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The Complementary Roles of Public Health & Medicine in the US Health Care System

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THE COMPLEMENTARY ROLES OF PUBLIC HEALTH & MEDICINE IN THE US HEALTH CARE SYSTEM

NOVGOROD STATE UNIVERSITY
INTERNATIONAL PROGRAMS WEEK

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Overview

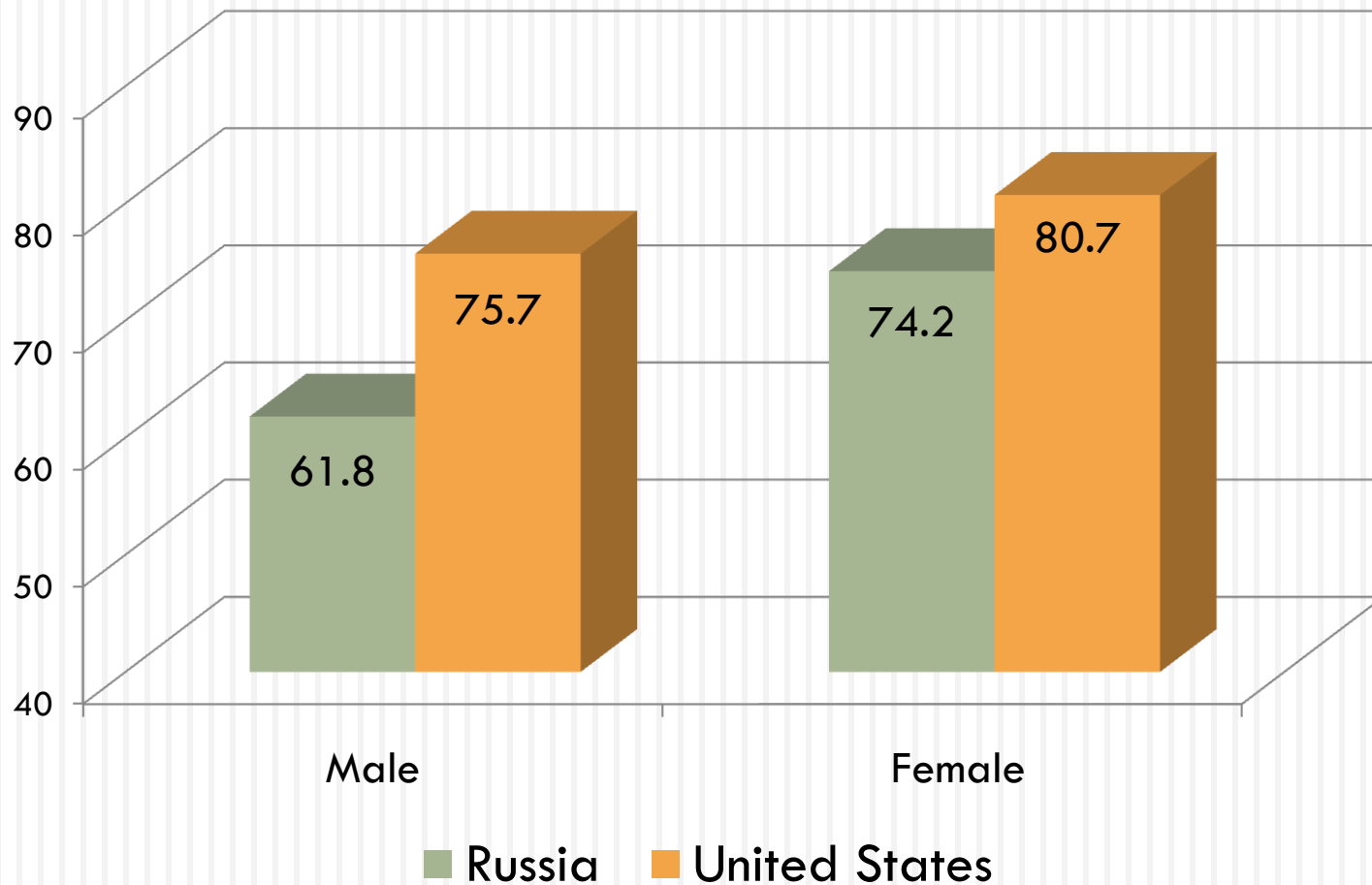


- I. Comparative Health Statistics
- II. Public Health vs. Medicine
- III. Public Health Model
- IV. US Public Health Care System

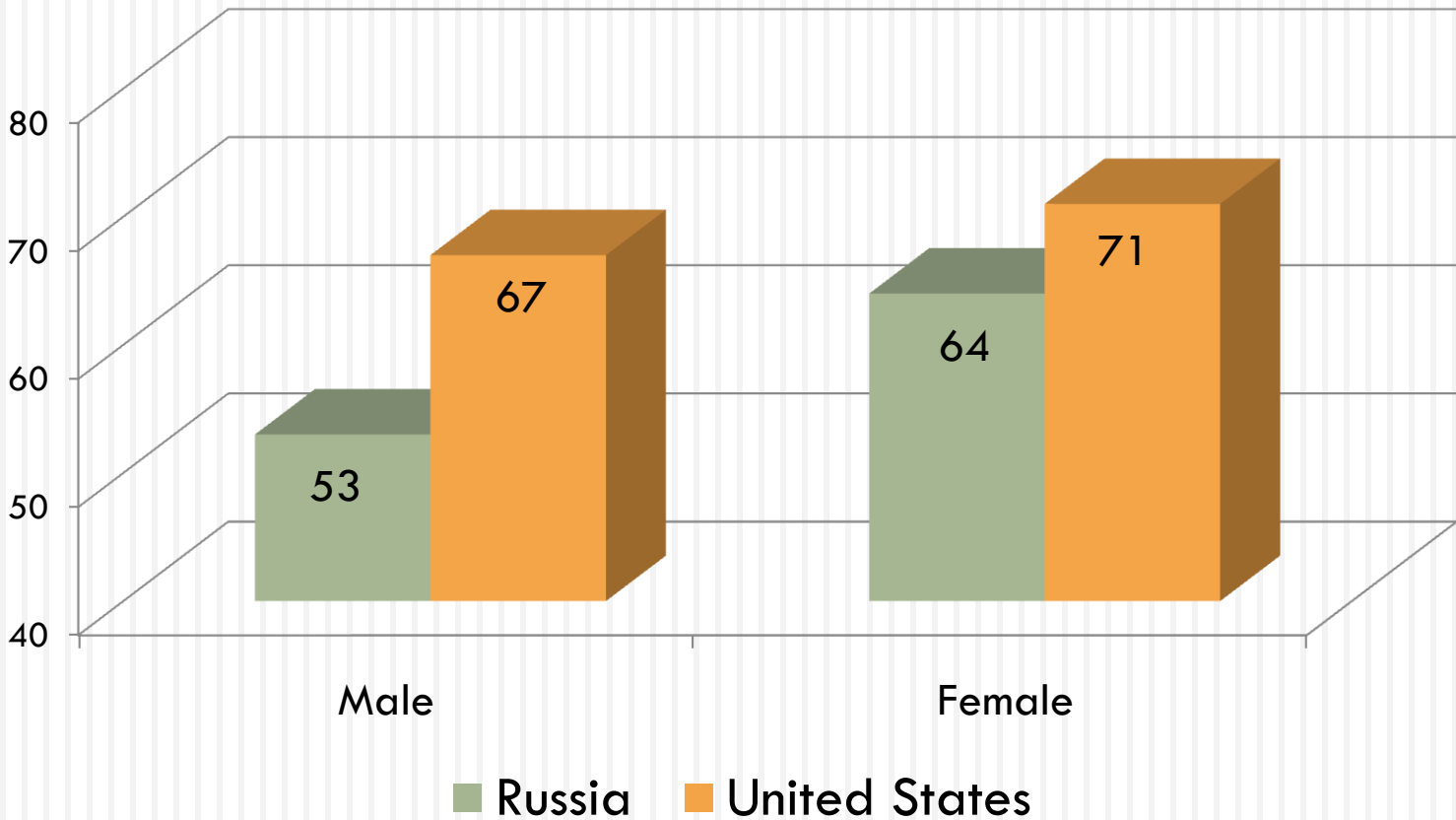
I. Comparative health statistics

- Life expectancy
- Healthy life expectancy
- Heart disease
- Stroke
- Diabetes
- Drunk driving deaths
- Maternal mortality
- Infant mortality

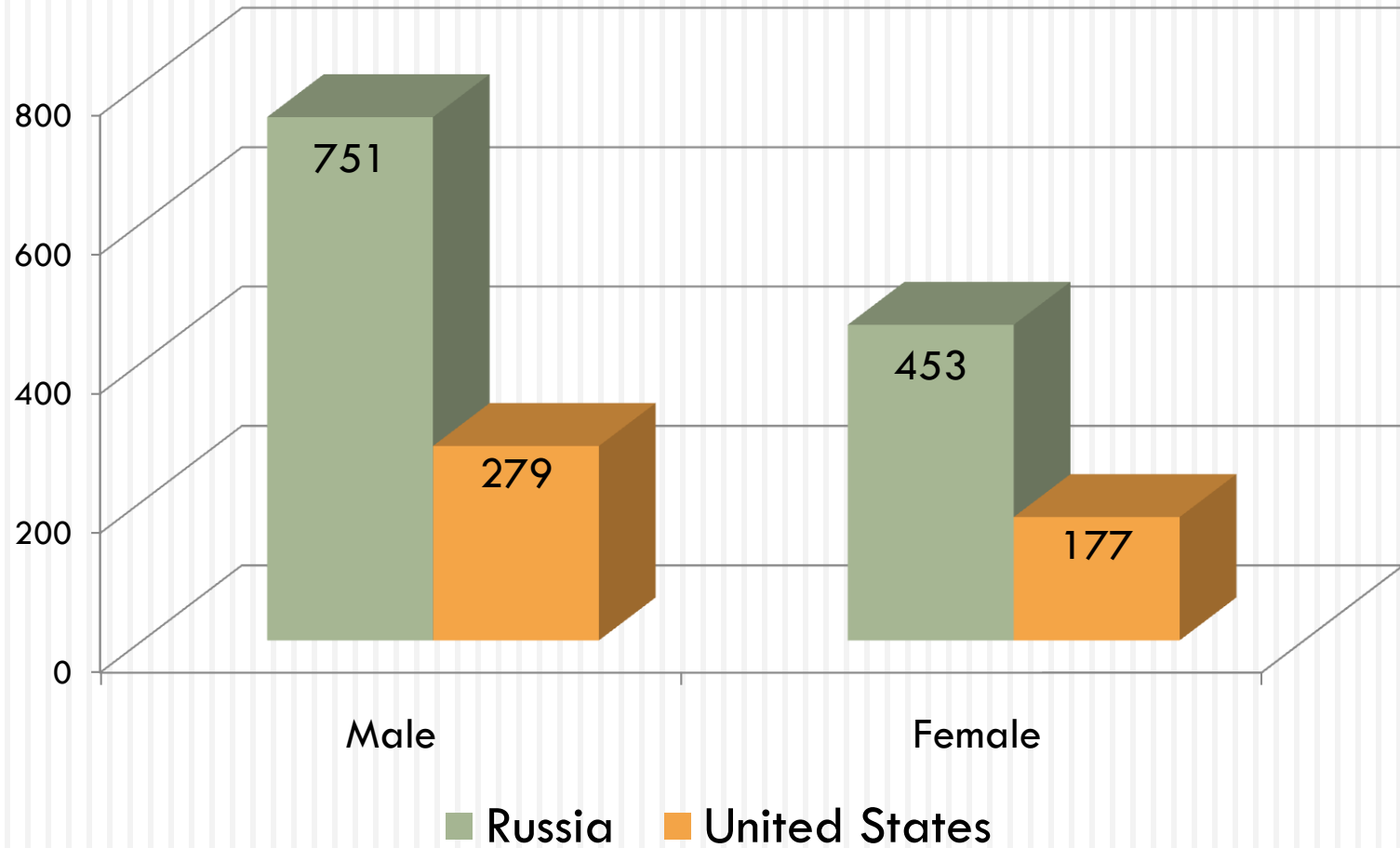
Life expectancy, 2008



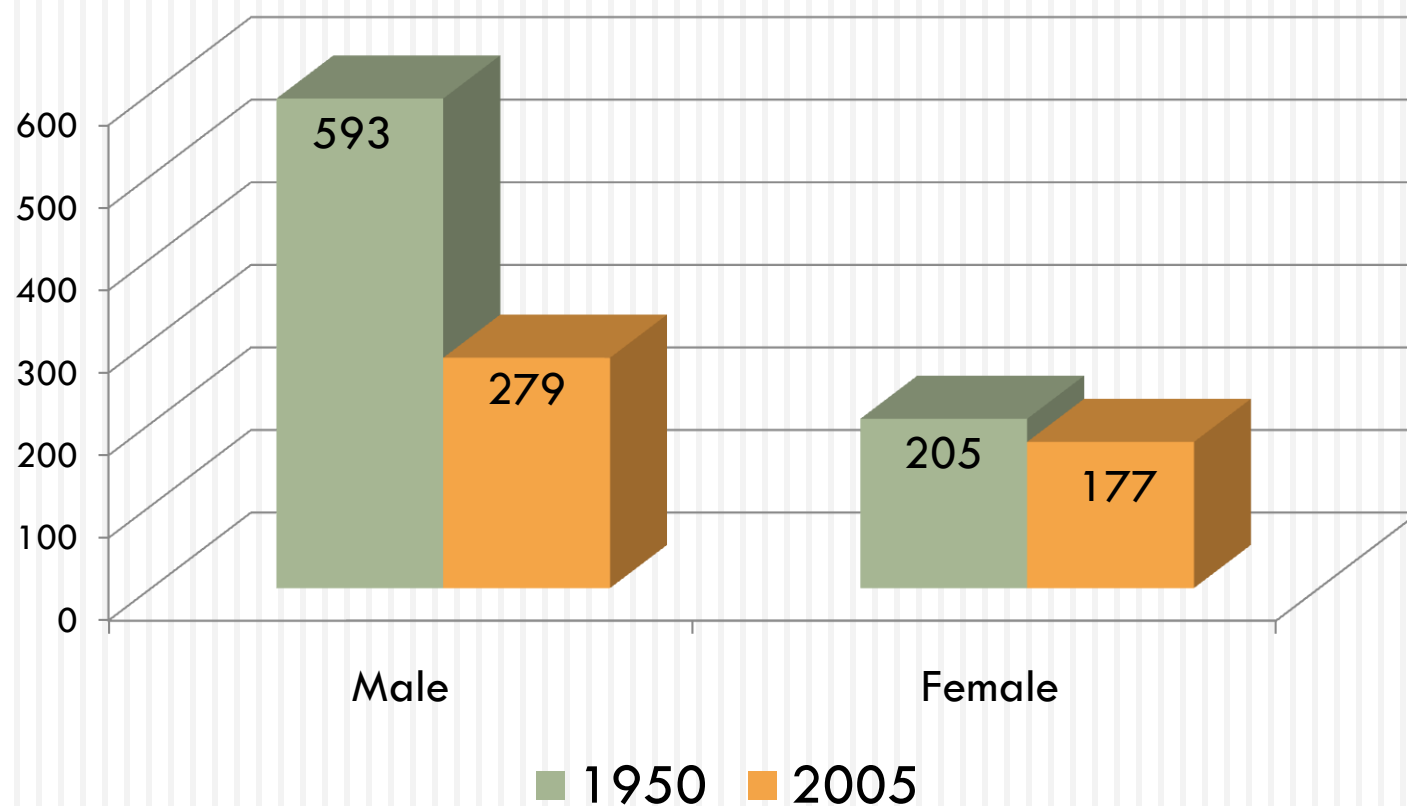
Healthy Life Expectancy



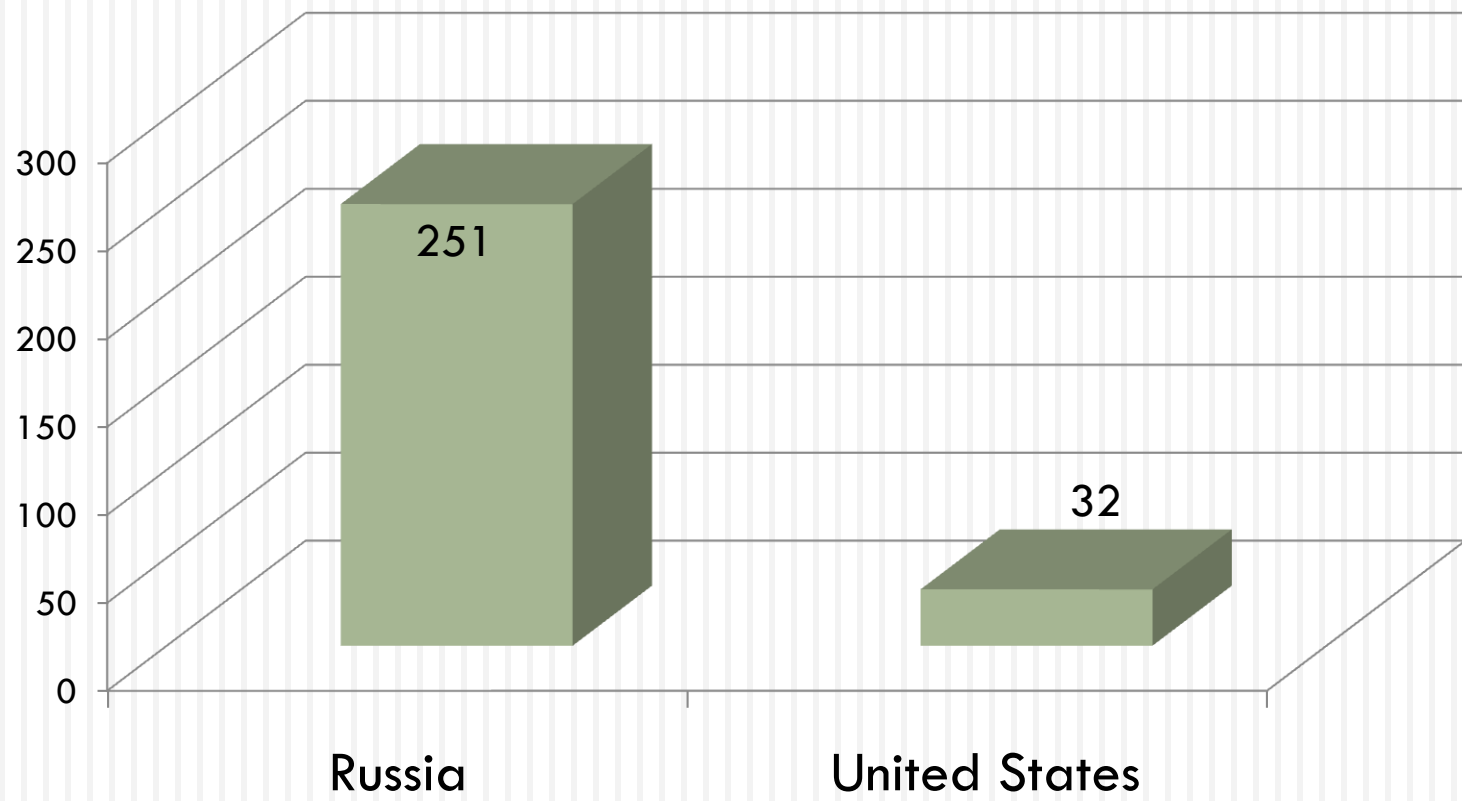
Heart disease rates



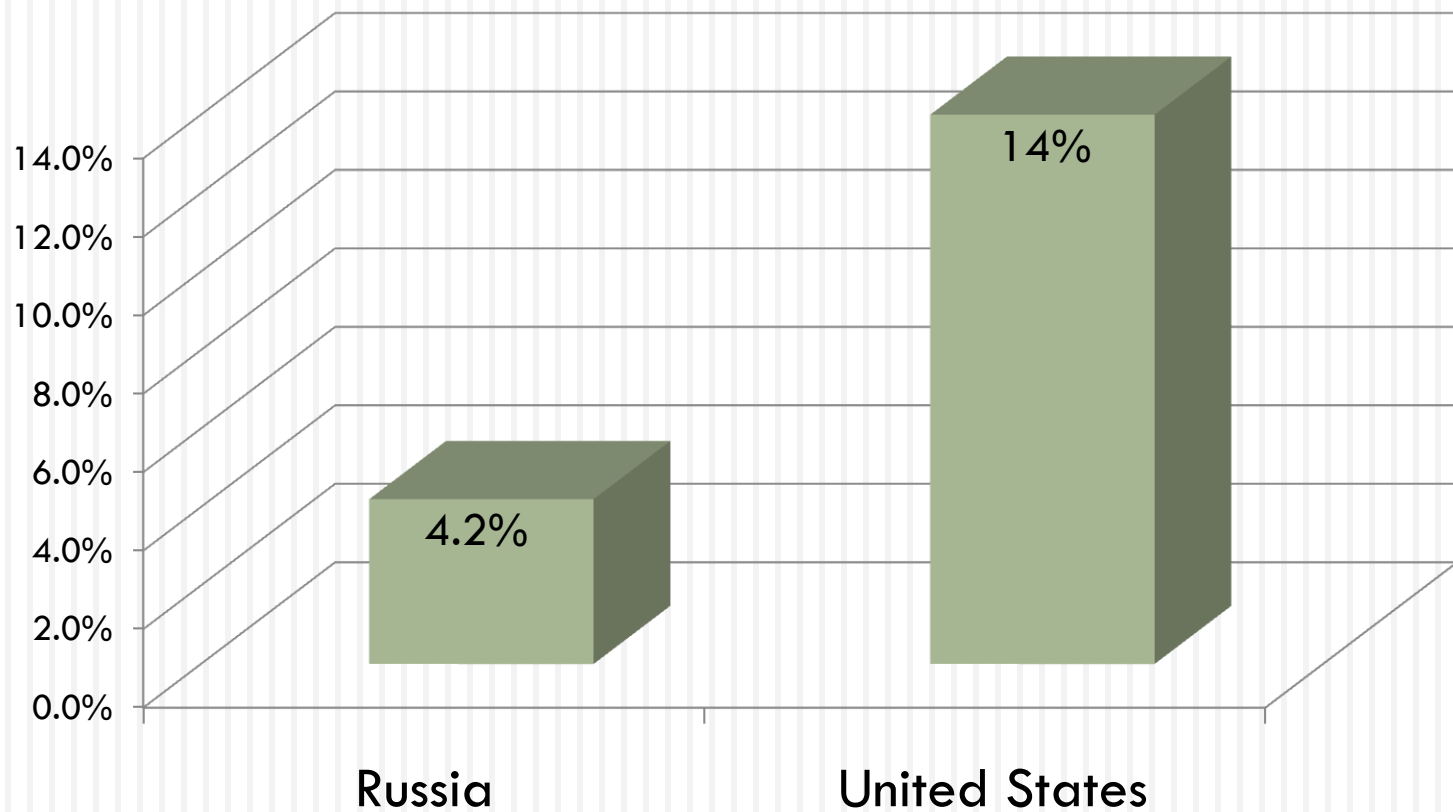
Heart disease rates, US, 1950 vs. 2005



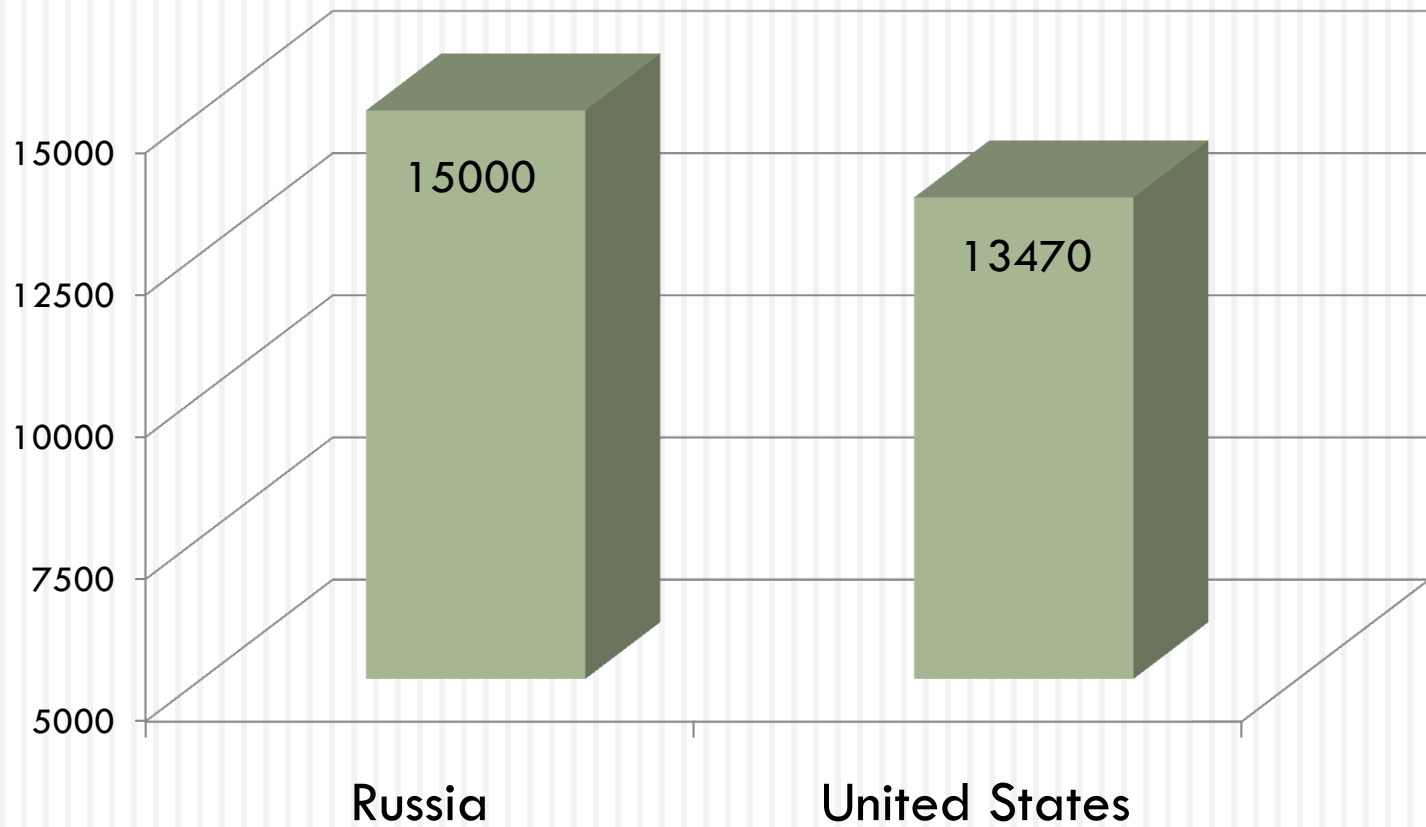
Stroke death rates



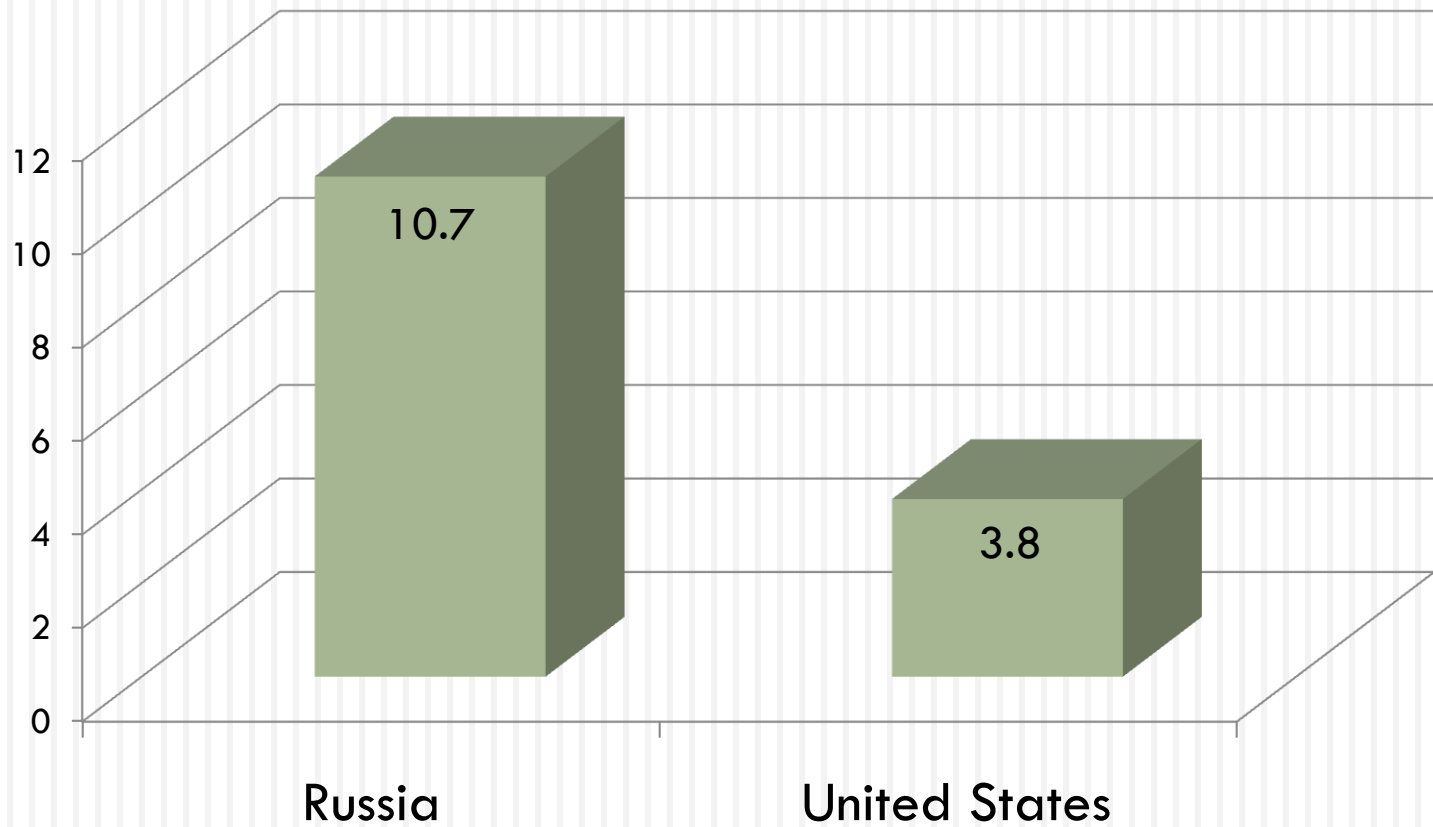
Diabetes rates, per 100,000



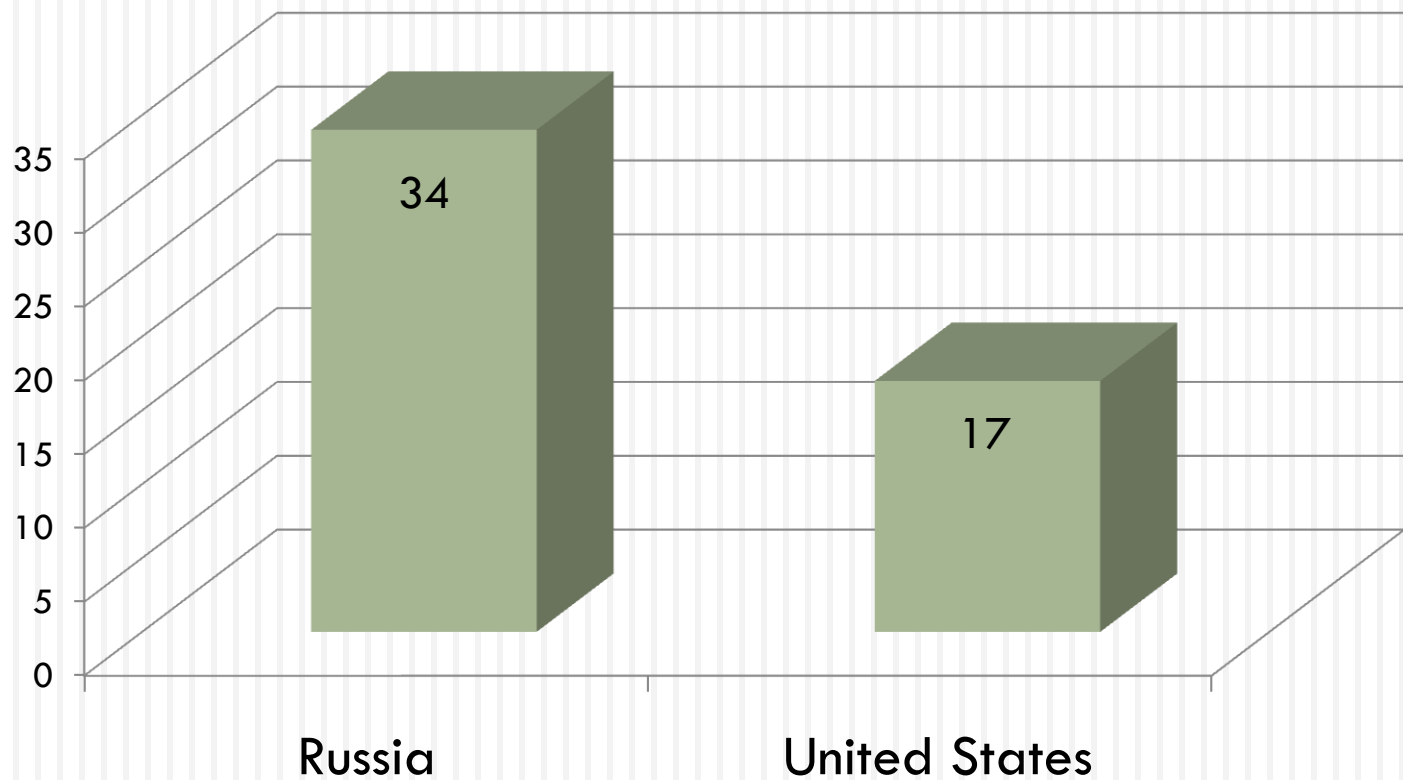
Drunk driving death, total number



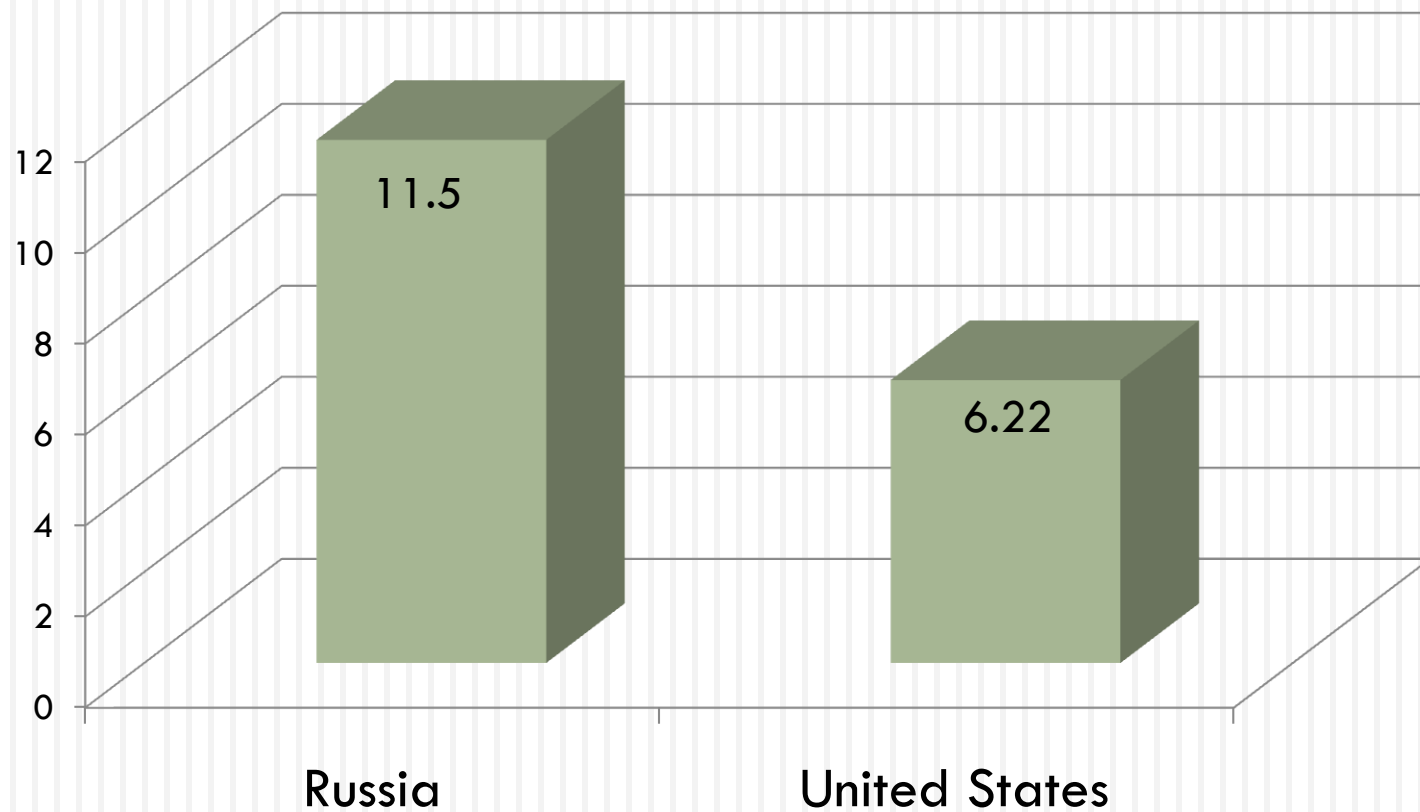
Drunk driving deaths rates, per 100,000



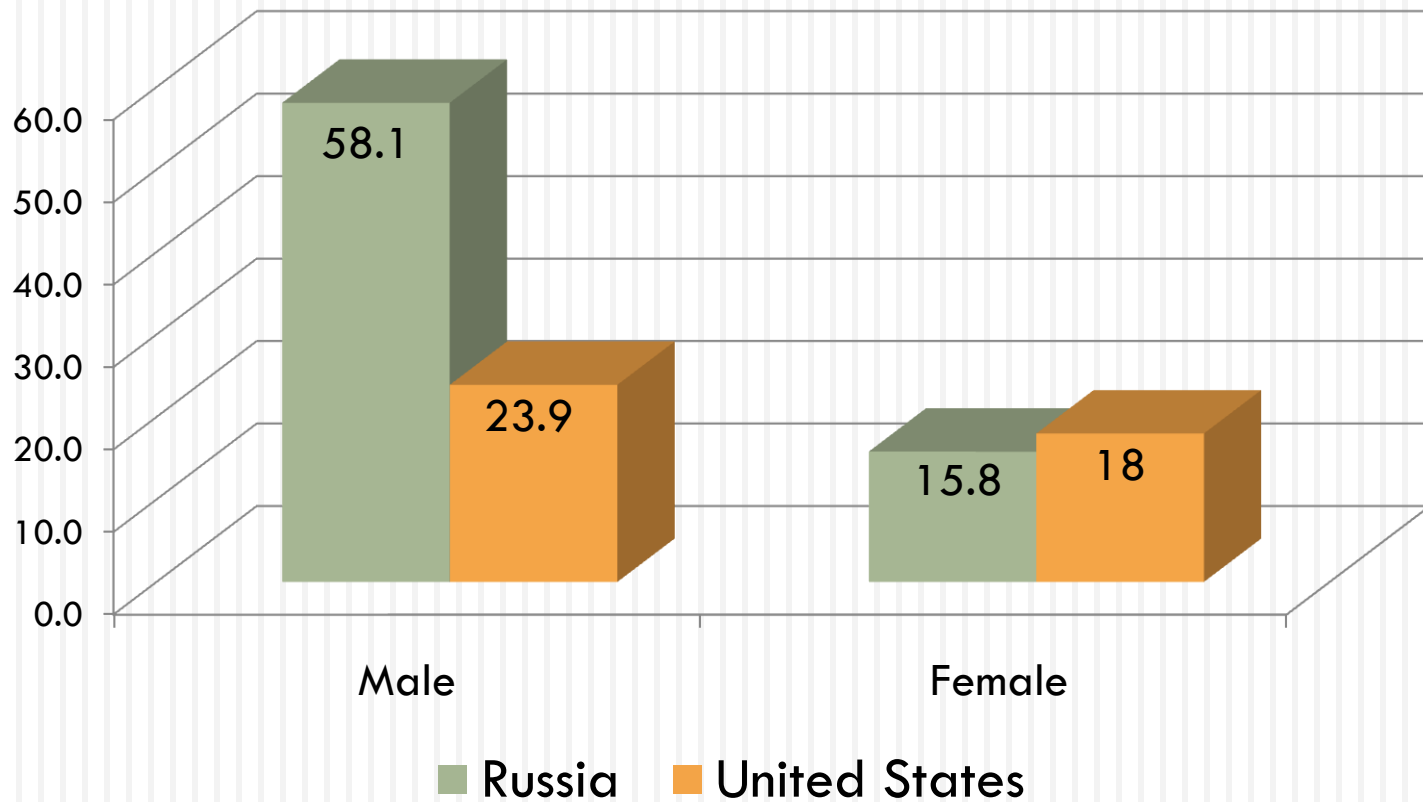
Maternal mortality rates, 2008



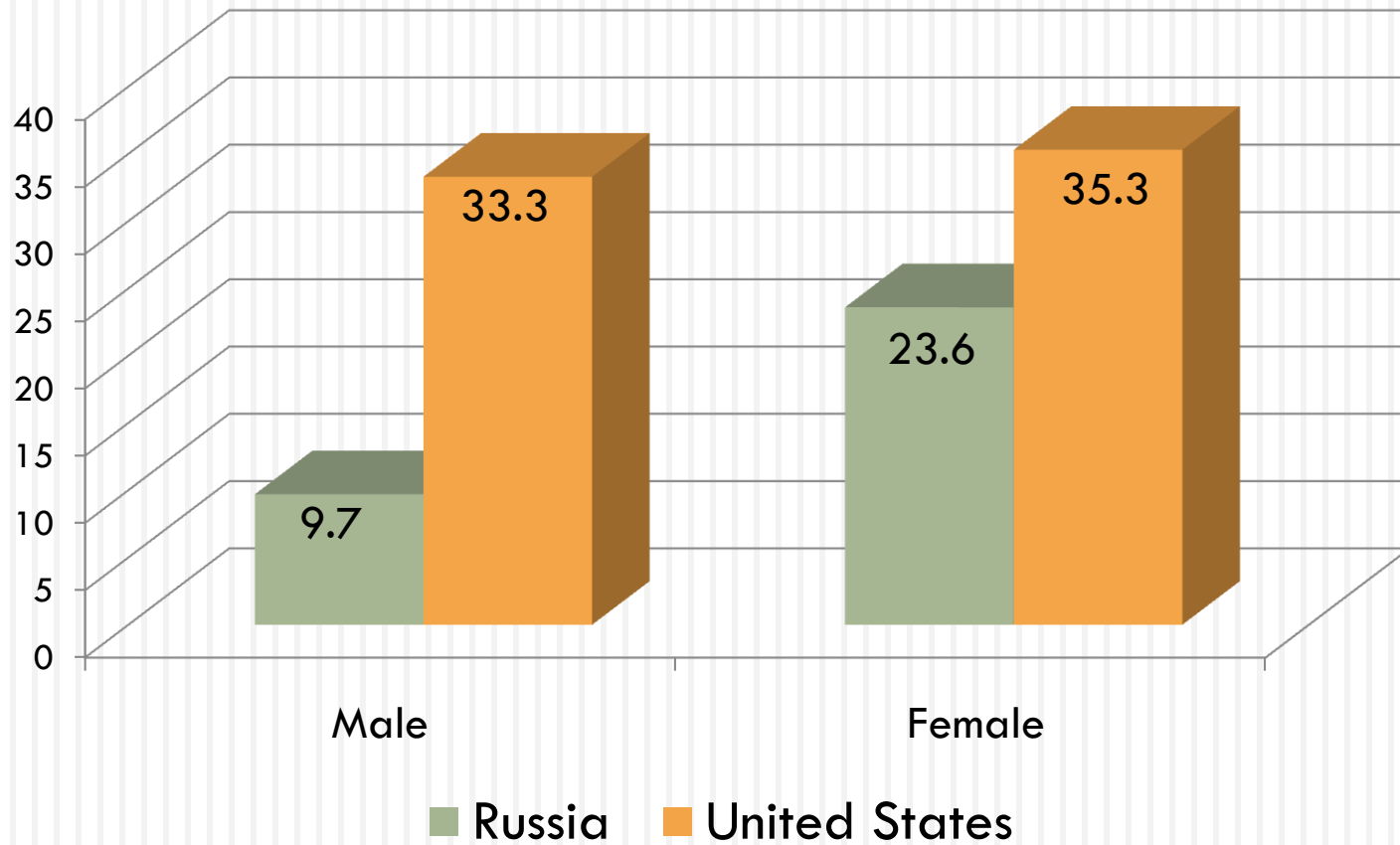
Infant Mortality Rates, 2009



Smoking rates



Obesity rates



II. Public Health vs. Medicine

- **Medicine** is the art and science of healing. It encompasses a range of care practices designed to restore health by treating illness.
- The goal of medicine is to heal sick persons in the encounter, here and now, between the physician and individual patient.

II. Public Health vs. Medicine

- The goal of public health is to protect and promote the health of the population as a whole.
- **Public health** is the science and politics of prevention.

Six major differences between Medicine and Public Health

Characteristic	Medicine	Public Health
Primary moral obligation	Best interests of individual patient; moral obligation to provide the best treatment possible	Best interests of society; scarce/limited resources necessitates priority setting; moral obligation to provide the most cost-effective interventions possible
Goal	Treatment	Prevention

Six major differences between Medicine and Public Health

Characteristic	Medicine	Public health
Recipient of services	Individual	Population
Aim	Focus on controlling the agent (after invading the host)	Focus on changing the environment

Six major differences between Medicine and Public Health

Characteristic	Medicine	Public Health
Scientific foundation	Based in biological & physiological sciences	Multi-disciplinary; multi-sectoral
Authority	Voluntary compliance	Police powers of state

Definition of Public Health

- Public health is the sum of all those activities that fulfill a society's collective responsibility for assuring the conditions for people to be healthy.
 - Adapted from Institute of Medicine, *The Future of Public Health*, 1988

Mission of Public Health

- Prevent epidemics & the spread of disease
- Protect against environmental hazards
- Prevent injuries
- Promote & encourage healthy behaviors
- Respond to disasters & assist communities in recovery
- Assure quality & accessibility of health services

Essential Public Health Services

- **Monitor** health status to identify community health problems.
- **Diagnose and investigate** health problems and health hazards in the community
- **Inform, educate, and empower** people about health issues.
- **Mobilize** community partnerships to identify and solve health problems.
- **Develop policies and plans** that support individual and community health efforts.

Essential Public Health Services

- **Enforce** laws and regulations that protect health and ensure safety.
- **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
- **Assure** a competent public health and personal healthcare workforce.
- **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
- **Research** for new insights and innovative solutions to health problems.

Looking upstream

My friend, Irving Zola, relates the story of a physician trying to explain the dilemmas of the modern practice of medicine:

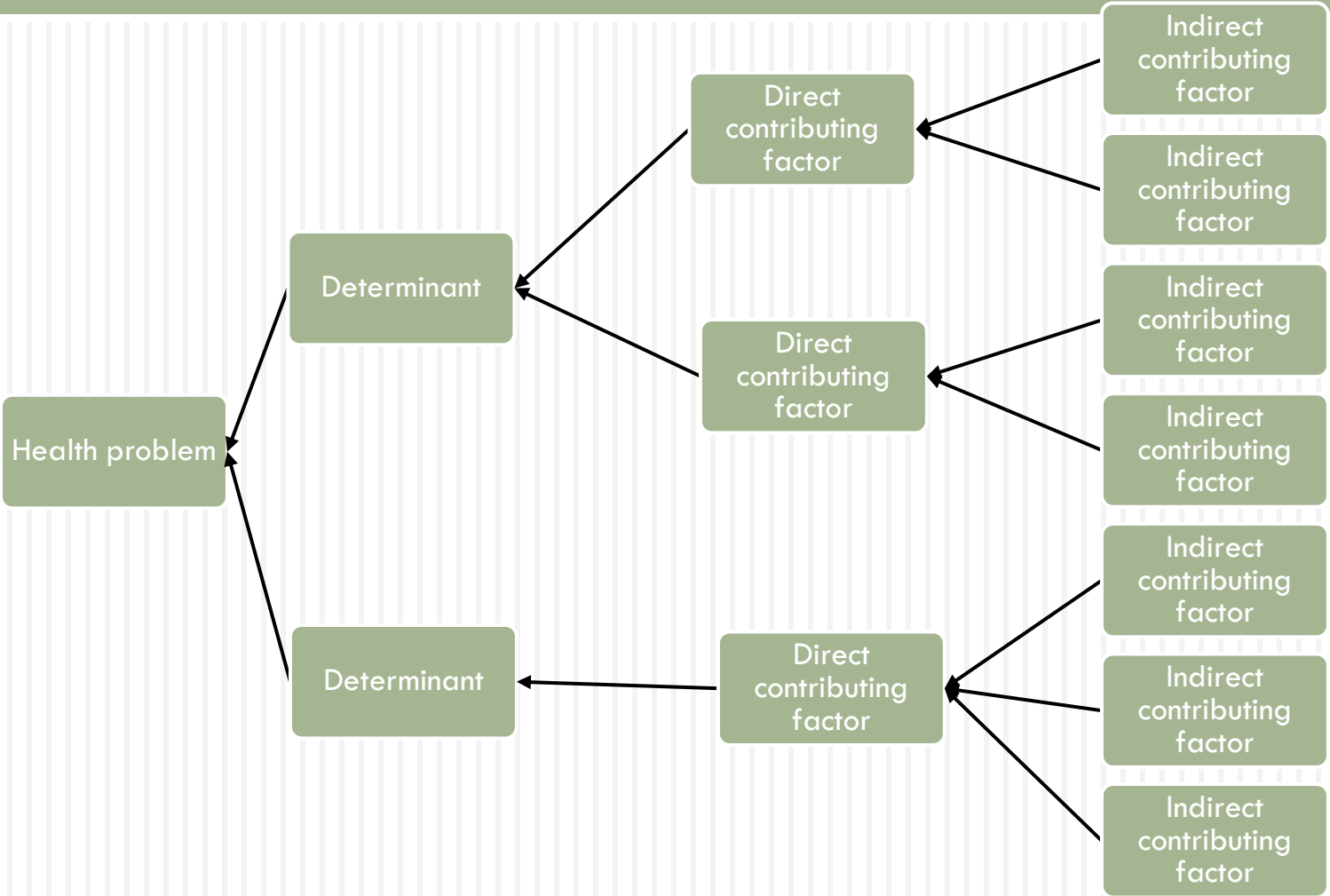
"You know, sometimes it feels like this. There I am standing by the shore of a swiftly flowing river and I hear the cry of a drowning man. So I jump into the river, put my arms around him, pull him to shore and apply artificial respiration. Just when he begins to breathe, there is another cry for help. So I jump into the river, reach him, pull him to shore, apply artificial respiration, and then just as he begins to breathe, another cry for help. So back in the river again, reaching, pulling, applying, breathing and then another yell. Again and again, without end, goes the sequence. You know, I am so busy jumping in, pulling them to shore, applying artificial respiration, that I have *no* time to see who the hell is upstream pushing them all in."

- John McKinlay

Definition of risk factor

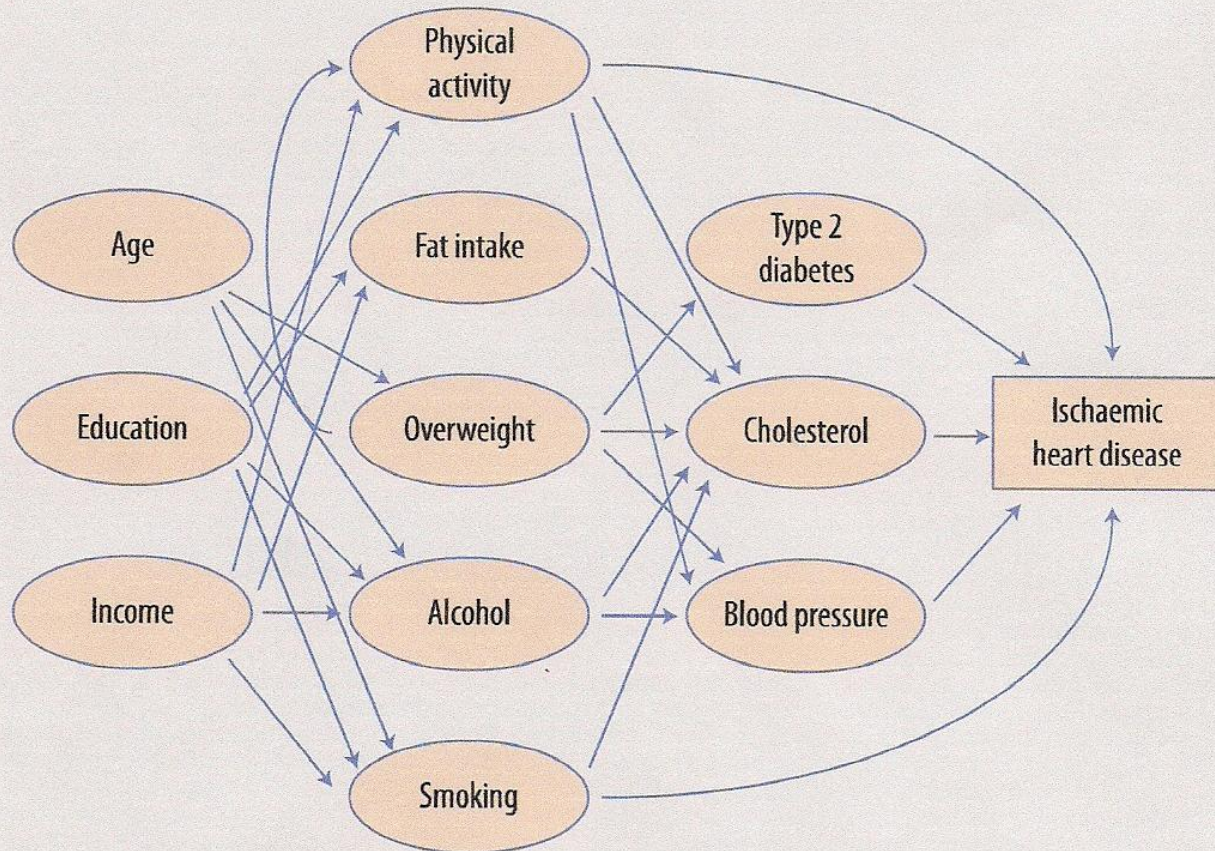
- A health risk factor is anything that increases one's chances of getting a disease. Common categories of risk factors include:
 - ▣ Biological or physiological factors
 - ▣ Behavioral factors
 - ▣ Psychosocial factors
 - ▣ Physical Environment
 - ▣ Social determinants of health

Risk Factor Analysis



Risk factor analysis

Figure 1: The causal chain. Major causes of ischaemic heart disease are shown. Arrows indicate some (but not all) of the pathways by which these causes interact.



Generic Risk Factor Model

Social Environment Risk Factors

(Family)
(Friends/Peers)
(Community)
(Opinion leaders)
(Policymakers)
Social theories
Social norms
Social support
Stigma

Psychological Risk Factors

Knowledge
Perceived severity
Perceived susceptibility
Attitudes
Perceived Norms
Intentions
Self-efficacy

Behavioral Risk Factors

Smoking
Physical activity
Overeating
Safe sex
Drug use
Alcohol abuse
Prenatal care
Screening

Physiological Risk Factors

Morbidity
High blood pressure
HIV+

Health Outcome

Mortality
CHD
Cancer

Physical Environment Risk Factors

Access
Fresh F&V
Spanish-speaking providers
Condom dispensers



Typical Public Health Services

- Family Health & Nutrition
- Community Health Promotion
- Environmental Health
- Health Statistics
- Substance Abuse Services
- Infectious Disease control
- Emergency Preparedness
- Health Care Safety & Quality

National spending on public health services

- Total amount, all public health services, \$46.4 billion
- 3.3% of all health care spending

Massachusetts Department of Public Health

- \$800 million
 - 60% from state; 40% from federal government (CDC & HRSA)
- ~\$109 per person
 - MA ranks 11th in nation; highest spends \$220 per person