

# Social Disparities in the Burden of Injury

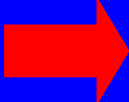
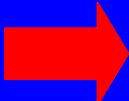
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# Causes of Death - U.S., 2000

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1	Heart disease	709,894
2	Cancer	551,833
3	Stroke	166,028
4	Chronic lung disease	123,550
	5 Accidents (unintentional injuries)	93,592
6	Diabetes	68,662
7	Influenza and pneumonia	67,024
8	Alzheimer's disease	49,044
9	Kidney disease	37,672
	10 Septicemia	31,613
	11 Suicide	28,332
12	Chronic liver disease	26,219
13	Hypertension and complications	17,964
	14 Pneumonitis	16,659
	15 Assault (homicide)	16,137
	All other causes	400,401

# Top Ten Causes of Death by Years of Potential Life Lost Before Age 75 and by Number of Deaths - U.S., 1998

Rank	Disease	YPLL-75	Disease	No. of deaths
1	Cancer	1716	Heart disease	724,915
2	Heart disease	1343	Cancer	549,787
3	Unintentional injuries	1052	Stroke	167,340
4	Suicide	365	COPD	124,153
5	Homicide	301	Unintentional injuries	97,298
6	Stroke	233	Diabetes	68,379
7	COPD	186	Pneumonia/flu	63,686
8	HIV infection	177	Alzheimer's	44,507
9	Diabetes mellitus	174	Renal disease	35,524
10	Chronic liver disease	159	Septicemia	30,670

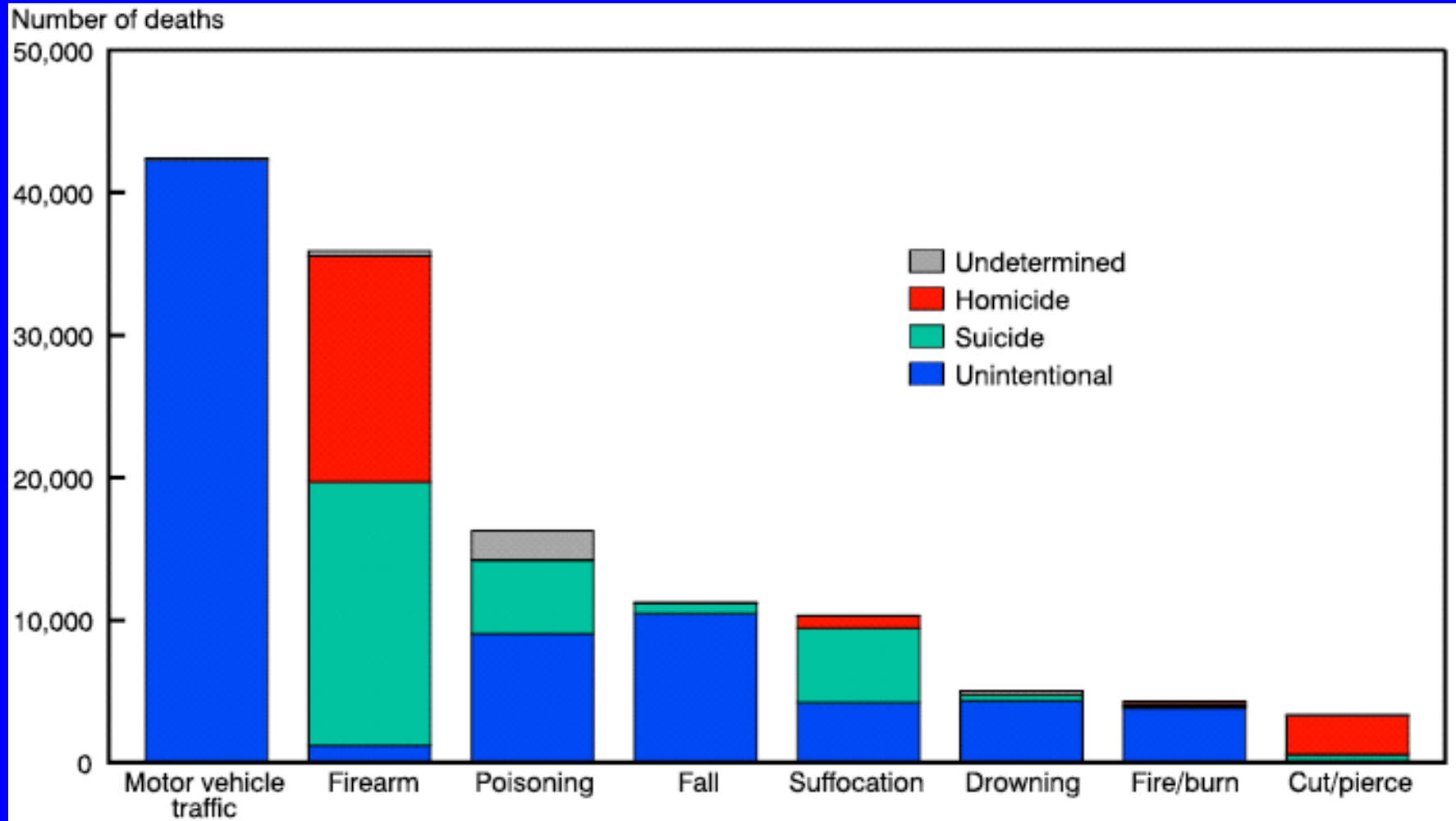
# Framework for Presenting Injury Mortality Data

Mechanism/ Cause	Manner/Intent			
	Unintentional	Intentional		
Fall Firearm MVA Poison etc.		Homicide	Suicide	etc.

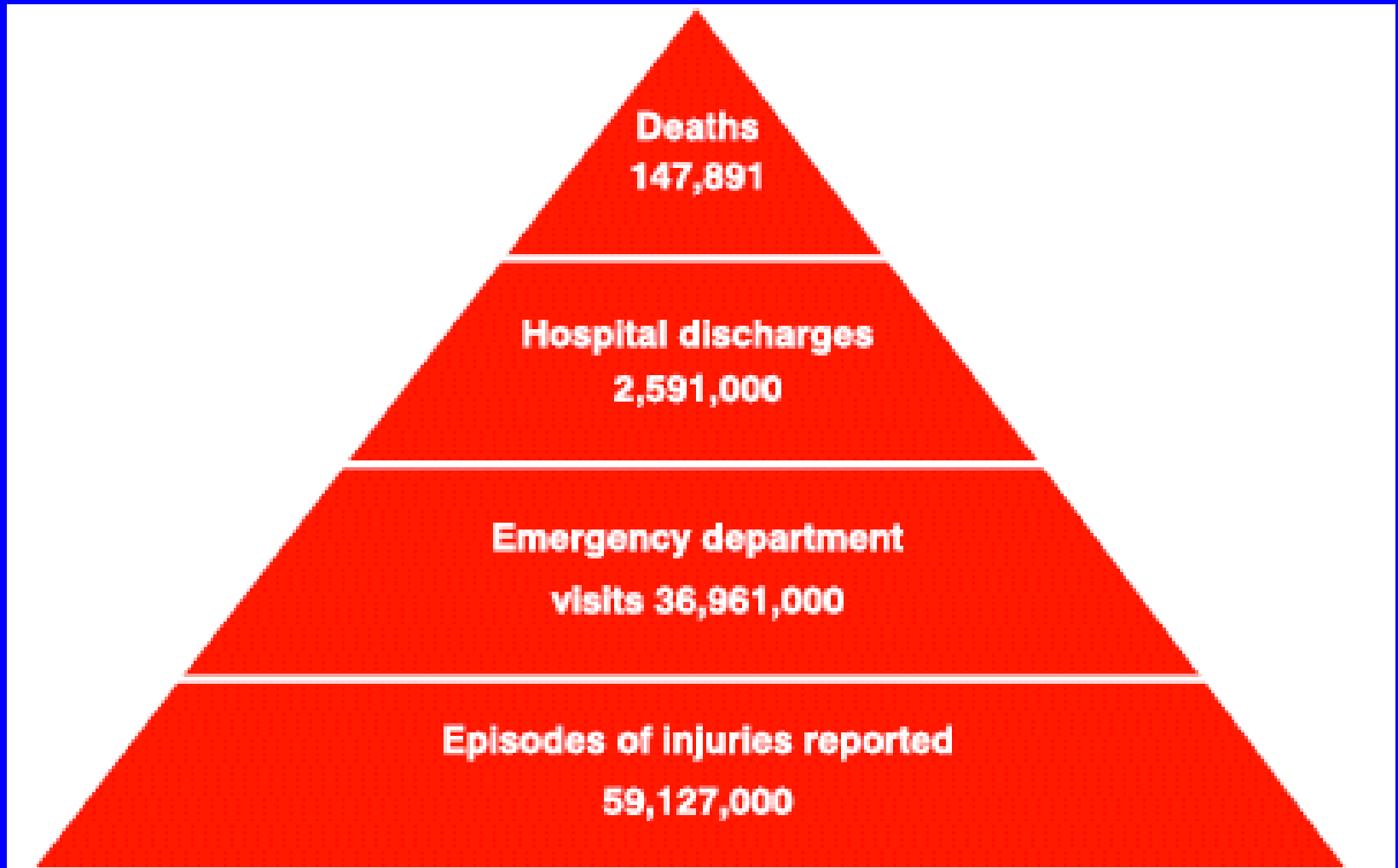
## Number of Injury Deaths for Top 5 Mechanisms, by Intentionality - U.S., 2000

<u>Mechanism</u>	<u>Total</u>	<u>Unin- tentional</u>	<u>Suicide</u>	<u>Hom- icide</u>	<u>Other</u>
All Injury	148,209	97,900	29,350	16,765	4,194
Transportation	46,509	46,259	103	106	41
Firearm	28,663	776	16,586	10,801	500
Poisoning	20,230	12,757	4,859	56	2,558
Fall	14,002	13,322	607	18	55
Suffocation	12,098	5,648	5,688	658	104
Other	26,707	19,138	1,507	5,126	936

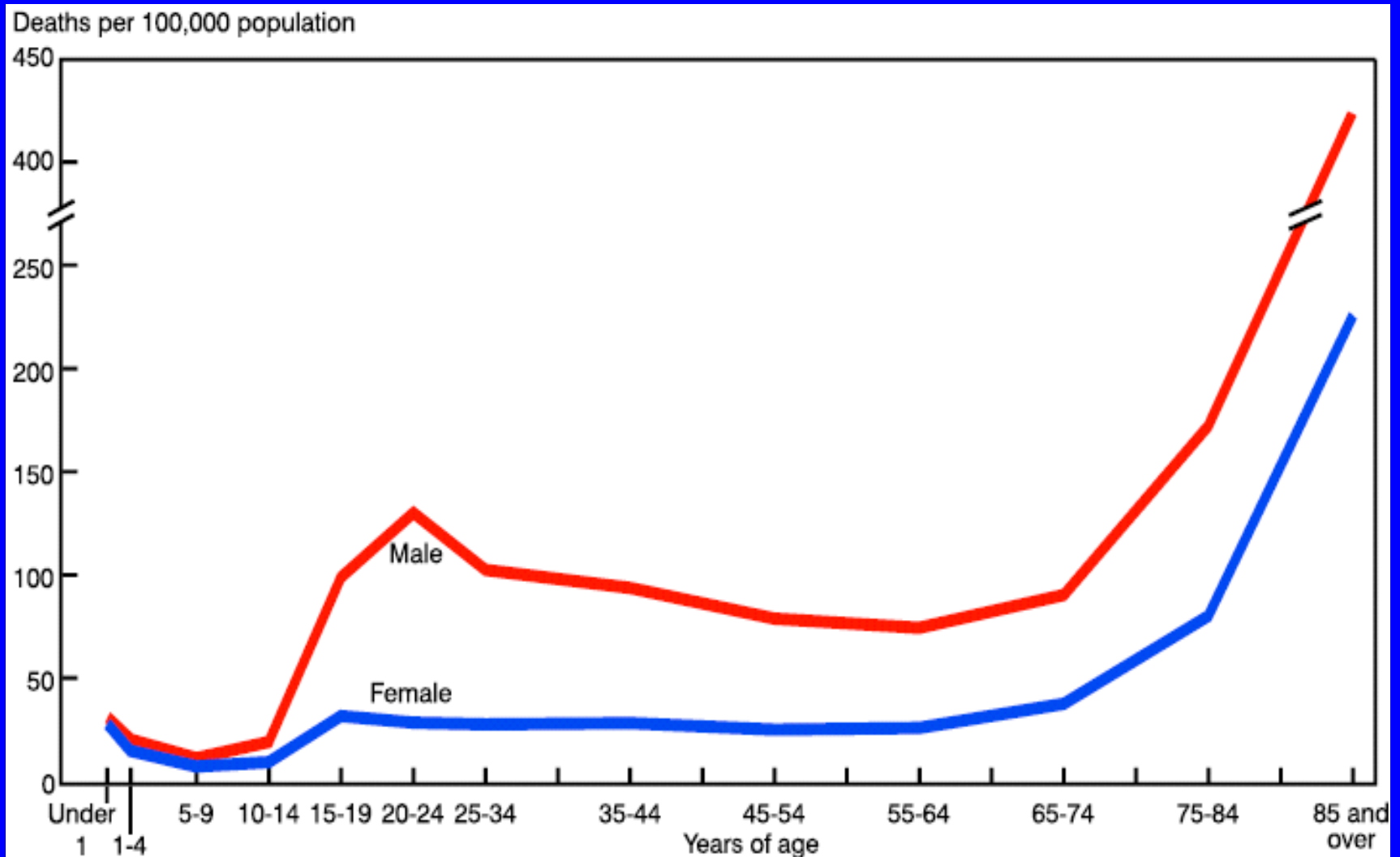
# Leading Mechanisms of Injury Death, by Intentionality - U.S., 1995



# Burden of Non-Fatal Injuries - U.S., 1995

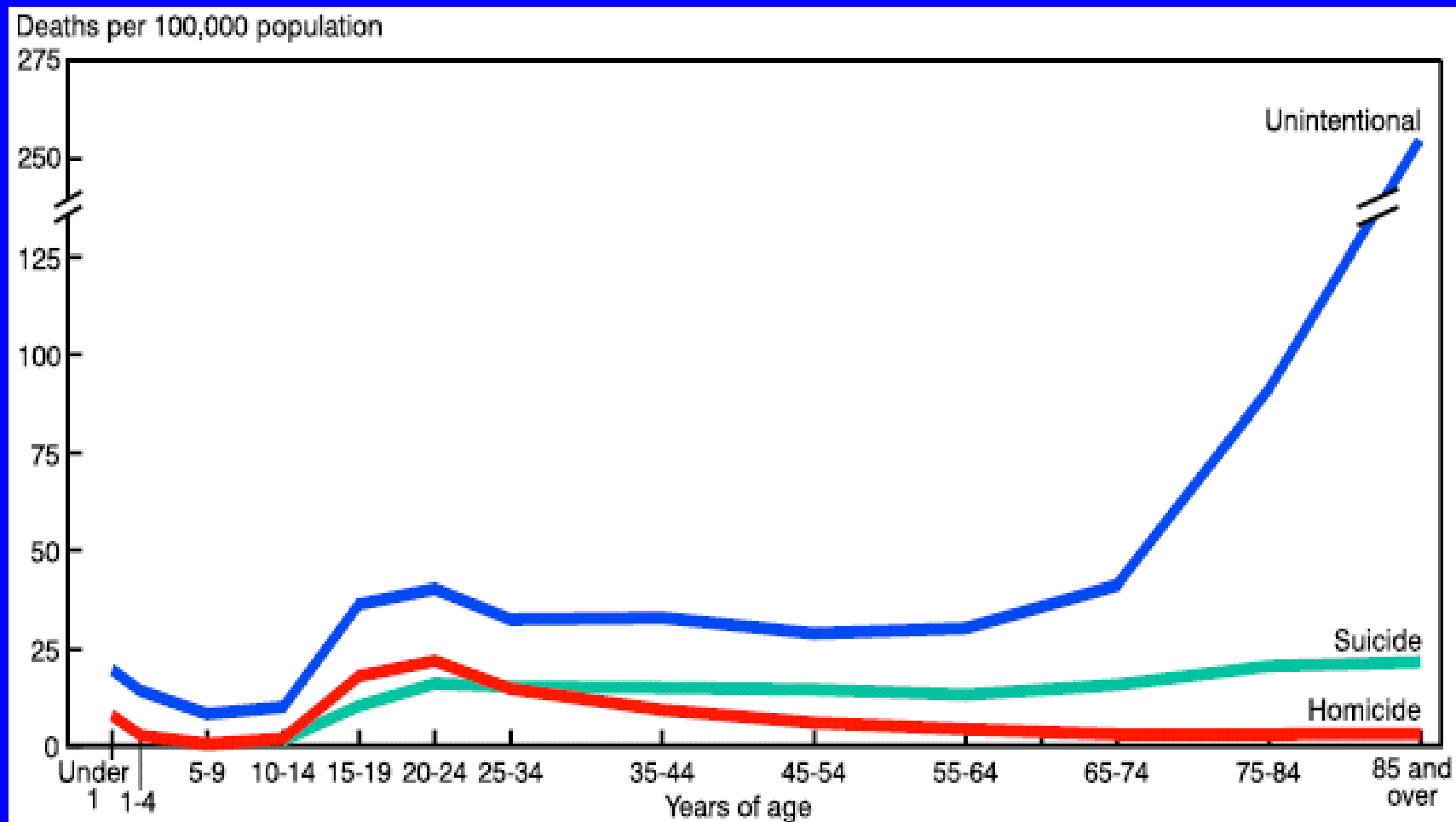


# Injury Mortality by Age and Gender - U.S., 1995

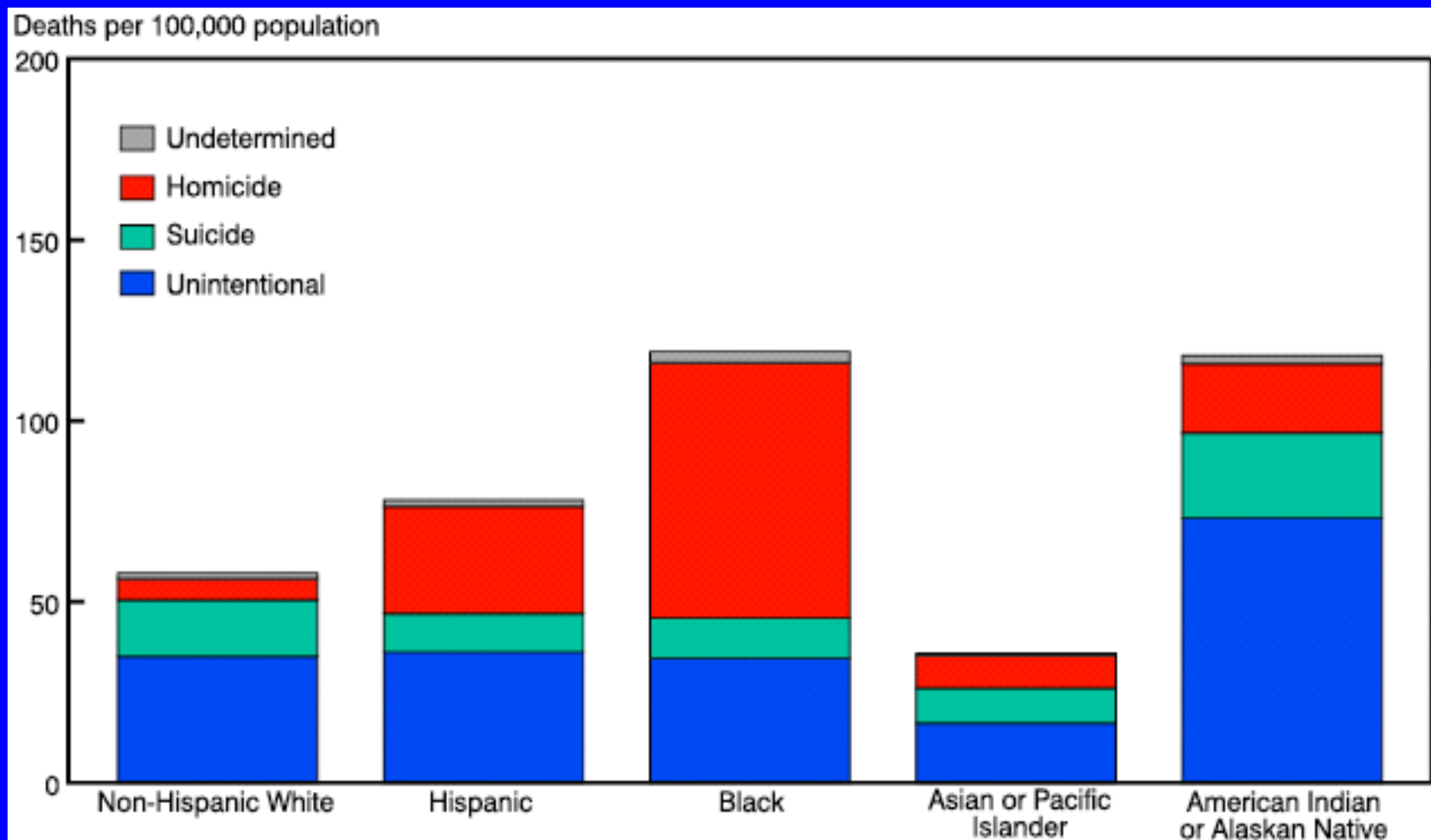




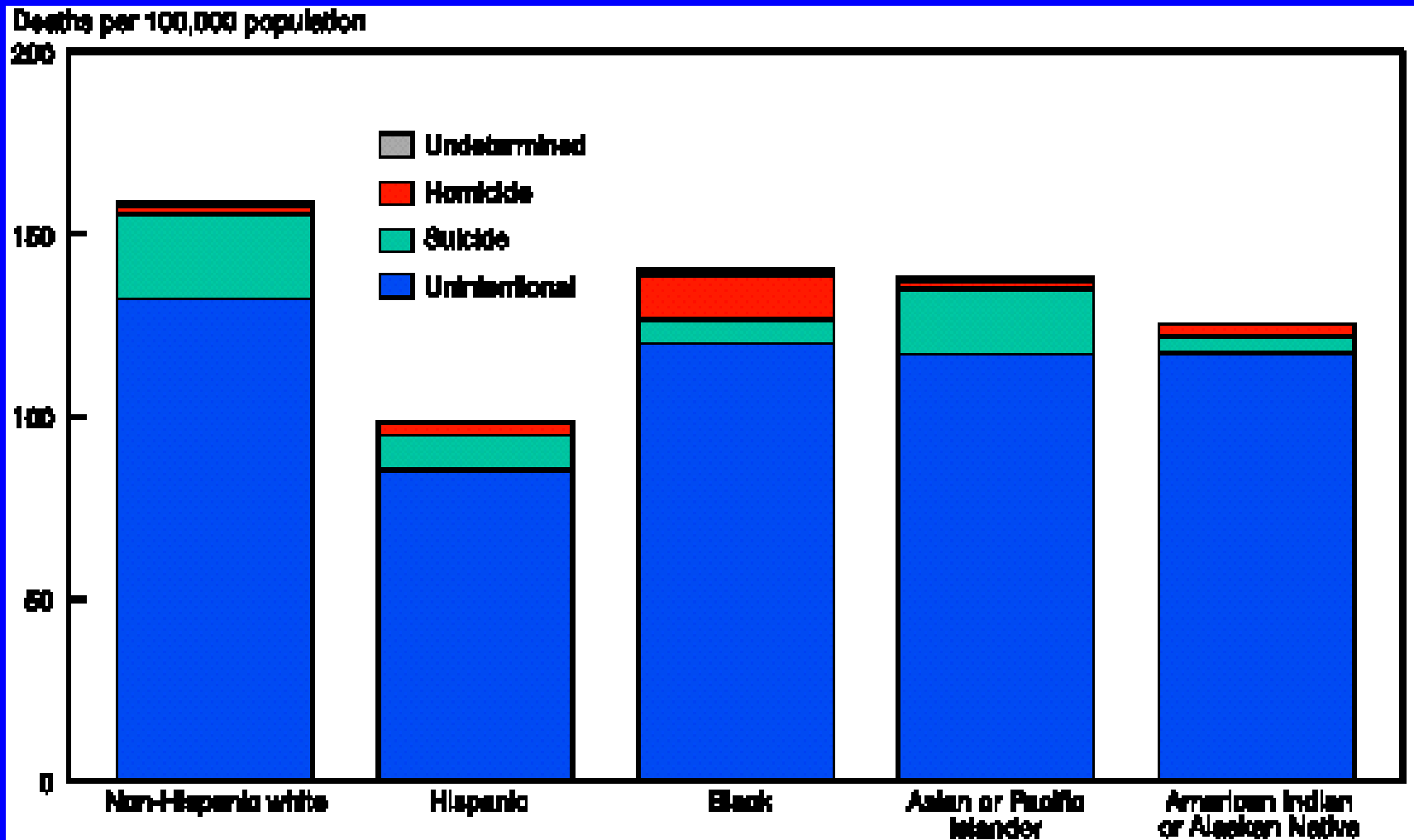
# Injury Mortality by Age and Intentionality U.S., 1995



# Injury Mortality for Ages 15-34 by Race/Ethnicity and Intentionality - U.S., 1994-5



# Injury Mortality for Ages 75+ by Race/Ethnicity and Intentionality - U.S., 1994-5



## Change in Motor-Vehicle Injury Mortality 1990-98 by Race/Ethnicity - U.S.

<u>Race/ethnicity</u>	<u>Age-Adj. Rate</u>		<u>Change</u>
	1990	1998	
White	18.1	15.7	-13%
Black	18.3	17.2	-6%
Hispanic	19.2	14.9	-22%
Am. Indian/A.N.	33.0	31.8	-4%
<u>Asian/Pac. Isl.</u>	12.5	8.6	-31%
Highest:Lowest	2.6	3.7	

Source: NCHS Statistical Notes 23, January 2002

## Change in Suicide Mortality 1990-98 by Race/Ethnicity - U.S.

<u>Race/ethnicity</u>	<u>Age-Adj. Rate</u>		<u>Change</u>
	1990	1998	
White	12.5	11.8	-6%
Black	7.0	6.1	-13%
Hispanic	7.2	6.0	-17%
Am. Indian/A.N.	12.4	13.4	+8%
<u>Asian/Pac. Isl.</u>	6.0	5.9	-2%
Highest:Lowest	2.1	2.3	

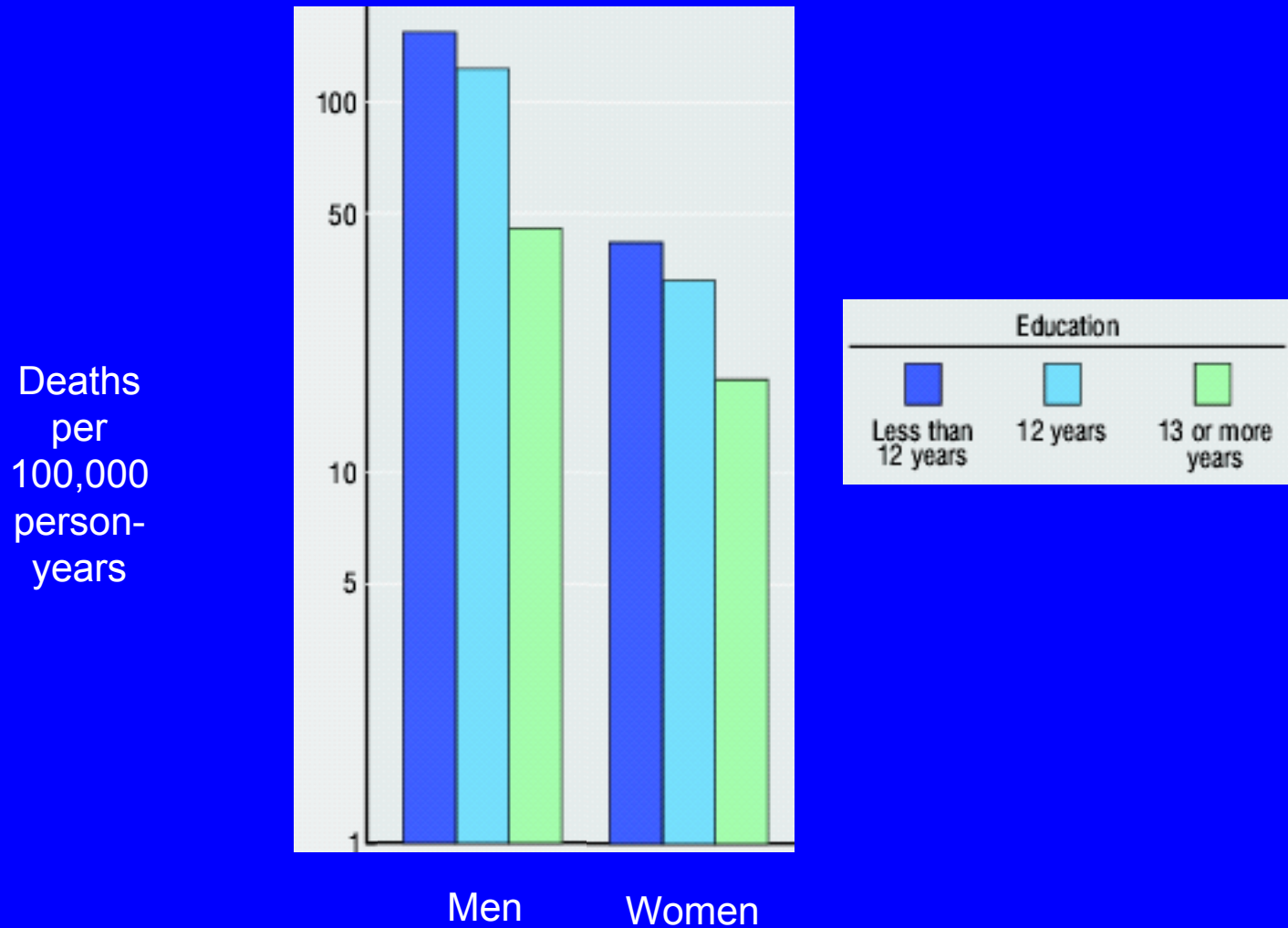
Source: NCHS Statistical Notes 23, January 2002

## Change in Homicide Mortality 1990-98 by Race/Ethnicity - U.S.

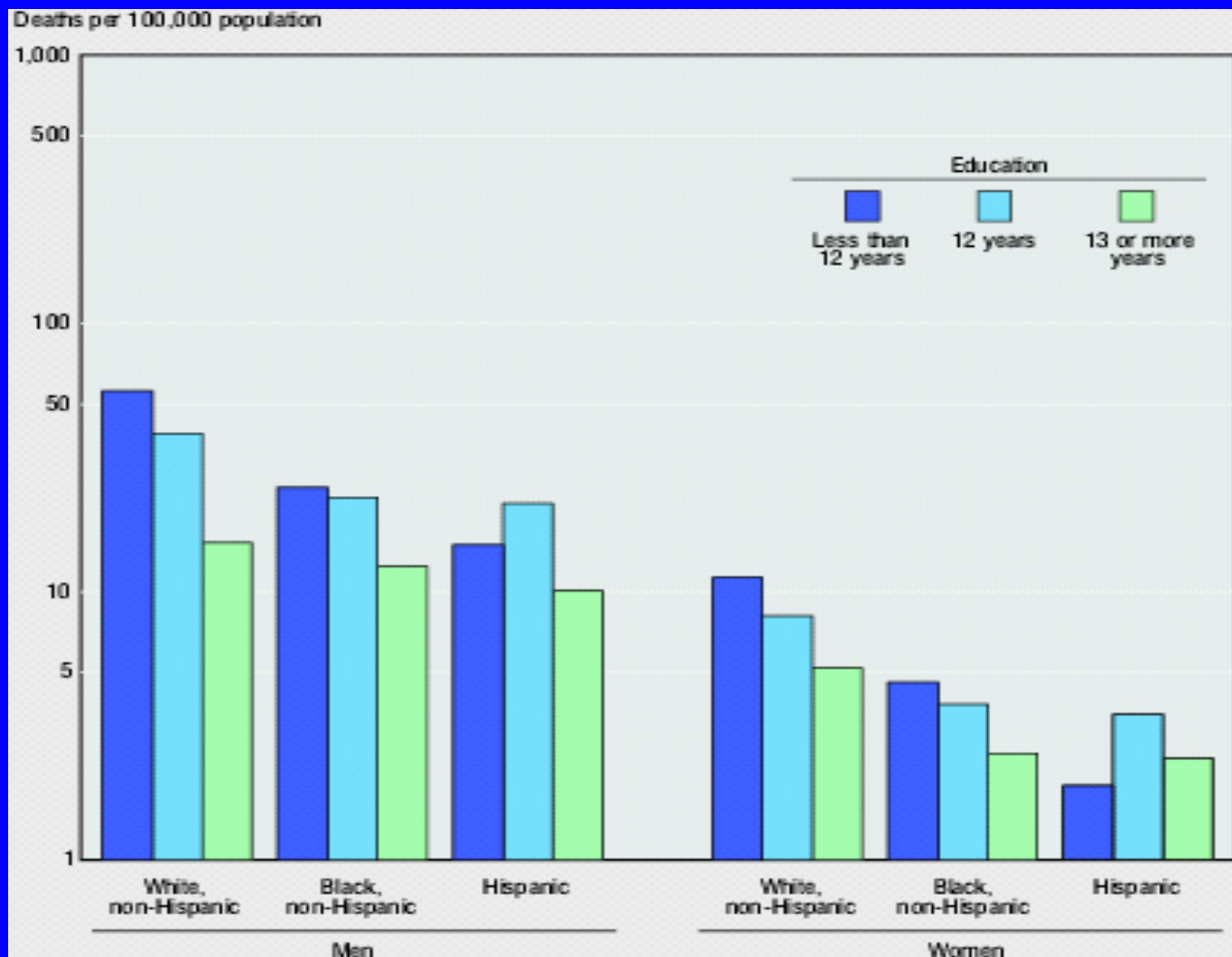
<u>Race/ethnicity</u>	<u>Age-Adj. Rate</u>		<u>Change</u>
	1990	1998	
White	4.1	3.2	-22%
Black	39.6	26.1	-34%
Hispanic	17.5	9.9	-43%
Am. Indian/A.N.	11.1	9.9	-11%
<u>Asian/Pac. Isl.</u>	5.2	3.7	-29%
Highest:Lowest	9.7	8.2	

Source: NCHS Statistical Notes 23, January 2002

# Injury Mortality Rates among Adults Age 25-64 by Gender and Educational Status - U.S., 1995

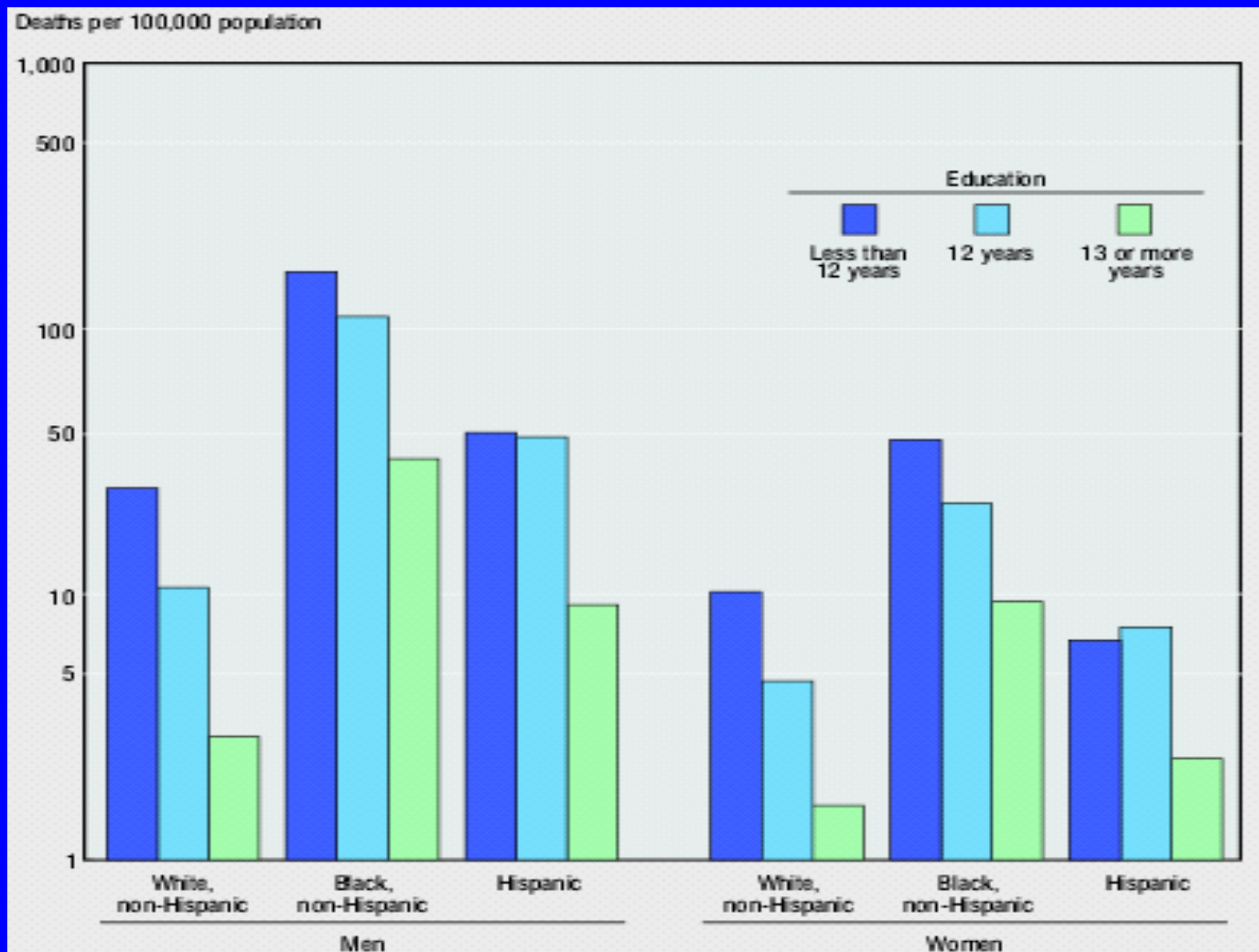


# Suicide Rates for Ages 25-64 by Gender, Race, and Education - U.S., 1995

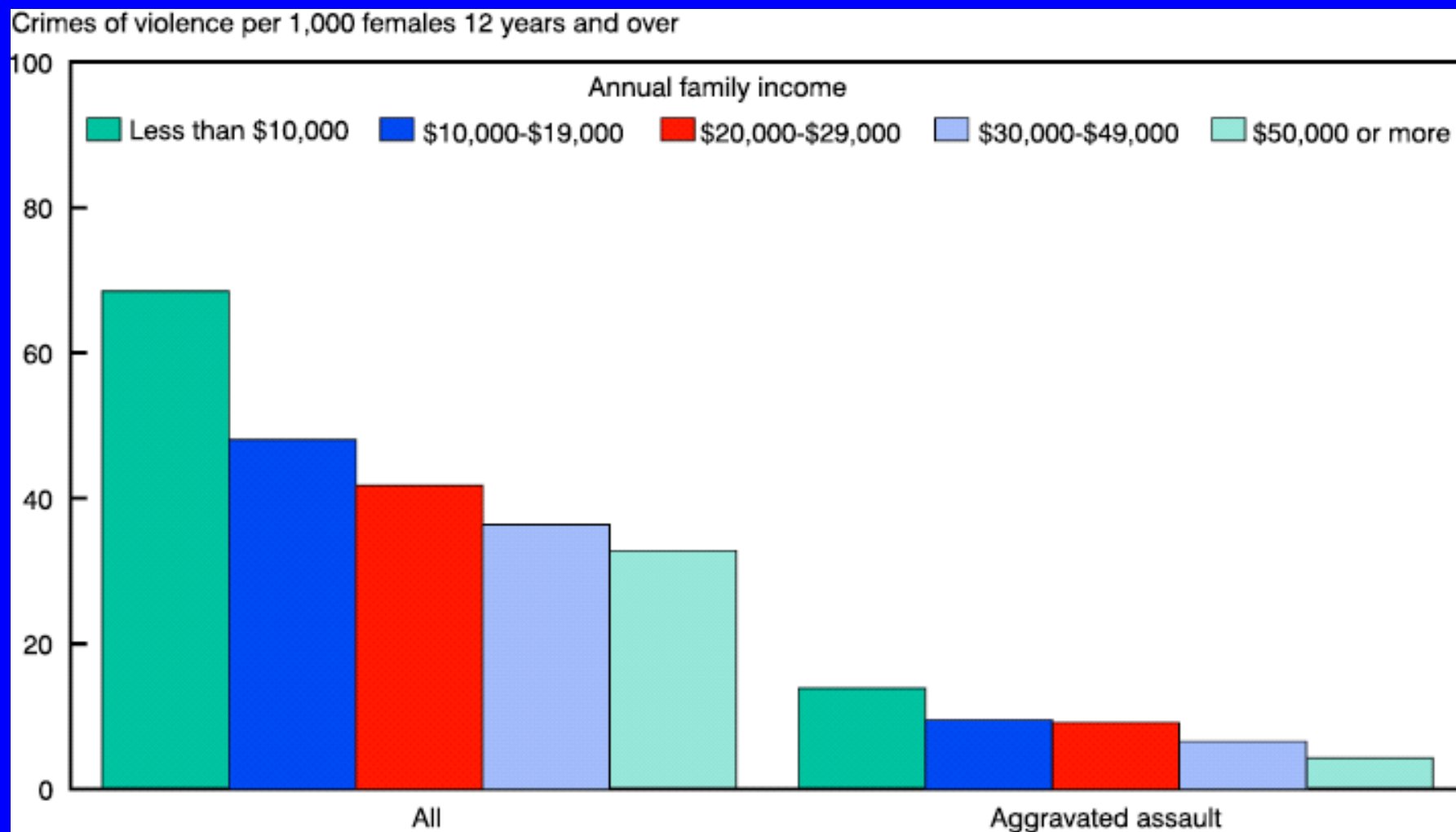




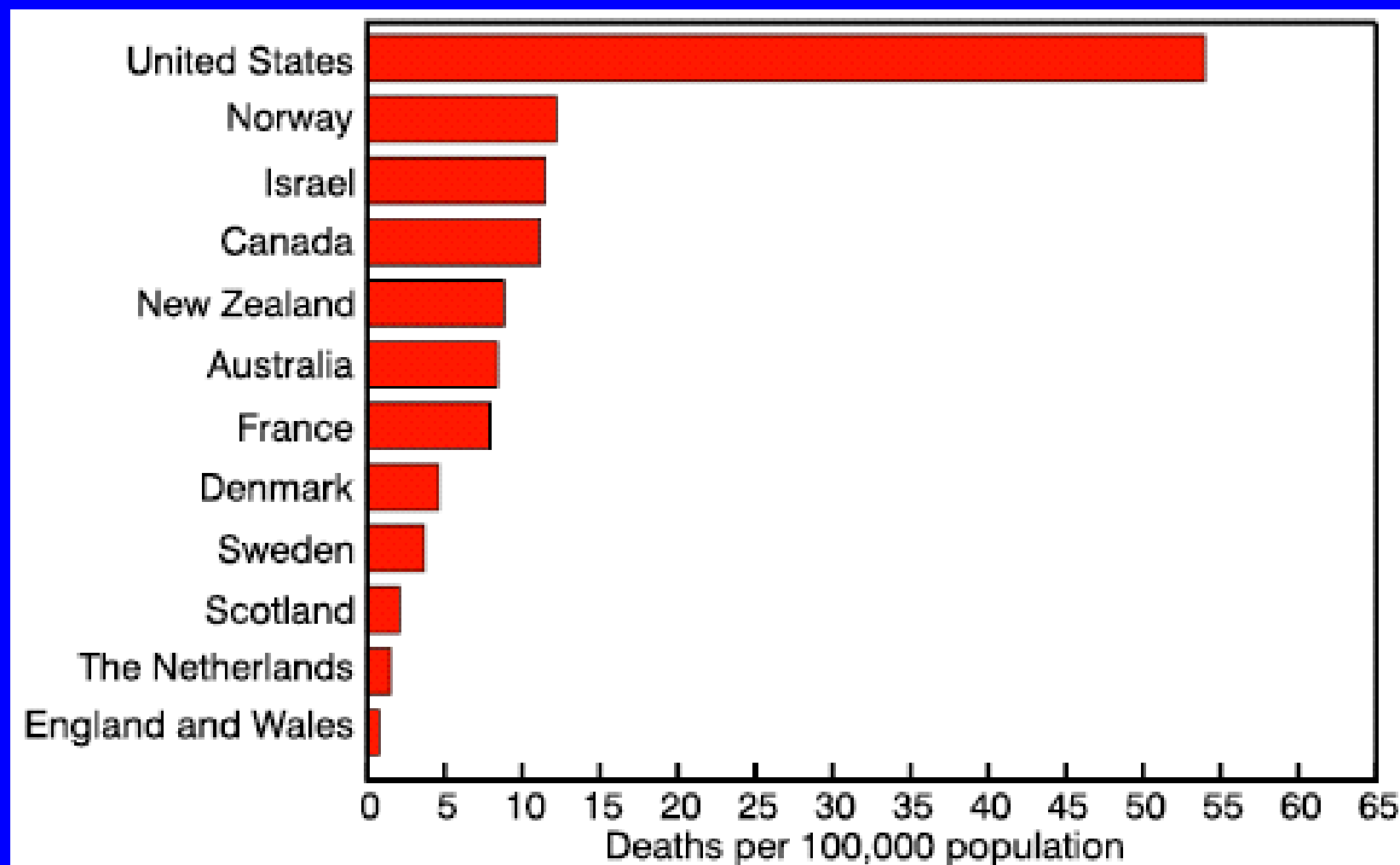
# Homicide Victimization Rates at Ages 25-64 by Gender, Race, and Education - U.S., 1995



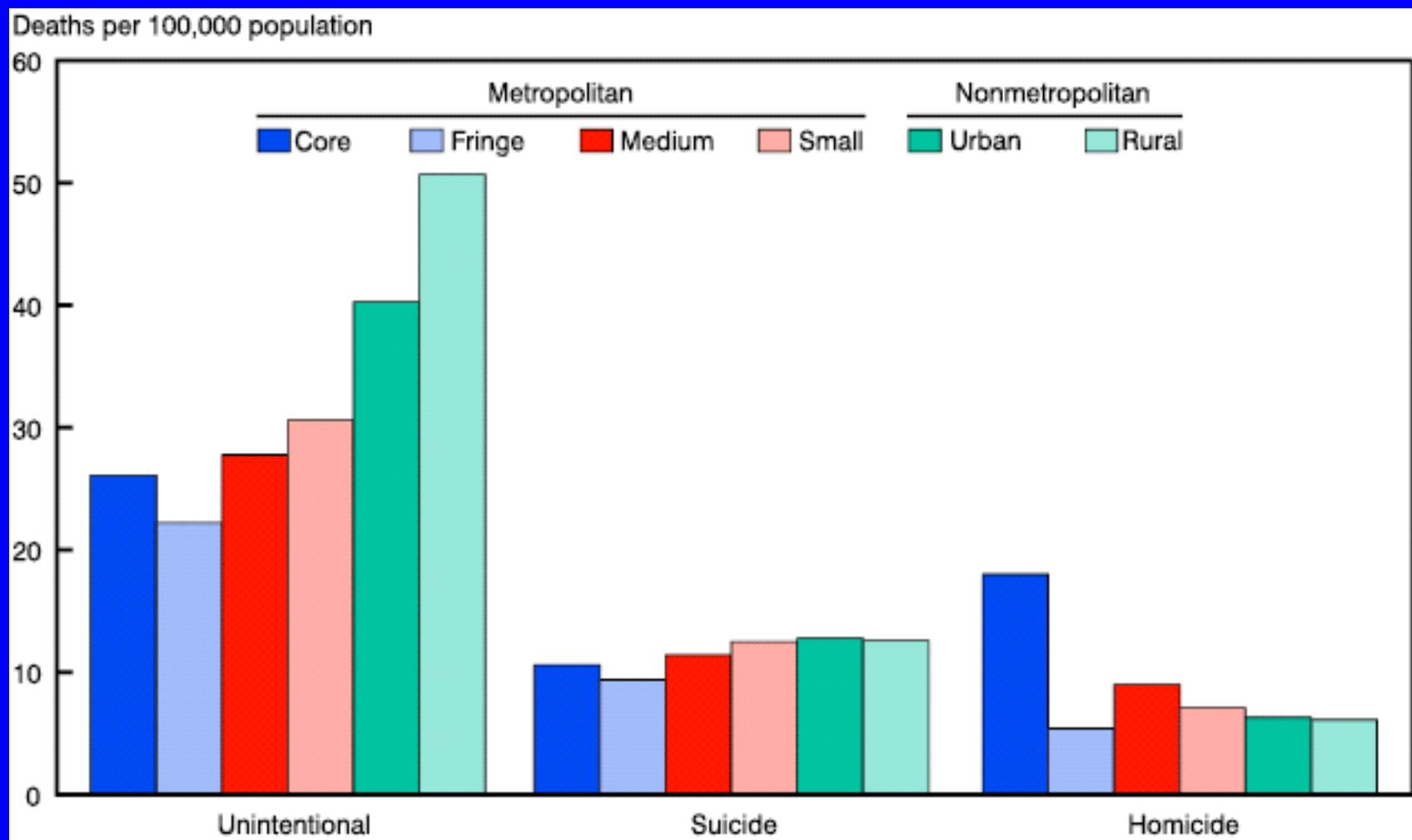
# Violent Crime Victimization among Women Age 12+ Years by Annual Family Income - U.S., 1994



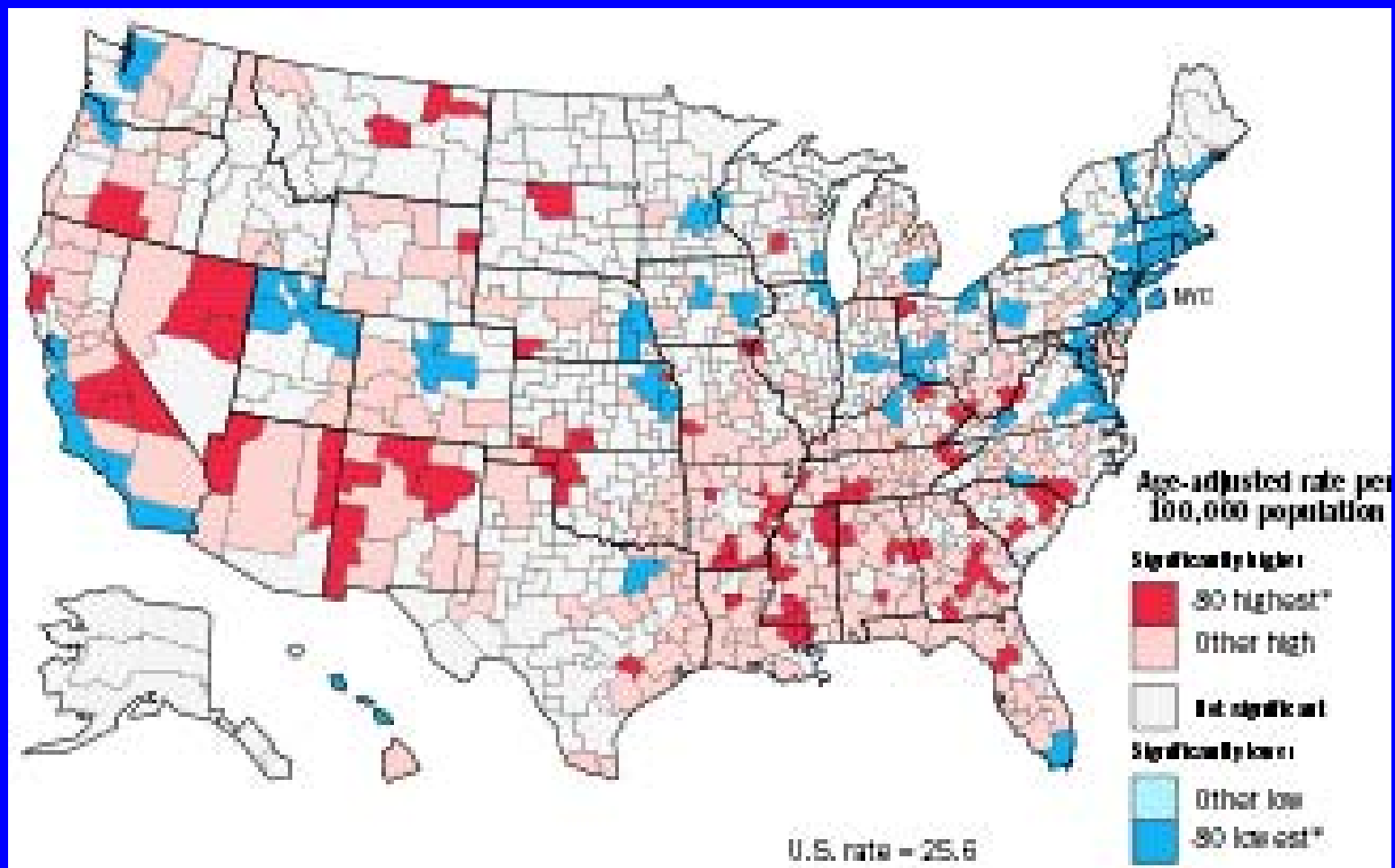
## Firearm Injury Mortality among Males Age 15-24 Years in Selected Countries - 1992-5



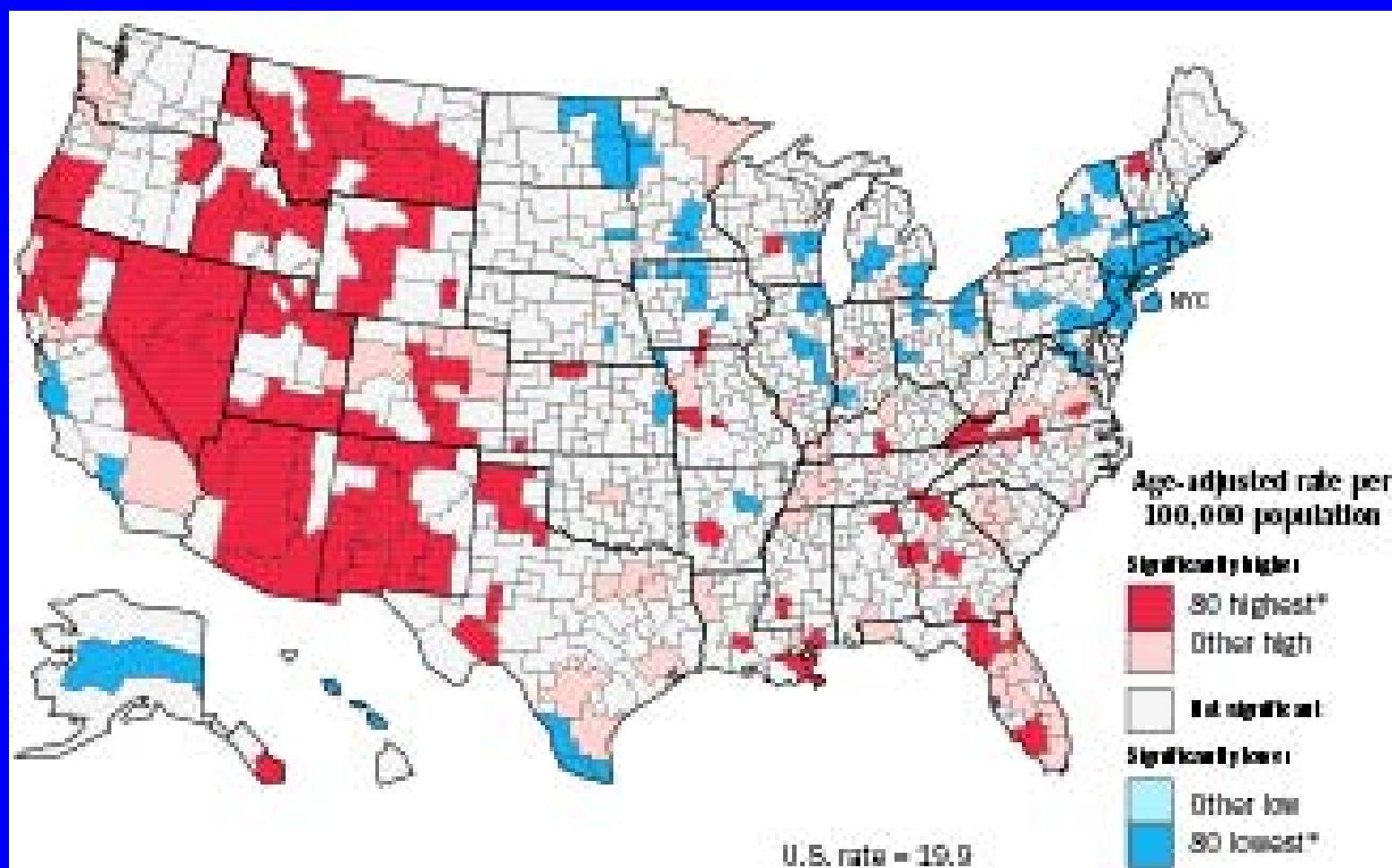
# Age-Adjusted Injury Mortality by Intentionality and Urban/Rural Residence - U.S., 1994



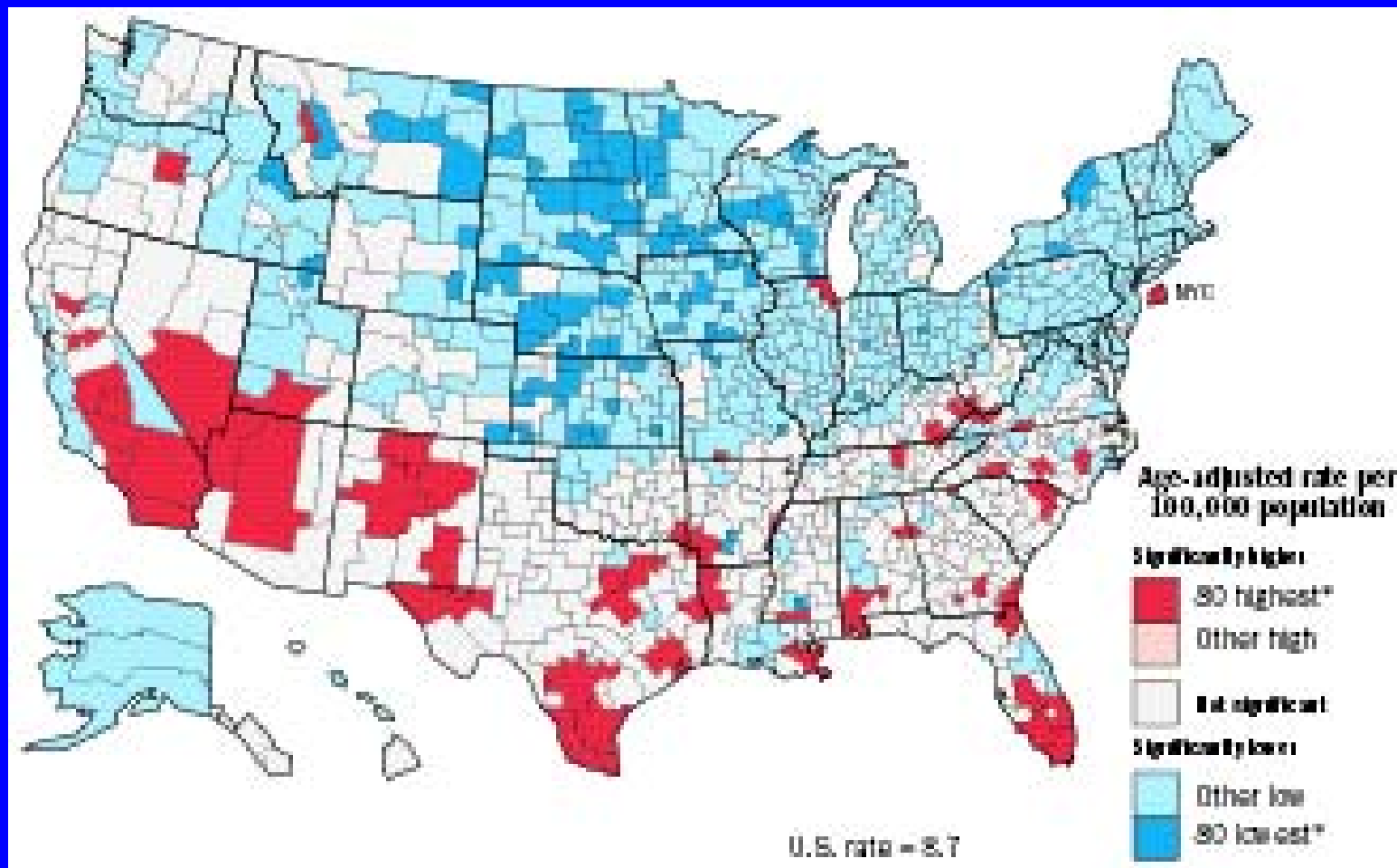
# Motor-Vehicle Mortality Rates by HSA - U.S. White Males, 1988-92



# Suicide Mortality Rates by HSA - U.S. White Males, 1988-92



# Homicide Mortality Rates by HSA - U.S. White Males, 1988-92



# A Few Hypothesized Mechanisms

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- Environment
  - Sociocultural: crime, family disorder
  - Physical: housing, transportation, workplace
- Behavioral risk factor prevalence
  - Alcohol
  - Firearm access
  - Restraint use
- Health care access for injury

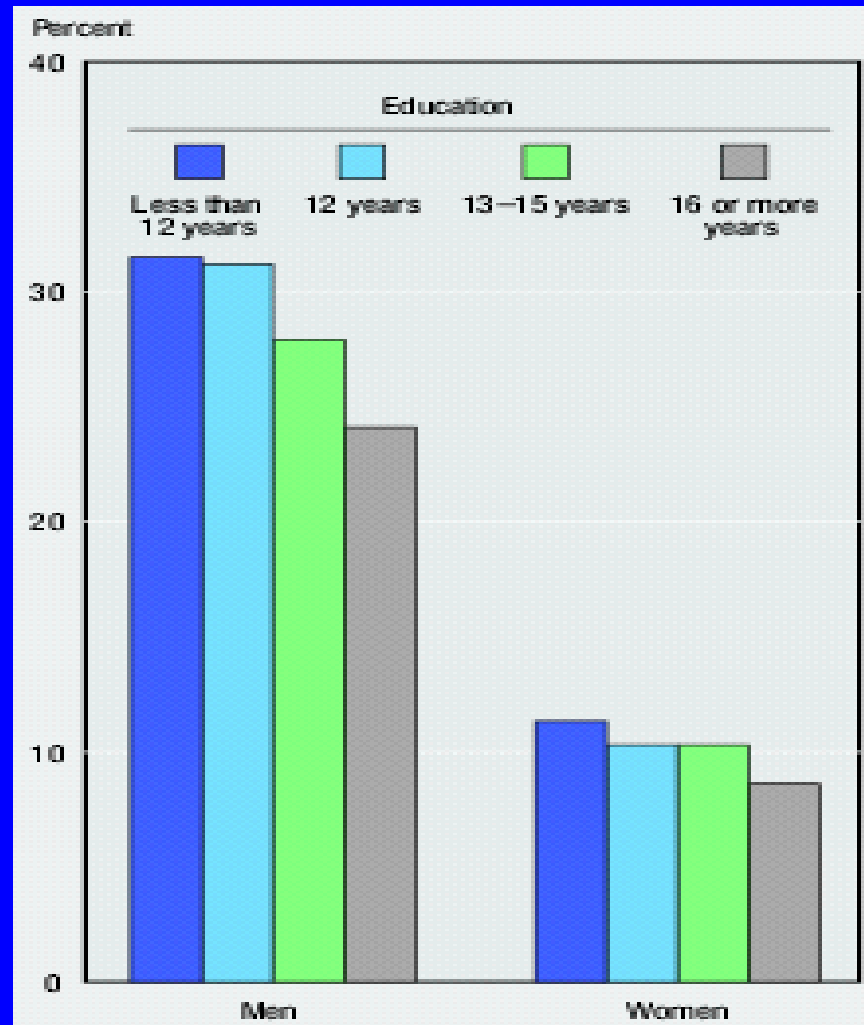


## Incidence of House Fires and Injuries by Median Census Tract Income - Dallas, TX, 1991-7

<u>Median income</u>	<u>Fires per 1000 houses</u>	<u>Injuries per 100 fires</u>	<u>Injuries per 100,000</u>
<\$20K	7.2	4.5	9.9
\$20K - 39K	6.0	3.0	6.0
\$40K - 59K	2.8	2.1	2.4
\$60K - 79K	2.0	2.1	1.3
≥\$80K	3.0	1.1	1.2

Source: NEJM 2001; 344:1911-6

# Prevalence of Heavy Alcohol Use at Ages 25-49 by Gender and Education - U.S., 1994-6



## Incidence of Recreational Injuries among School-Aged Children by Income and Race/Ethnicity - U.S., 1997-8

<u>Group</u>	<u>Injuries per 1000 persons</u>
Family income	
Poor	52
Near poor	80
Not poor	119
Race/ethnicity	
Non-Hispanic white	112
Non-Hispanic black	52
Hispanic	52
Other	41

Source: Inj Prev 2002; 8:60-5

# Broad Conclusions

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- Injury mortality and incidence vary importantly according to:
  - Demographics: age, sex, race/ethnicity
  - Socioeconomic status
  - Environment: region, urbanization, other community characteristics
- Disparities for some major injury types growing over time
- Reasons for disparities undoubtedly depend on injury mechanism