

Increasing Psychology's Role in Health Research and Health Care

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Washington DC



Presentation Overview

- Changing global health care challenges: rise in chronic disease
 - Impact of urbanization on health
- Increasing recognition of the role of behavior in chronic disease
 - Etiology
 - Prevention
 - Management
- Biomedical model's failure to successfully address chronic disease
 - Rise in the Biopsychosocial model
- Implications for psychology
 - Opportunities
 - External challenges
 - Internal challenges

Percent of Population Living in Urban Environments

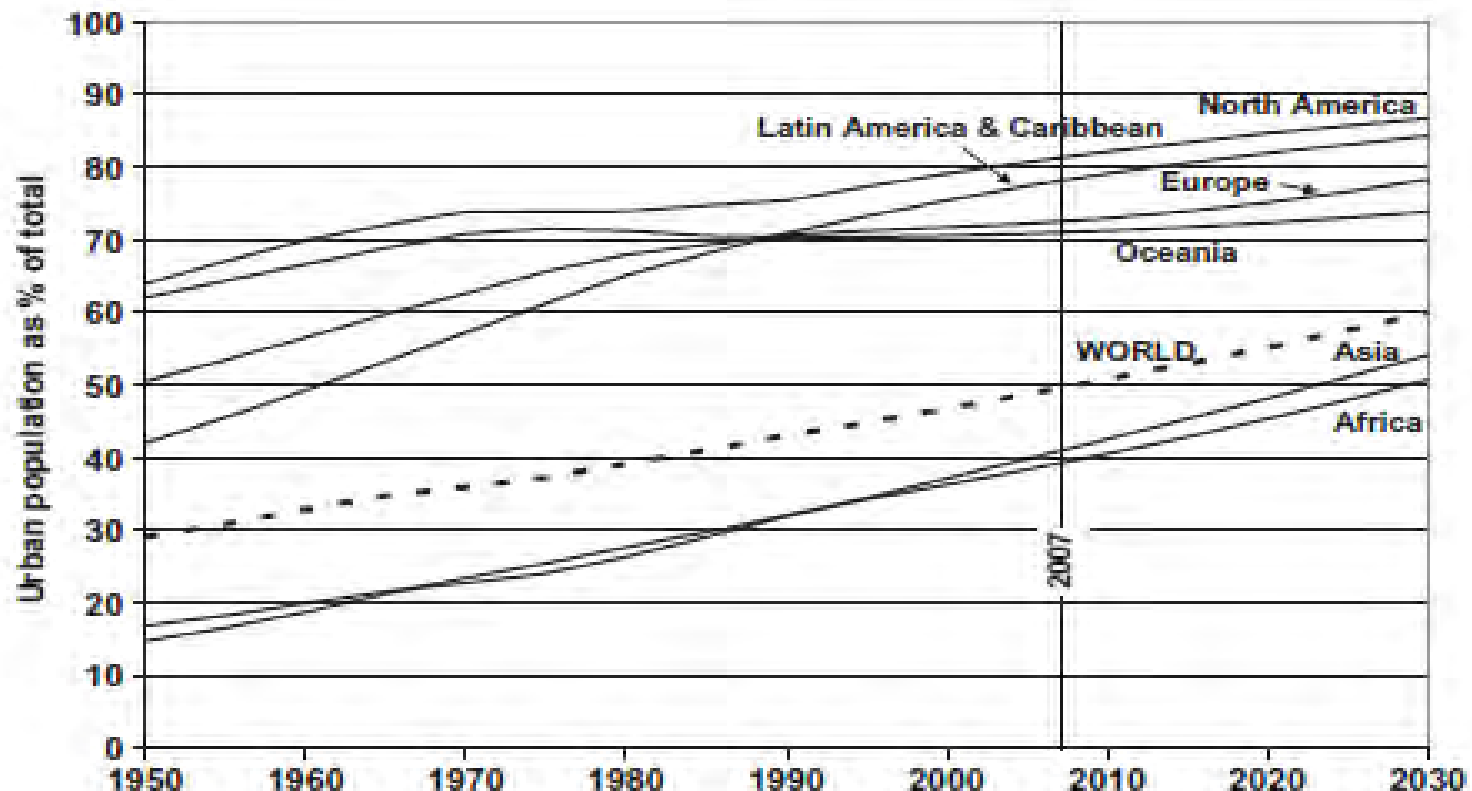
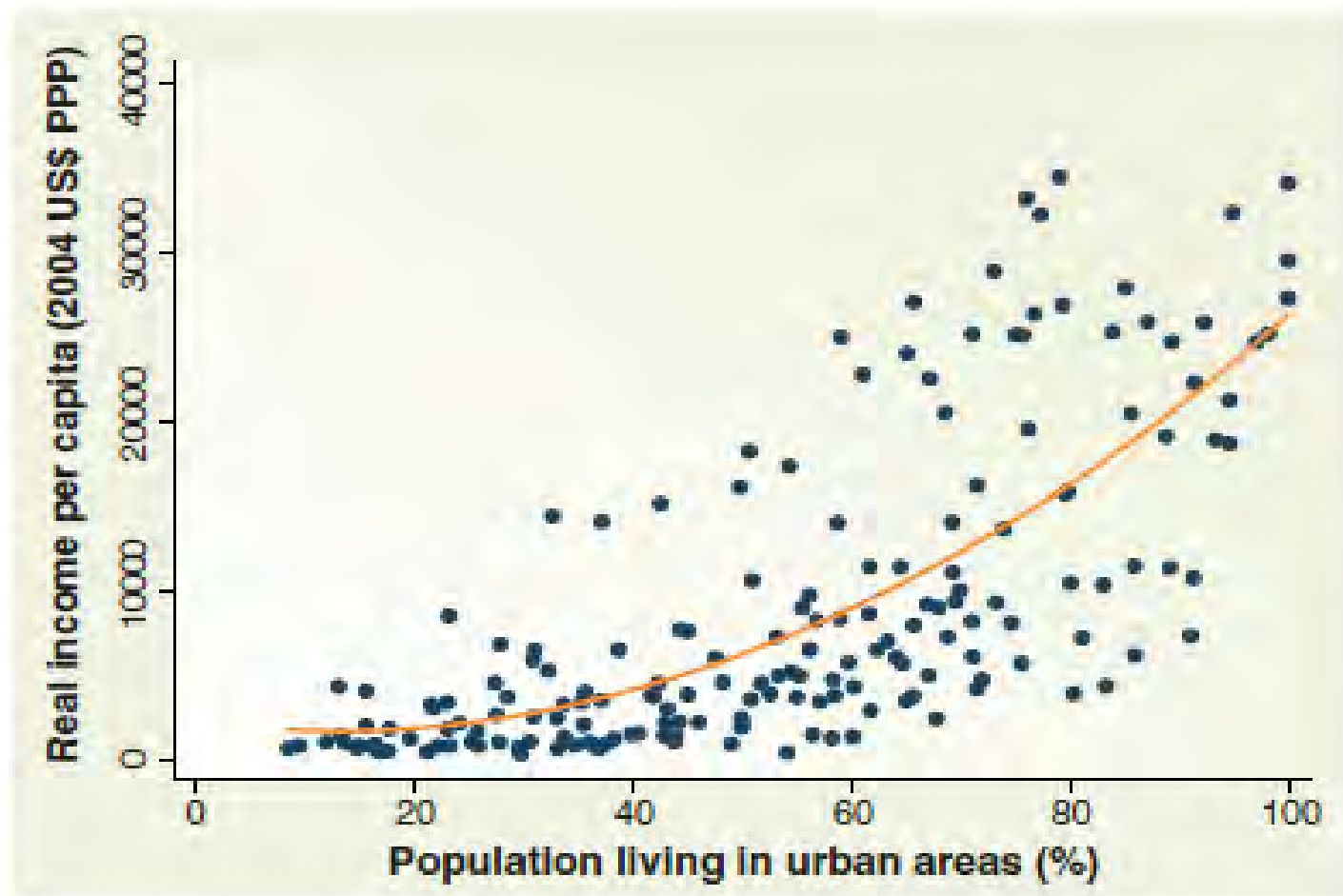


Figure 1 Trends and projections in urban population as a percentage of total population by world region

Leon D. Cities, Urbanization and Health. Int J of Epidemiology, 2008



Per Capita Income by Percent Population in Urban Environments (2000)



Bloom et al. Urbanization and the Wealth of Nations, Science 2008

Child Mortality Rates by Percent of Population in Urban Environments (2005)

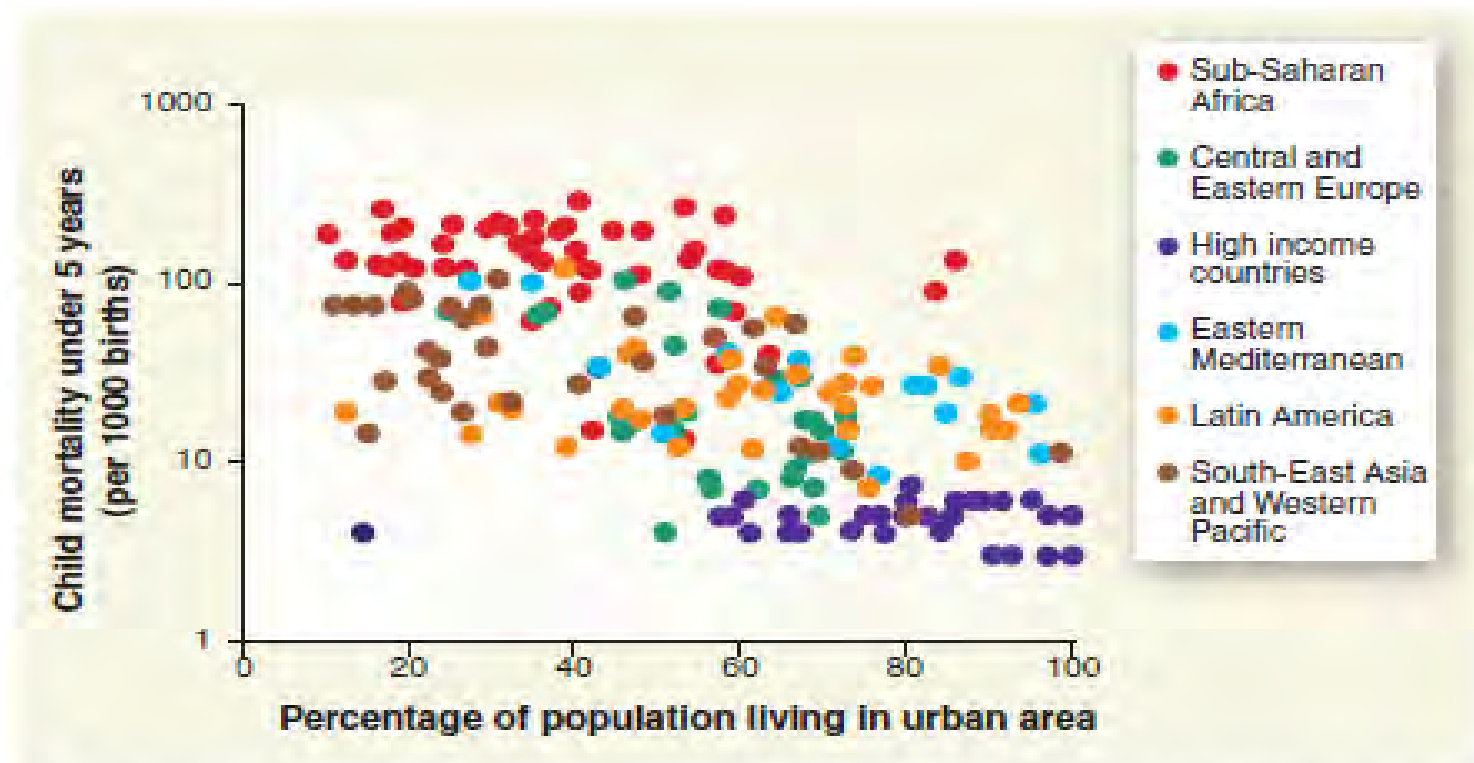


Fig. 3. Mortality rates of children under 5 years are lower in countries that are more urbanized, but mainly through differences between rather than within regions. Data are for 2005 (15, 16).

Urban Environments Can Be Associated With Improved Health

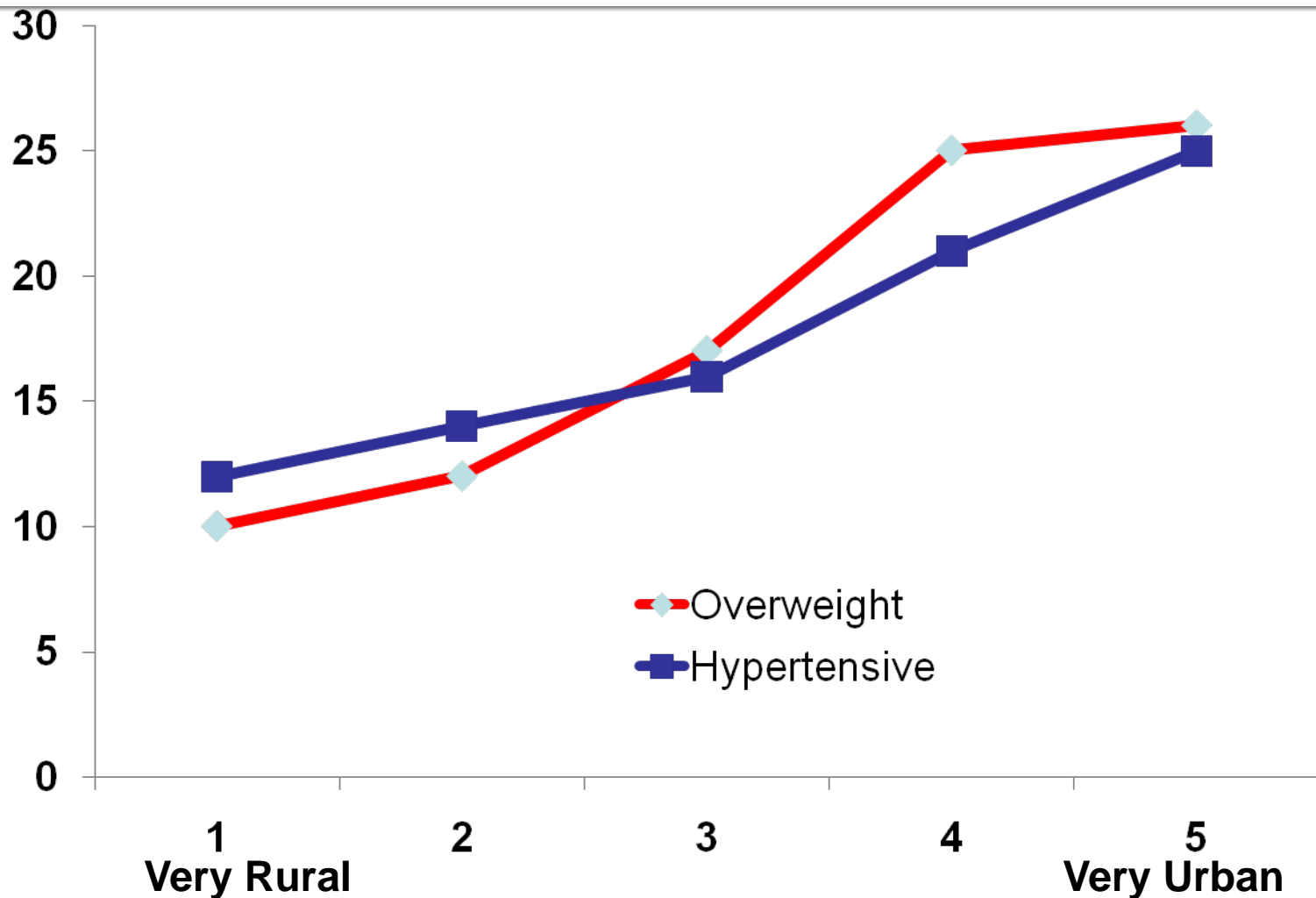
- **Cities can offer improved**
 - **Sanitation**
 - **Access to clean water**
 - **Access to improved housing**
 - **Access to health care**
 - **Education**
 - **Employment opportunities**

Urban Environments Are Associated with Increases in Chronic Disease

- Dietary changes – increased fat intake – and reduced physical activity are associated with increases in:
 - Obesity
 - High blood pressure
 - Cardiovascular disease
 - Diabetes

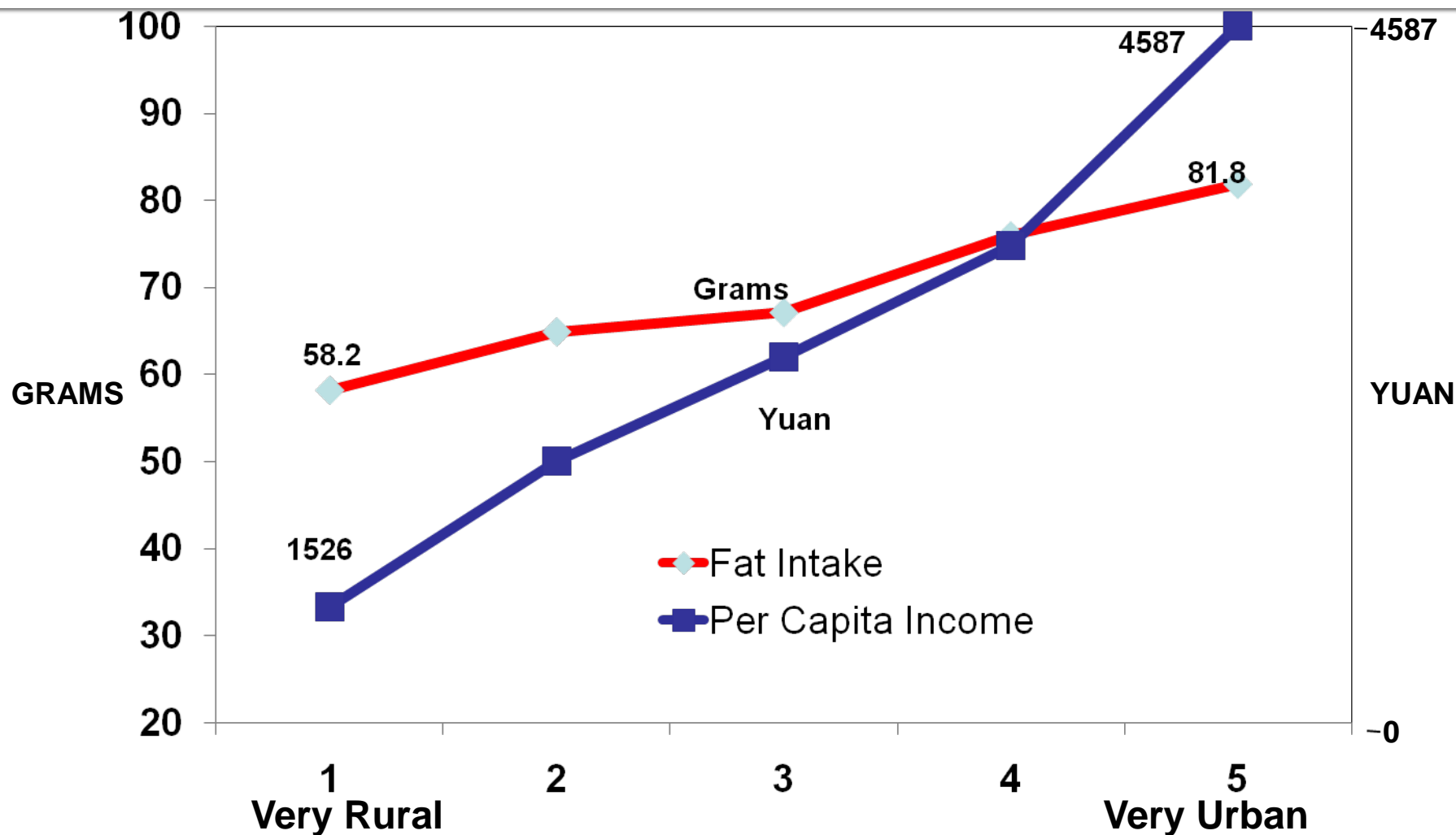


Percent of Population Overweight and Hypertensive as a Function of Urbanicity in China (1991-2004)



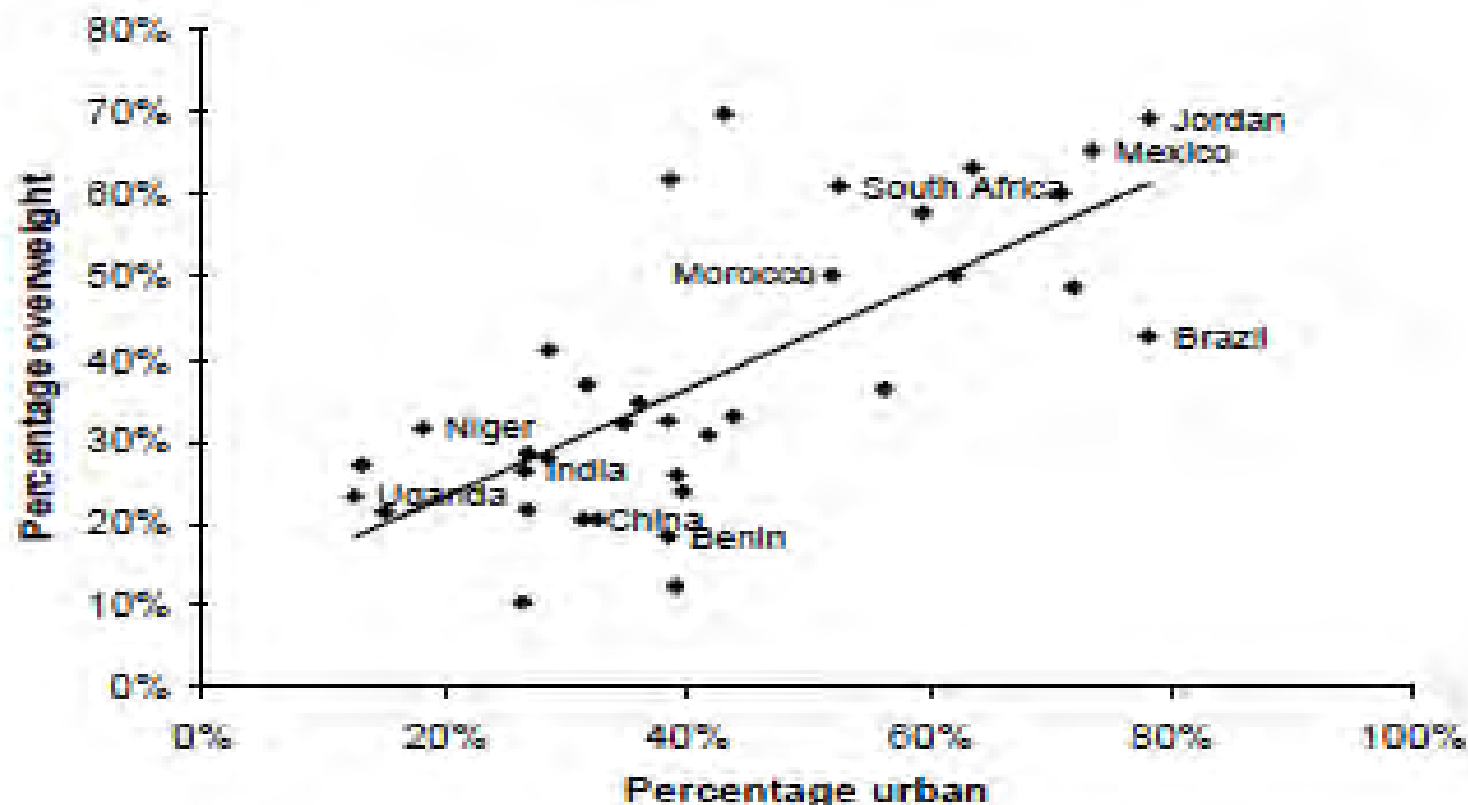
Poel et al. Urbanization and the spread of diseases of affluence in China. *Economics and Human Biology* 2009

Daily Fat Intake and Annual Per Capita Income as a Function of Urbanicity in China



Worldwide, Urbanization is Associated with an Increased Prevalence of Overweight

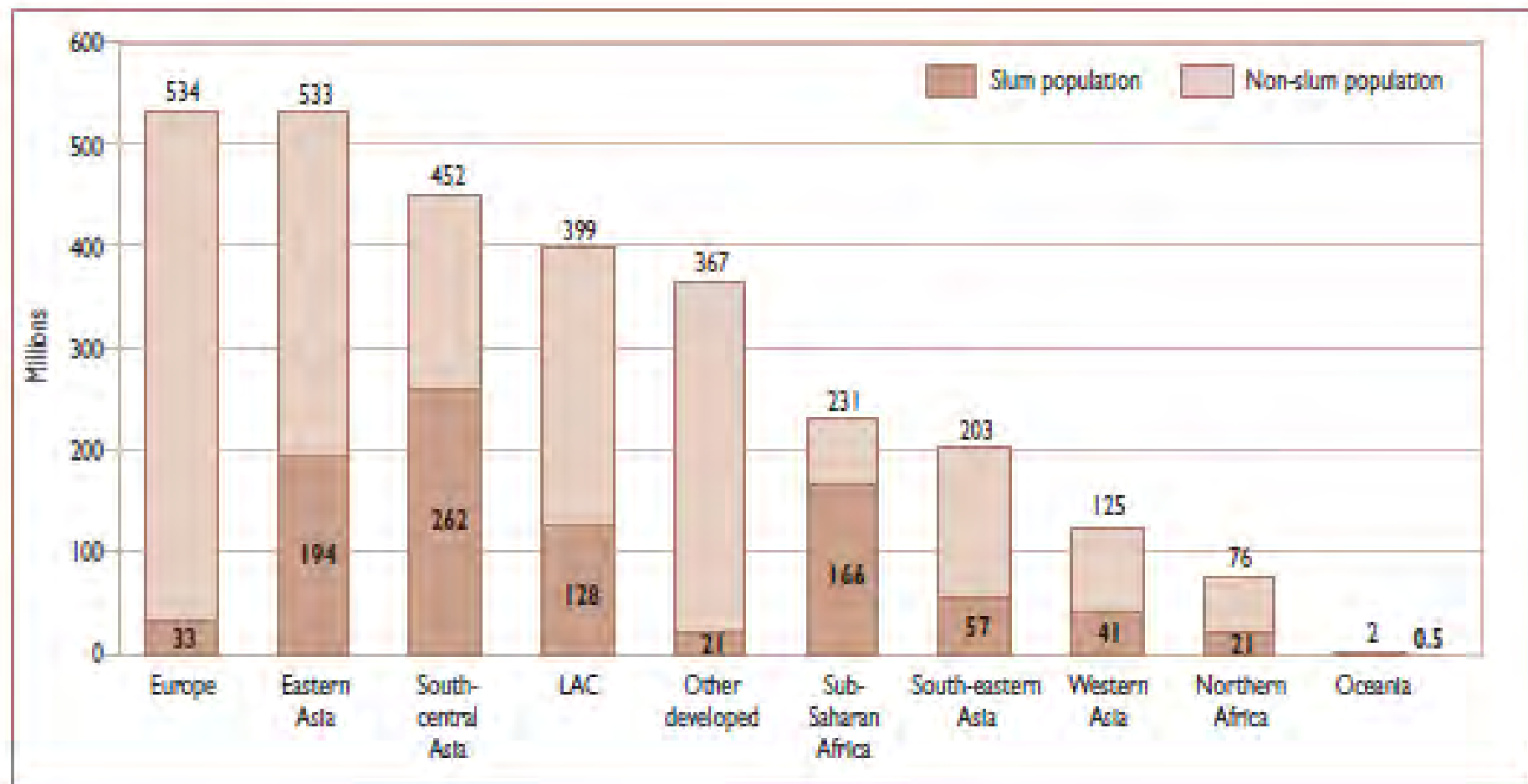
A. Overweight Prevalence in Urban Areas vs. Urbanization



Mendez & Popkin. Globalization, Urbanization, and Nutritional Change in the Developing World. J of Agriculture and Development



One Caveat: If Urbanization is Too Rapid, Cities Can Become Overwhelmed: Slum and Non-Slum Urban Dwellers by Region (2001)



Urbanization and Health

- Urbanization, while reducing deaths from infectious disease, presents new health challenges, with increasing numbers of people suffering from chronic disease
- One caveat: When urban areas are overwhelmed by rapid population growth, slums develop which are associated with high mortality rates from communicable diseases – essentially eliminating the health advantage normally offered by an urban environment



Increasing Recognition of the Role of Behavior in Chronic Disease

JAMA. 2004;291:1238-1245

US Rank	Cause of Death by Disease (2000)	Actual Cause of Death (2000)
1	Heart Disease	Tobacco
2	Cancer	Diet/Activity
3	Stroke	Alcohol
4	Pulmonary Disease	Microbial Agents
5	Accidents	Toxic Agents
6	Diabetes	Motor Vehicles
7	Pneumonia/Influenza	Firearms
8	Alzheimer's	Sexual Behavior
9	Kidney disease	Illicit Drug Use



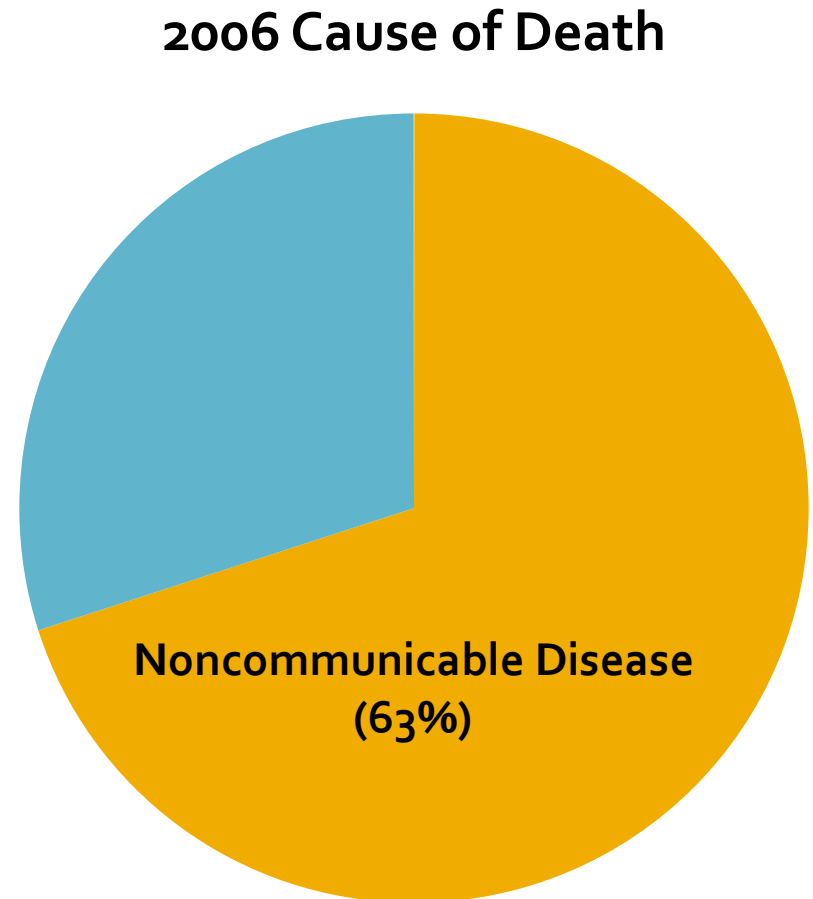
Increasing Recognition of Role of Behavior in Chronic Disease

- ⦿ Disease etiology
- ⦿ Disease prevention
- ⦿ Disease management
 - ⦿ ~ 30% of patients fail to adhere to short-term regimens
 - ⦿ ~ 50% of patients fail to adhere to long-term regimens
 - ⦿ ~ 70% of patients fail to comply when asymptomatic
 - ⦿ ~ 75% of patients have difficulty making lifestyle changes
 - ⦿ Chronic disease requires long-term often complex medical regimens; many require lifestyle changes
 - ⦿ Poor medical regimen adherence associated with increased health care costs

Clinical Therapeutics, 2000, 22:858-871; Johnson, Psychosocial clinical guidelines for the care of patients with diabetes, 2012

WHO: Chronic Disease a Major Health Challenge for the 21st Century

- **Top Noncommunicable Diseases Worldwide:**
 - **Cardiovascular (48%)**
 - **Cancer (21%)**
 - **Chronic Respiratory Disease (12%)**
 - **Diabetes (4%)**

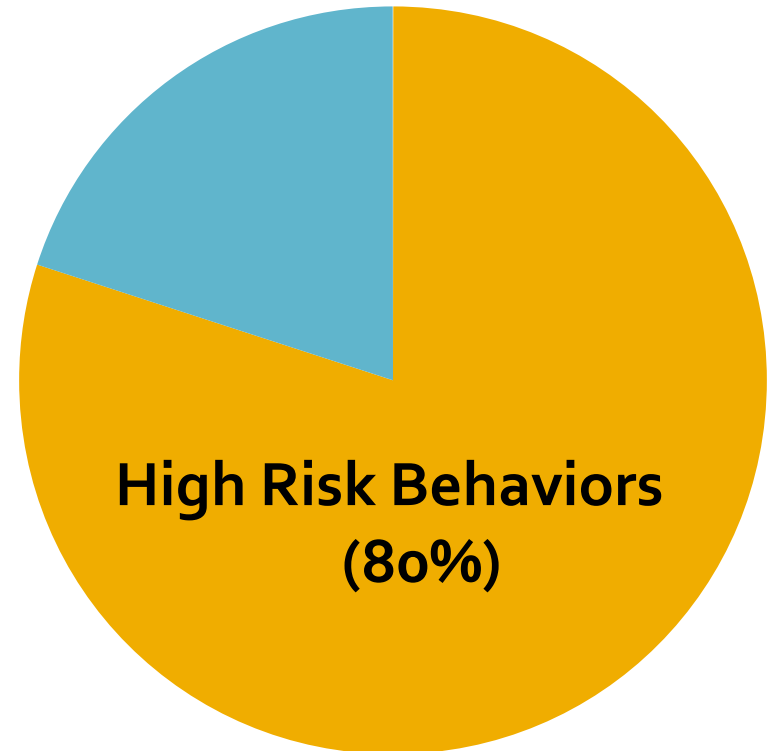


WHO: High Risk Behaviors Responsible for 80% of Cardiovascular Deaths

■ Top High Risk Behaviors

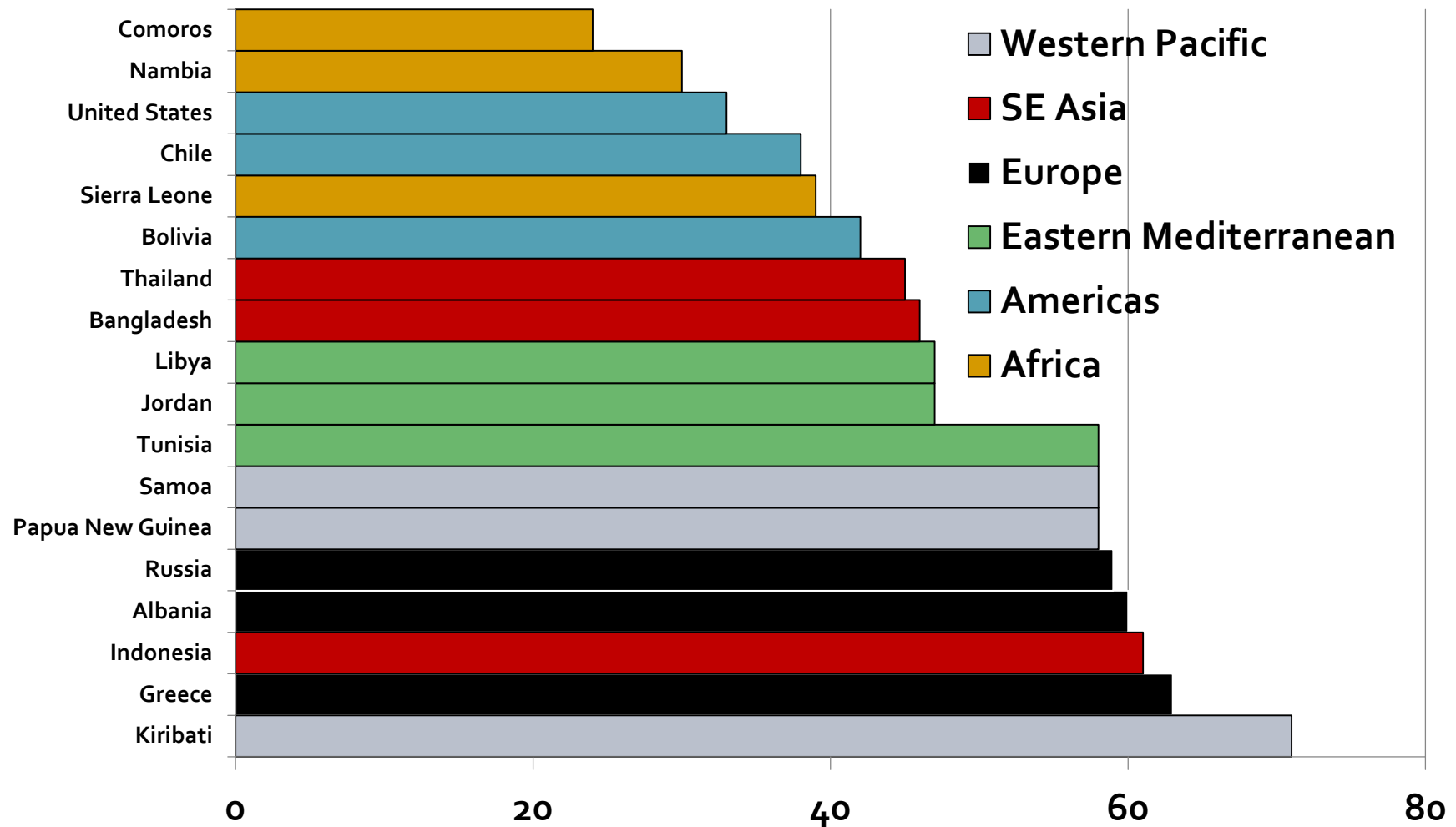
- Tobacco
- Physical inactivity
- Poor diet
- Harmful use of alcohol

Causes of Death from Cardiovascular Disease



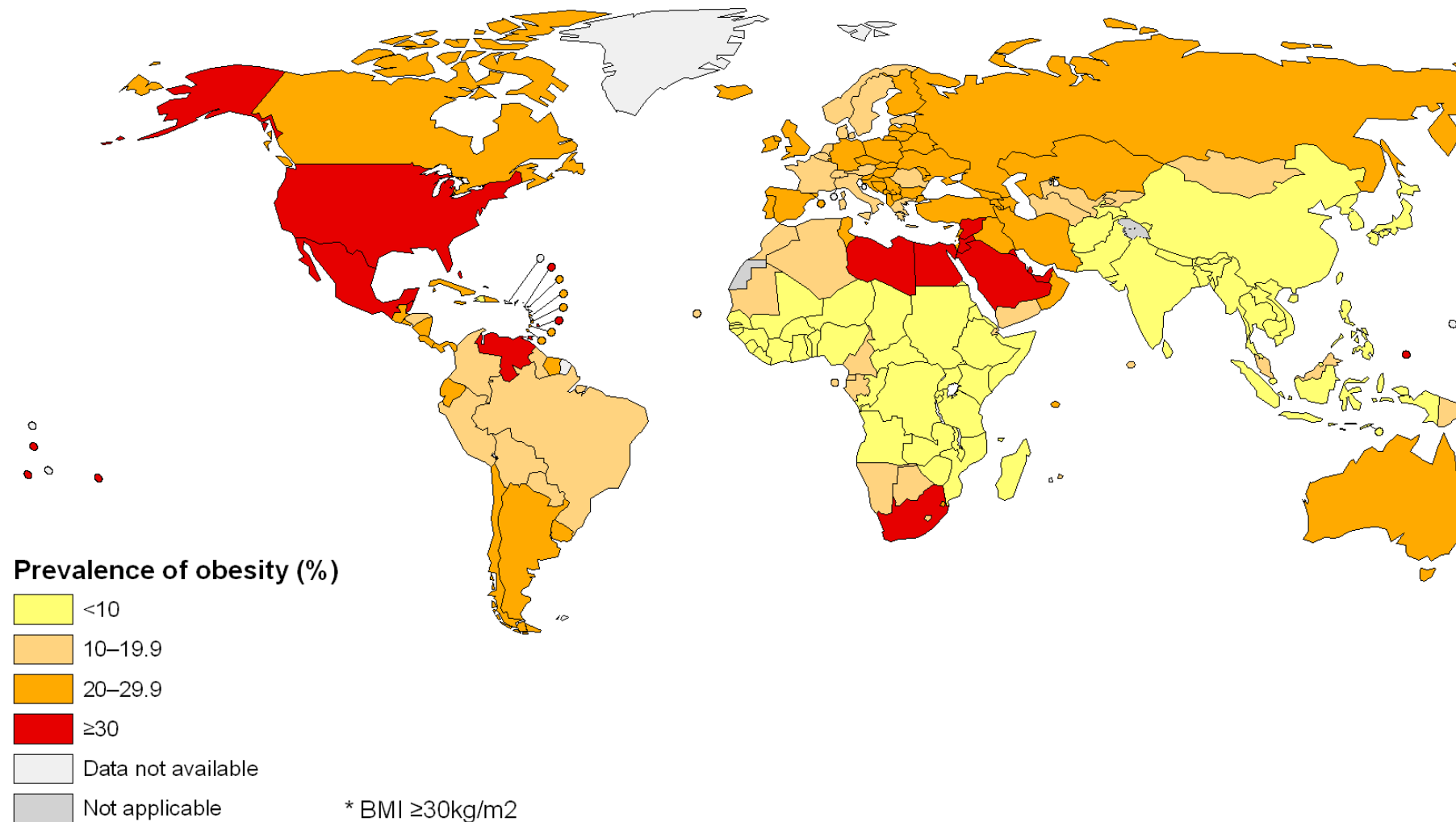


Percent Male Smokers for the Three Countries with the Highest Prevalence by Region: WHO 2009





Prevalence of obesity*, ages 20+, age standardized Both sexes, 2008



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

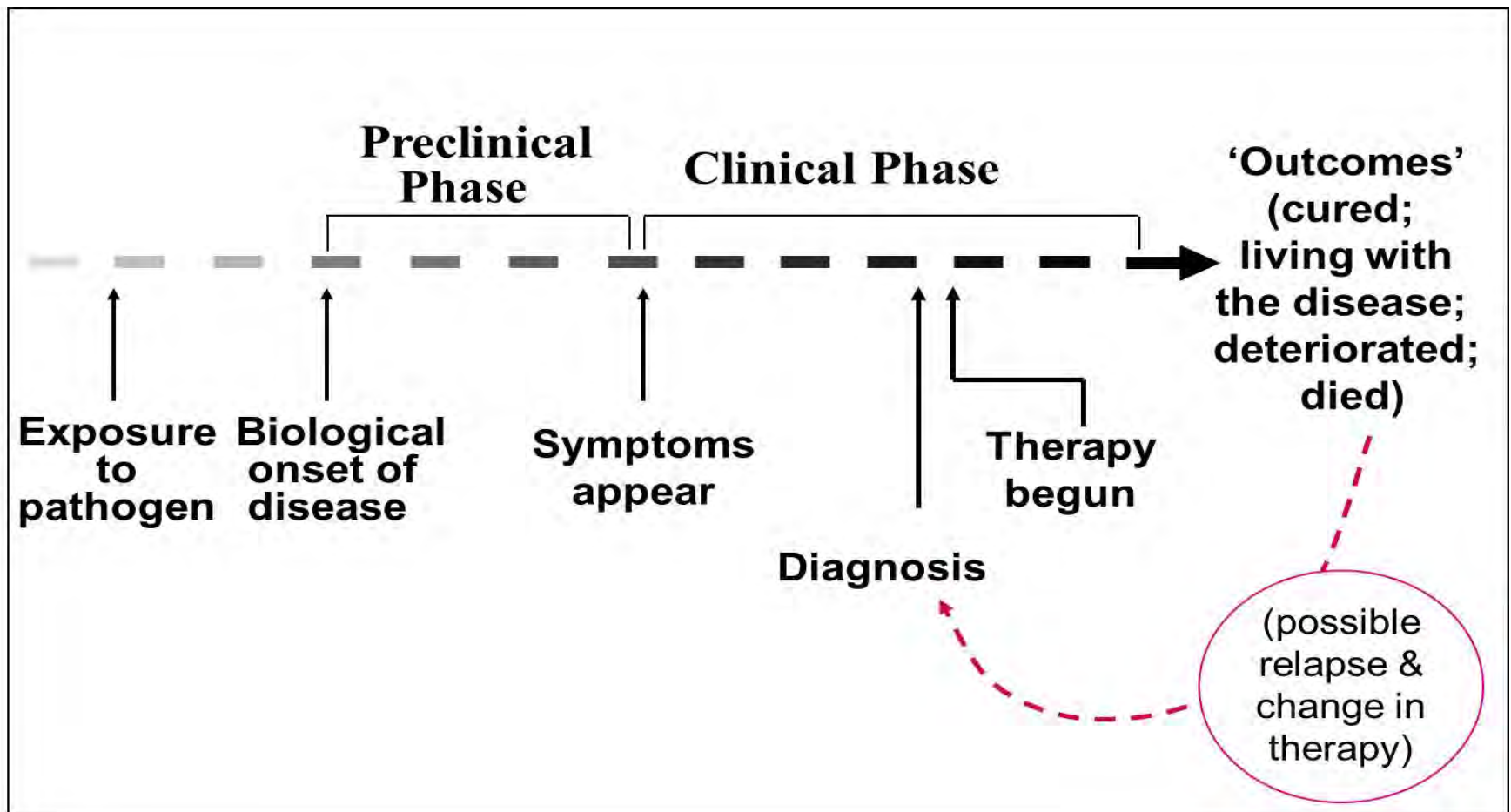
Data Source: World Health Organization
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization



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Biomedical Model: Successful for Infectious Disease, Has Not Worked Well for Chronic Illness



The Biopsychosocial Model Better Addresses Chronic Disease

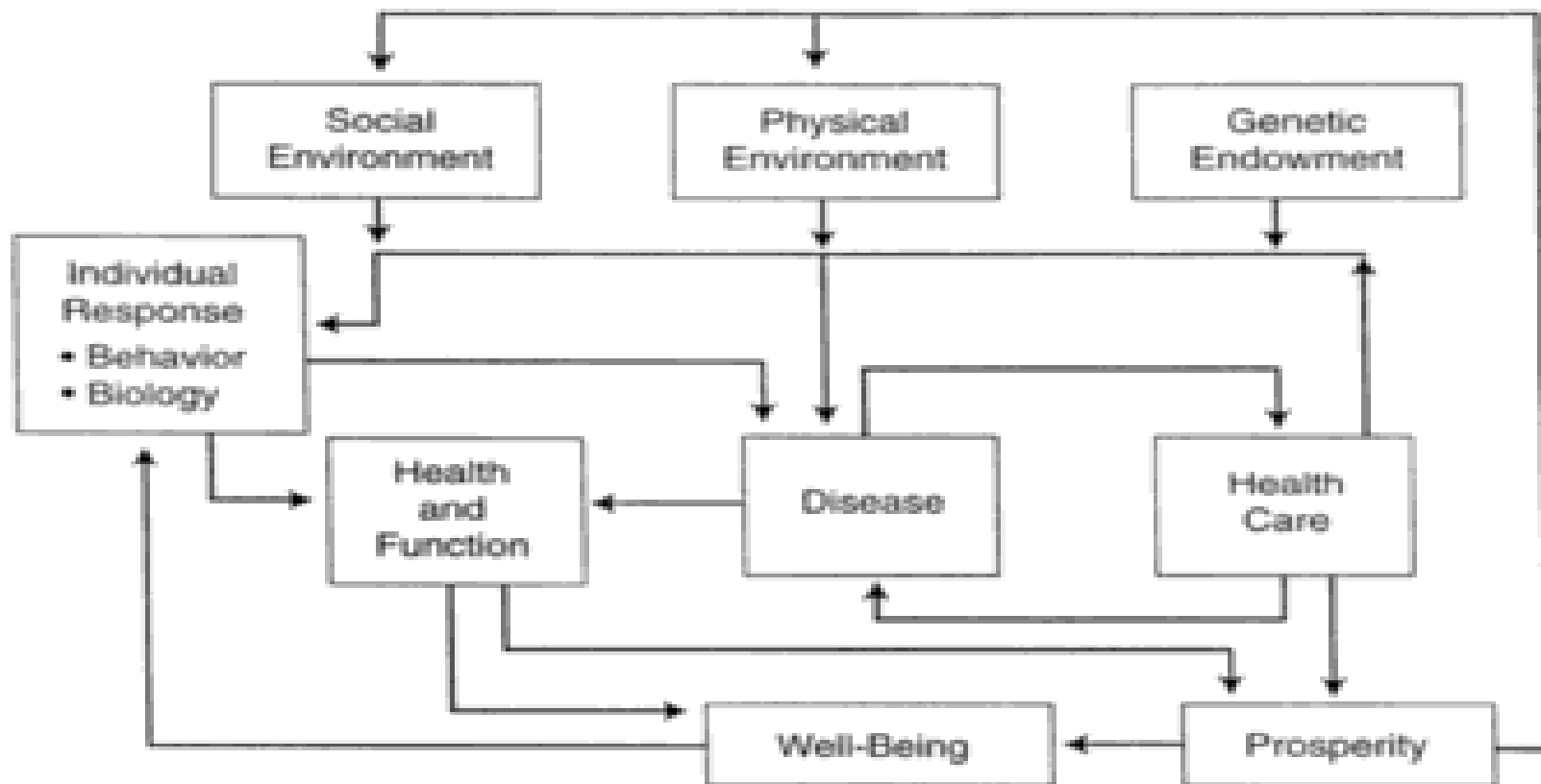


FIGURE 1-1 A model of the determinants of health. Source: Reprinted from R.G. Evans and G.L. Stoddart, 1990, Producing Health, Consuming Health Care, *Social Science and Medicine* 31:1347-1363, with permission from Elsevier Science Ltd, Kidlington, UK.



Biopsychosocial Model is Consistent with WHO's Definition of Health

- *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*
Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946
- *Closing the gap in a generation: health equity through action on the social determinants of health.* Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization, 2008.

Psychology's Role in Health Research and Health Care: Opportunities

- Shift from the Biomedical to the Biopsychosocial model provides psychology many opportunities
- Psychologists have the expertise to conduct research – and provide health services – on
 - Bio-behavioral relationships
 - Health promotion and disease prevention
 - Management of chronic disease
 - Adherence
 - Pain Management
 - Patient-provider communication
 - Medical decision making
 - Patient functioning and quality of life as health outcomes

Psychology's Role in Health Research and Health Care: External Challenges

- The biomedical model – despite its failure to address chronic disease – remains very influential worldwide
- Those trained in the biomedical model place greatest value on biologic aspects of disease,
- View “psychology” or “behavior” as “common sense,” non-scientific,” or something “anyone” can do
- Devalue both psychology and behavior in research and health care

Psychology's Role in Health Research and Health Care: Internal Challenges

- Many psychologist have accepted the role delegated to them by the biomedical model as “mental health” researchers or providers
- Many psychology training programs have failed to embrace the biopsychosocial model and the larger role psychology can play in health research and health care
- Many psychologists are not trained in the broader array of health research or health care skills required to address chronic disease

Increasing Psychology's Role in Health Research and Health Care

- Changing nature of the world's health challenges from infectious to chronic disease, and the adoption of the biopsychosocial model provide many opportunities for psychologists in health research and health care
- To take full advantage of these opportunities, psychology must:
 - Address external challenges from those who retain allegiance to the biomedical model
 - Fully embrace the biopsychosocial model
 - Abandon its narrow focus on mental health
 - Train the next generation to function successfully in the larger health arena