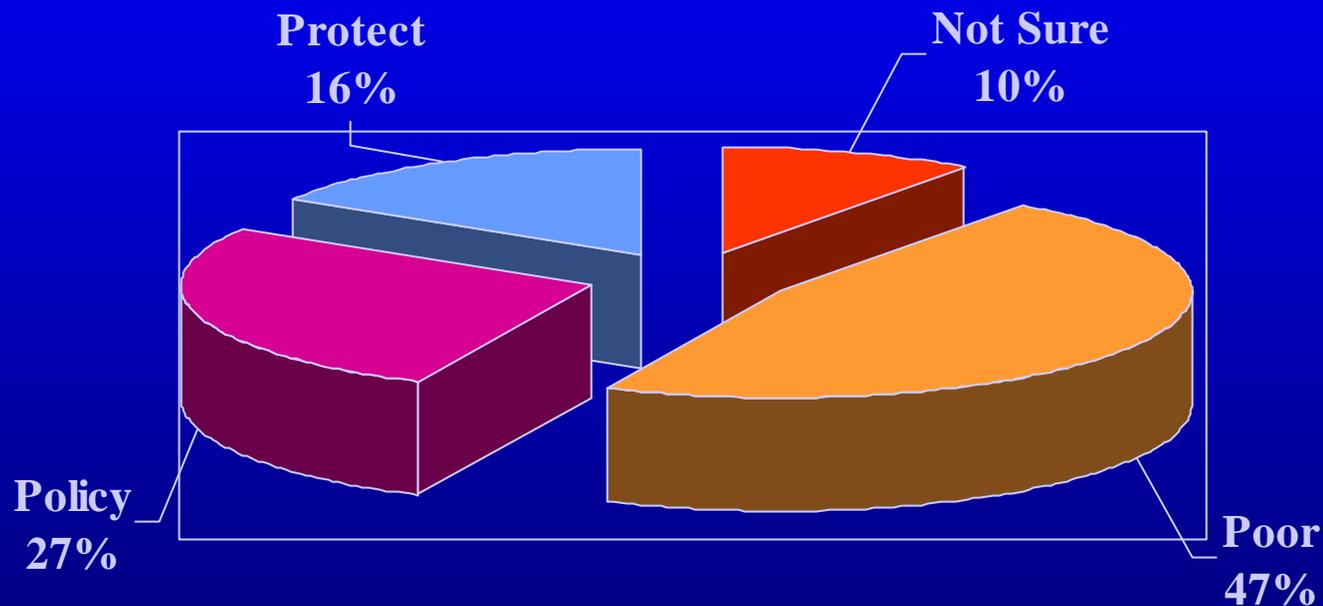
UNAIDS Prevalence Data 2000

- Uganda from 1990-2000 adult prevalence declined from 14% - 8%
 - Masaka – females, 20-24 yo decreased 20.9% ('89-'90) – 13.8% ('96-'97)
- Zambia – HIV prevalence in 15-19 yo females attending prenatal clinics 27% - 17%.
- Senegal – prevalence maintained at 2%

Successful Programs

- Strong, high-level political leadership supporting programs
- Upper level program plan
- Adequate funding
- Strong Community Involvement

Perceptions of Public Health



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Morbidity and Mortality – U.S.

Dr. James Marks

Centers for Disease Control and Prevention

Centers for Disease Control and Prevention



Trends of Elvis Presley Impersonators

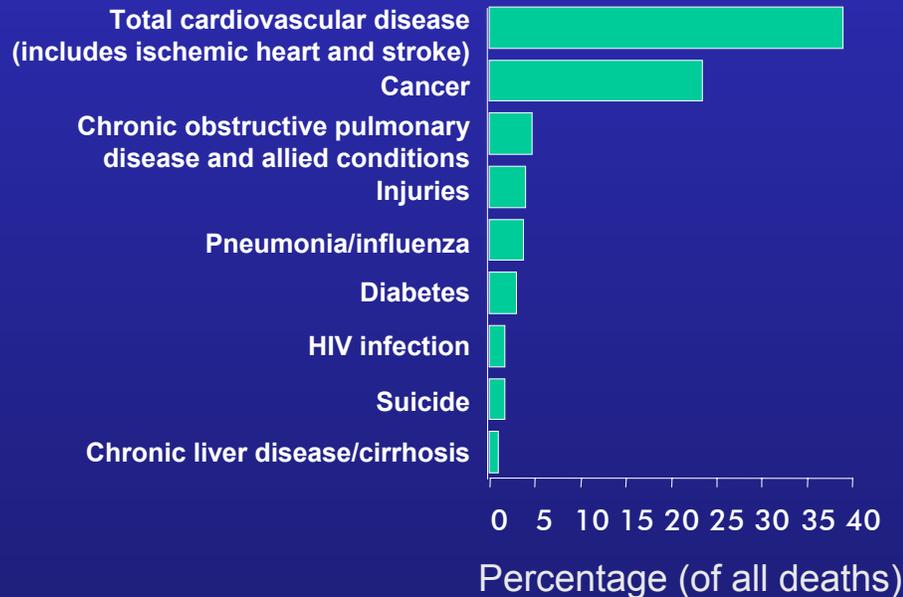
1977	37
1993	48,000
2010	2,500,000,000



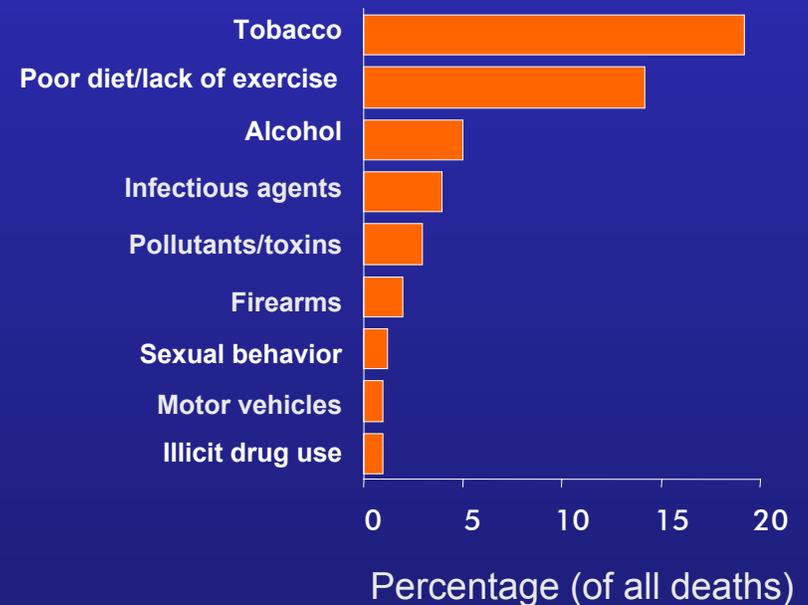
Source: Caen, H., San Francisco Chronicle; October 27, 1993

Chronic Diseases and Related Risk Factors

Most Common Causes of Death,
United States, 1996*



Actual Causes of Death,
United States, 1990†



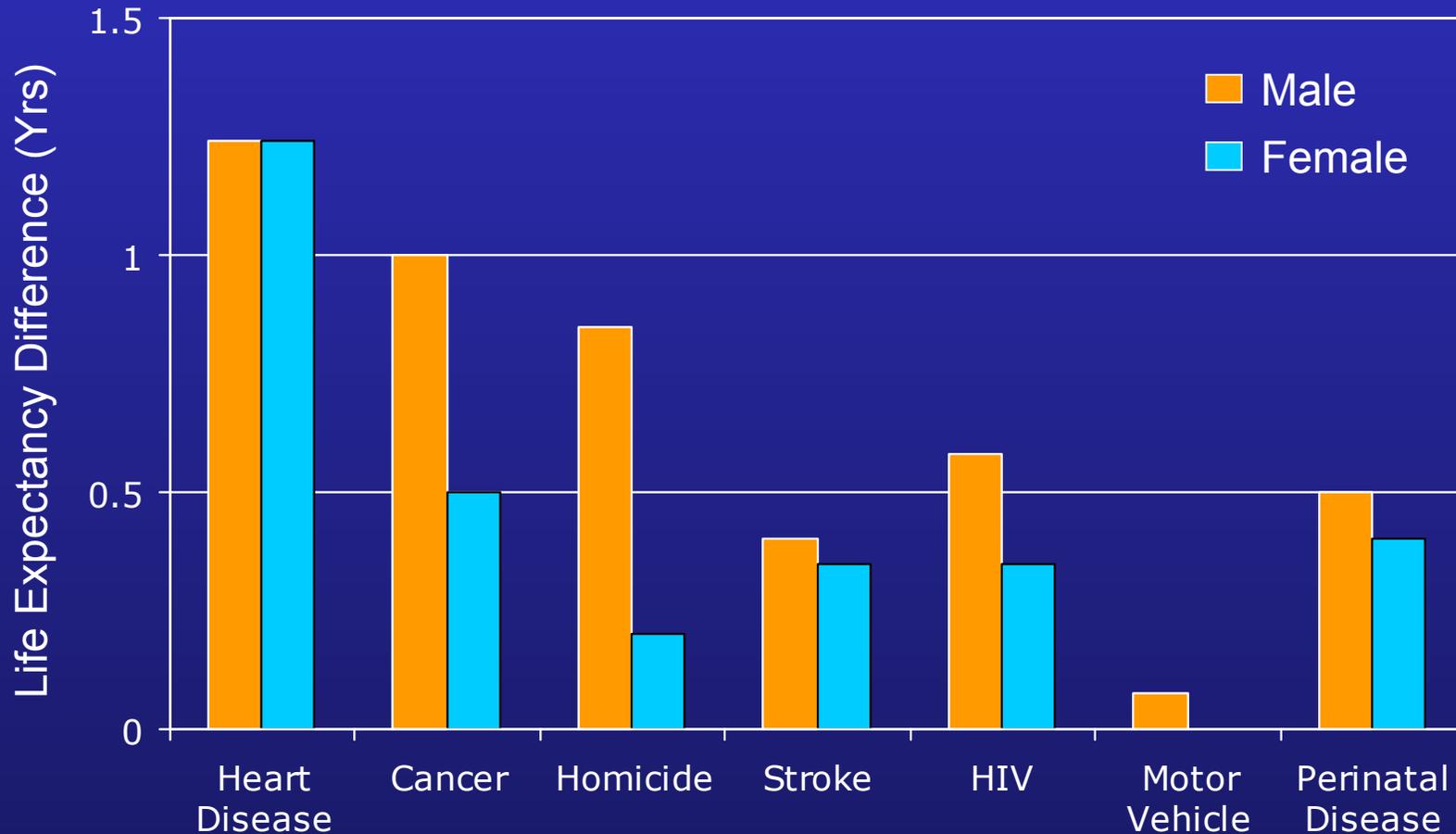
*National Vital Statistics Report; 47 (9) November 10, 1998

†McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993; 270:2207-12

Note: Dark shading denotes chronic conditions and risk behaviors



Number of Years Difference in Life Expectancy Between Blacks and Whites, by Cause of Death and Sex – United States, 1998

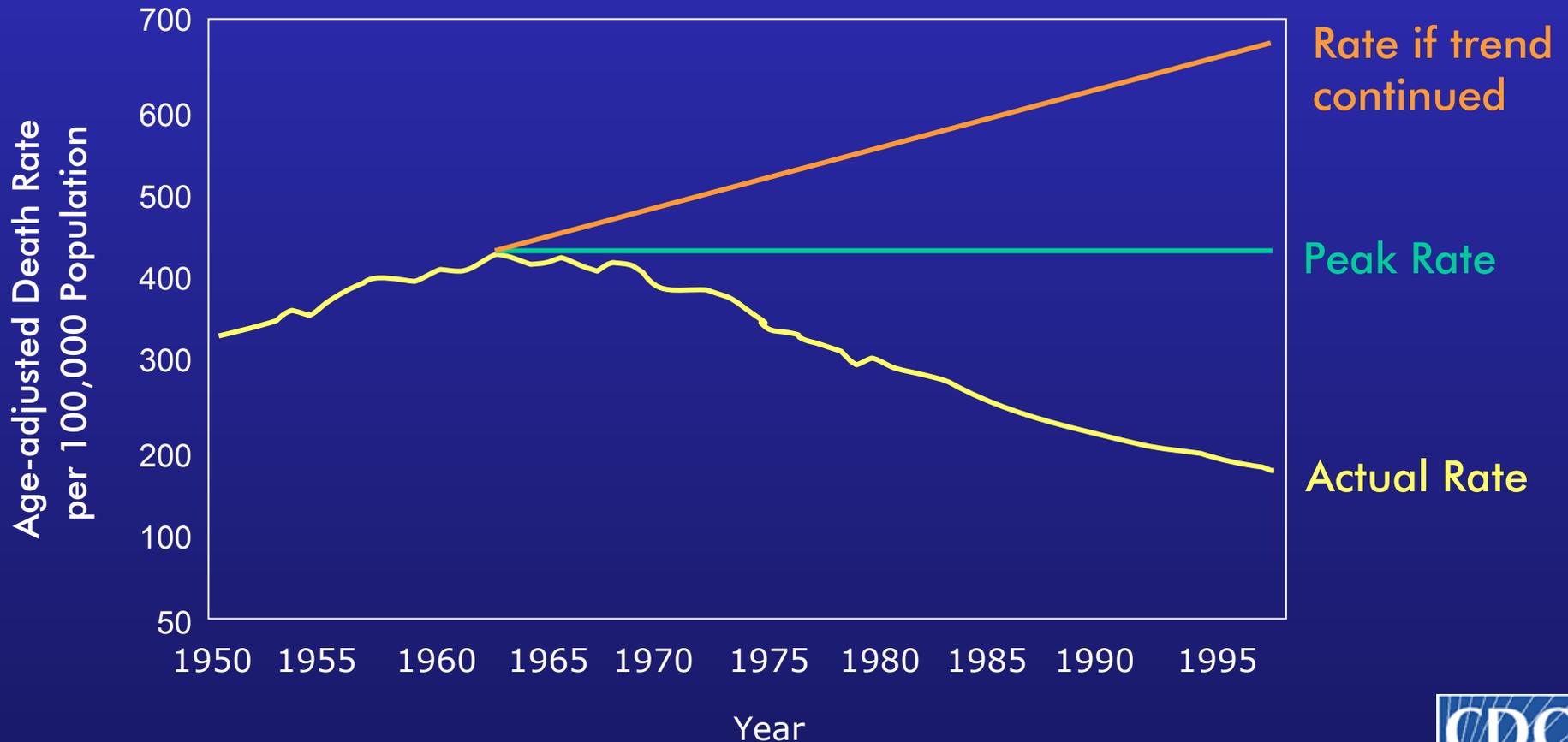


Adapted from: MMWR 2001;50:780–783

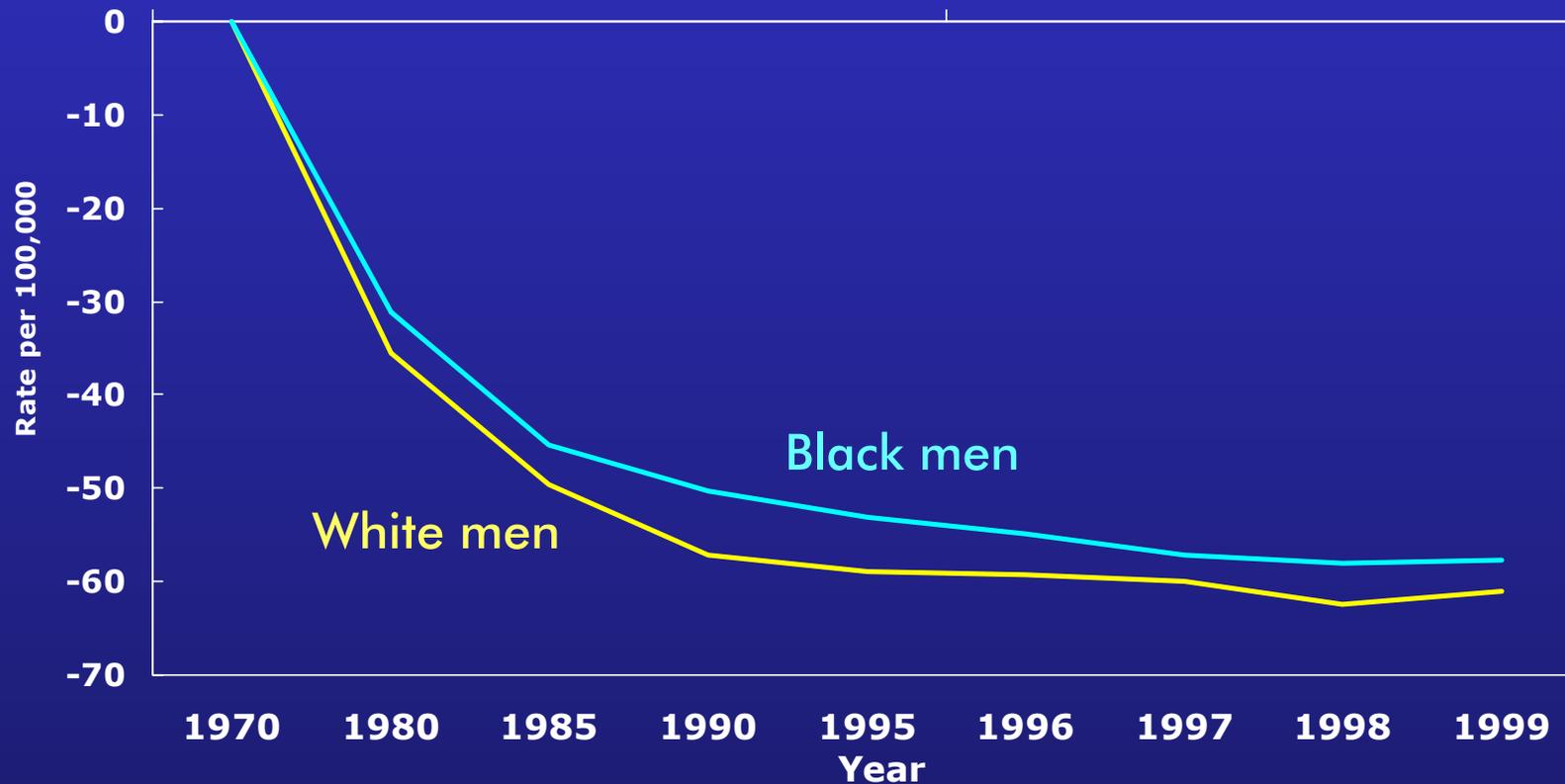


Actual and Expected Death Rates for Coronary Heart Disease, 1950–1998

CHD accounted for 460,000 deaths in 1998. It would have accounted for 1,144,000 if the rate had remained at its 1963 peak.



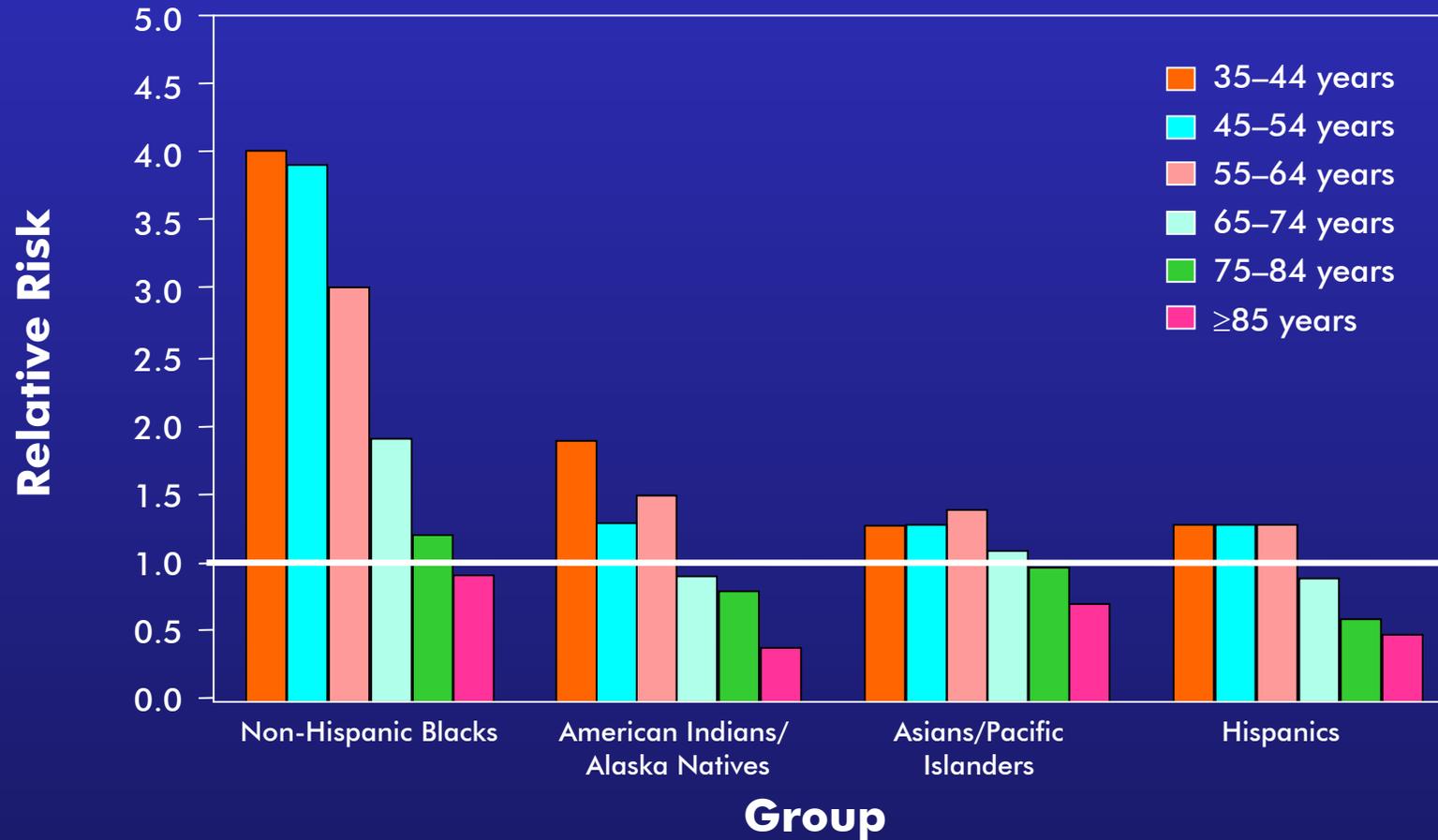
Decline in Mortality Rates* for Stroke Black and White Men, United States, 1970–1999



* Age-adjusted to the 2000 U.S. census population
Modified from JNC VI, 1997



Risk of Stroke Mortality among Racial/Ethnic Minority Groups Compared with Non-Hispanic Whites, by Age — United States, 1997

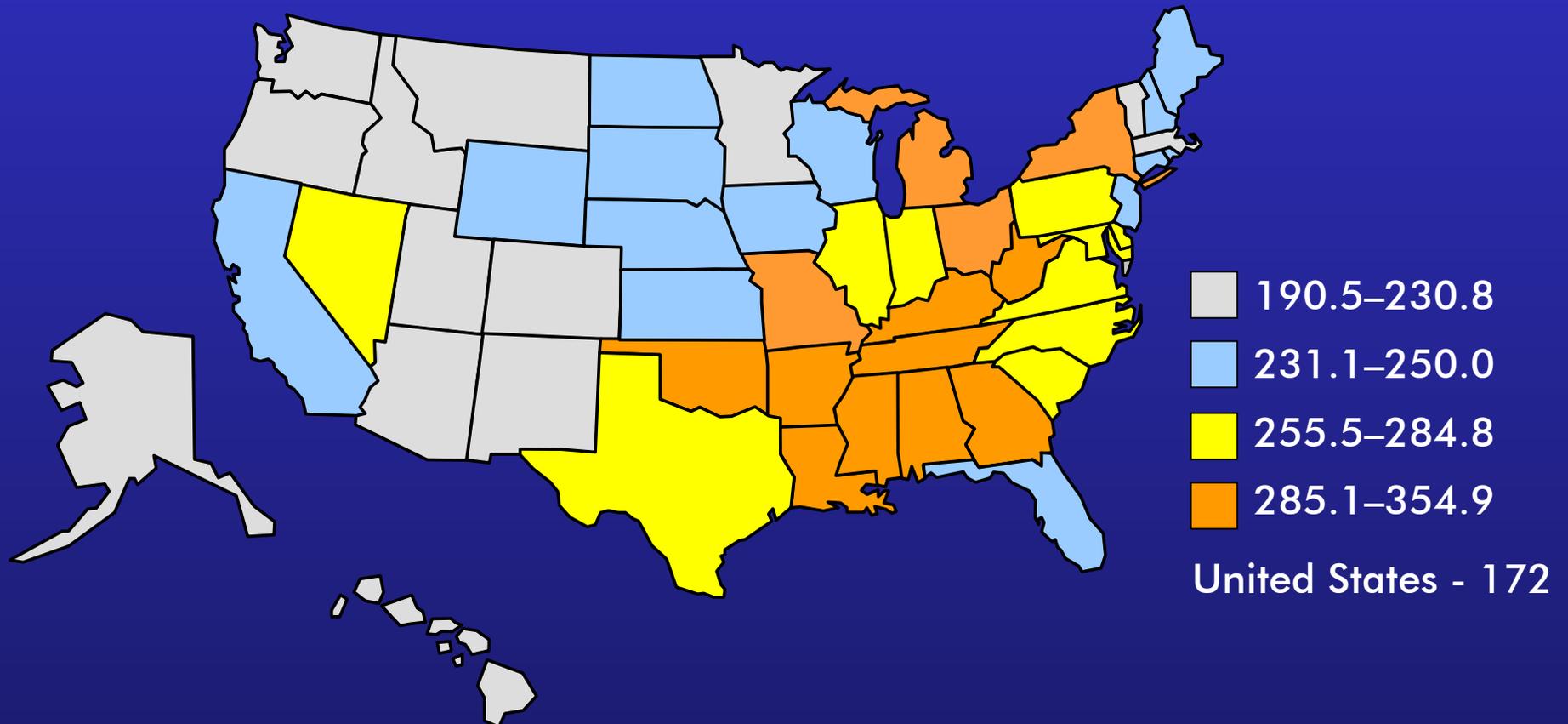


Source: MMWR 2000; Vol 49: p96.



Total Cardiovascular Disease Deaths, 1999

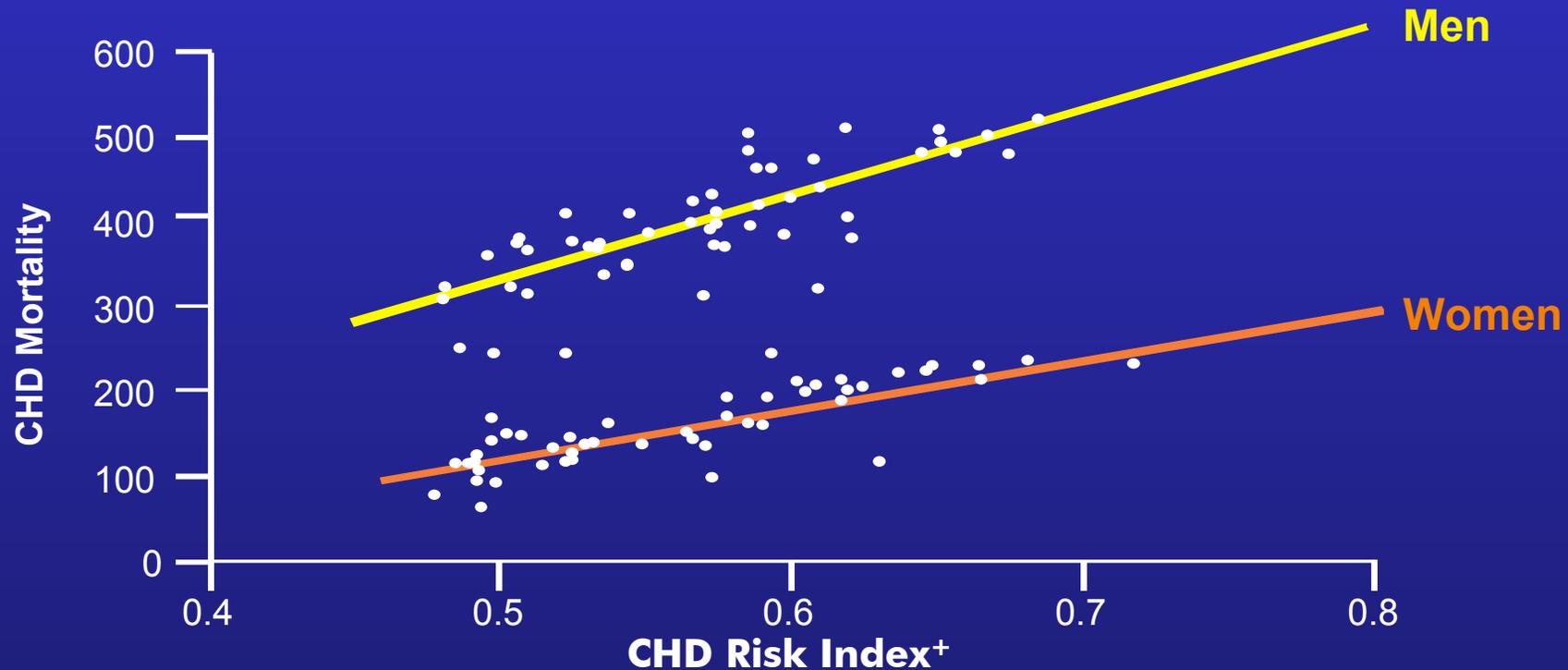
Age-adjusted death rates per 100,000 population



Source: National Vital Statistics System, National Center for Health Statistics, CDC



The Relationship Between CHD Mortality* and CHD Risk Factors in 49 States, 1991



*CHD Mortality = Mortality from coronary heart disease, aged 45-74

+CHD Risk Index = Effect of 7 risk factors combined (smoking, overweight, physical inactivity, high blood pressure, high cholesterol, diabetes, alcohol abstinence)

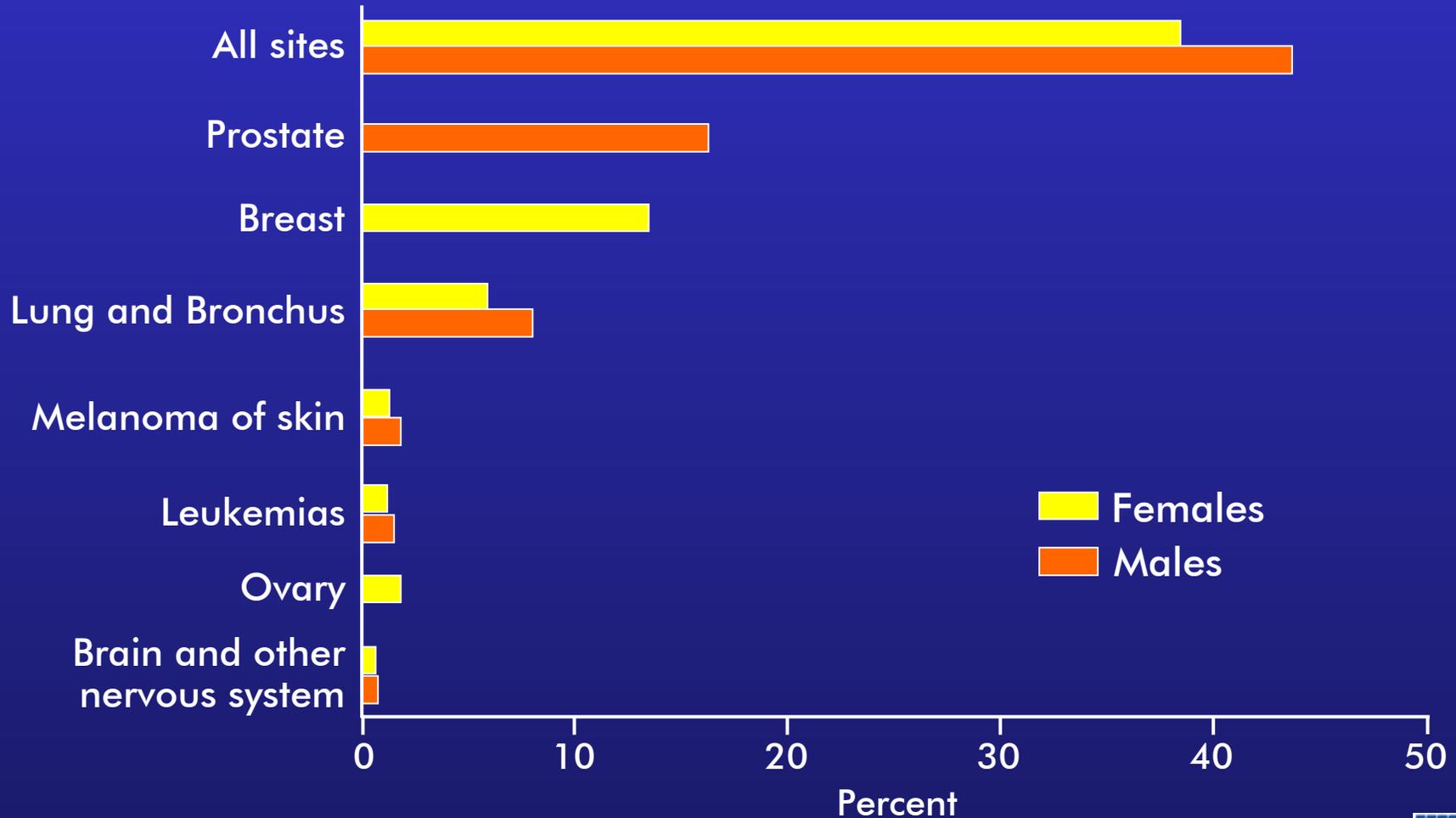
Mortality data and CHD risk factors prevalence were age-adjusted to the 1990 US population aged 45-74

Regression formulas are: CHD (men) = -155 + 955 (CHD index)

CHD (women) = -153 + 528 (CHD index)



Lifetime Risk of Being Diagnosed with Cancer

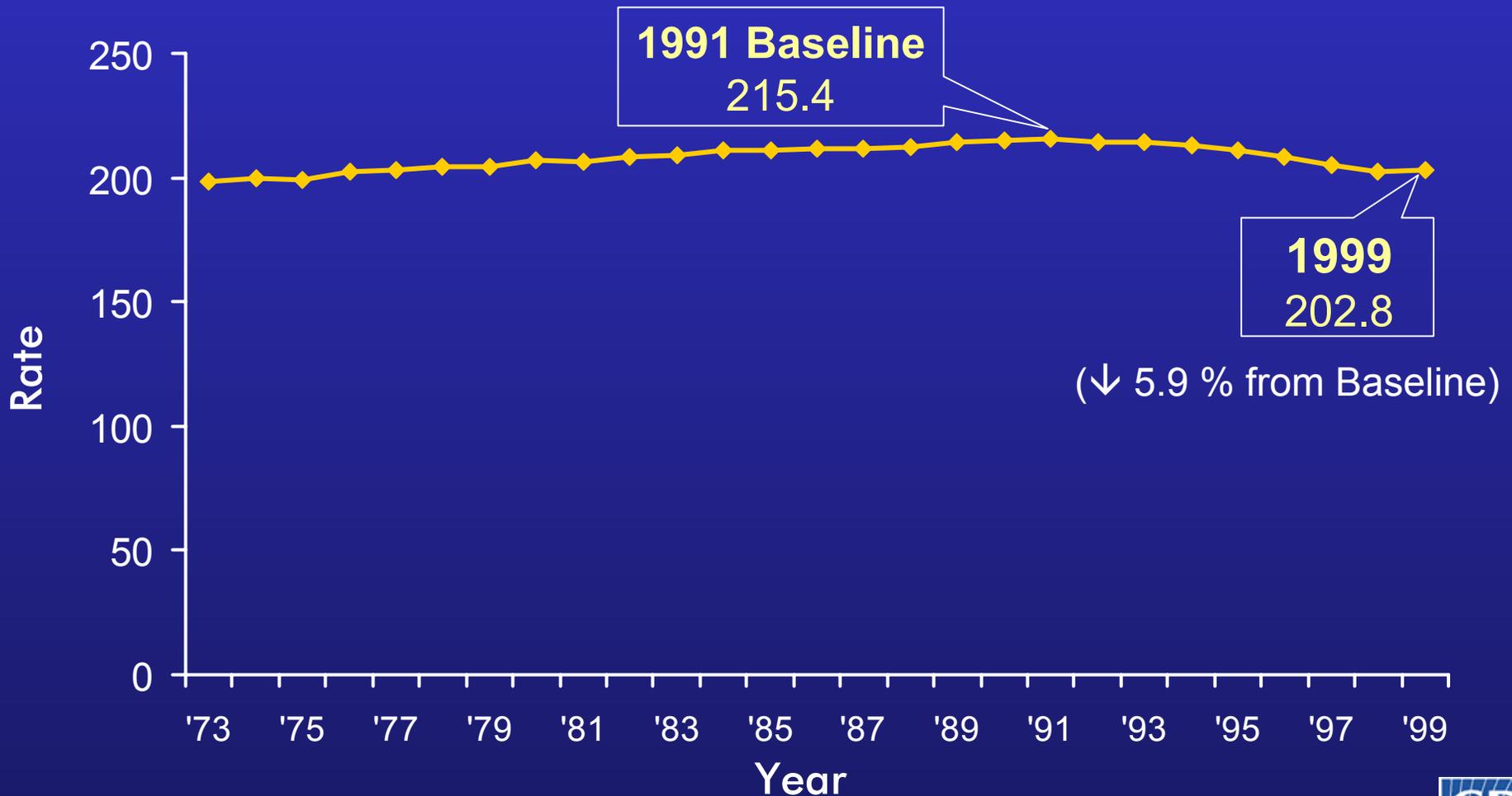


Source: SEER Cancer Statistics Review, 1973–1998 (NCI 2001)



All Sites— Mortality Rates

By Year of Death— All Races, Males and Females

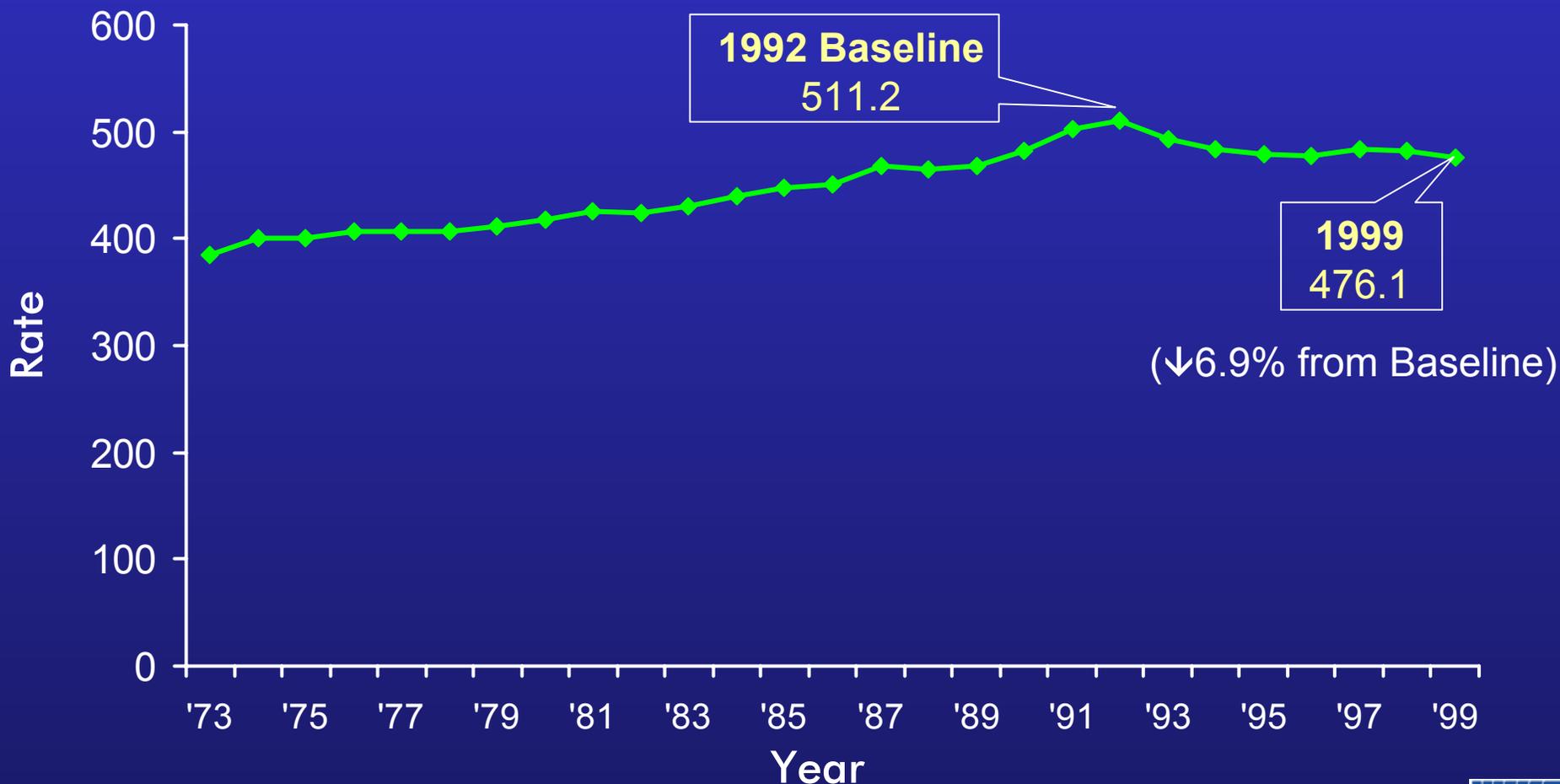


Incidence and mortality rates per 100,000 and age-adjusted to 2000 US standard population.
SEER Cancer Statistics Review 1973-1999.



All Sites (Invasive)— Incidence Rates

By Year of Diagnosis— All Races, Males and Females



Incidence and mortality rates per 100,000 and age-adjusted to 2000 US standard population.
SEER Cancer Statistics Review 1973-1999.



Death Rate and Average Annual Percentage Change

3 Leading Cancers in Men, 1990–1998*

	Age-adjusted Rate**		Average Annual
	1990	1998	% Change
Lung	75.2	65.4	-1.8
Prostate	26.4	21.5	-2.6
Colorectal	23.4	19.6	-2.1

* Adapted from MMWR 2002; 51: 49–53

** Per 100,000 1970 standard population



Death Rate and Average Annual Percentage Change

3 Leading Cancers in Women, 1990–1998*

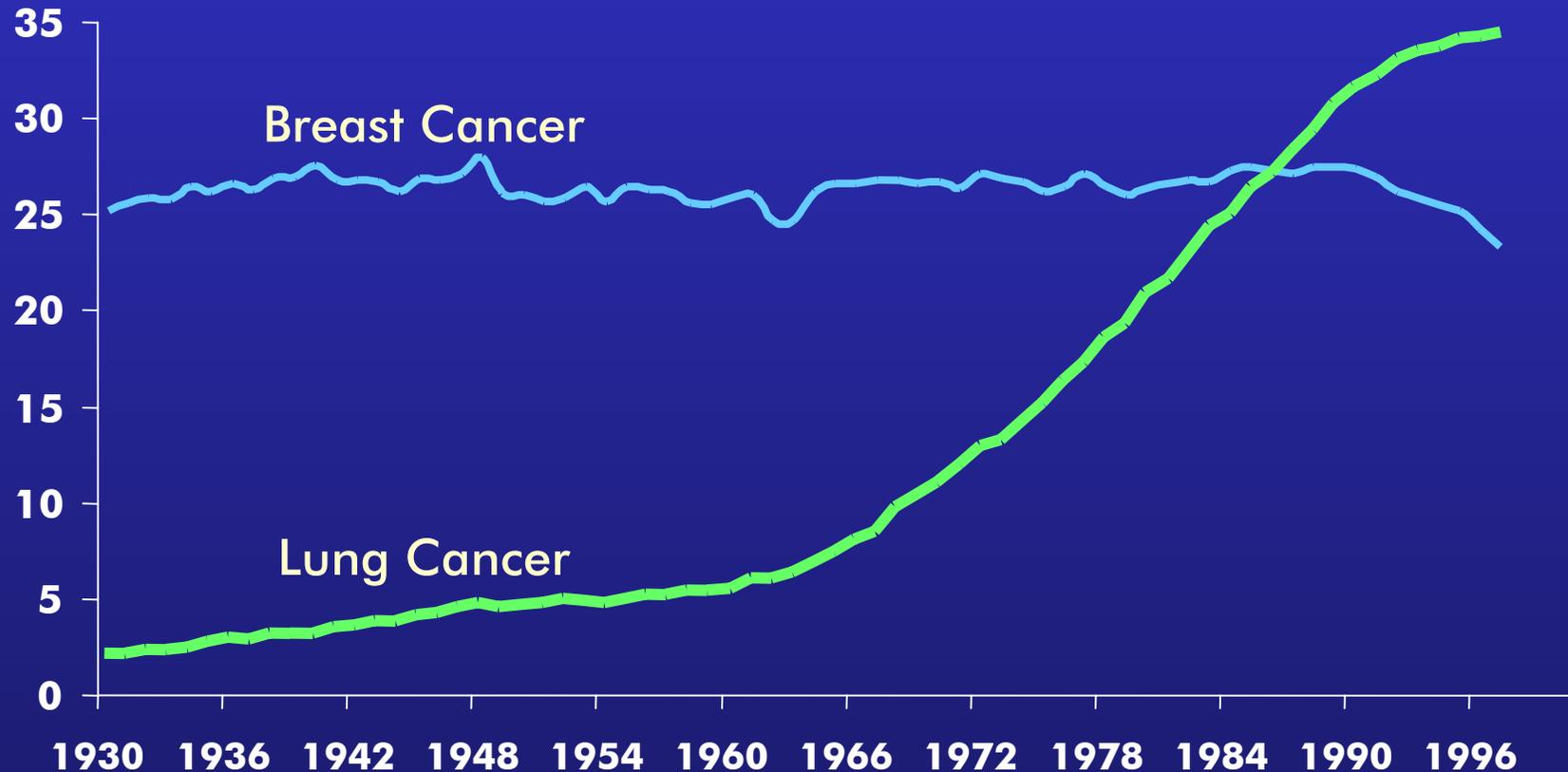
	Age-adjusted Rate**		Average Annual
	1990	1998	% Change
Lung	31.6	34.6	+1.1
Breast	27.4	22.7	-2.3
Colorectal	15.6	13.7	-1.7

* Adapted from MMWR 2002; 51: 49–53

** Per 100,000 1970 standard population



Age-adjusted Death Rates for Lung Cancer and Breast Cancer Among Women, United States, 1930–1997

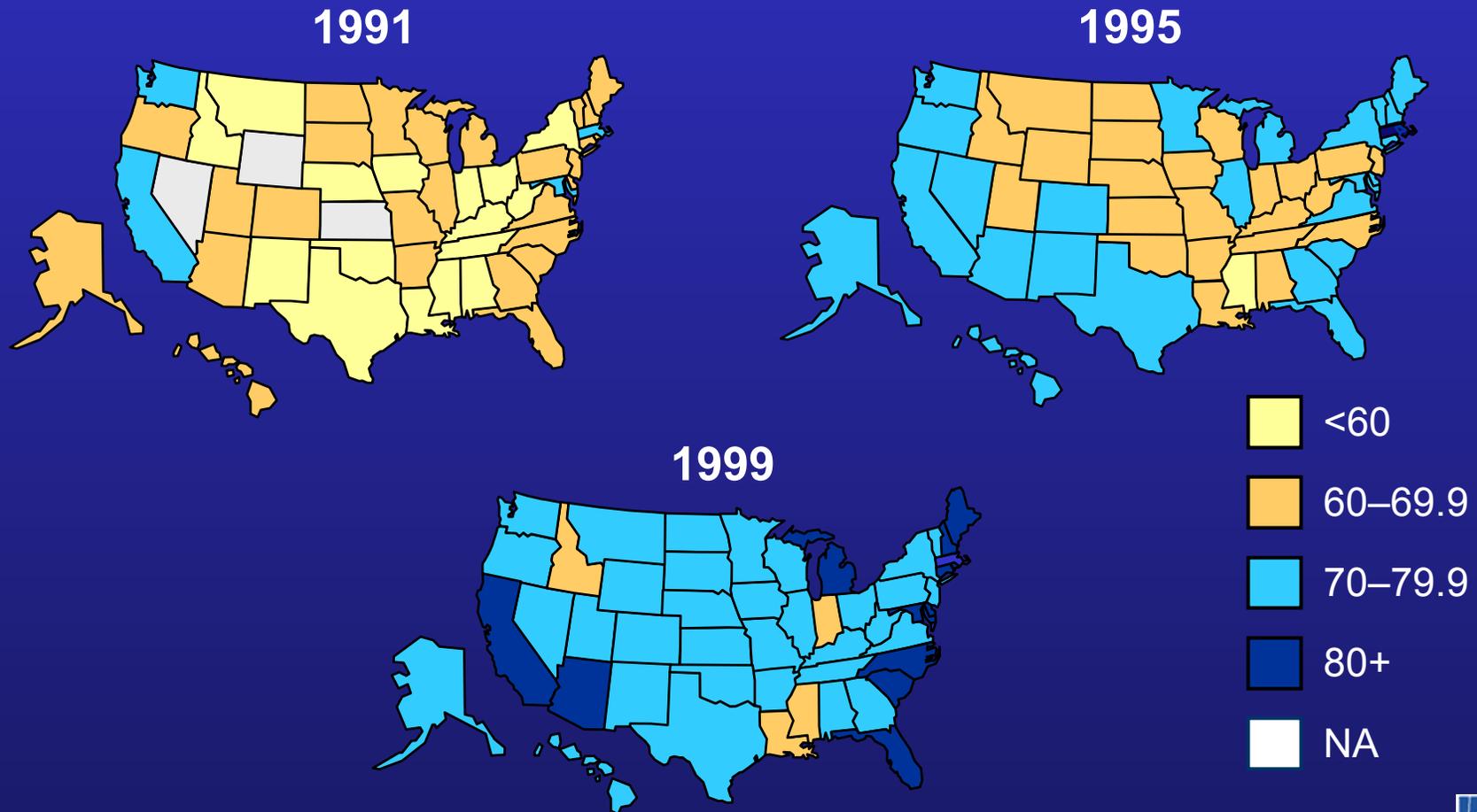


Note: Death rates are age-adjusted to the 1970 population.

Sources: Parker et al. 1996; National Center for Health Statistics 1999; Ries et al. 2000; American Cancer Society, unpublished data.



Percentage of Women 50 Years of Age or Older Who Reported Having Had a Mammogram Within the Past 2 Years, United States

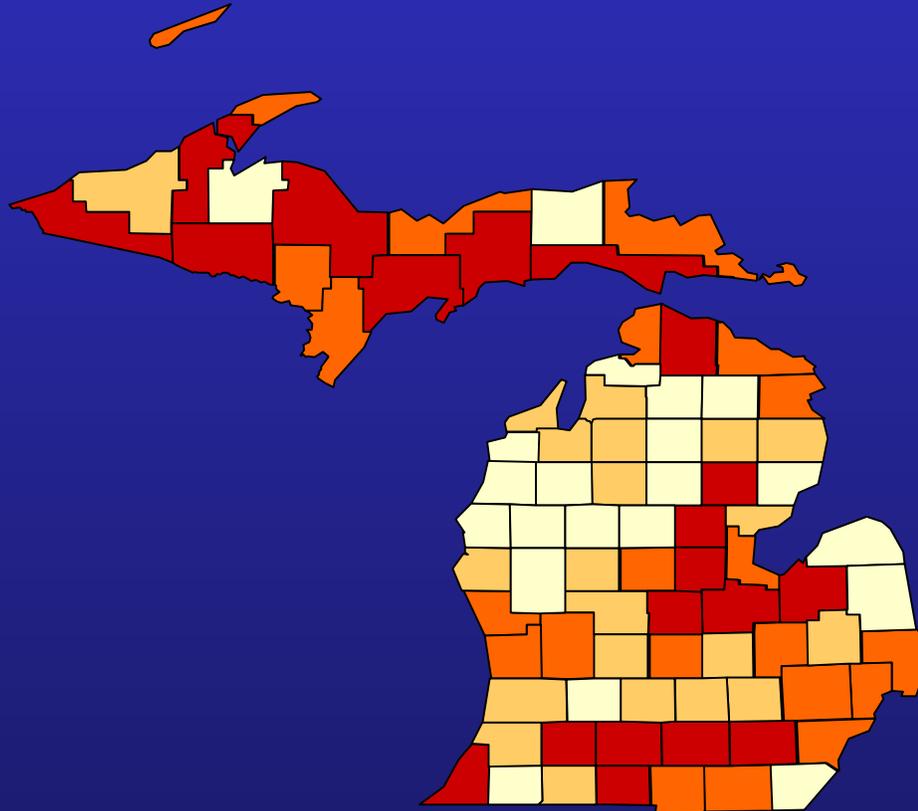
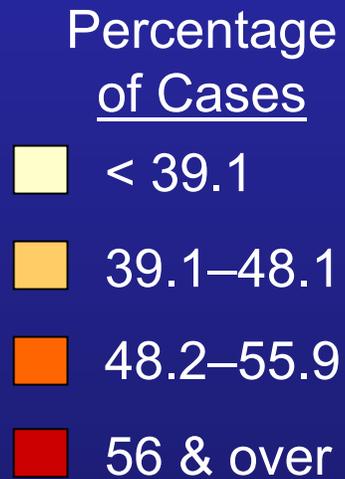


Source: Behavioral Risk Factor Surveillance System



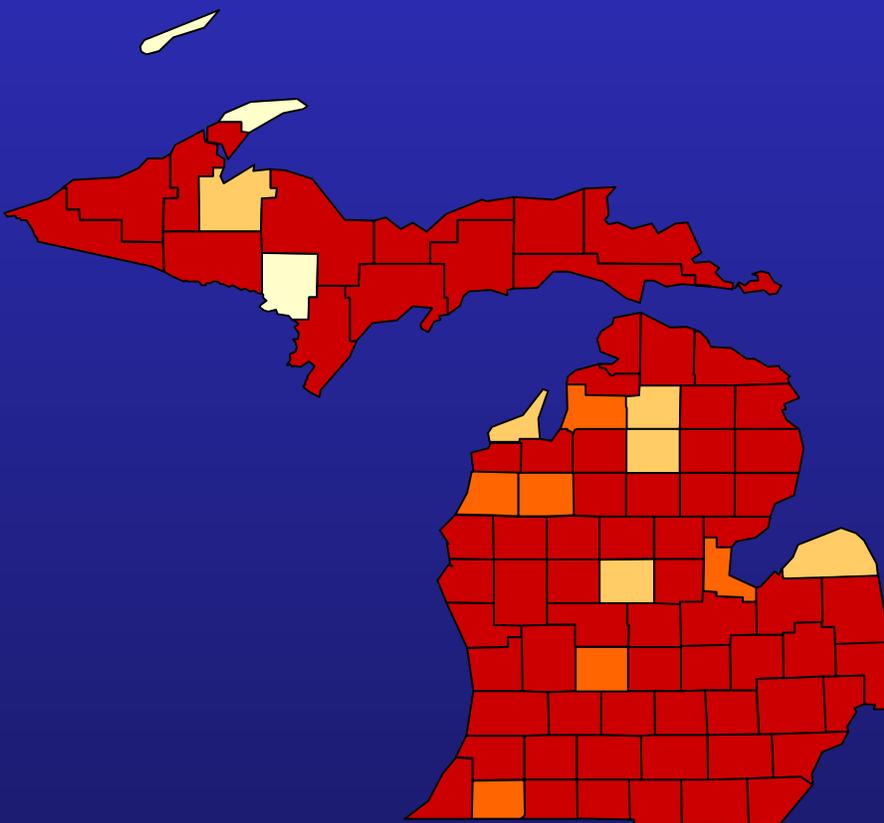
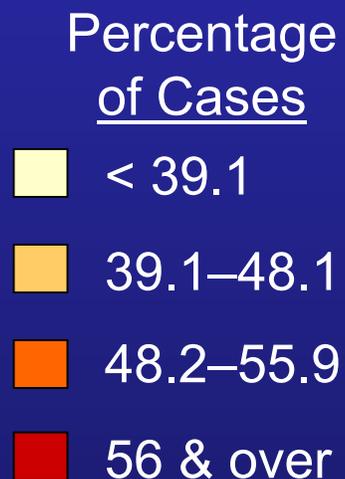
Female Breast Cancer Cases Diagnosed at Early Stage

1985–1987



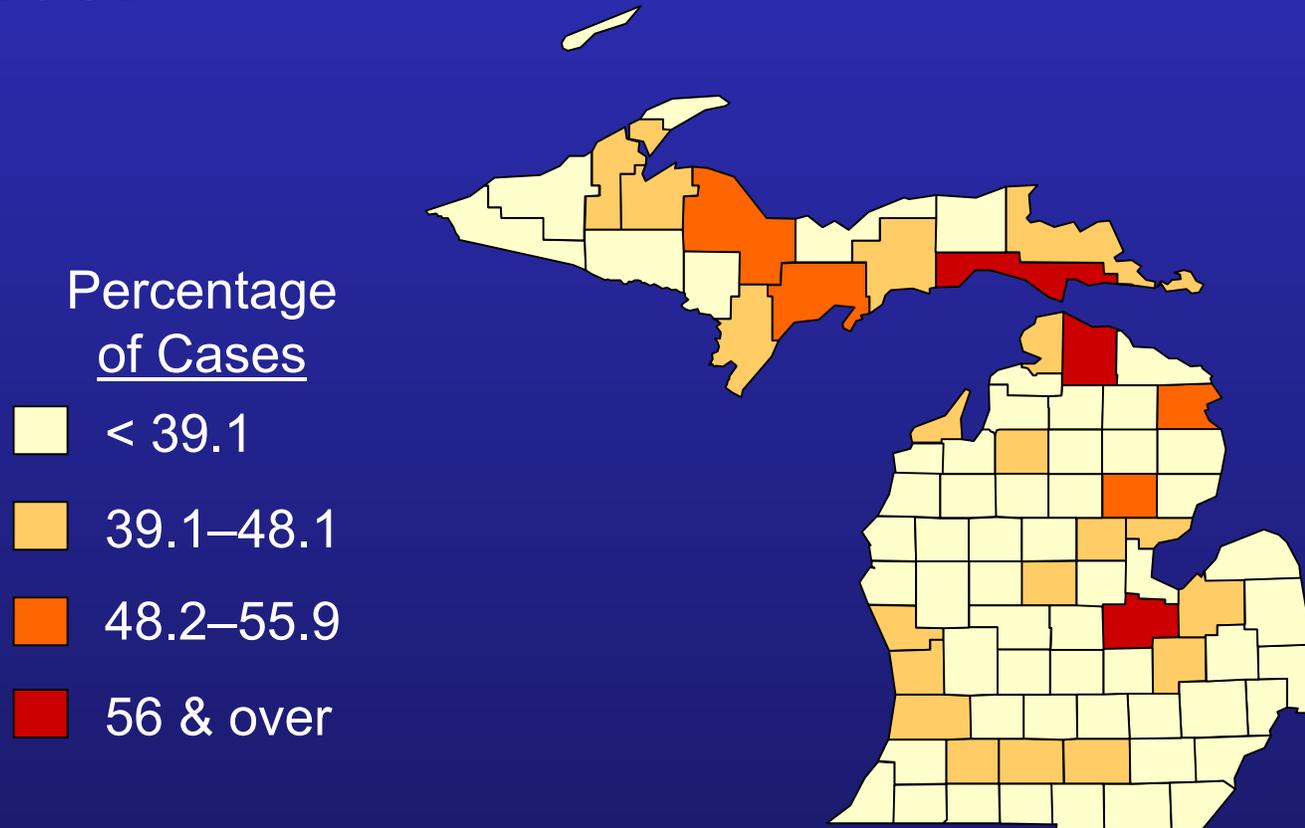
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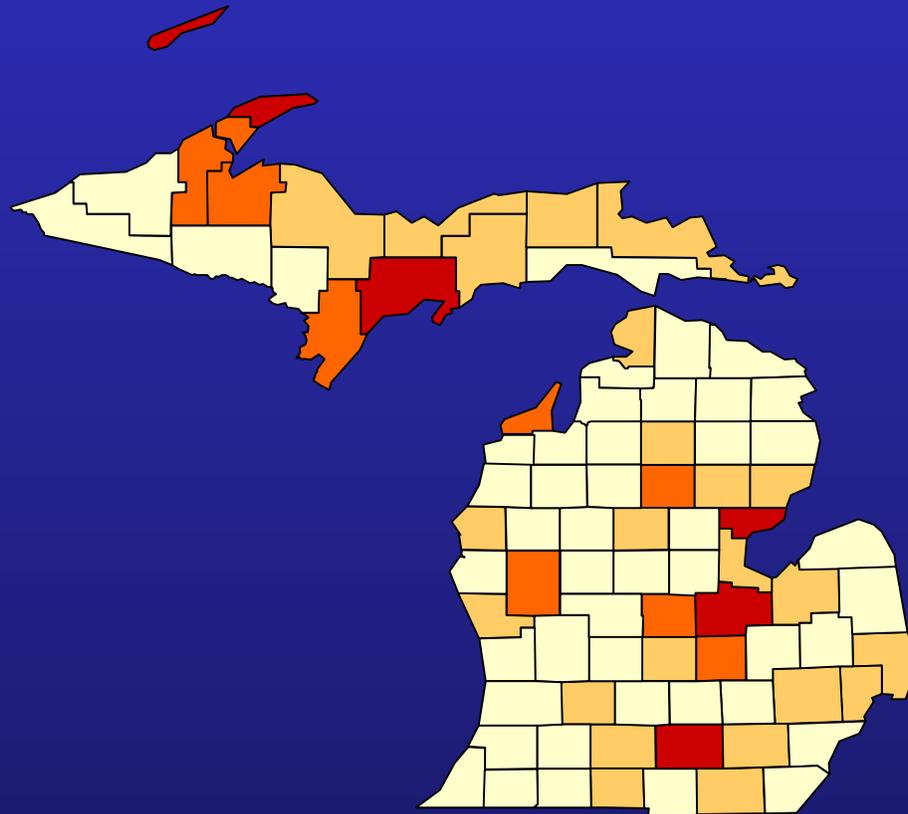
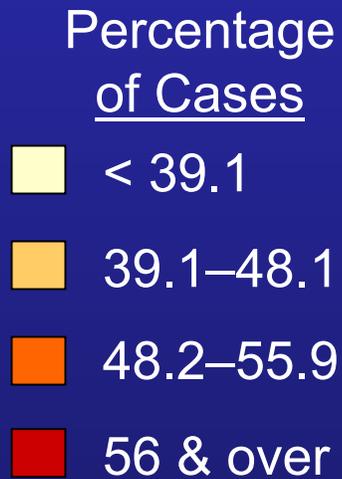
Colorectal Cancer Cases Diagnosed at Early Stage

1985–1987



Colorectal Cancer Cases Diagnosed at Early Stage

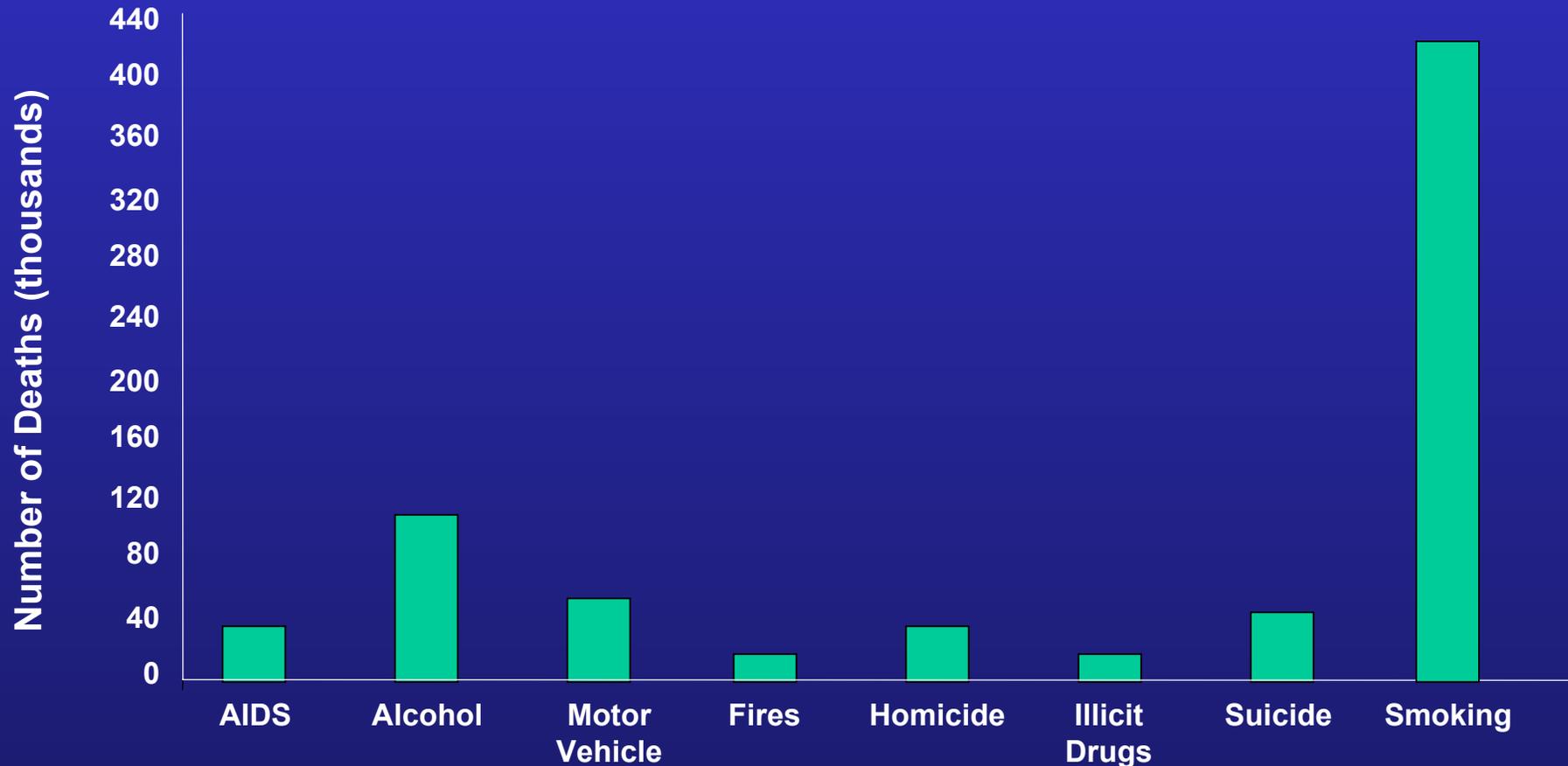
1995–1997



Comprehensive State Cancer Prevention and Control Plans



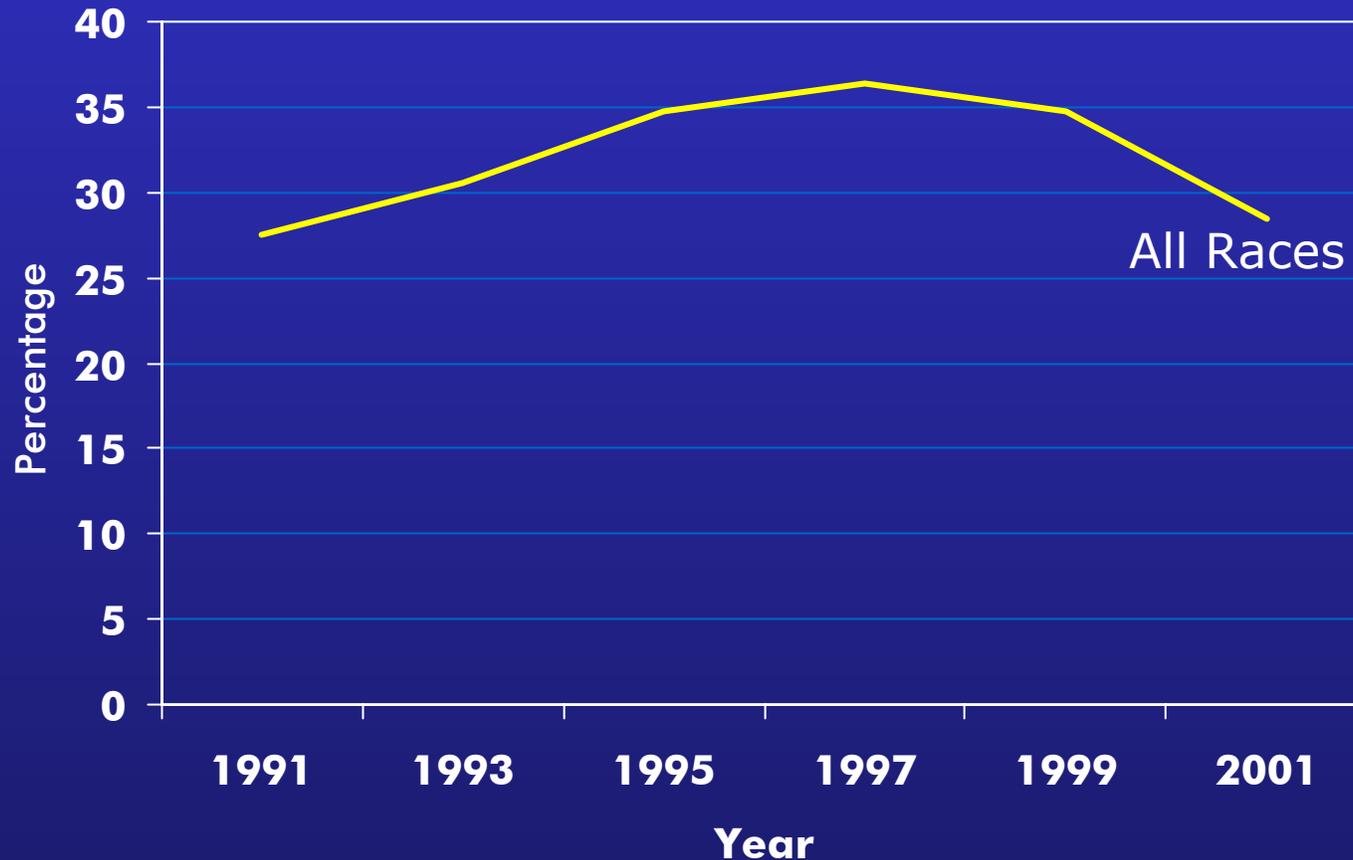
Annual Deaths from Smoking Compared with Selected Other Causes in the United States*



* All mortality data are for 1990, except alcohol, which is for 1987.



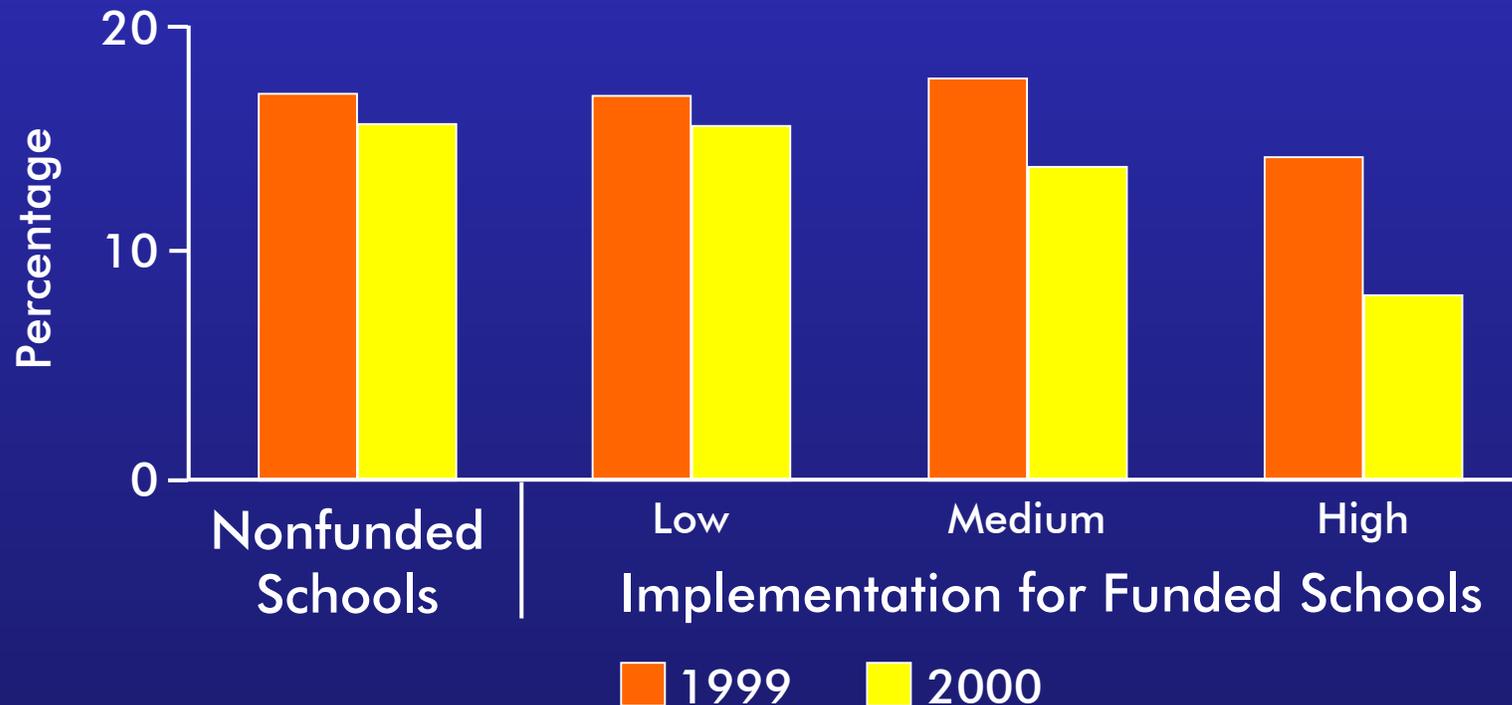
Percentage of High School Youth Who are Current Cigarette Smokers, YRBSS



Source: Adapted for MMWR 2002;51:409–412.
Current Use = self reported use at least 1 of past 30 days.



Percentage of Eighth Grade Students Who Reported Smoking During the Past 30 Days, by Tobacco Use Prevention Program Implementation Scores Oregon, 1999–2000*



*1999 data from Youth Risk Behavior Survey (YRBS) questionnaire, and 2000 data from either the YRBS or the Oregon Public School Drug Use Survey questionnaire.

Source: MMWR 2000; Vol 50: p665.



Arizona

- Adult smoking declined by 21% from 1996 to 1999
- Reductions for males, females, young adults, and Hispanics

California

- Adult prevalence declined at twice the US rate
- Youth Smoking down by 43% from 1995 to 1999

Changes in Youth Cigarette Use and Intentions Following Implementation of a Tobacco Control Program

Findings From the Florida Youth Tobacco Survey, 1998-2000

 Ursula E. Bauer, PhD; Tammie M. Johnson, MPH; Richard S. Hopkins, MD, MSPH; Robert G. Brooks, MD

Context Many states are developing tobacco use prevention and reduction programs, and current data on tobacco use behaviors and how these change over time in response to program activities are needed for program design, implementation, and evaluation.

Objectives To assess changes in youth cigarette use and intentions following implementation of the Florida Pilot Program on Tobacco Control.

Design, Setting, and Participants Self-administered survey conducted prior to program implementation (1998), and 1 and 2 years (1999, 2000) later among a sample of Florida public middle school and high school students who were classified as never users, experimenters, current users, and former users of cigarettes based on survey responses.

Over the two-year period between the first and third surveys, current cigarette use declined by 40% among middle school students and by 18% among high school students.

New

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Fat for Life?

**Six Million Kids
Are Seriously Overweight.
What Families Can Do.**

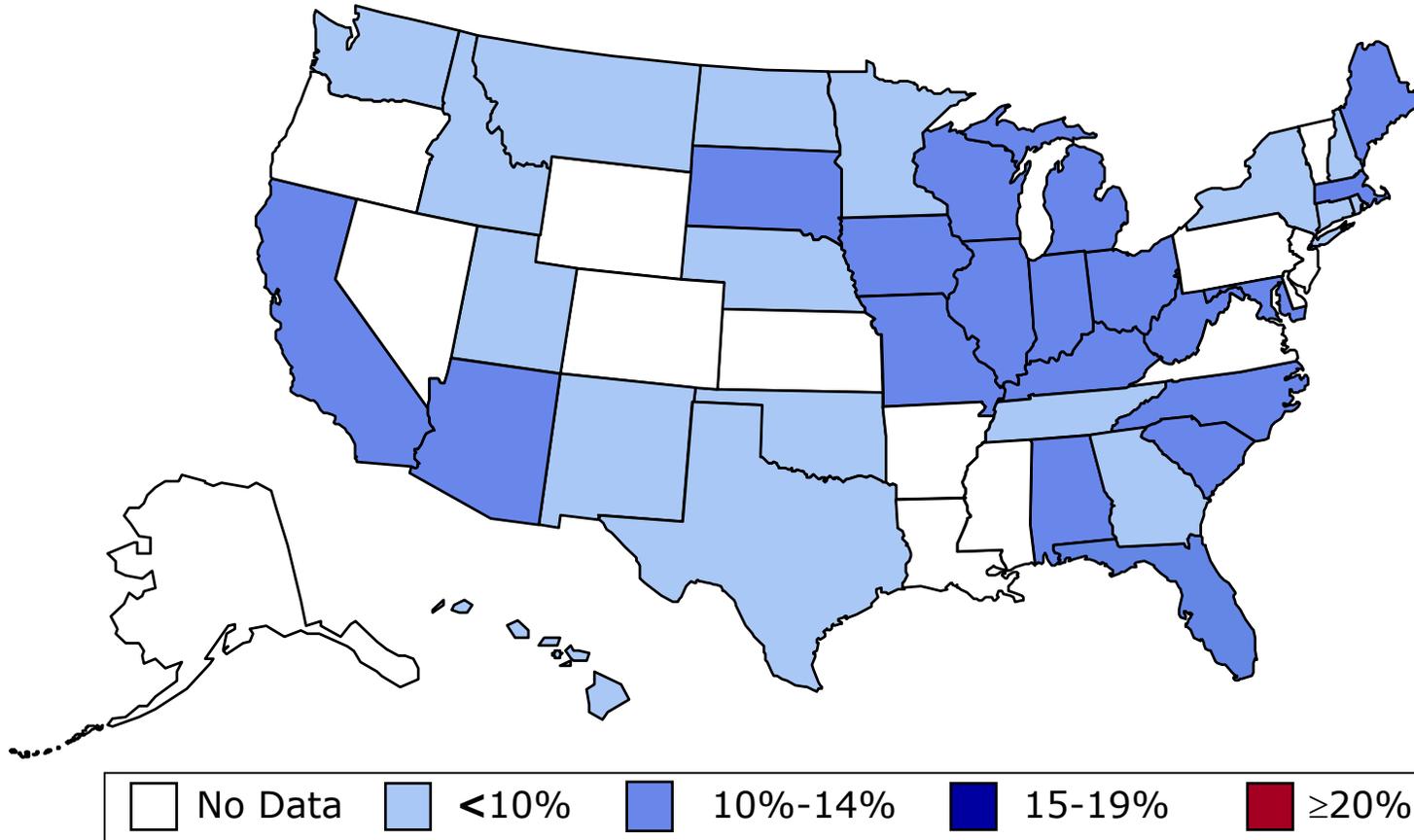
By Geoffrey Cowley & Sharon Begley



Obesity Trends* Among U.S. Adults

BRFSS, 1988

(*BMI \geq 30, or ~ 30 lbs overweight for 5'4" woman)

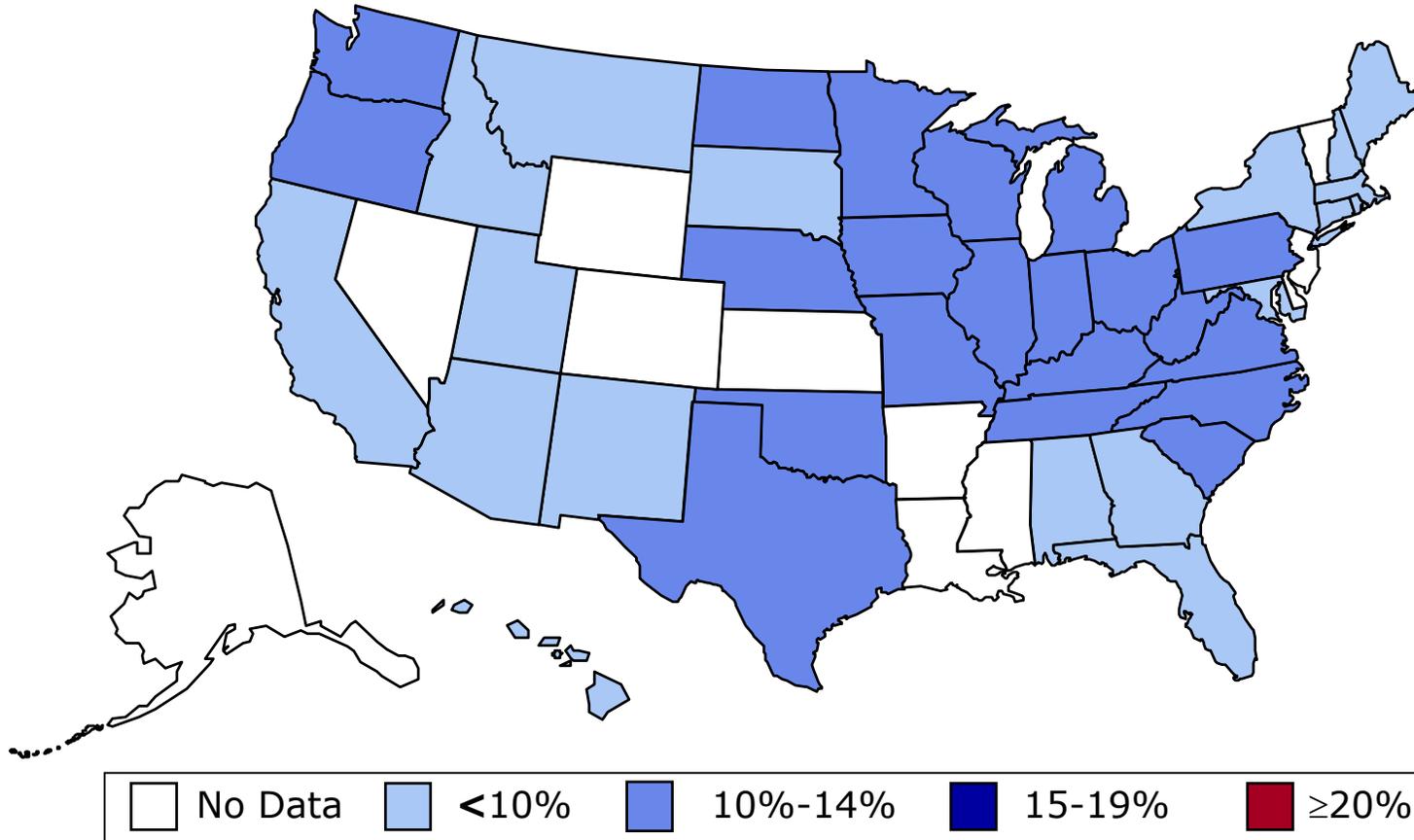


Source: Mokdad A H, et al. *J Am Med Assoc* 1999;282:16, 2001;286:10.

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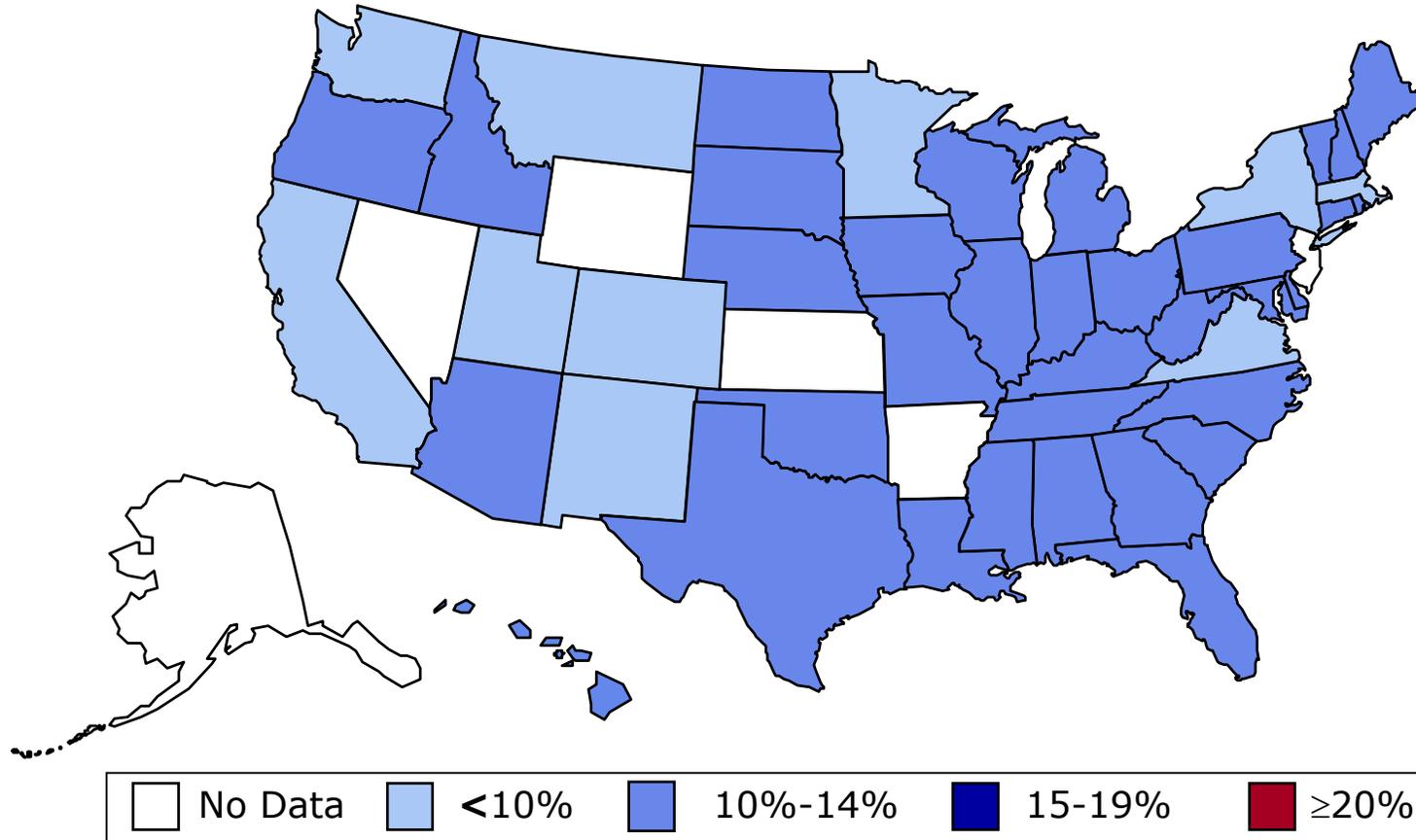


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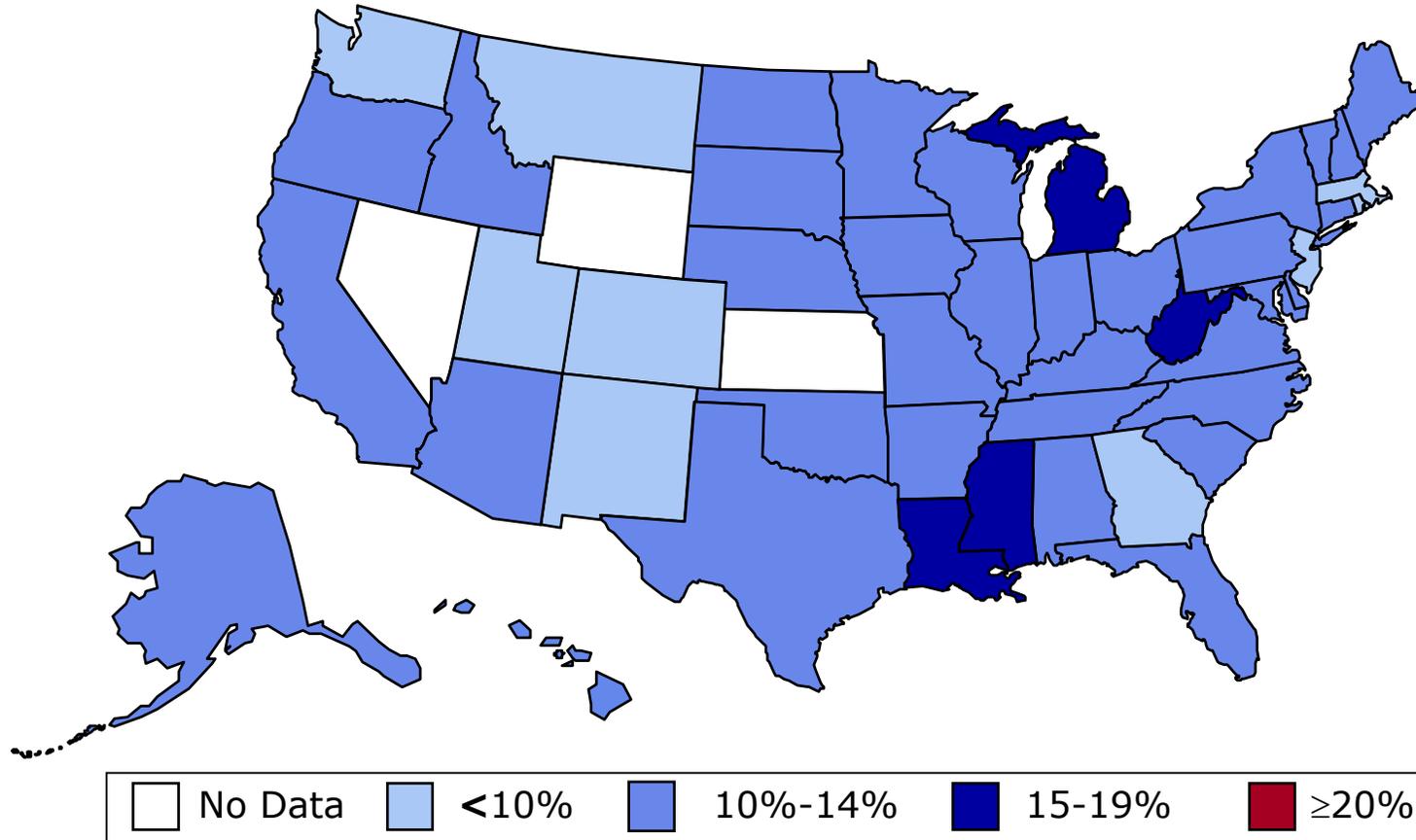


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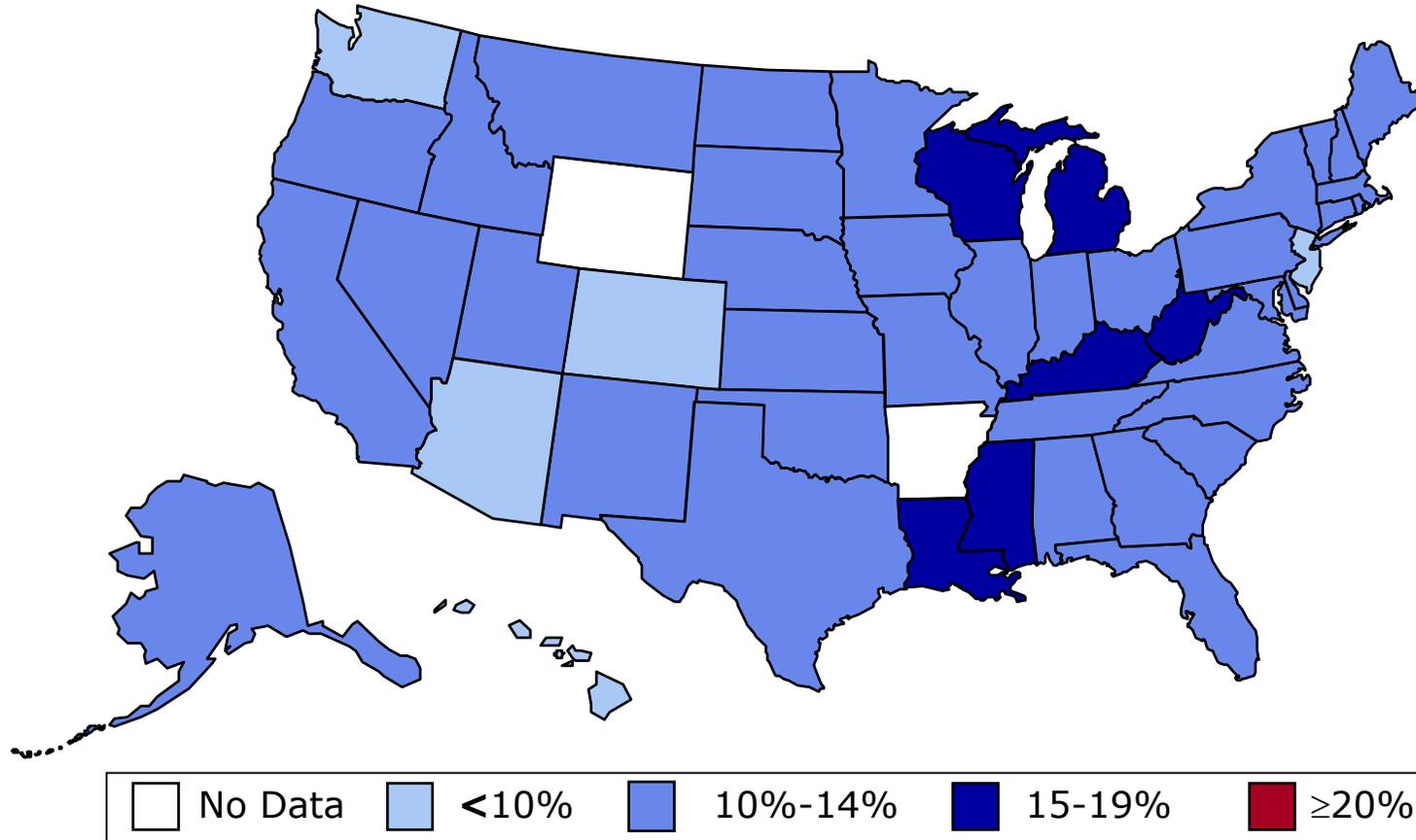


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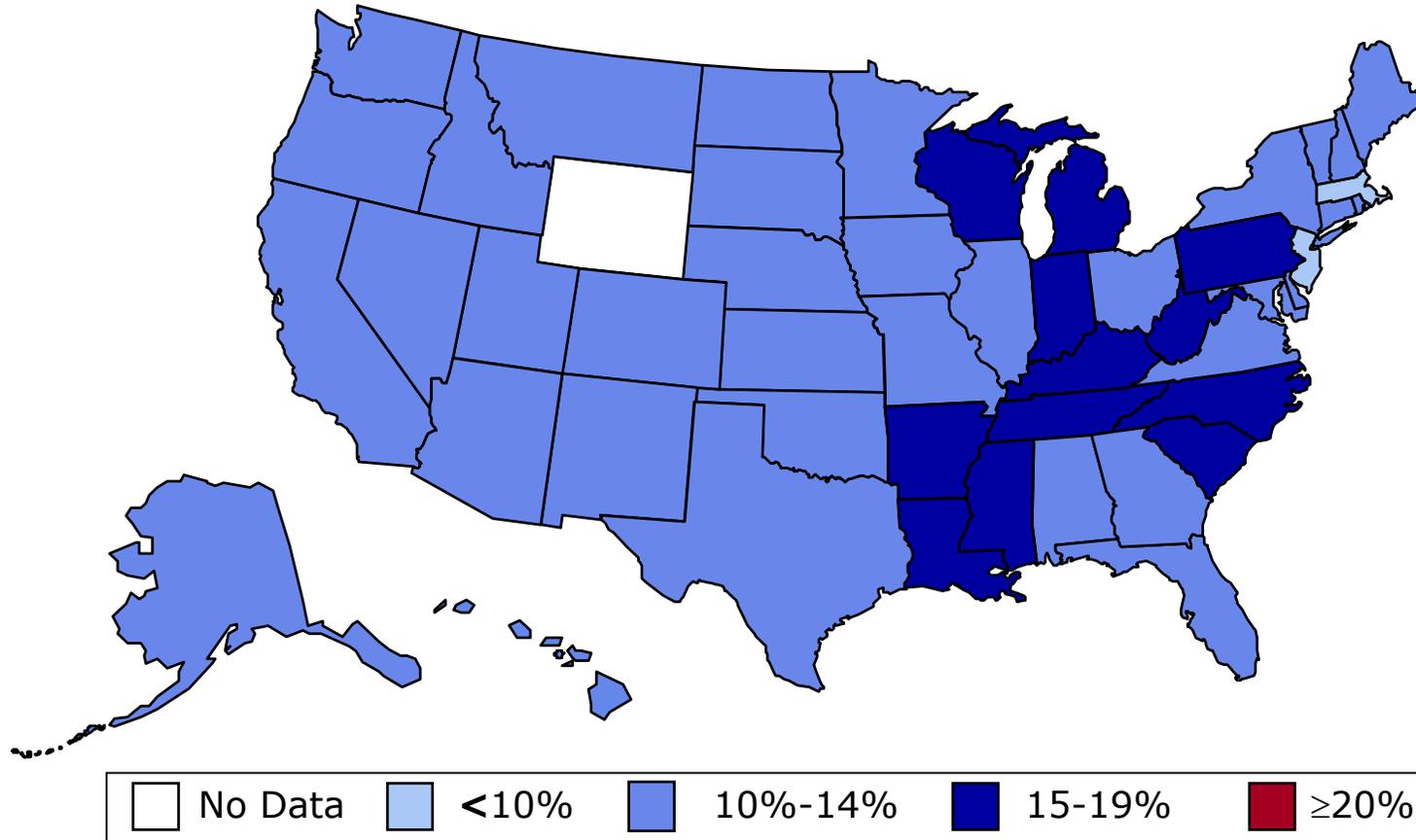


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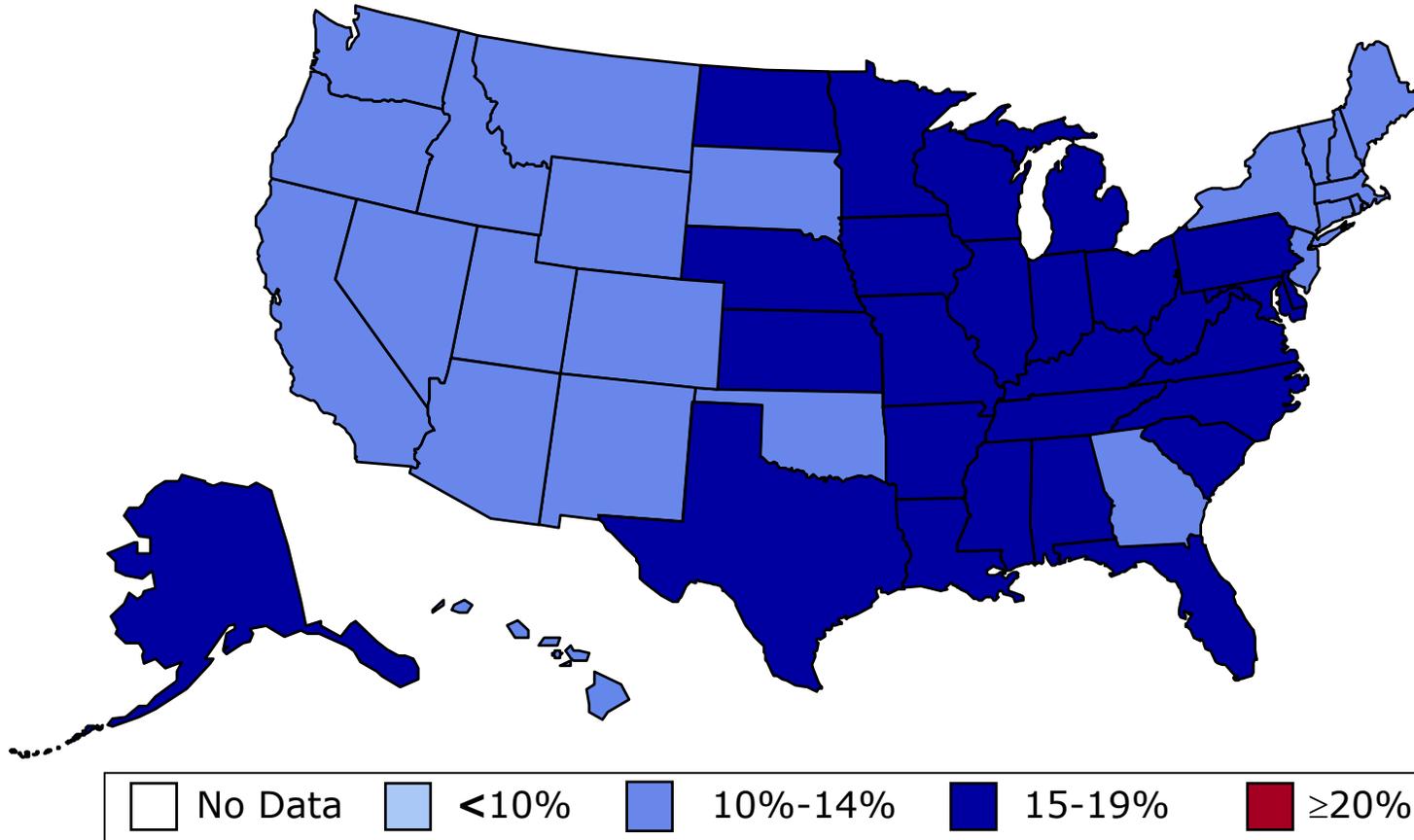


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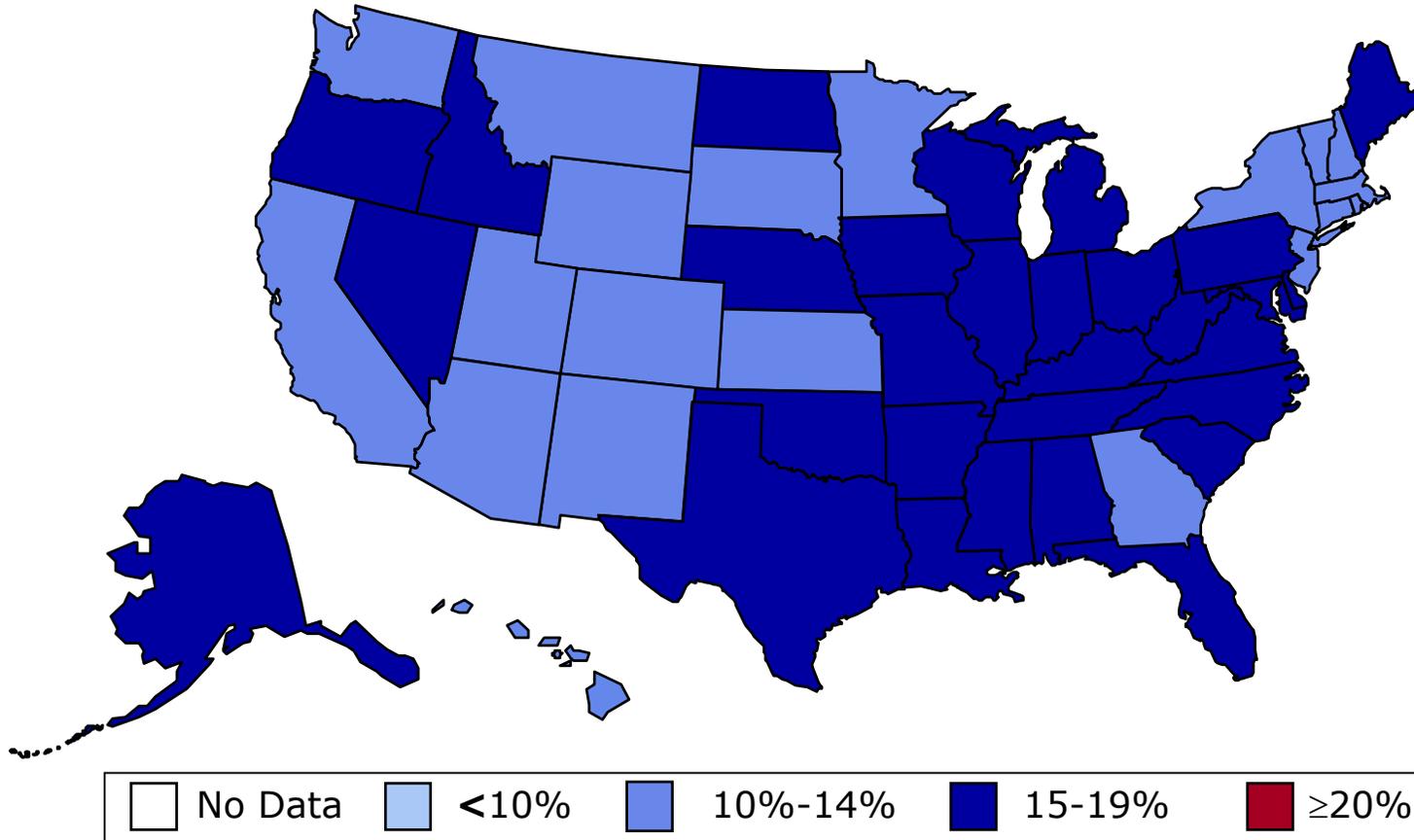


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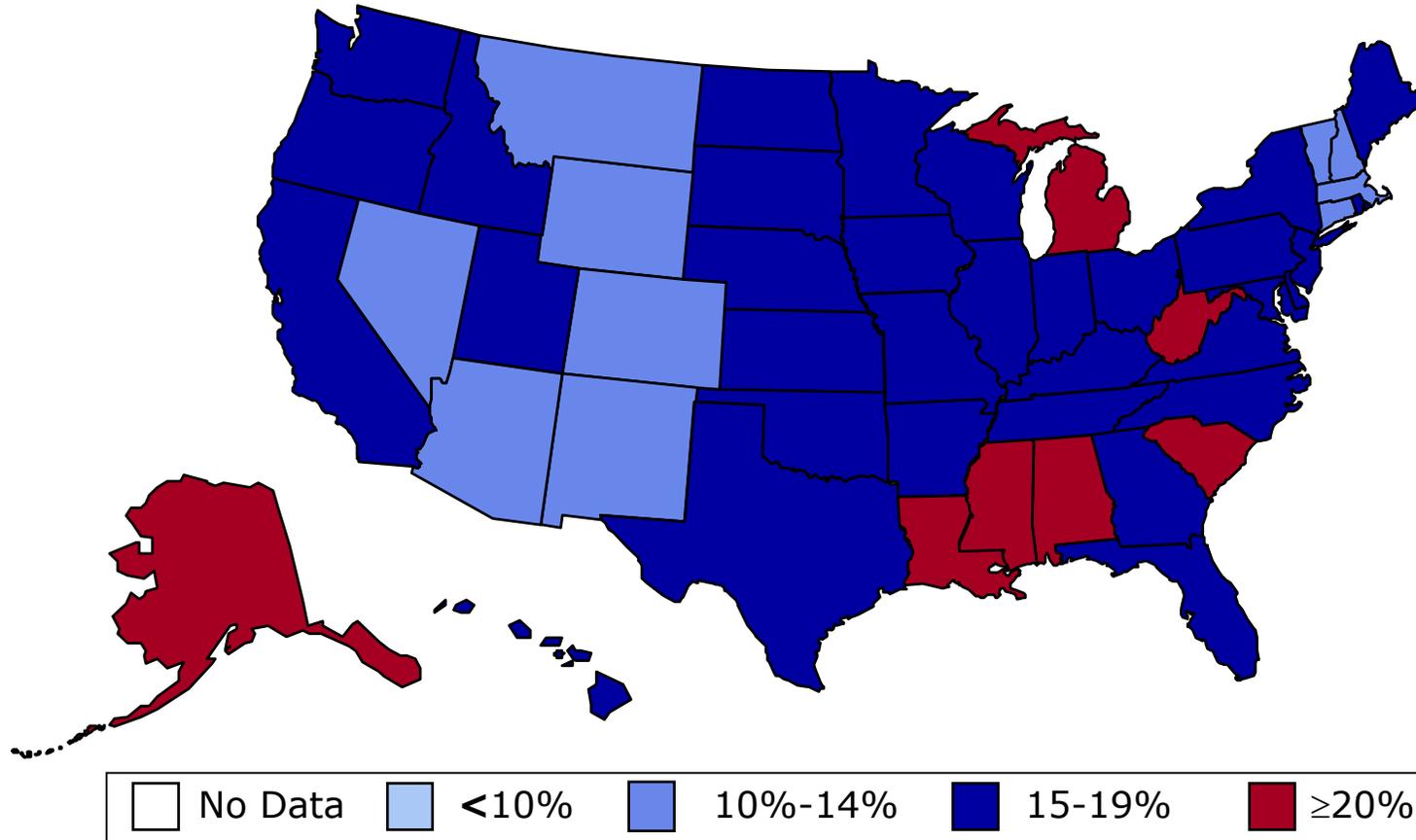


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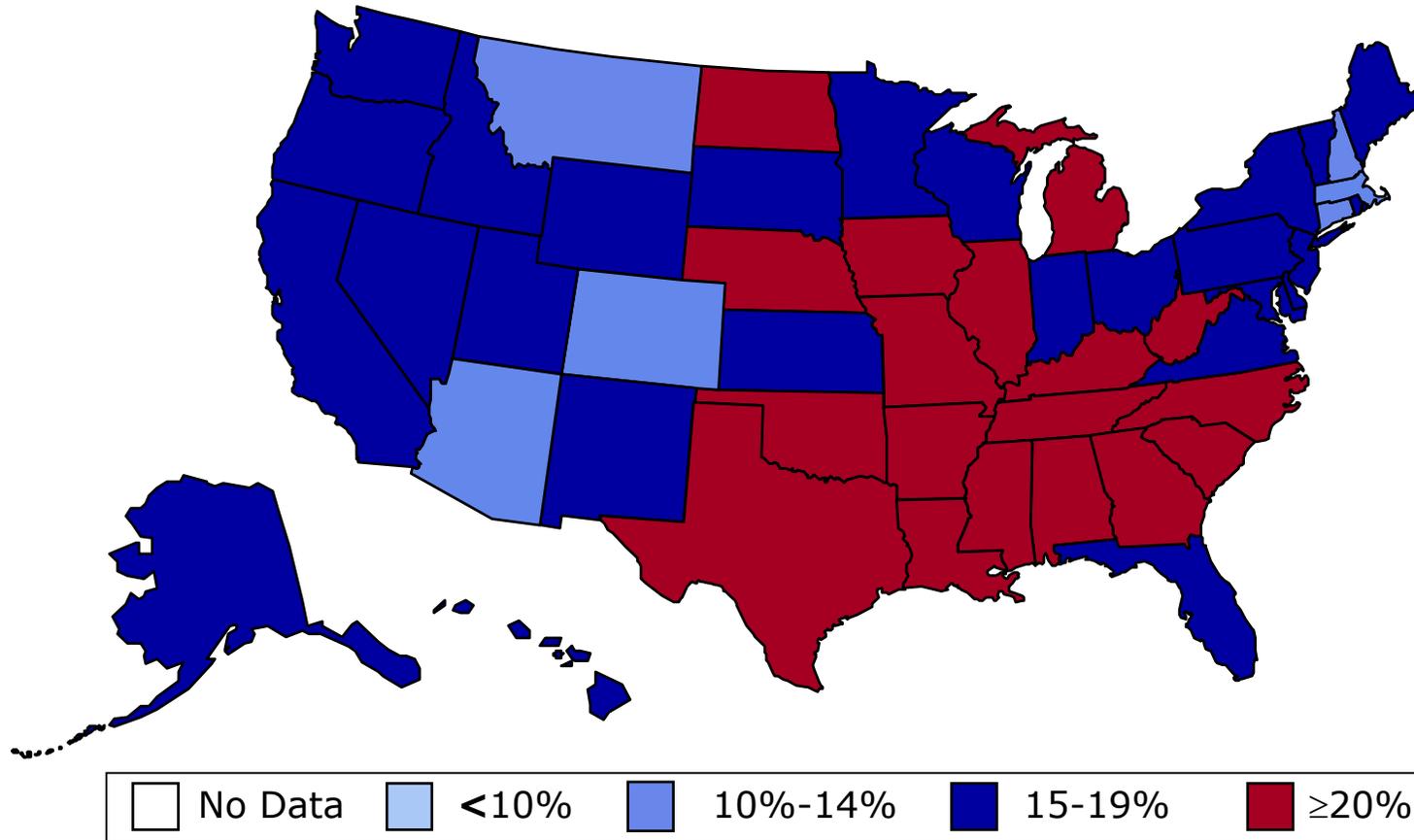


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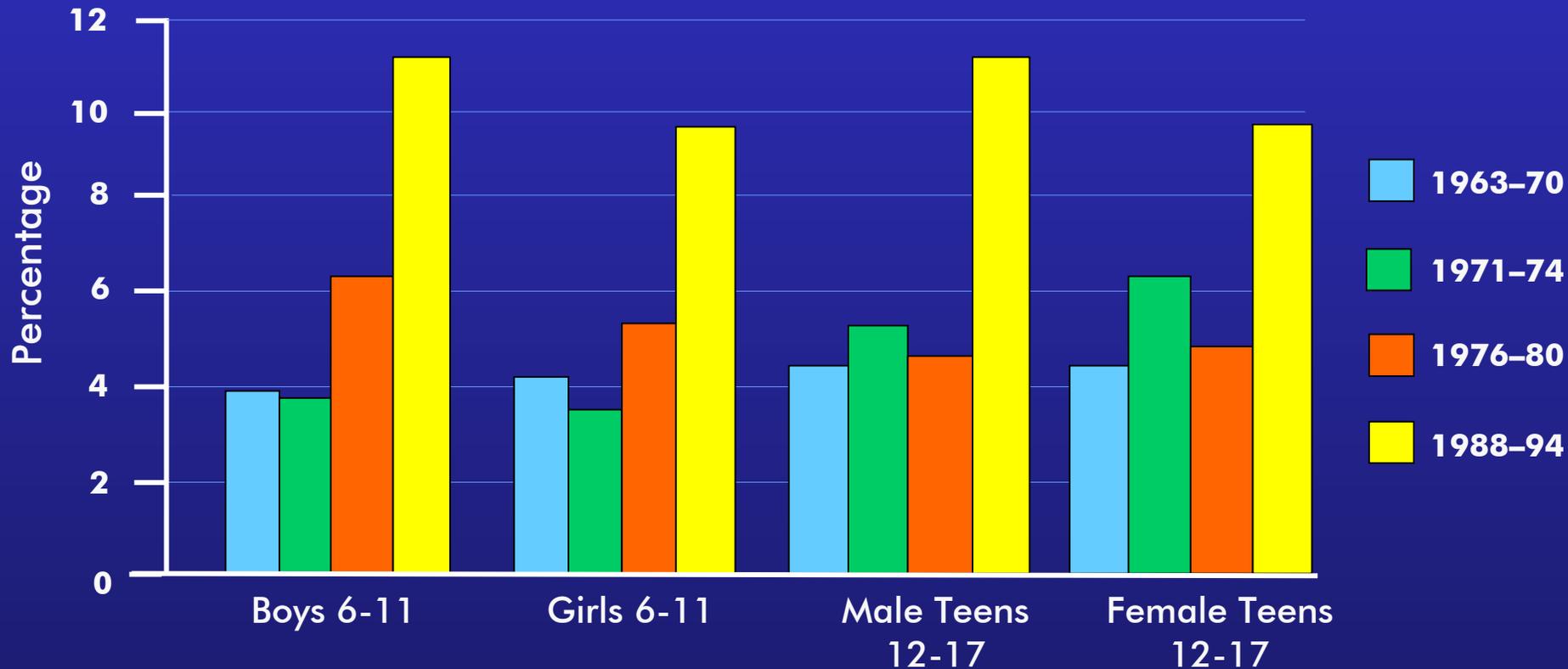
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Percentage of Overweight Children and Teens

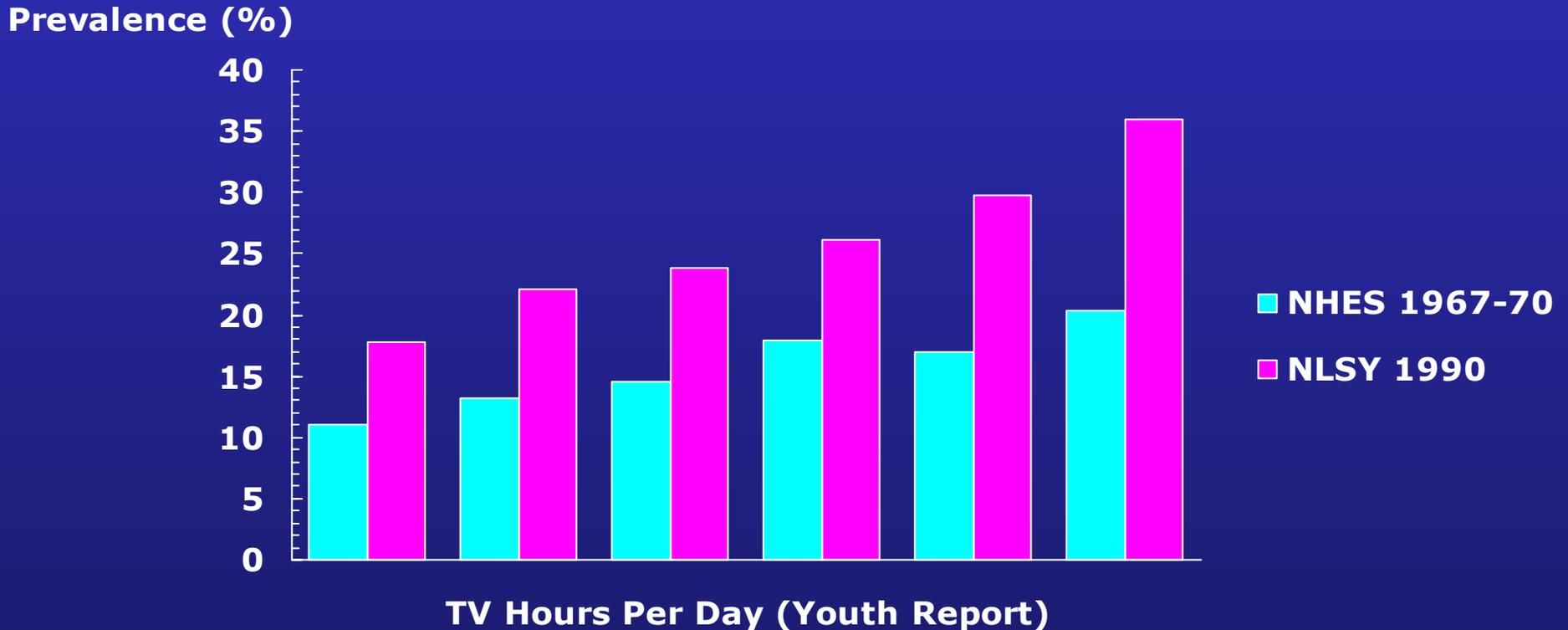


Source: Troiano et al. Pediatrics. 1998; 101;497-504



Prevalence of Obesity by Hours of TV per Day:

NHES Youth Aged 12-17 in 1967-70
and NLSY Youth Aged 10-15 in 1990



The Added Cost of Excess Weight

<u>Disease</u>	<u>Proportion attributable to obesity</u>	<u>Estimated costs (in billions)</u>	
		<u>Direct</u>	<u>Indirect</u>
Type 2 diabetes	61%	\$32.4	\$30.74
Coronary heart disease	17	6.99	N/A
Hypertension	17	3.23	N/A
Gallbladder disease	30	2.59	0.151
Breast cancer	11	0.84	1.48
Endometrial cancer	34	0.286	0.504
Colon cancer	11	1.01	1.78
Osteoarthritis	24	4.3	12.9
Total		\$51.64	\$47.56

Note: Obese was defined as body mass index > 29.

Source: Adapted from Wolf & Colditz. *Obesity Research*, 1998;6:97–106



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SAINTLY
POPE**

DIABETES

It Strikes 16 Million Americans

Are You at Risk?

Computer drawing of a human insulin molecule

SOCIETY

An American Epidemic

Diabetes

The silent killer: Scientific research shows a 'persistent explosion' of cases—especially among those in their prime
BY JERRY ADLER AND CLAUDIA KALB

SHEET WERE STARRING IN A 1997 EPISODE OF THE TV SERIES *ER* when they were being pressured to donate organs to a woman who had lost her kidney. The first symptoms were well known, appearing remarkably across her field of vision, the lines multiplied and merged into a haze that shut out light entirely. "The blood was like a thick, hot, red ooze," says her daughter, Janette Roman, a Chicago college student. "I noticed she was in her late 40s when the problem began four years ago, was a cleaning woman, but she'd had to stop working. After the surgery, she had irregular vision in one eye, but the vision in completely gone. A few weeks ago, everything was right in a lens treatment, she walked into a doctor, ending off a prescription of pain and nausea that hasn't let up yet. And what caused this catastrophe? She was nothing so much as a person who was working overtime. What was putting her through it was stress."



ILLUSTRATION BY JAMES H. HARRIS

0114

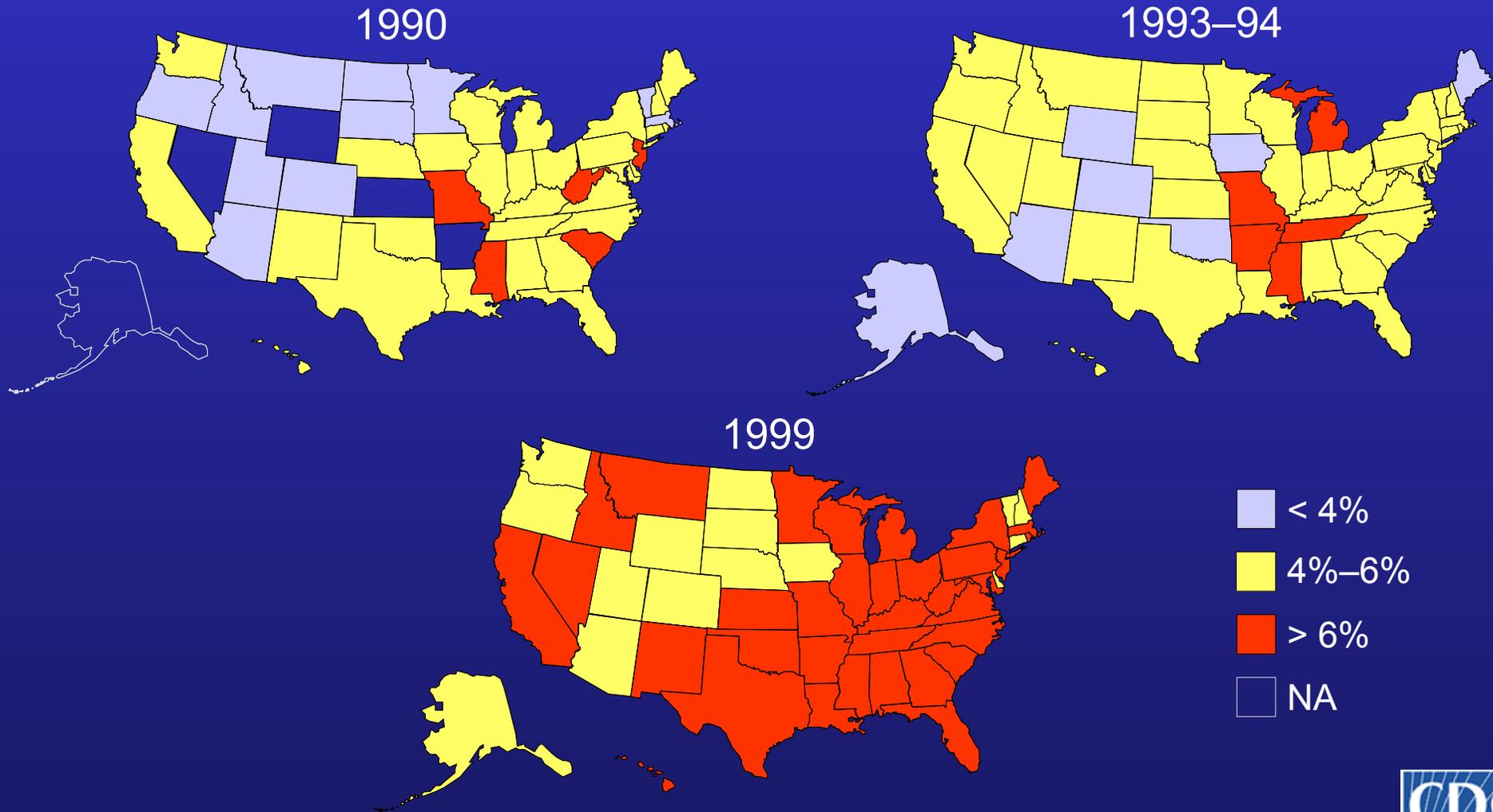


Heredity

Genes help determine whether you'll get diabetes. In many families, multiple generations are struck. But heredity is not destiny—especially if you eat well and exercise.



Trends in the Prevalence of Diagnosed Diabetes and Gestational Diabetes Among U.S. Adults



Source: Behavior Risk Factor Surveillance System



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Health & Science

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Walking, dropping weight cuts diabetes risk in half

By Anita Manning, USA TODAY

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Researchers have stopped a large diabetes-prevention study a year ahead of schedule because it became clear that what they suspected is true: Moderate exercise and diet changes can reduce the chance of developing the most common form of diabetes, even in people at highest risk.

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The study, whose early termination was announced Wednesday by Health and Human Services Secretary Tommy Thompson, also found that treatment with the insulin-sensitizing drug metformin reduces the risk of type 2 diabetes, though to a lesser degree.

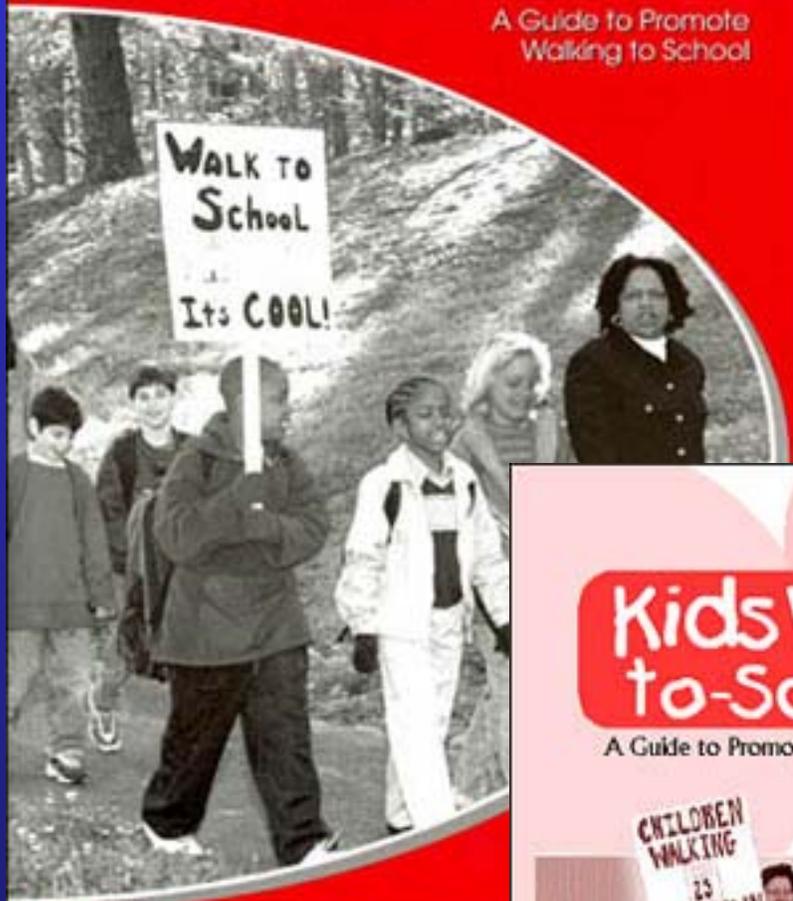
More on diabetes

- [Diabetes Q&A](#)
- [Complications come with a high price](#)
- [Index to archived stories](#)



KidsWalk-to-School

A Guide to Promote Walking to School



Department of Health
Centers for Disease

KidsWalk-to-School

A Guide to Promote Walking to School



KidsWalk-to-School: A Guide to Promote Walking to School - Microsoft Internet Explorer

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KidsWalk-to-School

 **Max**

A Guide to Promote Walking to School.

To support the national goal of better health through physical activity, CDC's Nutrition and Physical Activity Program has developed KidsWalk-to-School. This is a community-based program that aims to increase opportunities for daily physical activity by encouraging children to walk to and from school in groups accompanied by adults.

At the same time, the program advocates for communities to build partnerships with the school, PTA, local police department, department of public works, civic associations, local politicians, and businesses to create an environment that is supportive of walking and bicycling to school safely. By creating active and safe routes to school, walking to school can once again be a safe, fun, and pleasant part of children's daily routine.

The goals of KidsWalk-to-School are to

- Encourage children to walk and bicycle to and from school.
- Increase awareness of the importance of [regular physical activity](#) for children, [improved pedestrian safety](#), and healthy and walkable community



Internet



Forty percent of people with access to trails report using them
Walking trails improve community fitness

BUILDING community walking trails can lead to more exercise among residents and reach people who may otherwise be inactive, a study found.

Researchers examining the effect of walking trails in rural Missouri counties found that half of users surveyed said they had increased their walking since the trails were improved or built. Walkers with a high school education or less were more than twice as likely to have increased their walking since they began using the trails, which were enhanced as part of a community-based health intervention.

"Walking trails may be beneficial in promoting physical activity among segments of the population



The addition of walking trails can promote physical activity, especially among women, a study found.

can Journal of Preventive Medicine, focused on 12 southeastern Missouri

located primarily in residential parks. Among people who had access to the

The addition of walking trails can promote physical activity, especially among women.

Before

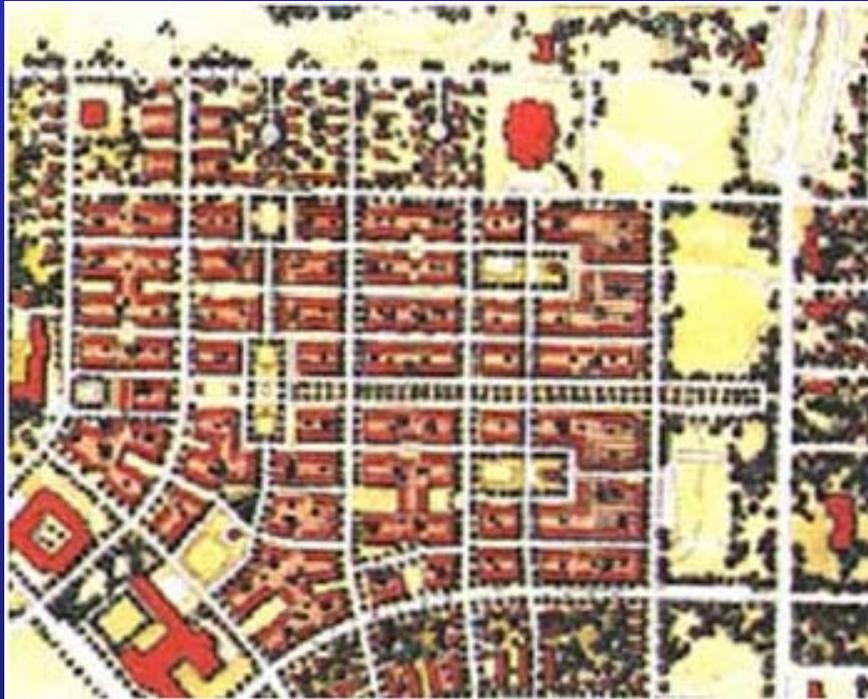




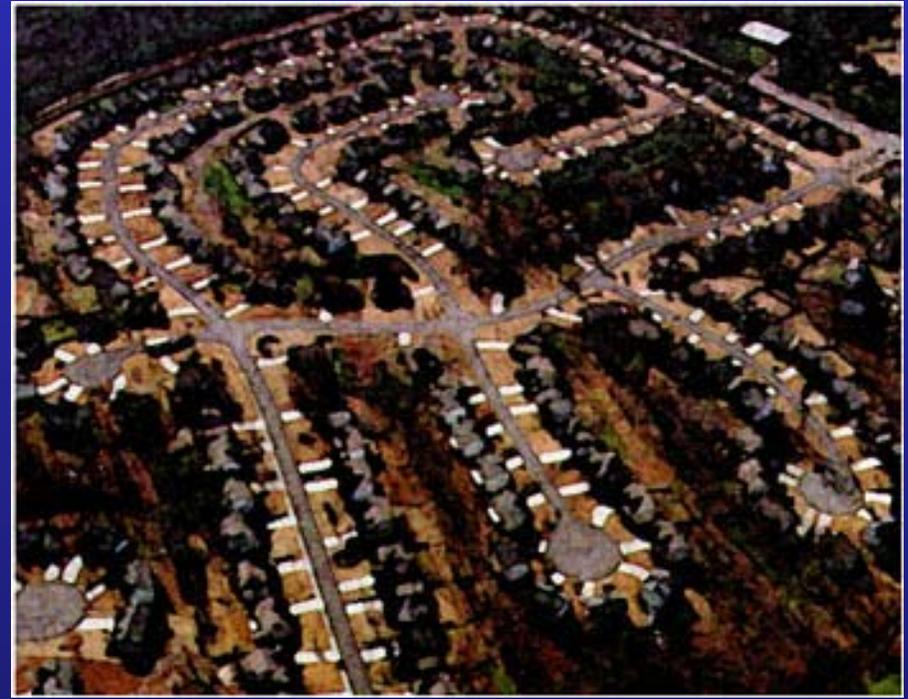
Phase 2: Winter, 1998 *framed pictures*

Community Structure and Physical Activity

then ...

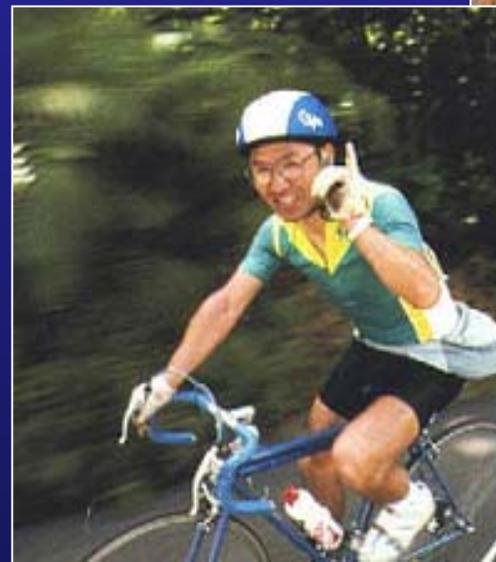
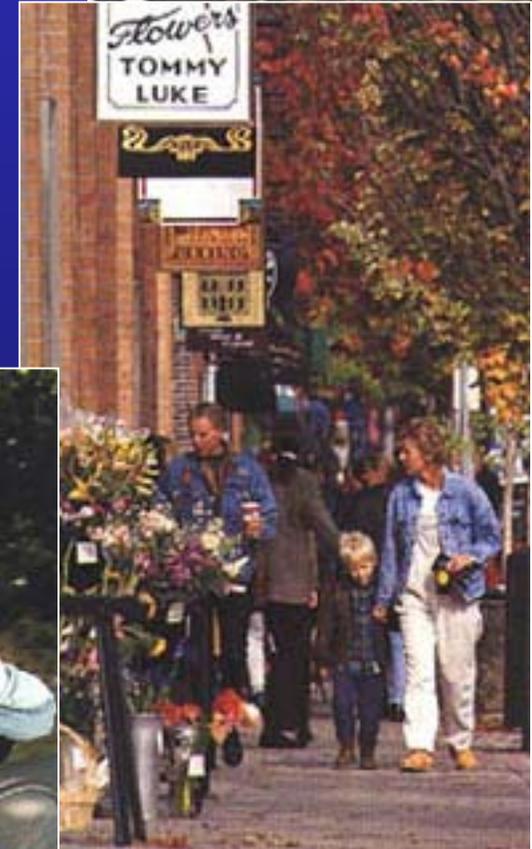


now ...



Community-based Approaches

- Communications
- Community programs
- Environmental change
 - Sidewalks and bicycle trails
 - Parks and recreational facilities
 - Neighborhood safety
 - Building design
 - Urban planning



Social Security, Medicare systems facing possible crisis as baby boomers grow old

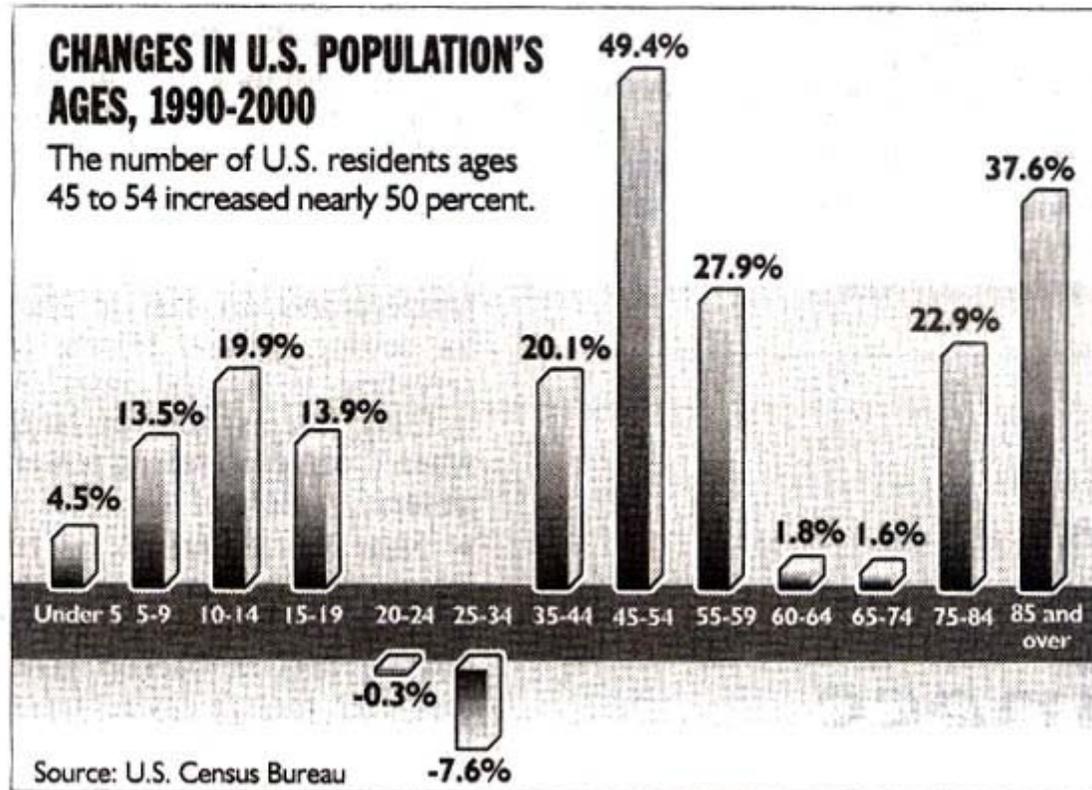
By CHERYL SEGAL
csegal@ajc.com

Washington — Efforts to revamp Social Security and Medicare are coming none too soon, new census data made clear today.

They show that within 10 years, America's middle-aged baby boomers will begin bearing down on retirement systems, health care and other services for senior citizens. Mass retirements could also cause a labor shortage, analysts say.

The number of Americans aged 45 to 54 grew by almost half over the past decade to just under 38 million, according to detailed numbers from the 2000 census. Those working will start retiring in 2011.

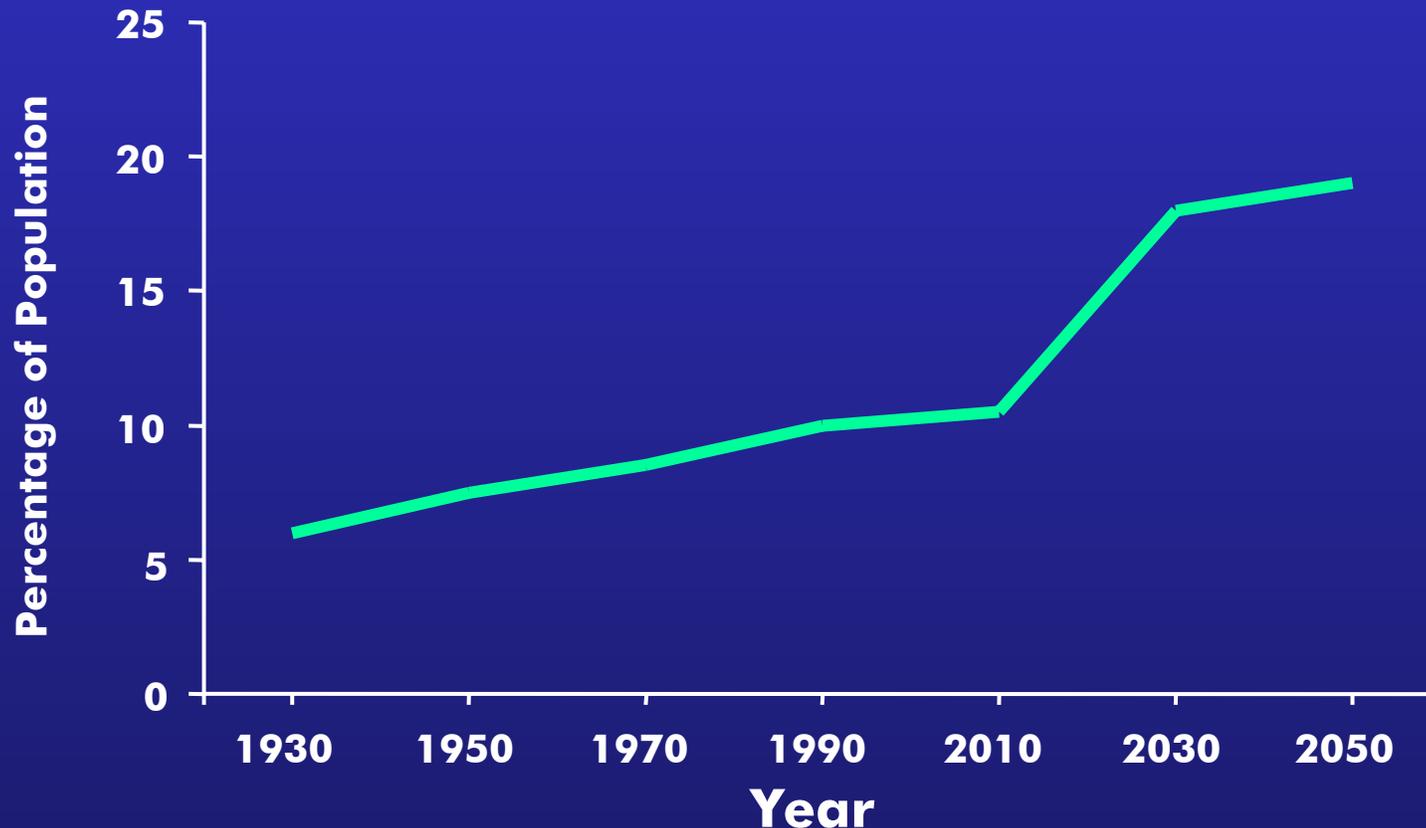
But the baby boom's second



CHUCK BLEVINS / Staff

An Aging Population

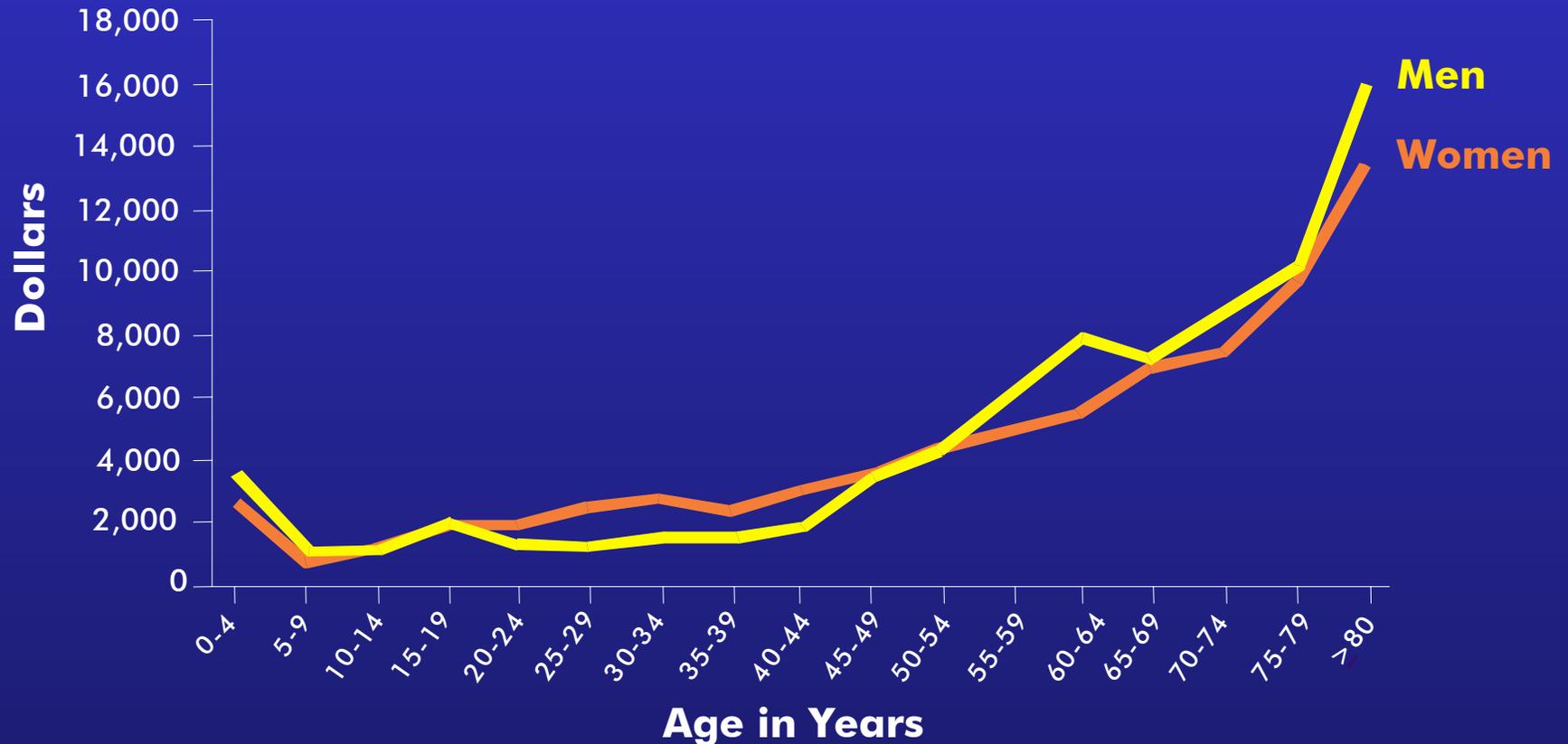
Percentage of U.S. Population over Age 65



Source: From Baby Boom to Elder Boom: Providing Health Care for an Aging Population
Copyright 1996, Watson Wyatt Worldwide.



Estimated Per Capita Health Expenditures by Age and Sex, 1995



Source: From Baby Boom to Elder Boom: Providing Health Care for an Aging Population
Copyright 1996, Watson Wyatt Worldwide.



Growth in National Health Expenditures 1980–2000

	1980	1993	1998	2000	2011*
Total NHE (B)	246	888	1150	1300	2815
Nursing Home and Home Health Costs (B)	20	88	123	125	237
Per Capita Costs (\$)	1067	3371	4177	4637	9216
% of GDP	8.8	13.4	13.1	13.2	17.0

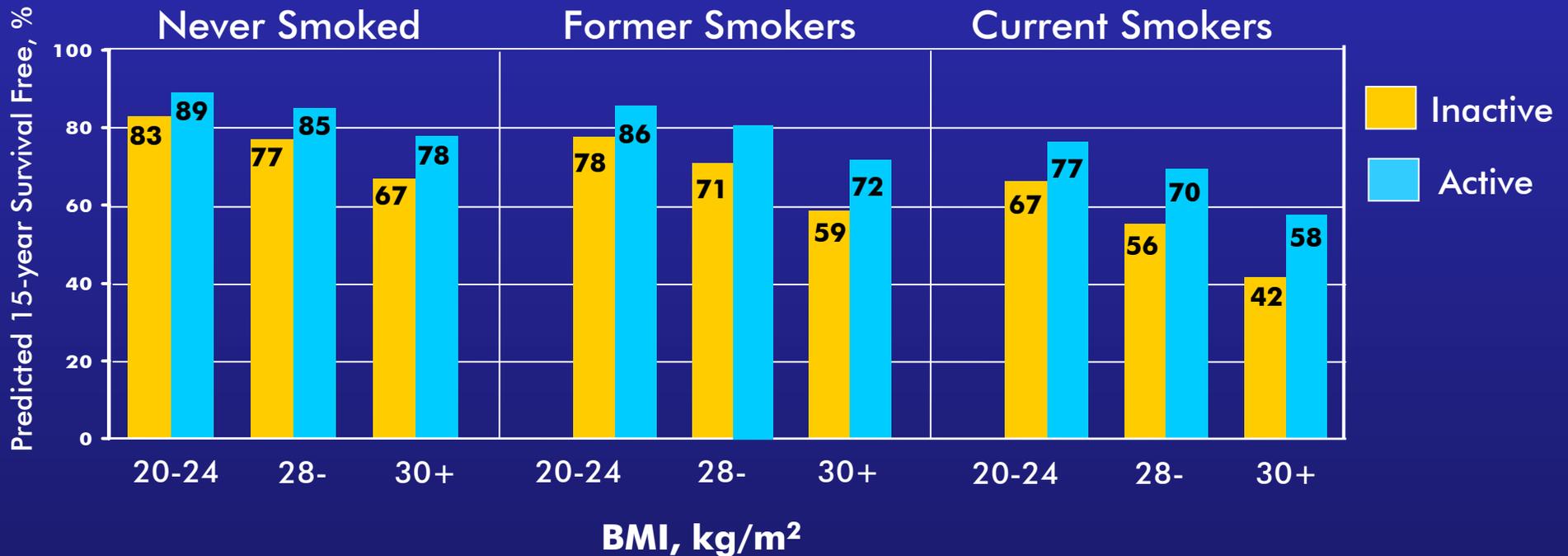
Source: Levit et al. Health Affairs 2002;21:172–181.

*Projection from Heffler et al. Health Affairs 2002;21:207–218.



Predicted Likelihood of Developing Coronary Heart Disease, Stroke or Diabetes by Age 65

Men, Aged 50



Source: Jones et al., Arch Intern Medicine, 1998; Vol 2436



Predicted Likelihood of Developing Coronary Heart Disease, Stroke or Diabetes by Age 65

Men, Aged 50

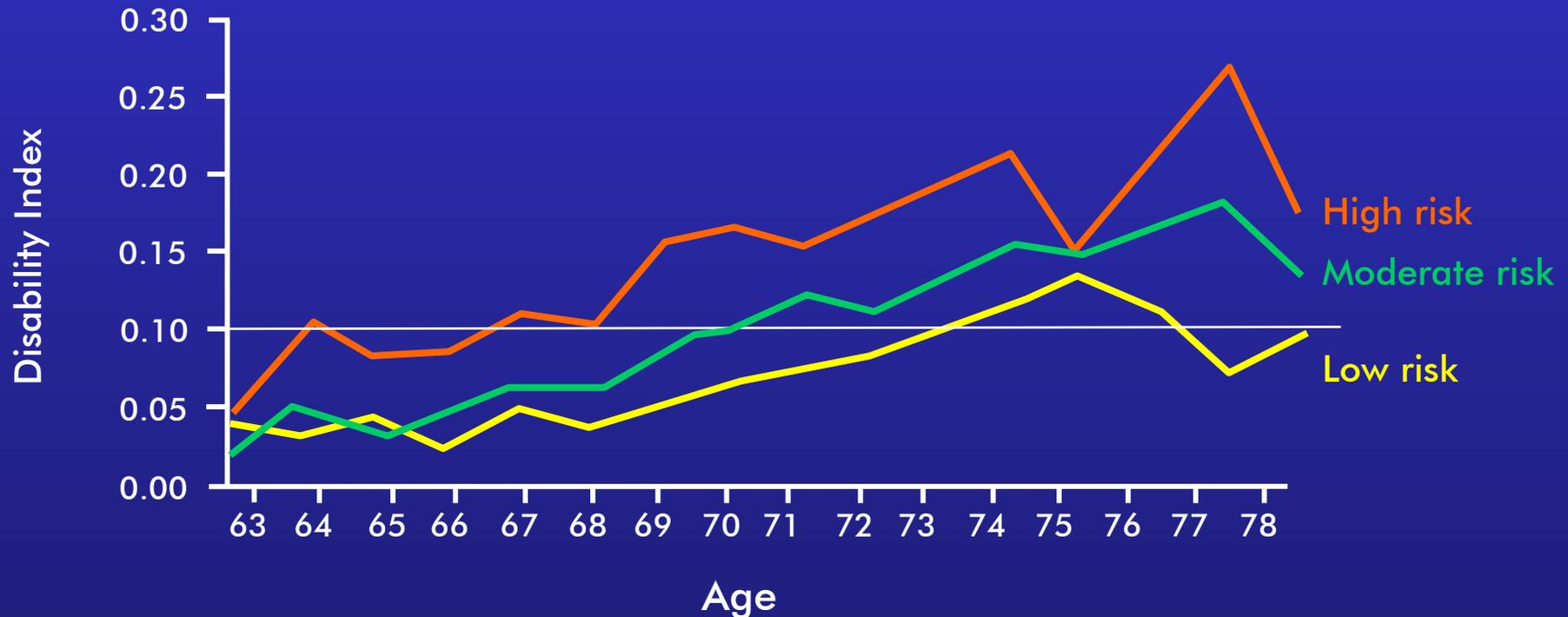
Non Smoker Normal Weight Active	Smoker Heavy Inactive	Ratio
11%	58%	5.5

Source: Jones et al., Arch Intern Medicine, 1998; Vol 2436



Disability Index* by Age and Health Risk†

University of Pennsylvania Alumni



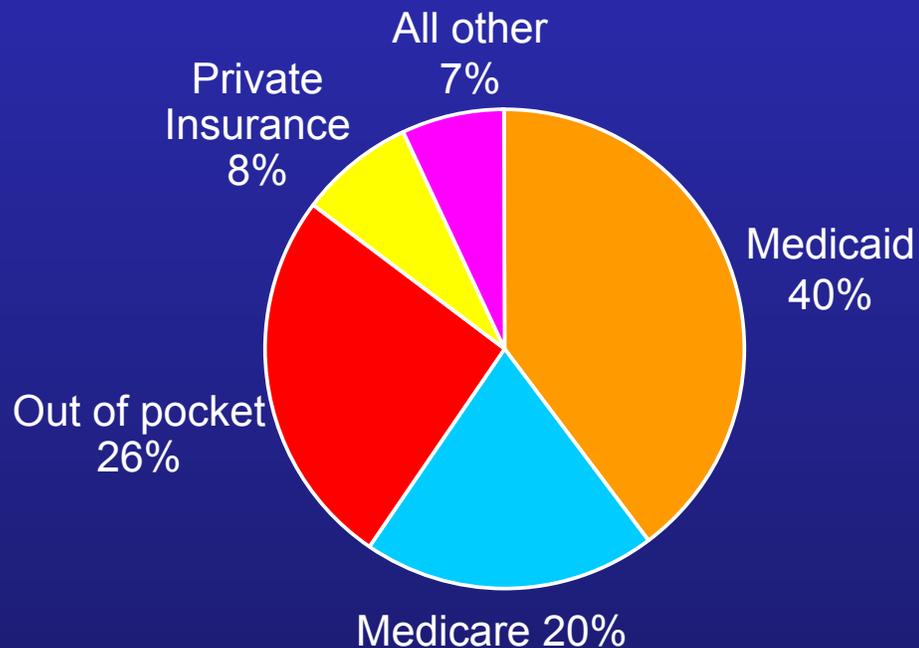
* Progression of disability was postponed by approximately 7 years in low risk vs. high risk.

† Risk based on body-mass index, smoking, exercise; 0-3 point scale for each; low = 0-2 points, moderate = 3-4 points, high = 5-9 points. Vita et al NE&M 1998:338:1035-41.

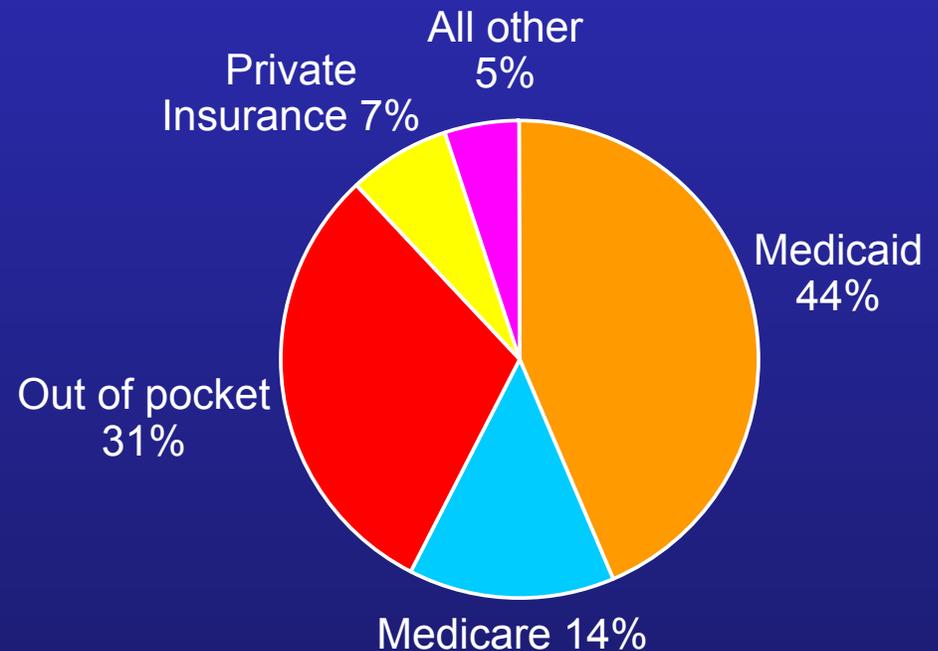
** A disability index of 0.1 = minimal disability.

Long-Term Care Financing By Payer, 1998

Total Nursing Home and Home Care
Expenditures (\$150 billion)



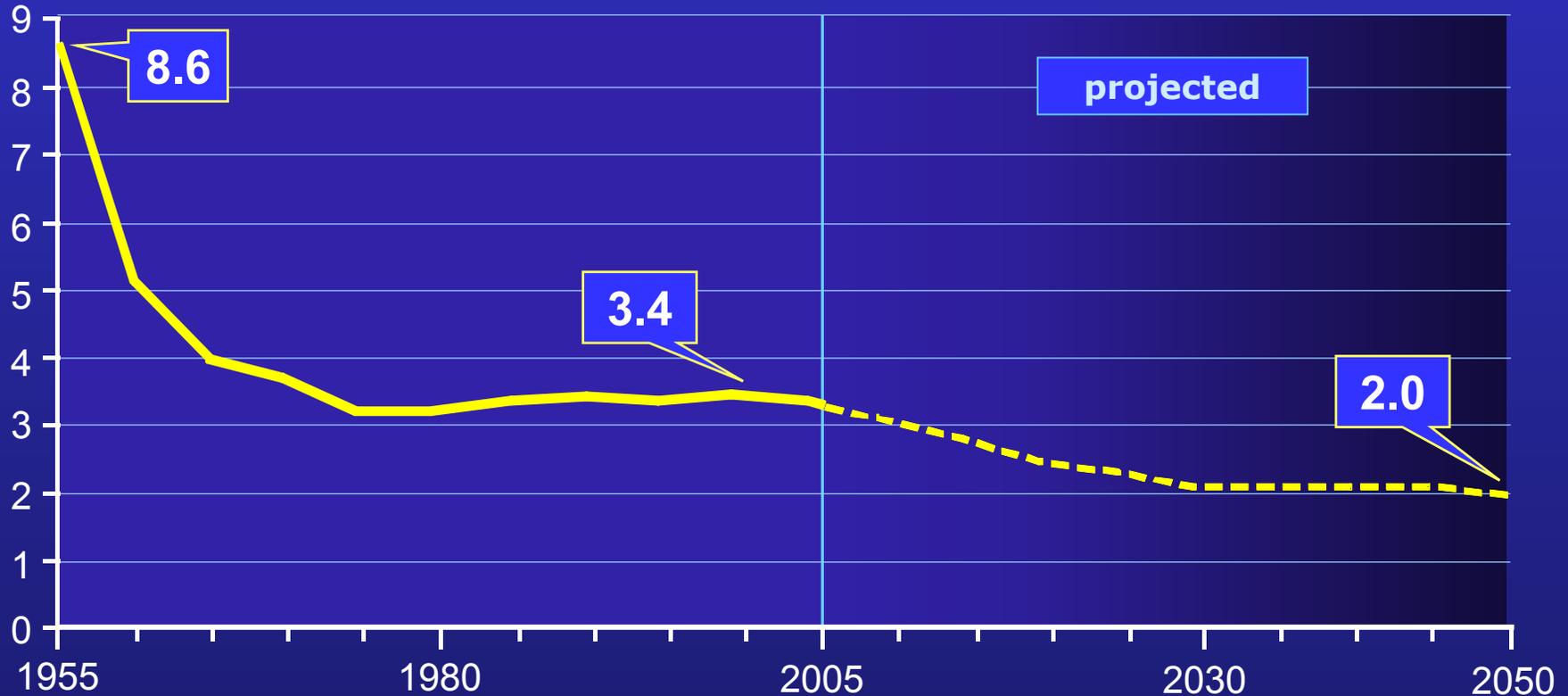
Nursing Home Expenditures
(\$100 billion)



Sources: Health Care Financing Administration, Office of the Actuary (Feb 2000); and B. Burwell, "Medicaid Long-Term Care Expenditures in FY 1998" (Cambridge, Mass.: MEDSTAT Group, 1999).

Worker-to-Retiree Ratio Drops

Projected Number of Workers Paying into Social Security Fund
Compared with Number of Retirees Withdrawing from the Fund

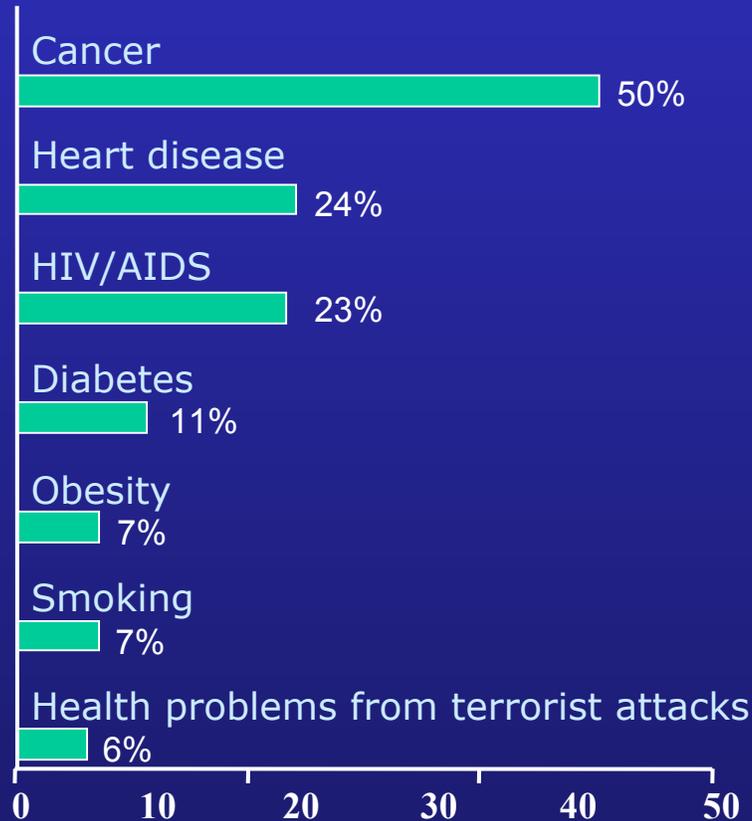


Source: Eugene Streuerle and Adam Carasso, Urban Institute.
Based on data from the 2001 Social Security Trustees Report.
USA Today, December 4, 2001

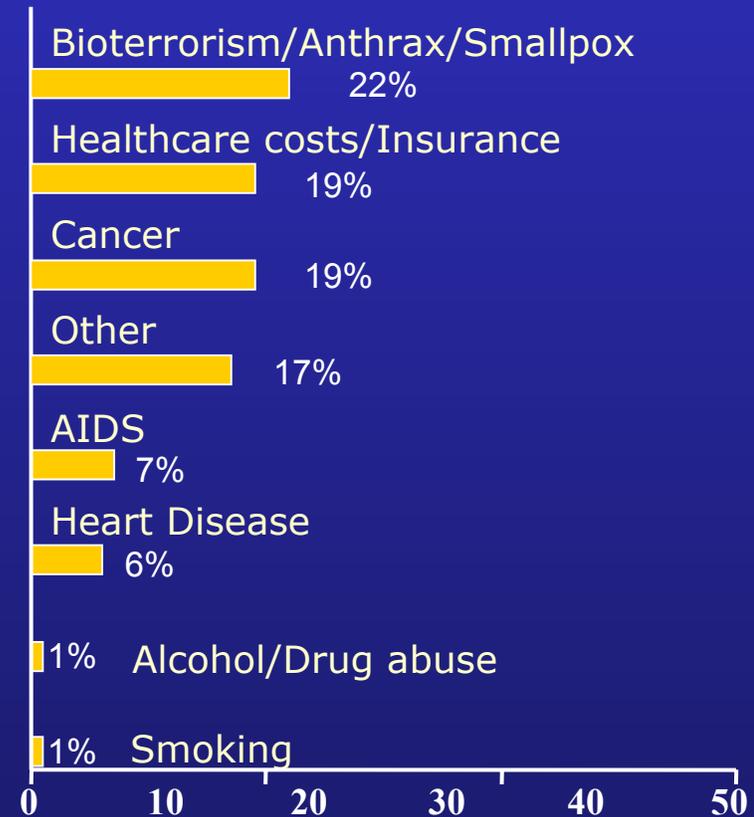


Americans' Views of the Most Important Health Problems, 2001

Percent saying issue is one of the two or three most **important** health problems:



Percent saying issue is one of the two or three most **urgent** health problems:



Note: Sums up to more than 100% because each respondent was asked to give up to three different answers.

HSPH/RWJF/ICR poll, November/December 2001

Gallup poll, November 8–11, 2001



Comprehensive State Chronic Disease Program

- **Addresses** heart disease and stroke, diabetes, cancer, and arthritis
- **Addresses** risk factors — physical activity, obesity, nutrition, and tobacco use
- **Reaches** priority populations: youth, underserved and aging in communities, schools, work sites, and health care settings

Lifestyle Changes that Promote Sedentary Behavior

* CANINE CONSTITUTIONAL



Wes Russell / Dispatch

A brisk walk in the park keeps Mateo B in shape between dog shows. His owner, Columbus resident Cathy Stumbo, got up early

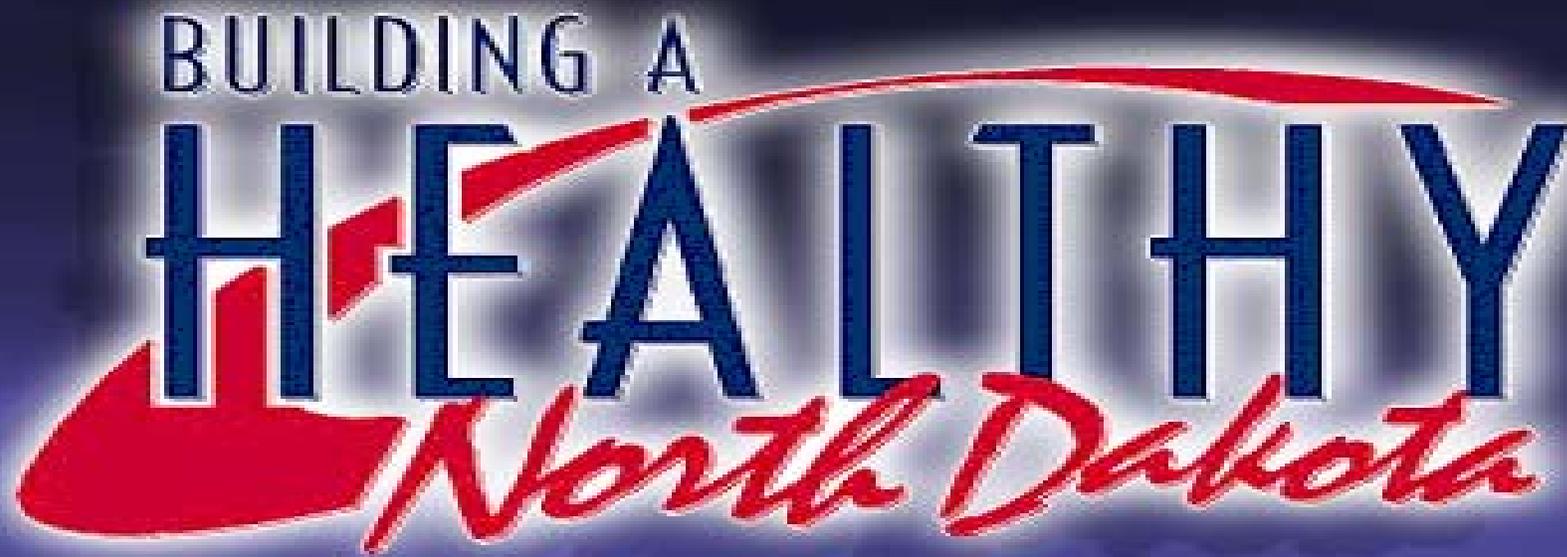
to give her 3-year-old Doberman his regular workout. They typically log 10 miles in Berliners Park.

BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit



Morbidity and Mortality – N.D.

Dr. Terry Dwelle

North Dakota Department of Health

Morbidity and Mortality in North Dakota

Terry L. Dwelle MD, MPHTM

North Dakota Department of Health

North Dakota is a Rural State

Eastern States			
State	Land Area	Population	Density
New Hampshire	8968	1,235,786	137.8
Vermont	9250	608,827	65.8
Massachusetts	7840	6,349,097	809.8
Connecticut	4845	3,405,565	702.9
Rhode Island	1,045	1,048,319	1003.2
New Jersey	7417	8,414,350	1134.4
Delaware	1953	783,600	401.1
Maryland	9774	5,296,486	541.9
Dist of Col	61	572,059	9316.4
Totals	51,153	27,714,089	541.8
US General	3,537,441	284,796,887	79.6
North Dakota	68,976	642,200	9.3
Montana	145,552	902,195	6.2
Wyoming	97,100	493,782	5.10
Alaska	571,951	626,932	1.10

Rural States

■ Disadvantages

- National political clout
- Distance / delivery
- Limited funding

■ Advantages

- Reduced crime
- Pristine environment
- Rural ethic

North Dakota 2000 Census Facts

Parameter	North Dakota	US
Age > 65	14.7%	12.4%
Income	\$31,764	\$37,005
Below Poverty	12.5%	13.3%
Native American	4.9%	0.9%

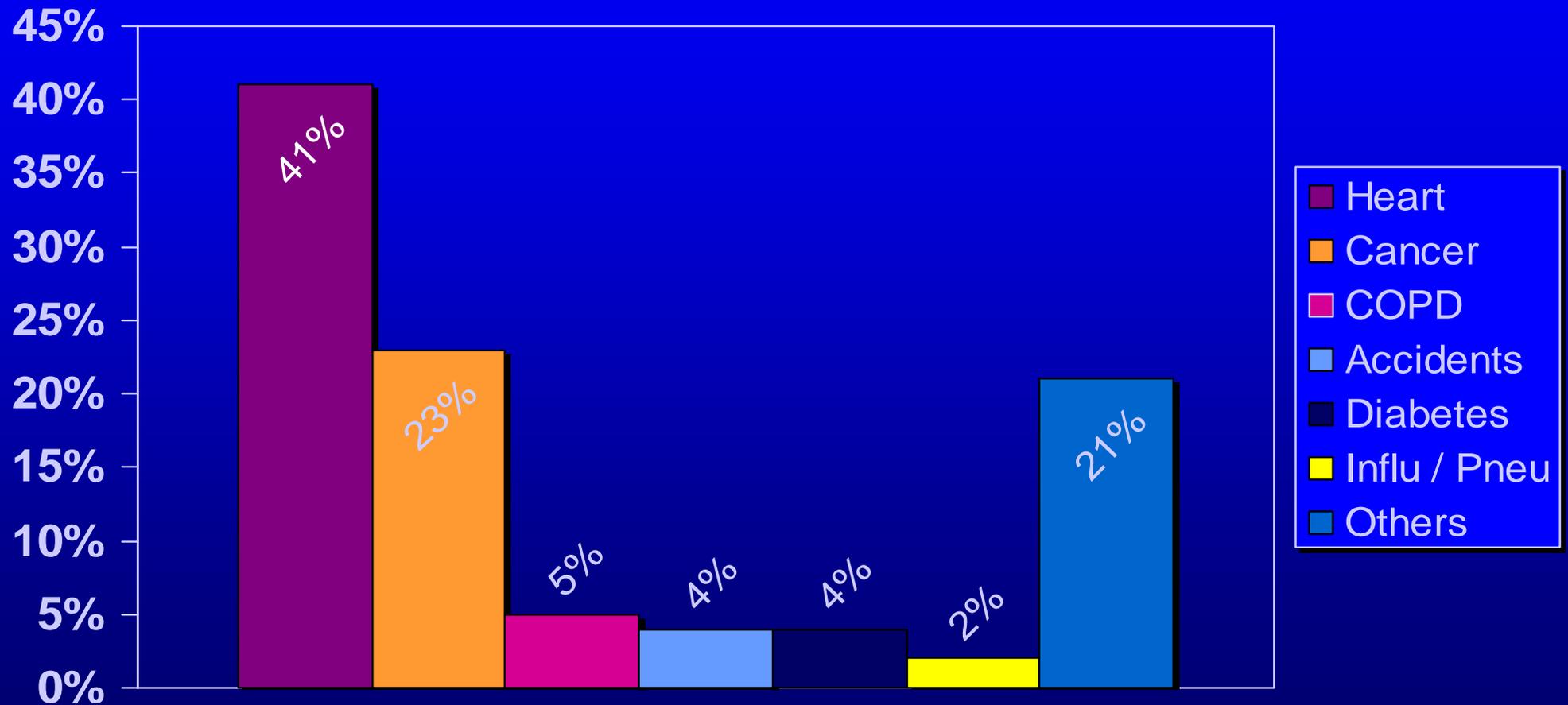
Chronic Disease

- Between 2010 and 2030 the 65+ age group will grow by 75% while the working group will grow by < 5% - impact on entitlements
- Elderly have more chronic diseases
- 50+ age group represent \$525 billion in direct health care and will increase to 1.1 trillion by 2007
- 50+ age group consumes 74% of prescription drugs.

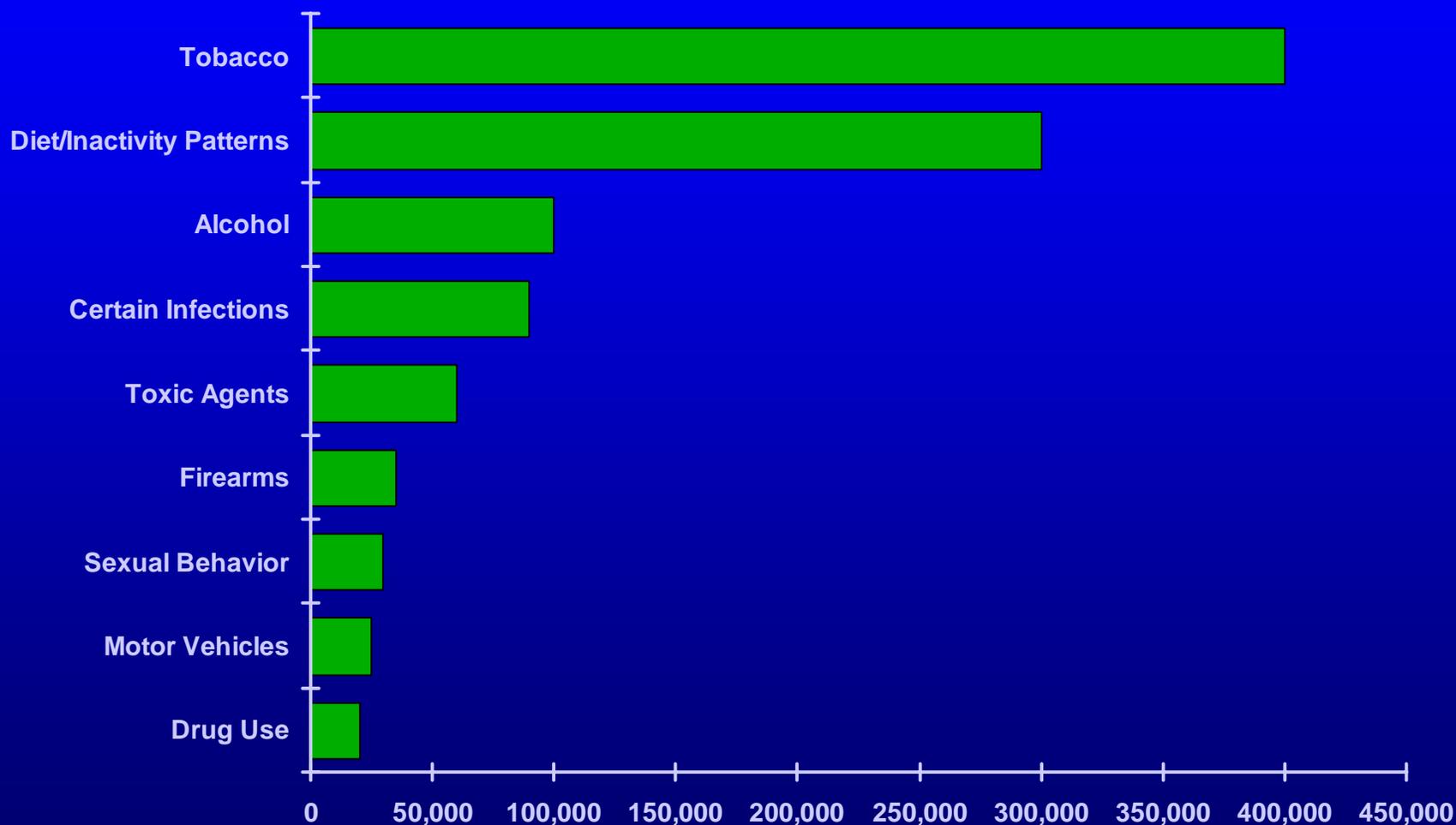
Chronic Disease Summary

- Prevent / better manage chronic diseases
- Current health care systems haven't worked as well as desired
- New ideas needed

ND – Leading Causes of Death



1990 Real Causes of Death in US



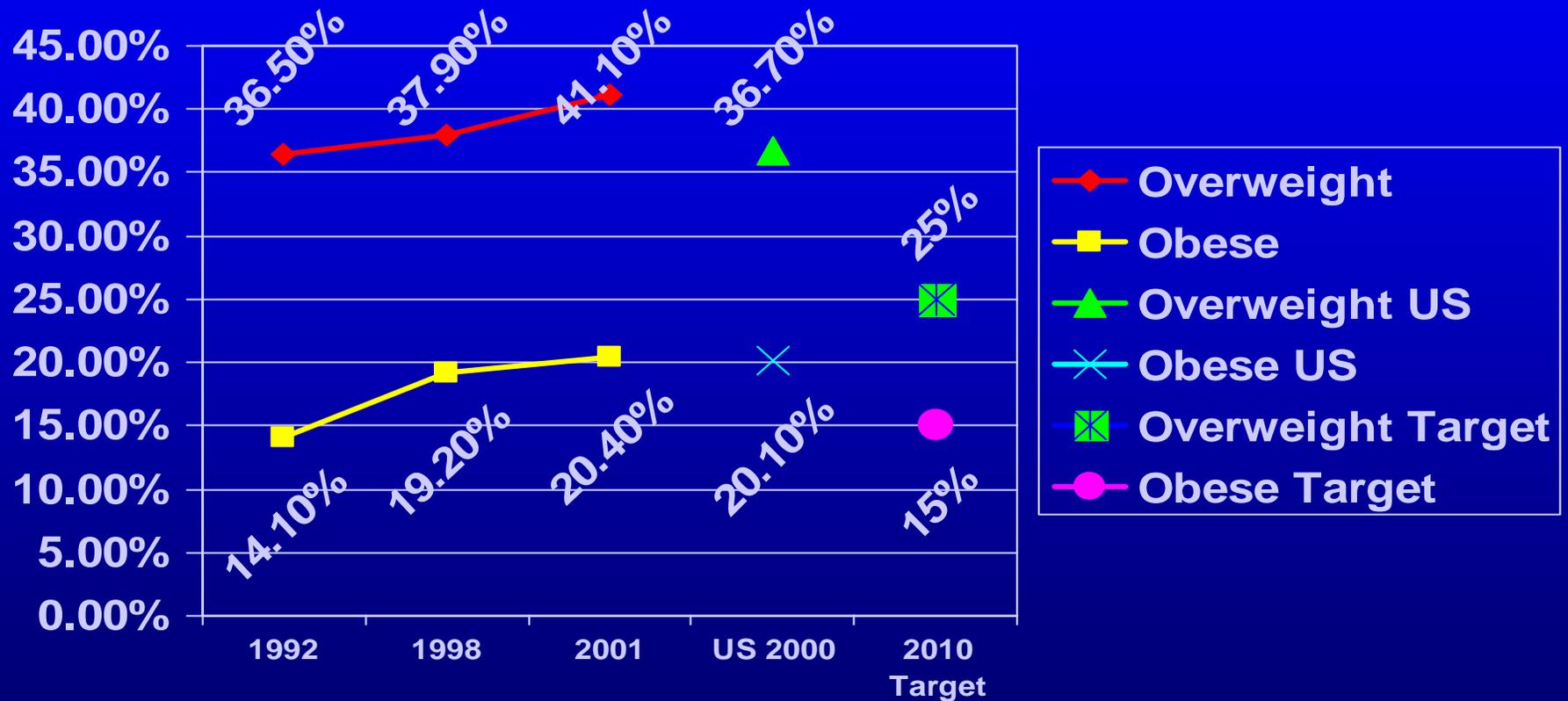
Source: (1993). McGinnis, J. M. and Foege, W. H., *Actual Causes of Death in the US*. JAMA, 270 (18) 2207-2212.

Heart Disease / Stroke



Rates are per 100,000 population

Weight - Adults



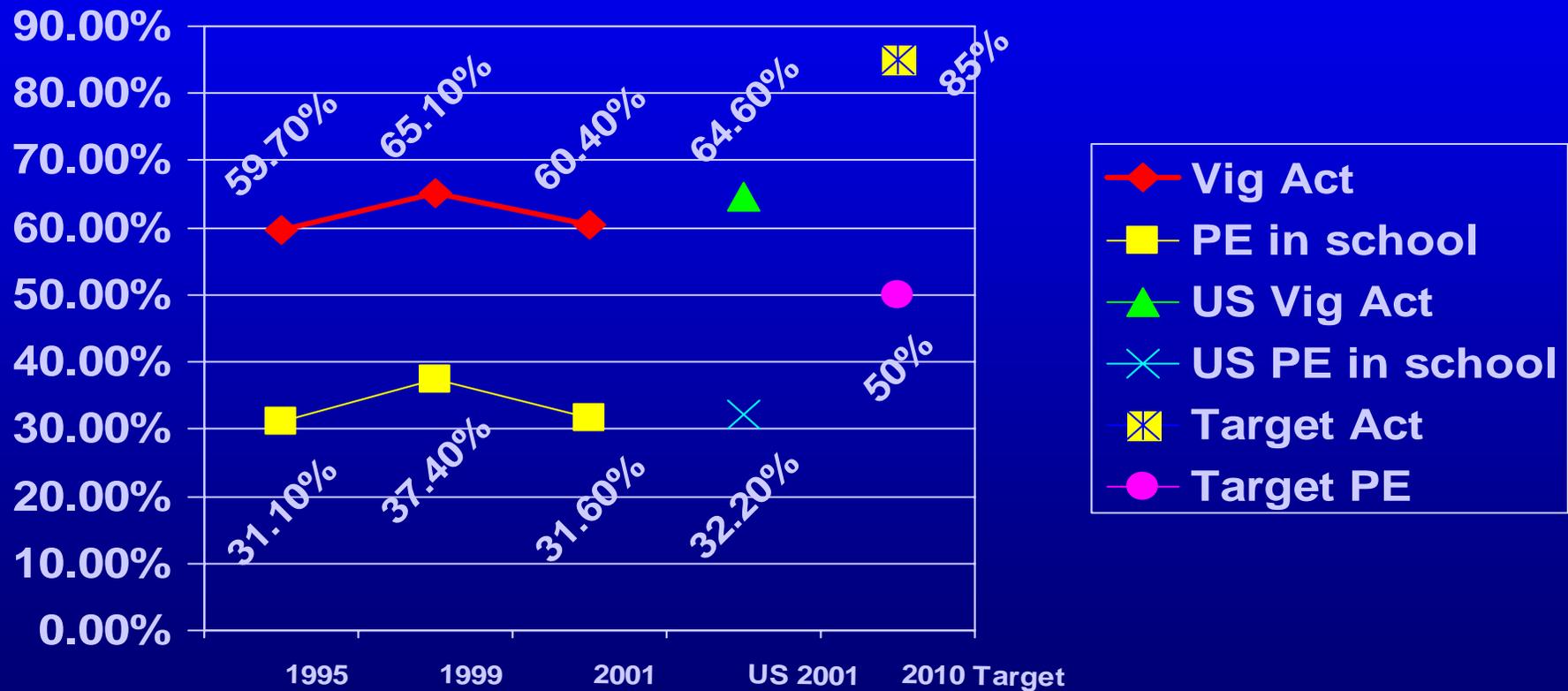
Weight - Adolescents



Physical Activity - Adults

- Adult participating in vigorous activity – 24%
(US 2000 – 23%)
- 2010 target – 30%

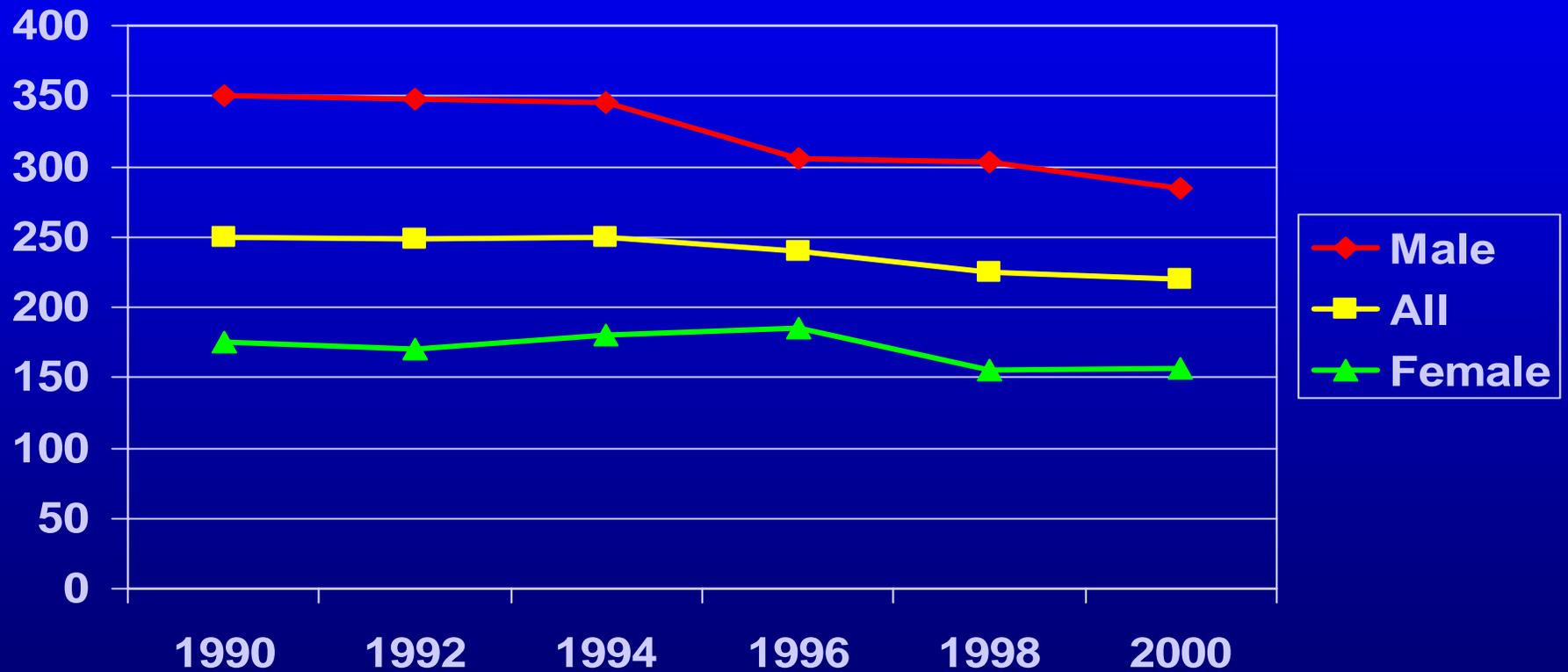
Physical Activity - Youth



Cardiovascular Risk Factors

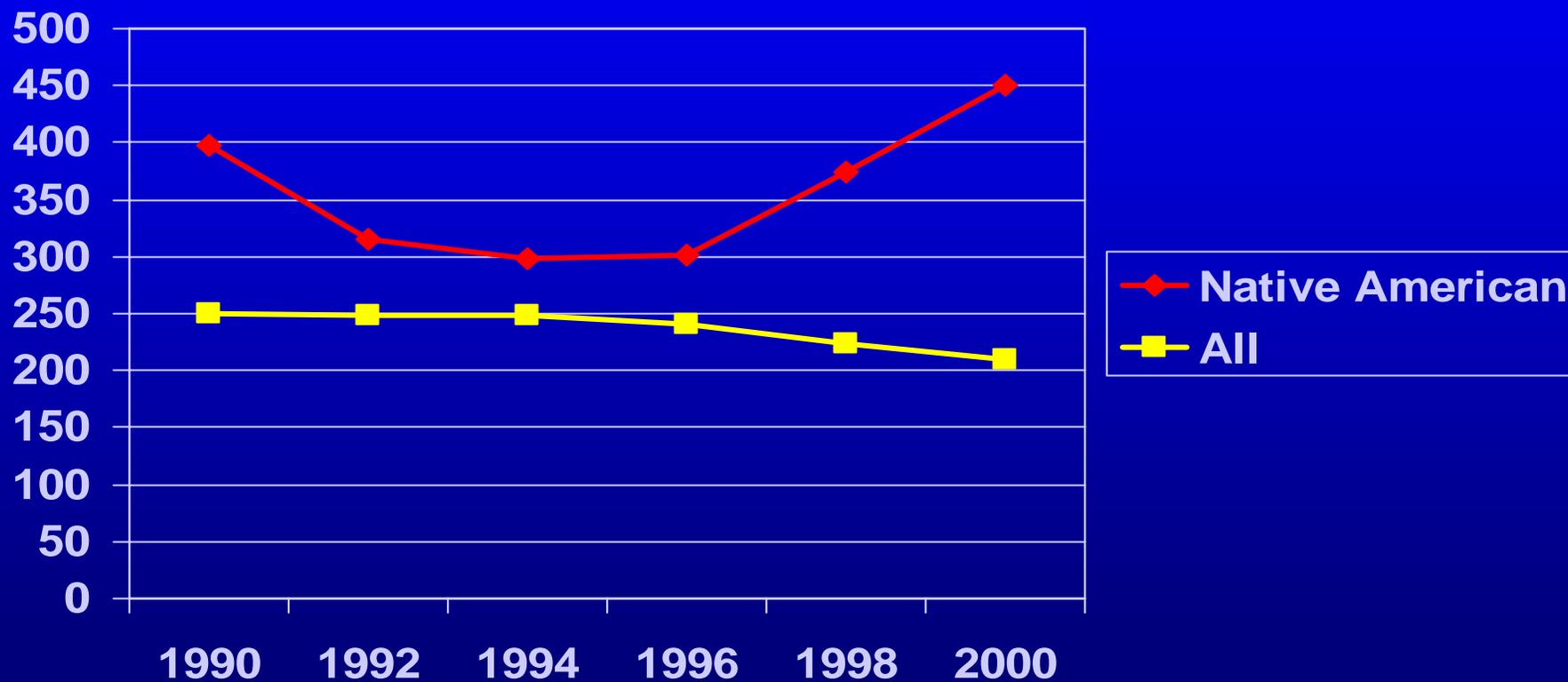
	N American	White	All
High BP	27.3%	26.2%	26.1%
High Chol	32.8%	30.8%	30.6%
Smokes	45.1%	22.6%	23.2%
Overweight	70.6%	59.9%	60.4%
Sedentary	62.9%	55.3%	55.9%
Diabetes	11.5%	4.6%	5.2%
At least 1 Risk factor	94%	92%	92%

Deaths by Heart Disease



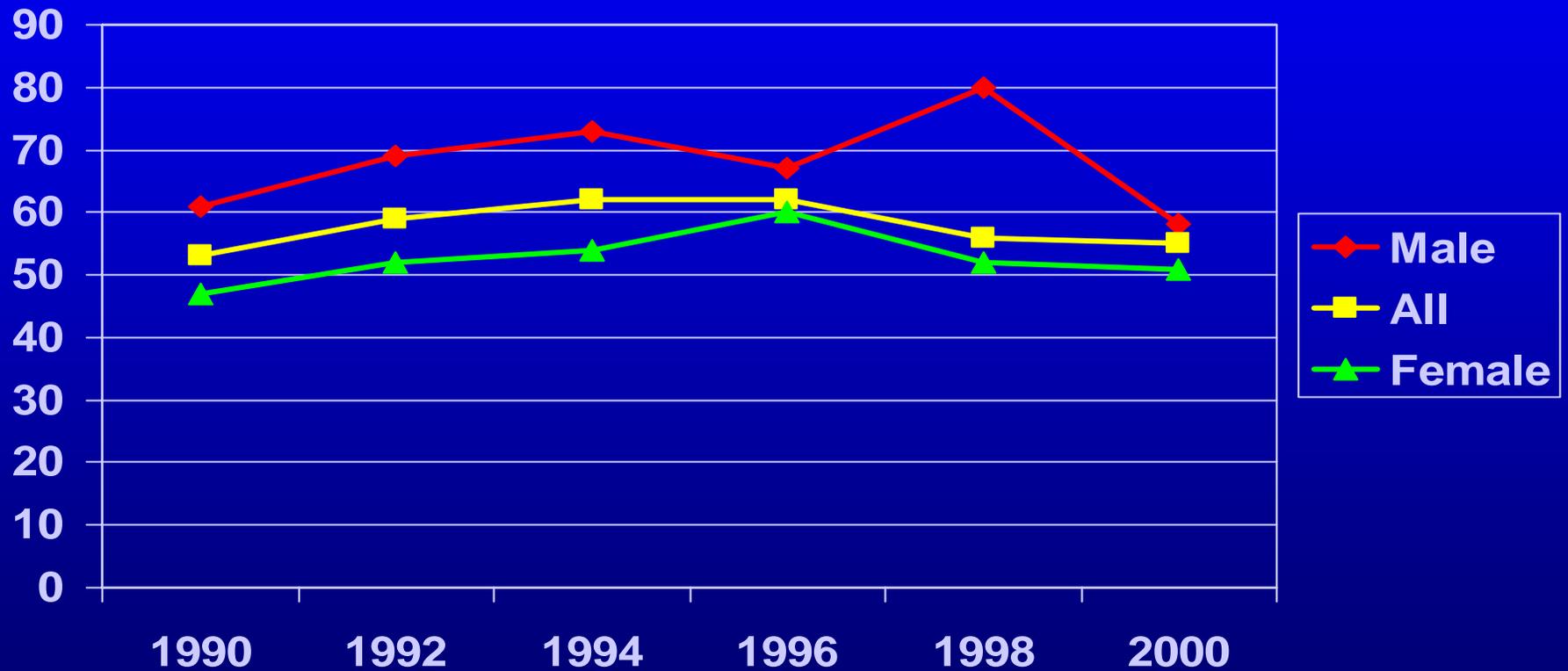
Death rate is per 100,000

Deaths by Heart Disease - Race



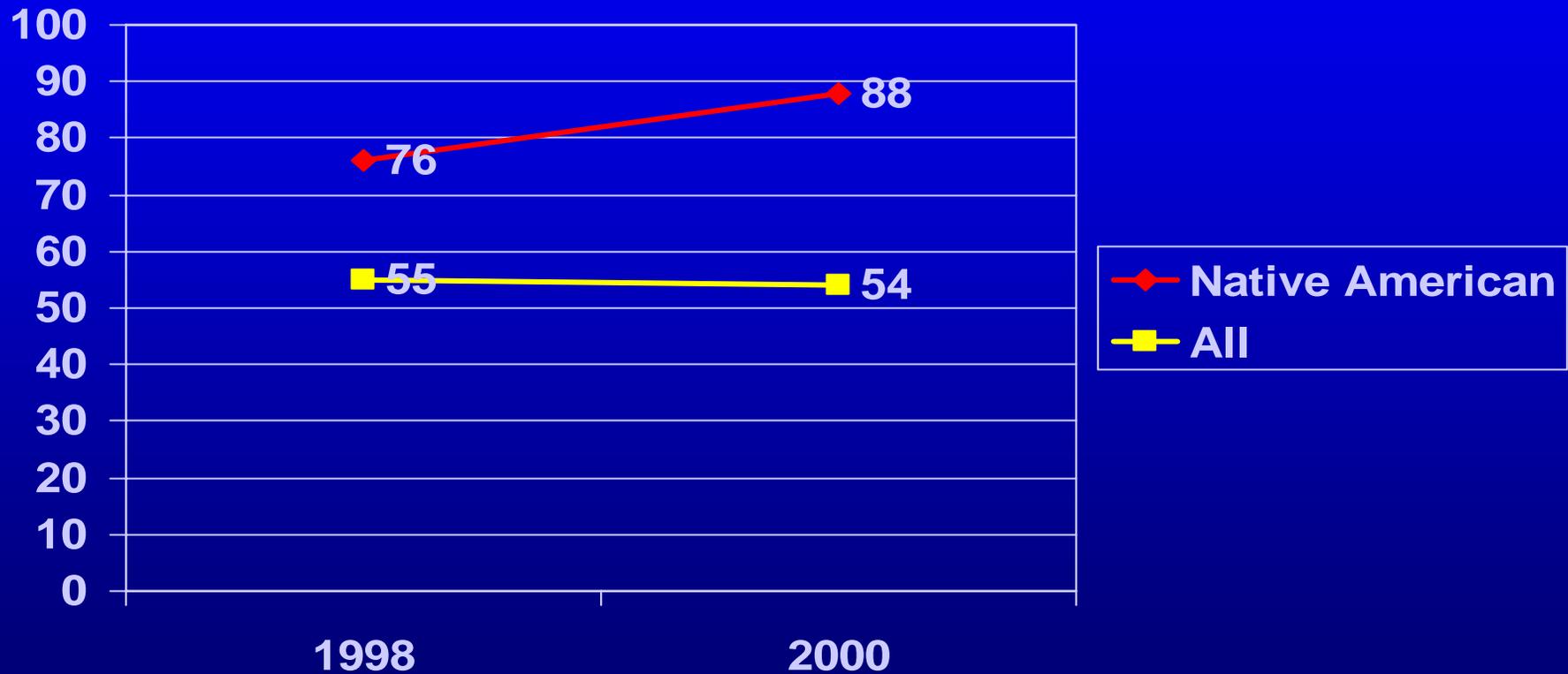
Death rate is per 100,000

Deaths by Stroke



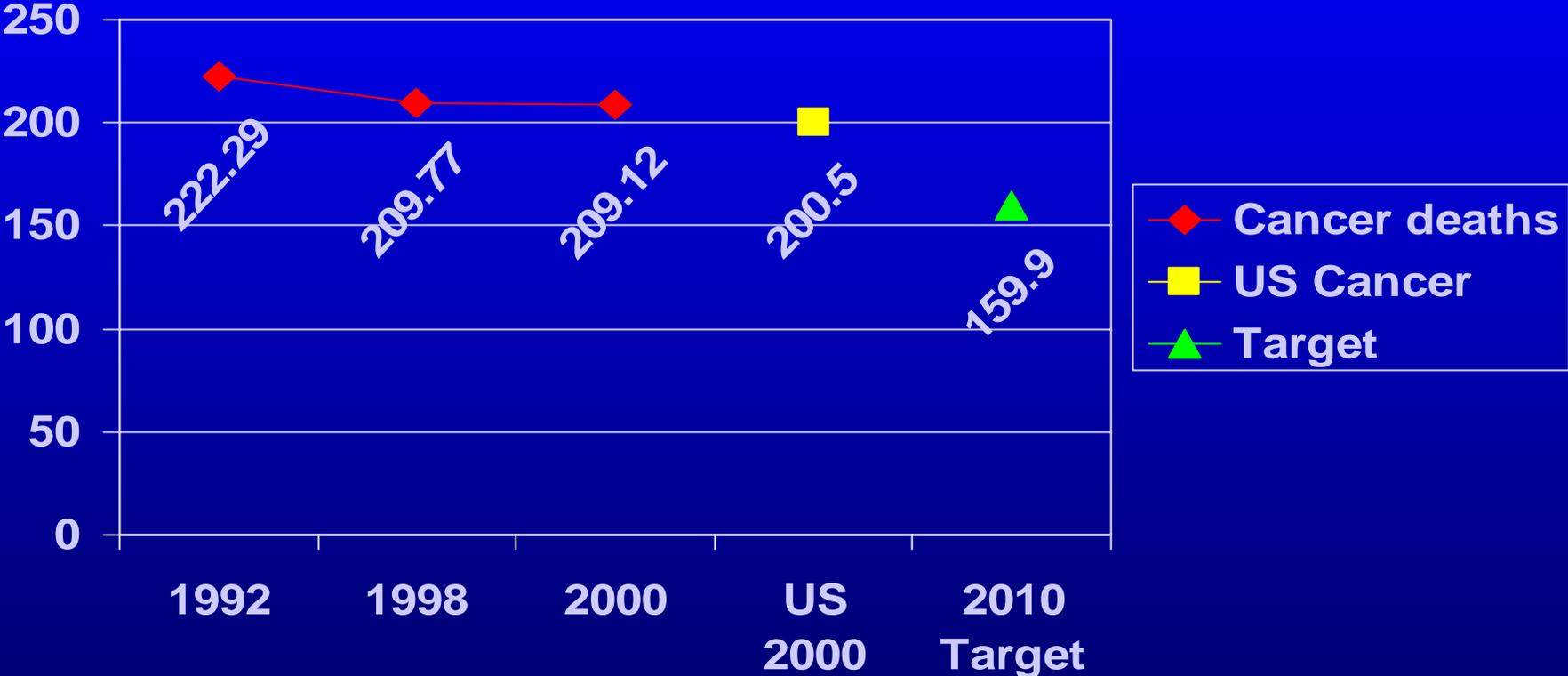
Death rate is per 100,000

Deaths by Stroke - Race



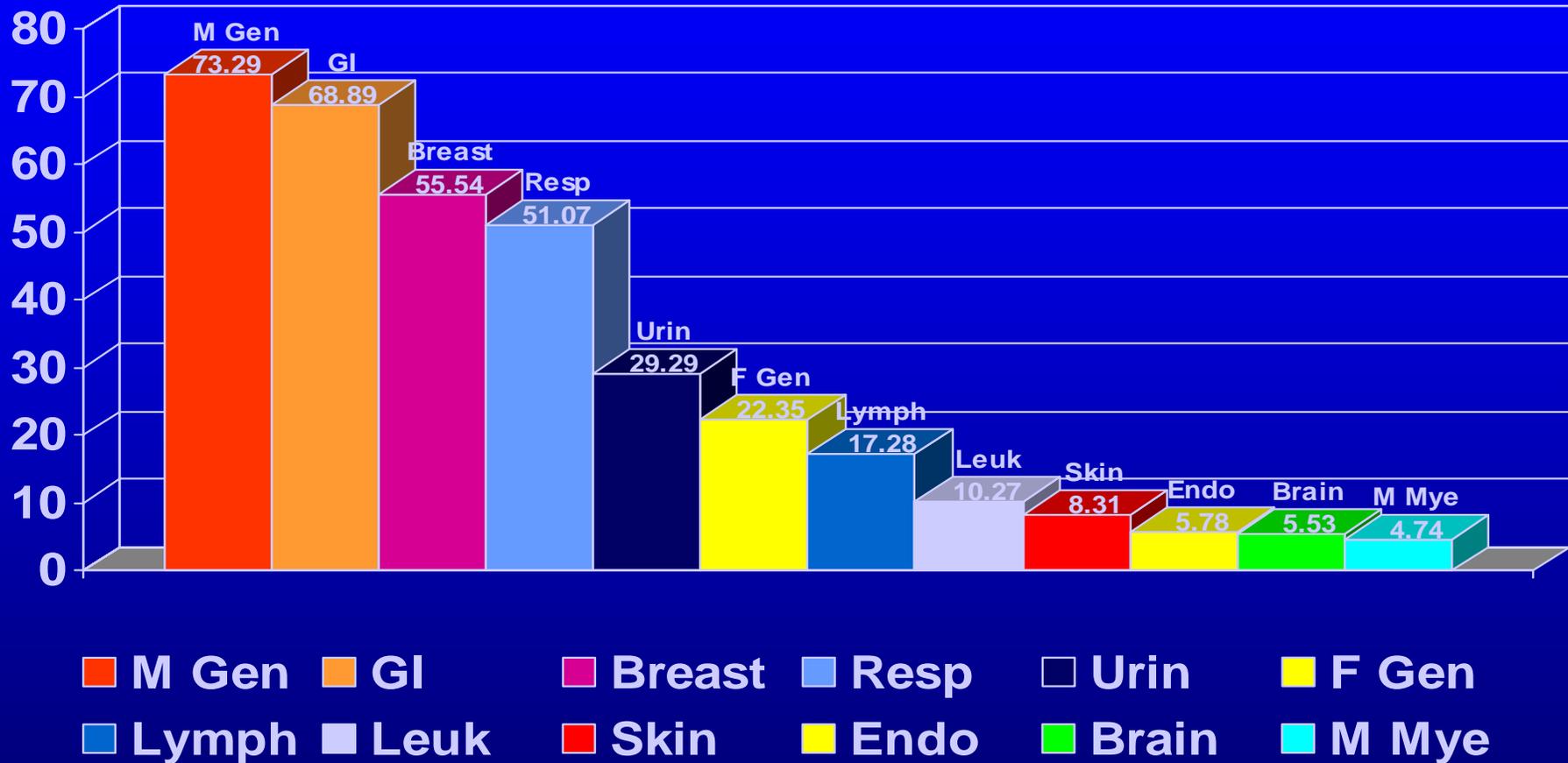
Death rate is per 100,000

Cancer Deaths



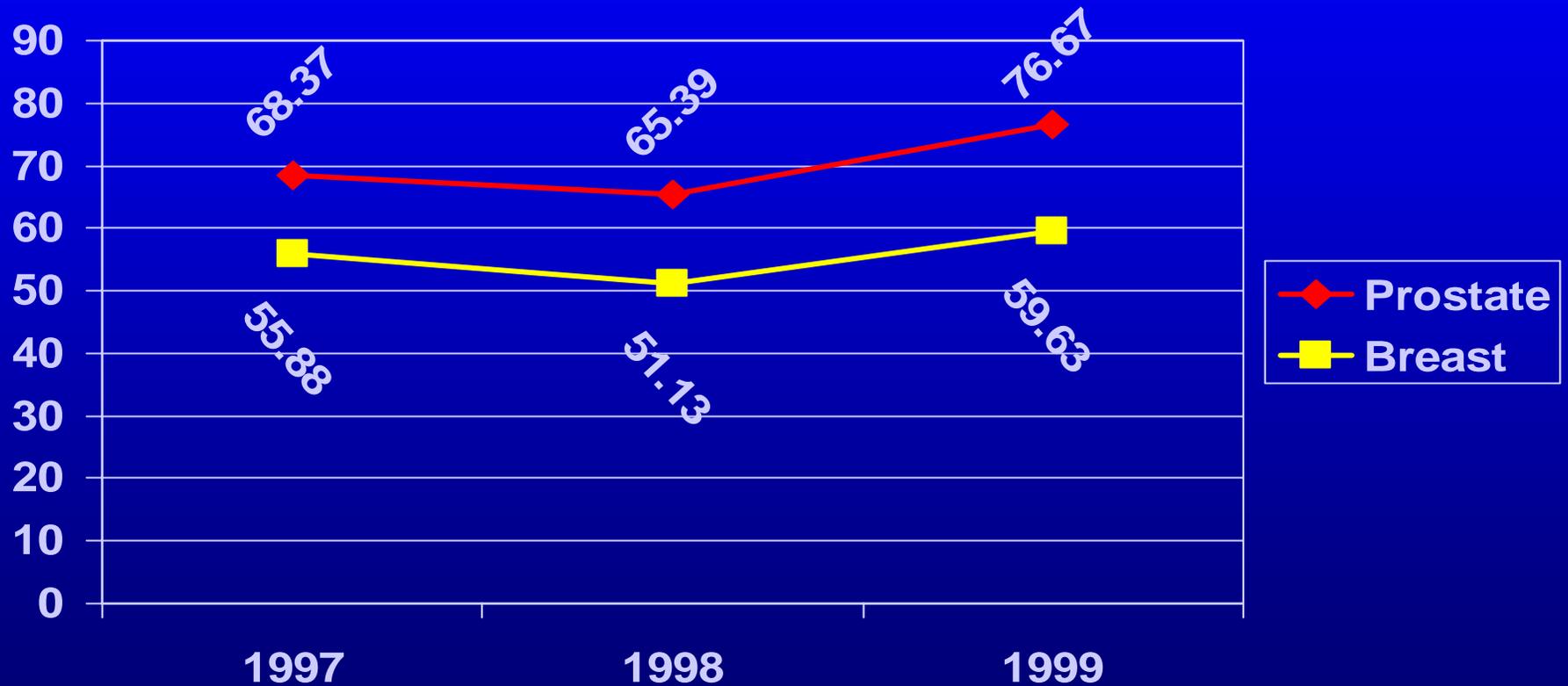
Rates are per 100,000 population

North Dakota Cancer Incidence



Incidence rates are per 100,000

Prostate and Breast Cancers



Rates are per 100,000 population

Tobacco

Description	1992	1998	2000	US 2000 Data	2010 Target
Current adult smoker	21.9%	20.0%	23.2% (45.2% AI)	23.2%	12%
Grades 9-12	39.6% (1995)	40.6% (1999)	35.3% (2001)	33.9% (2001)	16%

Sobering Facts

- Smoking is the chief preventable cause of morbidity and mortality in our society
- Smoking is one of the most serious health threats facing American Indians in North Dakota today
- 1990-1995 AI and Alaska Natives were the only minority groups with increasing respiratory cancers. Also the only minorities with increased smoking rates in the same period.

Economic Considerations

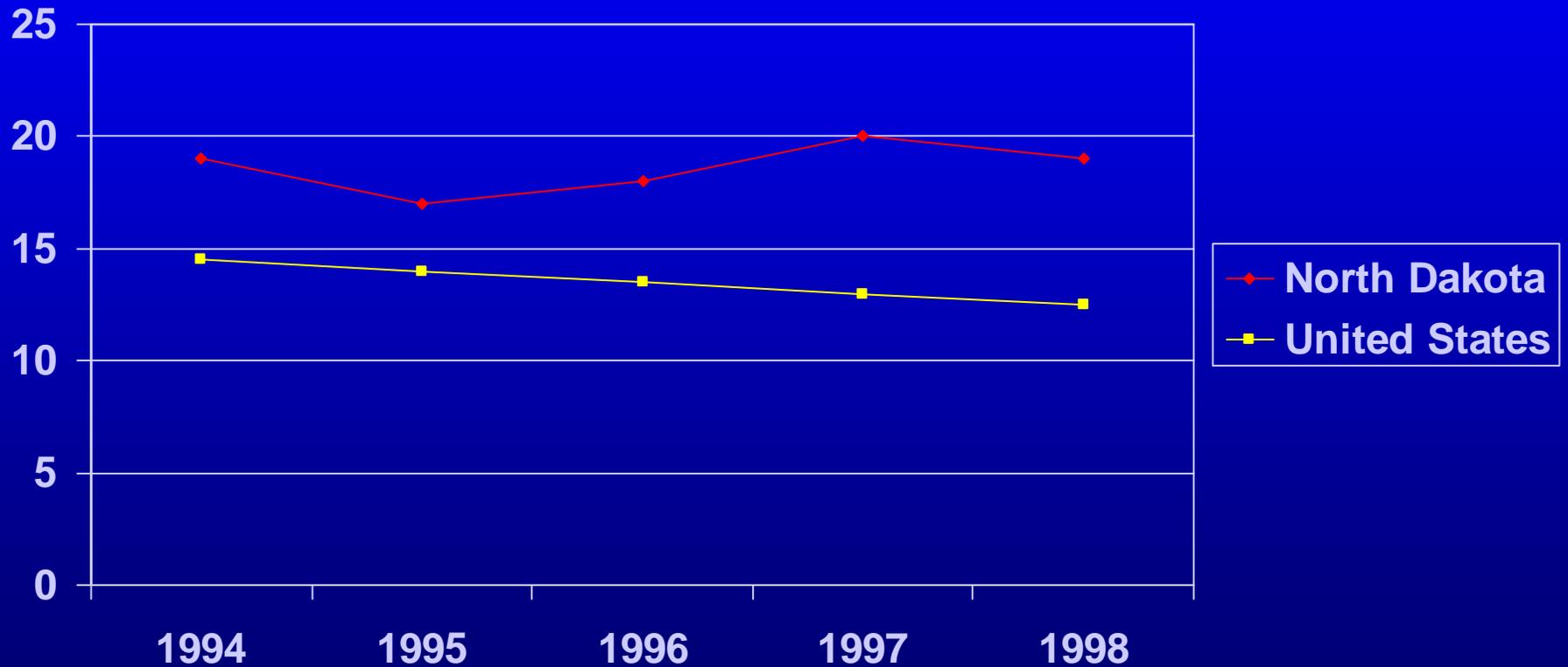
- Medical expenditures – \$75 Billion* (ND - \$193 million)
- Indirect costs - \$81 Billion* (ND - \$158 million)
- Young man who smokes 1 pack / day will incur \geq \$19,000 extra medical expenses in his lifetime
- Direct + Indirect costs = \$552 / person / year

*MMWR 2002;51(14):300-303, Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999

Smoking during Pregnancy

- Preterm birth
- Growth retardation
- Low birthweight
- Sudden Infant Death Syndrome (SIDS)
- Childhood illness
- School problems

Women who Smoked During Pregnancy

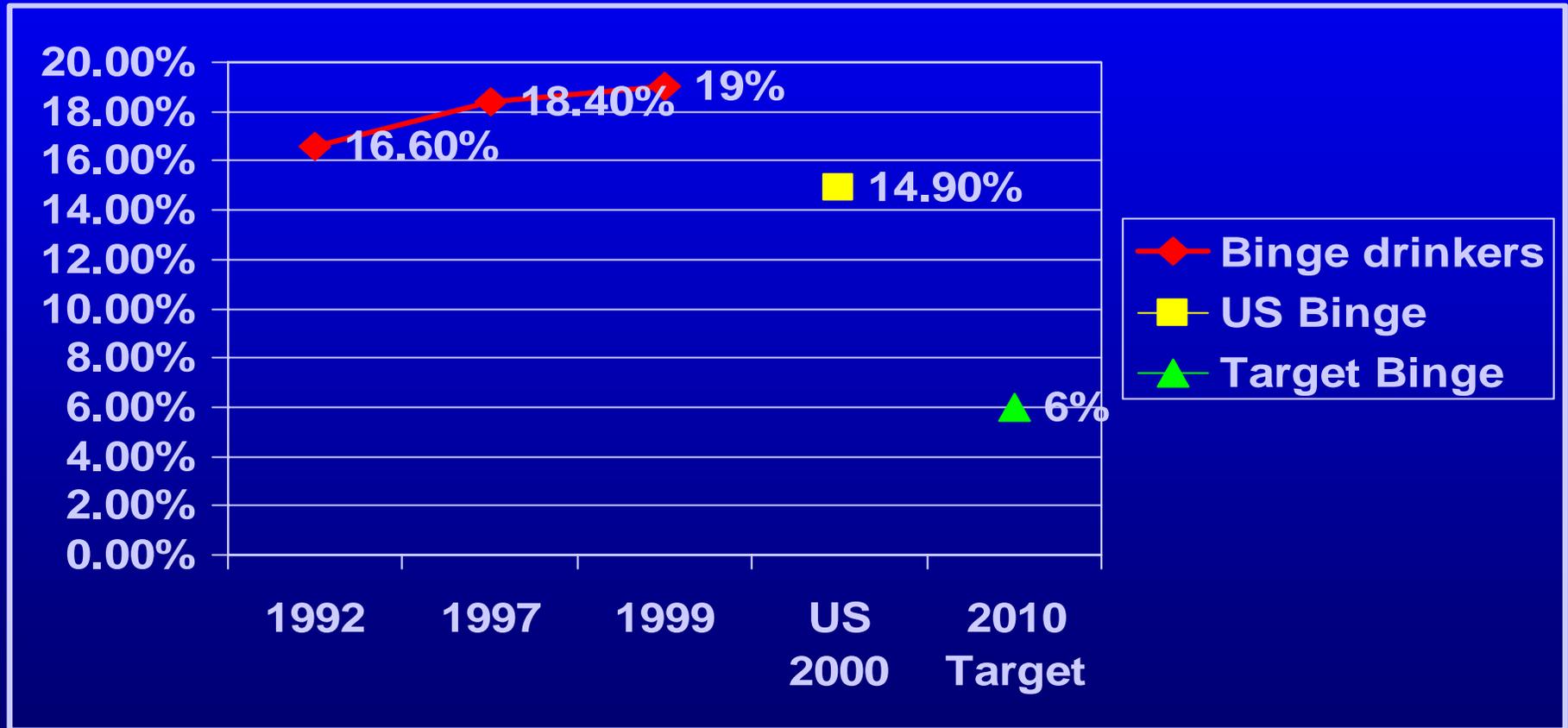


Rate expressed as percent

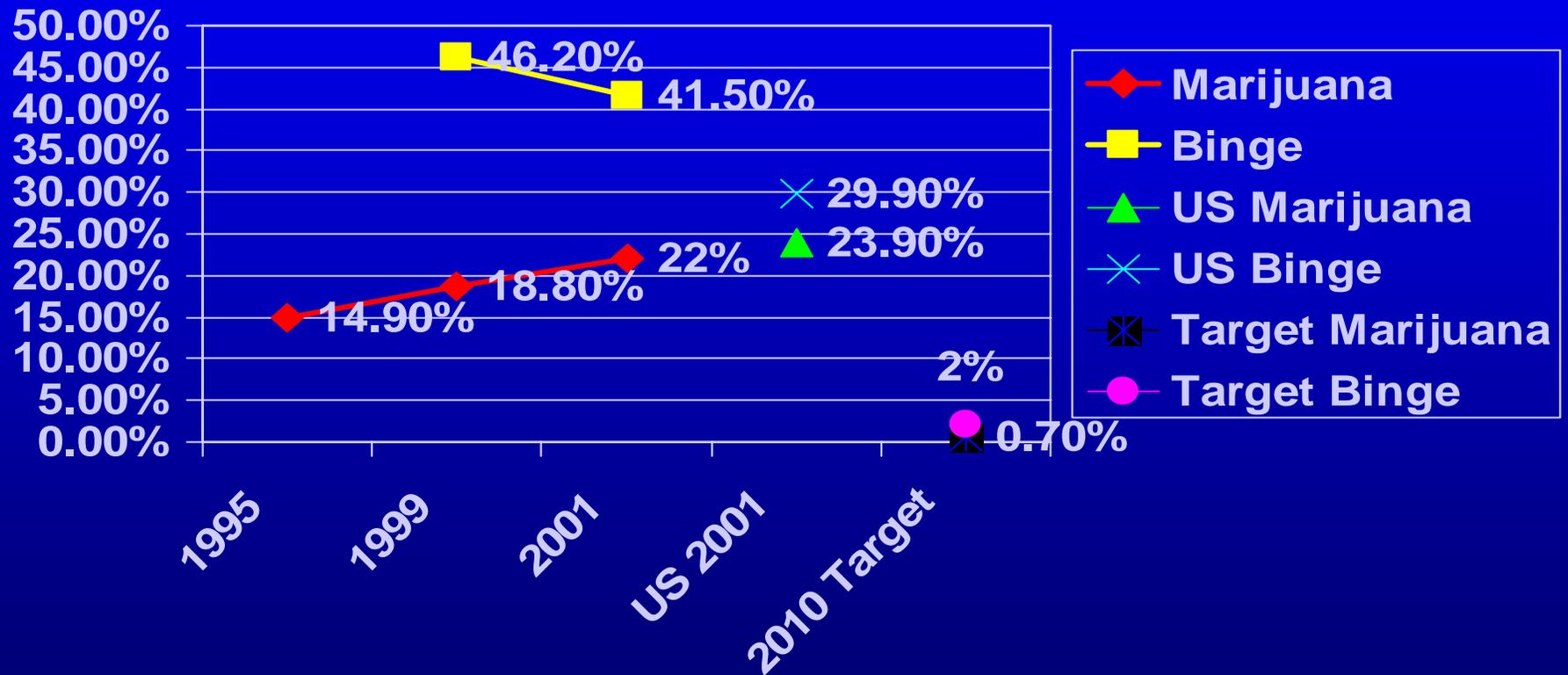
Diabetes

Description	1992	1998	2000	US 2000 Data	2010 Target
Diagnosis / 1000	47	42	52	61	25
Deaths / 100,000	22.23	29.74	32.08		45
Gest DM (% of births)	2.0%	2.8%	3.0%		None

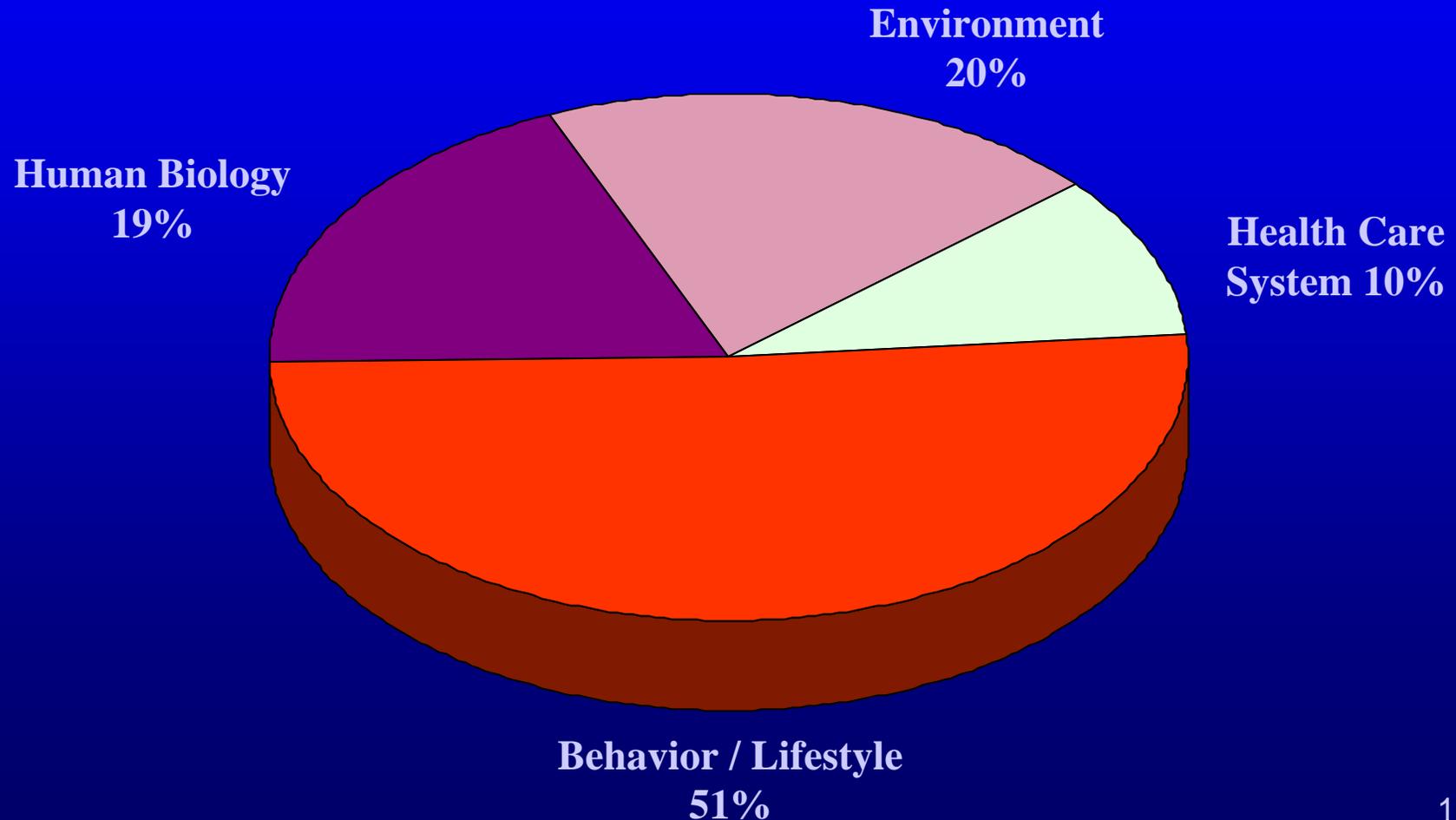
Substance Abuse - Adults



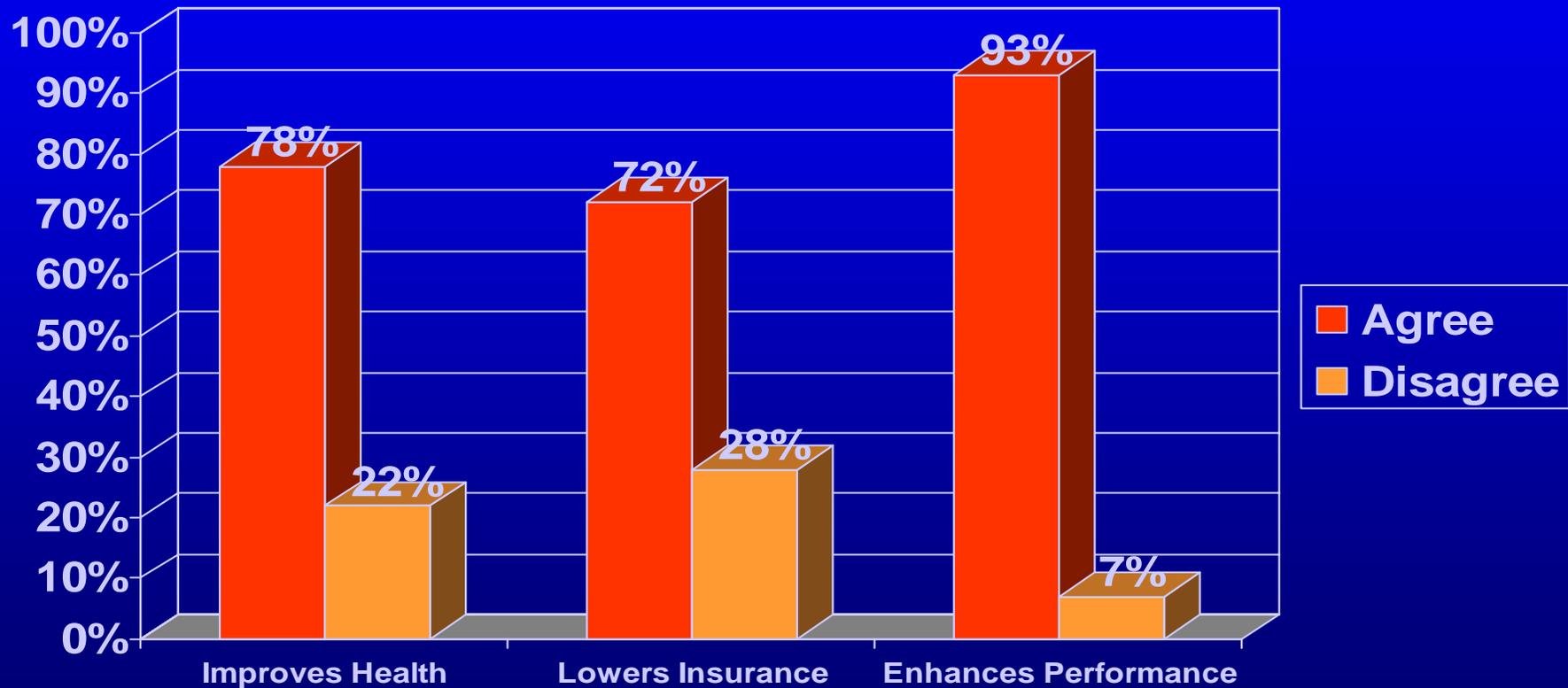
Substance Abuse - Youth



Factors Contributing to Premature Death before Age 75



Worksite Wellness - Attitudes



Wellness Program - Budget

- 61% of businesses felt a worksite wellness program was not possible due to budgetary constraints
- Strong association between having budget resources and interest to start wellness plans in the next 2-3 years

ND Workers

- 84% preschoolers have working parents (US – 66%)
- 70% of elementary schoolers have working parents (US – 55%)
- 10.3% have more than one job (US – 5.8%)

Injury Deaths – 1995-1997

Cause	Deaths	Percent
Unintentional Injury	698	70.9%
Intentional Injury	287	29.1%
Total (1995-97)	985	100%

Average injury deaths per year in ND = 328

Injury Related Causes of Death in ND

- Unintentional injury is the leading cause of death in the 1-34 year old age group
- Suicide is the second most common cause of death in the 10-34 year old age group

Unintentional Injury Deaths

- Brain injury (17.49/100,000)
- Motor vehicle accidents (14.45)
- Falls (4.91)
- Drowning (1.90)
- Fire (1.72)

BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit



Obesity as a Disease

Dr. James Mitchell

University of North Dakota

Obesity As A Disease

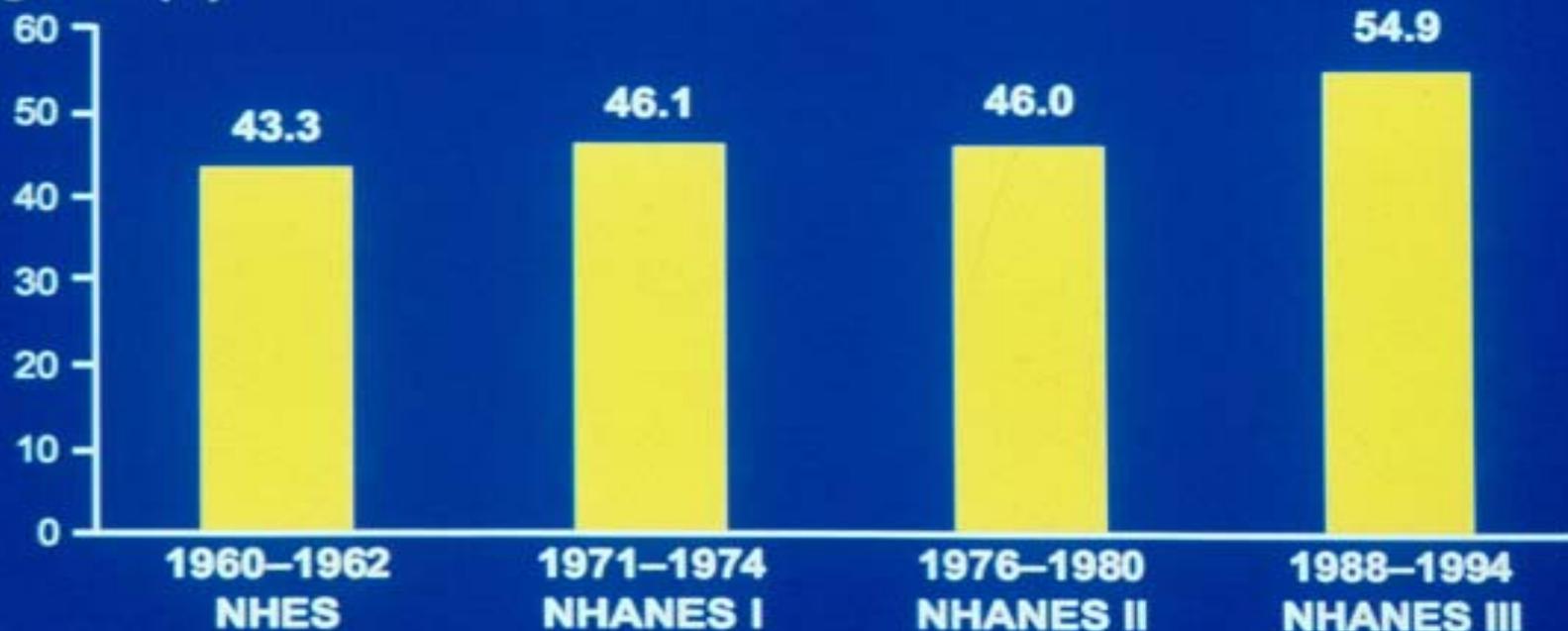
A Historical Perspective

- **Obesity can be traced to the Paleolithic era**
 - More than 25,000 years ago
- **First clinical evidence of obesity**
 - Dates to Greco-Roman times
- **1900s analysis of life insurance data:**
 - Obesity was associated with increased death

More Than One Half of US Adults Are Overweight or Obese*

US Population
Age 20+ (%)

Overweight US Adults



*BMI \geq 25.

NHLBI. *Obes Res.* 1998;6 (suppl 2):51S-209S.

Obesity Today: Disease Epidemic

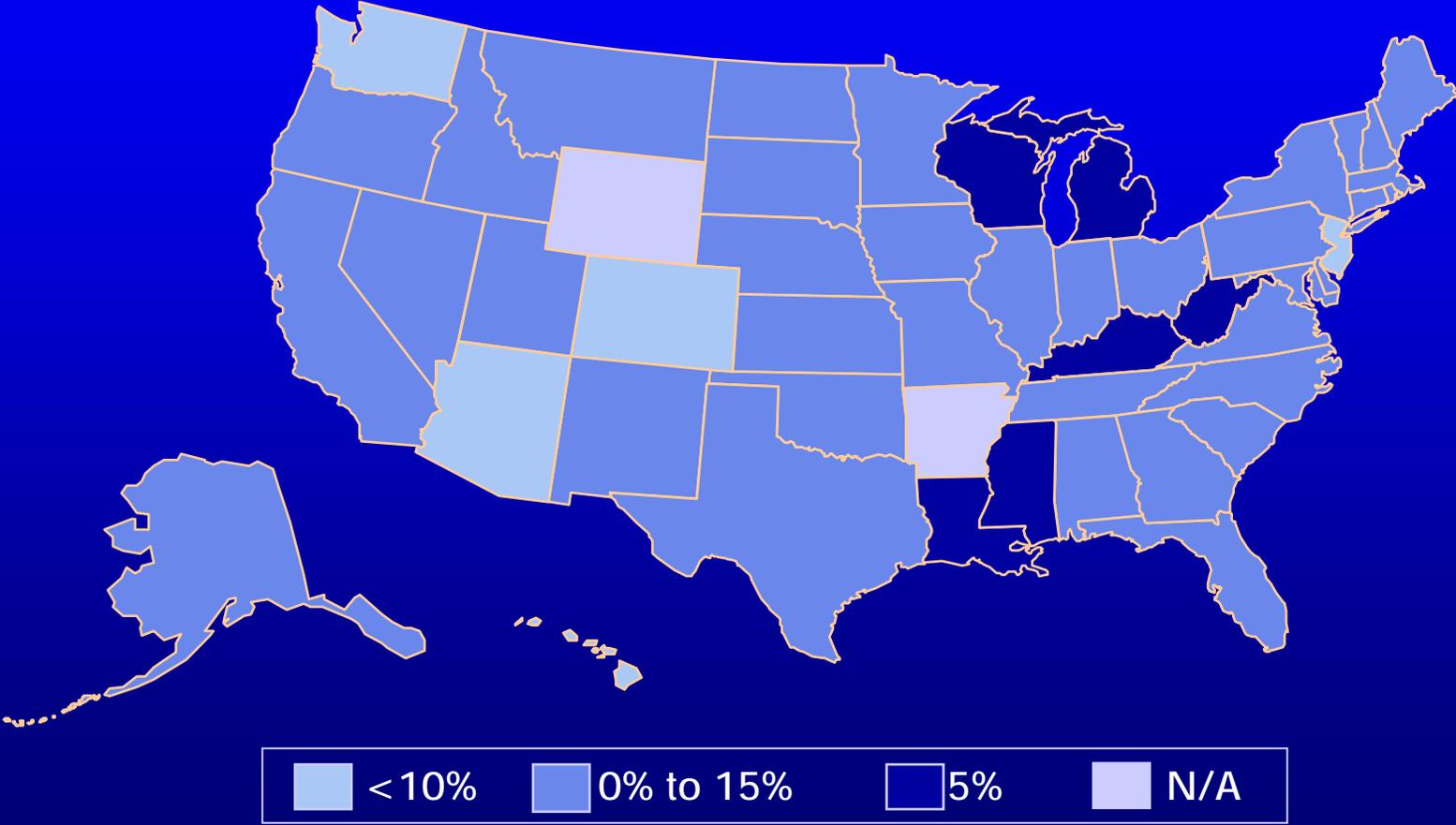
- **1995 total US obesity cost = \$99.2 billion**
 - **Includes \$51.6 billion for direct medical costs**

Obesity Worldwide

- **Obesity is increasing at an alarming rate in both developed and developing countries**
- **In many developing countries, obesity coexists with malnutrition**

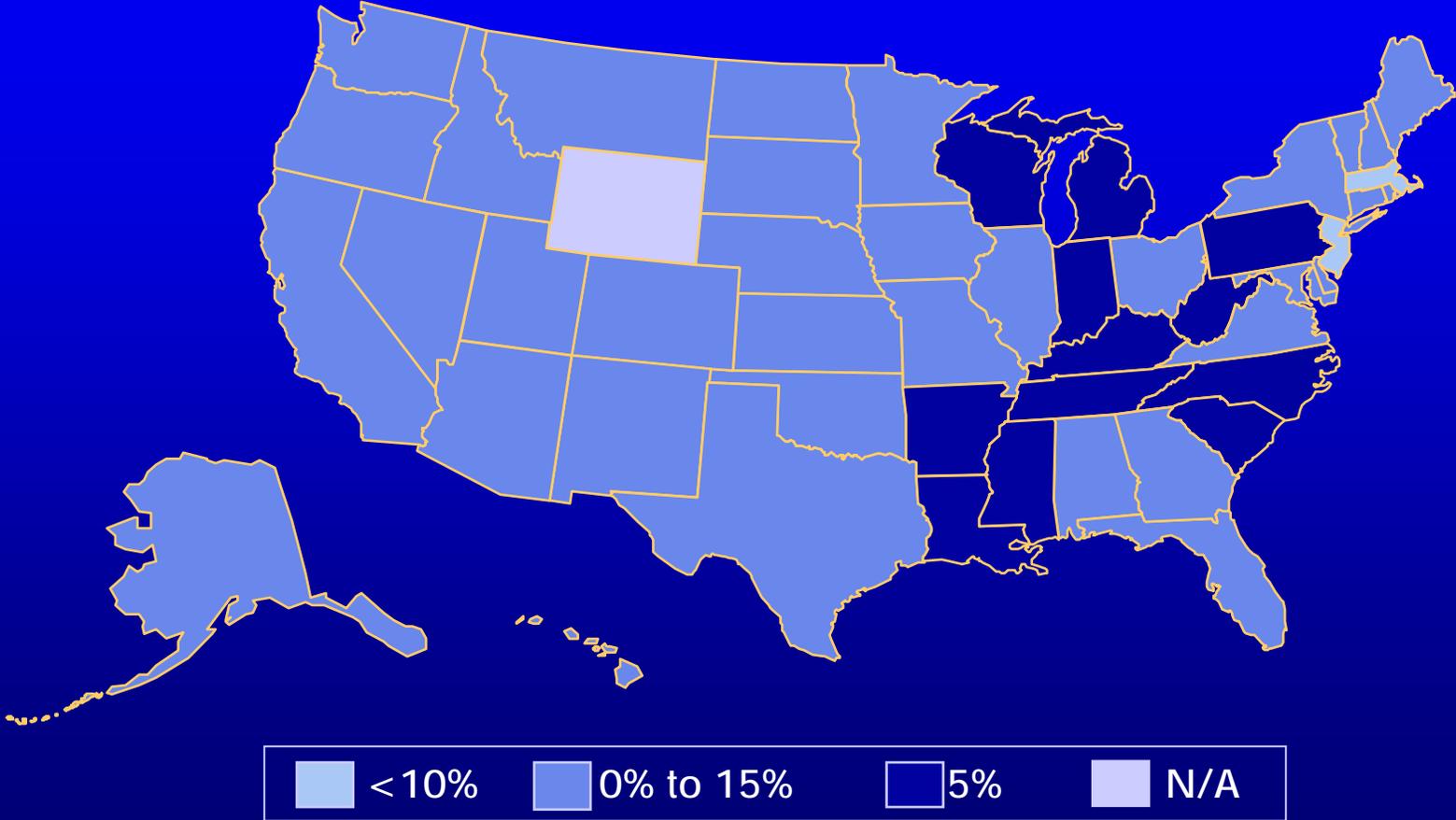
Prevalence of Obesity* Among U.S. Adults BRFSS, 1992

(*Approximately 30 pounds overweight)



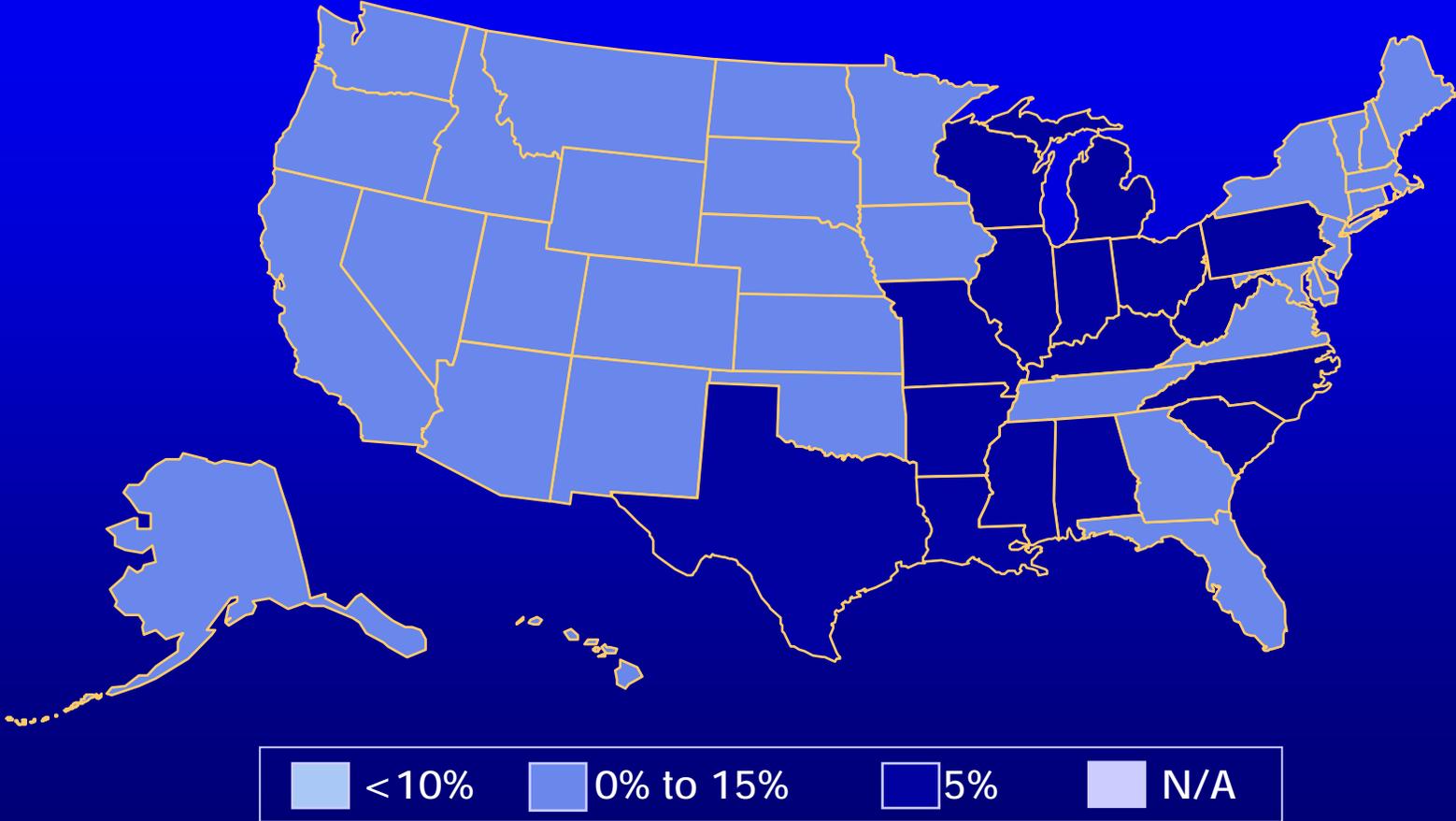
Prevalence of Obesity* Among U.S. Adults BRFSS, 1993

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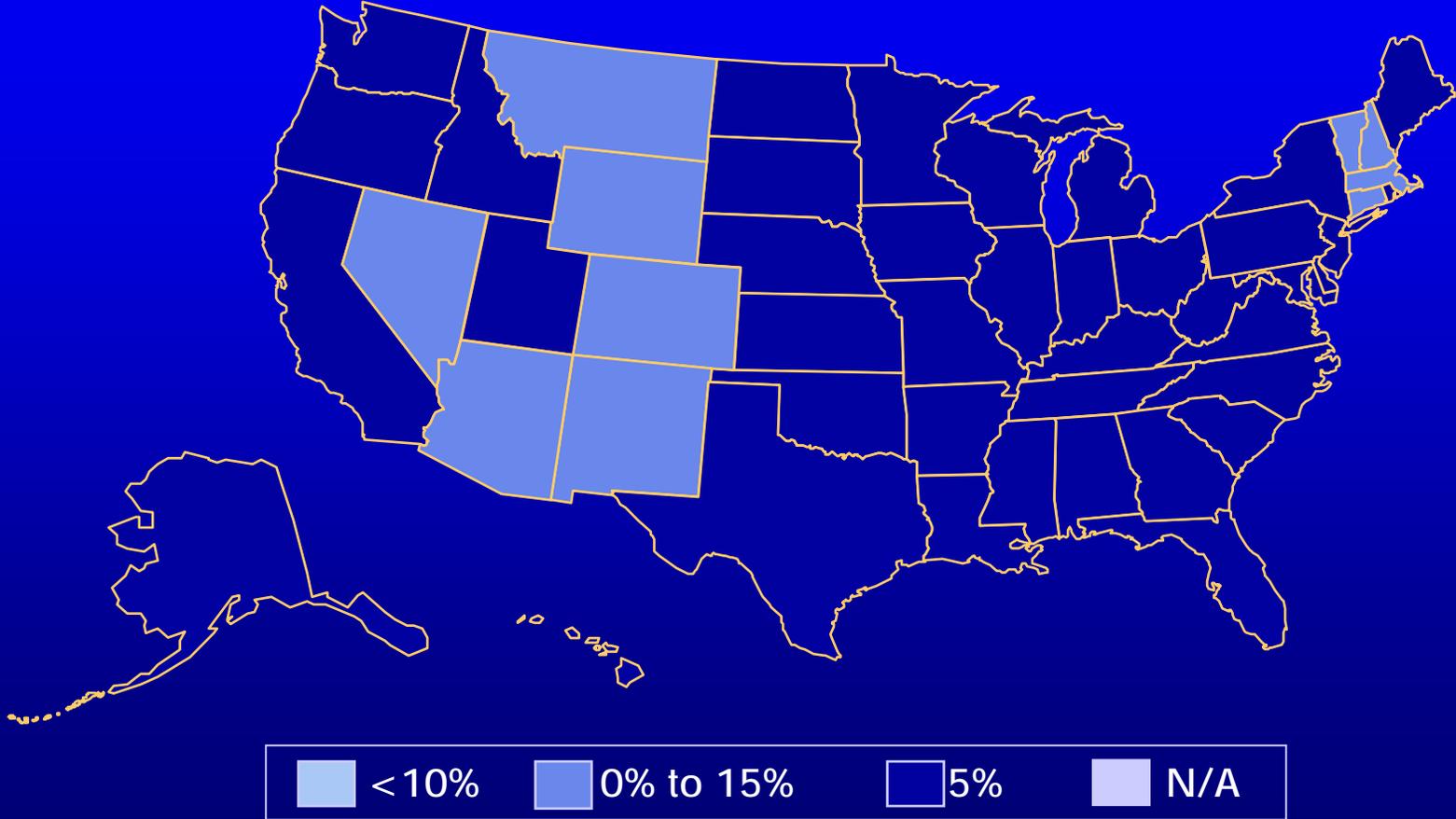
Prevalence of Obesity* Among U.S. Adults BRFSS, 1994

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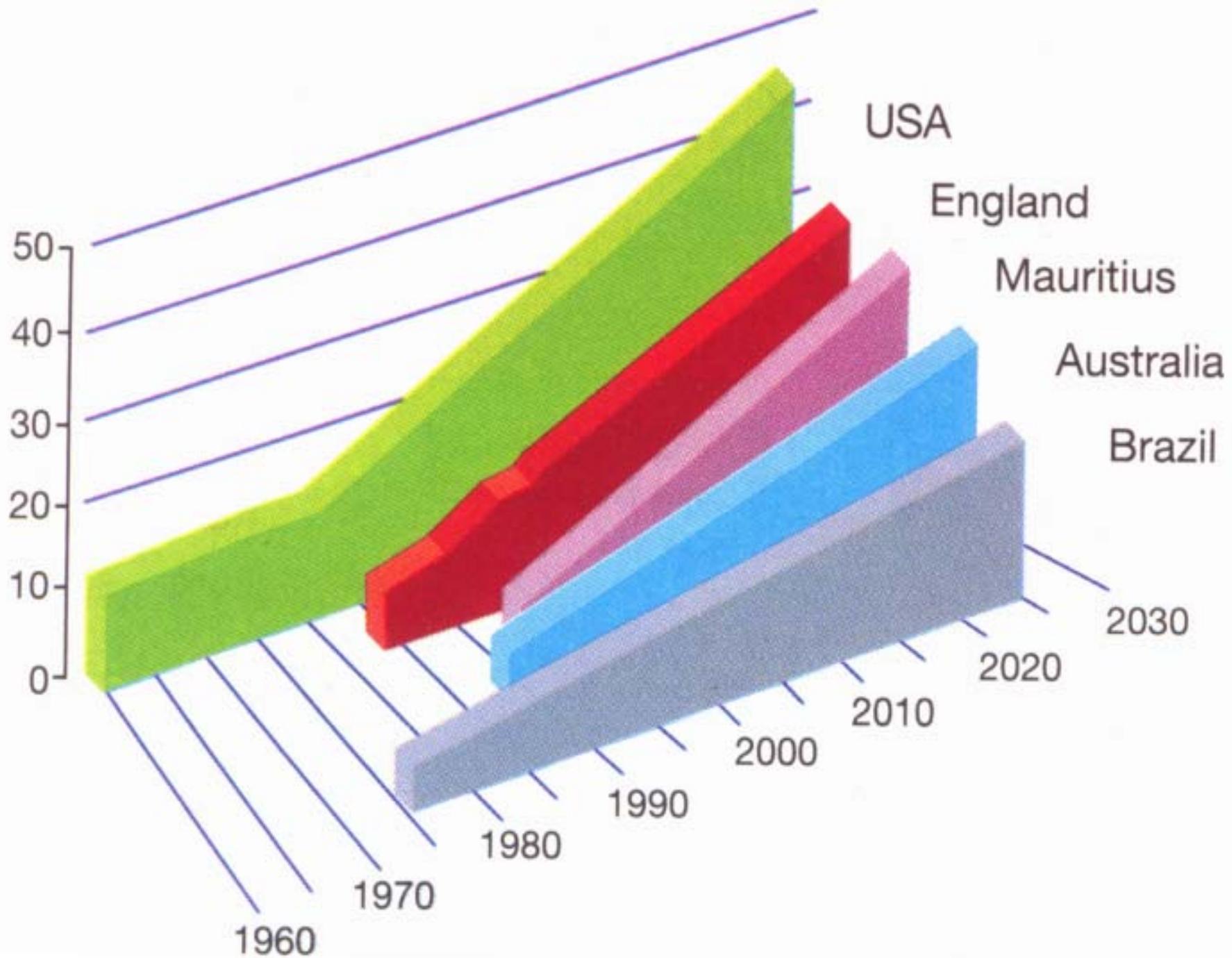


Prevalence of Obesity* Among U.S. Adults BRFSS, 1998

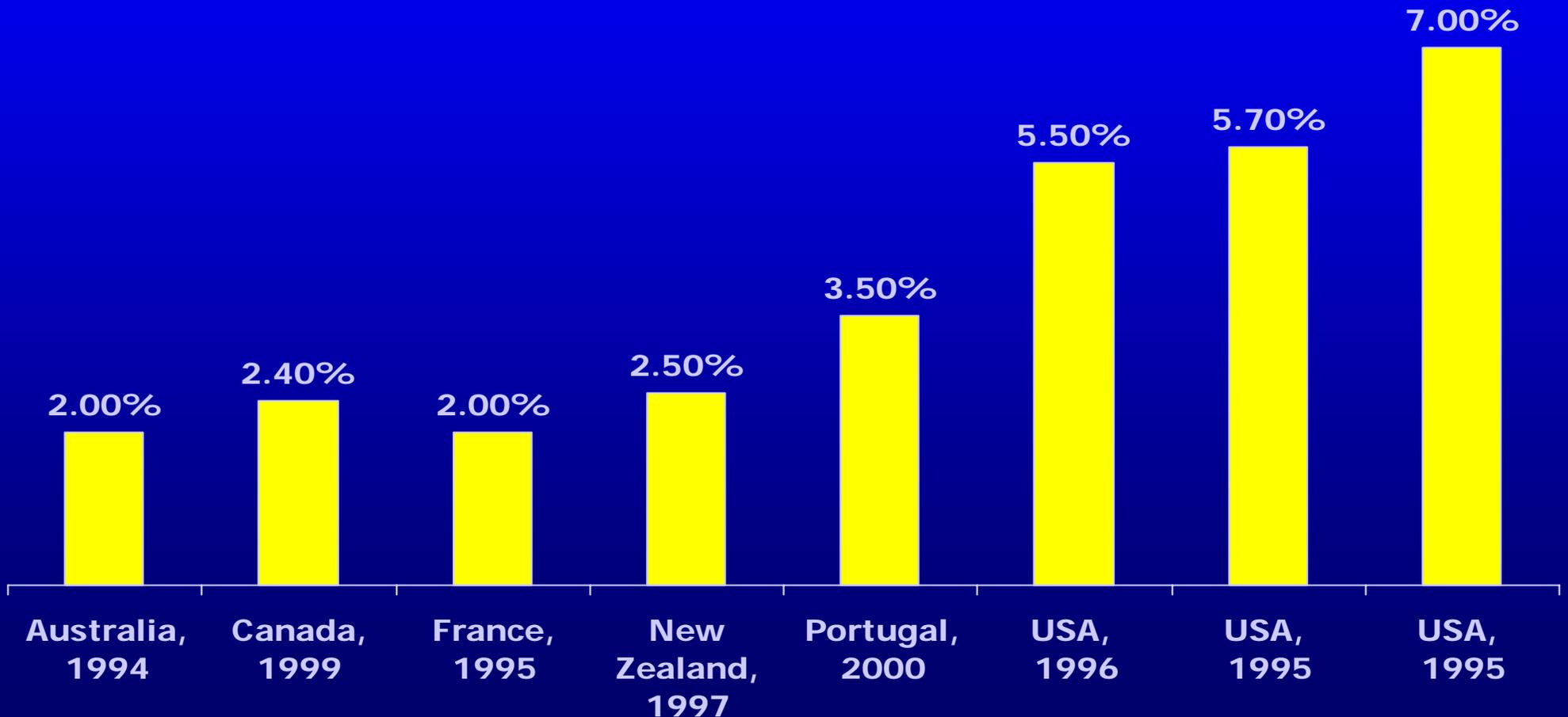
(*Approximately 30 pounds overweight)



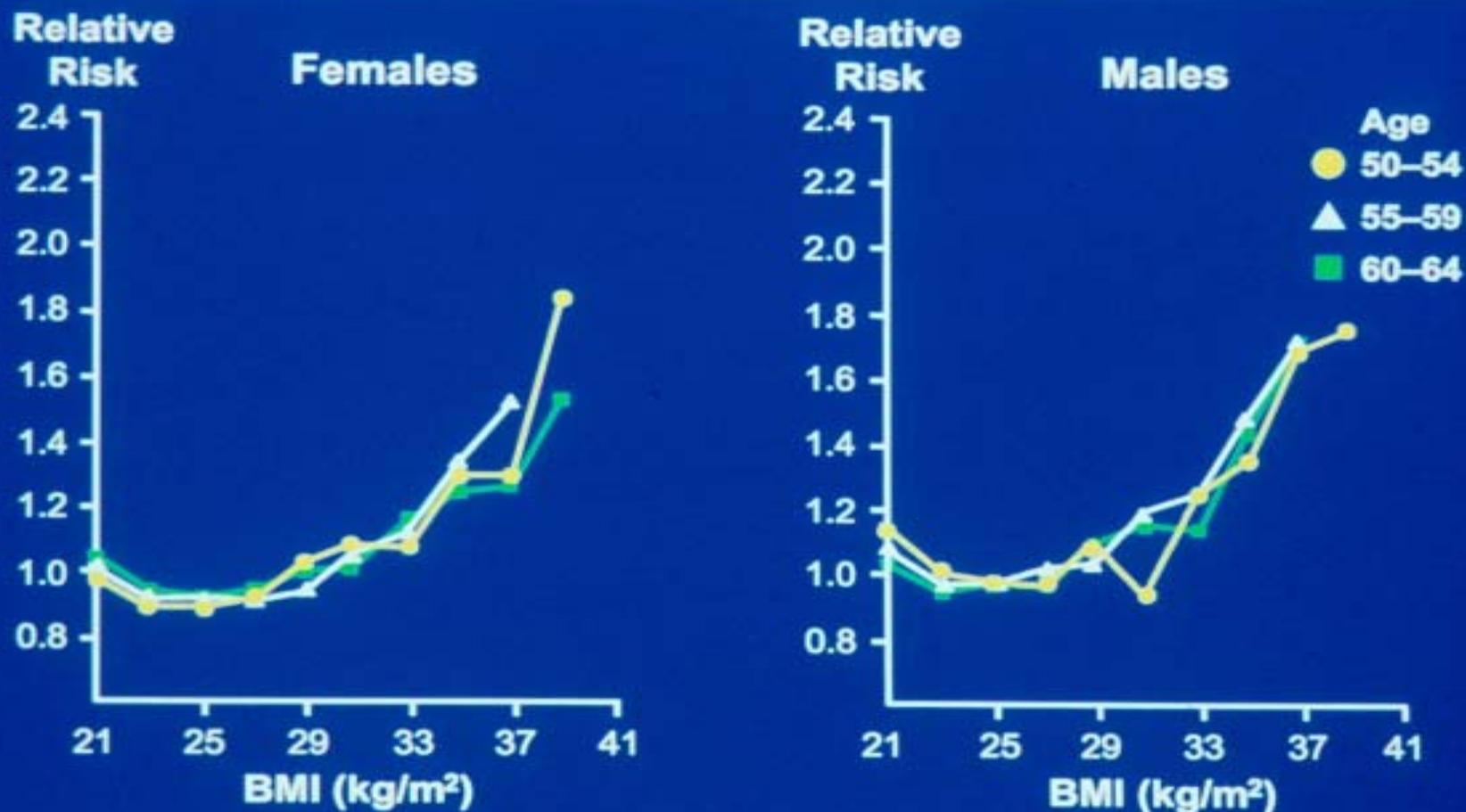
Percentage of population
with BMI ≥ 30 kg m⁻²



Percentage of national health expenditures attributable to obesity, by country



BMI and Age-Related Mortality



Adapted from Waaler HT. *Acta Med Scand.* 1984;679(suppl):1-56, with permission.

Medical Risks of Obesity

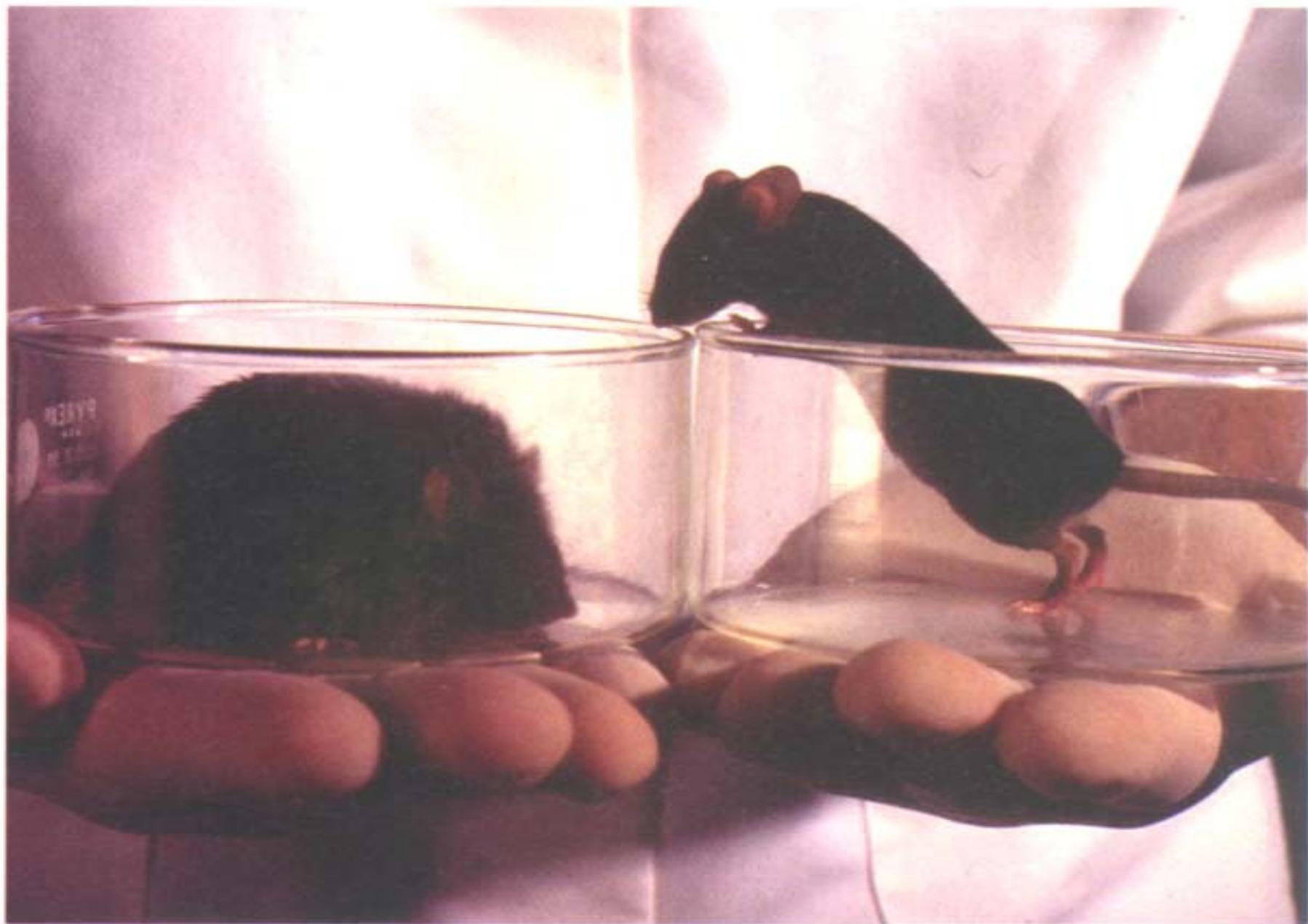
- **Hypertension**
- **Diabetes Mellitus (NIDDM)**
- **Hyperlipidemia**
- **Cardiovascular Disease**
- **Gall Bladder Disease**
- **Various Forms of Cancer
(endometrium, breast, colon)**
- **Sleep Apnea**
- **Menstrual Irregularities**
- **Osteoarthritis (knees)**

Causes of Obesity

1. Endocrine (very rare)
2. Genetics (30-70%)
3. Environment
 - a. Diet
 - b. Activity
 - c. Drugs
 - d. Intrauterine Env.
 - e. Infection

GENES IN HUMANS

- Associated with Metabolism, Hunger, Satiety, Fat Distribution?
- N>140 and counting
- But Few Explain Human Obesity Thus Far



Before and after: dramatic images such as this one fired pharmaceutical enthusiasm for leptin.

Pharmacology of appetite control

John Blundell

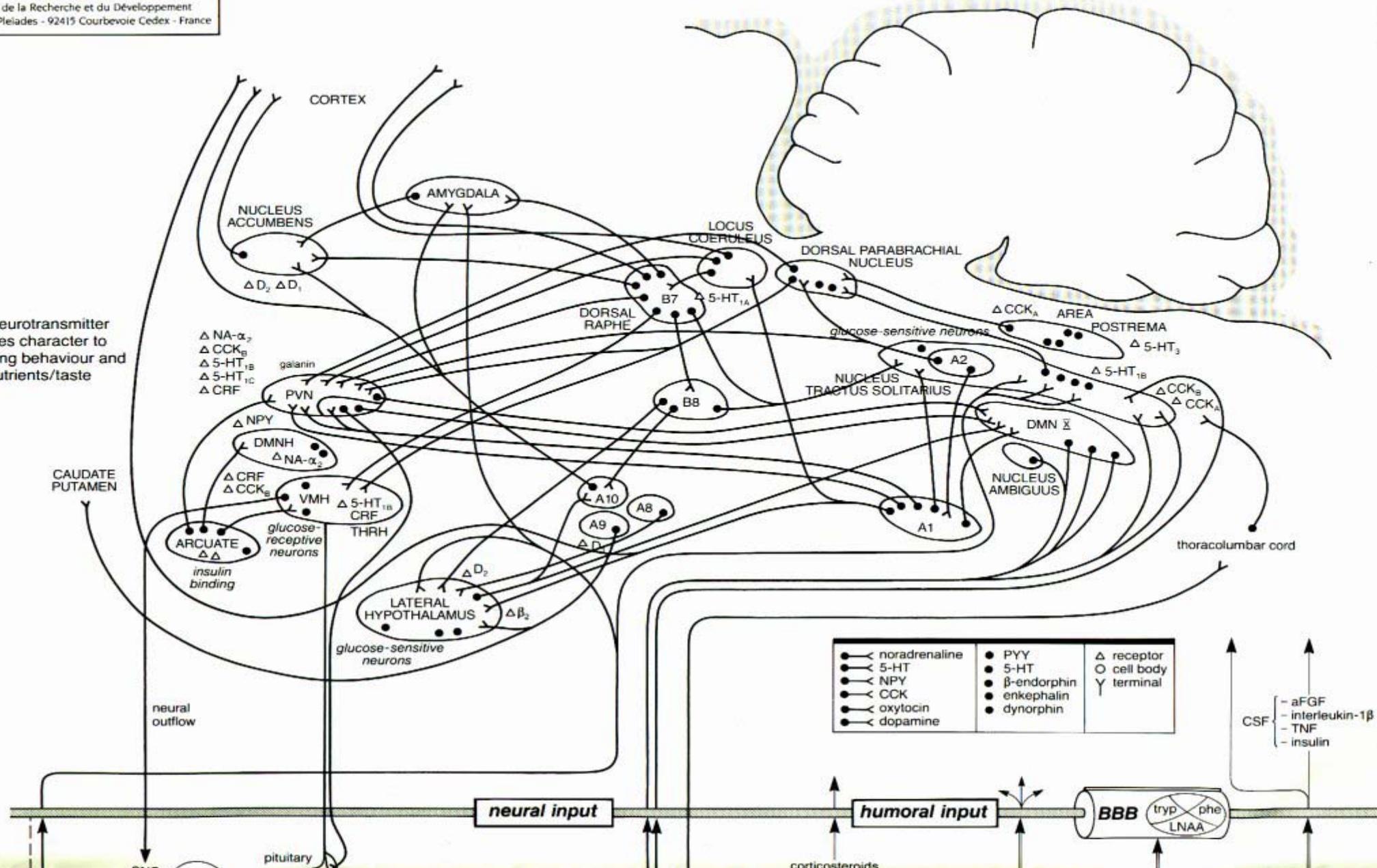
Trends in
Pharmacological
Sciences

INSTITUT DE RECHERCHES
INTERNATIONALES SERVIER

I.R.I.S.

Direction de la Recherche et du Développement
place des Pleiades - 92415 Courbevoie Cedex - France

File of neurotransmitter
activity gives character to
food-seeking behaviour and
response for nutrients/taste



Stimulate

- Orexin A, B
- Galanin
- Opioids
- Agouti related protein
- NPY,PYY
- Ghrelin

Inhibit

- Leptin
- Melanocortin
- CRF
- Glucogon-Like Peptide 1
- CCK

Viral Animal Models of Obesity

1. Canine Distemper Virus
2. Rous Associated Virus-7
3. Borna Virus
4. SMAM-1 Avian Adenovirus
5. AD-36 Human Adenovirus
6. SMAM-1 Human Adenovirus
(also in humans)

INTRAUTERINE ENVIRONMENT

- Dutch Hunger Winter
- Increased Obesity Associated with Second Trimester Malnutrition

FOOD AVAILABILITY/CHOICE

- Increased Fat - Poorly Regulated
- Easy/No Preparation Required!
- Access Everywhere

Food Availability U.S.A.

1970	3300 Kcal/per capita	154 gm/Fat
1994	3800 Kcal/per capita	159gm/Fat

COKE

1916	6.5 oz.	
1950's	6.5 oz. 10 oz. 12 oz.	(80% of sales) "King size"
1990's	12 oz. 16 oz. 32 oz. 42 oz.	"Child size" Adult "small size" Adult "large size" Adult "super size"

Eating Out

1983 - 1996

89% ↑ in Restaurants

147% ↑ Fast Food Outlets

200% ↑ Fast Food Consumption

Pizza and Soft Drinks

■ Pizza	150%	1977/78	1994
■ Soft Drinks	131%	1977/78	1994/96

Example

■ Big Mac	570 Kcal	32 gm/fat
■ Medium F.F.	450 Kcal	22 gm/fat

–83% of recommended fat intake

Advertising

Coca Cola 1997 277 million

McDonalds 1998 572 million

NIH 1996 1 million

Healthy Eating

Activity

Elevators

Computers

Remote Controls

Leaf blowers

Driving

Riding lawnmowers/
snow throwers

Moderate Weight Loss Reduces the Incidence of Diabetes

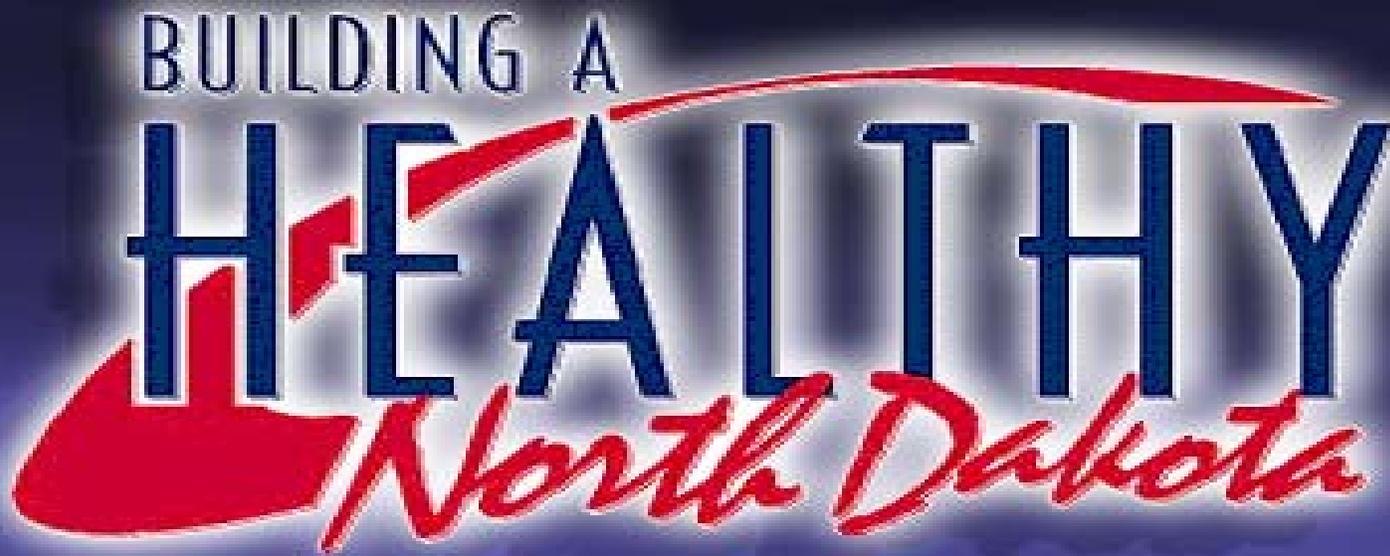
- Intensive lifestyle intervention targeting a 7% weight loss through guided diet and exercise results in:
 - Decreased incidence of diabetes
 - Decreased fasting glucose
 - Decreased HbA_{1C}

The Good News

- Modest Weight Loss Improves Risk Factors
- Modest Weight Loss Prevents Type II DM
- Modest weight loss sustainable
- New Medications Coming

Problems and Opportunities!!

- Unravel the Biology/Medication Development
- Target High Risk Groups (eg Native Americans)
- Target Binge Eating Groups
- GBP for Severly Obese
- Prevention in Children / Adolescents



Healthy North Dakota Summit

BUILDING A
HEALTHY
North Dakota

Bringing Science to Patients

Saving Lives

Dr. Lynn Smaha

American Heart Association

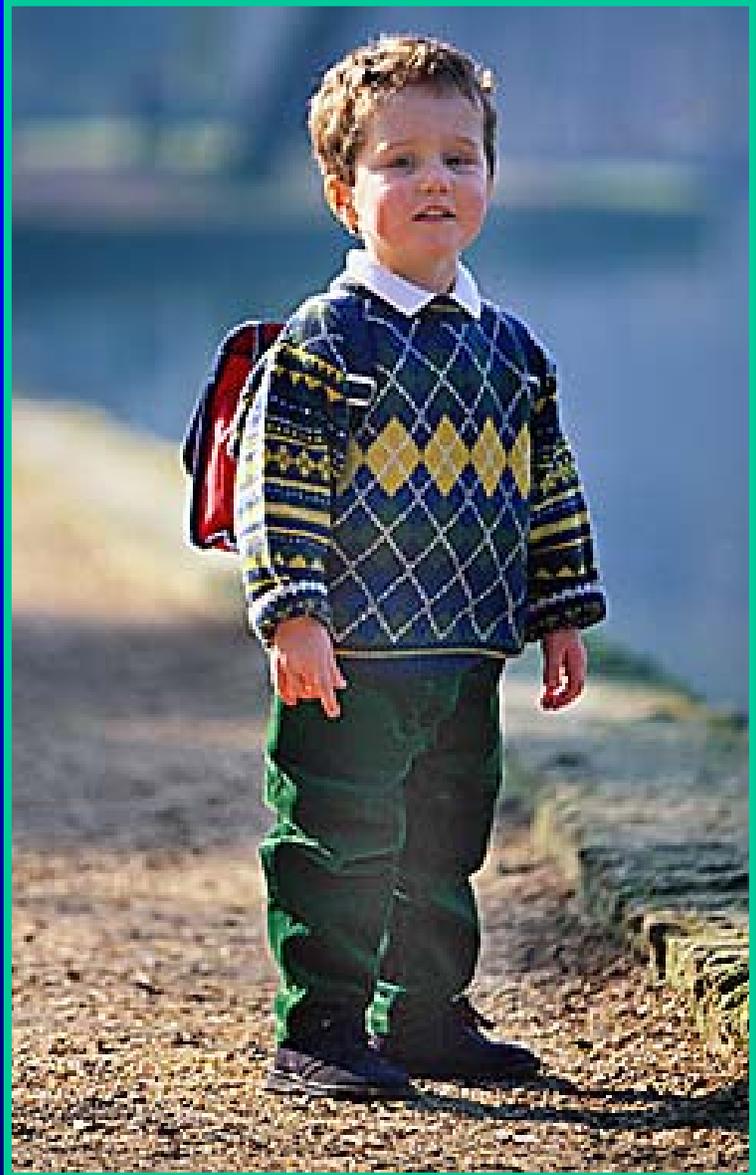
Healthy North Dakota Summit
Bringing Science to Patients
Saving Lives

Lynn A. Smaha, M.D., Ph.D.

Past President, AHA





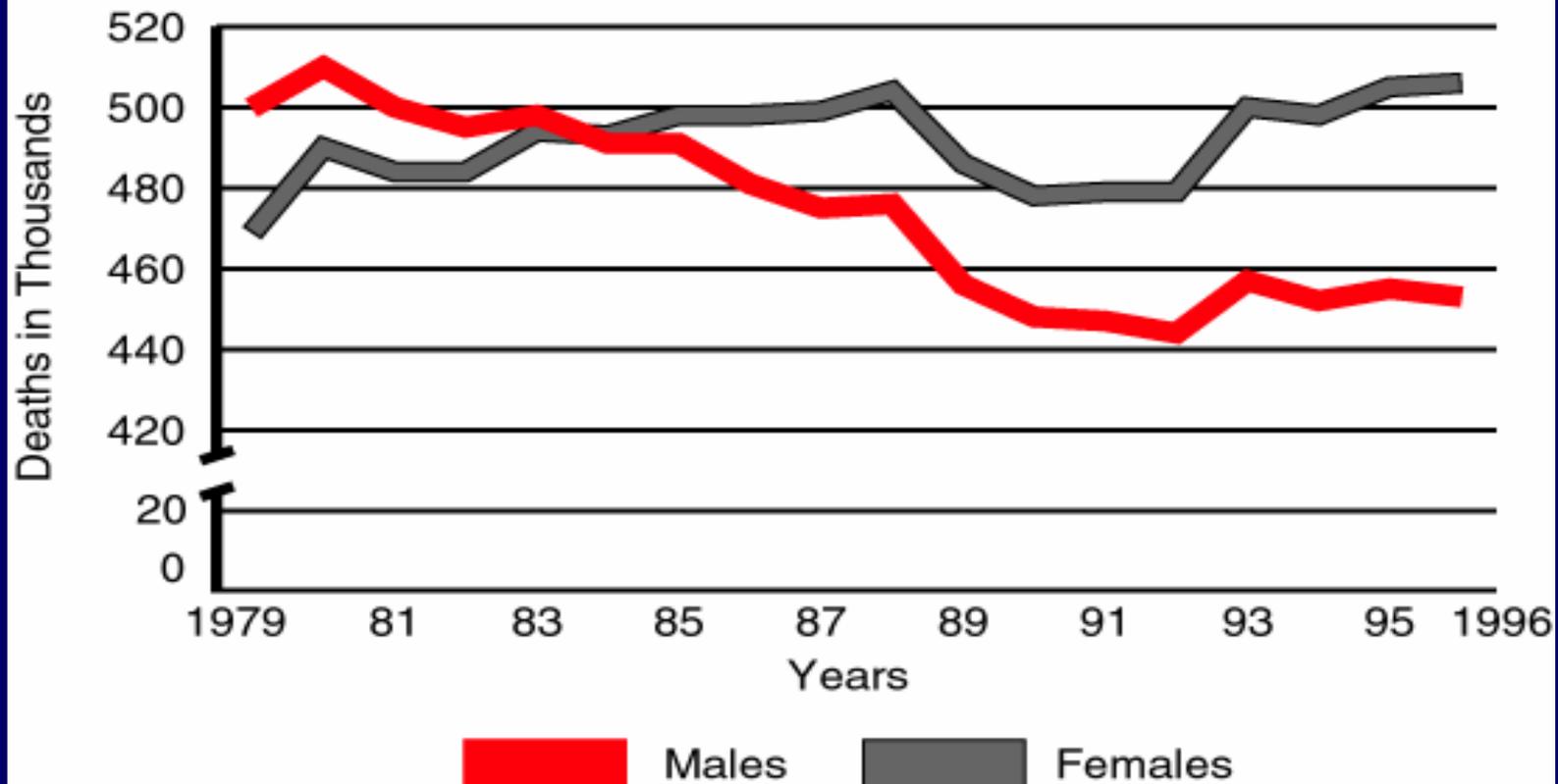






Cardiovascular Disease Mortality Trends for Males and Females

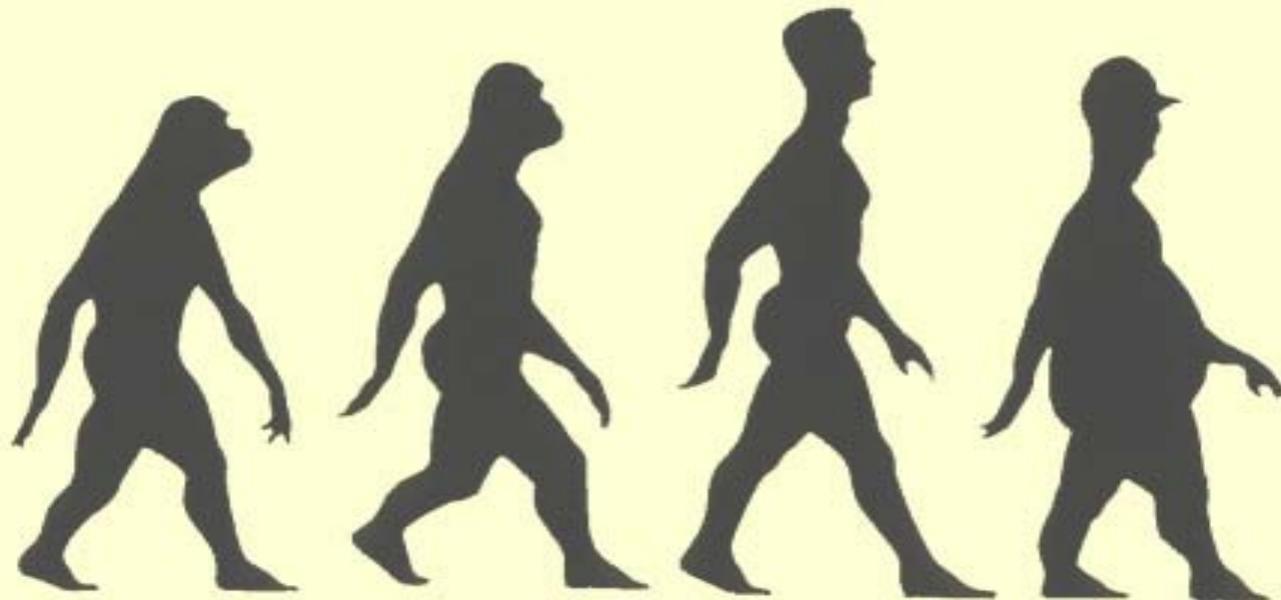
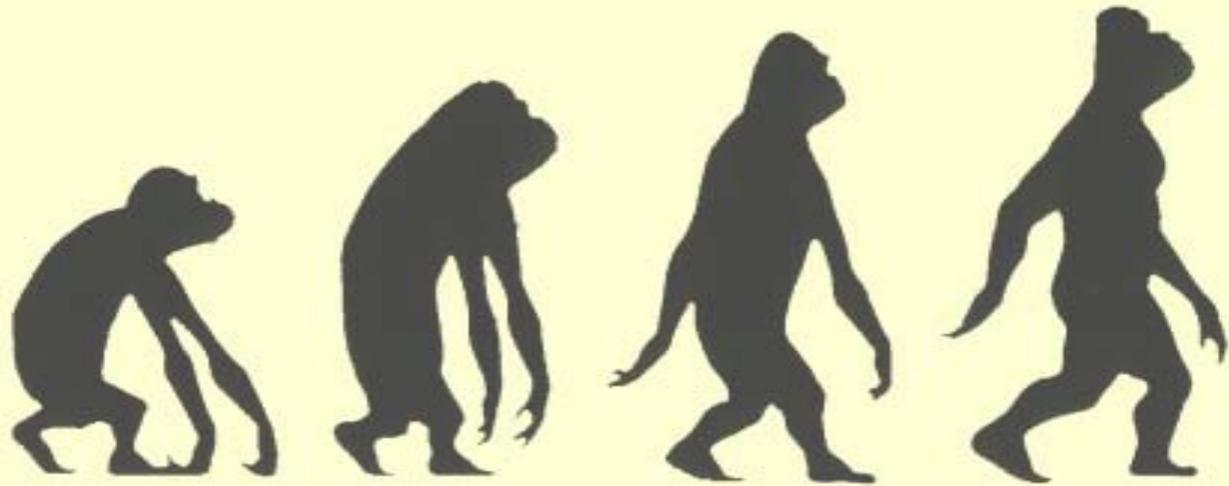
United States: 1979–96 Mortality



Source: CDC/NCHS and the American Heart Association.

Elderly Population 65 and Over

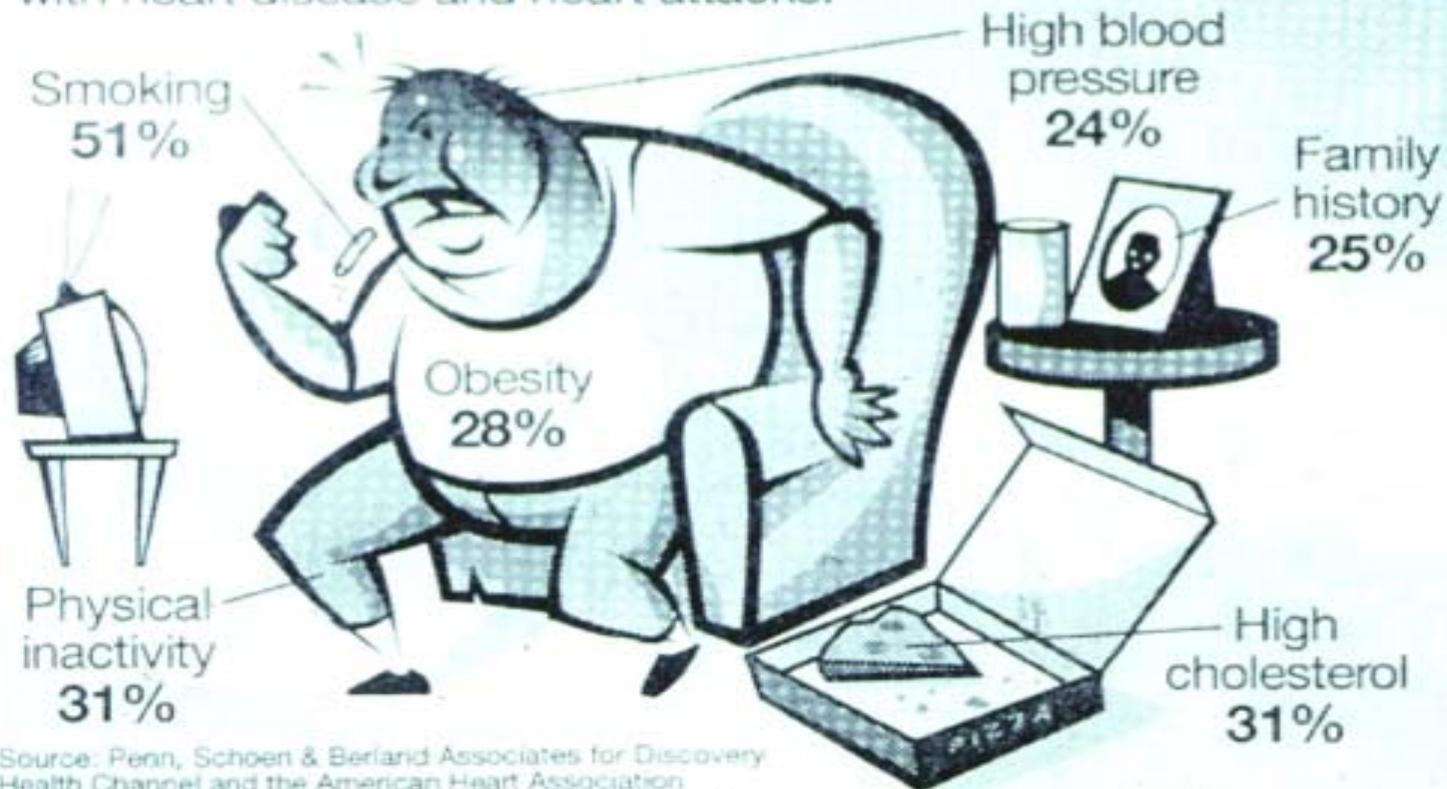
<u>Census</u> <u>Date</u>	<u>Number</u> <u>Millions</u>	<u>Percent</u>
1920	5	4.7
1940	9	6.8
1960	17	9.2
1980	26	11.3
1994	33	12.7
2010	40	13.3
2030	70	20.1



Falconer

Aware of risk factors

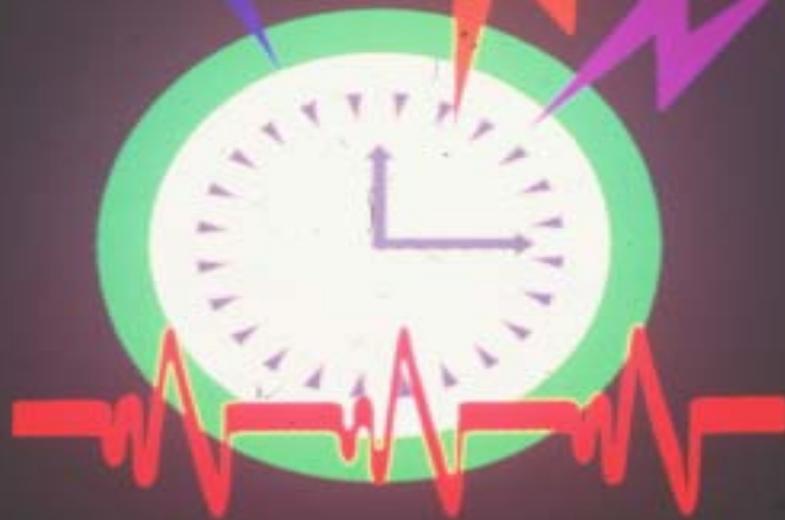
Adults who correctly know the following are risk factors associated with heart disease and heart attacks:



Source: Penn, Schoen & Berland Associates for Discovery Health Channel and the American Heart Association

Survival chances decrease

10% per minute





**Survival
rate**

3.6% to

49%



Heartsaver AED

for the Lay Rescuer and
First Responder



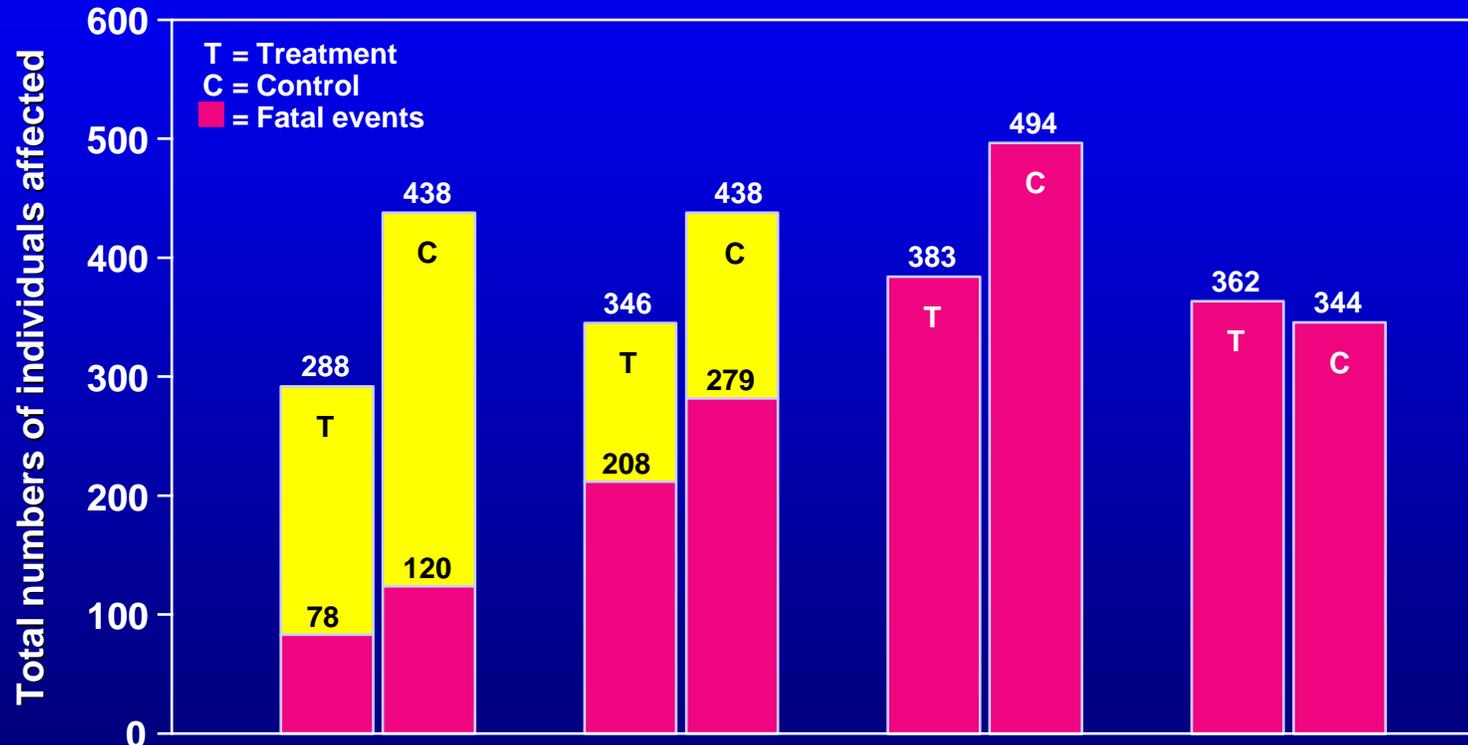
What do we know?

Hypertension

- ◆ 1 in 4 adults have HBP
- ◆ 31.6% are unaware of HBP
- ◆ 27.4% are on medication
- ◆ 26.2% are controlled

JNC VI 1991-

Combined Results of Five Randomized Trials of Antihypertensive Treatment in the Elderly



% (SD) reduction
in odds

34% (6)
2P <0.0001

19% (7)
2P <0.05

23% (6)
2P <0.001

-7% (8)
2P >0.5

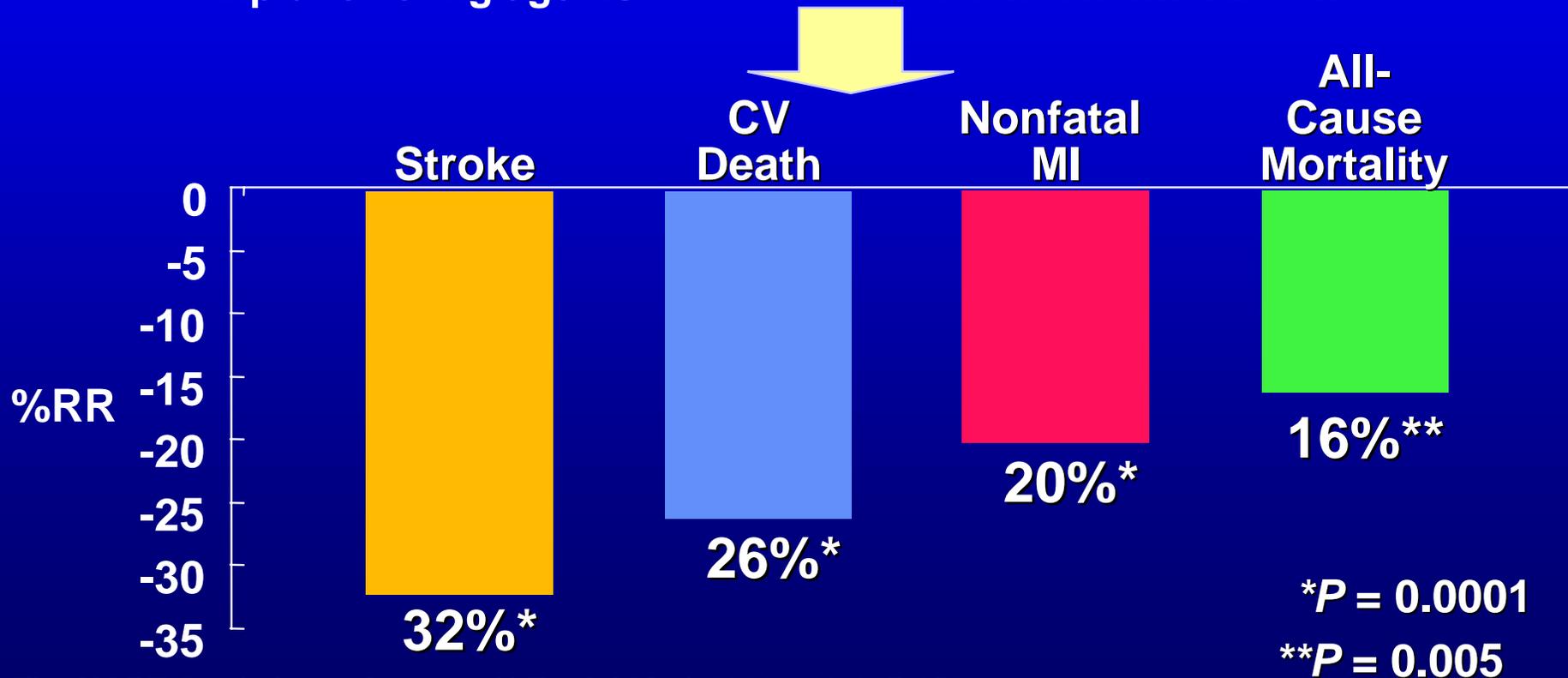
Lipid Lowering

<i>Primary Prevention</i>	<i>Secondary Prevention</i>
WOSCOPS	4S
AFTXCPS	CARE

HOPE: Cardiovascular Outcomes With Ramipril

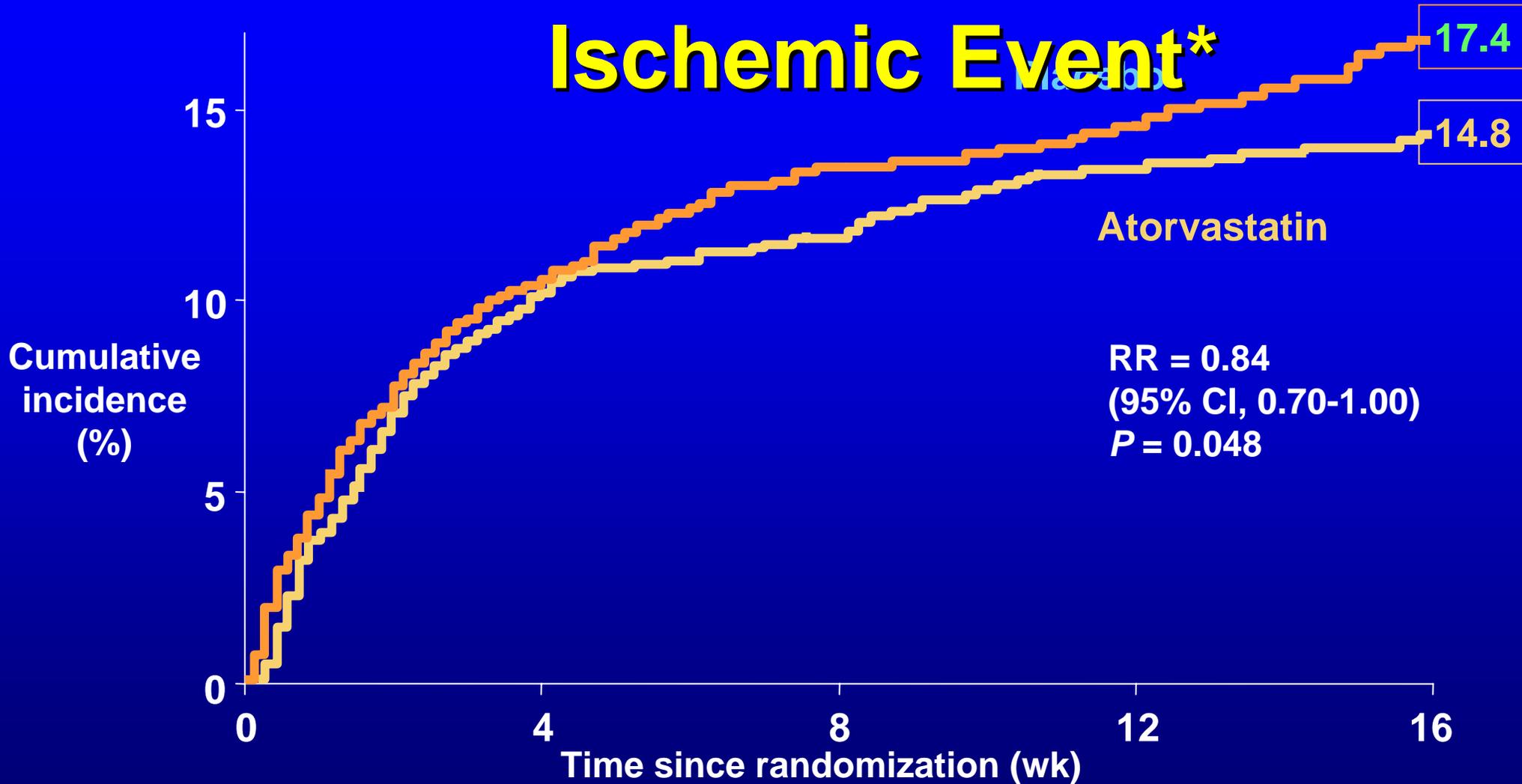
Effects Beyond Baseline Therapy

- Aspirin
- Beta-blockers
- Lipid-lowering agents
- Diuretics
- Other Antiplatelets
- Calcium Channel Blockers



The HOPE Study Investigators. *N Engl J Med.* 2000;342:145-153.

MIRACL: Time to First Ischemic Event*



*Death (any cause), nonfatal MI, resuscitated cardiac arrest, recurrent symptomatic myocardial ischemia with objective evidence requiring emergency rehospitalization. Schwartz GG et al. *JAMA*. 2001;285:1711-1718.

Comprehensive Medical Therapy For Patients with CHD or Other Vascular Disease

	Risk Reduction
■ ASA*	20-30%
■ Beta Blockers*	20-35%
■ ACE inhibitors*	22-25%
■ Statins*	25-42%
■ Smoking Cessation	50%

***The four medications every atherosclerosis patient should be treated with, unless contraindications exist and are documented**

Compliance with Secondary Prevention Guidelines for Acute Myocardial Infarction

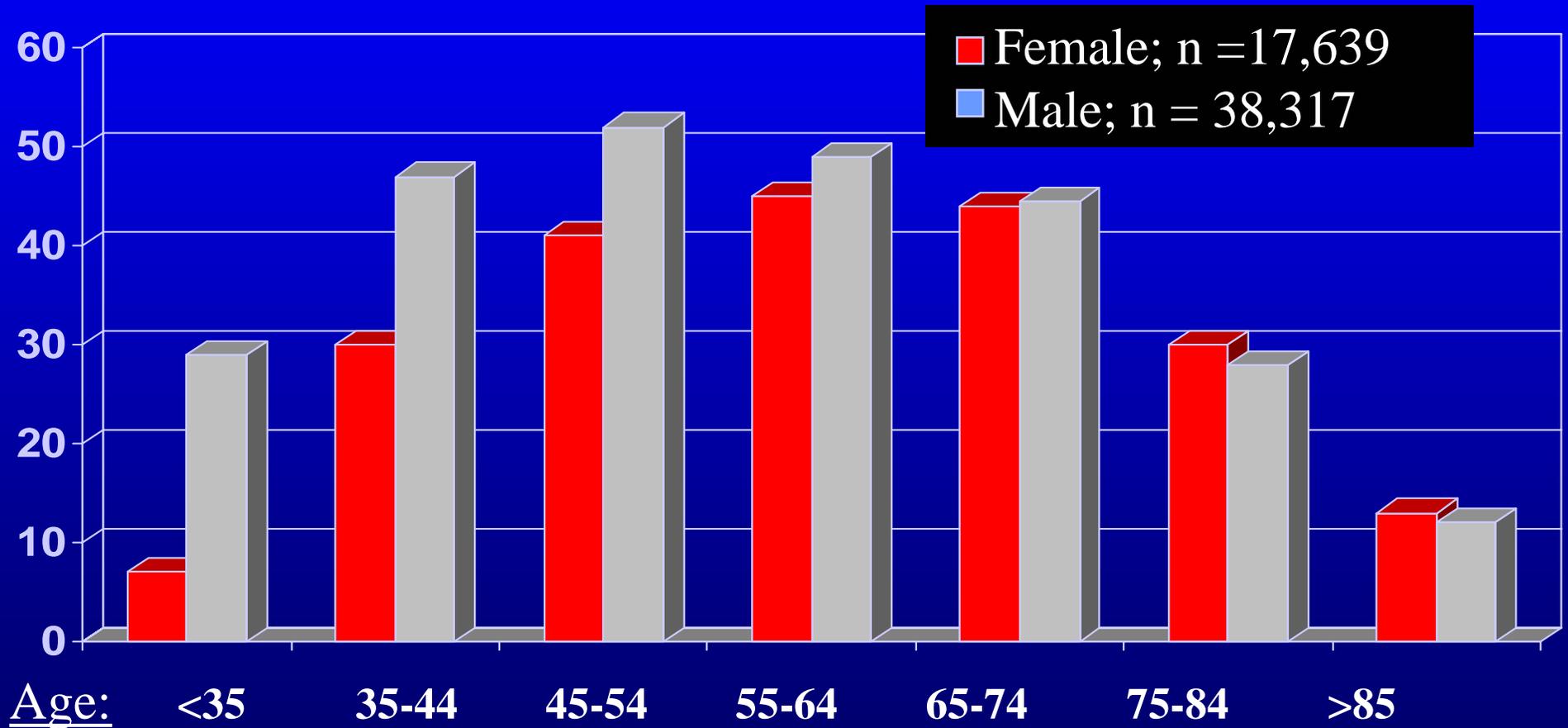
POST MI

Recommendation	Compliance
Aspirin	77.8%
ACE	59.3%
Thrombolytic therapy or PTCA	67.2%
Beta Blockers	49.5%
Smoking Cessation Advice	41.9%

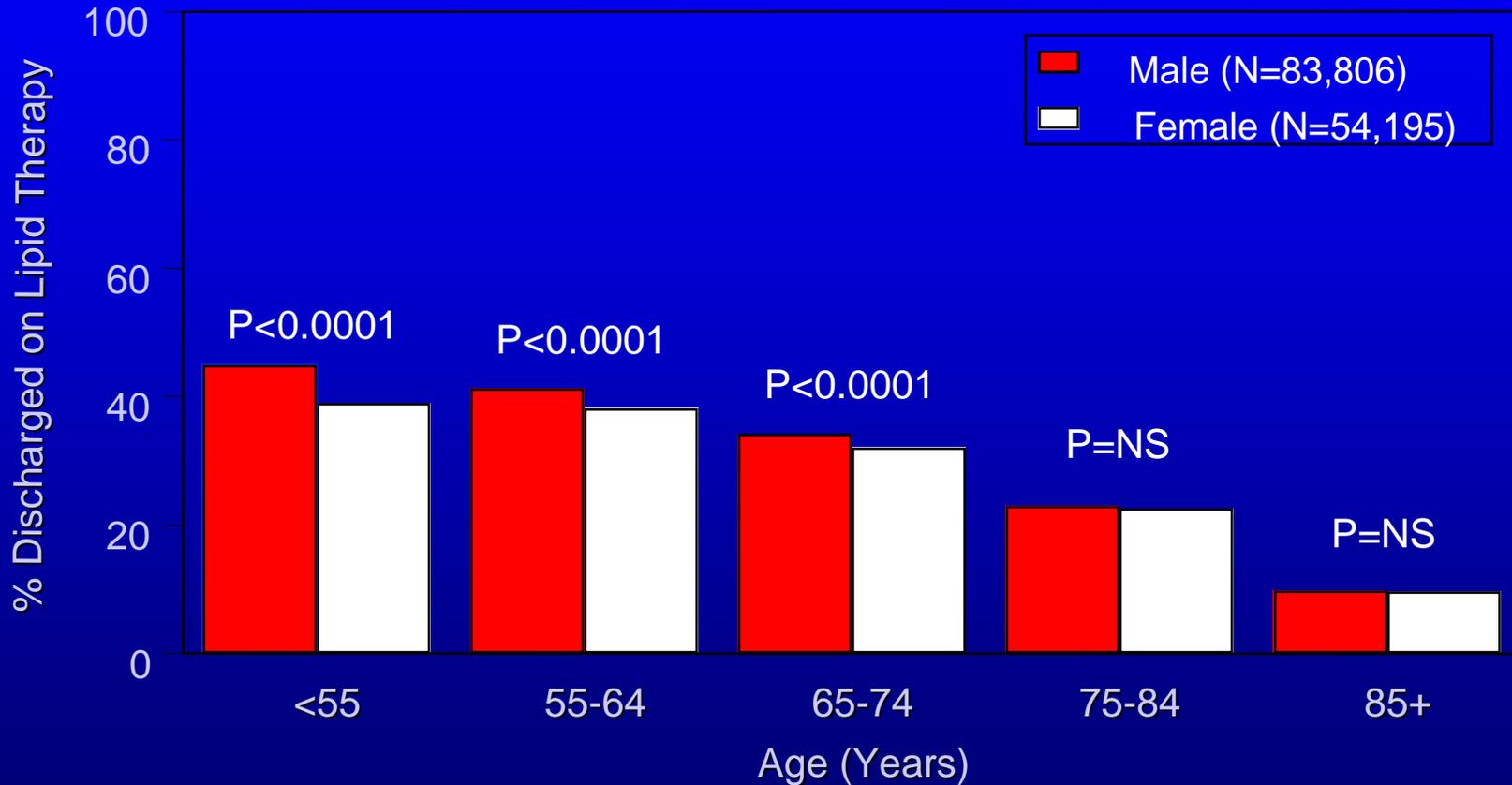
O'Connor et al

Jama Feb 1999

% of Patients on Lipid Lowering Therapy: Based on Gender & Age



Utilization of Lipid-Lowering Medications at Discharge in Patients with AMI



"Use of Lipid-Lowering Medications at Discharge in Patients With Acute Myocardial Infarction" Fonarow Circulation 2001;102:38-44

What Can We Do?

- Science
- Public Policy
- Tools
- CQI
- Life Style

AHA Guidelines

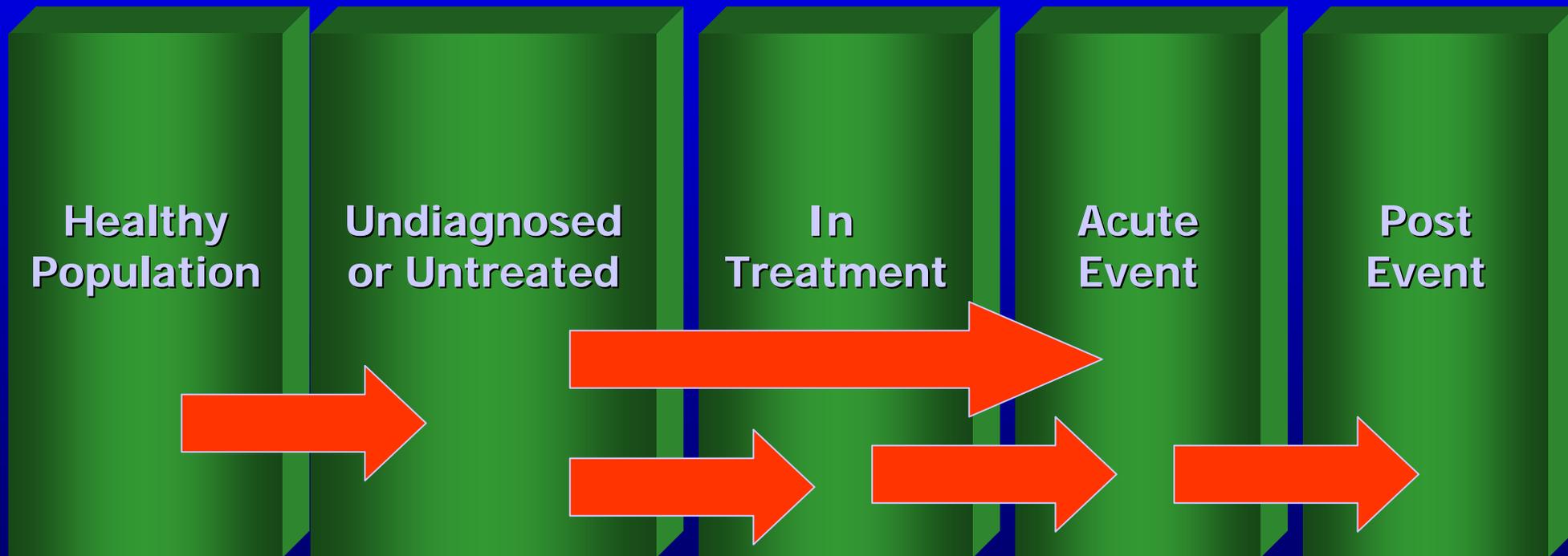
- Cessation of smoking
- Lipid Management Goals
- Physical activity
- Weight management
- Antiplatelet/
anticoagulants
- ACE inhibitors
- Beta blockers
- Blood pressure control
- Early Aspirin
- Early Beta-Blockers
- Reperfusion for AMI
- Stroke: Atrial Fibrillation
and Alcohol Use

Adapted from Smith, Circulation 92:3, 1995

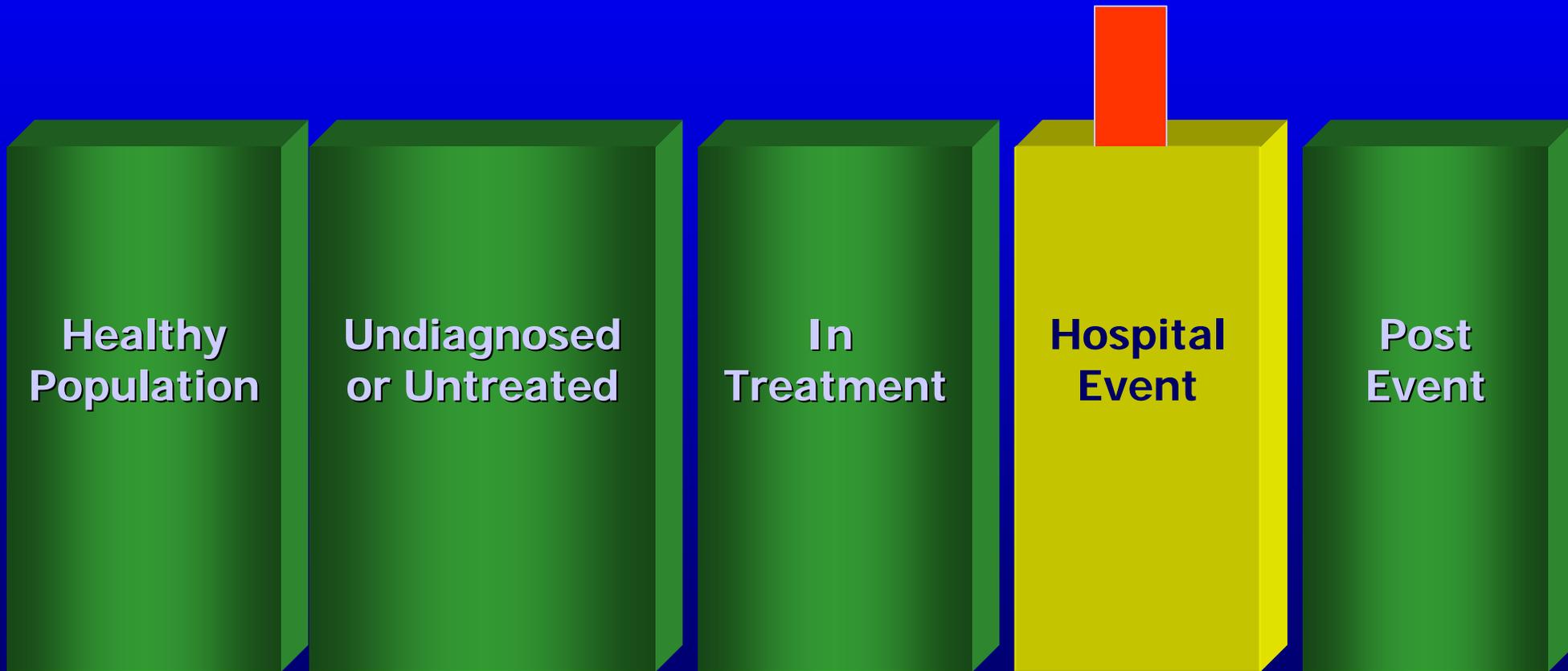


The American Heart Association is in a new business, from development of guidelines to implementation of guidelines.

The Healthcare Continuum



Implement Guidelines HERE



AHA TOOL: SIMPLE, ONE PAGE, ON-LINE FORM

AHA Discharge Form

Patient ID: Physician:
Admit Date: Discharge Date:

Demographic	Age: <input type="text"/> years Gender: <input type="radio"/> female <input type="radio"/> male Race: <input type="text"/>
Cardiac diagnosis:	<input type="text"/>
Procedures:	None <input type="text"/>
What does the patient's past history include?	<input type="checkbox"/> previous MI <input type="checkbox"/> angina <input type="checkbox"/> heart failure <input type="checkbox"/> hypertension <input type="checkbox"/> diabetes <input type="checkbox"/> renal insufficiency <input type="checkbox"/> smoker (within the past year) <input type="checkbox"/> no regular exercise (<30 min. 3x/wk) <input type="checkbox"/> none of the above

Demographics
6 clicks

<u>Height/Weight:</u>	Hgt: <input type="text"/> inches Wgt: <input type="text"/> lbs BMI: <input type="text"/> kg/m2 Waist Circumference: <input type="text"/> inches
<u>Blood pressure:</u>	<input type="text"/> / <input type="text"/> mmHg
<u>Lipids, HbA1C(if diabetic):</u>	Total Chol: <input type="text"/> mg/dL HDL: <input type="text"/> mg/dL LDL: <input type="text"/> mg/dL Triglycerides: <input type="text"/> mg/dL HbA1C: <input type="text"/> mg/dL
<u>Ejection fraction:</u>	<input type="text"/> %

Clinical/Lab
8 clicks

<u>Discharge Status:</u>	<input type="text"/>
<u>Anti-platelets/coagulants:</u>	<input type="checkbox"/> Aspirin (80-325mg/d) <input type="checkbox"/> Coumadin (Warfarin) <input type="checkbox"/> ticlid/plavix/other <input type="checkbox"/> check if taking one of these meds prior to admission <input type="checkbox"/> contraindications
<u>ACE Inhibitors:</u>	None <input type="text"/> <input type="checkbox"/> taking prior to admission
<u>Beta Blockers:</u>	None <input type="text"/> <input type="checkbox"/> taking prior to admission
<u>Cholesterol Reducer:</u>	None <input type="text"/> <input type="checkbox"/> taking prior to admission
<u>Other meds at discharge:</u>	<input type="checkbox"/> Ca++ Channel Blockers <input type="checkbox"/> Other Anti-hypertensive <input type="checkbox"/> Nitrates <input type="checkbox"/> Digoxin <input type="checkbox"/> Diuretic <input type="checkbox"/> Diabetes Medication <input type="checkbox"/> Other <input type="checkbox"/> None
<u>Referred to Cardiac Rehab Program:</u>	<input type="radio"/> yes <input type="radio"/> no <input type="radio"/> unknown
<u>Risk Interventions:</u>	<input type="checkbox"/> smoking cessation <input type="checkbox"/> weight management <input type="checkbox"/> activity recommendations <input type="checkbox"/> low cholesterol diet (Step II AHA or equivalent) <input type="checkbox"/> anti-hypertensive diet

Discharge meds and interventions
7 clicks

Interactively checks patient's data with the AHA guidelines

FAX LETTER TO REFERRING PHYSICIAN

IMPROVE COMMUNICATION AND REINFORCE INTERVENTION

<u>Height/weight:</u>	Waist Circumference: <input type="text"/> inches
<u>Blood pressure:</u>	<input type="text" value="139"/> / <input type="text" value="102"/> mmHg
<u>Lipids, HbA1C(if diabetic):</u>	Total Chol: <input type="text"/> mg/dL HDL: <input type="text"/> mg/dL LDL: <input type="text"/> mg/dL Triglycerides: <input type="text"/> mg/dL HbA1C: <input type="text" value="7"/> mg/dL
Ejection fraction:	<input type="text" value="45"/> %
Discharge Status:	
<u>Anti-platelets/coagulants:</u>	<input type="checkbox"/> Aspirin (80-325mg/d) <input type="checkbox"/> Coumadin (Warfarin) <input type="checkbox"/> ticlid/plavix/other <input type="checkbox"/> check if taking one of these meds prio admission <input type="checkbox"/> contraindications
<u>ACE Inhibitors:</u>	<input type="text" value="None"/> <input type="checkbox"/> taking prior to admission
<u>Beta Blockers:</u>	<input type="text" value="None"/> <input type="checkbox"/> taking prior to admission
Cholesterol Reducer:	<input type="text" value="None"/> <input type="checkbox"/> taking prior to admission
Other meds at discharge:	<input type="checkbox"/> Ca++ Channel Blockers <input type="checkbox"/> Other Anti-hypertensive <input type="checkbox"/> Nitrates <input type="checkbox"/> Digoxin <input type="checkbox"/> Diuretic <input type="checkbox"/> Diabetes Medication <input type="checkbox"/> Other <input type="checkbox"/> None
Referred to Cardiac Rehab Program:	<input type="radio"/> yes <input type="radio"/> no <input type="radio"/> unknown
<u>Risk Interventions:</u>	<input type="checkbox"/> smoking cessation <input type="checkbox"/> weight management <input type="checkbox"/> activity recommendations <input type="checkbox"/> low cholesterol diet (Step II AHA or equivalent) <input type="checkbox"/> anti-hypertensive diet

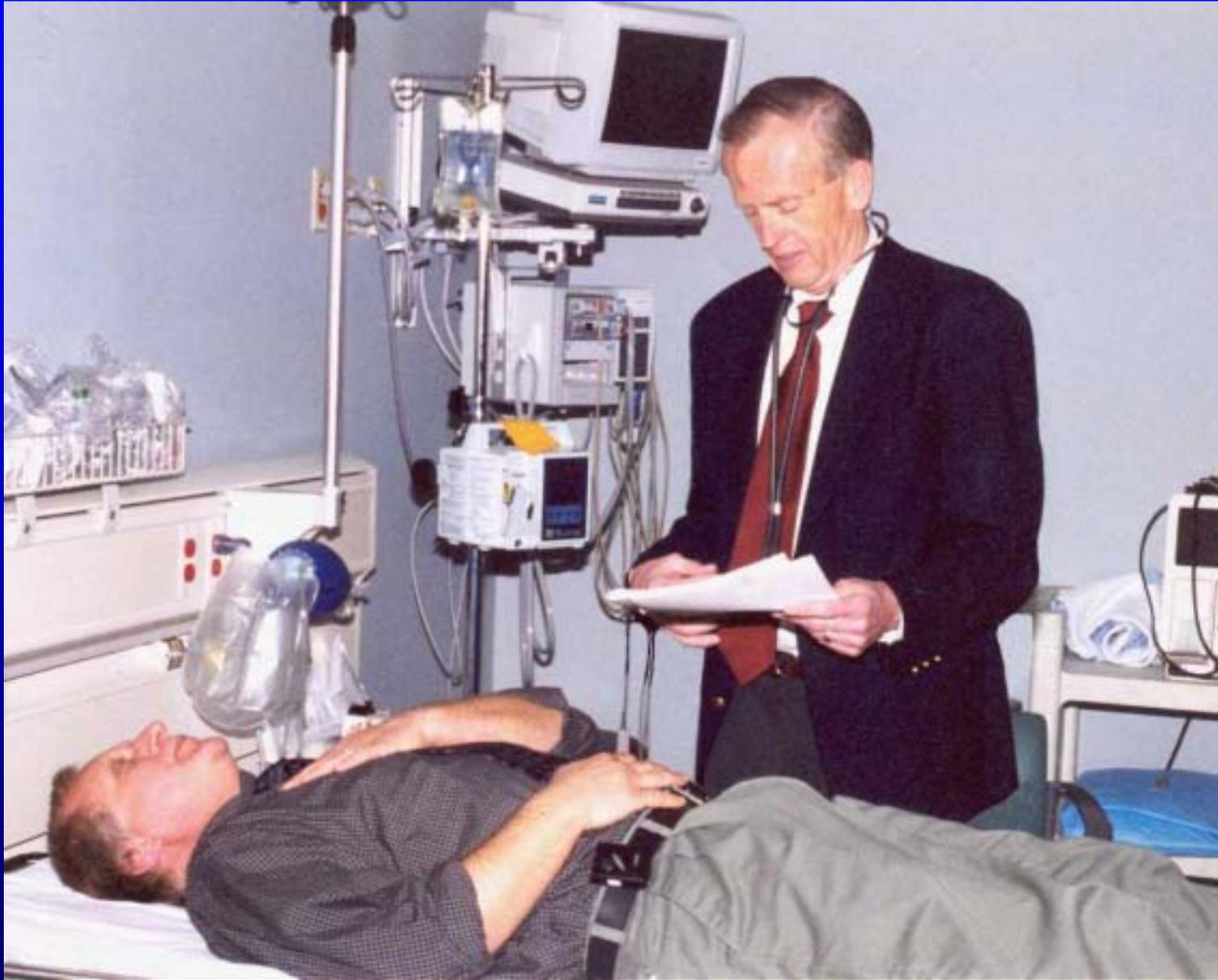
Discharge Letter - Microsoft Internet Explorer

Dear Dr. Martin:

Your patient, Mr. John Patient, a 76 year old man, was admitted through the emergency department to our facility on January 3rd 2000 with a diagnosis of acute myocardial infarction. At the time of admission, the patient had the following cardiac risk factors: smoking (within the past year), history of previous MI, diabetes and hypertension. At admission, the patient had a body mass of 24. His blood pressure was recorded at 145/95. A lipid profile obtained during this admission demonstrated HDL: 35 mg/dL, LDL: 141 mg/dL, and triglycerides: 230 mg/dL. The patients HbA1C was 7 mg/dL. Ejection fraction was recorded as 39%. The patient is being discharged on January 8th 2000 to home. Medications include: Aspirin, an ACE Inhibitor (drug x), a beta blocker (drug y), a cholesterol lowering agent and a diuretic. The patient was recommended to discontinue smoking, to begin a cholesterol lowering diet and, in consultation with his physician, to begin a medically supervised activity program.

Sincerely,

Charles Johnson, M.D.
Lawrence General Hospital



Why a Hospital Based System?

■ Patients

- Patient Capture Point
- Have patients/family attention: “teachable moment”
- Predictor of care in community

■ Hospital Structure

- Standardized processes/ protocols/orders/teams
- JCAHO-ORYX
 - Process Improvement Examples
- HCFA--Peer Review Organizations
 - Six Scope of Work



Building the Hospital Team

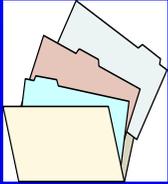


- Physicians
- Nurses
- Pharmacists
- Hospital Administrators
- Directors of Quality Improvement and Case Management
- Cardiac Rehab Team

Design of the UCLA Cardiovascular Hospitalization Atherosclerosis Management Program: CHAMP

- Based on hypothesis that physician use of and patient compliance with **secondary prevention therapies** could be improved with a **hospital based** treatment initiation program
- Focused on initiation of **aspirin, beta blocker, ACE inhibitor, and statin** dosed to achieve LDL < 100 mg/dl in all cardiovascular disease patients prior to hospital discharge
- Use of preprinted orders, simple **guidelines**, educational lectures, discharge forms, and prospective monitoring of treatment use.
- Started in **1994** and continues to be the standard of care at UCLA

Implementation of CHAMP



**Focused Treatment
Guidelines and Algorithm**



**Preprinted Admit
Order Sheets**



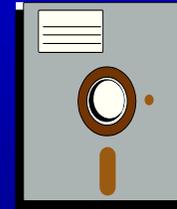
**Focused Lectures
by Opinion Leader**



**Discharge Forms
and Outpt F/U
Process**



**Patient Education
Materials**



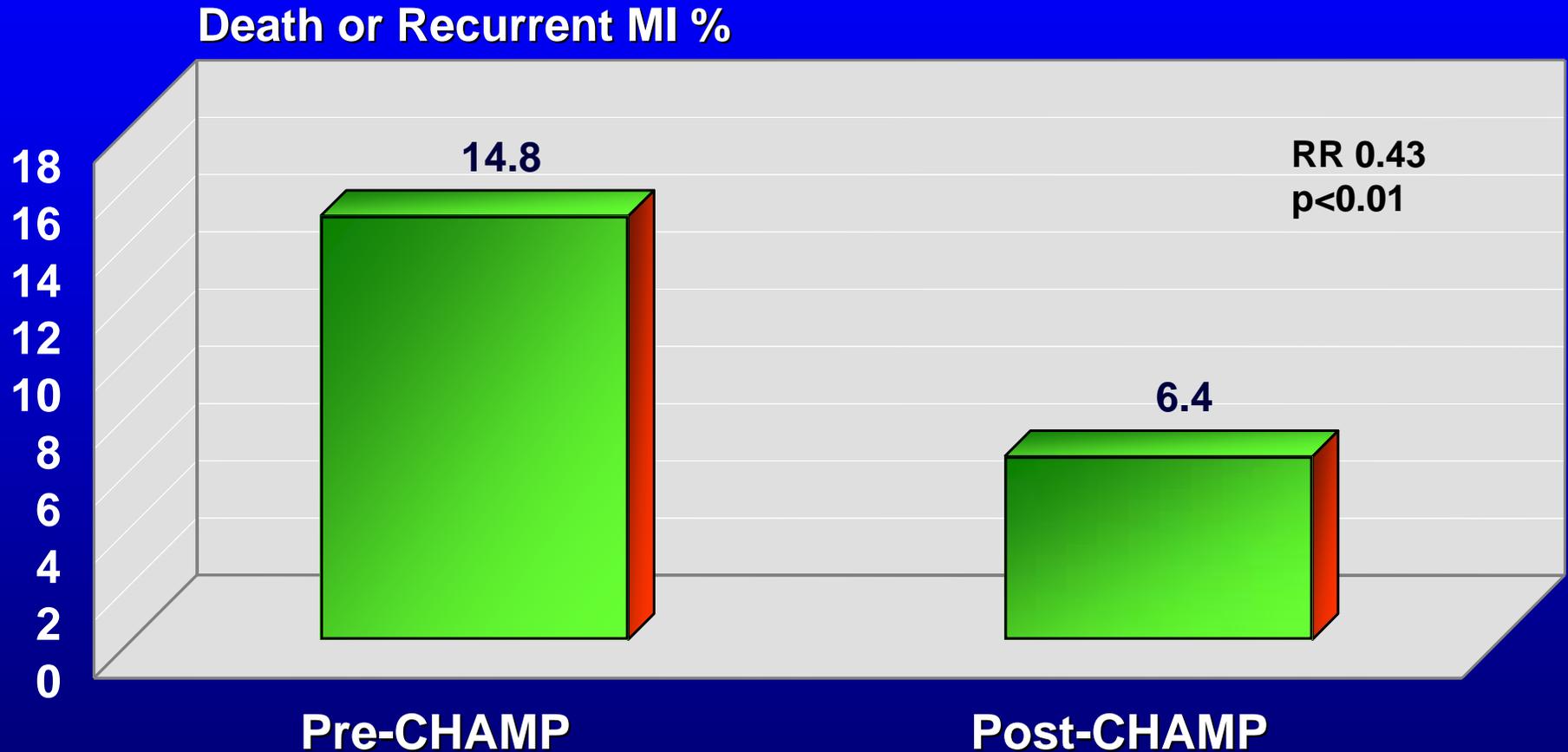
**Measurement and
Utilization Reports**

Impact of CHAMP on Discharge and Long-Term Treatment Rates

CAD Patient Treatment Rates

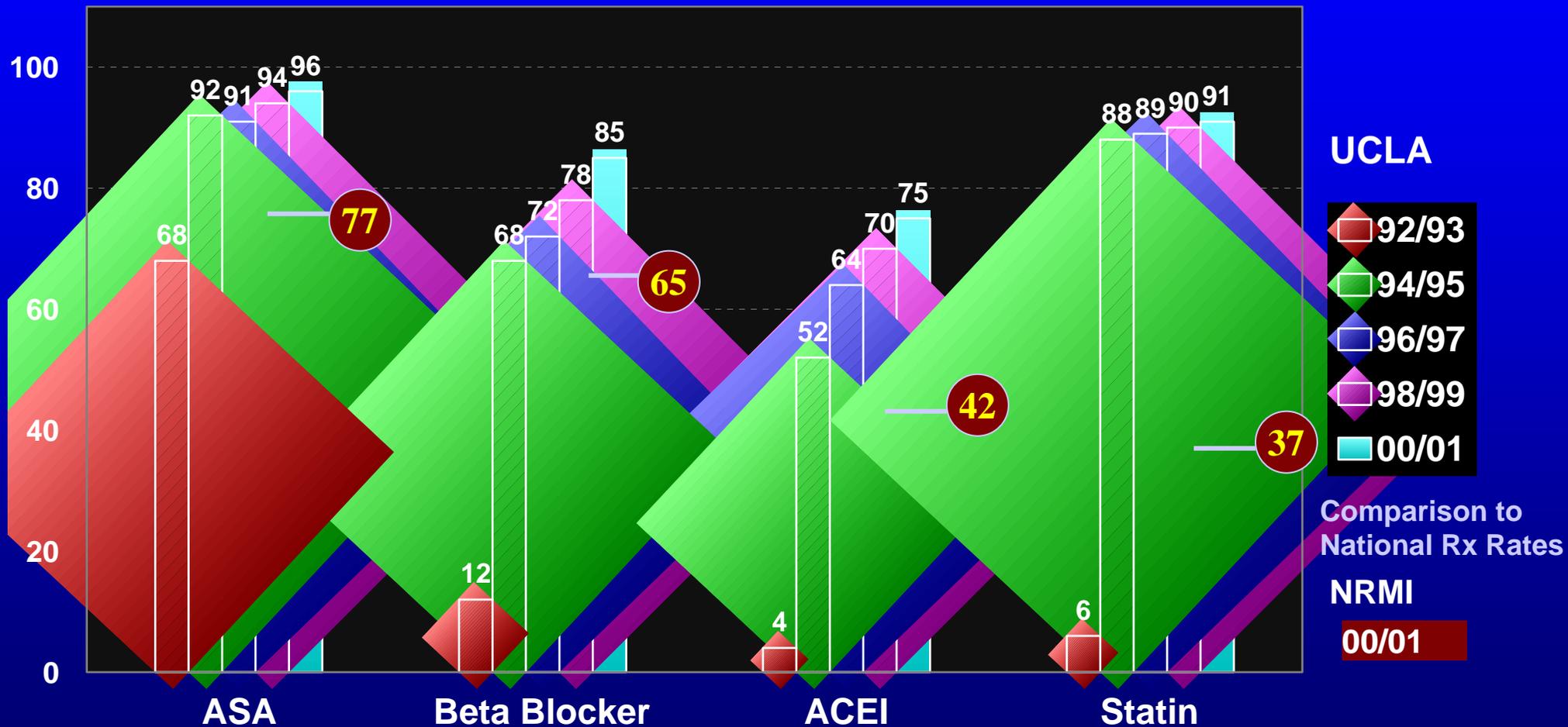
	<u>'92-'93</u> (n=256)	<u>'94-'95</u> (n=302)
<u>Hospital discharge:</u>		
Aspirin	78%	92%
Beta-Blocker	12%	61%
ACEI	4%	56%
Statin	6%	86%
<u>12-month follow-up:</u>		
Statin	10%	91%
LDL \leq 100 mg/dL	6%	58%

CHAMP: Impact on Clinical Outcomes in the First Year Post Hospital Discharge



256 AMI pts discharged in 92/93 pre-CHAMP compared to 302 pts in 94/95 post-CHAMP
Fonarow Am J Cardiol 2001;87:819-822

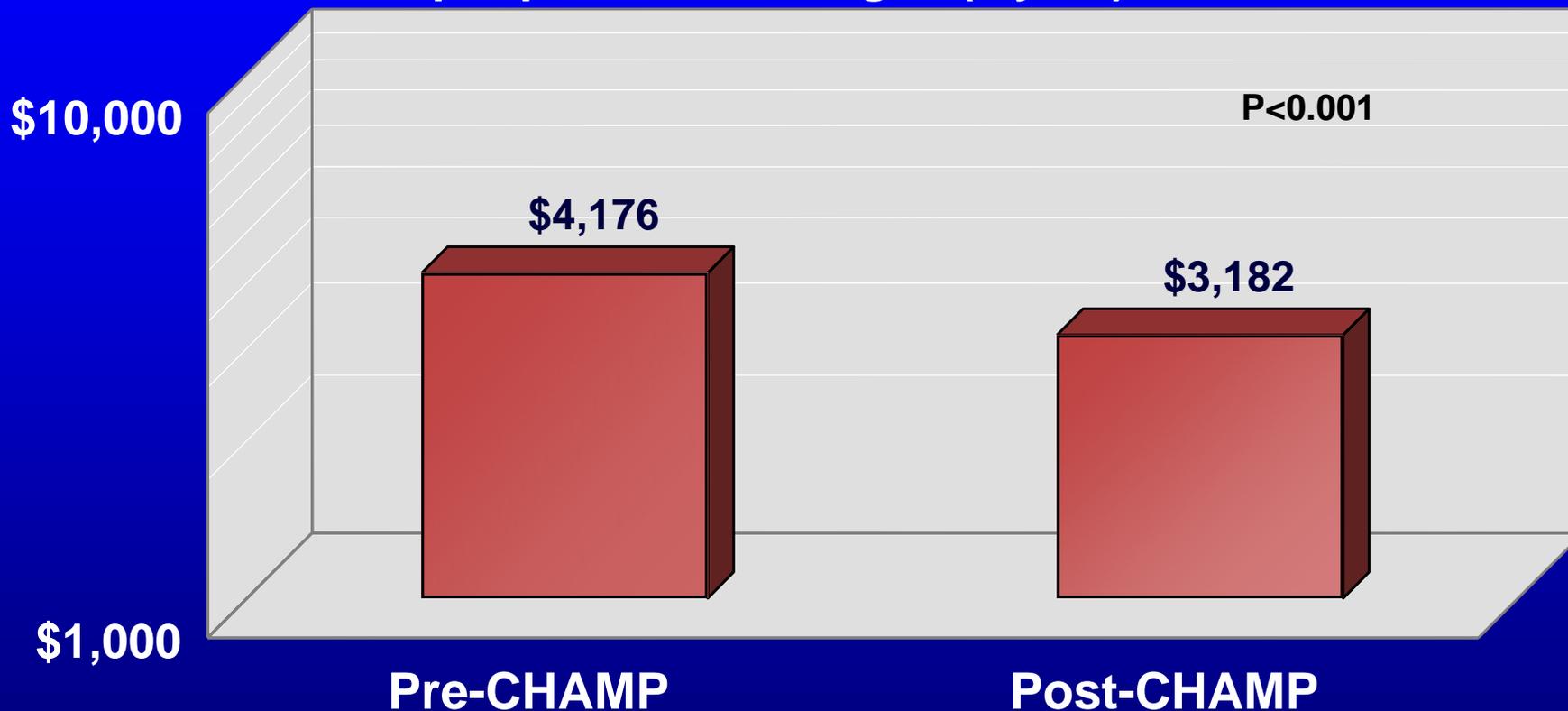
CHAMP: Sustained Impact Over an 8-Year Period



NRMI Registry Discharge Medications at UCLA compared to 1437 NRMI Hospitals
 Fonarow et al. Circulation 2001;104: II-711

CHAMP: Economic Analysis

Cost per patient discharged (1 year)



256 AMI pts discharged in 92/93 pre-CHAMP compared to 302 pts in 94/95 post-CHAMP
UCLA Med Center Accounting Model, total costs averaged over each pt dc; meds at AWP
Fonarow Am J Card 2001;87:819-822

AHA/ASA's

Get With The Guidelines (GWTG)

- **The most important, active, CAD QA/QI project in U.S.**
- **Supported by AHA, ACC, CMS, PRO's JCAHO and other regional and national organizations**
- **Will be nationwide in the next few months**
- **Can significantly improve outcomes for CVD patient populations**



What's Involved in Starting a Hospital Based Treatment Program

- Collect baseline data or use existing data source
 - i.e. NRMI IV or collect data with discharge nurse, medical student, etc.
- Select a champion, appoint a team to develop treatment algorithm, preprinted orders, discharge forms
- Present at lectures and staff in-services
 - present results
 - review successes and failures
 - lead discussion regarding recommendations on protocol improvement

What's Involved in Starting a Hospital Based Treatment Program (*continued*)

- Revise protocol to close gaps
- Communicate revisions to key departments
- Repeat cycle every quarter = CQI

Find & Support a Champion



Assess CHD Treatment Rates

Analyze
Discharge Rates

Evaluate Assessment

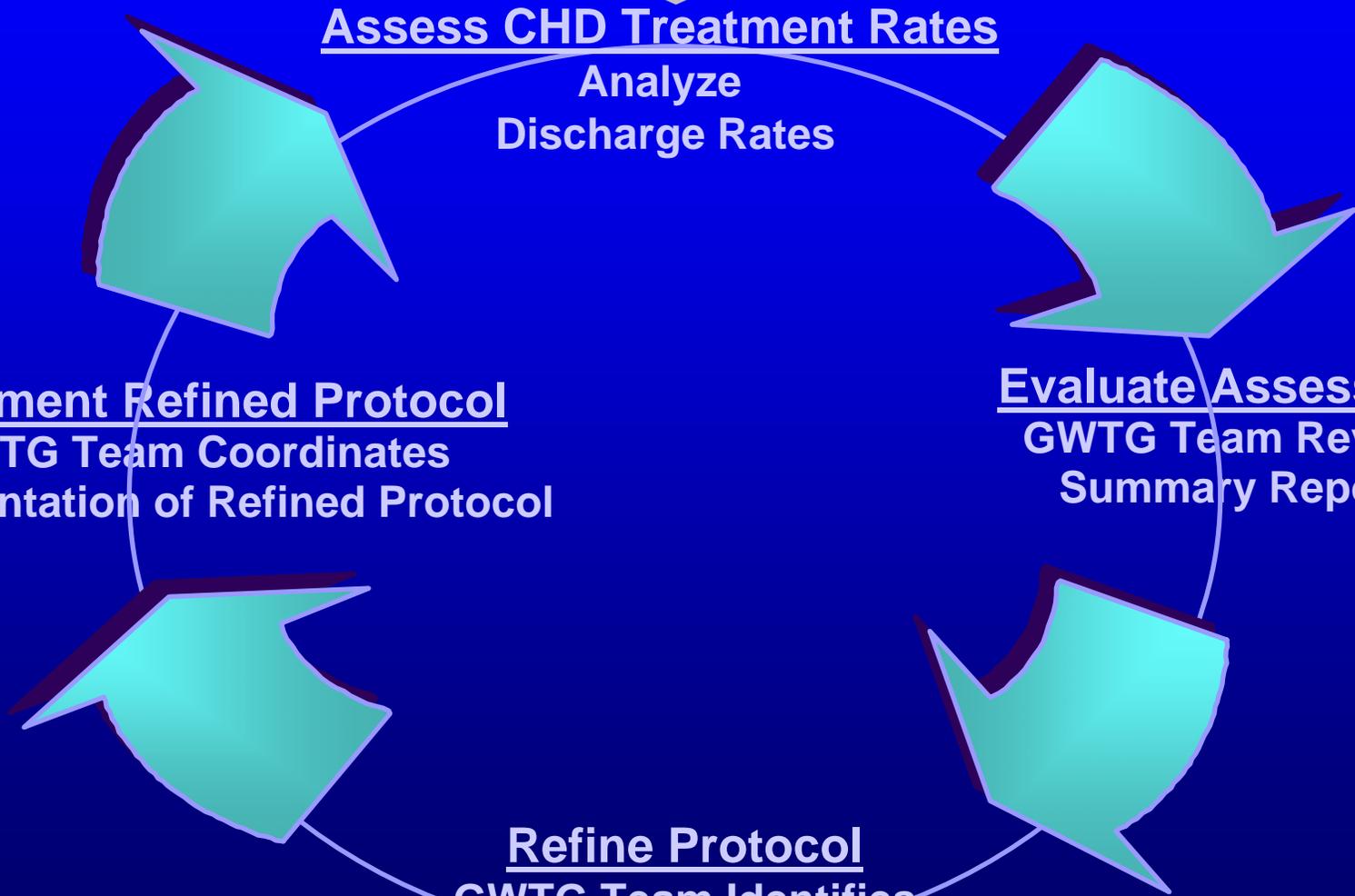
GWTG Team Reviews
Summary Reports

Refine Protocol

GWTG Team Identifies
Areas for Improvement

Implement Refined Protocol

GWTG Team Coordinates
Implementation of Refined Protocol



Incentives for Change

- Prevention is Cost Effective, Quality Care
 - Value based reimbursement will provide economic incentives
 - Our patients will demand it
 - Accreditation agencies will require it
- **It's the right thing to do!**

Hospital Recognition Plan

- Provides additional value and incentives for hospitals to participate and excel
- Two levels
 - Get With The Guidelines Hospital
 - Identifies a meaningful system change process
 - Permits access to GWTG E-community
 - Get With The Guidelines Achievement Award

What Is A *Get With The Guidelines*SM - CAD Hospital?

All of the following requirements must be met:

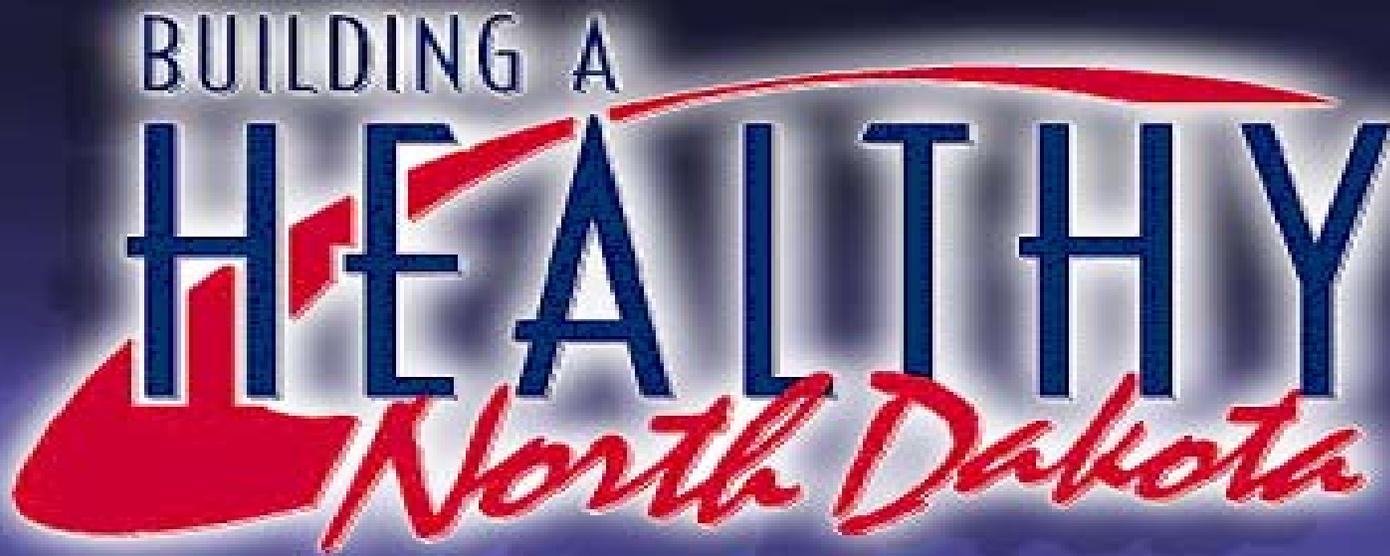
- Identification of a champion within a hospital
- Identification of a hospital team
- Implementation of standing orders and protocols
- Submission of baseline data (from at least 30 consecutive patients with the diagnosis ICD 410-414)
- Submission of a signed check-off list indicating the above have been developed and implemented and that prospective data collection is on-going

Potential Impact of GWTG on Cardiovascular Patient Outcome in the United States

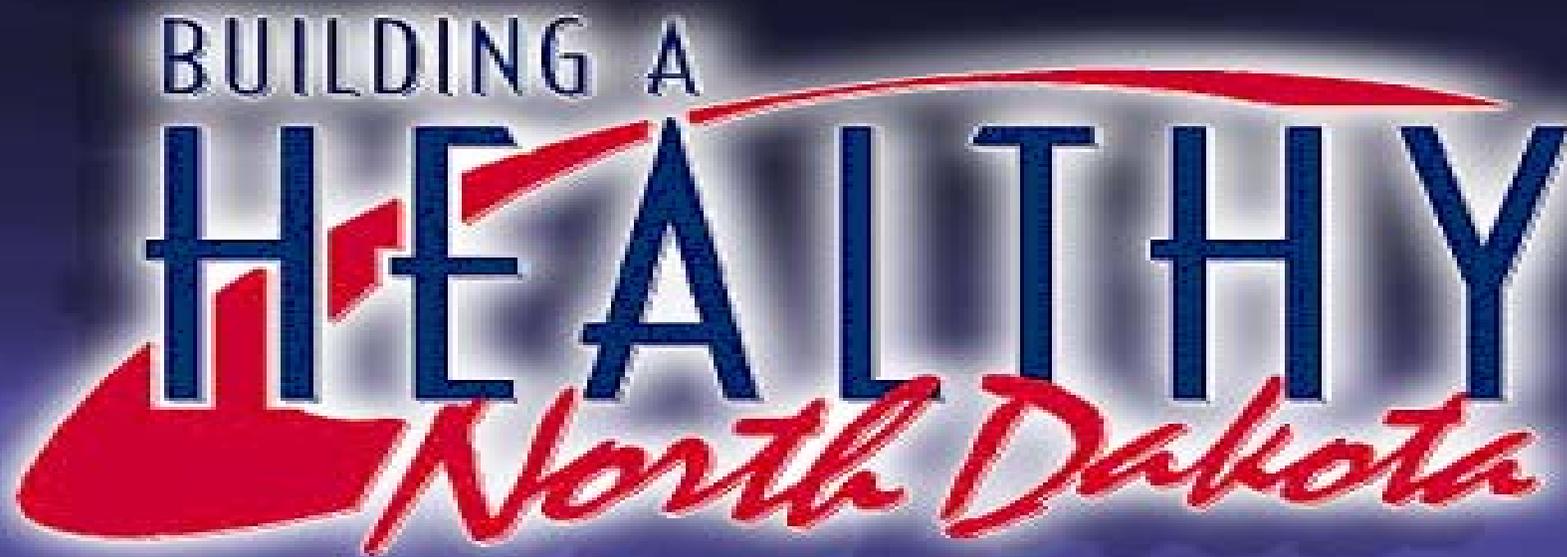
Outcomes	Events Avoided
PTCA/CABG	120,000
Hospitalizations	464,000
Myocardial Infarction	216,000
Strokes	44,800
All Deaths	83,400

Annual events avoided if 90% compliance with asa, bb, ACEI, statins in patients with CAD

4S/LIPID/HOPE/Antiplatelet and Beta Blocker Meta-analysis and Bahit et al AHA 2000



Healthy North Dakota Summit



Diabetes

Dr. James Brosseau

University of North Dakota

Diabetes

James D. Brosseau, MD, MPH

Chair

Department of Community Medicine

University of North Dakota

School of Medicine and Health Sciences

Director, Diabetes Center, Altru Health Systems



Guidelines for Diagnosis of Diabetes

Preferred test: Fasting Plasma Glucose (FPG)

Normal: FPG \leq 110 mg/dL

Pre-Diabetes:

FPG 111-125 mg/dL

Diabetes:

FPG \geq 126 mg/dL

or

Casual Plasma Glucose

\geq 200 mg/dL, with symptoms.

Required: Two elevated values on separate days.

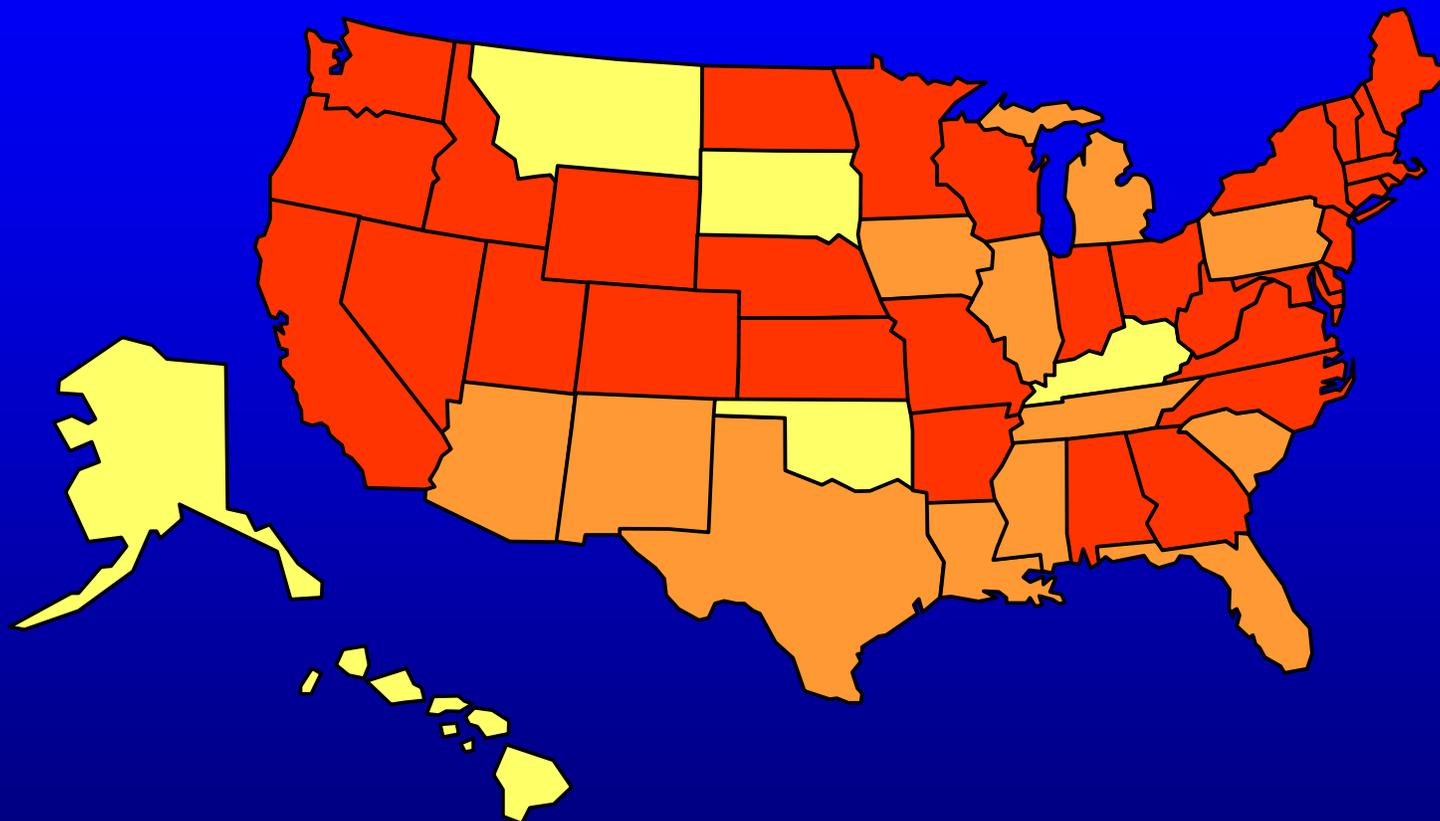


“17 million Americans now have diabetes. 16 million have pre-diabetes.”

*Tommy Thompson
Secretary of HHS, March 2002*



Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS 1995



4%



4-6%



6%

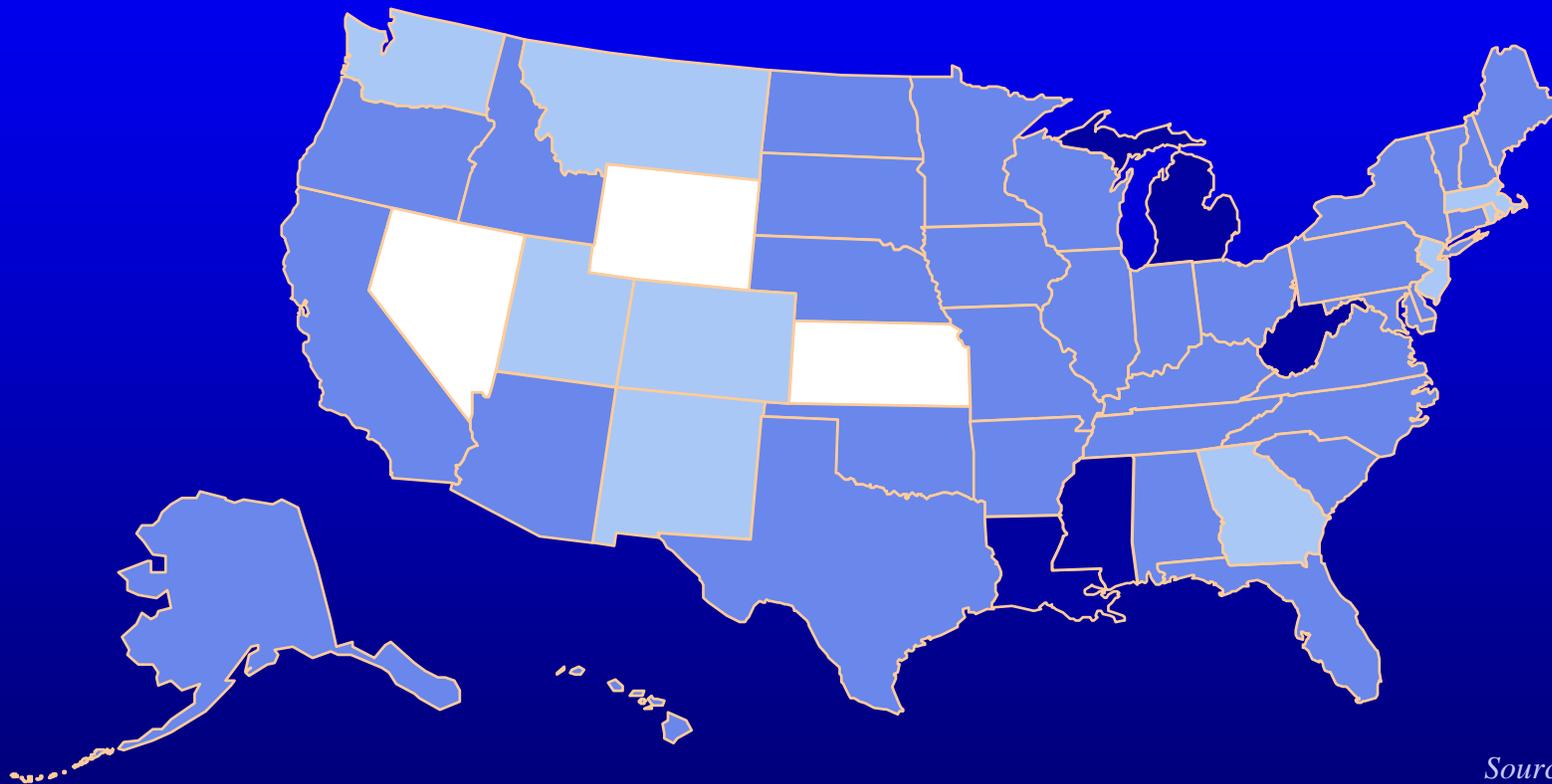


n/a



Source: Mokdad et al., Diabetes Care 2000;23:1278-83

Prevalence of Obesity* Among U.S. Adults, BRFSS, 1991



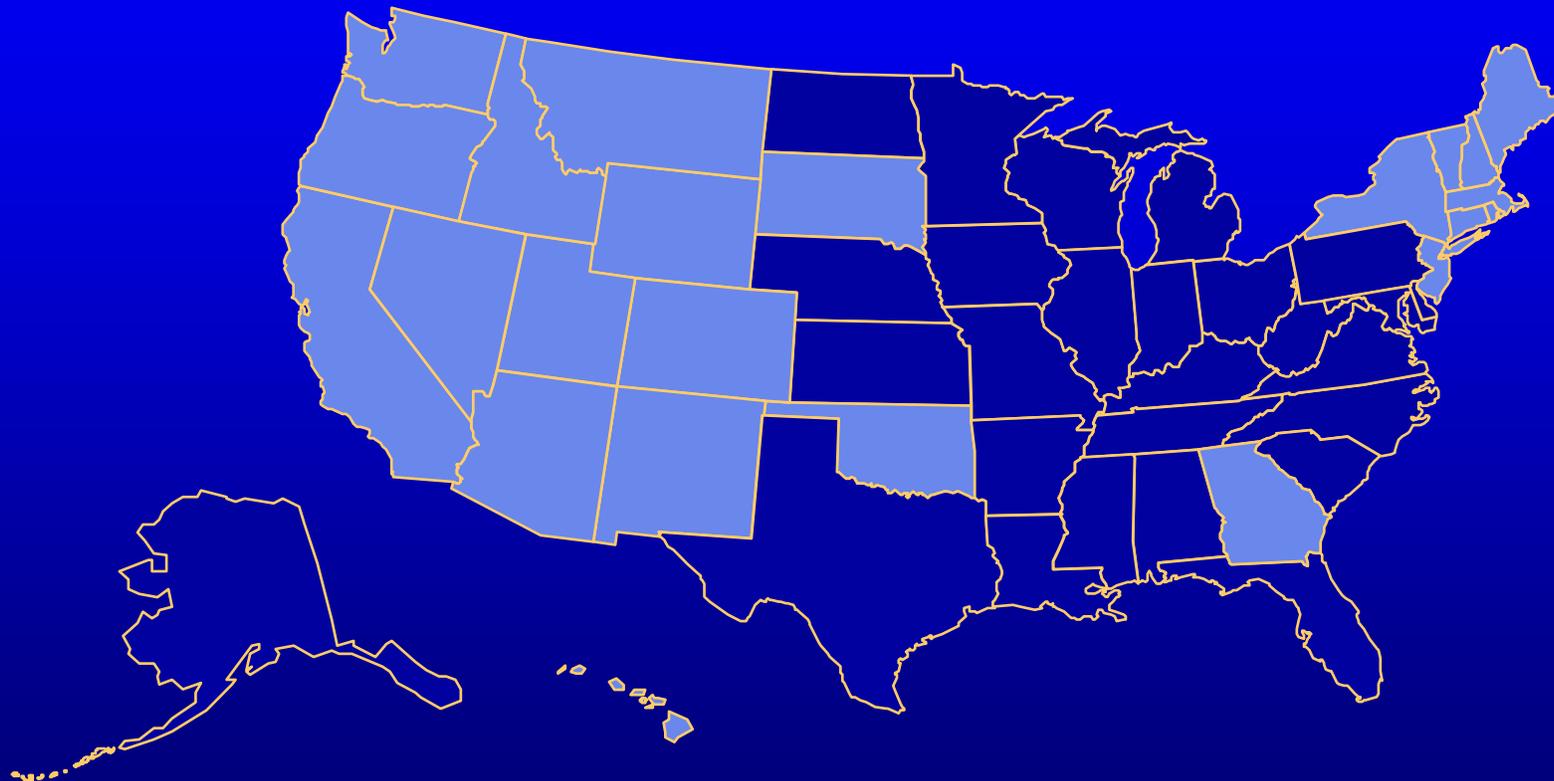
Legend:
 <10%
 0% to 15%
 5%
 N/A

Source: Centers for Disease Control, National Center for Health Statistics



(*Approximately 30 pounds overweight)

Prevalence of Obesity Among U.S. Adults, BRFSS, 1995



■ <10%

■ 0% to 15%

■ 5%



Increase in Rate of Diabetes 1990-2000

<u>STATE</u>	<u>NUMBER DIAGNOSED</u>	<u>PERCENT DIAGNOSED</u>	<u>INCREASE</u>
ND	41,000	6.3%	80%
MN	244,000	6.1%	91%



Types of Diabetes

Type 1

5%

Type 2

95%



Associated Conditions

Of all the people with diabetes:

- 50% have hypertension
- 50% have elevated cholesterol
- 35% are smokers
- 85% are overweight or obese



Complications of Diabetes

Microvascular

- Retinopathy
- Nephropathy

Neurological

- Peripheral neuropathy
- Autonomic neuropathy

Macrovascular

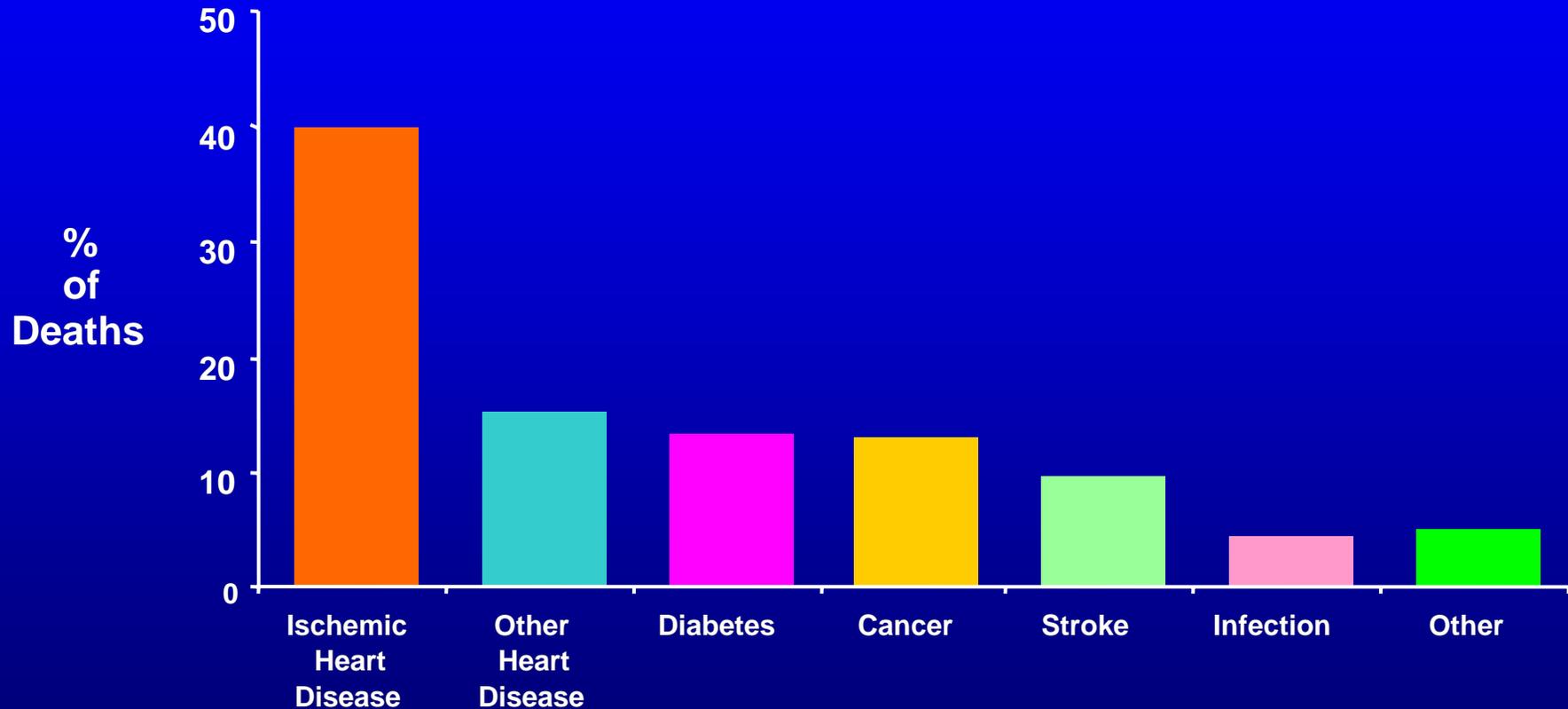
- Coronary artery disease
- Carotid stenosis
- Peripheral artery disease

Other

- Infection
- Arthropathy



Causes of Death in People With Diabetes



Prevention

Primary Prevention

- preventing the disease from developing in the first place.

Secondary Prevention

- preventing complications from developing in those who have the disease.

Tertiary Prevention

- preventing the progression of complications.



Primary Prevention

The Diabetes Prevention Program Lifestyle Modifications of Pharmacotherapy

- High risk individuals with pre-diabetes (n=3234) randomized to
 - Placebo
 - Intensive lifestyle intervention; at least monthly contact with case managers
 - Metformin titrated to 850 mg bid
- Relative Risk Reduction at 2.8 years
 - 58% in the intensive lifestyle group
 - 31% in the metformin group



Secondary Prevention

Good Glycemic Control (Lower HbA1c) Reduces Incidence of Complications

	<u>DCCT</u>	<u>Komamoto</u>	<u>UKPDS</u>
HbA1c	9 → 7%	9 → 7%	8 → 7%
Retinopathy	63%	69%	17-21%
Neuropathy	60%	--	--
Nephropathy	54%	70%	24-33%
Macrovascular disease	41%	--	16% *

* not statistically significant

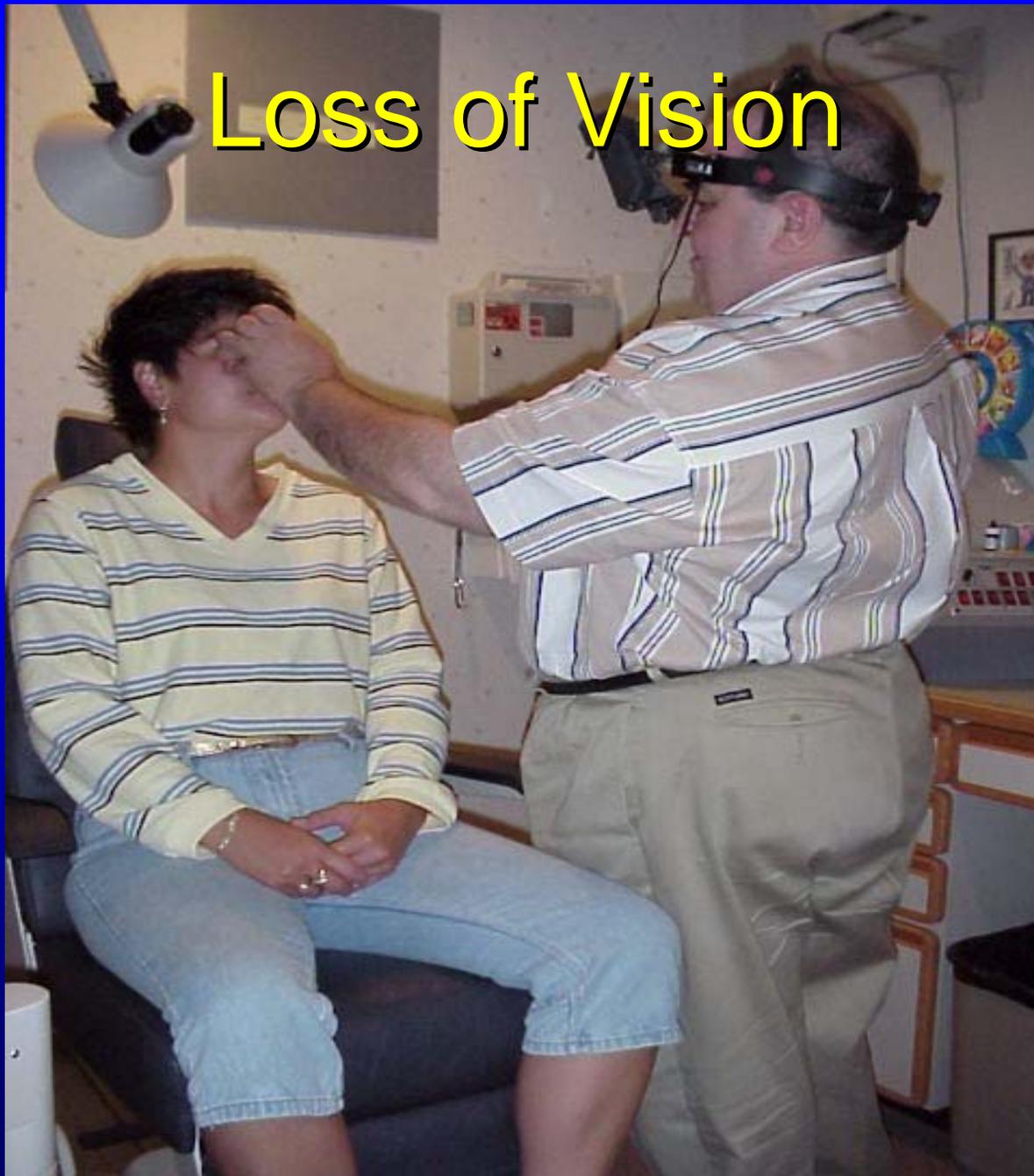
DCCT Research Group. *N Engl J Med.* 1993; 329: 977-986
 Ohkubo Y et al. *Diabetes Res Clin Pract.* 1995; 28: 103-117
 UKPDS 33 *Lancet.* 1998; 352: 837-853.



Tertiary Prevention



Loss of Vision



Amputations



Kidney Failure

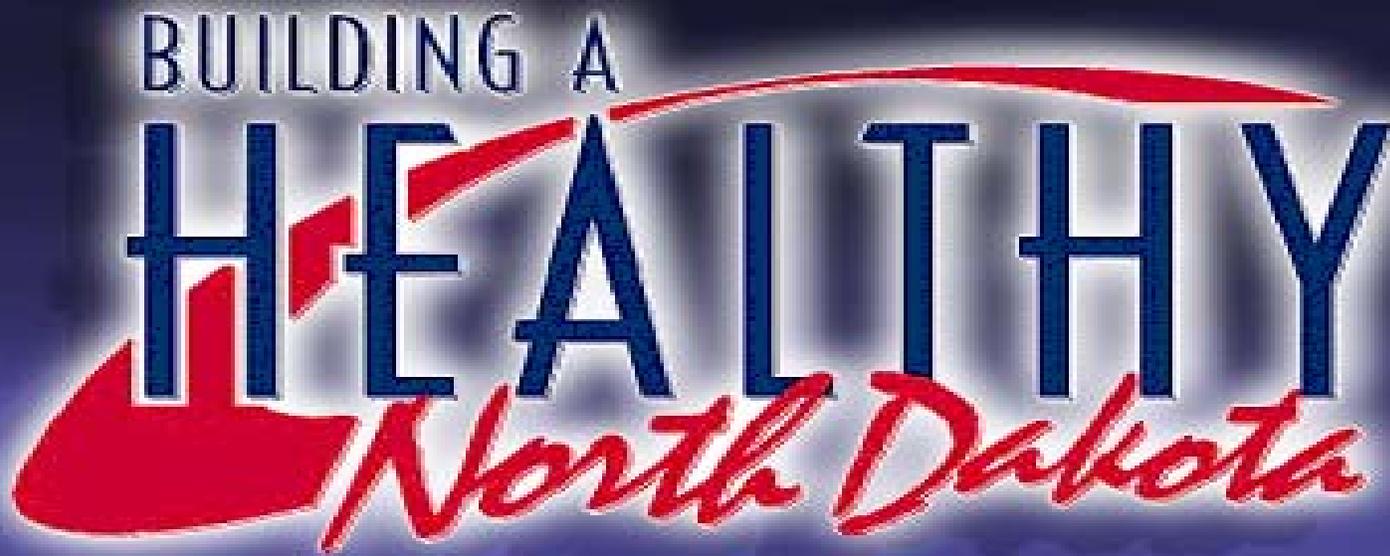


Heart Attacks



Strokes





Healthy North Dakota Summit



The Cancer Problem

Dr. Charles Kupchella

University of North Dakota



Healthy North Dakota

August 2002

The Cancer Problem

2002

**United
States**

**North
Dakota**

Cancer Deaths

555,500

1,300

New Cases

1,284,900

3,100

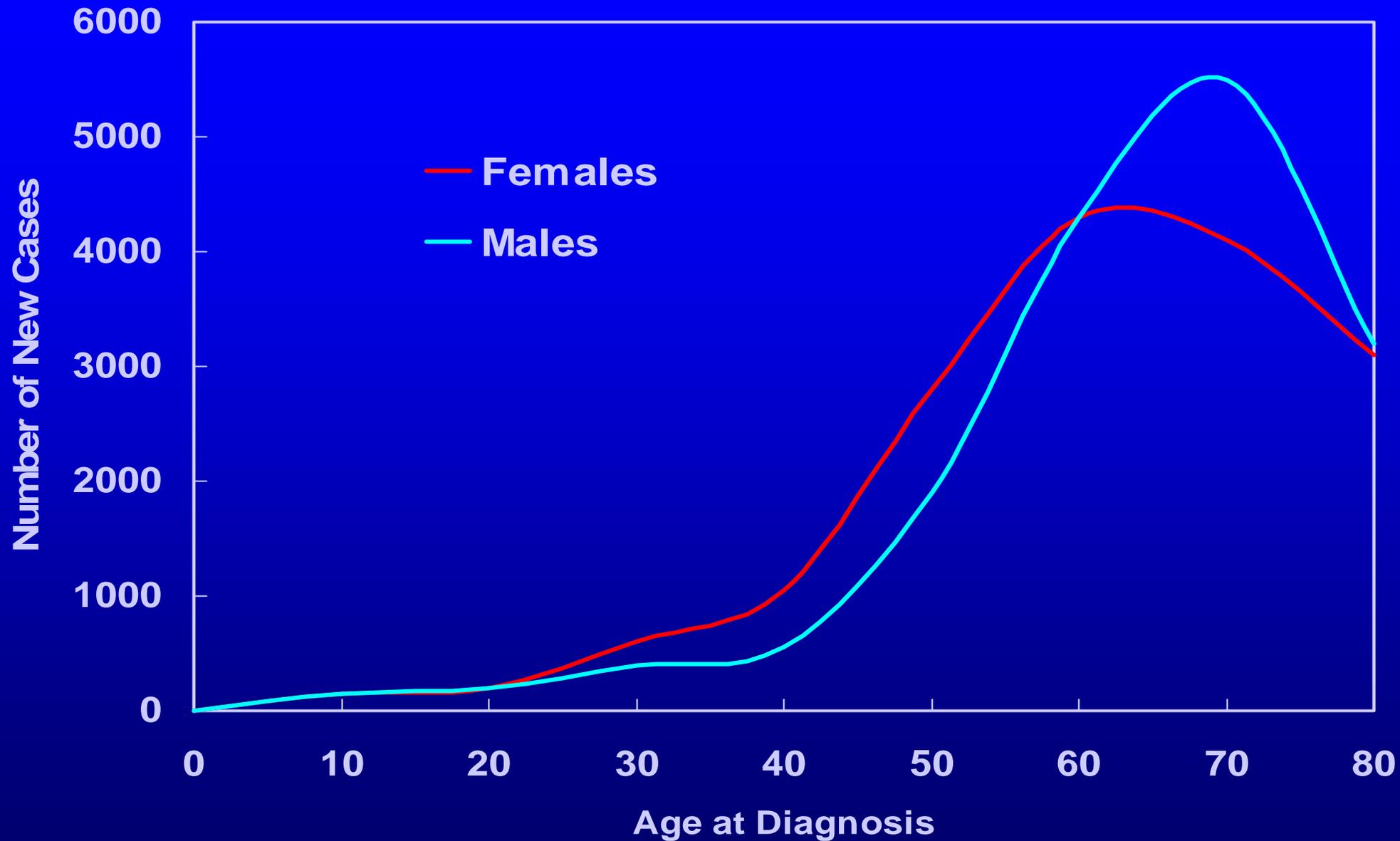
Odds Of Developing Invasive Cancer From Birth To Death

Men = 1 in 2

Women = 1 in 3

Prostate in Men = 1 in 6

Breast in Women = 1 in 8



Major Cancer Killers

Women

Lung	25%
Breast	15%
Colon	11%

Men

Lung	31%
Prostate	11%
Colon	10%

Cancer's Direct and Indirect Economic Cost

1985 \$47,000,000,000 *

2002 > \$100,000,000,000

* Rice et al., 1985

What Causes Cancer in Humans?

Range of Incidence Rates For Common Cancers

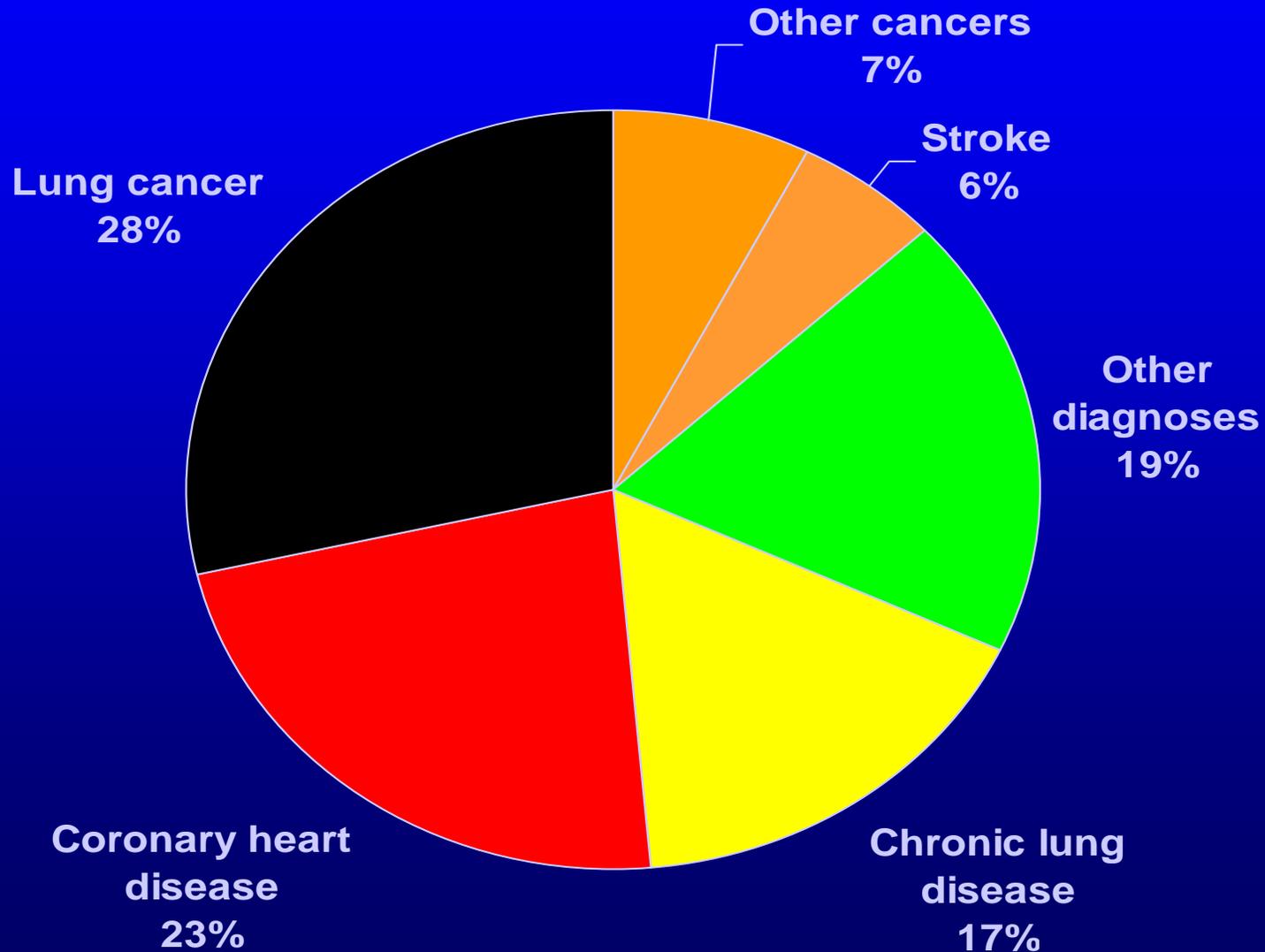
Site of Origin	High Incidence Area	Low Incidence Area	Sex	Ratio of Highest Rate to Lowest Rate
Esophagus	Iran, northeast section	Nigeria	M	300
Skin (chiefly non-melanoma)	Australia, Queensland	India, Bombay	M	>200
Liver	Mozambique	England	M	100
Prostate	United States: blacks	Japan	M	40
Lung and bronchus	England	Nigeria	M	35
Corpus uteri	United States: California	Japan	F	30
Buccal cavity	India, Bombay	Denmark	M	25
Stomach	Japan	Uganda	M	25
Rectum	Denmark	Nigeria	M	20
Cervix uteri	Colombia	Israel: Jewish	F	15
Colon	Unaided States: Connecticut	Nigeria	M	10
Breast	Canada, British Columbia	Israel: non-Jewish	F	7

Incidence rates were determined in 35–64 year-olds
Adapted from Doll et al.

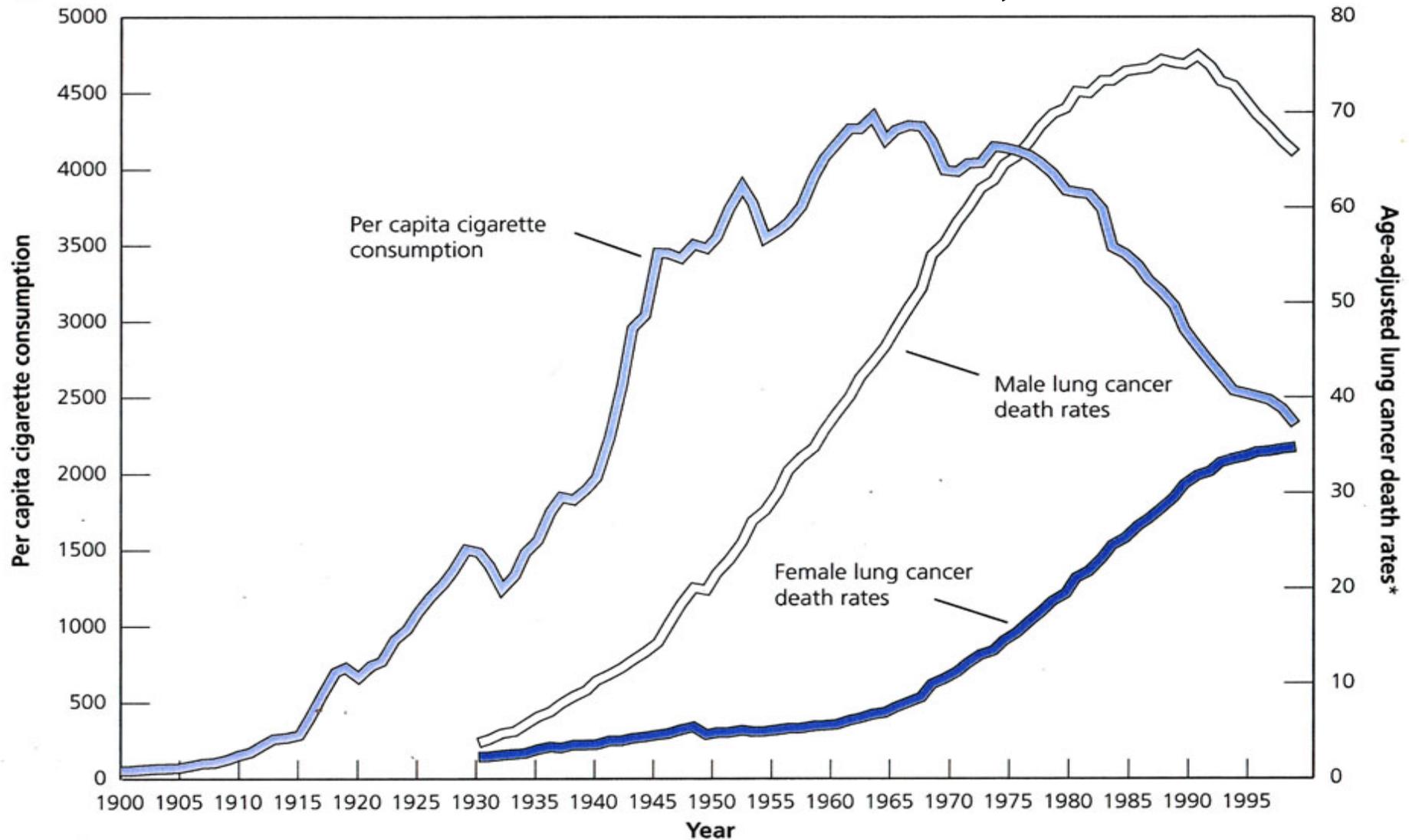
Cigarettes are killers that travel in
packs

– Unknown

430,000 U.S. Deaths Attributable Each Year to Cigarette Smoking

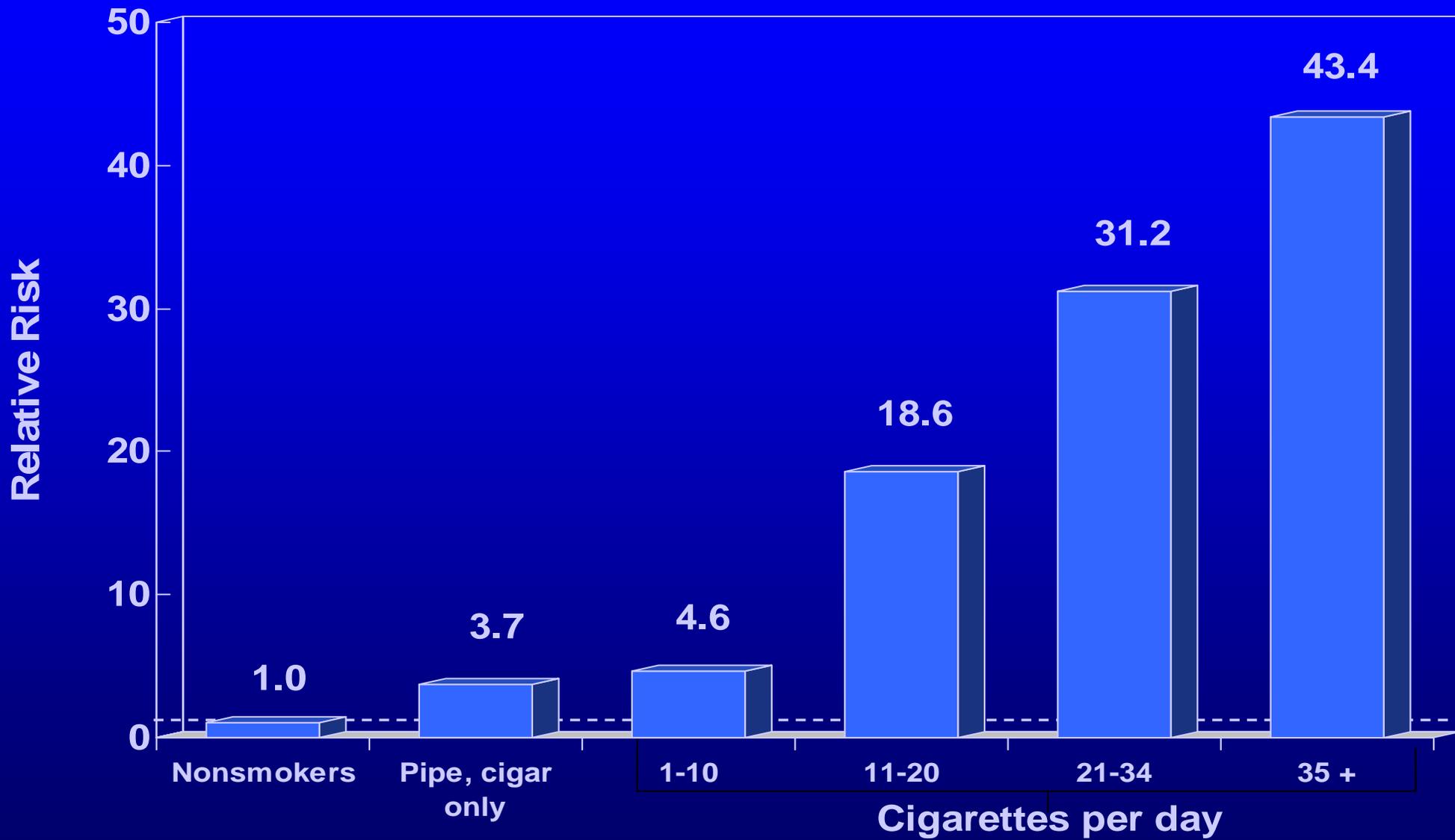


Tobacco Use in the United States, 1900-1998



*Age-adjusted to 1970 US standard population.

Source: Death rates: US mortality public use tapes, 1960-1998, US mortality volumes, 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 2000. Per capita cigarette consumption: US Department of Agriculture, 1900-1987,⁶ 1988,⁷ 1989-1997,⁸ 1998.⁹



Cancer And Tobacco

The American Cancer Society Estimates That
(In 2002)

- 170,000 Cancer Deaths Are Expected To Be Caused By Tobacco Use
- About 19,000 Deaths May Be Related To Excessive Alcohol Use
- 430,000 Total U.S. Deaths Are Attributable Each Year To Cigarette Smoking Alone

Another One Third Of The 555,500 Cancer Deaths Expected in 2002 Will Be Related To

- Physical Inactivity
- Nutrition
- Obesity
- Other Life-style Factors

And Could Be Prevented.

→ 185,166 Deaths!

Carcinogenic Hazards in the Workplace

Some of the Agents Linked To Cancer in Occupational Groups

Agent	Organ Affected	Occupation
Arsenic	Skin, lung, liver	Miners, smelter, Insecticide makers and sprayers, tanners, chemical workers, oil refiners, vintners
Asbestos	Lung (pleural and peritoneal mesothelioma)	Miners, millers, textile, insulation, and shipyard workers
Benzene	Bone marrow (leukemia)	Explosives, benzene, or rubber cement workers, distillers, dye users, painters, shoemakers
Bis(chloromethyl) ether, chloromethyl methyl ether	Lung	Chemical workers
Chromium	Nasal cavity and sinuses, lung, larynx	Chromium producers, processors, and aniline workers, glass, pottery, and linoleum workers, battery makers
Coal soot, coal tar, other products of coal combustion	Lung, larynx, skin, scrotum, urinary bladder	Asphalt, coal tar, and pitch workers, coke oven workers, miners, still cleaners
Iron oxide	Lung, larynx	Iron miners, metal workers, iron foundry workers
Isopropyl oil	Nasal cavity	Isopropyl oil manufacturing
Leather	Nasal cavity and sinuses, urinary bladder	Leather workers
Nickel	Nasal sinuses, lung	Nickel ore processors, electrolysis workers
Vinyl chloride	Liver, brain	Plastic workers
Wood	Nasal cavity and sinuses	Woodworkers

Data from Williams et al and Wynder and Gori

Summary of Cancer-Associated Environmental Factors

Factor	Sites Considered in Drawing the Estimates	Range of Estimates Associated with Factor
Tobacco	Upper respiratory tract, bladder, esophagus, kidney, pancreas	22-30% (30%)
Alcohol	Upper digestive tract, larynx, liver	3-5% (3%)
Natural radiation	Skin, breast, thyroid, lung, bone, blood (leukemia)	1-3% (1%)
Medical drugs and radiation	Breast, endometrium, ovary, thyroid, bone, lung, blood (leukemia)	1-4% (1%)
Occupation, all exposures	Upper respiratory tract, others	4-38% (4-10%)
Diet	Digestive tract, breast, endometrium, ovary	35-50% (35%)
Sexual development, reproductive patterns, and sexual practices	Breast, endometrium, ovary, cervix	1-13% (7%)
Pollution	Lung, bladder, rectum	1-5% (2%)
Consumer products (eg, cosmetics, clothing)	Possibly all sites	<1%
Infection	Uterine cervix, prostate, and other sites	1-15% (10%)
Unknown associations	All sites	1-10%

* Values in parentheses refer to the most commonly cited “best” estimates.

Data from Higginson et al, Doll et al, Wynder et al, and Office of Technology Assessment.

Food Additives?

**Natural carcinogens
in meat, grain, and
other foods = > 98% of
diet-related cancer risk.**

FDA/Scheuplein

Risk Factors for Colorectal Cancer

Relative Risk

Family history (first degree relative)	1.8
Physical inactivity (Less than 3 hours per week)	1.7
Inflammatory bowel disease (physician diagnosed Crohn's disease, ulcerative colitis or pancolitis)	1.5
Obesity	1.5
Red meat	1.5
Smoking	1.5
Alcohol (more than 1 drink/day)	1.4
High vegetable consumption (5 or more servings per day)	0.7
Oral contraceptive use (5 or more years of use)	0.7
Estrogen replacement (5 or more years of use)	0.8
Multivitamins containing folic acid	0.5

Modifiable factors are in **bold** text.

Adapted, with permission from Colditz et al (2000).

The following are internet resources of interest on colorectal cancer risk: <http://www.yourcancerrisk.harvard.edu/> and <http://www.cancer.org>

Risk Factors and Prevention Measures for Melanoma and Other Skin Cancers

■ Risk factors for melanoma

- Light skin color
- Family history of melanoma
- Personal history of melanoma
- Presence of moles and freckles
- History of severe sunburn occurring early in life

■ Risk factors for basal and squamous cell cancers

- Chronic exposure to the sun
- Family history of skin cancer
- Personal history of skin cancer
- Light skin color

**An ounce of prevention is worth
a pound of cure**

– Henry de Bracton

National Cancer Institute report in mid-1980s

Cancer death rate could be cut in half

“With aggressive use of existing knowledge.”

Didn't happen.

- 250,000 died each year unnecessarily of cancer
- Roughly 4,250,000 people since 1985

Obviously

All Cancers Caused by Cigarette Smoking and Heavy Use of Alcohol Could Be Prevented Completely.

Lung cancer, fortunately, is a largely preventable disease

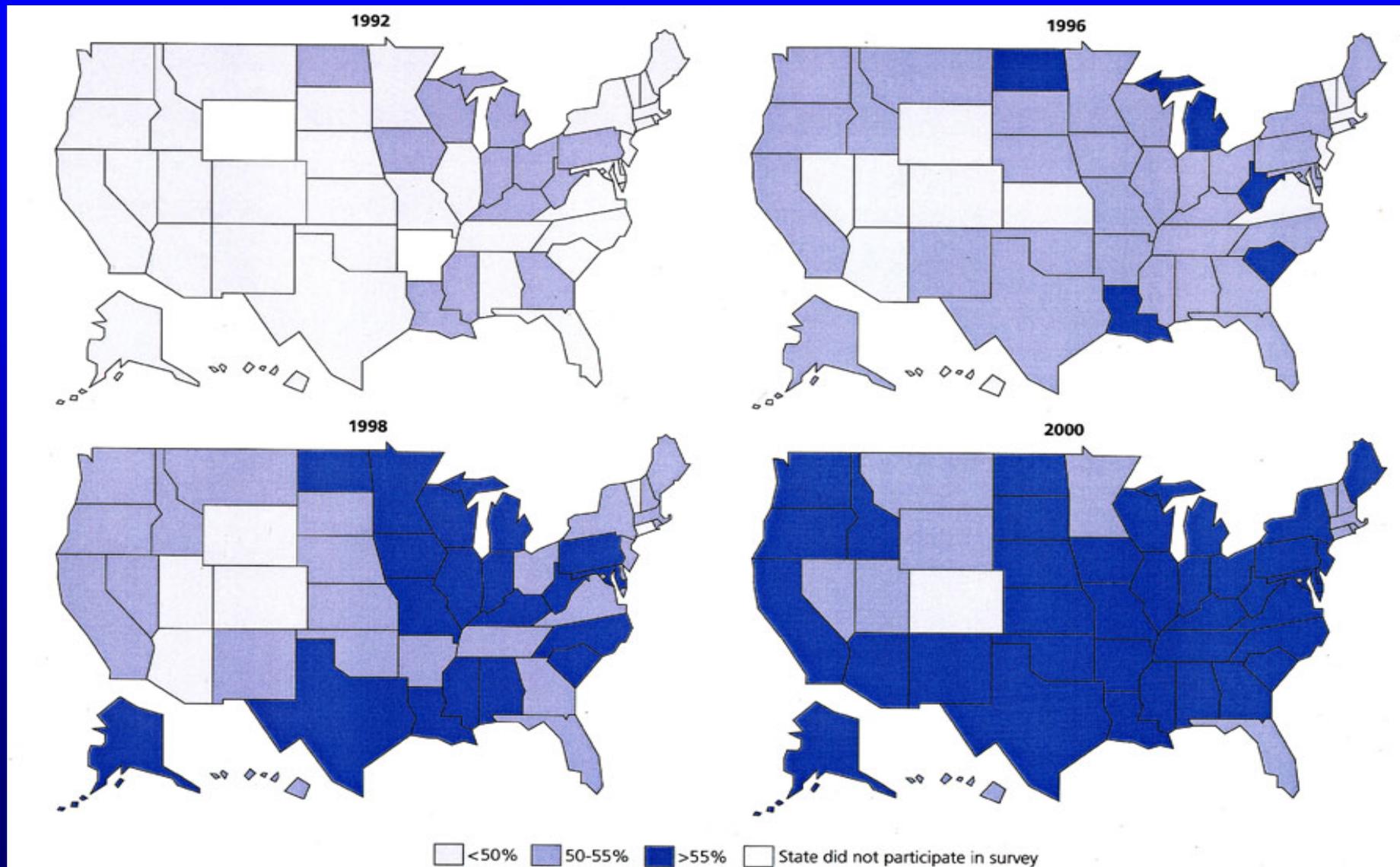
- About 87 percent of lung cancer deaths are related to smoking.
- Men who smoke are more than twenty times more likely to die from lung cancer, and
- Women who smoke are twelve times more likely to die from it.
- Groups that advocate non-smoking as part of their religion, such as Mormons and Seventh-Day Adventists, have much lower rates of lung cancer and other smoking-related cancers.

As early as the 1940s, researchers found that laboratory animals placed on calorie-restricted diets were less likely to develop cancer. More recently, an ACS study published in the *New England Journal of Medicine* reported that heavier men and women in all age groups had an increased risk of death and that the heaviest individuals had a 40 to 80 percent increased risk of dying from cancer.

Overweight & Obese Adults 18 & Over 2002

	Overweight	Obese
Men - US	45%	21%
Men - North Dakota	49%	22%
Women - US	29%	20%
Women - North Dakota	30%	20%

Overweight* Adults in the United States, by State, 1992-2000



*Body mass index of 25.0 kg/m² or greater.

Source: Behavioral Risk Factor Surveillance System, CD-ROM 1984-1995, 1996, 1998, and public use data tape 2000, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1997, 1999, 2000, 2001.

**Many, If Not Most, Of More Than
1,000,000
New Cancer Cases Could be
Prevented by
Hats, Long Sleeves, and
Sunblock (SPF 15 Or Higher)**

Total Cancer Deaths = 555,500 in 2002

Preventable?

170,000

Tobacco

19,000

Alcohol

183,000

Nutrition, obesity and other

372,000

Total preventable - 67% or 2/3

1,000,000 skin cancers most preventable

Cancer Facts & Figures American Cancer Society

**What is The Potential Impact of
Prevention Measures?**

**Smoking low tar and nicotine
cigarettes is the equivalent of
jumping out of the 29th floor of a
building rather than the 31st**

– Kenneth Warner and John Slades
American Journal of Public Health

**Does Changing Behavior Do
Any Good?**

Smoking Cessation

In 1990, the U.S. Surgeon General outlined the benefits of smoking cessation:

- People who quit, regardless of age, live longer than people who continue to smoke.
- Smokers who quit before age 50 halve their risk of dying within the next 15 years compared with those who continue to smoke.
- Quitting smoking substantially decreases the risk of lung, laryngeal, esophageal, oral, pancreatic, bladder, and cervical cancers.
- Quitting lowers the risk for other major diseases including coronary heart disease and cardiovascular disease.

If You Smoke or Chew Tobacco, Stop!

- Smoking is the biggest cancer risk to the smoker and to everyone near them.**
- If you are going to have a baby and you smoke, you pass the smoke and the risk right on to your baby.**
- Smoking and drinking alcohol is even riskier.**



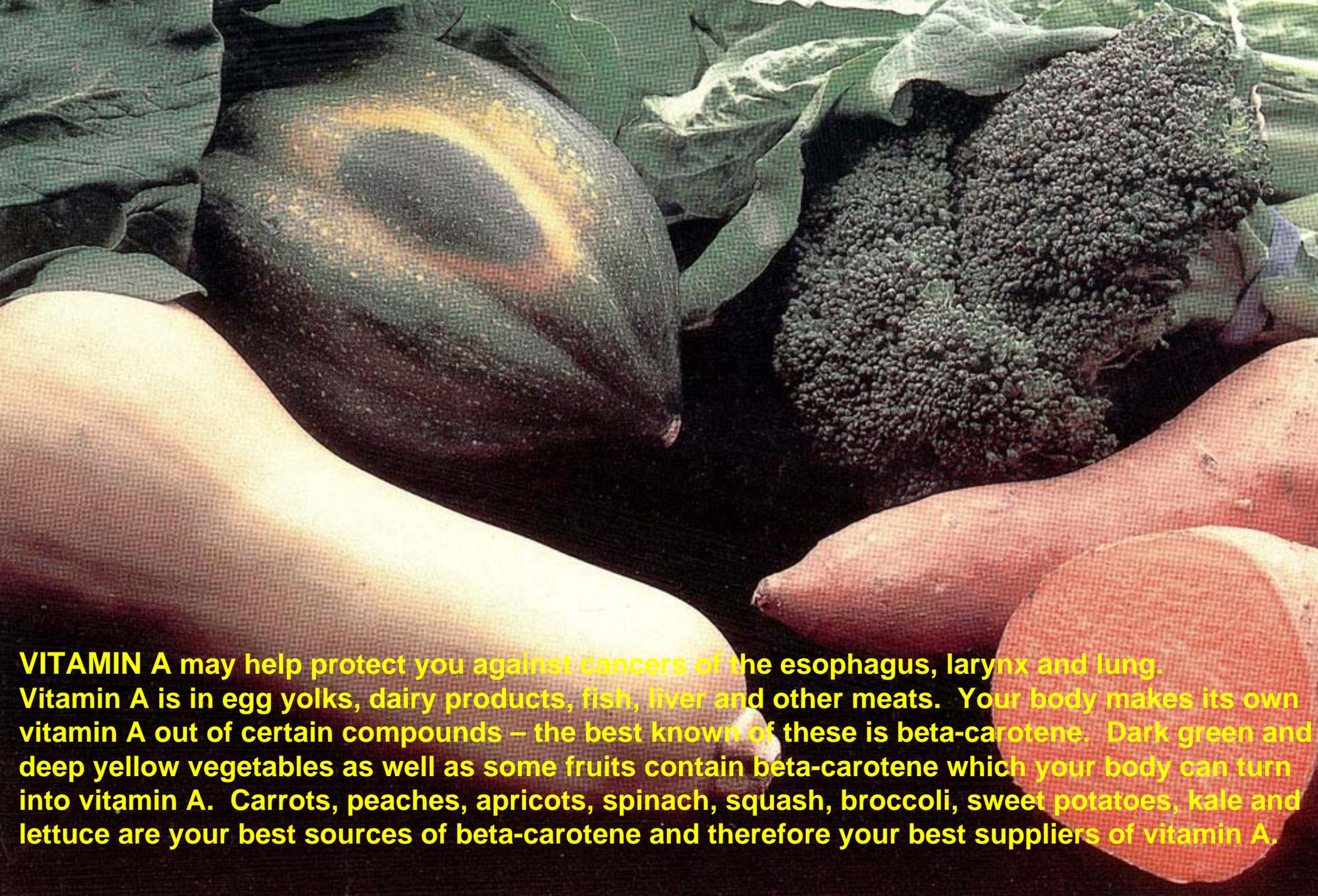
Dietary Guidelines for Reducing the Risk of Cancer

- Avoid obesity.
- Cut down on total fat intake.
- Eat more high-fiber foods.
- Include foods rich in vitamins A and C in your daily diet.
- Cut down on salt-cured, smoked and nitrite-cured foods.
- Keep alcohol consumption moderate, if you do drink.



What are some good sources of Vitamin C?

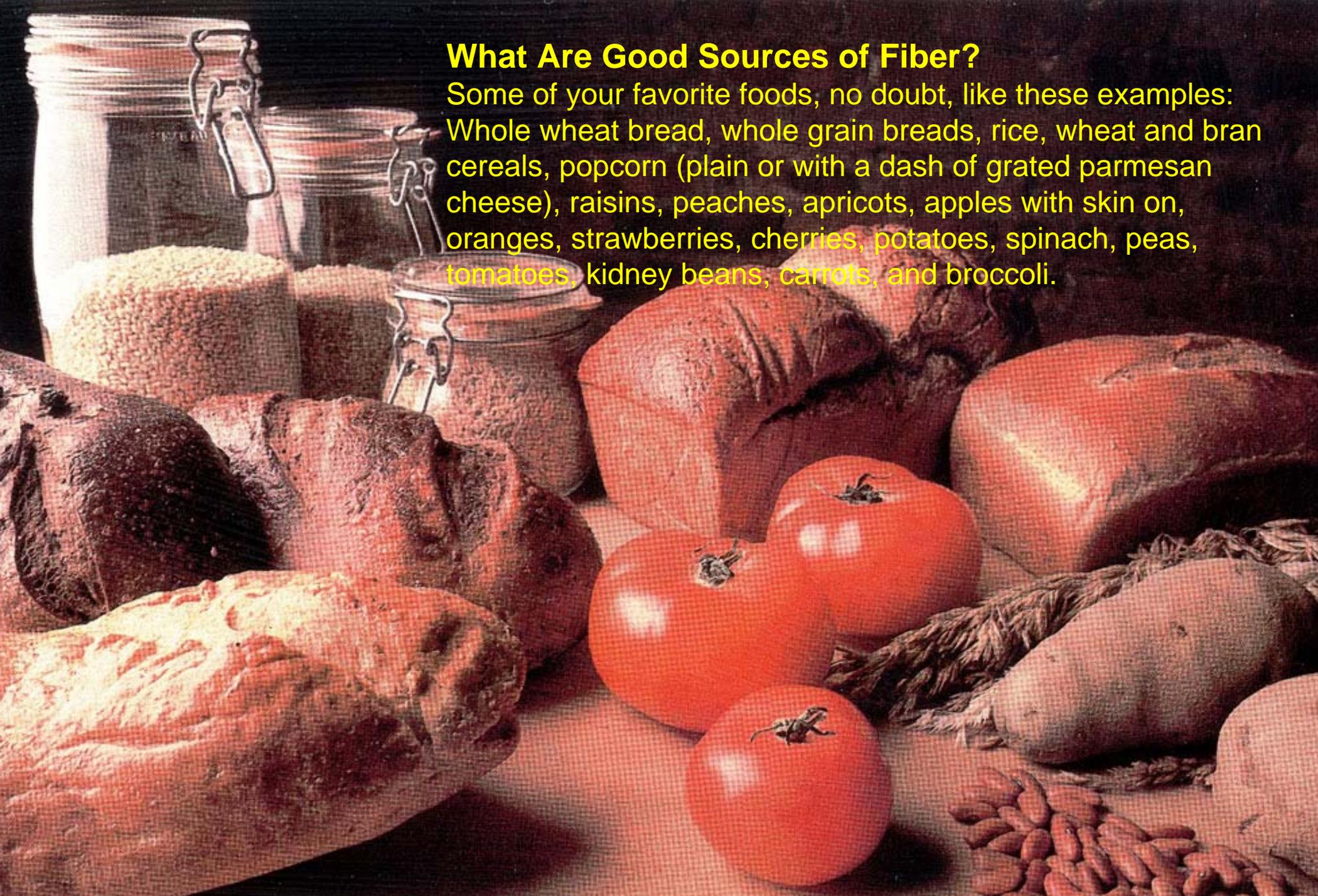
Grapefruit, oranges, broccoli, Brussels sprouts, cantaloupe, currants, kiwi fruit, mangoes, cauliflower, celery, kale, mustard greens, grapefruit, oranges, red and green peppers, strawberries and tomatoes.



VITAMIN A may help protect you against cancers of the esophagus, larynx and lung. Vitamin A is in egg yolks, dairy products, fish, liver and other meats. Your body makes its own vitamin A out of certain compounds – the best known of these is beta-carotene. Dark green and deep yellow vegetables as well as some fruits contain beta-carotene which your body can turn into vitamin A. Carrots, peaches, apricots, spinach, squash, broccoli, sweet potatoes, kale and lettuce are your best sources of beta-carotene and therefore your best suppliers of vitamin A.

What Are Good Sources of Fiber?

Some of your favorite foods, no doubt, like these examples: Whole wheat bread, whole grain breads, rice, wheat and bran cereals, popcorn (plain or with a dash of grated parmesan cheese), raisins, peaches, apricots, apples with skin on, oranges, strawberries, cherries, potatoes, spinach, peas, tomatoes, kidney beans, carrots, and broccoli.





Add More Fresh Vegetables To Your Plate

Trim Fat From Your Diet



Limit How Much Meat You Eat, Especially High-fat Meats

- Choose lean cuts of meat
- Trim the skin off chicken and turkey



Go Easy On Alcohol

If you drink large amounts of alcoholic beverages, you increase your risk of liver cancer. If you smoke cigarettes with your cocktails, you've got more than double trouble. The evidence is overwhelming that heavy drinkers who also smoke are at much greater risk for cancers of the mouth, throat, larynx and esophagus than non-smokers.

**If You Drink Alcohol, Limit Yourself
To One Or Two Drinks A Day**

Get Some Physical Activity

- Like walking, gardening, or dancing for at least 30 minutes on most days of the week.
- Check with your health care provider before you begin an exercise routine.

Adopt a Physically Active Lifestyle

- Adults: engage in at least moderate activity for 30 minutes or more on 5 or more days of the week; 45 minutes or more of moderate to vigorous activity on 5 or more days per week may further enhance reductions in the risk of breast and colon cancer.
- Children and adolescents: engage in at least 60 minutes per day of moderate to vigorous physical activity at least 5 days per week.

Protect Your Skin From UV Rays

- Stay out of the sun as much as you can between 10 a.m. and 4 p.m. when the sun's UV rays are the strongest.
- When you are outside, cover up with clothing.
- Wear a hat with a brim that shades your face, ears and neck.
- Use sun-screen with SPF 15 or higher on all skin not covered with clothing.
- Wear sunglasses.
- Don't use sun lamps or tanning salons.

**If You Work With Harmful Chemicals
Or Fibers Like Asbestos, Wear The
Right Clothes And Follow Directions
Exactly.**

Be sure to learn emergency
procedures.

Have Regular Check-ups

Ask your health care provider about the American Cancer Society guidelines for early detection

Early Detection in Asymptomatic People

American Cancer Society Recommendations

- Breast Mammogram/BSE
- Colon/rectum Sigmoidoscopy/occult blood
- Prostate PSA test, digital rectal exam
- Uterus PAP test

Cancer-related checkup

- Ages 20-39 Every 3 years
- Ages 40+ Every year

Habits are first cobwebs then
cables

–Spanish proverb

Risk Factors:

Can People be Helped to Change
Their Behavior??

Recommendation for Community Action

Public, private, and community organizations should work to create social and physical environments that support the adoption and maintenance of healthful nutrition and physical activity behaviors.

- Increase access to healthful foods in schools, worksites, and communities.
- Provide safe, enjoyable, and accessible environments for physical activity in schools and for transportation and recreation in communities.

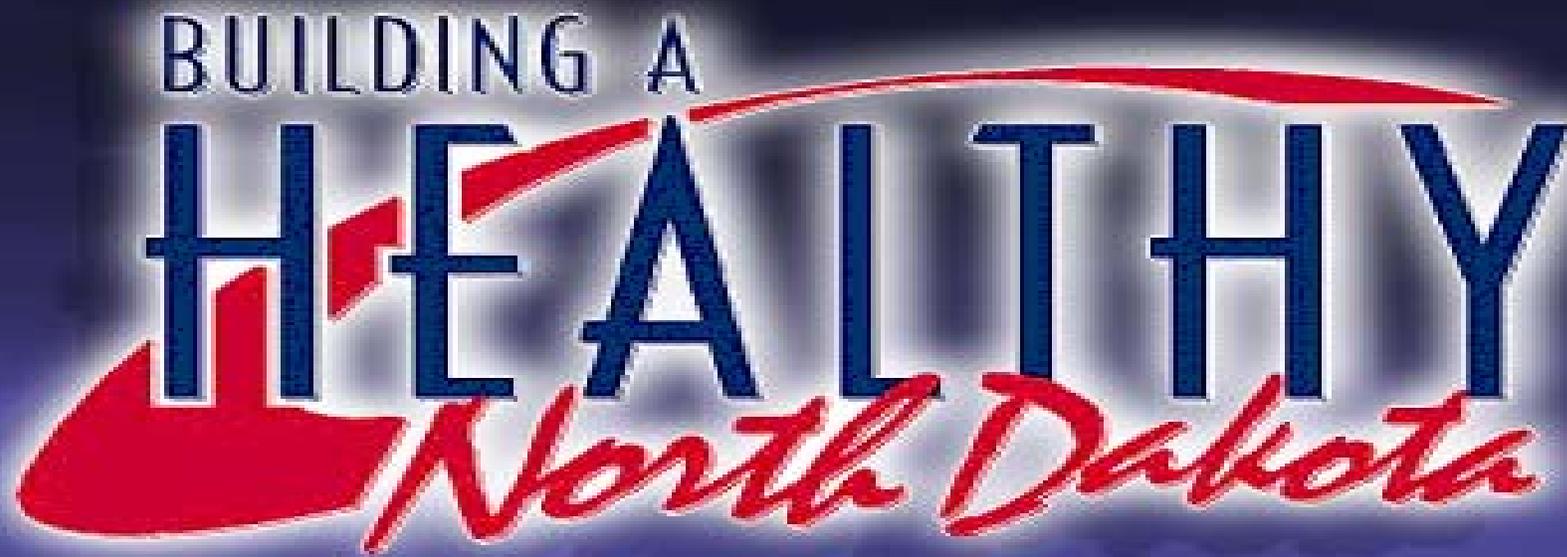


BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit



*The Science and Art
of Tobacco Control*

Dearell Niemeyer

Tobacco Technical Assistance Consortium

Presentation Objectives

Improve our understanding of:

- Evidence-based public health
- Economic Evaluation
- Evidence-based tobacco control resources
- *Guide to Community Preventive Services* tobacco control recommendations
- How tobacco control guidelines can be used to support a comprehensive tobacco control program

Why do Programs/Policies Fail to Achieve Maximum Potential?

- Choosing an ineffective intervention approach
- Selecting a potentially effective approach, but weak or incomplete implementation or “reach”
- Conducting an inadequate evaluation that limits generalizability

What is “Evidence Based Public Health”?

- The available body of research evidence on any given intervention’s effectiveness
- The use of this evidence by public health professionals, advocacy groups, providers, purchasers, and policy makers when making health care decisions

What is an Evidence-Based Method?

“A strategy for explicitly linking public health or clinical practice recommendations to the underlying scientific evidence that demonstrates effectiveness.”

Truman *et al.* *Am J Prev Med* 2000,18 (1 Suppl):18-26

What is an Evidence-Based Method?

- Based on interventions that have been evaluated in scientific studies
- Expert opinions
- Systematic Reviews
 - Summary of data based on narrative or quantitative techniques
- Can include economic evaluations

How are Systematic Reviews Developed?

- Identify and select interventions to review
- Search the literature
- Abstract and evaluate the quality of each study
- Summarize the evidence (effectiveness, applicability, and economic efficiency)
- Translate evidence into a recommendation

Advantages to Using EBPH

- High likelihood of success
- Identification of common indicators
- Defend/expand an existing program
- Advocate for new programs
- New knowledge is generated to help others

Barriers to Using EBPH

- Lack of leadership in setting a clear and focused agenda for evidence-based approaches
- Lack of a view of the long-term “horizon” for program implementation and evaluation
- External (including political) pressures drive the process away from an evidence-based approach

When Evidence is Not Enough

- Only 1 piece of the decision-making process
 - Often lacks the details of “how to”
- Cultural bias
 - Largely western world phenomena
- Community-based & participatory approaches
 - May be counter-intuitive to an evidence-based process

Economic Evaluation

Applied analytic methods used to:

- *Identify,*
- *Measure,*
- *Value, and*
- *Compare*

the costs and consequences of prevention and treatment strategies.

Cost-Effectiveness Analysis (CEA)

- Expresses outcomes in natural units
 - Number of quitters
 - Cases of lung disease prevented
- Results expressed as a ratio of cost per unit of outcome
 - Cost/quitter
 - Cost /case of lung cancer prevented
- Decision-makers can compare different types of interventions that affect the same outcome (e.g., cessation)
 - \$200 per quitter for a smoking cessation program
 - \$320 per quitter for a mass media program

Cost-Utility Analysis (CUA)

- A special type of CEA: Health benefits are expressed as years of life saved adjusted to reflect changes in “quality” of life
 - Cost / per quality-adjusted life year (QALY) saved
- Decision-makers can compare different types of health programs targeting different health outcomes:
 - Cost of smoking cessation program = \$ 1,000 per QALY vs.
 - Skin cancer prevention program = \$8,000 per QALY

Cost-Benefit Analysis (CBA)

- Expresses all costs and benefits in dollars
 - Includes monetary costs of the program, as well as
 - costs averted due to the positive health effects of the program
- Results expressed as a single outcome (benefits – costs)
 - For every \$1 spent on the smoking cessation program, you save \$1.50 in reduced health care costs.
- Decision-makers can compare different types of programs targeting different outcomes
 - A smoking cessation program provides a 25% return on investment vs.
 - A job skills program provides a 10% return on investment.

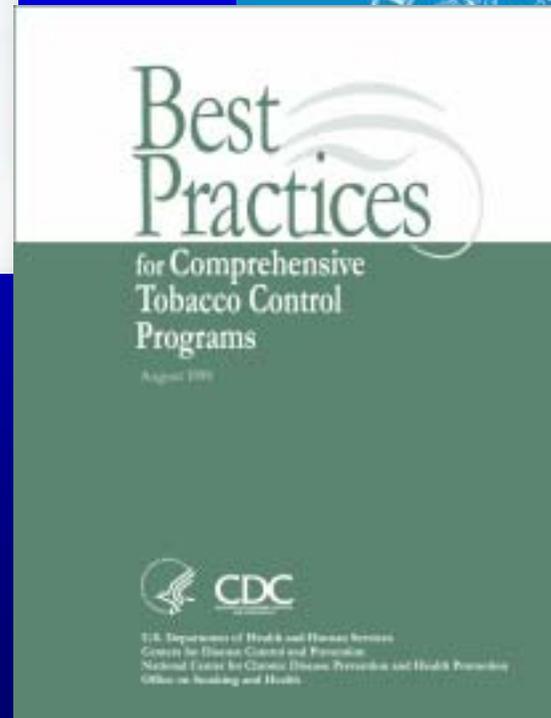
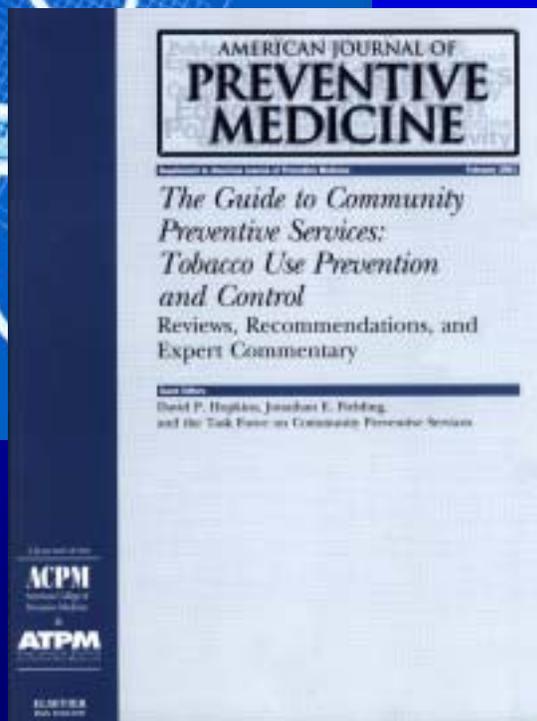
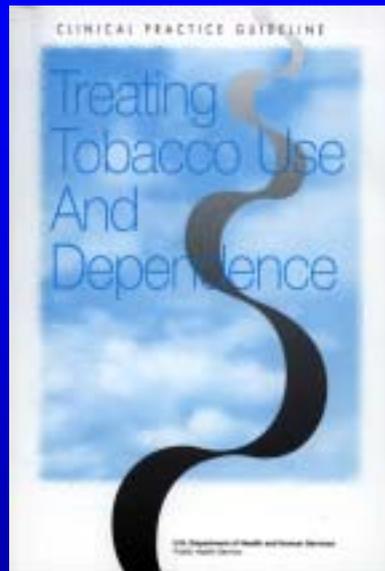
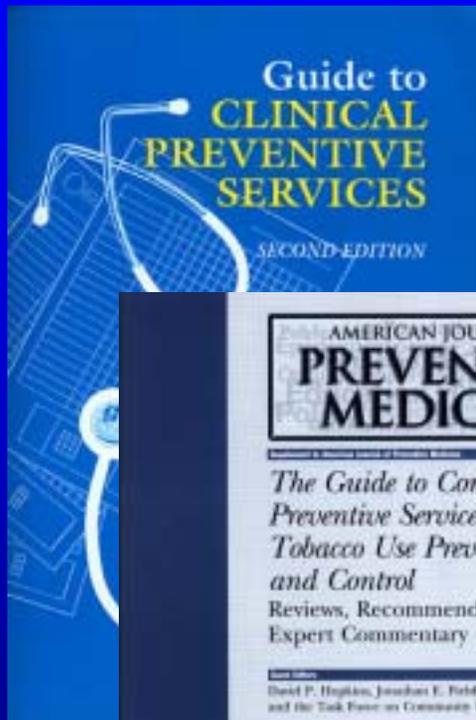
Advantages to Using Economic Evaluation

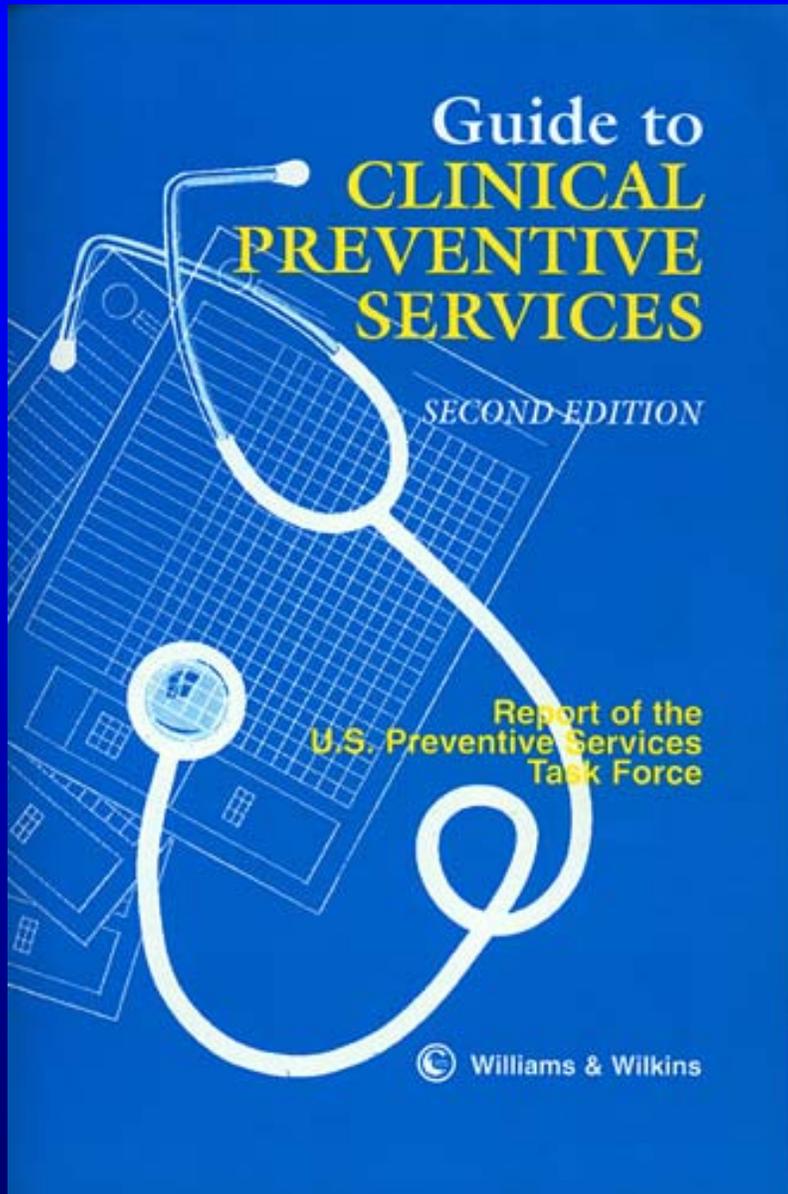
- Strengthens the evidence base on effectiveness
- Provides information on returns on investment
- Useful for allocating resources among competing preventive services

Barriers to Using Economic Evaluation

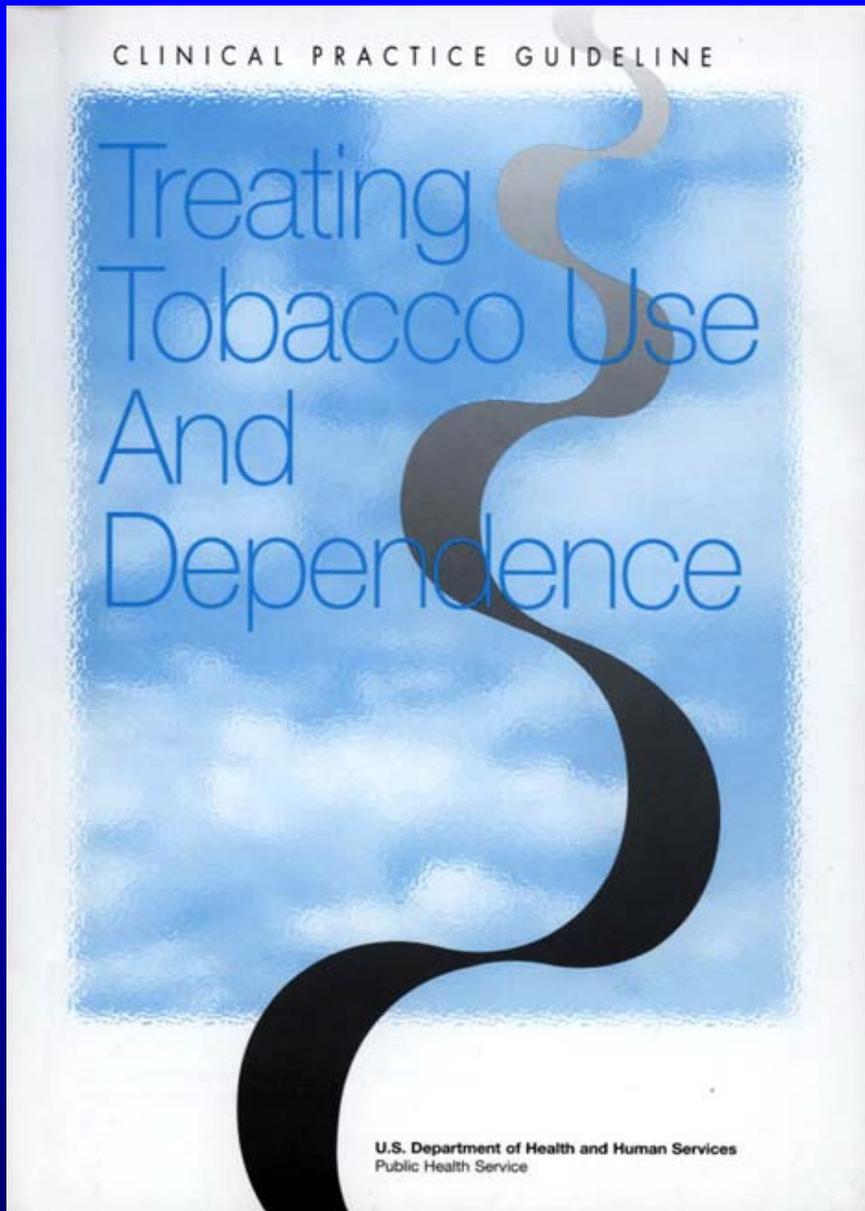
- Lack of data
- Time consuming and requires expertise
- Standardization of methodology
- Interpretation of results

Tobacco Control Resources





- Led by the U.S. Preventive Services Task Force
- Provides evidence-based recommendations for clinical preventive services
- Focus on interventions for identifying and treating tobacco use and dependence



- A product of the Tobacco Use and Dependence Guideline Panel
- Comprehensive review of interventions to treat tobacco use and dependence
- Appropriate for health care providers, purchasers, and health care systems

Reducing Tobacco Use
A Report of the Surgeon General



Department of Health and Human Services

Narrative reviews of the evidence (without formal recommendations) for:

- Current tobacco use
- Effective educational strategies
- Individual and clinical strategies
- Regulatory efforts
- Economic approaches
- Comprehensive tobacco use prevention programs

Best Practices

for Comprehensive
Tobacco Control
Programs

August 1999



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health

- A guidance document developed by CDC
- Recommendations based on experiences with state programs and some published intervention studies
- Identifies 9 components of a comprehensive tobacco program
- Provides budget estimates for implementation of each component

Best Practices

for Comprehensive
Tobacco Control
Programs

August 1999



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health

- The four areas of focus include:
 1. Preventing tobacco use initiation among youth
 2. Promote smoking cessation among youth and adults
 3. Eliminate exposure to environmental tobacco smoke
 4. Identify and eliminate disparities in tobacco use among different population groups

Best Practices

for Comprehensive
Tobacco Control
Programs

August 1999



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health

- The 9 Elements are:
 - Community Programs
 - Chronic Disease Programs
 - School Programs
 - Enforcement
 - Statewide Programs
 - Counter-Marketing
 - Cessation Programs
 - Surveillance and Evaluation
 - Administration & Management

Public AMERICAN JOURNAL OF
**PREVENTIVE
MEDICINE**

Supplement to American Journal of Preventive Medicine

February 2001

*The Guide to Community
Preventive Services:
Tobacco Use Prevention
and Control*

Reviews, Recommendations, and
Expert Commentary

Guest Editors

David P. Hopkins, Jonathan E. Fielding,
and the Task Force on Community Preventive Services

A Journal of the

ACPM
American College of
Preventive Medicine

&

ATPM
ASSOCIATION OF TEACHERS
OF PREVENTIVE MEDICINE

ELSEVIER
ISSN 0749-3797

- Led by the Task Force on Community Preventive Services
- Focus on population-based interventions
- Recommendations based on systematic reviews of published intervention studies

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ATPM
ASSOCIATION OF TEACHERS
OF PREVENTIVE MEDICINE

ELSEVIER
ISSN 0749-3797

- Looks at both effectiveness and economic efficiency
- Tool for program and policy decision-making
- Building blocks for a comprehensive tobacco control program

**“Tobacco Prevention and Control” is
the 2nd Community Guide Product
Released**

October 2000

Mortality and Morbidity Weekly Report

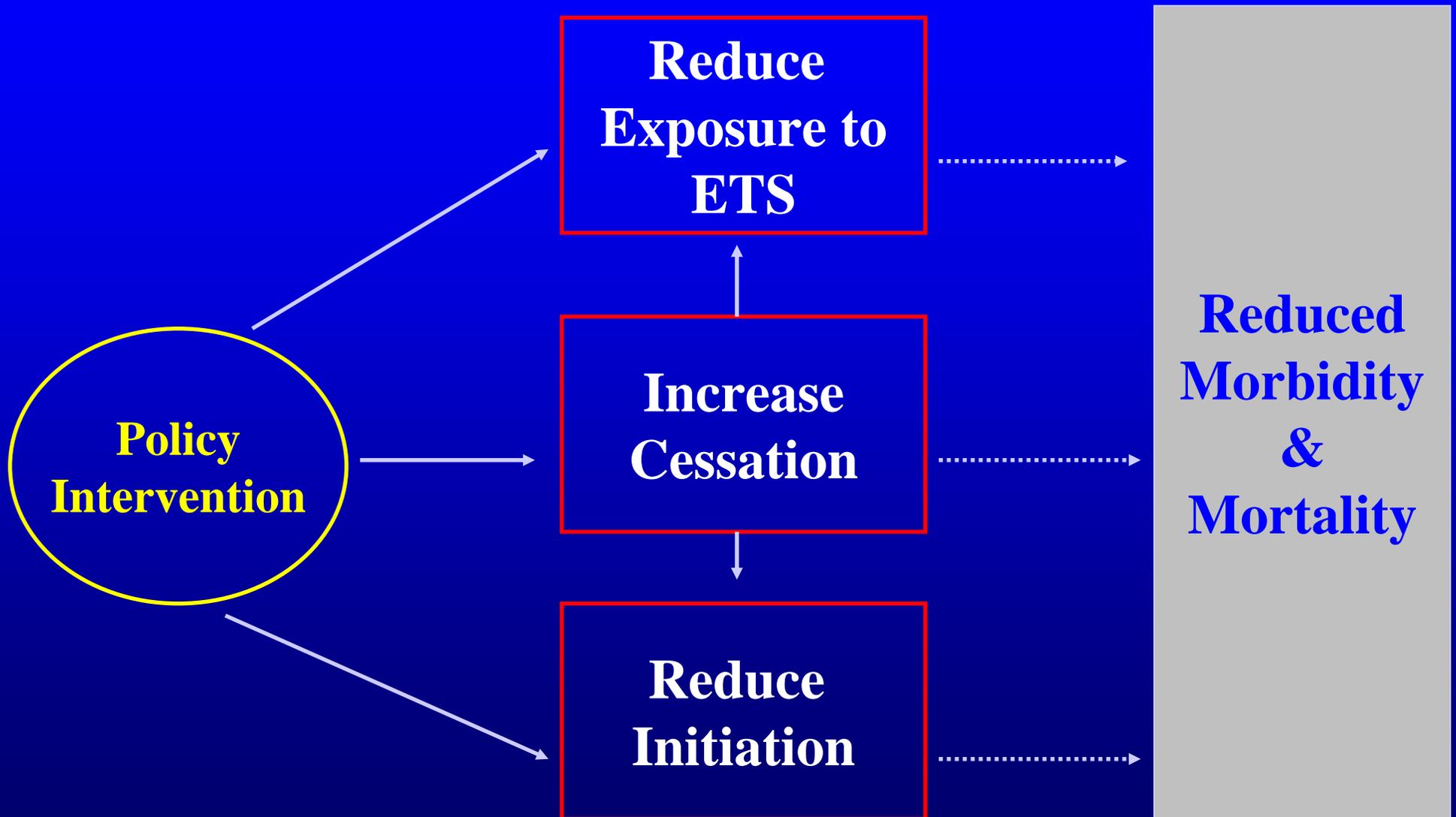
February 2001

American Journal of Preventive Medicine

The Community Guide's Tobacco Control Findings

- **Policies are interventions**
- **Policy Interventions reviewed**
 - Smoking bans and restrictions
 - Excise taxes
 - Youth access restrictions
 - Reducing patient out-of-pocket costs

Policies are Interventions



Tobacco Control Policies: Settings

Goal	Community	Health Care System
Reduce ETS	Yes	Done
Increase Cessation	Yes	Yes
Reduce Initiation	Yes	(No)

Task Force Recommendations

Four options for or against an intervention:

1. *Strongly Recommended* - Strong evidence of effectiveness
2. *Recommended* - Sufficient evidence of effectiveness
3. *Insufficient Evidence* - Lack of studies, inconsistent effects, or poor quality of design
4. *Recommend Against* - Documented ineffectiveness and/or harm

The Most Effective Tobacco Control Interventions For Communities

Goal	Recommended Intervention
Increase Cessation	Increase the price (tax) Mass media campaigns* Telephone Quit lines* Smoking bans
Reduce Initiation	Increase the price (tax) Mass media campaigns*
Reduce ETS Exposure	Smoking bans

* When combined with other interventions

Community Interventions with Insufficient Evidence

Goal	Interventions with insufficient evidence
Increase Cessation	Smoking cessation contests Broadcast smoking cessation series
Reduce Initiation	
Reduce ETS Exp.	Community-wide efforts to reduce ETS exposure in the home

The Most Effective Tobacco Control Interventions for Health Care Systems

Goal	Recommended Interventions
Increase Cessation	Provider reminder systems* Telephone Quit Lines* Reducing patient out-of-pocket costs (NRT)
Reduce Initiation	
Reduce ETS	Smoking bans (in effect)

*** When combined with other interventions**

Health Care System Interventions with Insufficient Evidence

Goal	Interventions with Insufficient Evidence
Increase Cessation	Provider education programs (alone) Provider feedback systems
Reduce Initiation	
Reduce ETS	(Provider counseling to reduce home ETS exposure)

Reviews in Progress

Goals	Interventions under Evaluation
Increase Cessation	
Reduce Initiation	Youth access interventions School-based interventions
Reduce ETS	

Economic Findings From the Community Guide

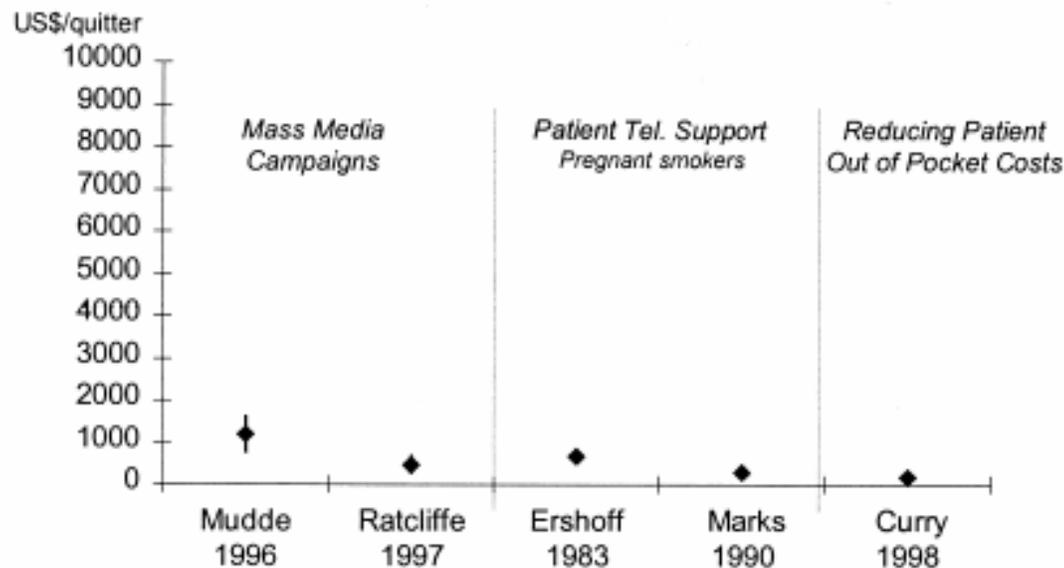
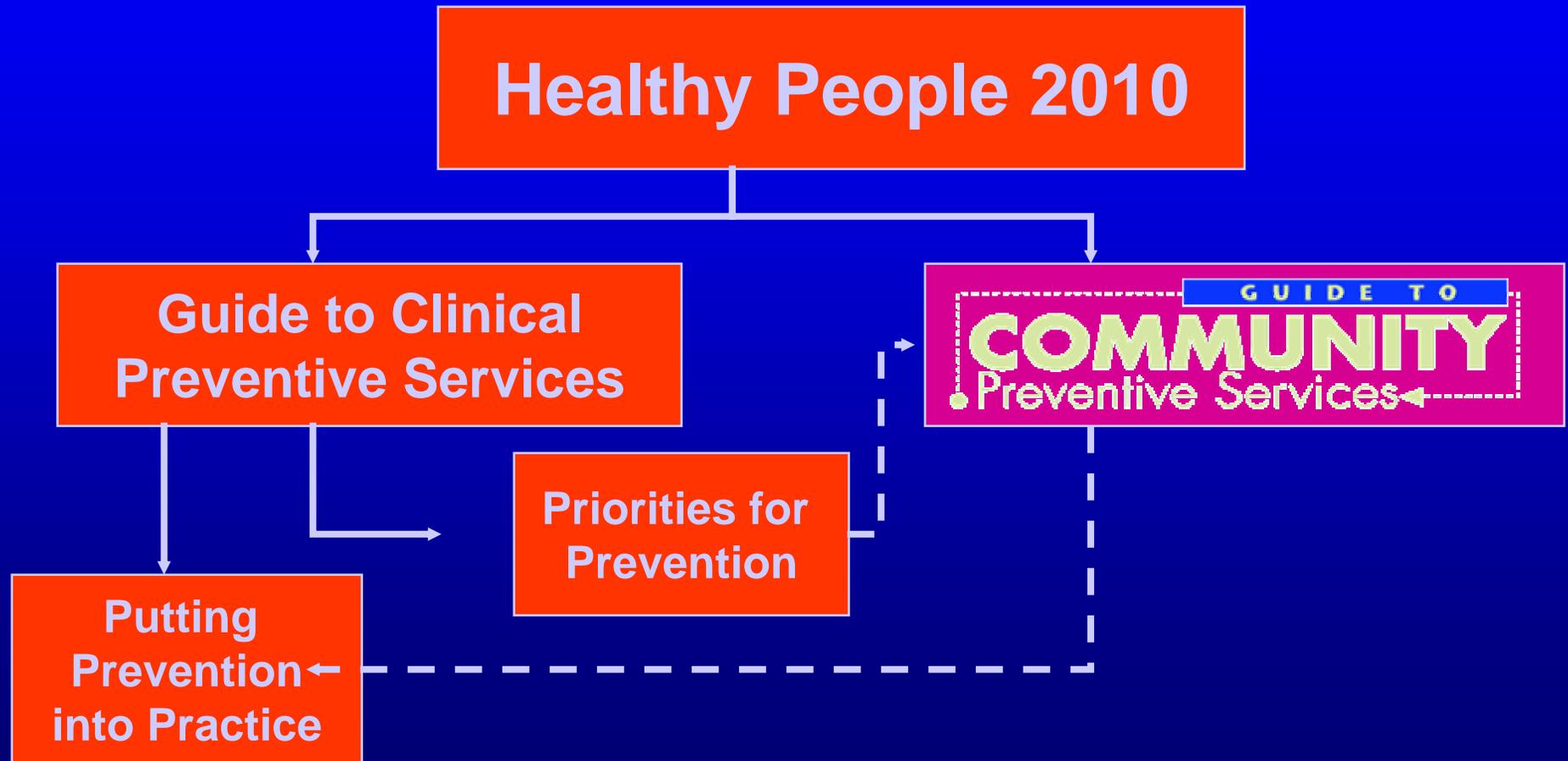


Figure C-1. Adjusted program cost per quitter of three interventions for tobacco use prevention, by author.

Community Guide Limitations

- **Based on published research**
 - Bans v. Restrictions
- **Excluded cross-sectional evidence**
 - Recent studies
 - Additional evidence of impact on tobacco use
- **Does not provide “how to” information**

The Community Guide is Part of a Family of Federal Initiatives



Making Sense of What Works: How to use the Tobacco Guidelines

CDC Best Practices

PHS: Clinical Practice Guidelines

Community

**Health
Care
System**

Provider

**Tobacco
User**

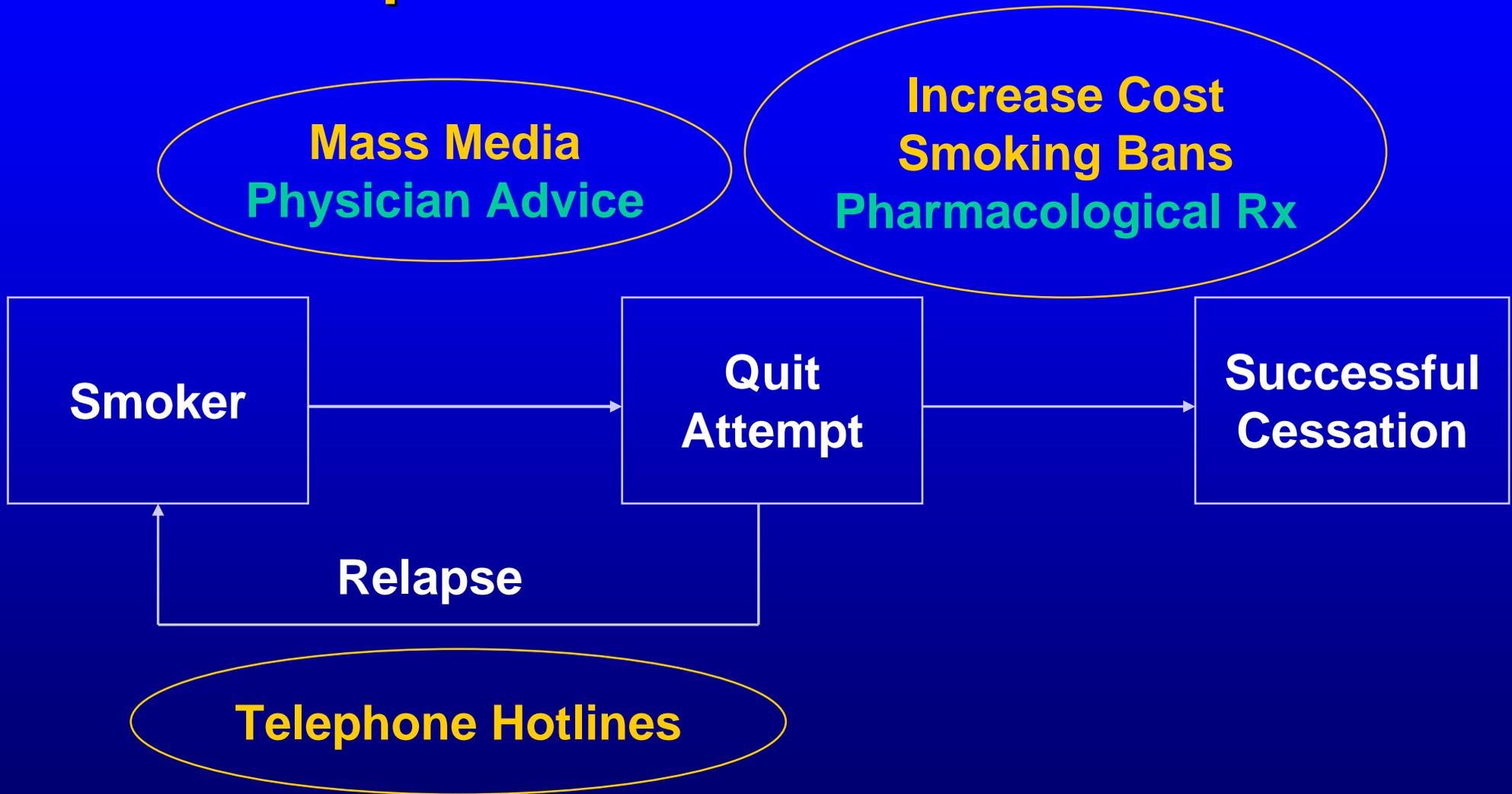
Community Guide

Clinical Guide

SGR: Reducing Tobacco Use

NCI: Population Based Smoking Cessation

Making Sense of What Works Comprehensive Tobacco Control*



* NCI Monograph #12 Population Based Smoking Cessation

Estimated Impact of Smoking Cessation Interventions (US)*

Intervention	Potential Effect
Comprehensive State Program	508,111
Advised by Physician	189,000
20% increase in cost	222,298
Total work ban	221,493
Medication	500,000
Optimal system intervention	756,000

* NCI monograph #12 Population Based Smoking Cessation

Making Sense of What Works

These Guidelines:

- Should be viewed as a first step in the decision-making process
- Are not conceptualized to address the needs of the community, cultural appropriateness, and political considerations
- Will be most useful when used in conjunction with community needs assessment and planning

Making Sense of What Works

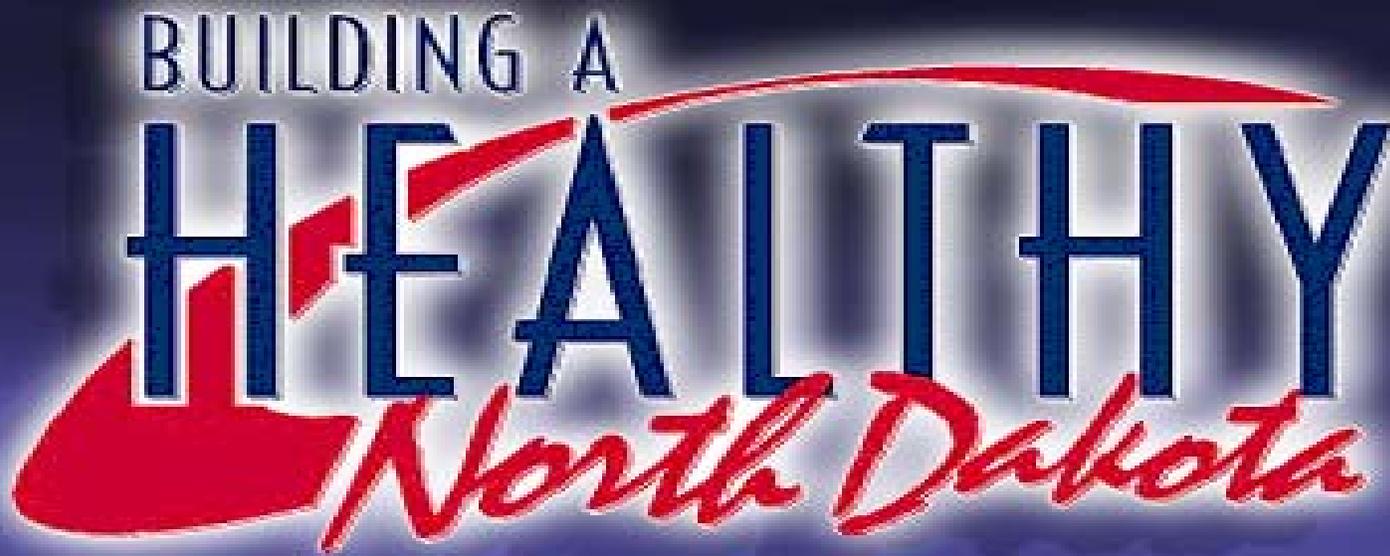
Use this information locally to:

- Select strategies and interventions that are evidence-based and systems focused
- Integrate the findings into decision-making
 - (e.g., educate staff, RFP's, advocacy)
- When faced with limited resources
 - Defend and expand existing programs
 - Advocate for new programs
 - Support evaluation of programs without demonstrated results

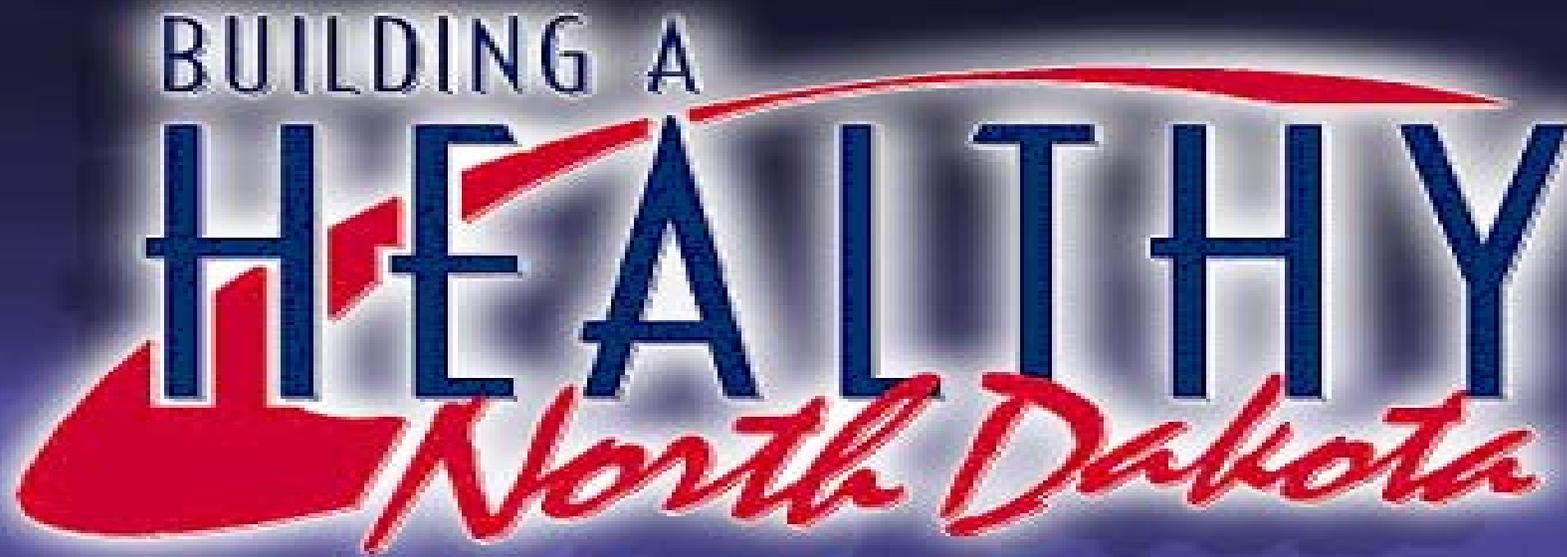
Making Sense of What Works:

“Our lack of greater progress in tobacco control is more the results of failure to implement proven strategies than the lack of knowledge about what to do”

A Report of the Surgeon General



Healthy North Dakota Summit



*Principles of
Substance Abuse Prevention*

Karen Larson

North Dakota Dept. of Human Services

Principles of Substance Abuse Prevention

Presented By:

Karen Romig Larson

ND Dept. of Human Services

Influences/Domains in Substance Abuse Prevention

- Individual
- Family
- Peer
- School
- Community
- Society/Environmental

Web of Influence



Individual Risk
and Protective Factors

Society/
Environment
Related Risk
and Protective
Factors

Family
Risk and
Protective
Factors

Community
Risk and
Protective
Factors

School/
Work Risk
and
Protective
Factors

Peer
Association
Risk and
Protective
Factors



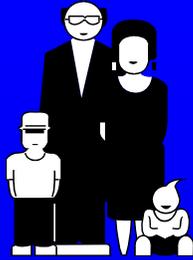
Individual Domain

Risk Factors

- attitudes favorable toward use
- biological or psychological disposition
- antisocial behavior
- sensation seeking

Principles

- social and personal skills building
- culturally sensitive
- cite immediate consequences
- recognize relationship between substance use and other adolescent health problems



Family Domain

Risk Factors

- parental or sibling drug use or approval of use
- lack of supervision
- lack of parental involvement
- family conflict
- economic instability

Principles

- target the entire family
- help develop bonds among parents in programs
- develop parenting skills
- emphasize family bonding



Peer Domain

Risk Factors

- peer use
- peer norms favorable toward use
- peer activities conducive to use

Principles

- structured and supervised alternative activities
- involving youth in the development of alternative programs
- placing peers with behavior problems with other nonproblematic youth



School Domain

Risk Factors

- lack of commitment to education
- poor grades or school failure
- lack of attachment to school
- negative school climate
- lenient school policies

Principles

- Avoid relying solely on knowledge only interventions
- give students opportunities to practice newly acquired skills
- help youth retain skills through booster sessions
- involve parents in school-based approaches



Community Domain

Risk Factors

- lack of attachment to social and community institutions
- lack of community awareness or acknowledgement of substance abuse problems
- community norms favorable to use

Principles

- integrated, comprehensive prevention strategies
- structured time with adults through mentoring
- increase positive attitudes through community service
- clear company policies on substance abuse

Society/Environmental Domain

Risk Factors

- norms tolerant of use/abuse
- policies enabling use/abuse
- lack of enforcement of laws designed to prevent use/abuse
- inappropriate negative sanctions for use/abuse

Principles

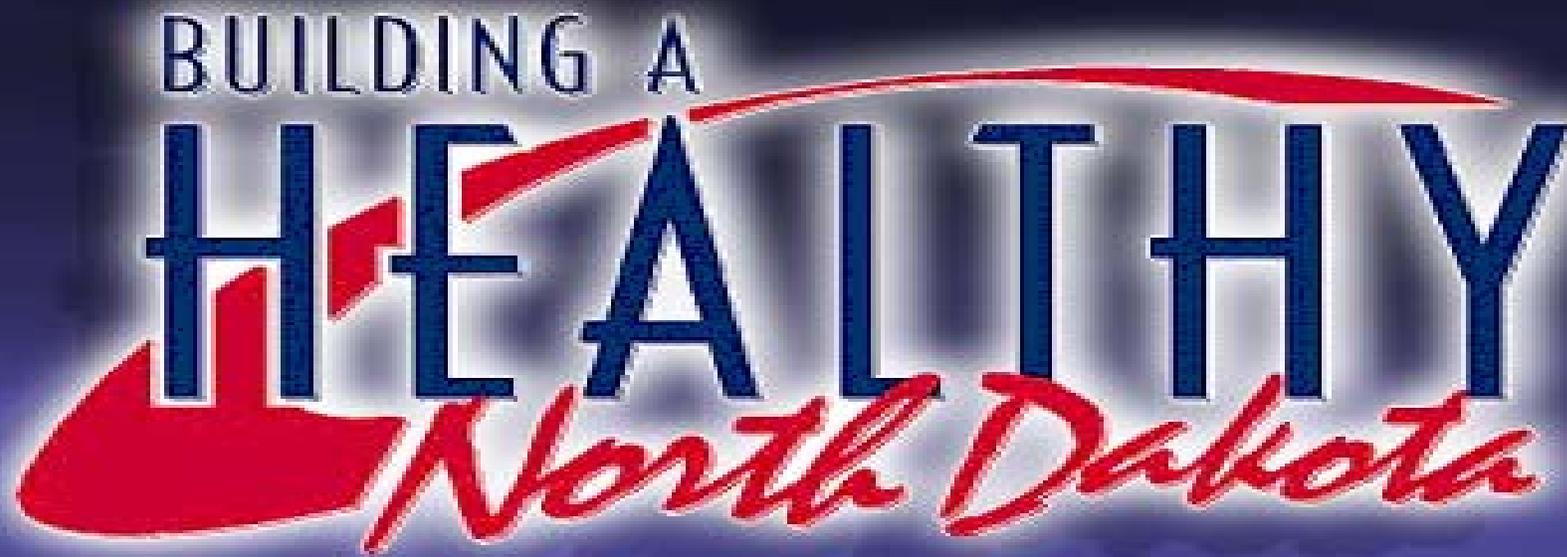
- develop community awareness and media efforts
- limit the location and density of retail alcohol outlets
- enforce minimum purchase age laws using undercover buying operations

BUILDING A

HEALTHY

North Dakota

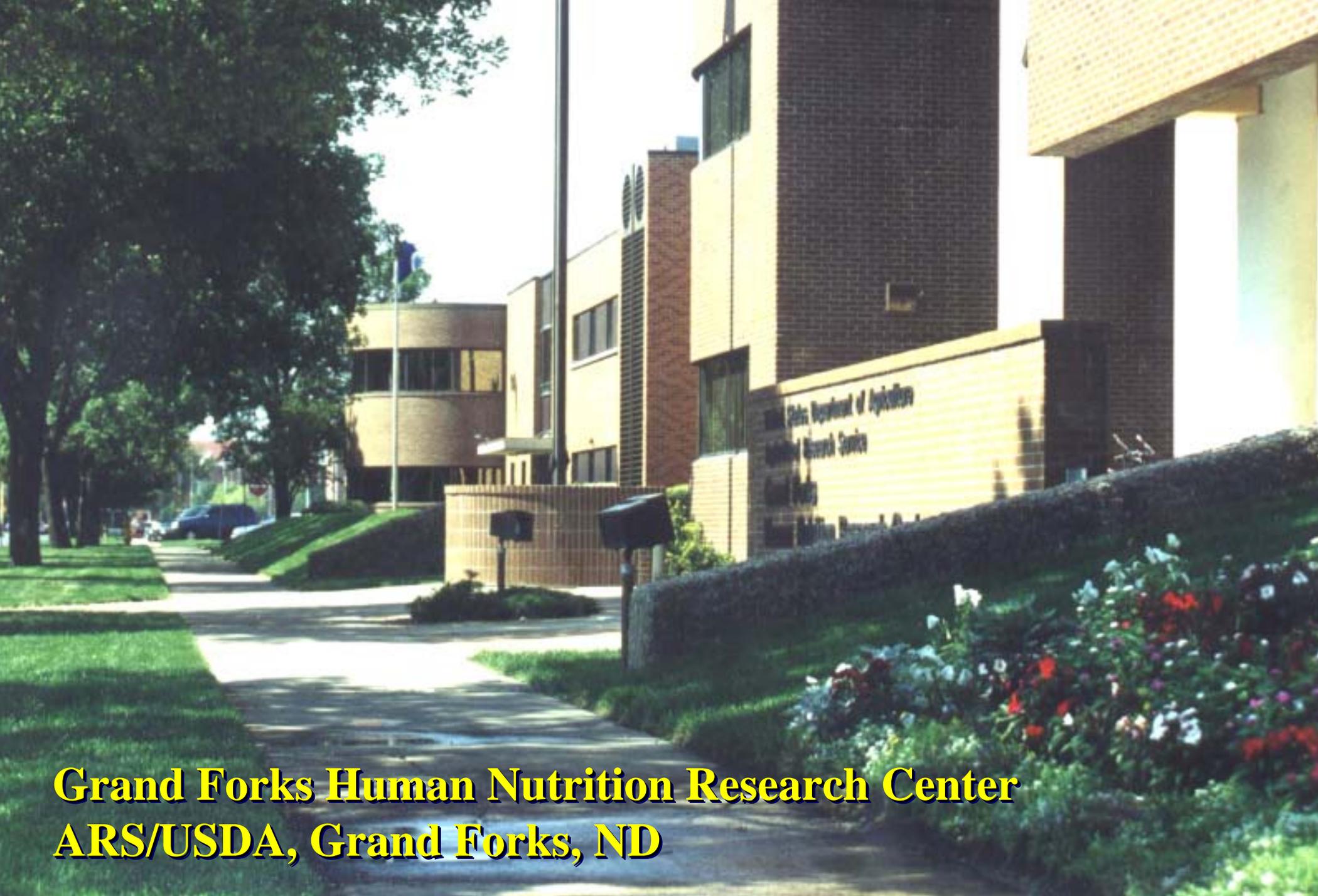
Healthy North Dakota Summit



Opportunities for Healthy Eating

Dr. Gerald Combs Jr.

*U.S. Department of Agriculture,
Human Nutrition Research Center*



**Grand Forks Human Nutrition Research Center
ARS/USDA, Grand Forks, ND**



leading causes of death in the US

- heart disease
- cancer
- injuries
- stroke
- chronic lung disease
- pneumonia/influenza
- suicide
- diabetes
- liver disease
- atherosclerosis

leading causes of death in the US

- heart disease
 - cancer
 - injuries
 - stroke
 - chronic lung disease
 - pneumonia/influenza
 - suicide
 - diabetes
 - liver disease
 - atherosclerosis
- related to diet*
-
- The diagram consists of a vertical list of ten leading causes of death in the US. The first four items (heart disease, cancer, injuries, and stroke) are highlighted in yellow. The remaining six items (chronic lung disease, pneumonia/influenza, suicide, diabetes, liver disease, and atherosclerosis) are in white. To the right of the list, the text 'related to diet' is written in red. Five red dotted arrows point from this text to the following causes: heart disease, cancer, stroke, diabetes, and atherosclerosis.

trends . . .

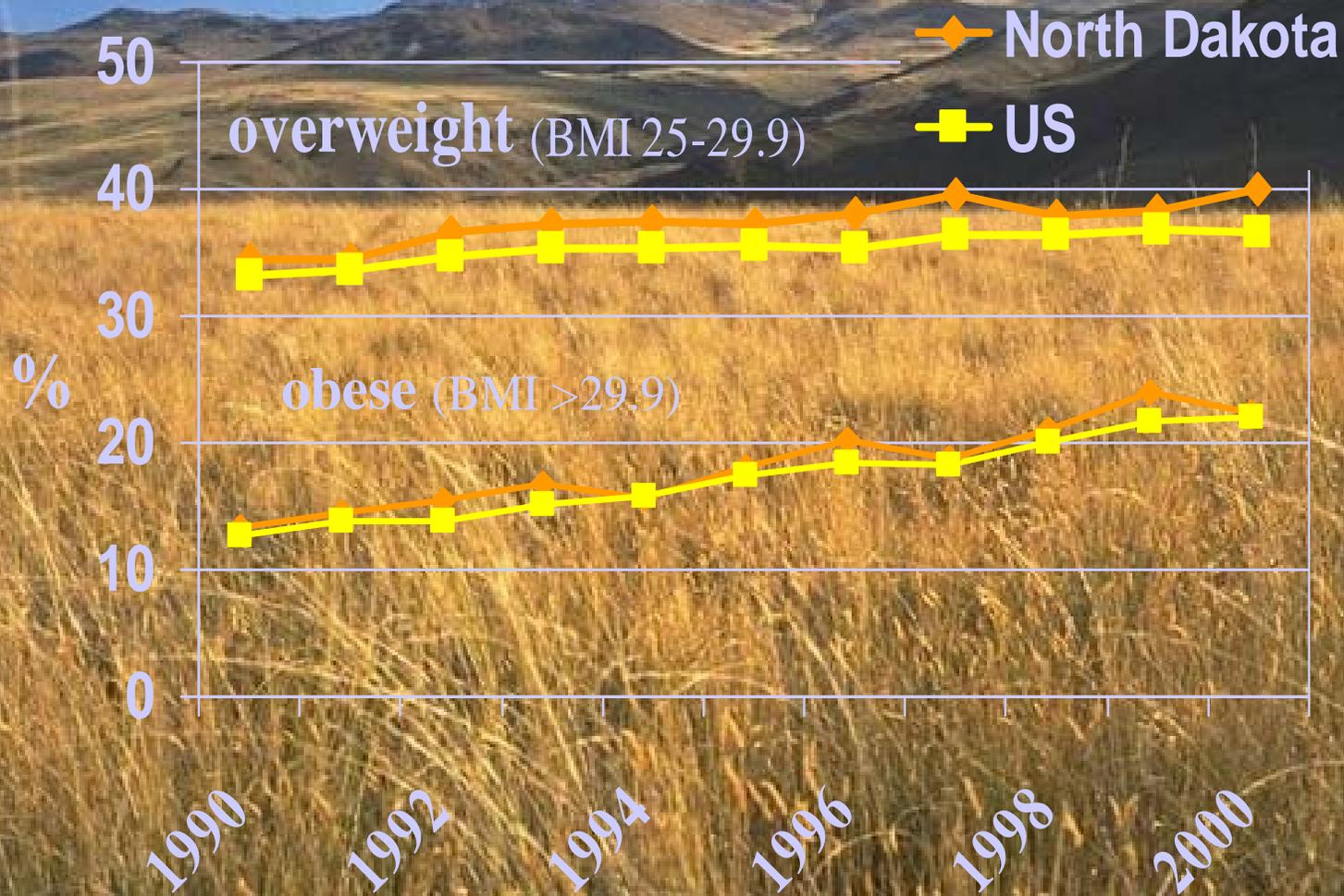
- graying population
- shrinking rural communities
- increasing scale of retail food marketing; withdrawal from rural communities

Food Insecurity . . .

- 10% of US households; *higher* in rural areas
- lower intakes of critical nutrients
- 2.5 million older adults
- 3 million children
 - poor school performance
 - excess illness

North Dakota

CDC: BRFSS data



Fats, Oils & Sweets
USE SPARINGLY

Fight fat?

KEY

● Fat (naturally occurring and added)

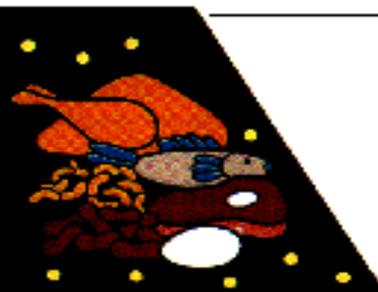
▼ Sugars (added)

These symbols show fats and added sugars in foods.

Milk, Yogurt &
Cheese Group
2-3 SERVINGS



Meat, Poultry, Fish, Dry Beans,
Eggs & Nuts Group
2-3 SERVINGS



Vegetable Group
3-5 SERVINGS



Fruit Group
2-4 SERVINGS



Cut carbs?

Bread, Cereal,
Rice & Pasta
Group
**6-11
SERVINGS**





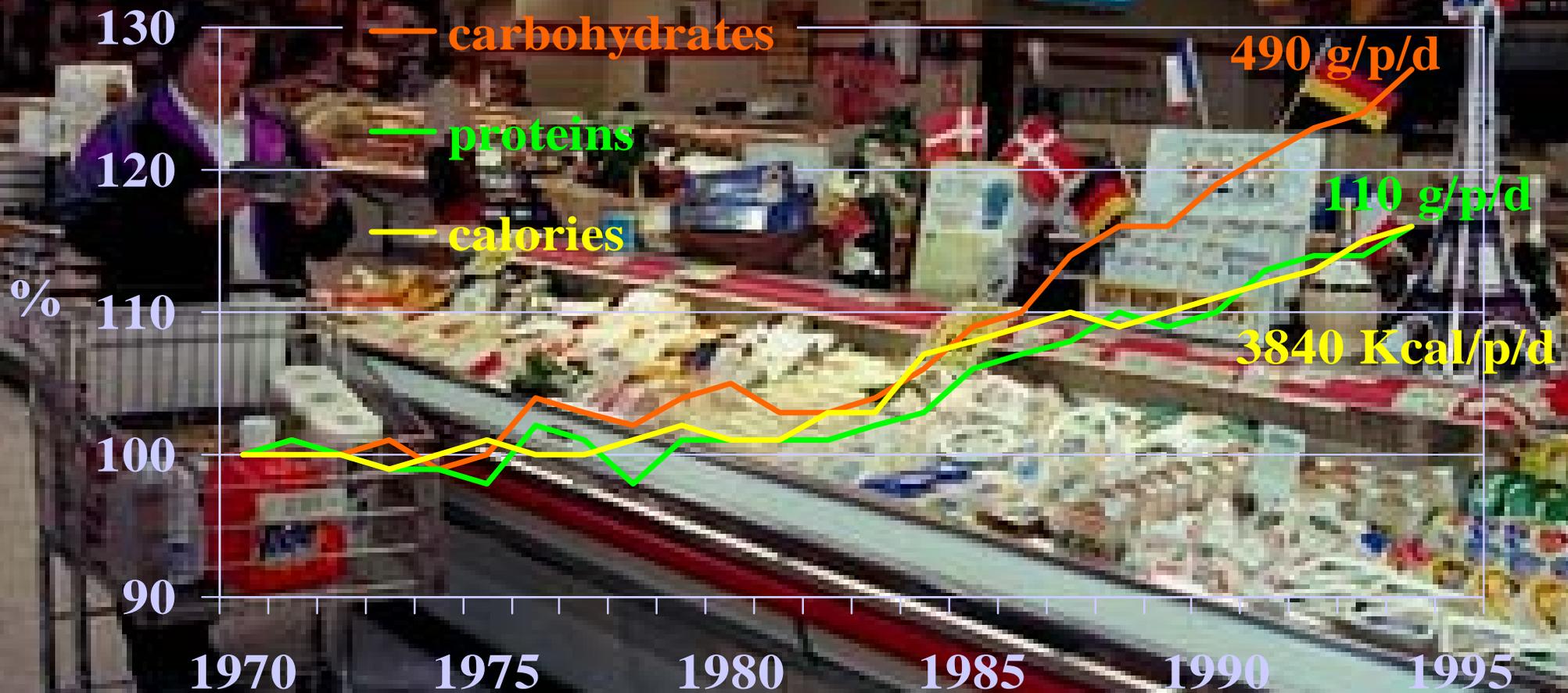
from the “diet gurus”

diet revolution · lifelong solution · stay thin forever
protein power · sugar buster
trim fat · feel fit · boost health
in just weeks

Basic idea: excess carbohydrates stimulate insulin over-production

- solution for overweight is decreased carbohydrates
- reducing carbohydrates leaves foods high in protein and/or fat

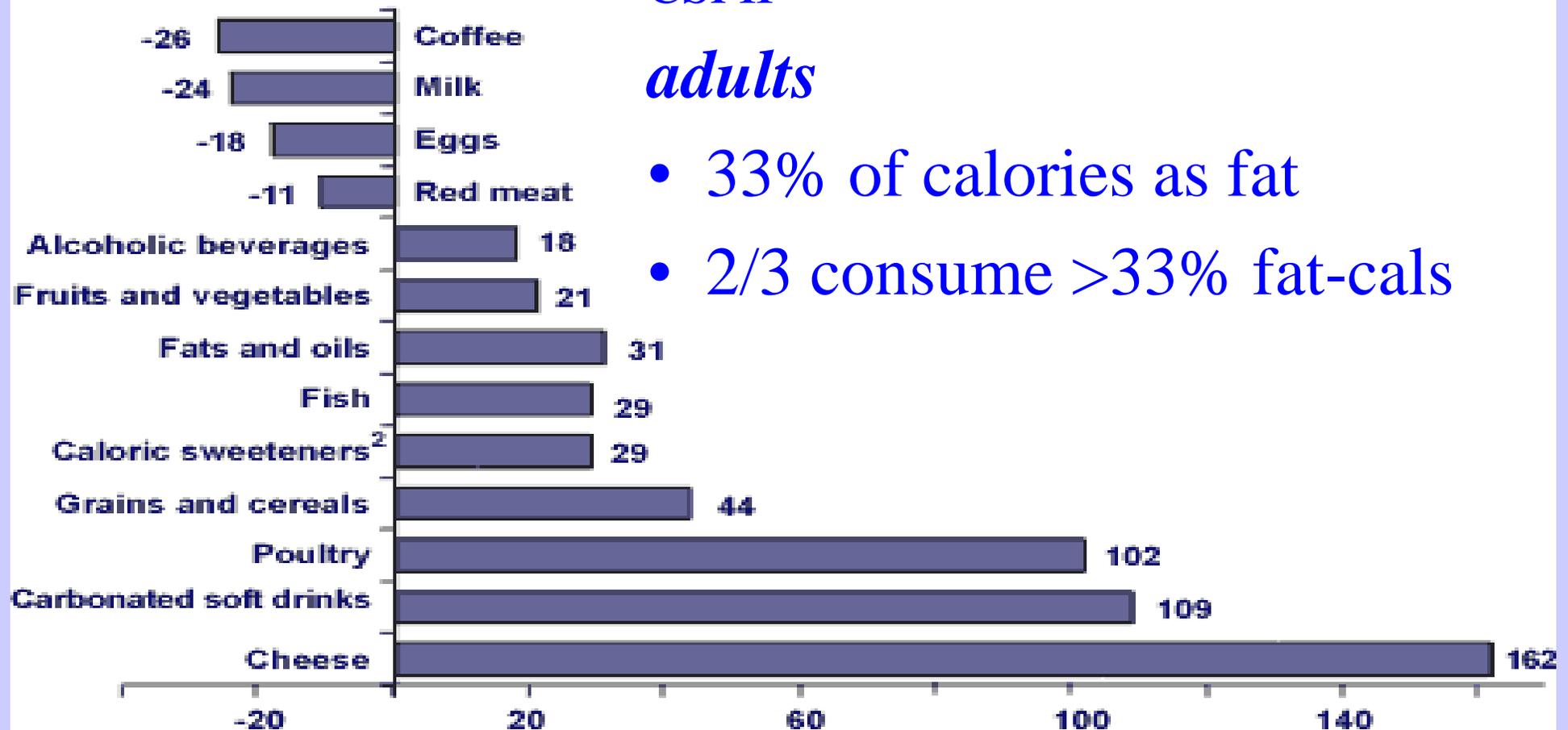
changes in per capita availability of nutrients in the US food supply 1970-1994 (USDA data)



Changes in per capita consumption, 1970-99¹

The American diet has undergone marked changes

Percent change



¹1999 data are preliminary.

²Includes caloric sweeteners used in soft drinks.

Source: USDA, Economic Research Service.

CSFII

adults

- 33% of calories as fat
- 2/3 consume >33% fat-cals

CSFII

A photograph of a grocery store aisle. In the foreground, there is a deli counter with various meats and cheeses. A person is standing behind the counter. In the background, there is a shopping cart and a person walking. The store has a wooden ceiling and various signs.

Persons with high-carb ($\geq 55\%$ calories) diets:

- ate more fruit, fiber, nutrients
- chose low-fat milk, meat, poultry, fish
- consumed 200-300 fewer calories/day
- had lower BMIs



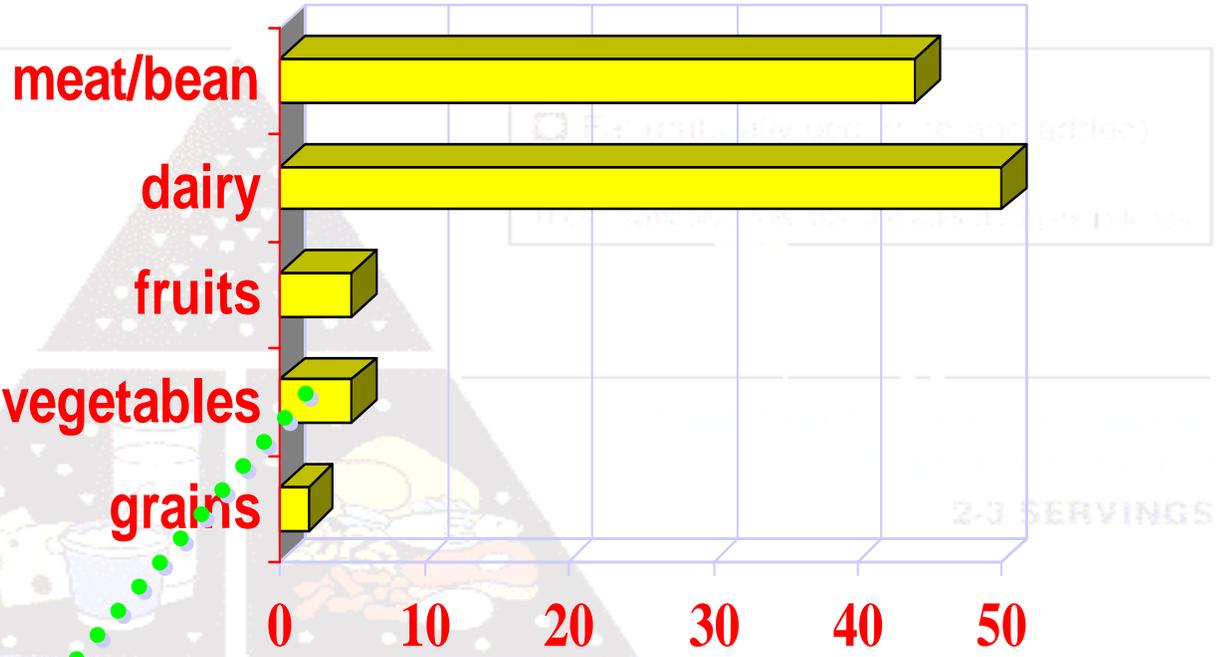
successful losers (ARS)

- eat a low-fat, high-carbohydrate diet
- monitor their weights
- are physically active
- eat breakfast

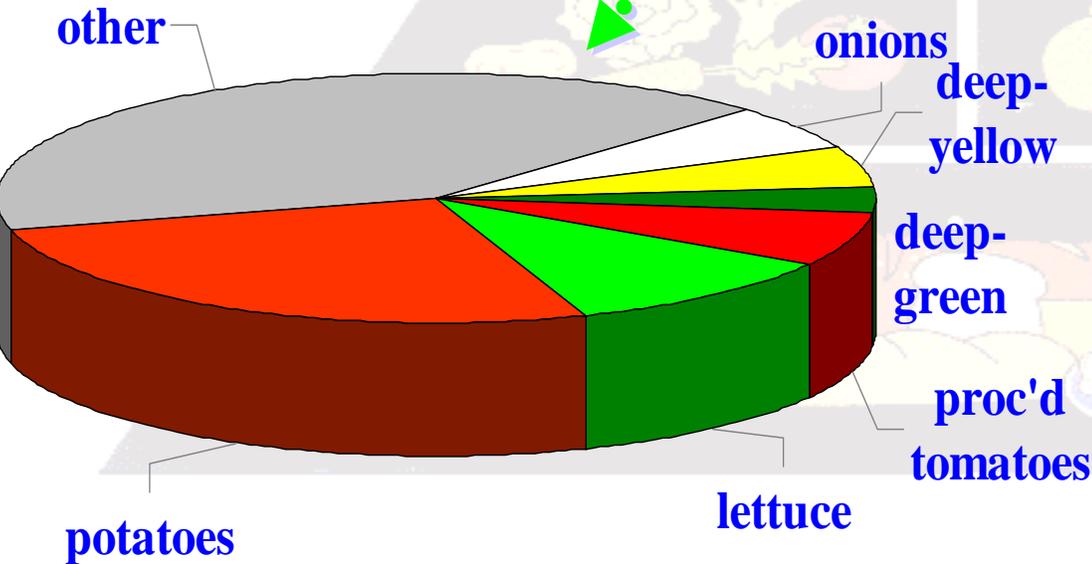
Food Consumption of Americans

USE SPARINGLY

Yogurt & Cheese Group
2-3 SERVINGS



3-5 SERVINGS



% older Americans meeting recommended intake
(Cornell, 1991)

Fruit Group
2-4 SERVINGS

Bread, Cereal, Rice & Pasta Group
6-11 SERVINGS

Fats, Oils & Sweets
USE SPARINGLY

KEY

- Fat (naturally occurring and added)
- Sugars (added)

□ Symbols show fats and added sugars in foods

Americans consuming insufficient Fruits and Vegetables (CDC:BRFSS data)

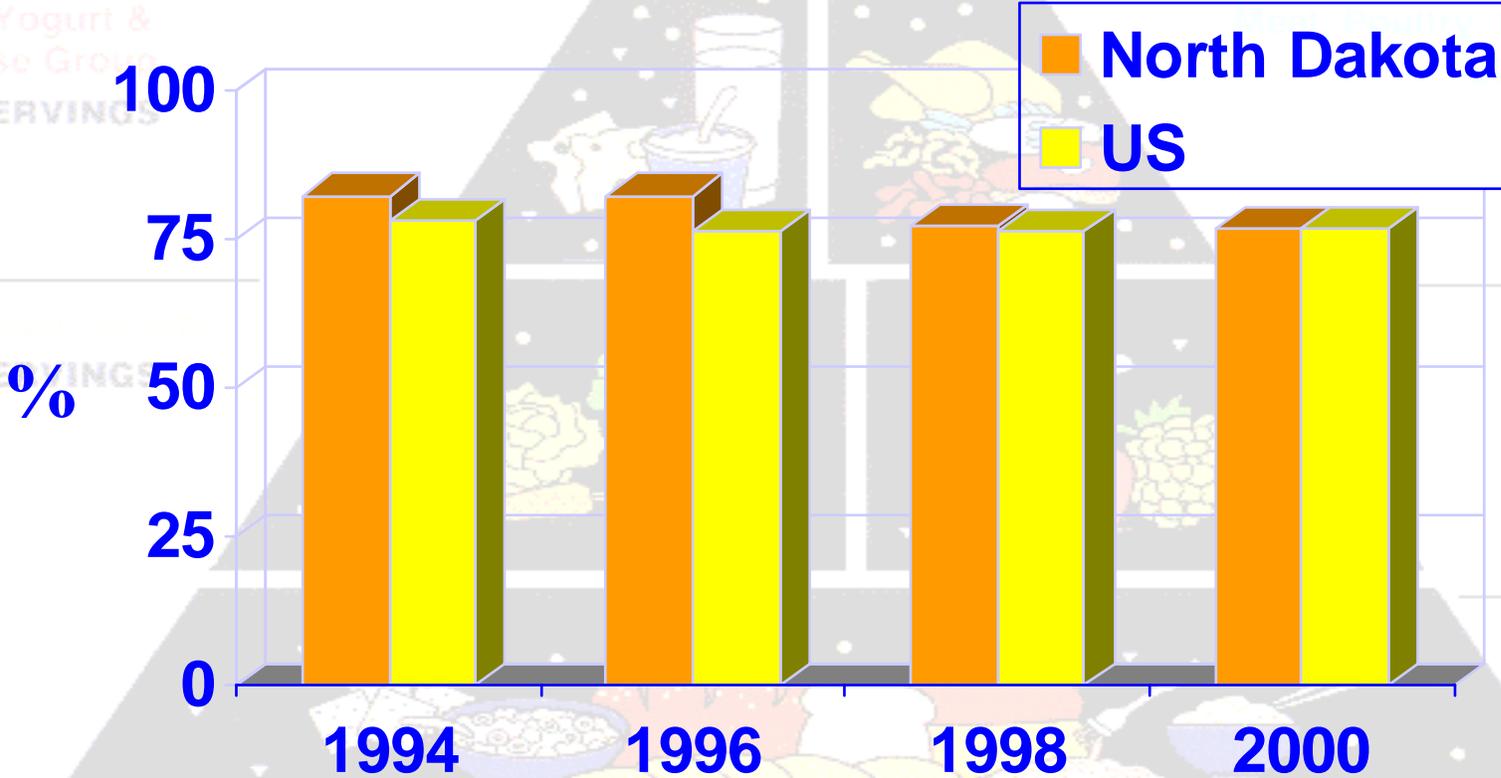
Milk, Yogurt &
Cheese Group
2-3 SERVINGS

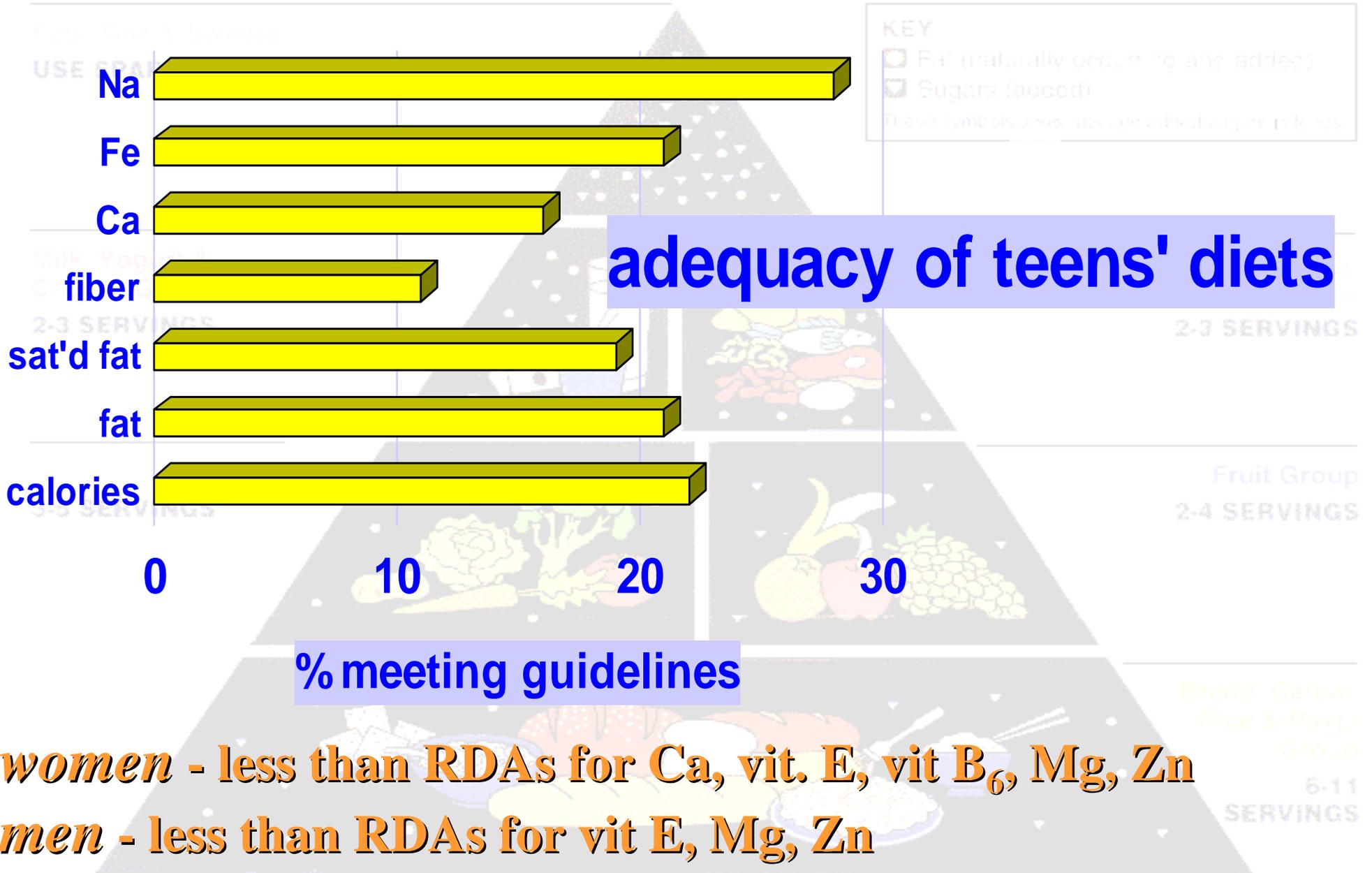
Fish, Dry Beans
& Nuts Group
2-3 SERVINGS

3-5 SERVINGS

Fruit Group
2-4 SERVINGS

Bread, Cereal,
Rice & Pasta
Group
6-11
SERVINGS





American consumers

- 58% - their diet is “unhealthy”
- 23% - interested in improving their diets
- 70% - feel doing so too complicated
- “health” ranks close to “taste”, “price”



\$6.1B “organic” +24%

\$28.2B “natural” +24%

\$17.4B “functional” + 9%

\$15.4B supplements ++

NUTRITION sells!



Healthy foods

a North Dakota strategic advantage

reduce risk for . . .

eat . . .

cancer

high-selenium wheat, buckwheat, beef, bison,
allium and cruciferous vegetables

high-CLA dairy products

beet pulp oligosaccharides, potatoes (?)

diabetes

buckwheat fagopyritols

anemia

iron, zinc in soy hulls, wheat, barley, oats

heart disease

n-3 fatty acids in flax, canola oils; range-fed
bison, beef

copper, folate in beans, peas

osteoporosis

soy isoflavones, beet pulp oligosaccharides

THE DEFINITIVE VOICE IN ANTI-AGING & SELF-MANAGED NATURAL HEALTH

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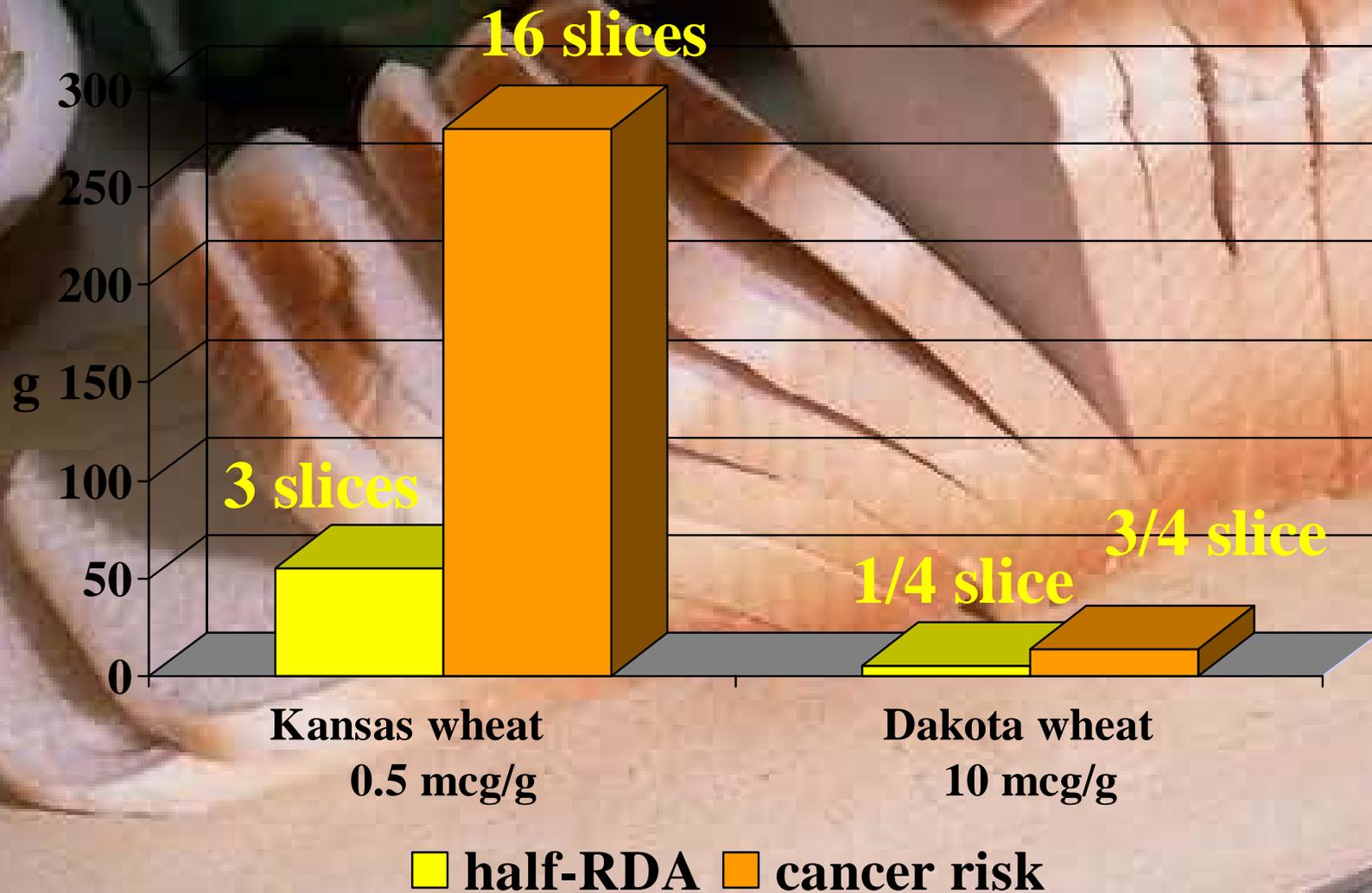
**Linda
Evans**

decade-long trial
1312 older Americans
+200 ug Se/day

64% fewer colorectal cancers
67% fewer prostate cancers
39% fewer total cancers
52% fewer cancer deaths

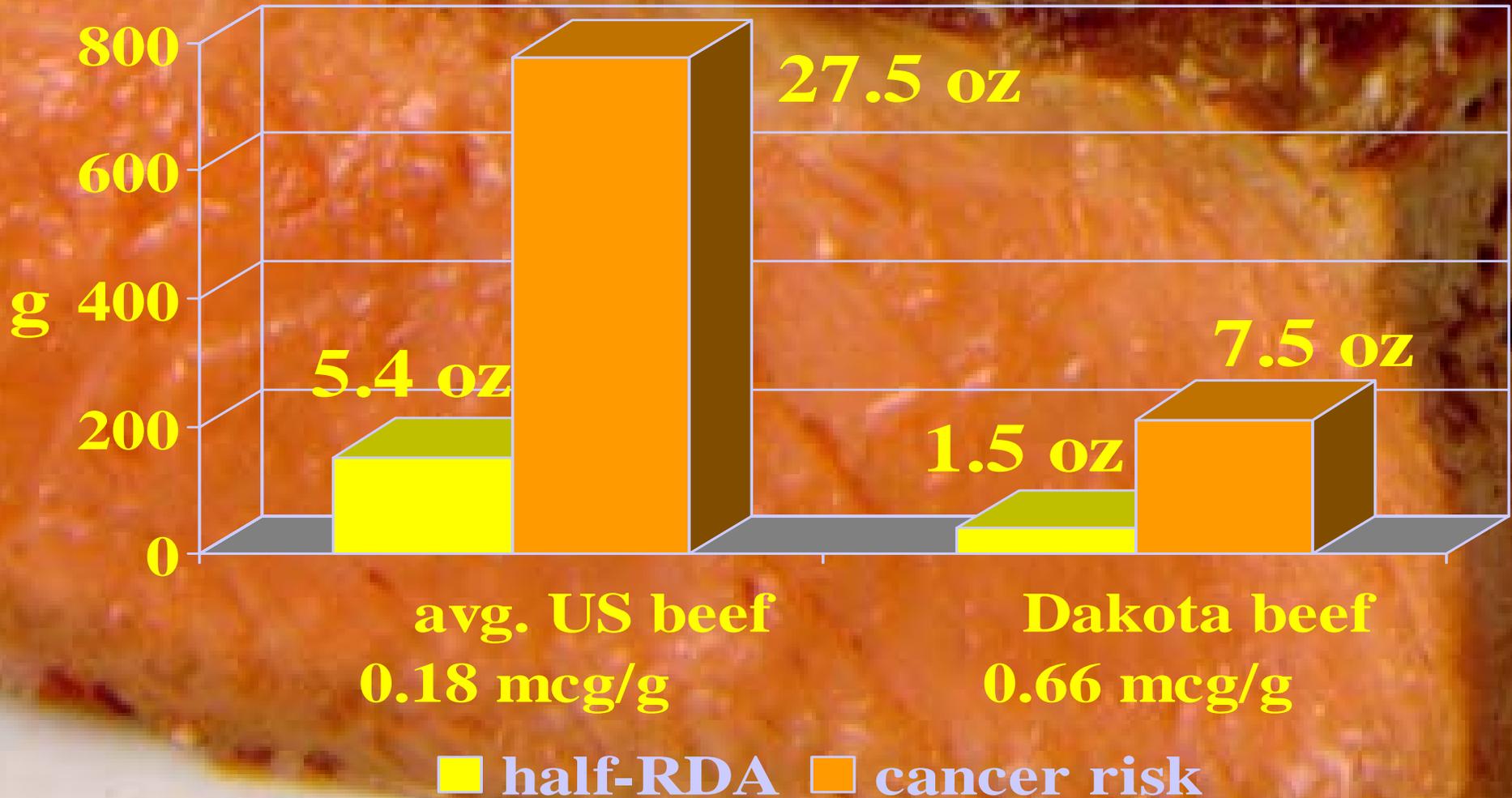
JAMA 257:1957, 1995

North Dakota wheat *a superior source of Selenium*



North Dakota beef

a superior source of Selenium



The Traditional Healthy Mediterranean Diet Pyramid

Daily Beverage Recommendations

6 Glasses of Water



Wine in moderation



© 2000 Oldways Preservation & Exchange Trust

The Traditional Healthy Latin American Diet Pyramid

Daily Beverage Recommendations:

6 Glasses of Water



Alcohol in moderation



© 2000 Oldways Preservation & Exchange Trust

The Traditional Healthy Asian Diet Pyramid

Daily Beverage Recommendations:

6 Glasses of Water



Sake, Wine, or Beer in moderation



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The Traditional Healthy Vegetarian Diet Pyramid

Daily Beverage Recommendations:

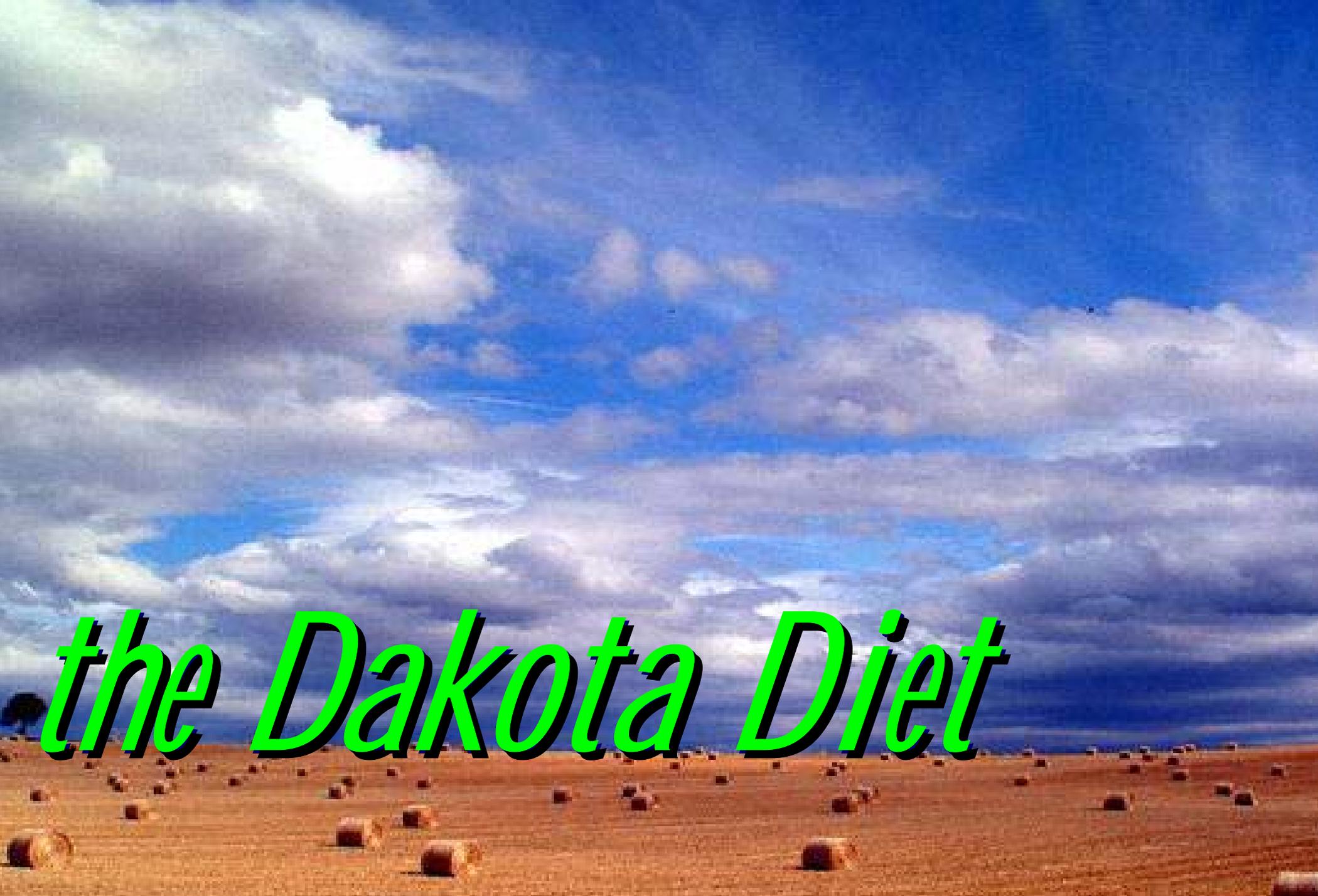
6 Glasses of Water



Alcohol in moderation



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the Dakota Diet

Fats, Oils & Sweets
USE SPARINGLY

KEY

● Fat (naturally occurring and added)

▼ Sugars (added)

These symbols show fats and added sugars in foods.

Milk, Yogurt & Cheese Group
2-3 SERVINGS

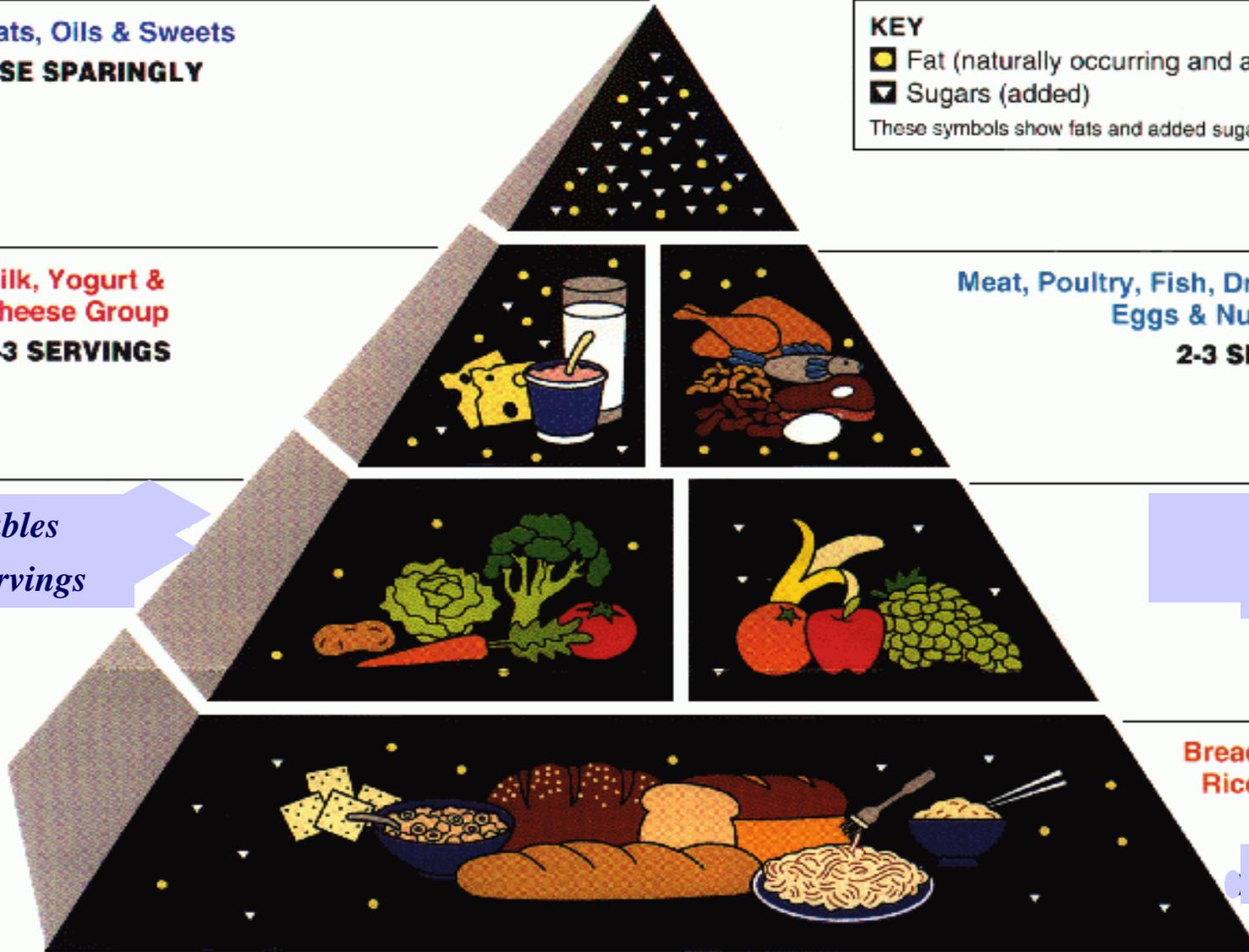
Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group
2-3 SERVINGS

vegetables
3-5 servings

fruits
2-3 servings

Bread, Cereal, Rice & Pasta Group

6-11 servings



a Dakota Diet

*flax canola oils; honey,
beet sugar & oligosaccharides*

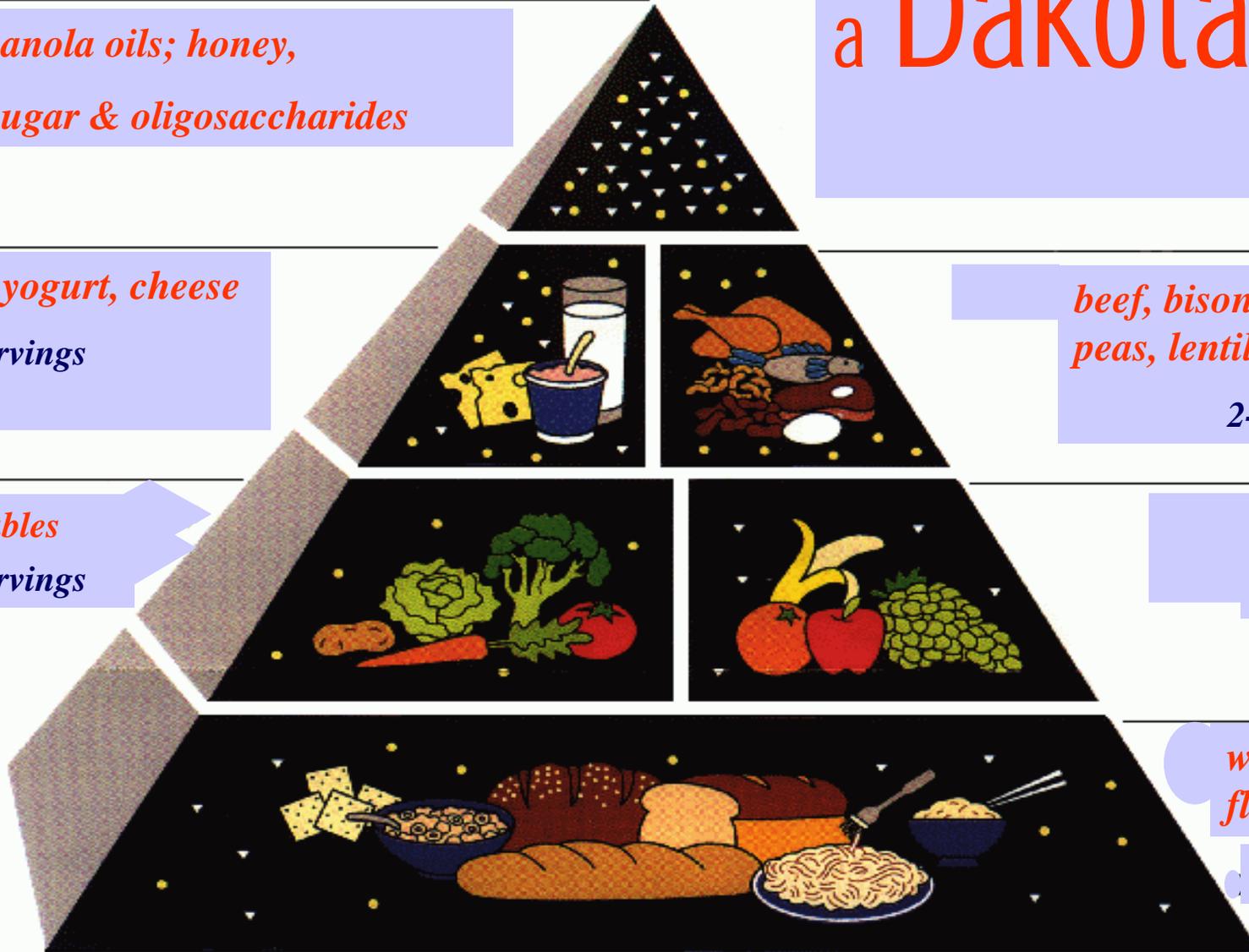
*milk, yogurt, cheese
2-3 servings*

*beef, bison; dry beans,
peas, lentils
2-3 servings*

*vegetables
3-5 servings*

*fruits
2-3 servings*

*wheat, buckwheat,
flax products
6-11 servings*



a Dakota Diet

n-3 fatty acids

flax, canola oils; honey,
beet sugar & oligosaccharides

pre-biotic

milk, yogurt, cheese
2-3 servings
calcium
CLA

iron
beef, bison;
soy, beans, peas, lentils

selenium

isoflavones

2-3 servings

vegetables
3-5 servings

copper

fruits

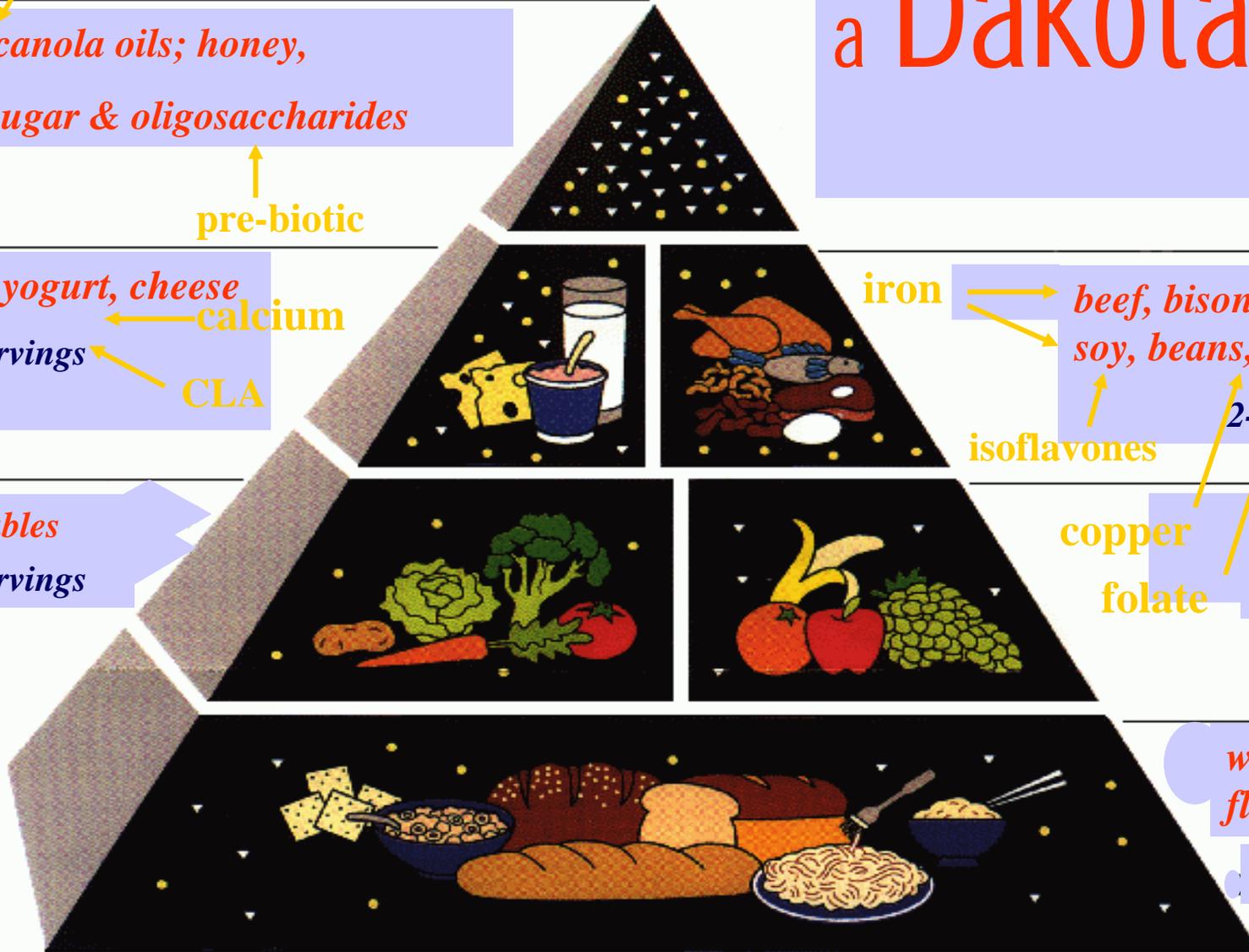
folate

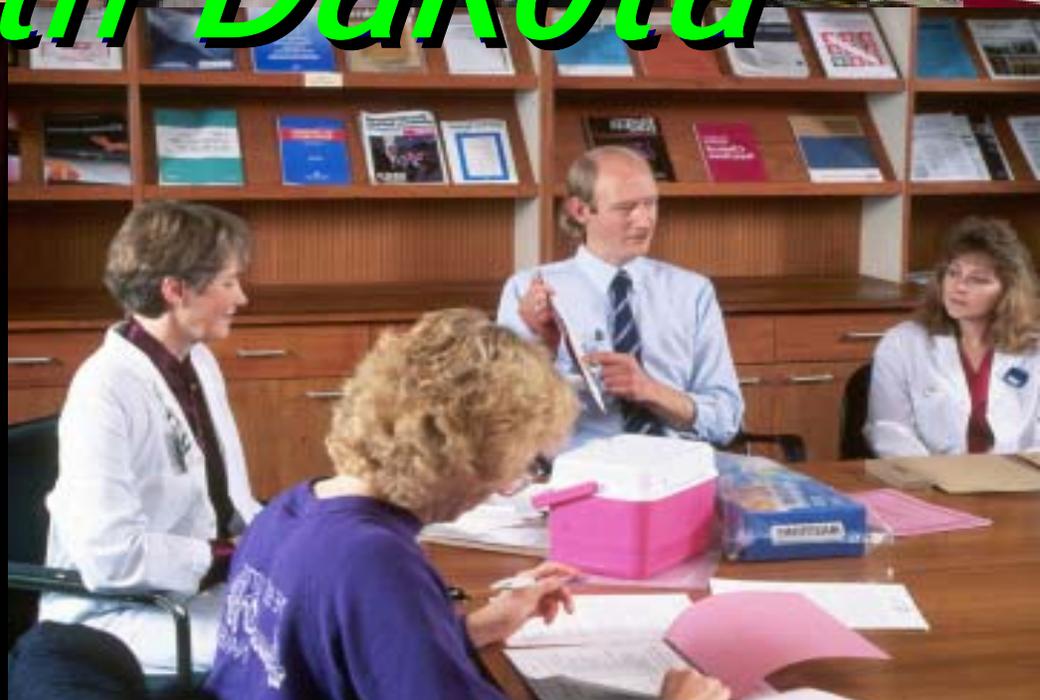
2-3 servings

wheat, buckwheat,
flax products

6-11 servings

fagopyritols





Healthy North Dakota

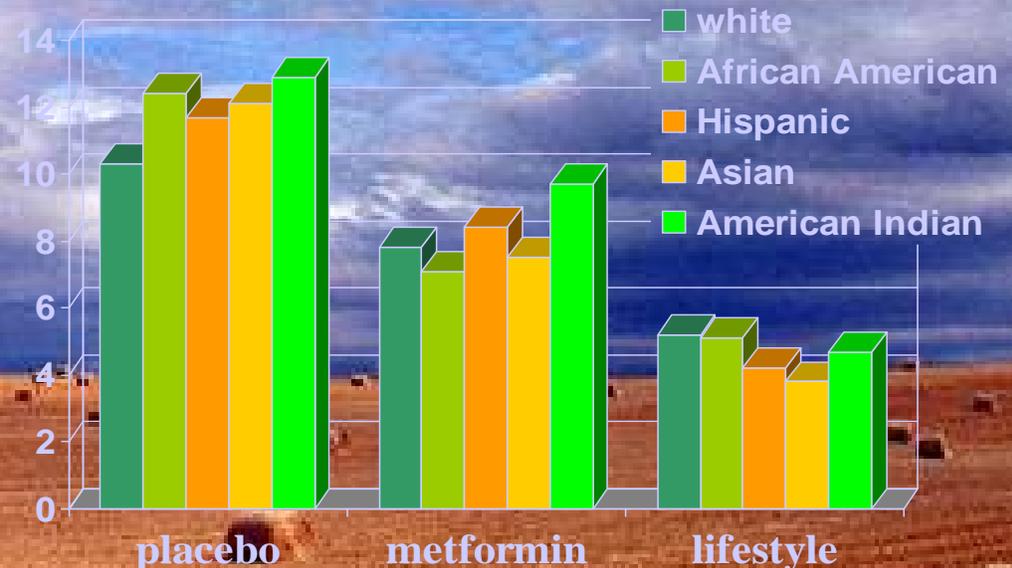
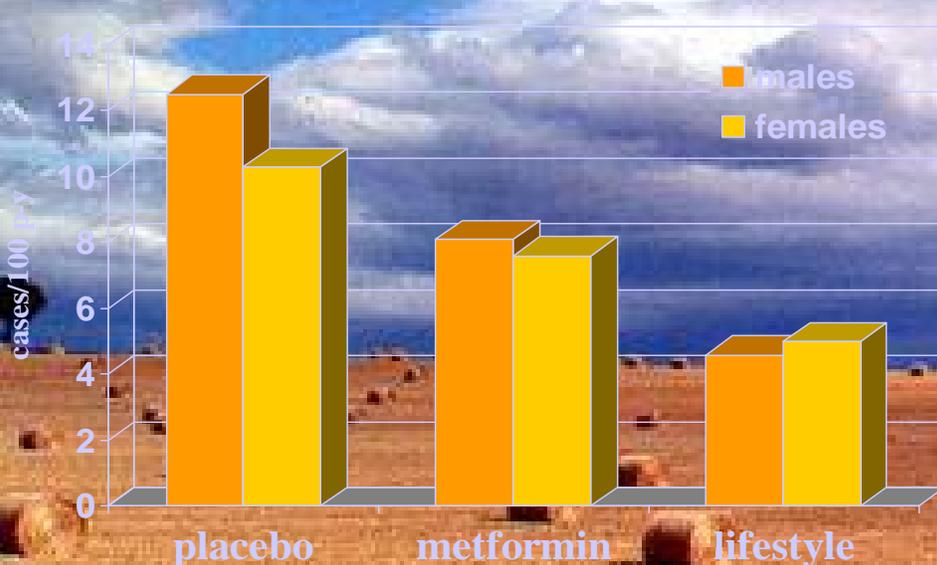
Healthy North Dakota

model: DPPRG program

- Food Guide Pyramid
- 7% reduction in body weight
- moderate intensity physical activity - 150 min/wk

diet and exercise (*lifestyle*) effective in reducing diabetes risk

2.8 yr follow-up (*NEJM* 346:393-403, 2002)



Healthy North Dakota

- valid information
 - what North Dakotans eat
 - how North Dakotans make food/health decisions
 - how North Dakotans access services
 - contents and efficacies of “healthy” foods
- broad community-based programs
 - healthy food choices, physical activity
 - families, schools, communities
 - multi-cultural, multi-age
 - private-public partnerships
- monitoring, surveillance

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Better Health with Good Nutrition



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HEALTHY

North Dakota

Healthy North Dakota Summit



*Healthy People 2010:
Goals for a Healthier U.S.*

Connie Carmack

Centers for Disease Control and Prevention





Meriwether Lewis



William Clark





Sacagawea



HEALTHY
PEOPLE
2010



What is Healthy People 2010?

- A comprehensive set of national health objectives for the decade
- Developed by a collaborative process
- Designed to measure progress over time
- A public health document that is part strategic plan, part textbook on public health priorities



Healthy People – Entering its Third Decade

1979 - *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*

1980 - *Promoting Health/Preventing Disease: Objectives for the Nation*

1990 - *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*

2000 - *Healthy People 2010*



Healthy People 2010 Key Elements

- Goals
- Objectives
- Determinants of Health
- Health status



Healthy People 2010 Goals

- Help individuals of all ages increase life expectancy and improve quality of life.
- Eliminate health disparities among segments of the population.



Healthy People 2010 Objectives

467 objectives in 28 focus areas (chapters)

1. Access to Quality Health Services
2. Arthritis, Osteoporosis, and Chronic Back Conditions
3. Cancer
4. Chronic Kidney Disease



Healthy People 2010 Objectives

467 objectives in 28 focus areas (chapters)

5. Diabetes
6. Disability and Secondary Conditions
7. Educational and Community-Based Programs
8. Environmental Health
9. Family Planning



Healthy People 2010 Objectives

467 objectives in 28 focus areas (chapters)

10. Food Safety

11. Health Communication

12. Heart Disease and Stroke

13. HIV

14. Immunization and Infectious Diseases

15. Injury and Violence Prevention



Healthy People 2010 Objectives

467 objectives in 28 focus areas (chapters)

16. Maternal, Infant, and Child Health

17. Medical Product Safety

18. Mental Health and Mental Disorders

19. Nutrition and Overweight

20. Occupational Safety and Health

21. Oral Health



Healthy People 2010 Objectives

467 objectives in 28 focus areas (chapters)

22. Physical Activity and Fitness

23. Public Health Infrastructure

24. Respiratory Diseases

25. Sexually Transmitted Diseases

26. Substance Abuse

27. Tobacco Use

28. Vision and Hearing



Example Objectives

- **27-10.** Reduce the proportion of nonsmokers exposed to environmental tobacco smoke. (Baseline 65%, 2010 target 45%)
 - This is a measure for a Leading Health Indicator
- **1-5.** Increase the proportion of persons with a usual primary care provider. (Baseline 77%, 2010 target 85%)



Healthy People 2010 Determinants of Health

- **Biology**
- **Behaviors**
- **Social Environment**
- **Physical Environment**
- **Policies and Interventions**
- **Access to Quality Health Care**



Leading Health Indicators

Measures of Health Status

1. Physical activity
2. Overweight and obesity
3. Tobacco use
4. Substance abuse
5. Responsible sexual behavior
6. Mental health
7. Injury and violence
8. Environmental quality
9. Immunization
10. Access to health care



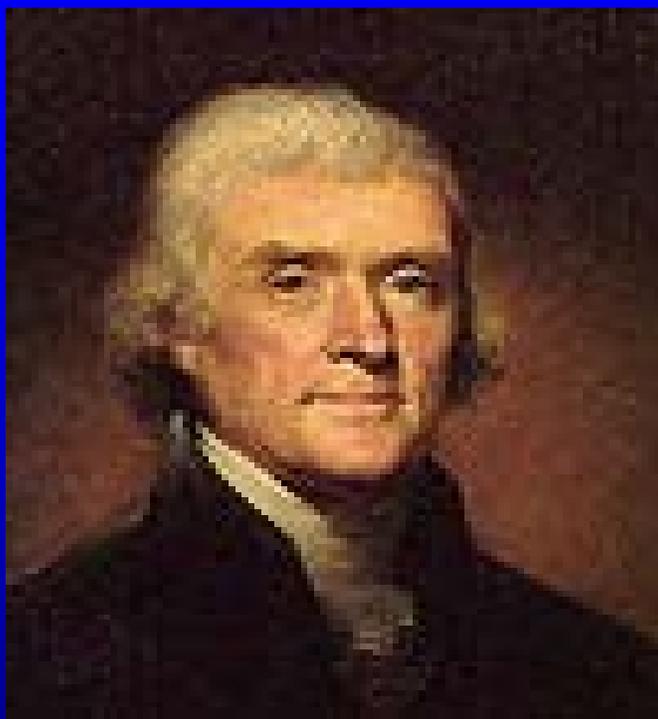


“Never doubt that a group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.”

Margaret Mead







“I Salute You . . .



For More Information

<http://www.health.gov/healthypeople/>



**National Center for
Chronic Disease
Prevention and Health
Promotion**



BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit



Health and Wellness Initiative

Dennis Renville

United Tribes Technical College

United Tribes Technical College

Health and Wellness Initiative

What is the UTTC Health and Wellness Initiative?

- It is an initiative to integrate health and wellness values.
- Data collection.
- Provide wellness activities.
- To set goals and objectives.
- Follow-up in a systematic way into the everyday life of the UTTC community.

Why did President Gipp decide to create a wellness initiative?

- Research has proven that healthy lifestyles contribute to improved performance and greater productivity.
- Has a major impact on reducing absenteeism and retention rates for students and the workforce.

How did it get started?

- In 2001, UTTC President David M. Gipp, challenged the staff to build on the successes of a number of individual health and wellness programs on campus, which were operating as a “wellness circle.”

Who gets to participate?

- All UTTC students and staff, including preschool and elementary

When does it start?

- With the beginning of the Fall 2002 UTTC school term

Goal

- To improve and sustain the health and wellness of the UTTC campus community

Mission

- The mission of the UTTC President's Health Promotion Disease Prevention Initiative is to educate, motivate and empower students and staff to make healthier choices that will reduce health risks by nurturing the spiritual, mental, emotional and physical wellness of the UTTC community.

Vision

- To employ the use of scientific methods in organization, data collection, goal setting, tracking, and to follow-up
- To strive for maximum participation by making events and activities enjoyable and rewarding
- To ground this effort in American Indian cultural and spiritual values
- To aim for results that contribute to students and staff success

How does UTTC establish a measurable baseline?

- Admissions require new students to get a physical
- Health risk appraisals have been developed for students, staff, and faculty which are institutionally and culturally relevant

Action Goals

- Develop and administer a specific survey form for the UTTC population
- Construct a general health data base
- Set health and wellness goals and objectives
- Build on current health and wellness projects and programs

More Action Goals

- Develop a centralized scheduling system for wellness activities
- Improve information distribution about health and wellness activities
- Enhance the health and wellness rewards and recognition system
- Plan for follow up tracking
- Update and revise the plan

Activities

- Annual health and wellness fair
- Stress management instruction
- Campus garden
- Nutritional consultants with the college's two full-time licensed dietitians
- Physical fitness planning
- Smoking awareness and cessation classes
- Size acceptance workshops

More Activities

- “Strong in Body” diabetes curriculum and classes
- Diabetes and Mother Earth Curriculum
- Native American personal finance instruction
- Nutrition education for youngsters
- “Buffalo and Wellness,” a resource guide for CHRs
- Walking club
- An array of regularly scheduled entertainment events and activities

Commitment

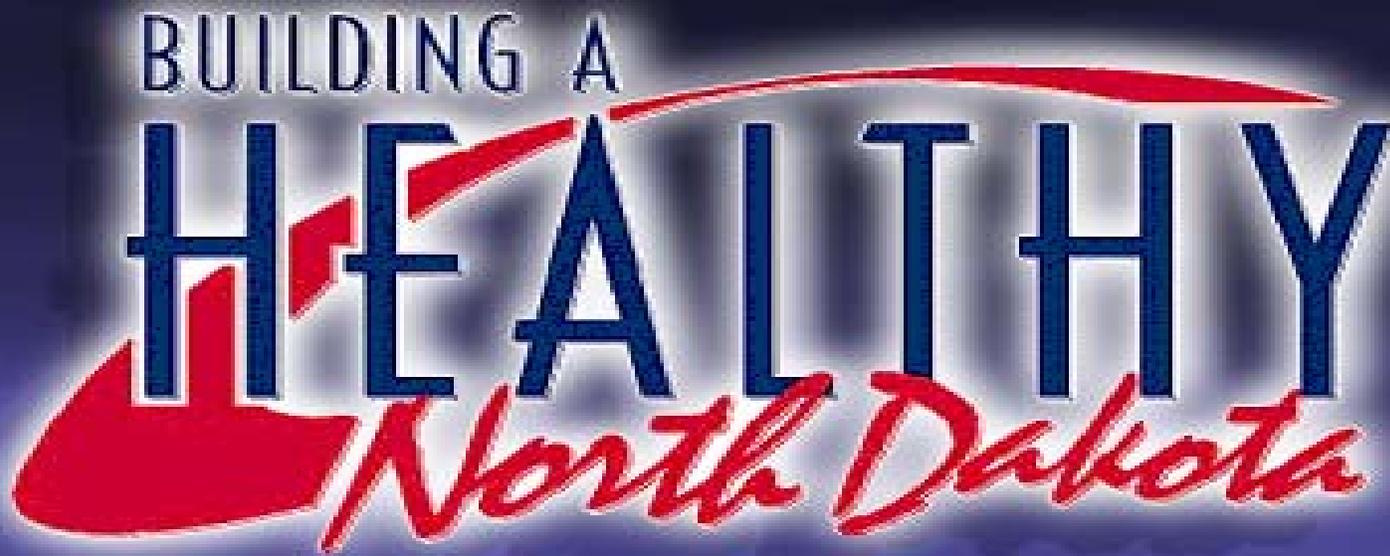
- An expectation that participants will make choices to live a healthy lifestyle
- Participate in the collection of baseline data by filling out a survey
- Make a wellness pledge with yourself
- Participate in health and wellness activities
- Participate in creating new activities
- Add your activities to the UTTC events calendar

Summary

- Comprehensive effort includes all students and staff
- Initiated internally at UTTC
- Addresses needs of American Indian students and families and the people who serve them
- Based on national health model and native wellness concepts

Summary

- Builds on the the success of current UTTC health and wellness programs
- Uses the professional expertise, practical experience and personal commitment of the UTTC staff



Healthy North Dakota Summit



*Healthy People 2005:
Better Health ... Better Future!*

*Dr. Fikry Isaac
Johnson & Johnson*

HEALTHY PEOPLE 2005

Better Health.....

Better Future!!!

Fikry W. Isaac, MD, MPH
Director, Health & Wellness



Johnson & Johnson

- World's leading health care products corporation –
2001 sales of \$33 billion
 - 190 operating companies in 51 countries selling products in more than 175 countries
- 101,000 employees worldwide
- Investments in Research & Development reached \$3.6 billion in 2001
- Headquartered in New Brunswick, New Jersey

Johnson & Johnson

OUR CREDO

"We believe our first responsibility is to the doctors, nurses and patients, to mothers and fathers and all others who use our products and services. In meeting their needs, everything we do must be of high

We are responsible to our employees, the men and women who work with us throughout the world.

opportunity for employment, development and advancement for those qualified. We must provide competent management, and their actions must be just and ethical.

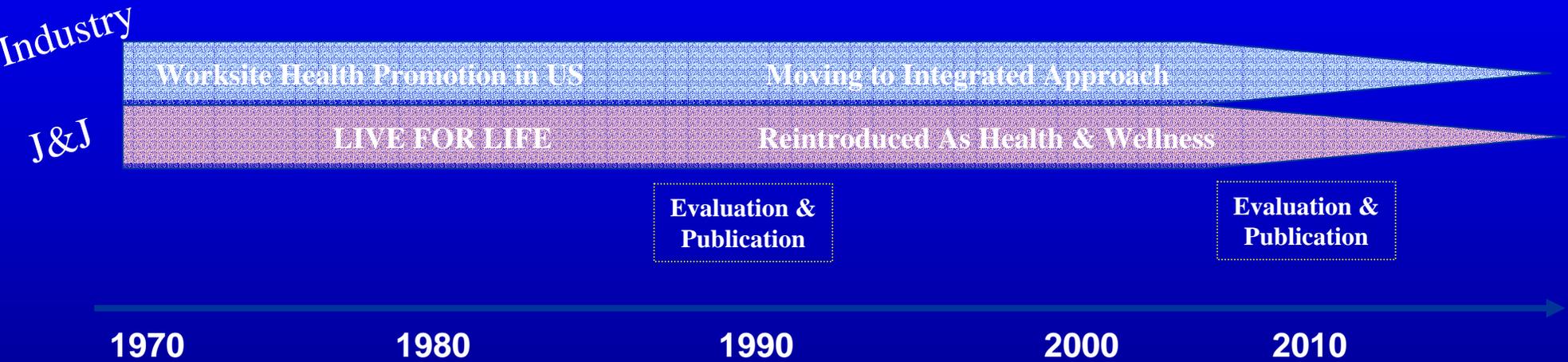
working conditions [must be] clean, orderly and safe.

Health & Wellness

Our History

- Johnson & Johnson's LIVE FOR LIFE® Program began in 1978
- **LIVE FOR LIFE Mission:** To encourage employees to accept responsibility for their own health and well-being by providing them and their families with resources and opportunities that would result in healthier lifestyles.
- The program was reorganized in 1995 to integrate functional areas EAP, Occupational Health, Wellness and Fitness, and Disability Management into a shared service called ***Health & Wellness (H&W)***

Program Evolution



Putting the Pieces Together



Health & Wellness

Vision

To optimize the health, well-being and productivity of Johnson & Johnson employees

Mission

We will deliver leading edge, best-value health and wellness services that achieve excellence in customer satisfaction and promote prevention, education and self-responsibility

Strategic Objectives

- Optimize the J&J employee health, wellness and productivity
- Develop innovative programs and services that reduce/eliminate risks for J&J and their employees
- Maximize business partnership opportunities
- Create competitive advantage for J&J

Health & Wellness

Key Features

- **Integrated service delivery**
- Focus on prevention and education
- Health Benefits linkage
- Targeted health interventions
- Cost-effective delivery

Service Delivery through *Integrated Site Teams*

- Occupational Health
- Employee Assistance (EAP)
- Wellness
- Disability Management
- Work/Life
- TotalHealth

Key Services/Programs

Ergonomics
Program

Employee Assistance

Fitness Centers

Medical Case
Management

Preventive
Screening

**Healthy People
2005**

JobFit®

Health Profile

International
Travel Services

Emergency
Treatments

AED
Program

Preplacement
Assessments

Medication
Vending Machine

Wellness

NurseLine

Achieving Optimal
Performance

Compliance
(Radar-OSHA)

Medical Surveillance

Return-to Wellness

LifeWorks

Promoting a Healthy Workforce = Good Business

- Higher use of the medical system
- More unscheduled absences and sick days
- Greater overtime costs to cover for sick days, absences
- Greater recruiting and training costs to replace employees
- More work-related injuries/illness
- Low morale by employees who have to “cover” for sick/absent employee
- High stress levels that can cause variability, mistakes, rework, project delays, etc.

Bottom Line: A healthy workforce yields productivity gains

Health Risk Assessment (HRA)

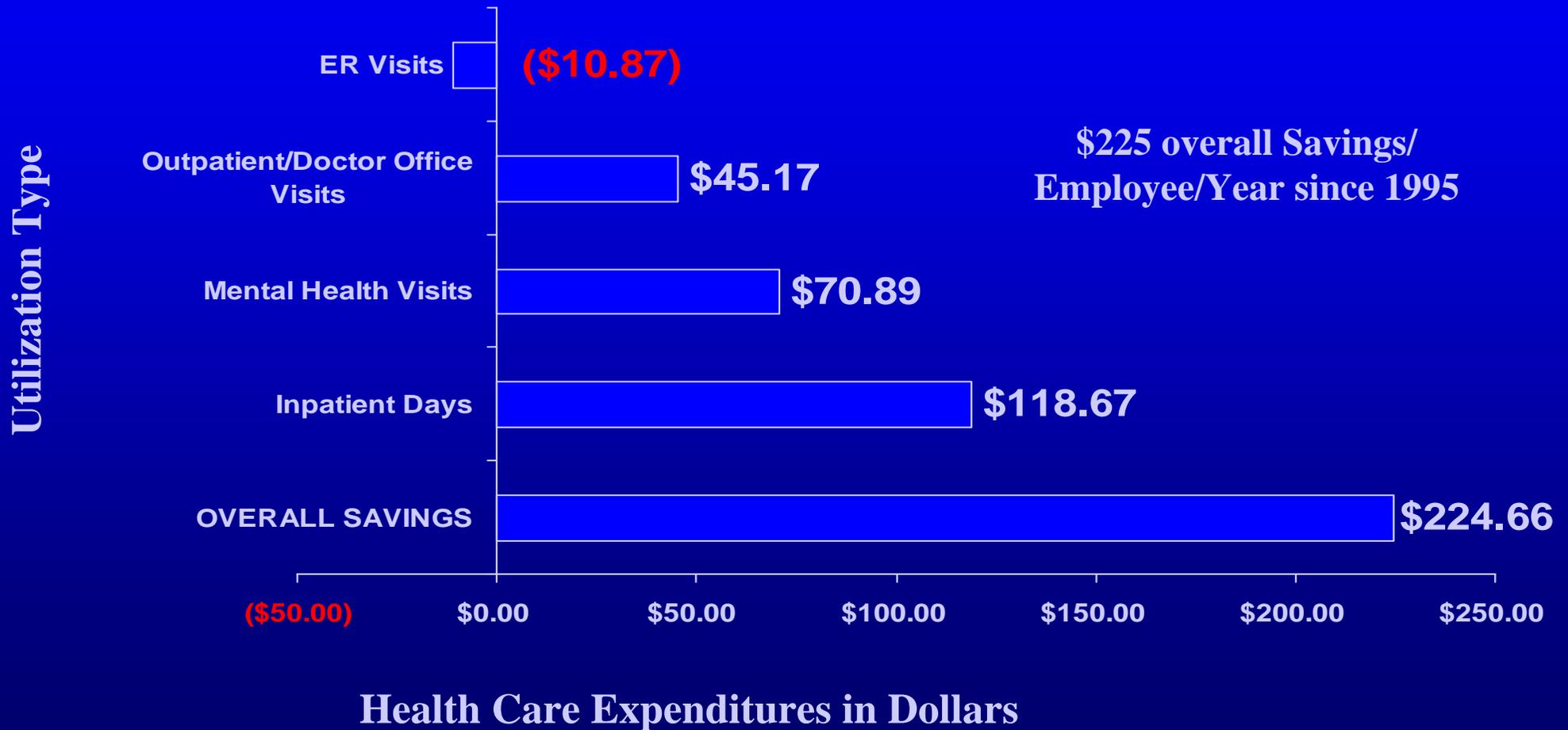
- Delivered comprehensive Health Risk Assessment with all eligible domestic employees
 - Includes professionally collected biometrics
 - Confidentiality is key
 - Participating employees receive \$500 discount on benefit plan
- 26,000 employees participated in the HRA with 91% average participation
- 98% of employees “Agree” or “Strongly Agree” that the HRA as worthwhile

New Online Health Profile

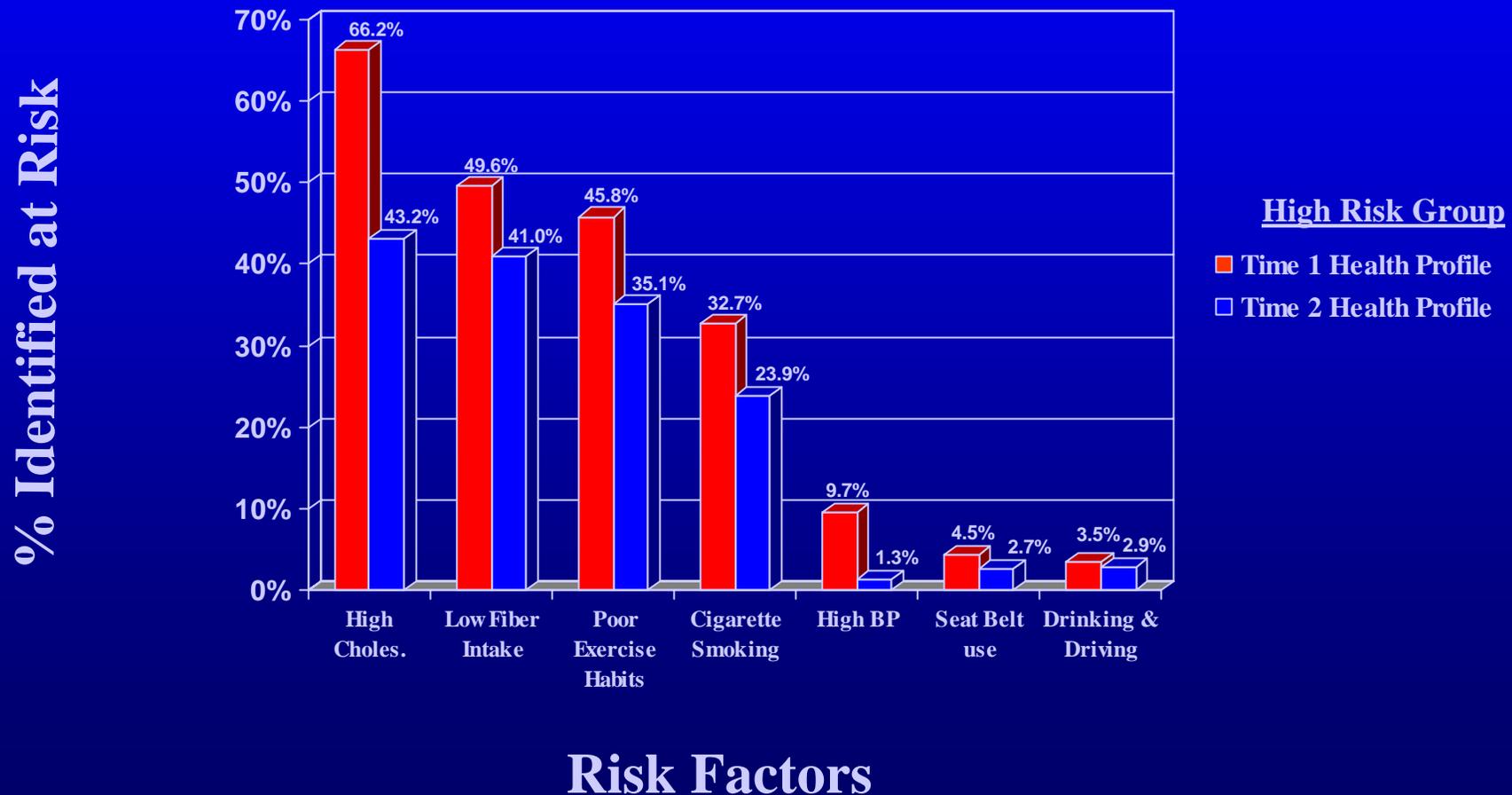
- Profile employees every two years
- Immediate feedback and lifestyle resources
 - online Action Planning Guides
 - referral to HealthLine nurses for lifestyle counseling
- Automated Benefits Linkage System to the \$500 Benefit Incentive



Health & Wellness Impact on Medical Cost and Employee Health



Health & Wellness Impact on Medical Cost and Employee Health



Health & Wellness Impact on Medical Cost and Employee Health

- Overall, H&W resulted in savings of about \$8.5 million per year for the company
- Savings came from reduced medical care use (\$3.4 million) and lower administrative costs (\$5.2 million).
- Risks decreased over time in several categories: high cholesterol, high blood pressure, low fiber intake, cigarette use, sedentary habits, seat belt use, drinking/driving
- High Intervention program saved an estimated \$390 per participant per year compared to non-participants. Total savings to company = \$890,000 per year

First Things First.....

the health & wellness of our workforce

The premise of Healthy People 2005 is that the health of the individual is inseparable from the overall health of the corporation.

Johnson & Johnson Leadership – Their Role in Healthy People 2005

- Communicate the HP 2005 Message
- Establish HP 2005 as Business Priority
- Support the HP 2005 Effort
- Reinforce our Credo and Values
- Make a Personal Commitment

Healthy People 2005 Progress

Health Indicators	HHS Healthy People 2010		Johnson & Johnson Healthy People 2005	
	BASELINE	TARGET	BASELINE*	TARGET
Smoking	24%	12%	12%	9%
High Blood Pressure	28%	16%	14%	10%
High Cholesterol	21%	17%	19%	15%
Inactivity	40%	20%	39%	25%

Health Profile tool monitors progress, assesses risk, informs and provide resources to enable employees to make lifestyle changes

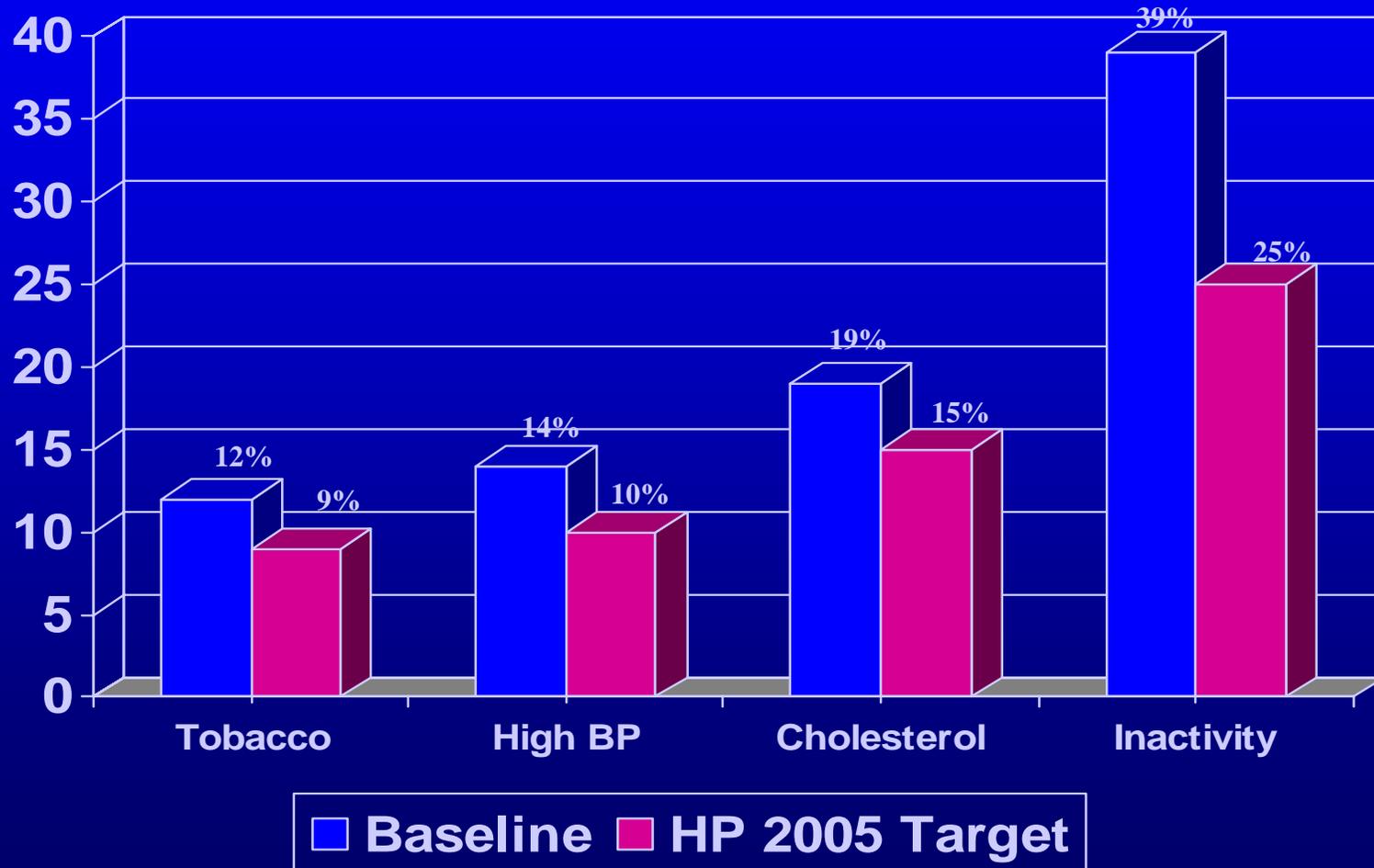


Preliminary Results to Date

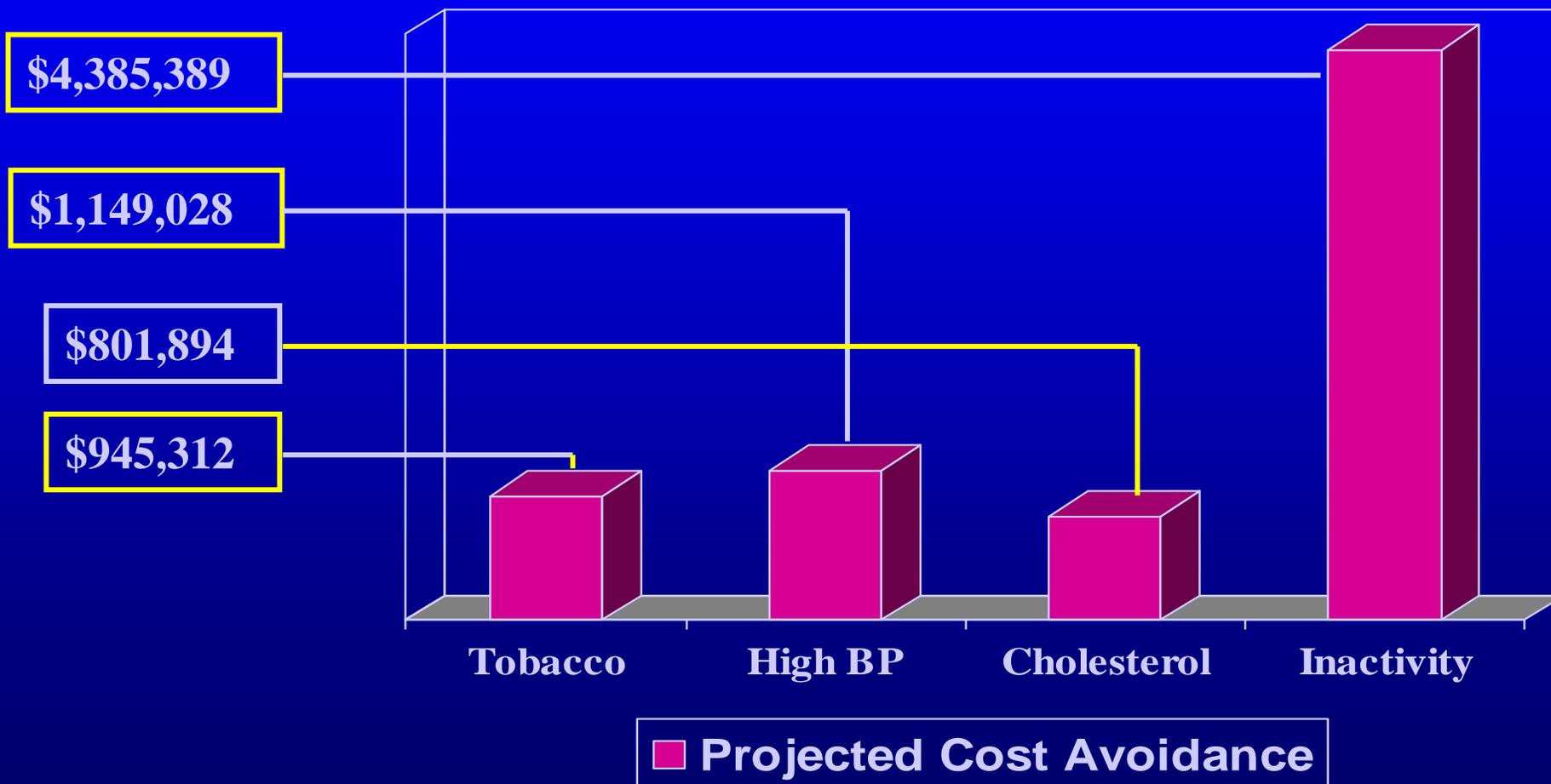
Health Indicators	Healthy People 2005		Completed Profiles @ April 30
	BASELINE	TARGET	
Smoking	12%	9%	6%
High Blood Pressure	14%	10%	16%
High Cholesterol	19%	15%	11%
Inactivity	39%	25%	34%

Key Health Indicators

Healthy People 2005 Targets

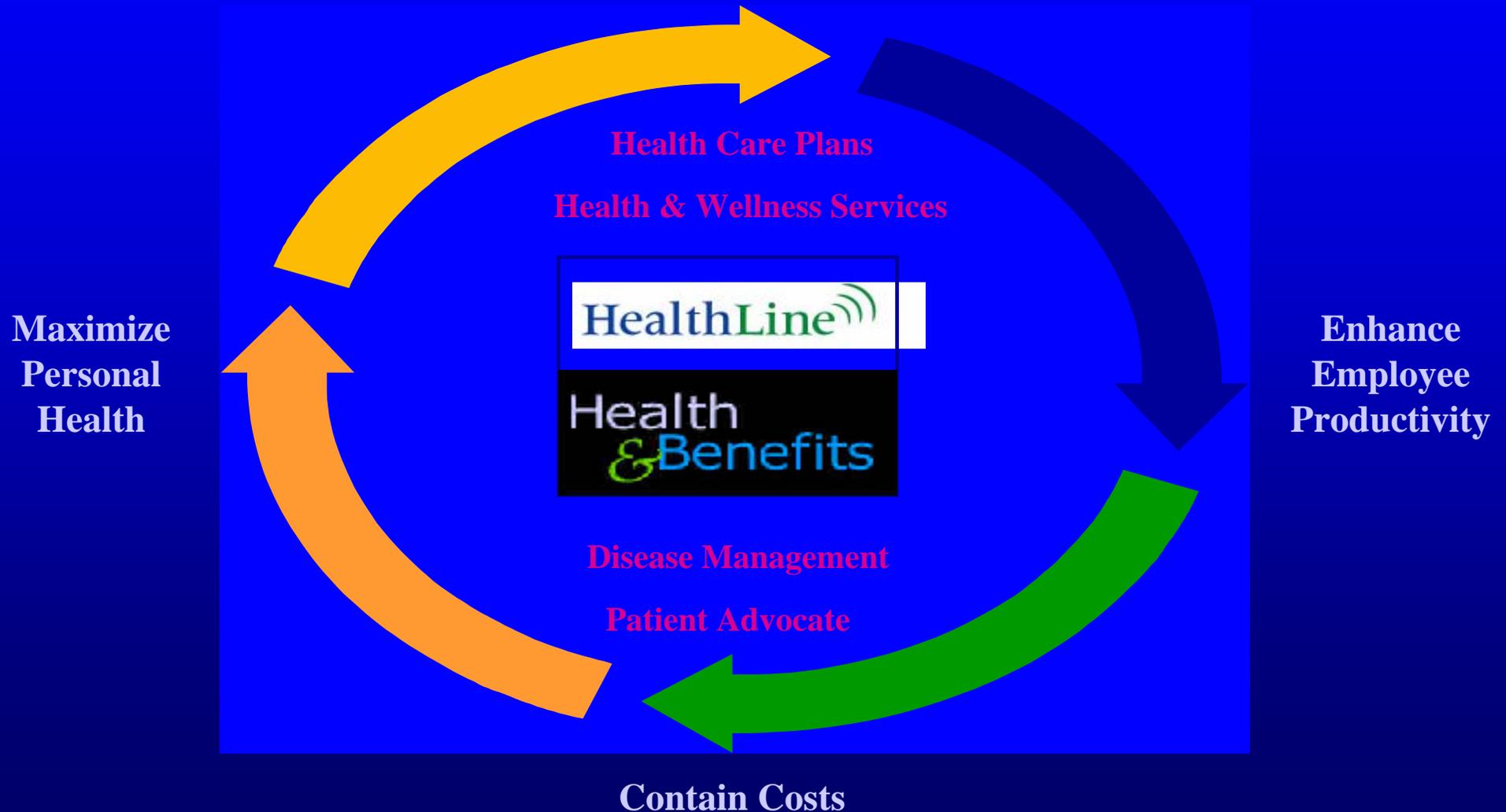


Healthy People 2005 Projected Cost Avoidance



Total Health Management the bigger picture

Optimize Health & Well-Being of Employees & Their Families



BUILDING A

HEALTHY

North Dakota

Healthy North Dakota Summit



*The Role of the Third Party Payer
in Health Promotion*

Dr. Jon Rice

Blue Cross Blue Shield

Role of the Third Party Payer in Health Promotion

Jon R. Rice, M.D.

BCBSND

August 23, 2002

Agenda

- What BCBSND is doing
- What others are doing
- The role of individual responsibility
- Potential resources

What BCBSND is doing

- Member Communications
 - SmartMoves and Wisemoves
 - www.BCBSND.com
- Paid Media
 - Knowledge is power
 - Your choices make a difference
- Member Education
- Contributions and Sponsorship
- Programs and Services

SmartMoves and WiseMoves

BlueCross BlueShield of North Dakota

smartmoves

SEMI-ANNUAL

FOR A HEALTHIER YOU

QUALITY CARE

The Power of Information

The many choices about your health, the more control you have in the health care process, and, usually, the cost of medical care, information is one of our most powerful tools to see it comes to finding solutions, your choices keep you in the driver's seat.

Daily decisions about your health are a lot more than just what to eat, how to exercise, or how to manage your stress. Financial ramifications that impact you, your family, and your overall BCBSD member. That's why it's so important for you to make informed decisions to actively participate in your own care.

Here are some ways to get to find the information you need, so that you need it.

- Call us on our web site, www.BCBSD.com.
- Call us at 1-800-362-2776.
- Visit a BCBSD office near you.
- See pages 4 and 5 of this issue to learn more about ways that health care professionals in spine.



The Mammography Question

The lifesaving effects of this procedure have been strongly reconfirmed.

In fall of 2002, a question was asked that made a lot of people nervous: "What if a Danish study published in *The Lancet*, a prestigious British medical journal, asked whether mammograms really reduced the number of deaths from breast cancer?"

The researchers had taken a hard look at the mammograms of the last 50 years that supported the practice of mammography. The researchers noted that there was no real proof. Public confidence was shaken. So much effort had gone in to putting women to the advantage of the delicate organ: breast cancer. Recog-

nizing the importance of the question, medical experts would not let such a matter sit unexamined. Extensive research was conducted around the world, and by late winter of 2003, the findings started being released.

YES TO MAMMOGRAMS

Just weeks after the controversy erupted, a group of the nation's leading medical organizations including the American Medical Association and the American Cancer Society took a stand. They published a 12-page press conference in leading newspapers. "The breast cancer detection rates a greater chance for a successful

treatment a greater speed of treatment options," they wrote. ■ The National Cancer Institute issued a statement saying that it was worthwhile to look re-examined the rates of mammograms. But, until the evidence got all clear, they still recommended regular mammography screening for women age 40 and older.

■ The U.S. Preventive Services Task Force had been studying mammography for almost two years when the controversy erupted. In mid-February their findings were made for publication. Tommy Thompson, secretary of the U.S. Department of Health and Human Services, delivered the "final word" on the subject. As far as the federal government was concerned, he said, "If you are 40 or older, get screened for breast cancer with mammography every one to two years. . . . The early detection of breast cancer can save lives."

Thompson quoted his wife, Susie Ann, a breast cancer survivor who benefited from the early detection of mammography. She said, "This information leads to knowledge, knowledge leads to power. . . and that power leads to the ability to make informed choices and decisions."

In effect, the government position regarding the value of mammography by screening women between 40 and 50 at the recommendation of Thompson, a spokesman for the World Health Organization, reported that for women aged 50 to 69, "If you have screened regularly then the risk of dying from breast cancer goes down by 35 percent. That's the chance we can take in women."

- INSIDE**
- 2 | HealthLines
 - 4 | Where Does Your Health Care Premium Cost? A
 - 6 | PortionPatrol
 - 7 | Smart Consumer
 - 8 | Saving in Calories

BlueCross BlueShield of North Dakota

wise moves

SEMI-ANNUAL

FOR A HEALTHIER YOU

POWER OF INFORMATION

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The Mammography Question

The lifesaving effects of this procedure have been strongly reconfirmed.

In fall of 2002, some Danish scientists asked a question that made millions of women very nervous. The researchers had taken a hard look at the major studies that supported the practice of mammography.

The researchers noted that there was no real proof that mammograms saved lives.

Public confidence was shaken and medical

experts around the world quickly moved to double-check the data. By late winter of 2003, the findings started being released, and women were breathing a little easier.

Just weeks after the controversy erupted, a group of the nation's leading medical organizations (including the American Medical Association and the American Cancer Society) took a new step. They published full-page

position statements in leading newspapers. "Early breast cancer detection means a greater chance for successful treatment and a greater range of treatment options," they wrote.

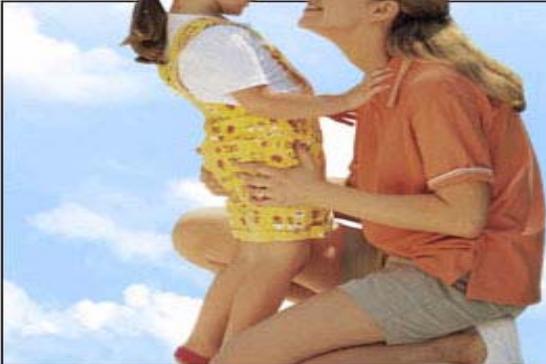
THE FINAL WORD

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www.BCBSND.com



**BlueCross BlueShield
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2001 Rural Health Grant Recipients
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For Providers		Find a Doctor	
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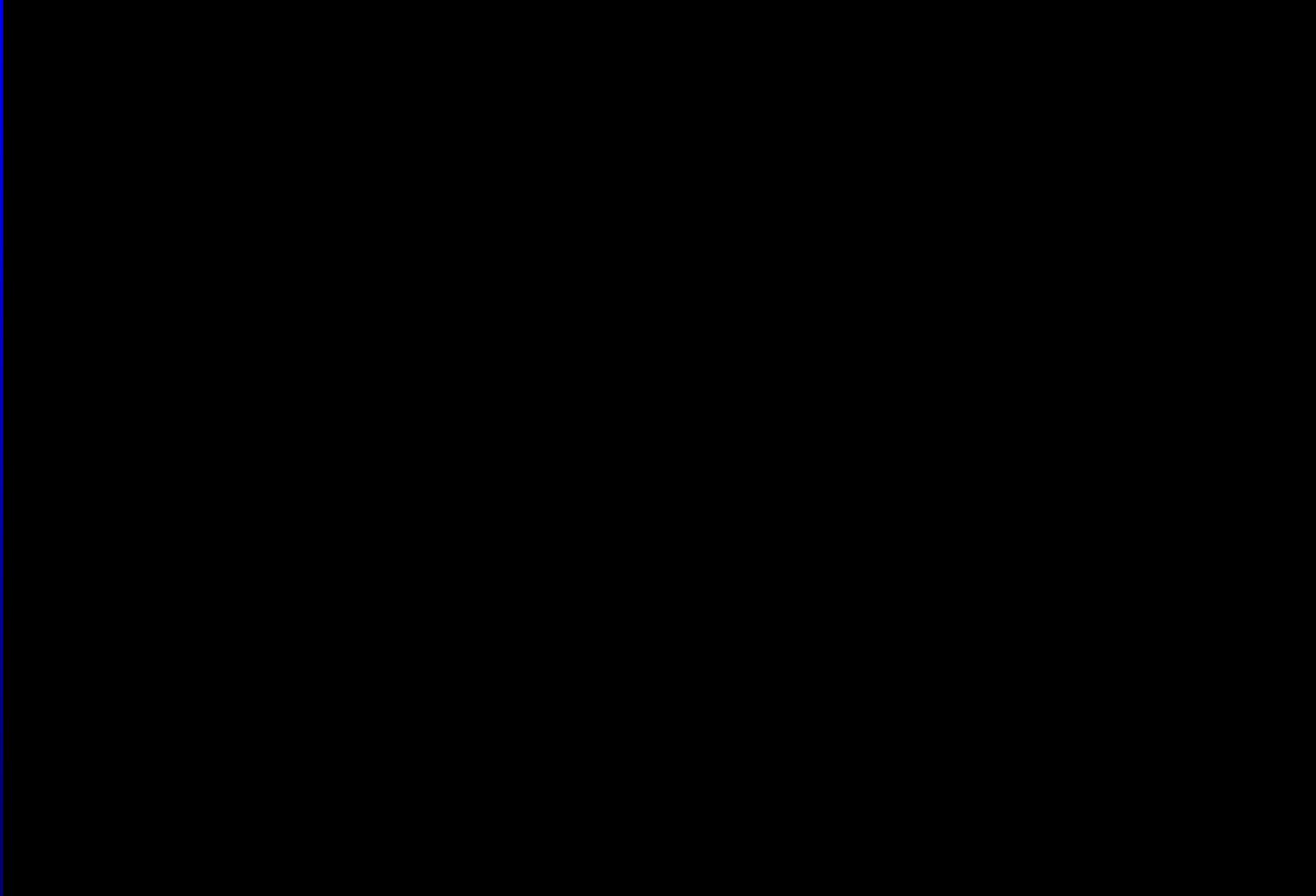
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Phone 800-342-4718, E-mail [Questions and Comments](#)
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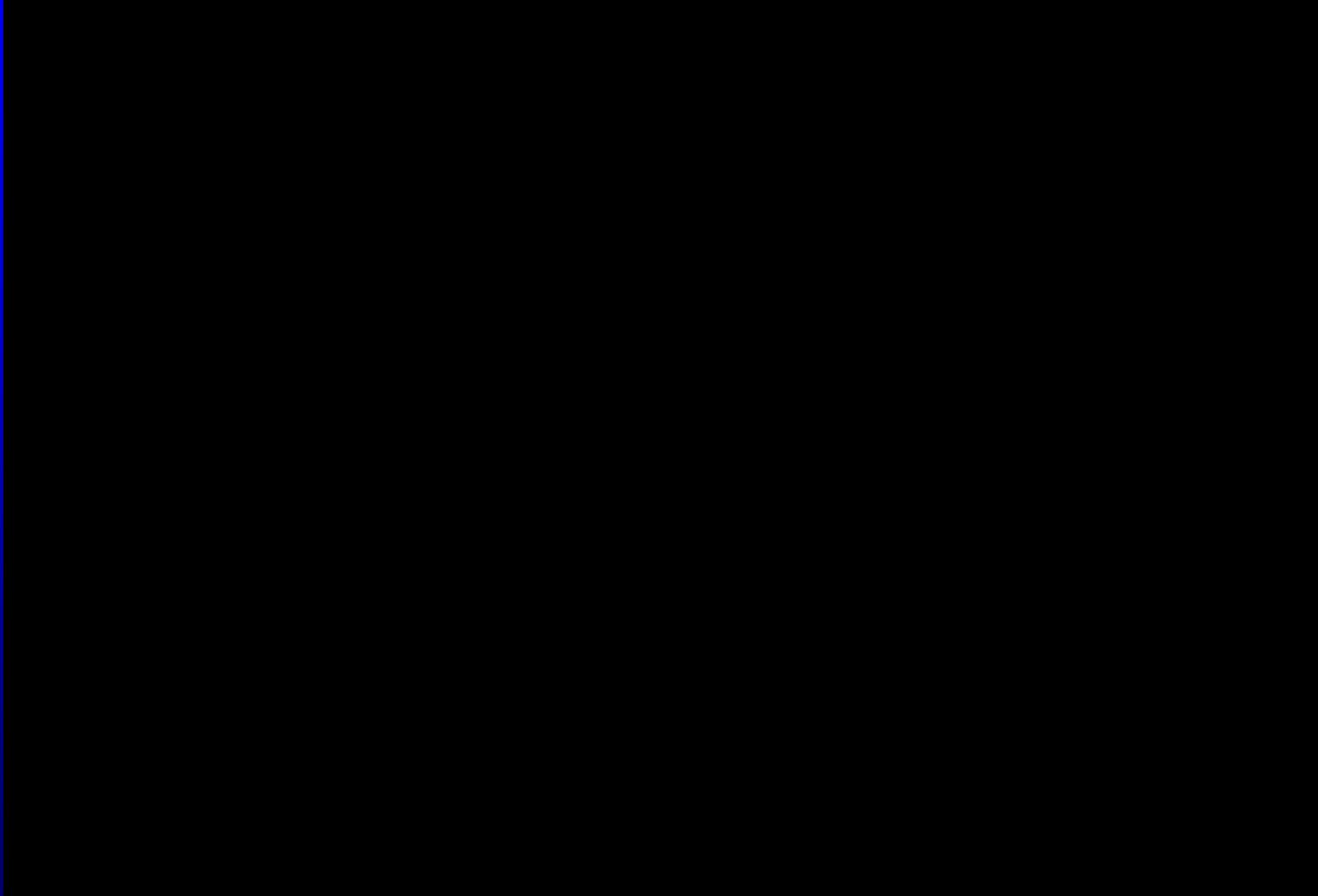
Advertising Campaign

- Knowledge is power.
- Your choices make a difference.

Bicycle Helmet vs. Brain Injury



Tennis Shoes vs. Heart Surgery



Member Education

- Patients, Provider, Payers – each play a role.
- Health care cost drivers in North Dakota.
- Personal responsibility for health and wellness.
- Tools and ideas for becoming more involved when receiving services and staying well.

Member Education

- Three member ed reps
- Since January 2000
 - 768 presentations
 - 27,054 members
 - Over 30,000 books distributed

Know when to seek care!

FIFTH • EDITION

Taking Care of Your Child



More Than 1,300,000 Copies Sold

Easy-to-Use Decision Charts Quickly Show

- How to Help Your Child at Home
- When to See a Doctor

A Parent's Illustrated Guide to Complete Medical Care

Robert H. Pantell, M.D.
James F. Fries, M.D. • Donald M. Vickery, M.D.

COMPLETELY REVISED AND UPDATED SEVENTH EDITION

Take Care of Yourself



Blue Cross Blue Shield of North Dakota
NODURAN

"Every family should have this book."
Journal of Internal Medicine

THE MOST COMPLETE ILLUSTRATED GUIDE TO MEDICAL SELF-CARE
COVERS AT-HOME TREATMENTS FOR OVER 175 HEALTH PROBLEMS
AND WHEN TO SEE A DOCTOR

Donald M. Vickery, M.D. James F. Fries, M.D.

THIRD EDITION

Living Well



More Than 400,000 Copies Sold

Easy-to-Use Decision Charts Quickly Show

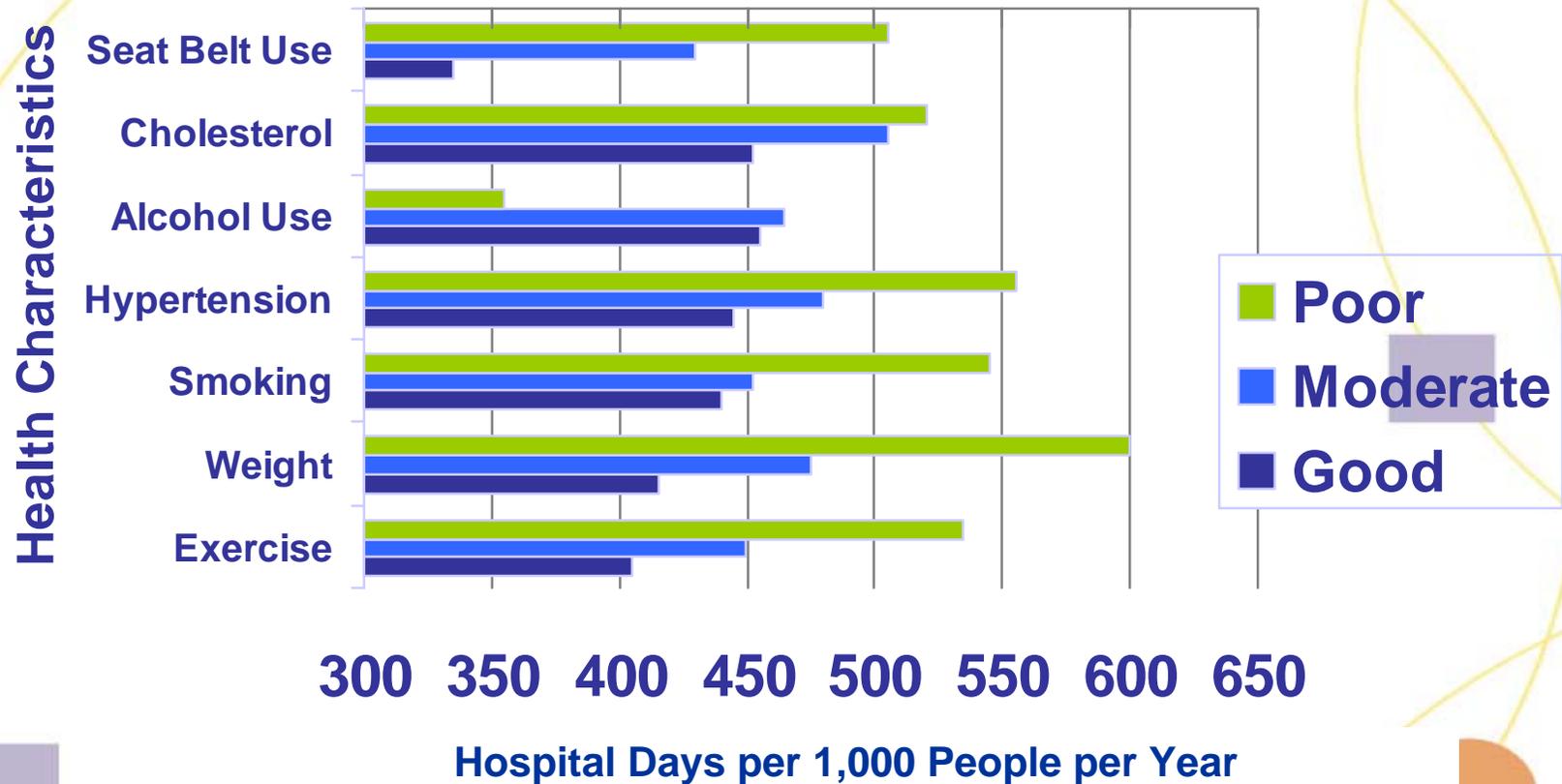
- How to Treat Problems Yourself
- When to See a Doctor

Making Care of Your Health in the Middle and Later Years

James F. Fries, M.D.

Bad habits cost money.

Hospital Inpatient Days



Contributions and Sponsorships

- Public Health & Rural Health Conferences
- Rural Grant Program
- Women's Health Conference
- The Forum's Senior Options
- Advanced Care Planning Resource Guide for North Dakotans

Programs and Services

- Prenatal Plus
- Diabetes Education
- Case Benefits Management
- Employee Assistance Program

What do some other Plans do?

- Wellmark – Iowa and South Dakota
 - Web-based Immunization Registry
 - Little Winds Diabetes Prevention Program
 - South Dakota Frontier School Health Initiative
 - Boy's Health Advocacy Program
 - Van Buren County Community-based Tobacco Cessation Program
 - Bicycle Helmet Program

■ Texas

- Care Van for Immunizations

■ Trigon – Virginia

- Supports free clinics

■ Massachusetts

- Improving access
- Jump Up and Go! Initiative

■ North Carolina

- Blue Bikers Program

■ BCBSA

- Public Policy
- Research
- Paid Media
- Healthy Competition Program
- Ageless Heroes Program

Individual Responsibility

- Requests for spas/swimming pools
- Requests for athletic/exercise club memberships
- Requests for diet programs and foods
- **Where should the line be drawn?**
- Everything can be paid for, **but**

How much “Health Care” can we afford?

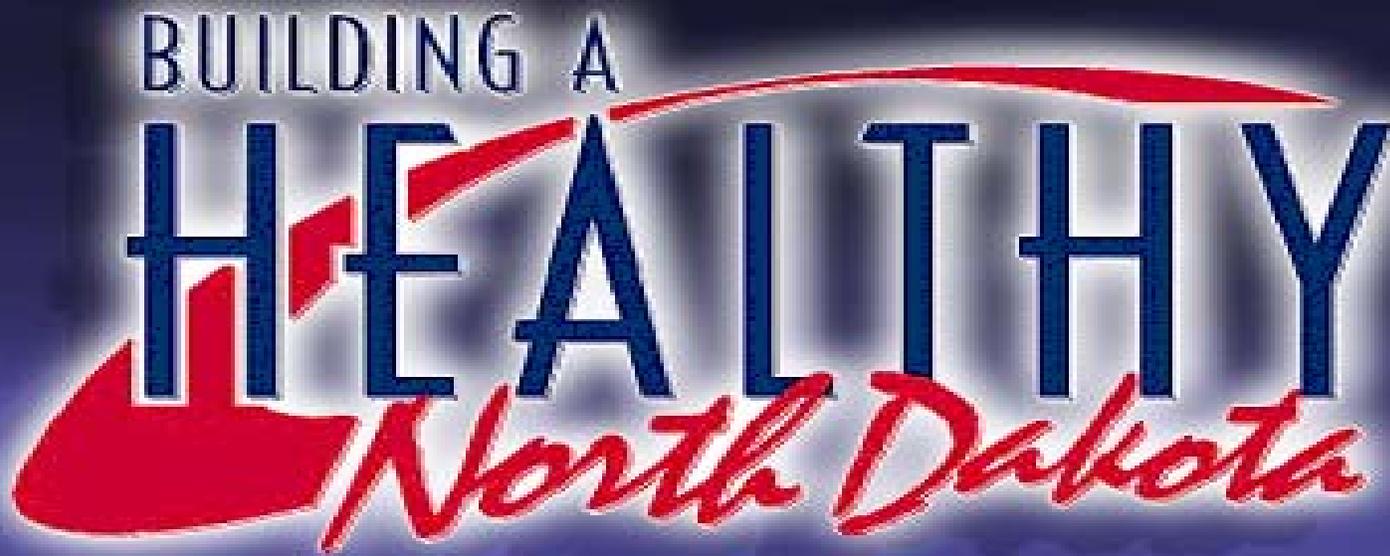
- Expenses paid by insurance companies are reflected in premiums
- ND premiums represent about 13.2% of the average income
- Compares to 11.7% in the region
- Our biggest competition in the health insurance market is non-insurance

Potential Resources

- Communication tools
 - Publications to members
 - EOBs
 - Media activities
- Benefit changes
 - Additional preventive coverage
 - Additional services
 - Risk policy

Conclusions

- Payers are responsible for significant health promotion activities
- Multiple options are available
- There are financial and philosophical issues about how individual health promotion services should be funded



Healthy North Dakota Summit



Partners ... in Pursuit of Good Health:

*Pennsylvania's State Health of
Improvement Plan*

Robert Zimmerman Jr.

Pennsylvania Department of Health

Partners...in Pursuit of Good Health

Pennsylvania's State Health Improvement Plan

Robert S. Zimmerman, Jr. M.P.H.
Secretary of Health

WE'RE THERE.

For Your Health. For Your Community.

DEPARTMENT OF
HEALTH

Mark Schweiker, Governor • Bob Zimmerman, Secretary of Health

Pennsylvania Demographics

- Population 12,282,054
- 12.3% minorities
- Second largest rural population of any state
- Second largest elderly population of any state
- Population density of PA counties ranges from 11.6 to 11,241 persons per square mile

What we set out to do

- Create a health plan focused on improved health outcomes
- Give communities a greater voice in dealing with state health agency
- Link local planning efforts to state resources
- Link to national health objectives
- Create a shared responsibility/accountability model for engagement with communities
- Adopt a healthy communities model

How we worked

- Broad stakeholder involvement
 - Government agencies, local government
 - Business
 - Health associations, voluntary associations
 - Community leaders
- Organized three committees
 - Health Program Planning
 - Community Partnership
 - Data and Information
- Studied other states' plans
- 12 month initial planning period

What we've accomplished

- Developed a framework for health improvement planning
- Strengthened community relationships
- Improved access to data and information

Leading vs Actual Causes of Death

■ Leading causes of death/disability

- Heart disease
- Cancer
- Stroke
- Accidents
- Chronic lung disease
- Pneumonia/Flu
- Diabetes

■ Actual causes of death/disability

- Tobacco use
- Diet/Sedentary lifestyle
- Alcohol
- Sexual behavior
- Toxic agents
- Infections

We've formalized a framework for health improvement planning

- Focus on root causes and conditions, not clinical disease
- Partners defined six “Categories for Health Action as broad planning categories
 - Chronic Disease
 - Communicable Disease
 - Violence & Injury
 - Environmental Health
 - Family Health
 - Health Service Delivery
- Incorporates Healthy People 2010 and Surgeon General's Leading Health Indicators
- Prepared a master plan, and began series of supplemental health plans based on disparities:
 - SHIP Special Report on Rural Health - 2001
 - SHIP Special Report on Health Status of Minorities - 2002



State Health Improvement Plan Special Report and Plan To Improve Rural Health Status

August 31, 2000



Robert S. Zimmerman, Jr., M.P.H.
Secretary of Health



State Health Improvement Plan 2001 – 2005

July 10, 2001

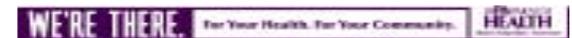


Robert S. Zimmerman, Jr., M.P.H.
Secretary of Health

State Health Improvement Plan

Special Report on the Health Status of Minorities in Pennsylvania

2002



Robert S. Zimmerman, Jr., MPH, Secretary of Health

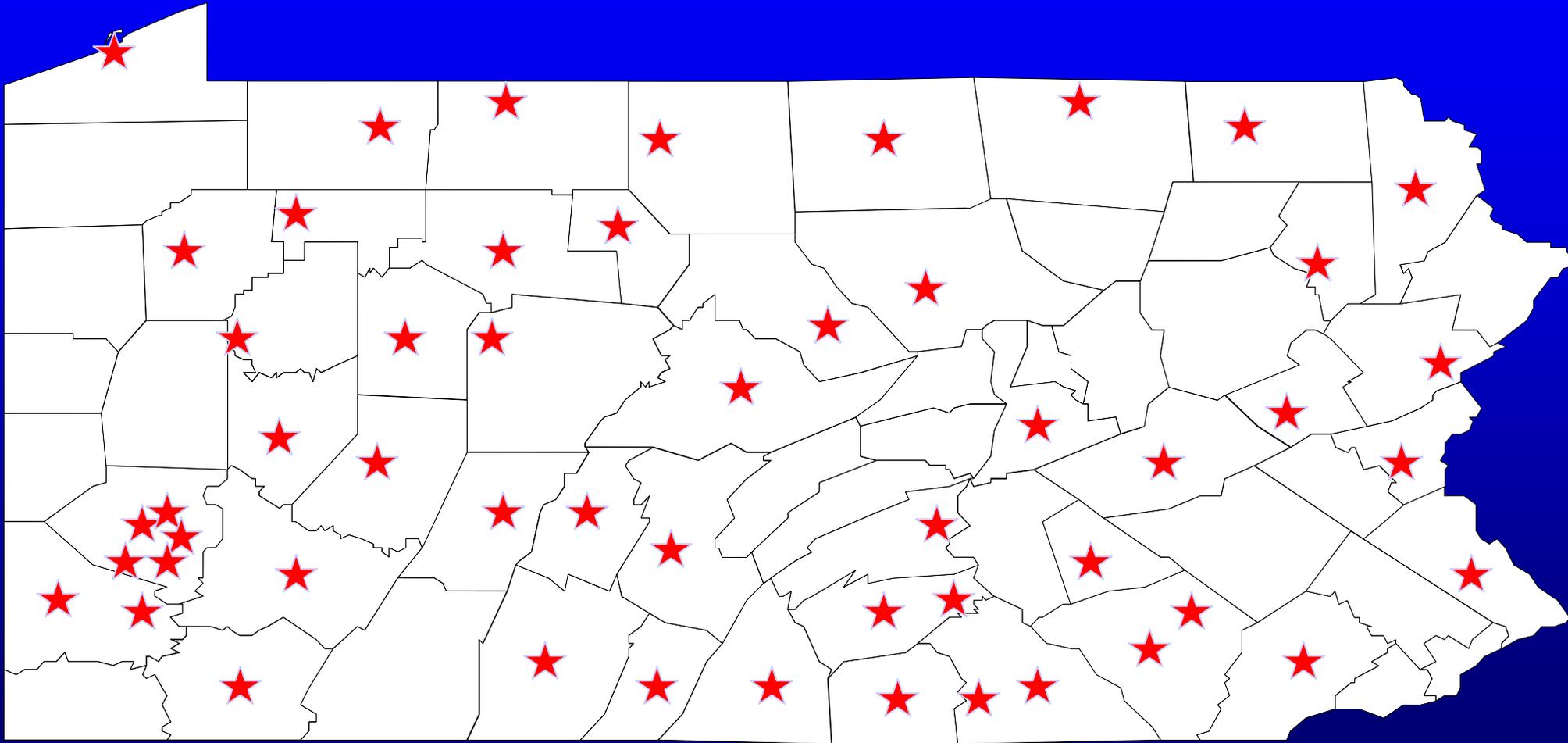
Engaging Around Mutual Interests



We've strengthened our relationship with communities

- 52 Community Health Improvement Partnerships have formally affiliated with Department
 - Community partnerships helped design affiliation process
- Department wide program requirements for linking to SHIP partners
- Mini-grants create pool of funds for local projects
- Engaging with sister agencies to reduce barriers to coordination

52 SHIP Affiliated Partnerships



(6/10/02)

We've improved community access to data and information

- Biennial survey of community health data needs used as the basis for improvements
- HP 2010 Baseline Data by County
- Searchable data bases
- Local BRFSS over sampling and tech support
- Data web-ring linking state agency health related data
- Web links embedded in plans expand utility of documents as research tools

Lessons learned

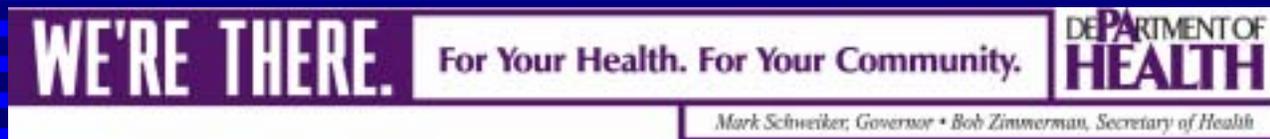
- Stakeholder and community involvement is essential to achieve local “buy in”.
- Lead without dominating
- Build trust
- Collaboration is seen by some to be an unnatural act.
- Health improvement agenda must reach into all elements of the Department

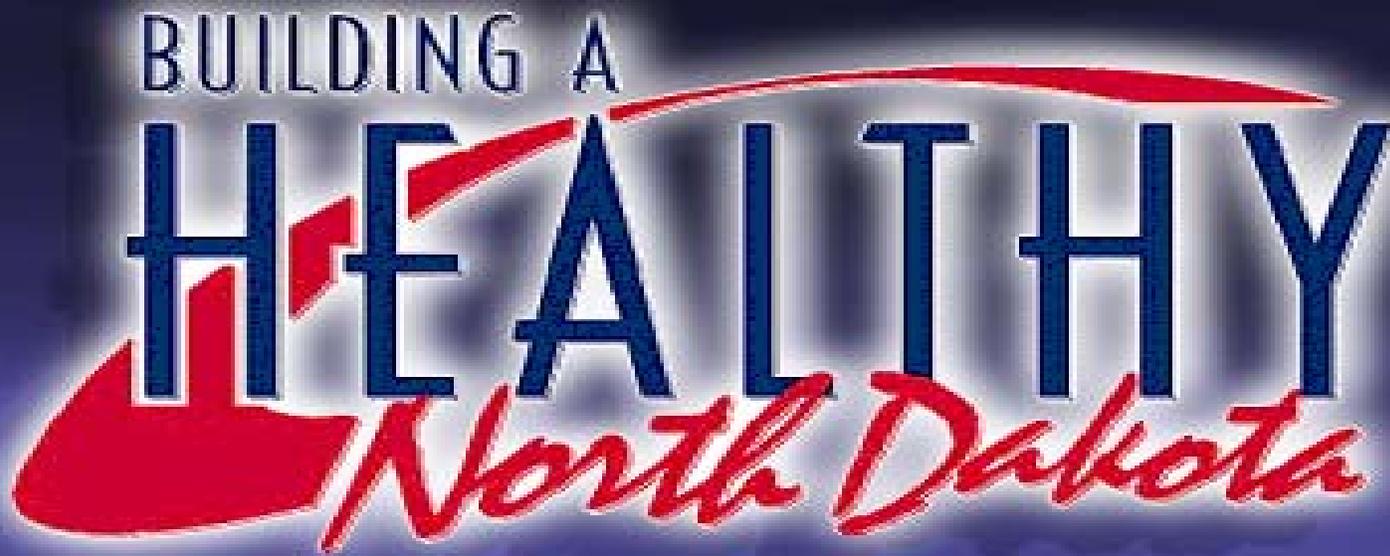
Thank You !

To learn more about SHIP go to:

www.health.state.pa.us

Quick Link “SHIP”





Healthy North Dakota Summit