

# **International Seminar on Nutrition in Primary Health**

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## **Integrating Prevention of NCDs in the Primary Health Care system with a focus on Nutrition**

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**Chronic Diseases and Health Promotion**

**WHO/HQ – Geneva**

**Brasilia 9 Nov 2008**



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# Nutrition and the Chronic Noncommunicable Diseases (NCDs)

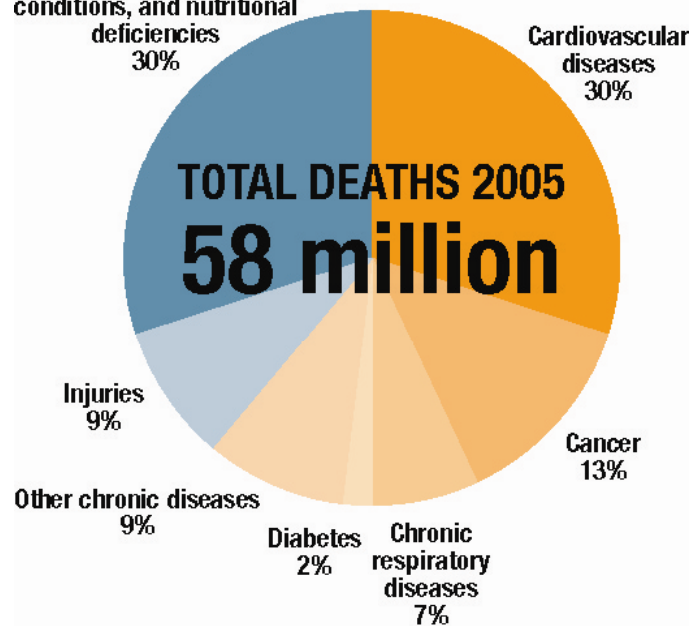
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- More than 5 million children die each year before their fifth birthday in developing countries because of undernutrition.
- Among the survivors, 178 million children in developing countries are stunted and are at an increased risk of an early death.
  - 90% of the world's stunted children live in 36 countries
- The epidemic of obesity and noncommunicable diseases is emerging in the same countries and often in the same households where undernutrition is already a serious problem.
- Recent research has shown that babies born with low birth weight are much more prone to obesity and noncommunicable diseases in adult life.

# Did you know?

## Projected main causes of death, worldwide, all ages, 2005

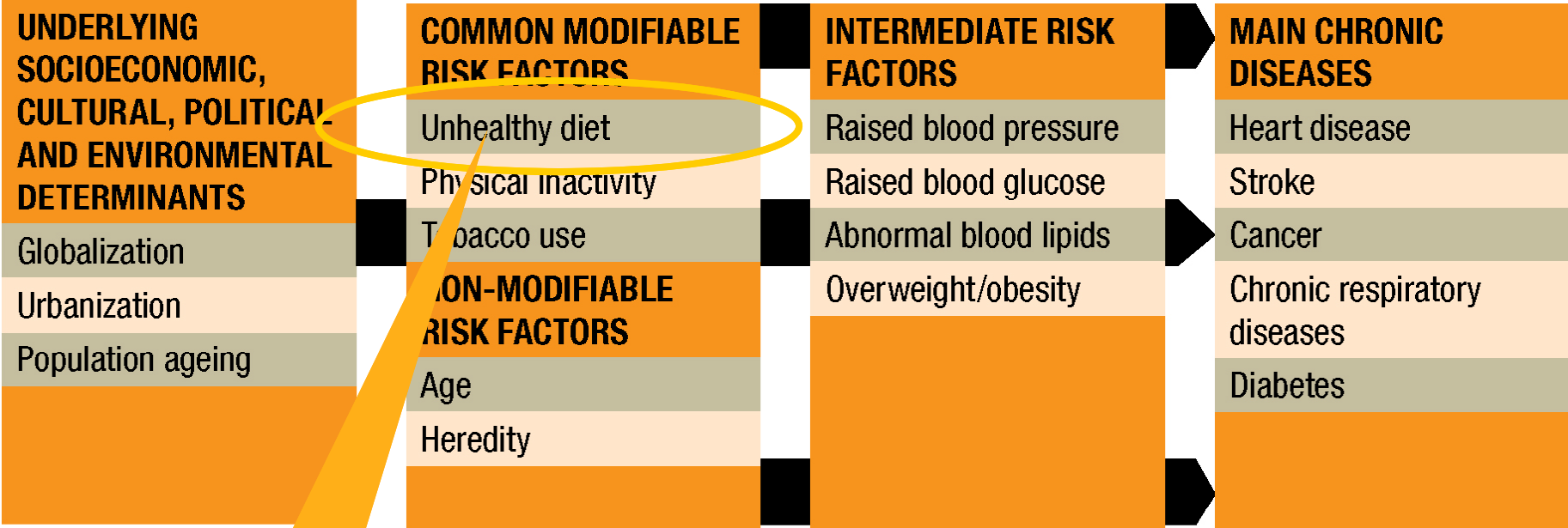
Communicable diseases, maternal and perinatal conditions, and nutritional deficiencies  
30%



**35 000 000**  
**people died from**  
**chronic diseases**  
**in 2005**

**60%** of all deaths are due to chronic diseases

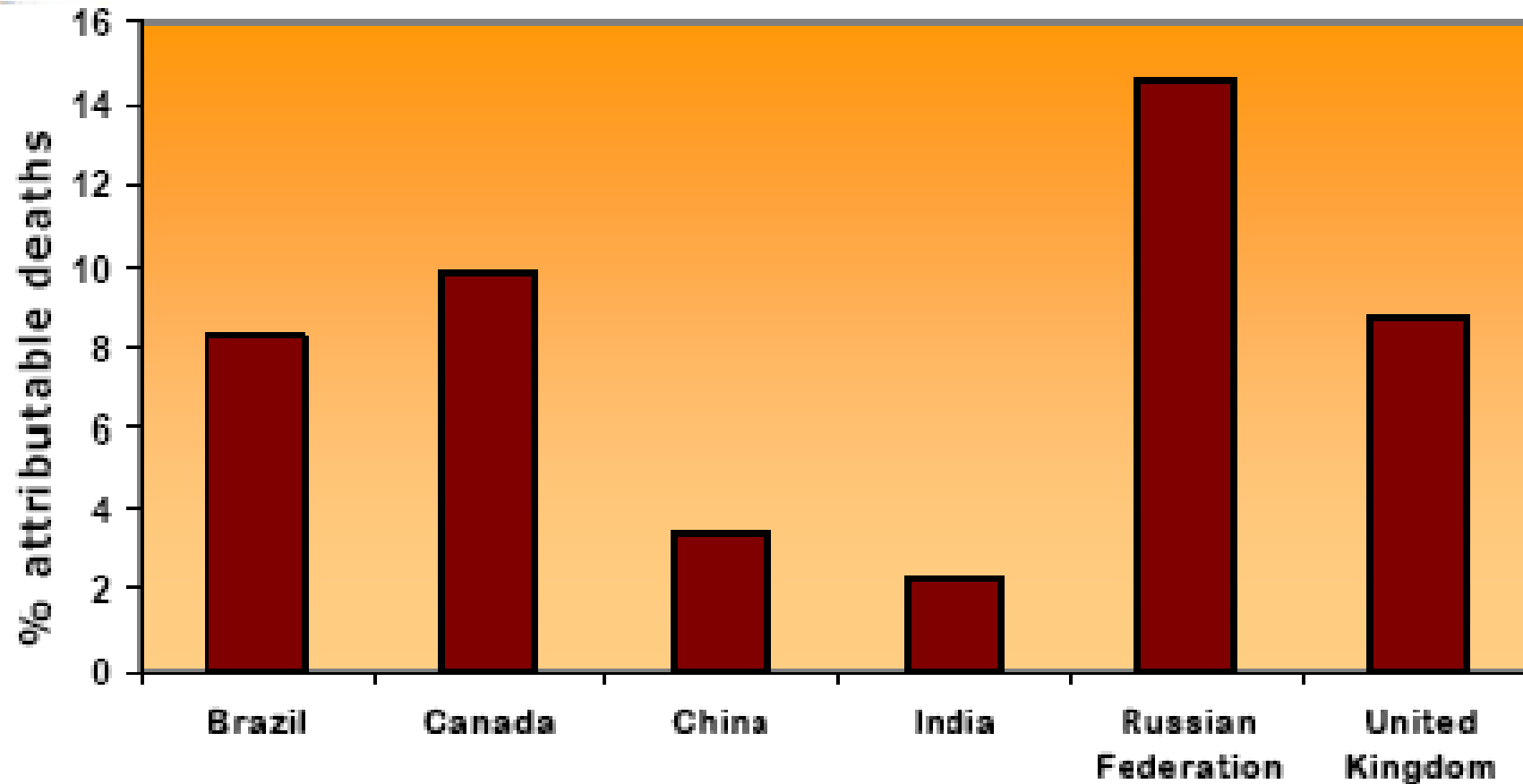
# Causes of Chronic Noncommunicable Diseases



5.3 million deaths a year

# Death caused by raised BMI

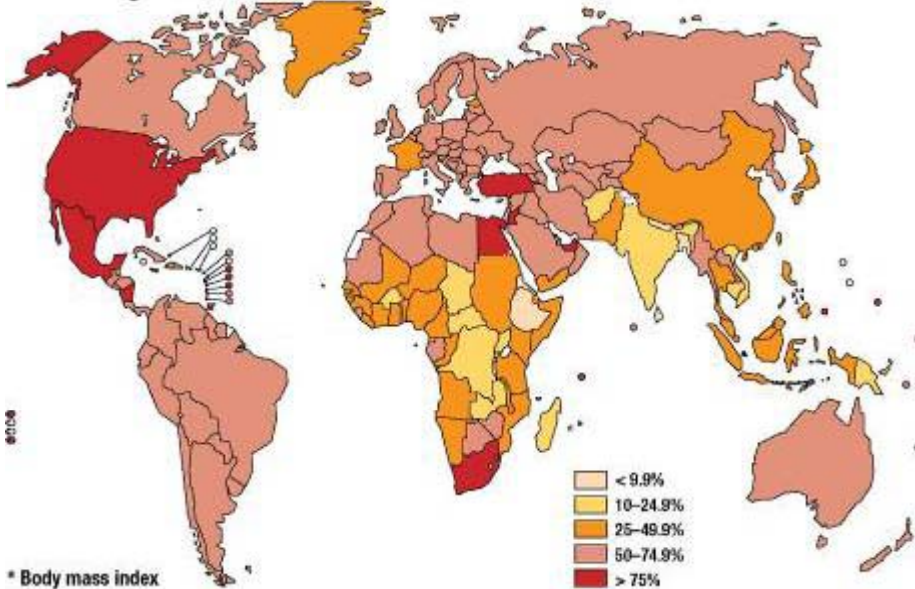
All ages, 2002



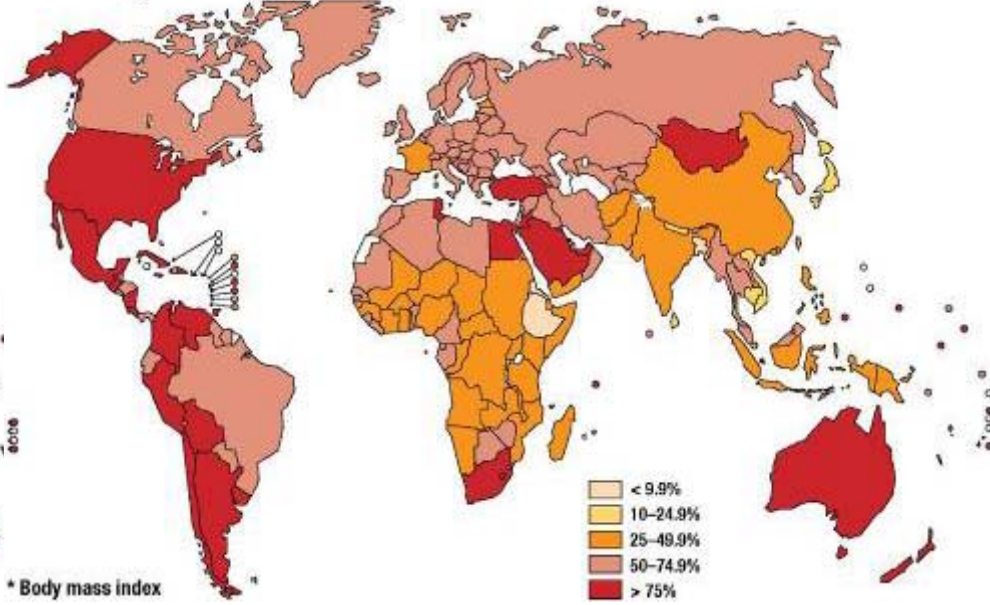
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# Risks are increasing

Projected prevalence of overweight (BMI\*  $\geq 25$  kg/m<sup>2</sup>), women aged 30 and above, 2005

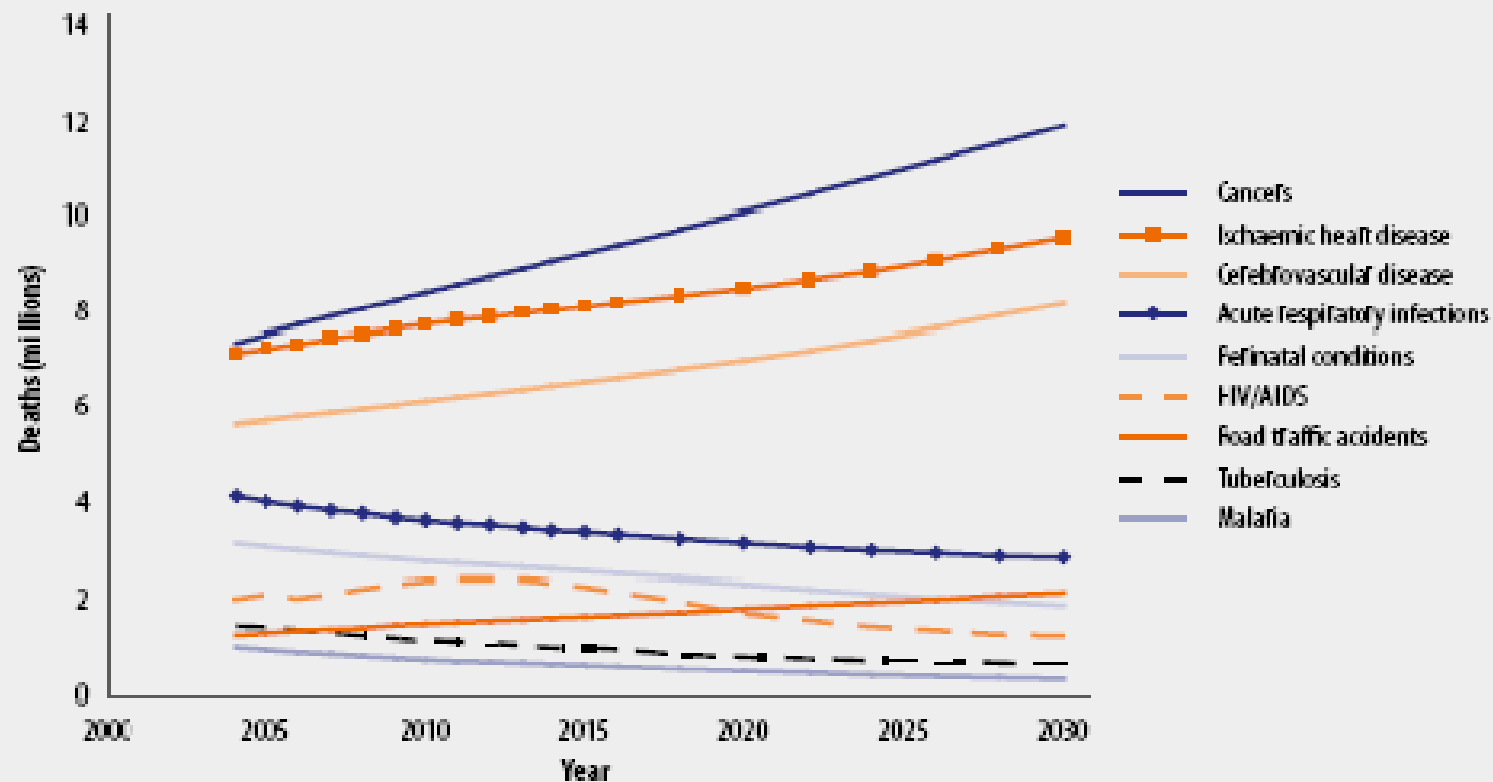


Projected prevalence of overweight (BMI\*  $\geq 25$  kg/m<sup>2</sup>), women aged 30 and above, 2015



# Chronic Noncommunicable Disease will increase

Figure 16: Projected global deaths for selected causes, 2004–2030



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## Deaths by cause in the world (2004-2030)

2004				2030			
Disease or injury	Deaths (%)	Rank		Rank	Deaths (%)	Disease or injury	
Ischaemic heart disease	12.2	1	→	1	14.2	Ischaemic heart disease	
Cerebrovascular disease	9.7	2	→	2	12.1	Cerebrovascular disease	
Lower respiratory infections	7.0	3	→	3	8.6	Chronic obstructive pulmonary disease	
Chronic obstructive pulmonary disease	5.1	4	→	4	3.8	Lower respiratory infections	
Diarrhoeal diseases	3.6	5	→	5	3.6	Road traffic accidents	
HIV/AIDS	3.5	6	→	6	3.4	Trachea, bronchus, lung cancers	
Tuberculosis	2.5	7	→	7	3.3	Diabetes mellitus	
Trachea, bronchus, lung cancers	2.3	8	→	8	2.1	Hypertensive heart disease	
Road traffic accidents	2.2	9	→	9	1.9	Stomach cancer	
Prematurity and low birth weight	2.0	10	→	10	1.8	HIV/AIDS	
Neonatal infections and other*	1.9	11	→	11	1.6	Nephritis and nephrosis	
Diabetes mellitus	1.9	12	→	12	1.5	Self-inflicted injuries	
Malaria	1.7	13	→	13	1.4	Liver cancer	
Hypertensive heart disease	1.7	14	→	14	1.4	Colon and rectum cancers	
Birth asphyxia and birth trauma	1.5	15	→	15	1.3	Oesophagus cancer	
Self-inflicted injuries	1.4	16	→	16	1.2	Violence	
Stomach cancer	1.4	17	→	17	1.2	Alzheimer and other dementias	
Cirrhosis of the liver	1.3	18	→	18	1.2	Cirrhosis of the liver	
Nephritis and nephrosis	1.3	19	→	19	1.1	Breast cancer	
Colon and rectum cancers	1.1	20	→	20	1.0	Tuberculosis	
Violence	1.0	22	→	21	1.0	Neonatal infections and other*	
Breast cancer	0.9	23	→	22	0.9	Prematurity and low birth weight	
Oesophagus cancer	0.9	24	→	23	0.9	Diarrhoeal diseases	
Alzheimer and other dementias	0.8	25	→	29	0.7	Birth asphyxia and birth trauma	
				41	0.4	Malaria	

(WHO, 2008)

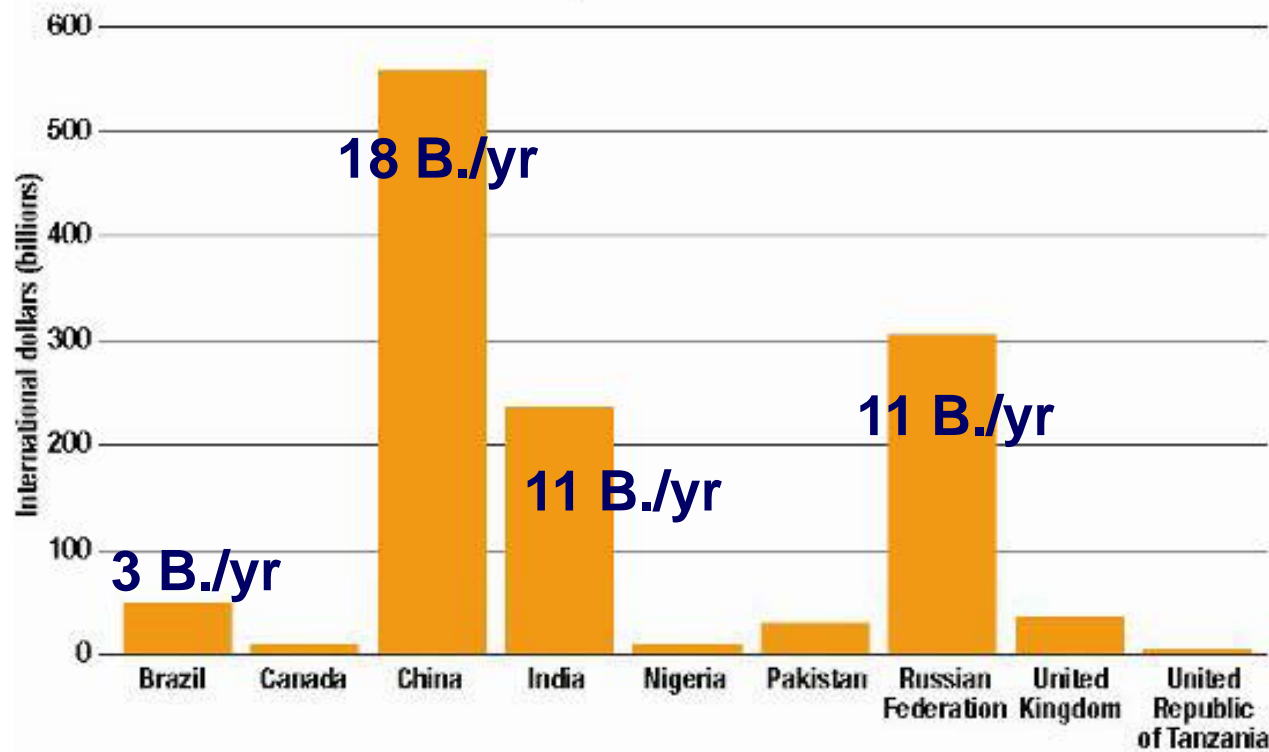


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# The economic impact: billions

## Projected foregone national income

due to heart disease, stroke and diabetes  
in selected countries, 2005–2015



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# THE COST OF INACTION IS CLEAR AND UNACCEPTABLE

**However,**

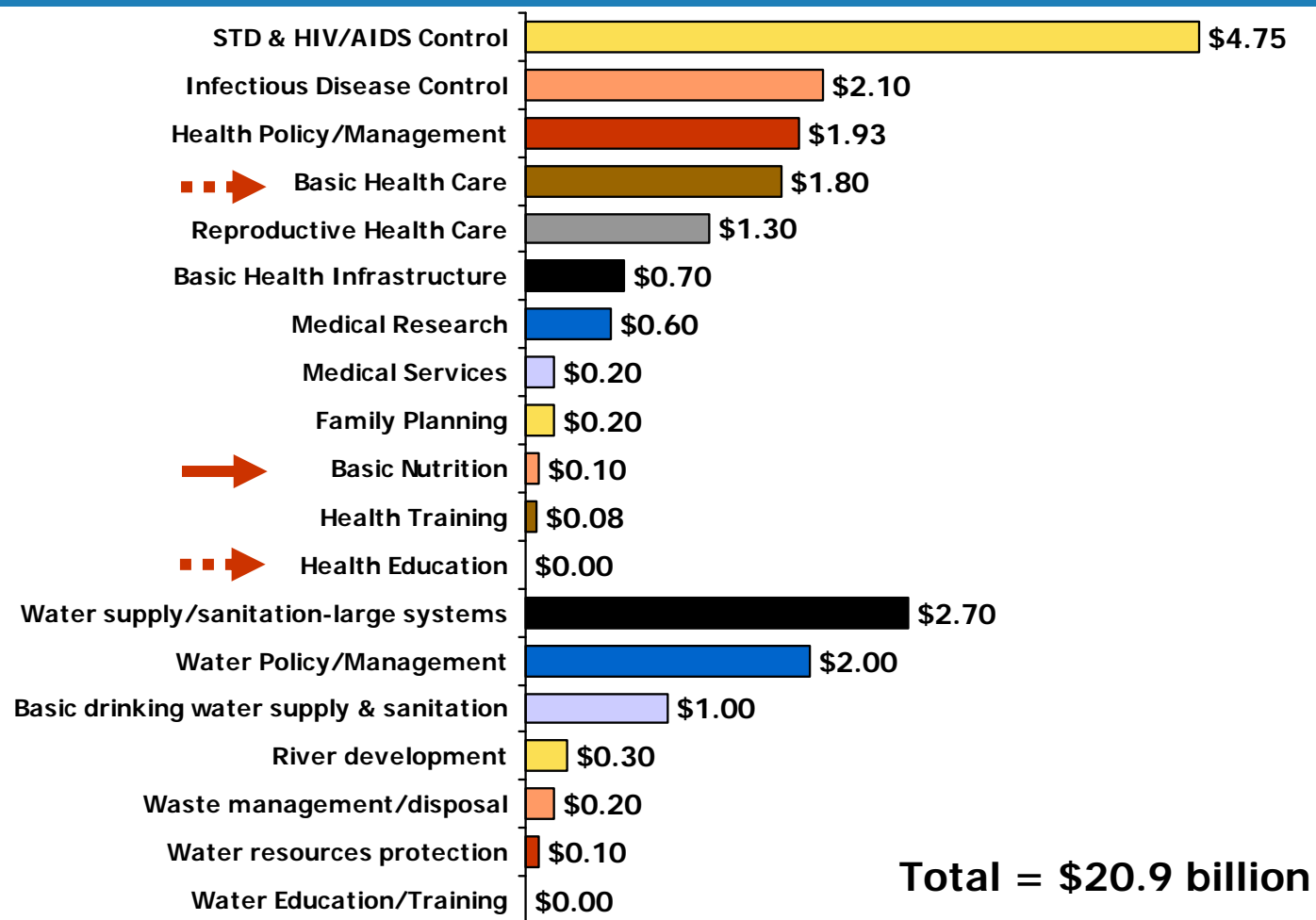
**Global recognition and  
response has not kept pace...**



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# Health ODA\* Commitments 2006 by major subsector

US\$ Billions



\* ODA = Official Development Assistance provided by 24 OECD/DAC donor countries, as well as the European Commission



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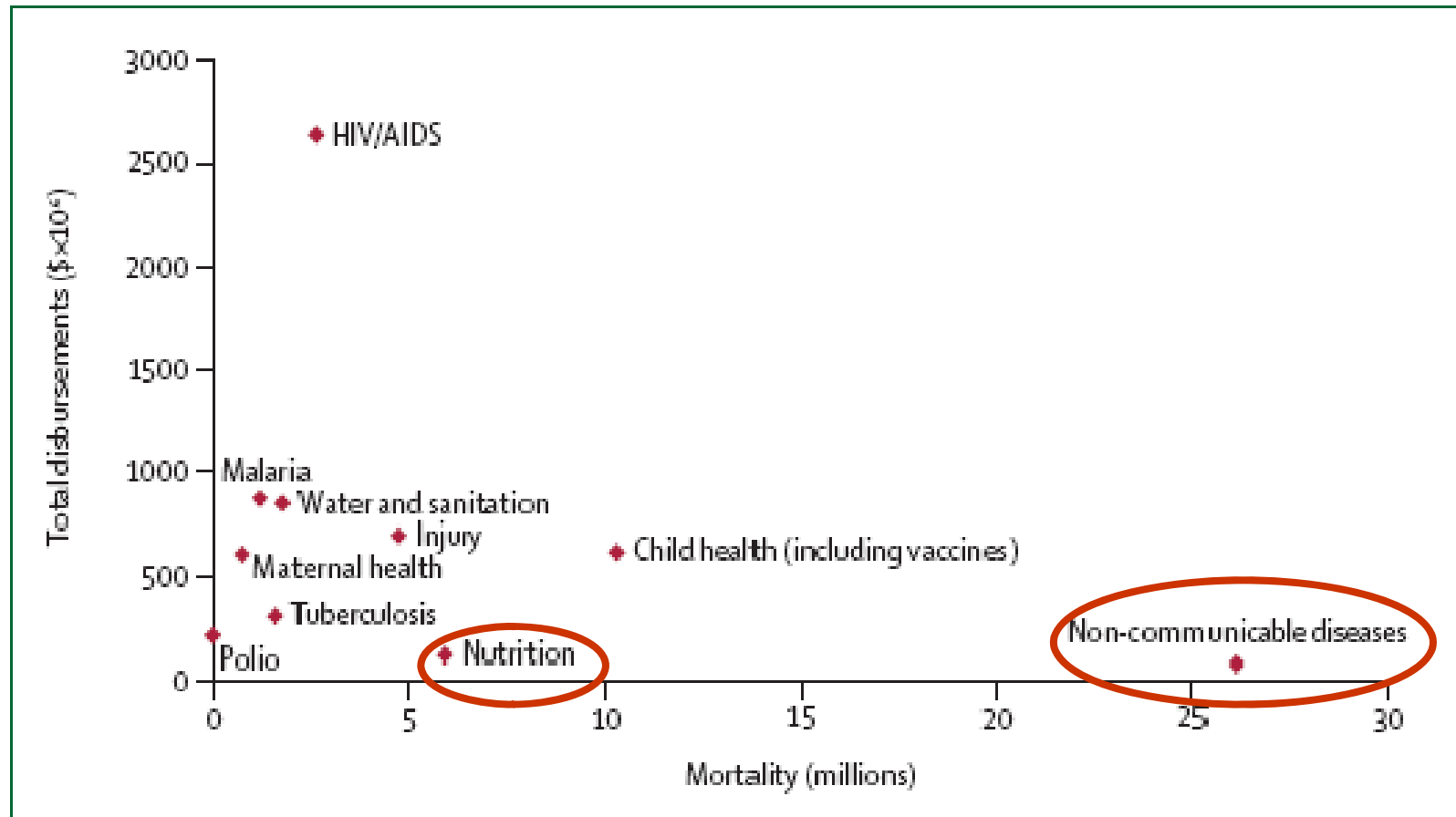


Figure 1: 2001 worldwide mortality versus 2005 disbursements of World Bank, US Government, Bill & Melinda Gates Foundation, Global Fund to fight HIV/AIDS, Tuberculosis and Malaria. Health-systems funding cannot be represented as a graph because no reliable measure of mortality and disability due to the absence of a good health system exists. The omission of health-systems funding excludes about a third of all World Bank disbursements from this figure.

# Funding: fighting over crumbs

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# However...

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- Global recognition and response has not kept pace
- Widespread misunderstandings about chronic disease  
- and the reality
- Misunderstandings can be dispelled by the strongest evidence



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# Reality: 80% of chronic disease deaths occur in low & middle income countries

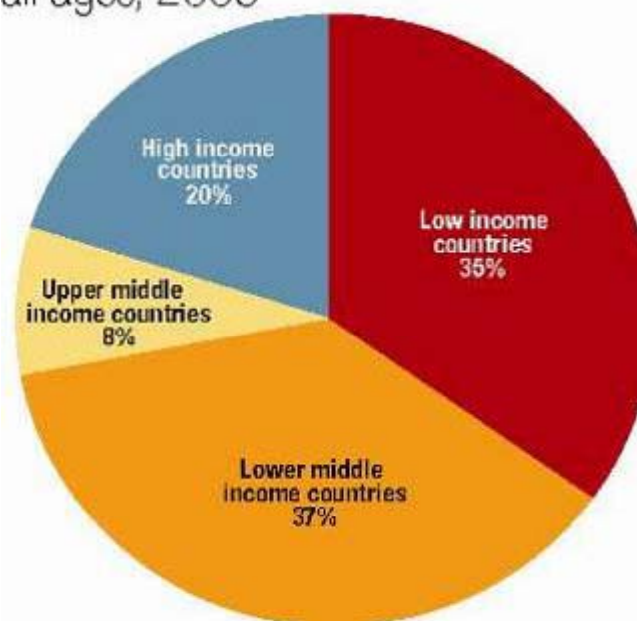
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**MISUNDERSTANDING** CHRONIC DISEASES MAINLY AFFECT HIGH INCOME COUNTRIES

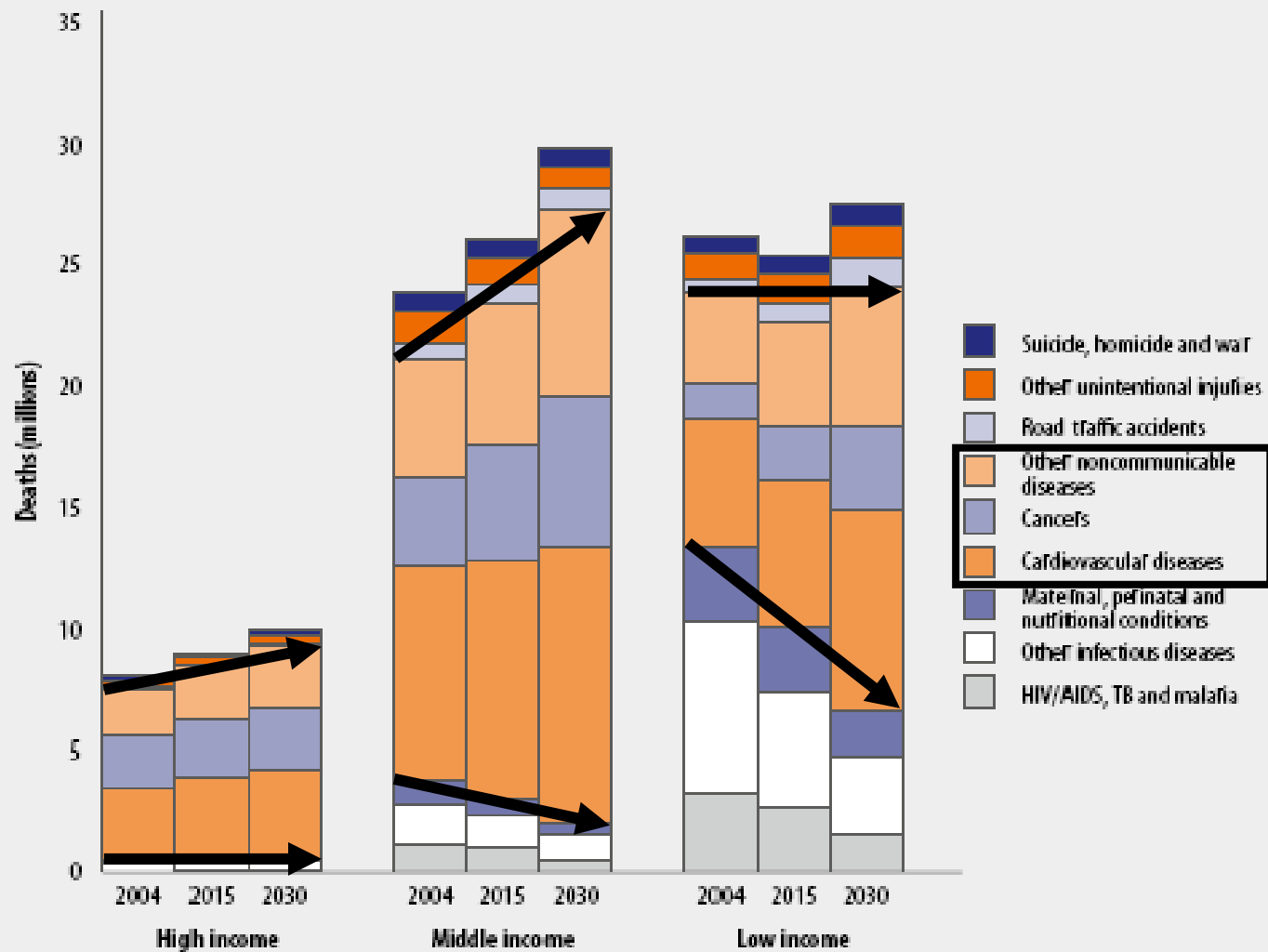
## Projected global distribution of chronic disease deaths

by World Bank income group, all ages, 2005

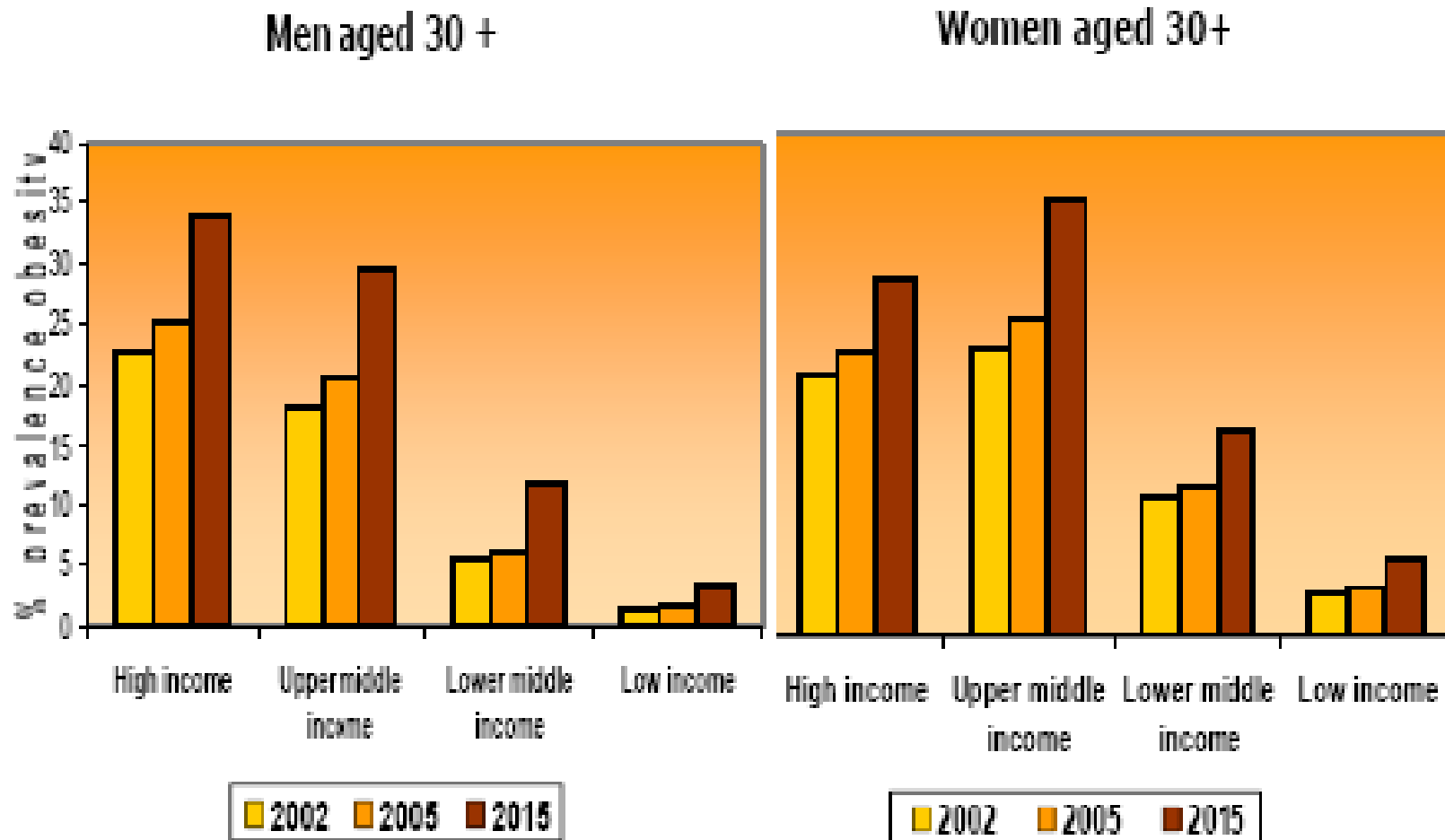


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Figure 15: Projected deaths by cause for high-, middle- and low-income countries



# Obesity rising regardless of country income



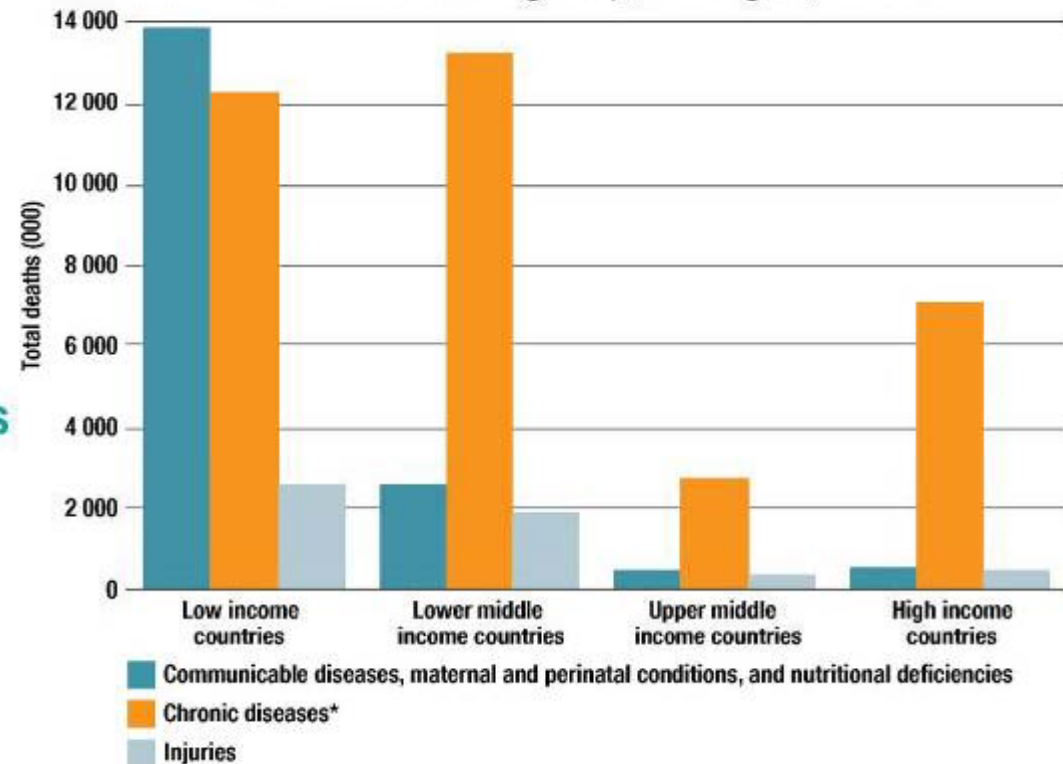
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# Reality: double burden = double response

# 9

**MISUNDERSTANDING** LOW AND MIDDLE INCOME COUNTRIES SHOULD CONTROL INFECTIOUS DISEASES BEFORE CHRONIC DISEASES

**Projected deaths by major cause** and World Bank income group, all ages, 2005



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# Reality: chronic diseases are concentrated among the poor

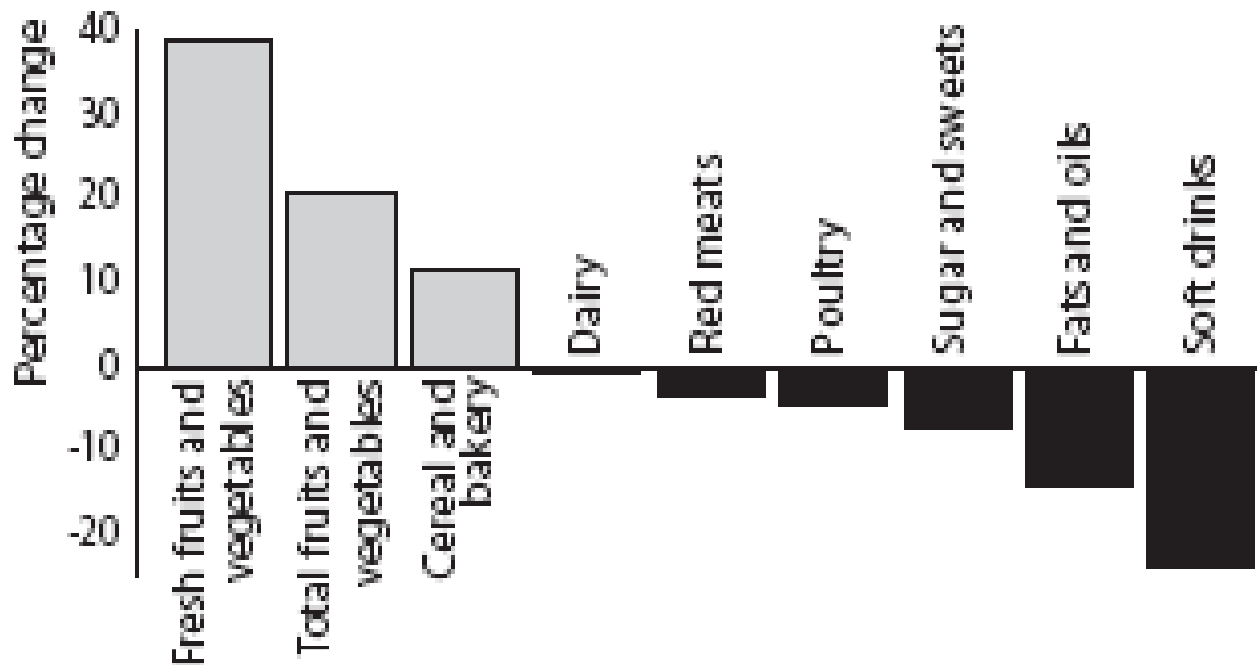
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# Reality: chronic diseases are concentrated among the poor

Change in food prices, 1985–2000  
(real dollars)



Source: USDA ERS FoodReview, Vol. 25, Issue 3. Converted to real dollars.



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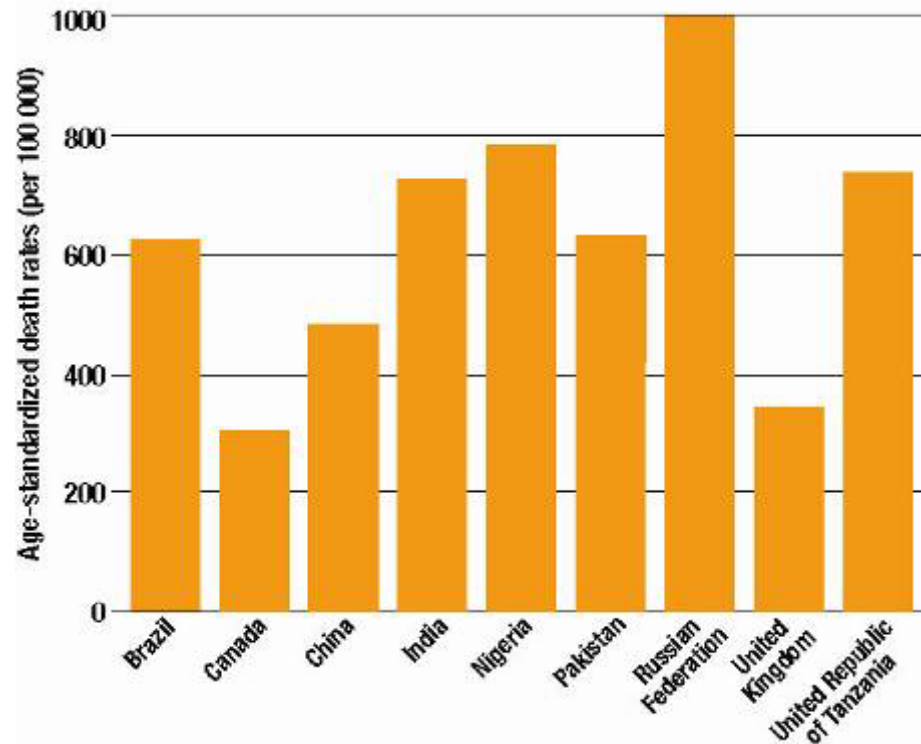
# Reality: almost half in people under age 70 years

# 7

**MISUNDERSTANDING**

**CHRONIC DISEASES MAINLY  
AFFECT OLD PEOPLE**

**Projected chronic disease death rates**  
for selected countries, aged 30–69 years, 2005

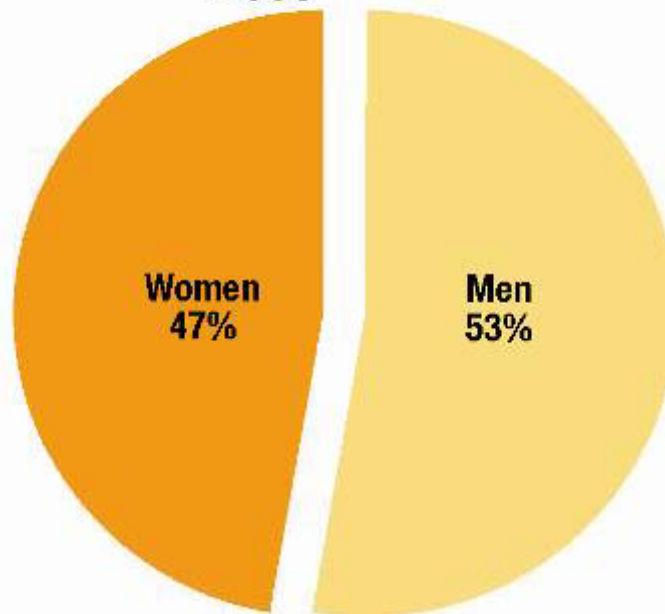


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# Reality: chronic diseases affect men and women almost equally

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**Projected global coronary heart disease deaths by sex, all ages, 2005**



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**MISUNDERSTANDING**

**CHRONIC DISEASES AFFECT PRIMARILY MEN**



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# Reality: poor and children have limited choice

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# Reality: prevention is possible

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MISUNDERSTANDING

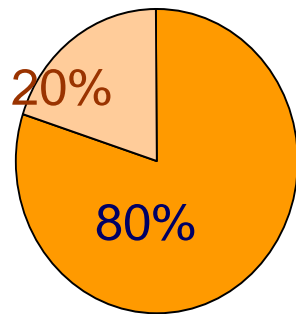
**CHRONIC DISEASES  
CAN'T BE PREVENTED**



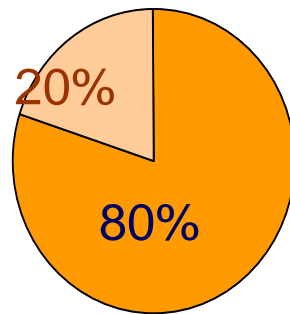
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# Prevention is possible

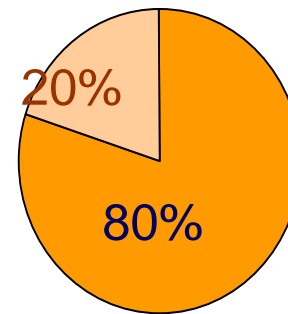
Largest part of main chronic diseases can be prevented if risk factors are eliminated



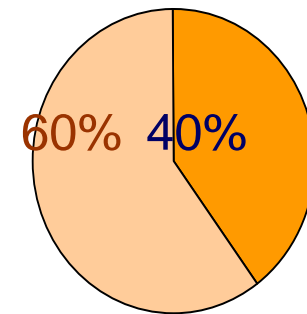
Heart disease



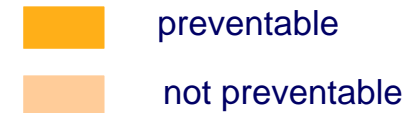
Stroke



Type 2 diabetes



Cancer



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# Reality: inexpensive and cost-effective interventions exist

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MISUNDERSTANDING

**CHRONIC DISEASE  
PREVENTION AND CONTROL  
IS TOO EXPENSIVE**



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# Reality: these people are the rare exceptions

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HALF-TRUTH

2

“My grandfather smoked and was overweight –  
**and he lived to 96”**



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**Reality: death is inevitable but  
it does not need to be slow, painful or premature**

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# What works?



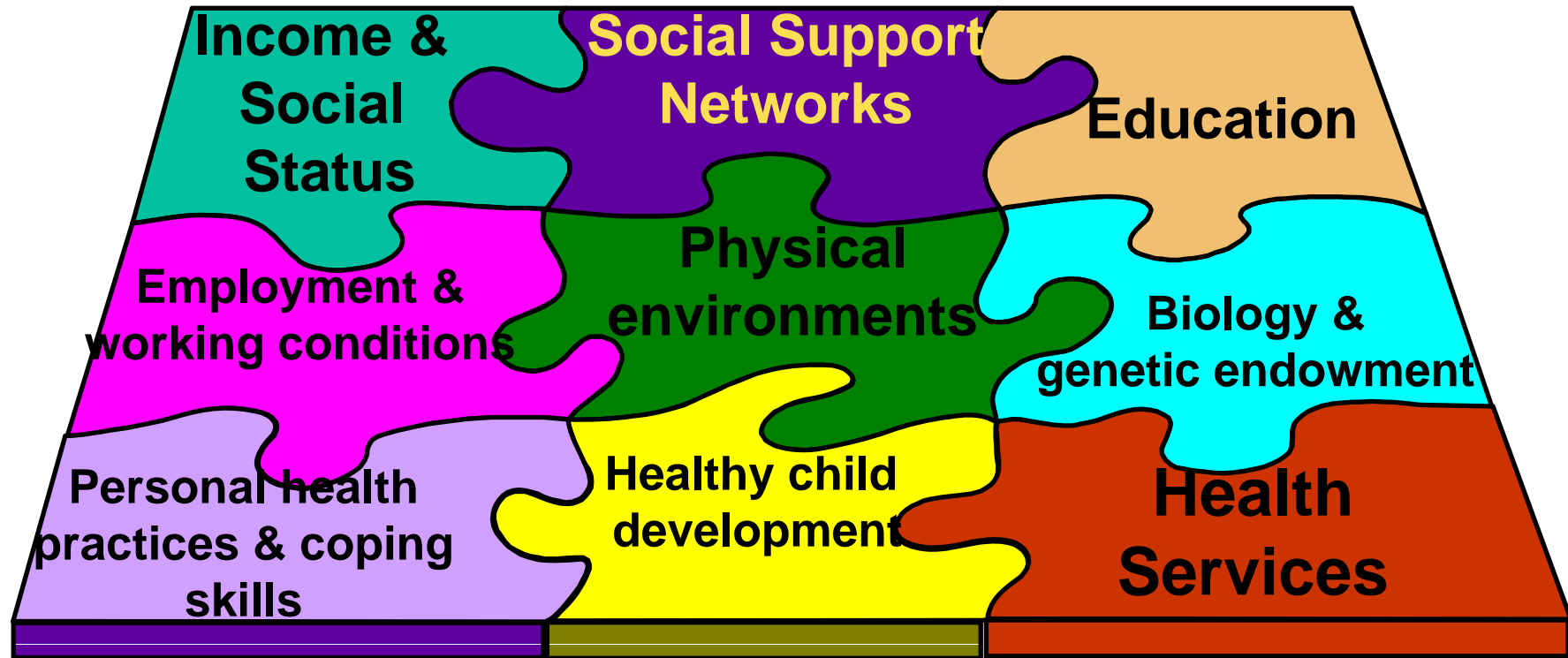
**Comprehensive and integrated** action is the means to prevent and control chronic diseases

**Key:**  
**Multisectoral approaches**



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# Determinants of Population Health

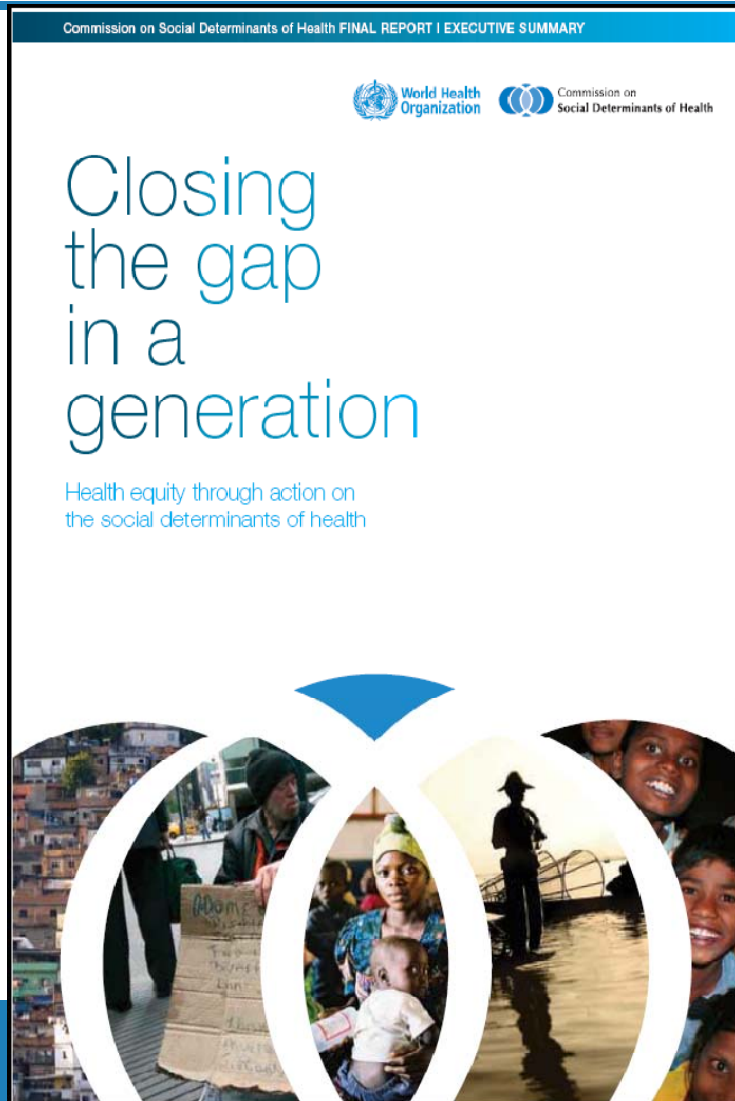


Population Health Framework



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# Social Determinants of Health

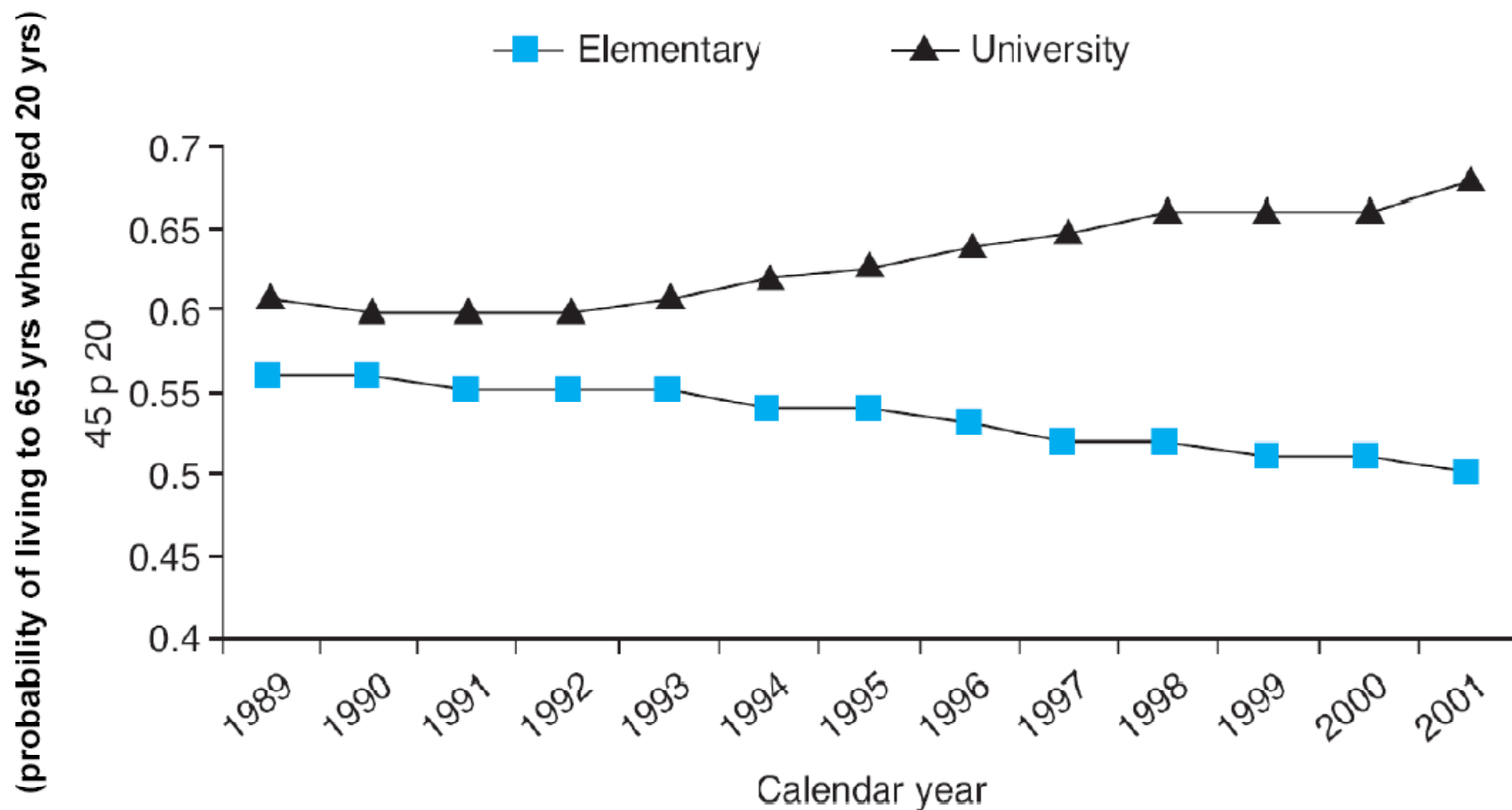


[www.who.int/social\\_determinants](http://www.who.int/social_determinants)



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## The widening trend in mortality by education in Russia, 1989-2001



(Murphy et al, 2005)



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# Global Social and Health inequities

## Example: Life expectancy at birth (men)

Glasgow, Scotland (deprived suburb)	54
India	61
Philippines	65
Korea	65
Lithuania	66
Poland	71
Mexico	72
Cuba	75
US	75
UK	76
Glasgow, Scotland (affluent suburb)	82

*(WHO World Health Report 2006; Hanlon,P.,Walsh,D. & Whyte,B.,2006)*



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# Global Social and Health inequities

Example: Life expectancy at birth (men)

Glasgow, Scotland (deprived suburb)	54
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**Gap: 28 years**

(WHO World Health Report 2006; Hanlon, P., Walsh, D. & Whyte, B., 2006)



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# Inequity: example of HDI at state level

## State Maps At-A-Glance

### AMERICAN HUMAN DEVELOPMENT INDEX

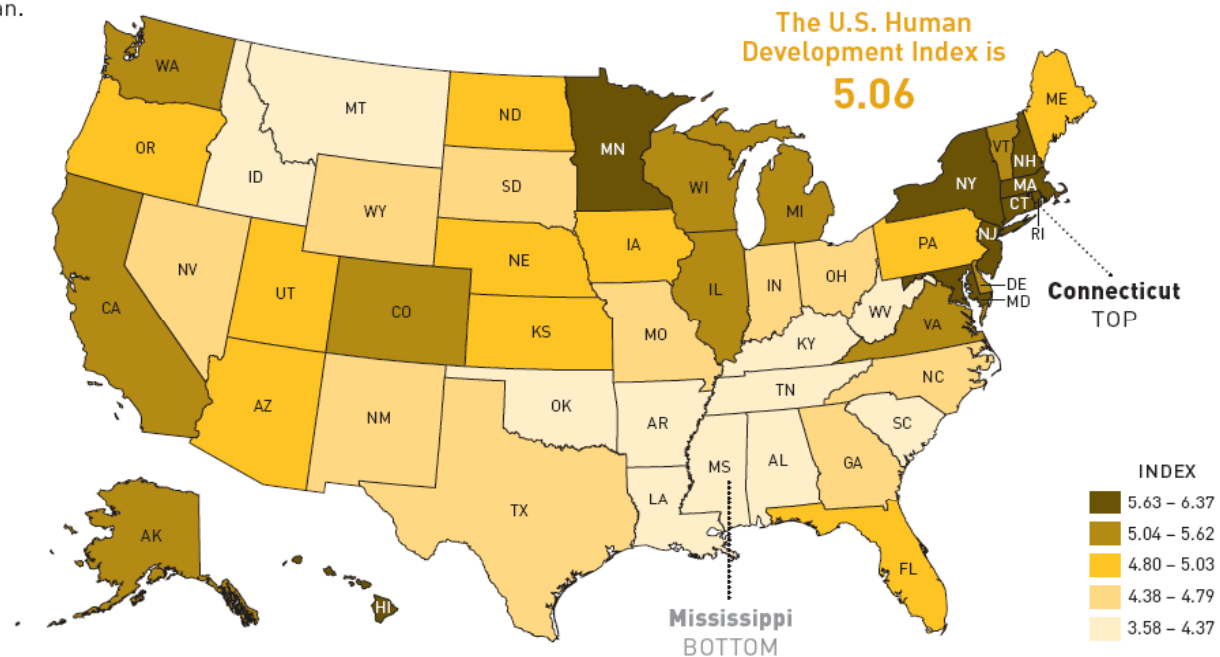
Connecticut has an HD Index of 6.37, which, if current trends continue, will be the average HD Index of America as a whole in the year 2020. Mississippi has an HD Index (3.58) lower than the HD Index for the whole country in 1990. An average Connecticut resident earns 60 percent more, lives six years longer, and is almost twice as likely to have a college degree as a typical Mississippian.

#### Top 5

1. Connecticut
2. Massachusetts
3. New Jersey
3. Washington, DC
5. Maryland

#### Bottom 5

47. Alabama
48. Arkansas
49. Louisiana
50. West Virginia
51. Mississippi



Source: Measure of America



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# Inequity: example of HDI at district level

## Congressional District Maps At-A-Glance

### AMERICAN HUMAN DEVELOPMENT INDEX

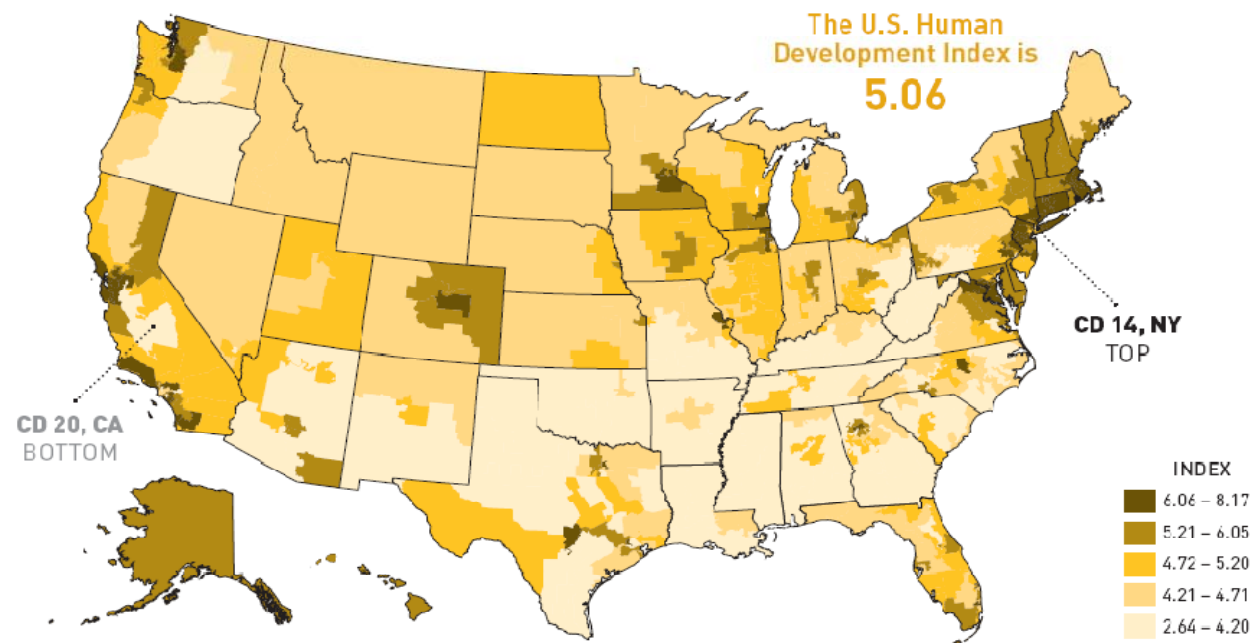
Each of the country's 436 Congressional districts has approximately 650,000 inhabitants, except for a few districts located in states with small populations. If you divide the congressional districts into 5 groups according to rank, 40% of the congressional districts in the top group are in the Northeast; 73% of the districts in the bottom group are in the South.

#### Top 5

1. CD 14, NY
2. CD 8, VA
3. CD 14, CA
4. CD 48, CA
5. CD 30, CA

#### Bottom 5

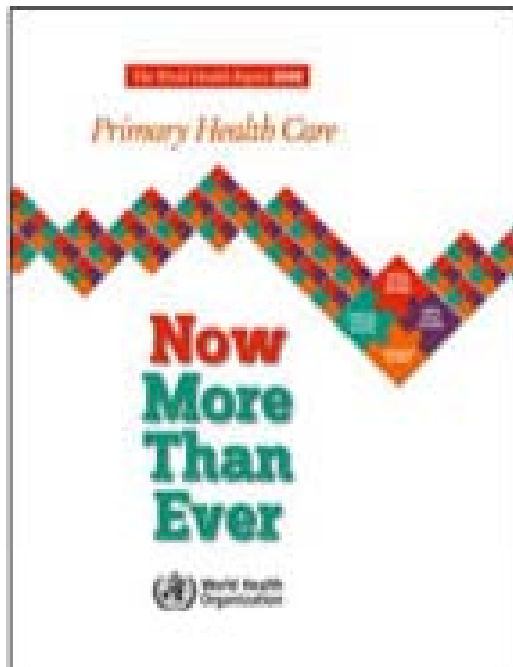
432. CD 4, AL
433. CD 8, MO
434. CD 29, TX
435. CD 5, KY
436. CD 20, CA



Source: Measure of America



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"This year marks both the 60<sup>th</sup> birthday of WHO and the 30<sup>th</sup> Anniversary of the declaration of Alma Ata on Primary Health Care in 1978. .... In moving forward it is important to learn from the past and, in looking back it is clear that we can do better in the future"

*Dr. Margaret Chan,  
Director General WHO.  
WHR, 2008*



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## Five common shortcomings of health-care delivery

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***Inverse Care*** - People with the most means – whose needs for healthcare are often less – consume the most

***Impoverishing Care*** – Wherever people lack social protection and payment for care is largely out-of-pocket at point of service, they can be confronted with catastrophic expenses

***Fragmented and Fragmenting Care*** – The excessive specialization of health-care providers and the narrow focus of many disease control programmes discourage a holistic approach



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## Five common shortcomings of health-care delivery

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***Unsafe Care*** – Poor system design that is unable to ensure safety and hygiene standards leads to high rates of hospital-acquired infections, along with medication errors and other avoidable adverse effects that are an underestimated cause of death and ill health

***Misdirected Care*** – Resource allocation clusters around curative services at great cost, neglecting the potential of primary prevention and health promotion to prevent up to 70% of the disease burden.



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# How experience has shifted the focus of the PHC movement

Early Attempts at Implementing PHC	Current Concerns of PHC Reforms
Extended access at a <b><u>basic package</u></b> of health interventions and essential drugs for the rural poor	Transformation and regulation of existing health systems, aiming for <b><u>universal access</u></b> and social health protection
Concentration on <b><u>mother and child</u></b> health	Dealing with the health of <b><u>everyone</u></b> in the community
Focus on a small number of selected diseases, primarily <b><u>infectious and acute</u></b>	A <b><u>comprehensive response</u></b> to people's expectations and needs, spanning the range of risks and illnesses



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# How experience has shifted the focus of the PHC movement

<b>Early Attempts at Implementing PHC</b>	<b>Current Concerns of PHC Reforms</b>
Improvement of <u>hygiene</u> , water, sanitation and health education at <u>village</u> level	Promotion of <u>healthier lifestyles</u> and mitigation of the health effects of social and environmental hazards
Simple technology for <u>volunteer</u> , non-professional community health workers	<u>Teams of health workers</u> facilitating access to and appropriate use of technology and medicines
Participation as the mobilization of local resources and health-centre management through <u>local health committees</u>	<u>Institutionalized participation</u> of civil society in policy dialogue and accountability mechanisms



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## How experience has shifted the focus of the PHC movement

Early Attempts at Implementing PHC	Current Concerns of PHC Reforms
<u>Government</u> -funded and delivered services with a centralized top-down management	<u>Pluralistic health systems</u> operating in a globalized context
Bilateral <u>aid</u> and technical assistance	Global solidarity and <u>joint learning</u>
Management of growing scarcity and <u>downsizing</u>	Guiding the <u>growth of resources</u> for health towards <u>universal coverage</u>
<u>PHC is cheap</u> and requires only a modest investment	<u>PHC is not cheap</u> : it requires considerable investment, but it provides better value for money than its alternatives
Primary care as the <u>antithesis of the hospital</u>	Primary care as <u>coordinator</u> of a comprehensive response <u>at all levels</u>



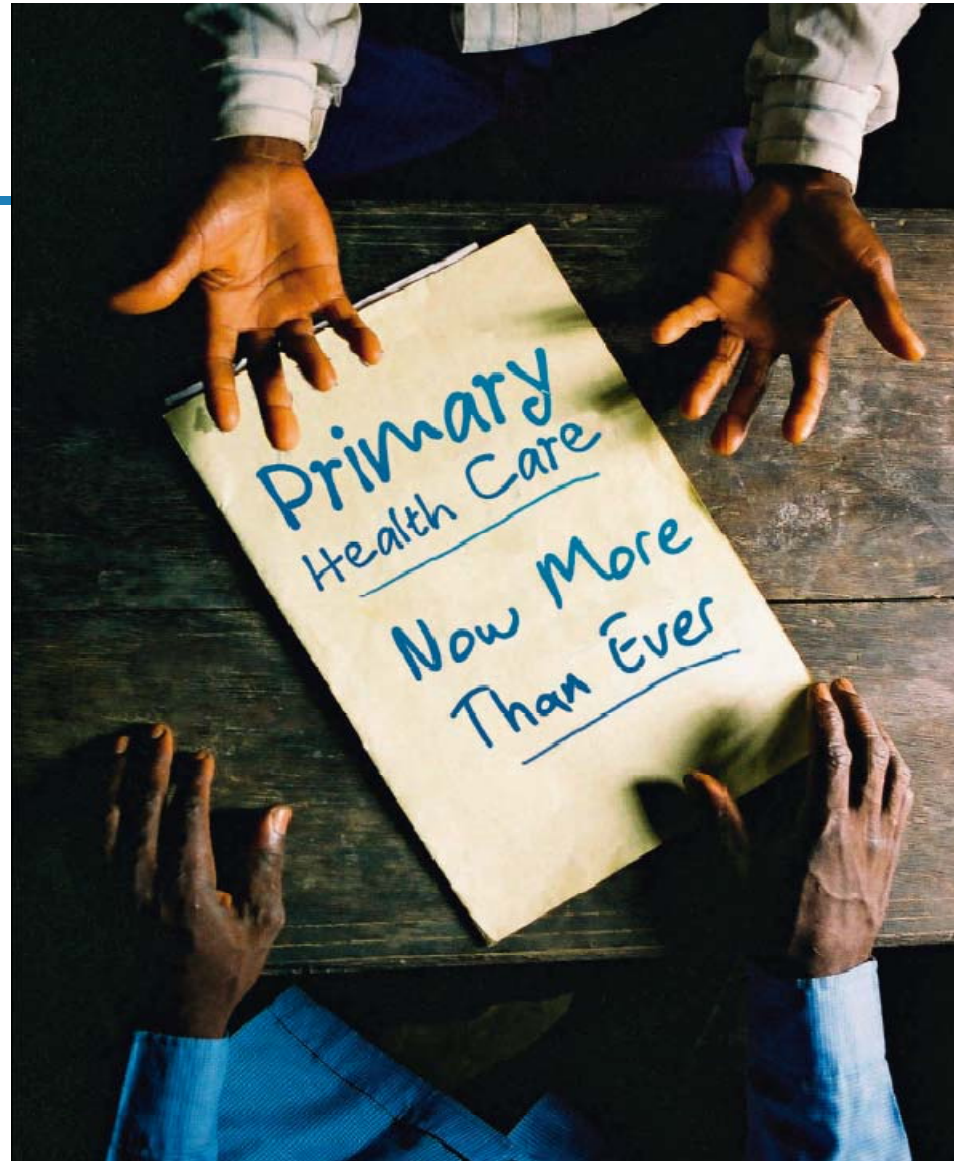
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# Four sets of PHC reforms necessary to focus health systems towards health for all

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