



GLOBAL STRATEGIES FOR THE PREVENTION OF DIABETES AND OTHER NONCOMMUNICABLE DISEASES

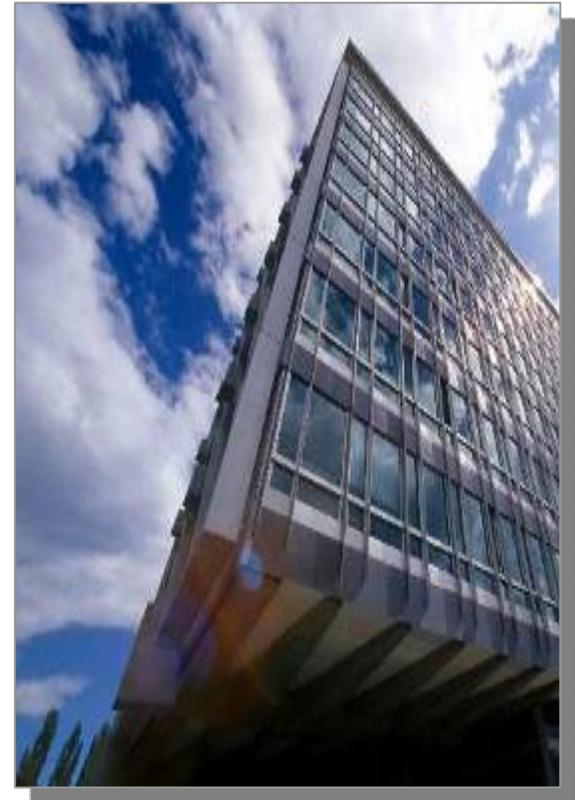
Ala Alwan
Assistant Director-General
World Health Organization

Workshop on Epidemiology of Diabetes and Other Noncommunicable Diseases
(Bibliotheca Alexandrina, 8 January 2009)

World Health Organization

Who we are

- Specialized agency within the United Nations
- Established in 1948
- 193 Member States
- World Health Assembly and Executive Board as Governing Bodies
- Headquarters in Geneva, Switzerland
- 6 Regional Offices; 6 Regional Committees
- 150 country offices
- 5,431 professional staff



WHO's Core Functions

- providing leadership on matters critical to health;
- shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge;
- setting norms and standards;
- articulating ethical and evidence-based policy options;
- providing technical support and building sustainable institutional capacity; and
- monitoring the health situation and assessing health trends.

1 2 3

- A brief review of the global magnitude of NCDs and their risk factors
- An outline of the global response – The Global Strategy for the Prevention and Control of NCDs and its implementation plan
- Possible implications for national response



The global disease profile is changing at an astonishingly fast rate, with serious implications for health and socio-economic development

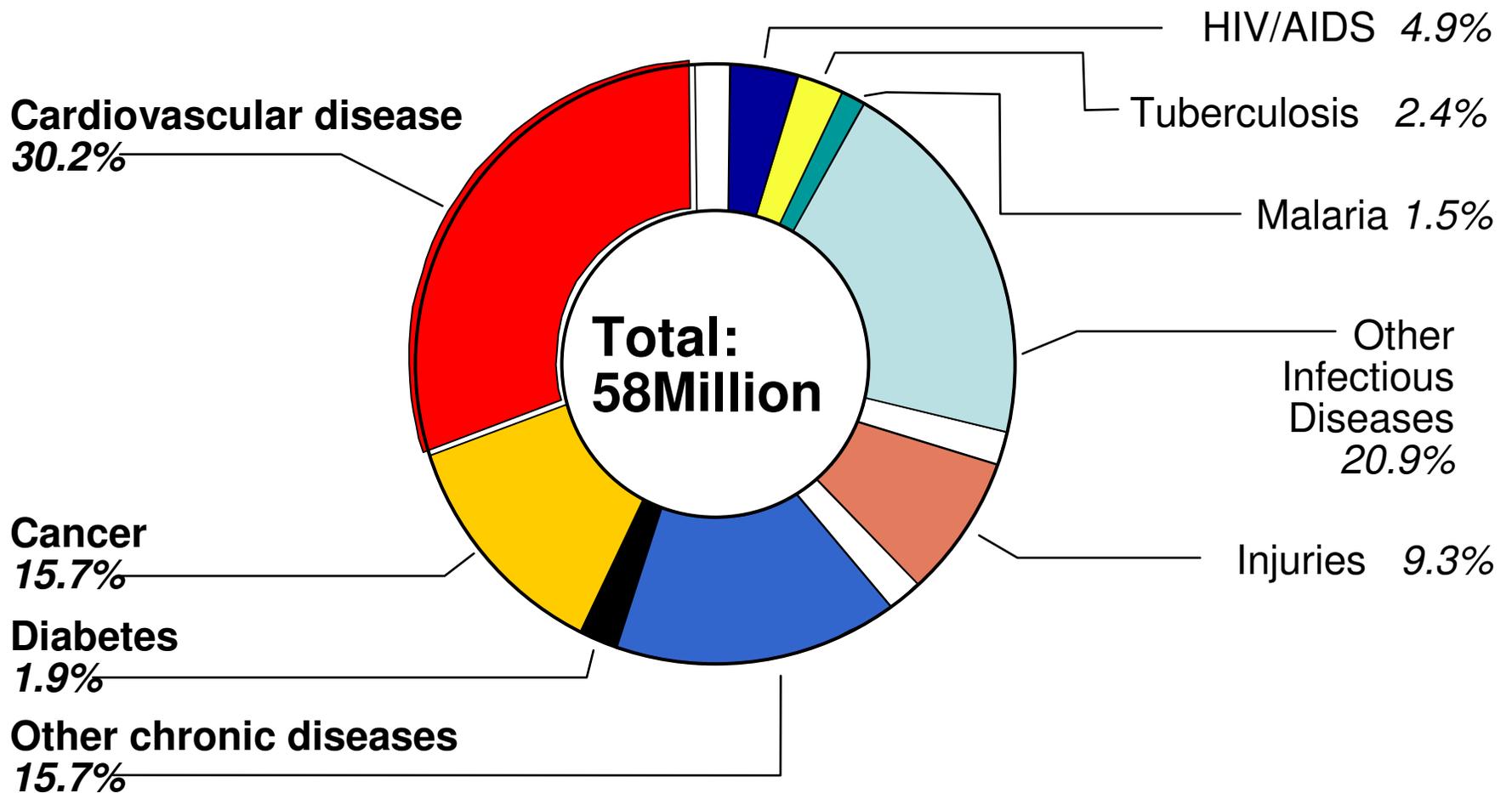
The Noncommunicable Diseases Burden

- **Responsible for up to 60% of all deaths:** 80% are in low and middle income countries; almost half before 70
- **Major noncommunicable diseases:**
 - CVDs, Diabetes, Cancer and Chronic Respiratory disease
- **Shared preventable risk factors:**
 - Tobacco use, unhealthy diet and physical inactivity, harmful use of alcohol
- **Major inequalities between and within countries**
- **NCDs are undermining development**

Deaths by cause in the world

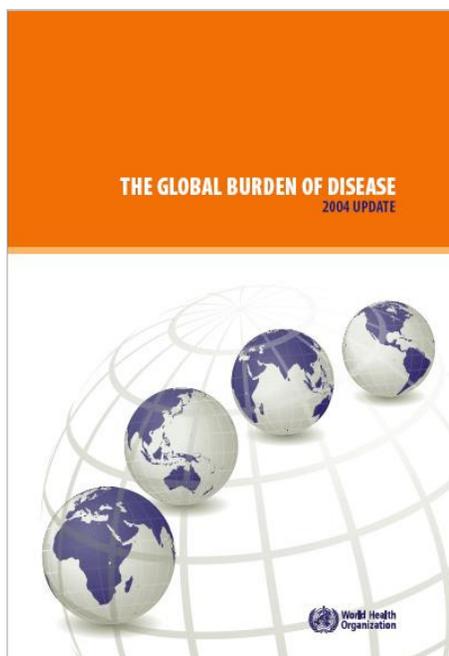
Noncommunicable diseases:

Infectious diseases:

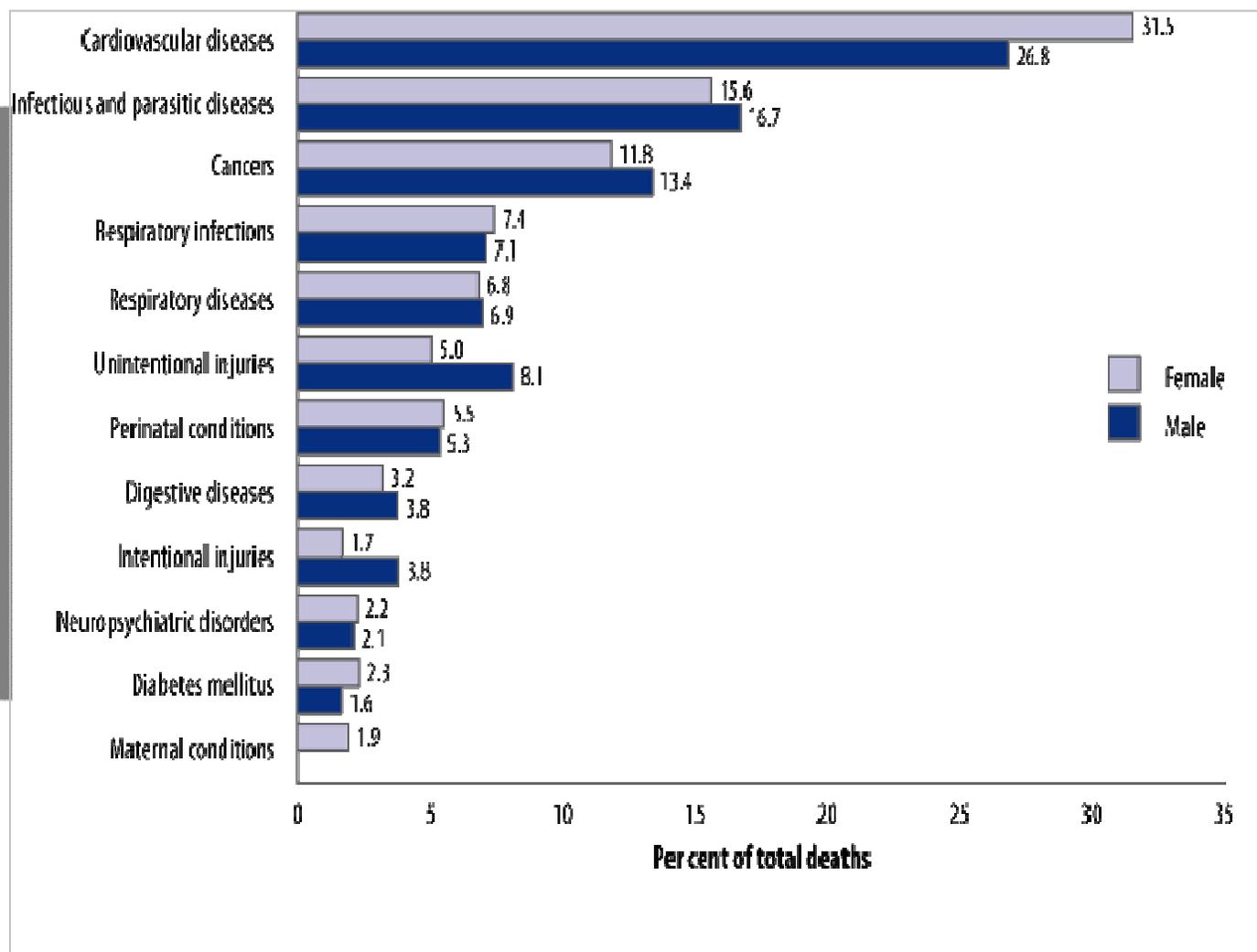


(WHO, 2004)

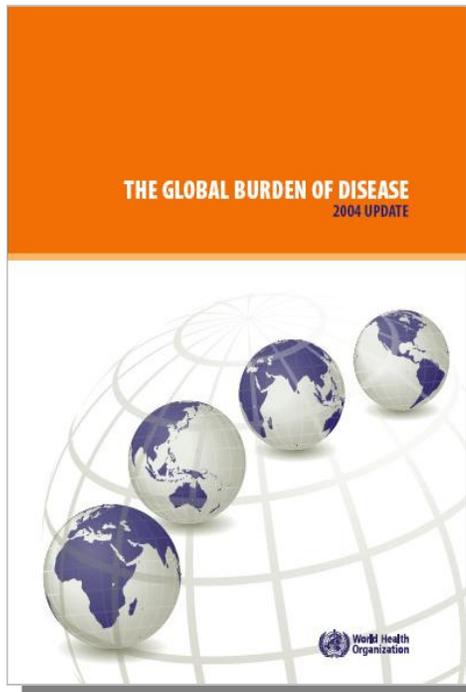
Global Distribution of Death: Update for 2004



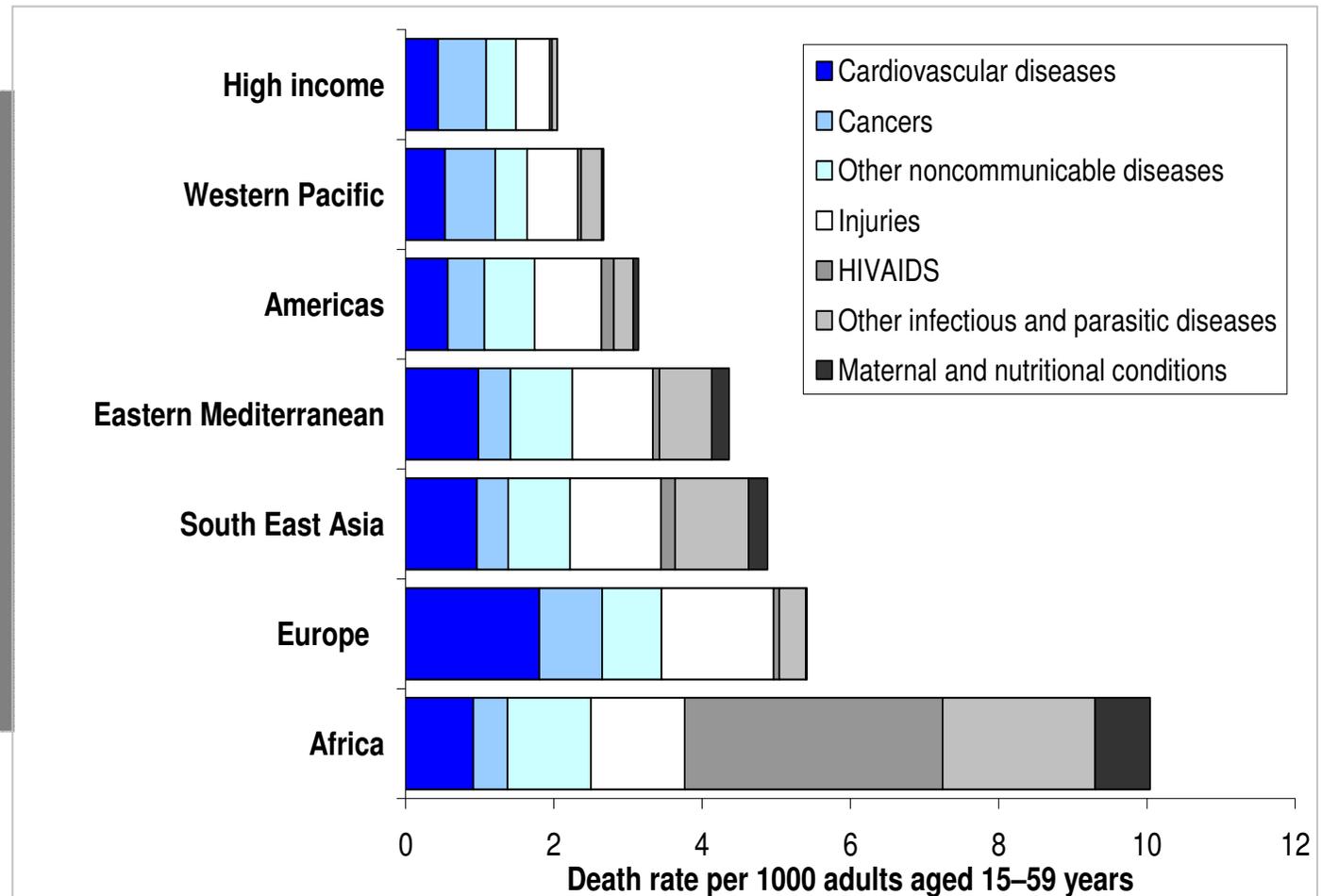
Launched 27 October 2008



EMR Mortality trends compared with other regions

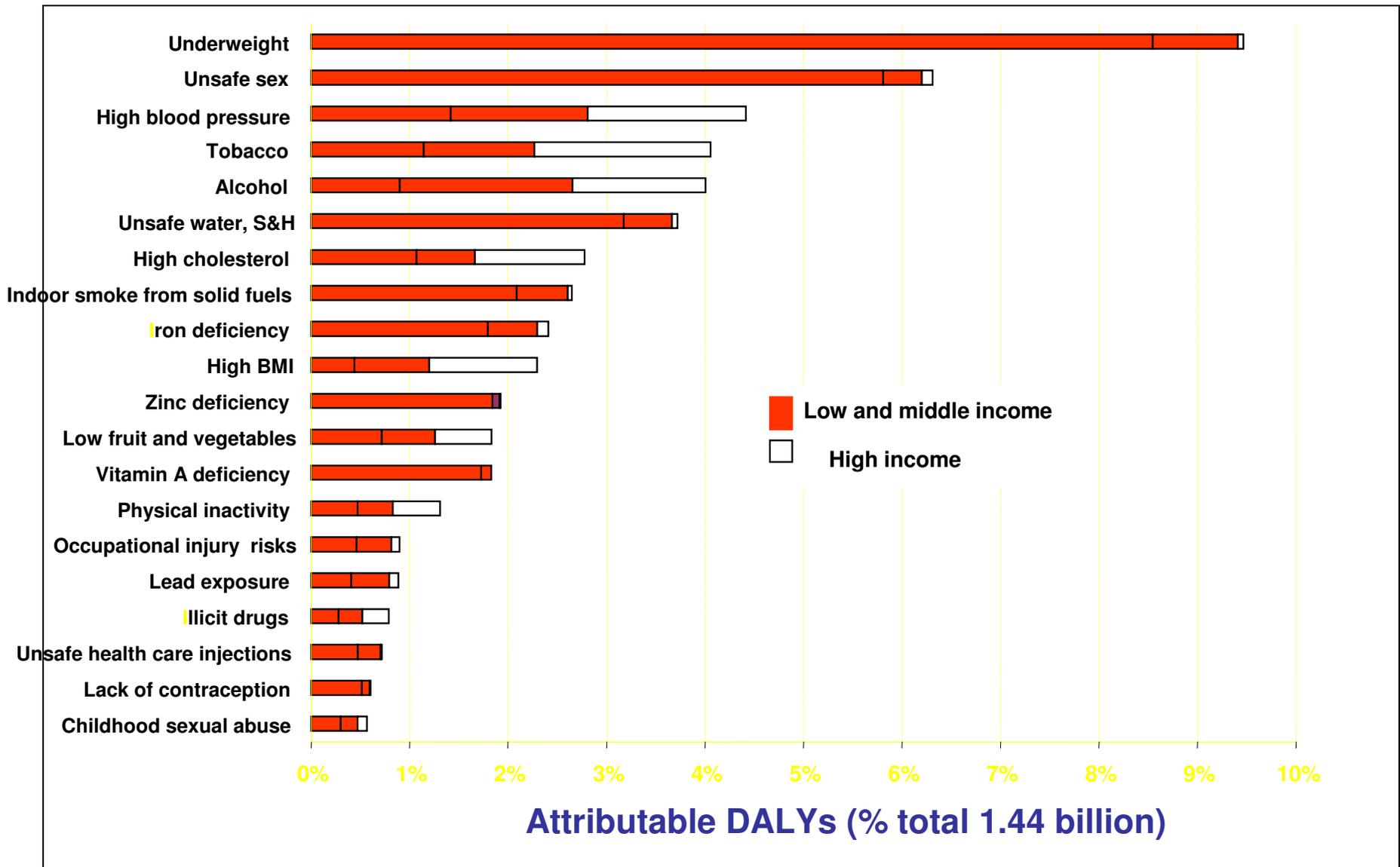


Launched 27 October 2008



Adult mortality rates by major case group and region (2004)

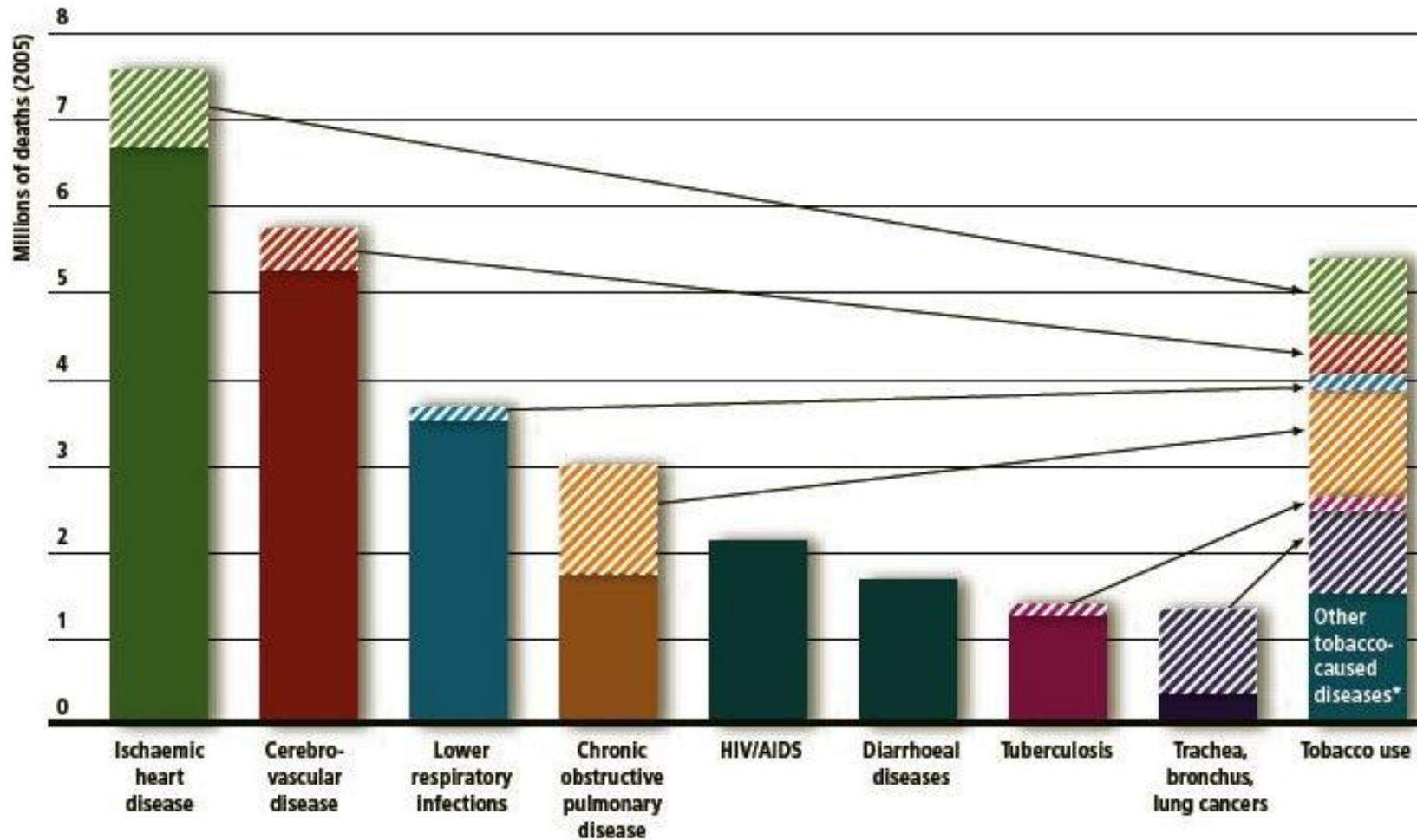
Global burden of disease attributable to 20 leading selected risk factors: in year 2000



Attributable DALYs (% total 1.44 billion)

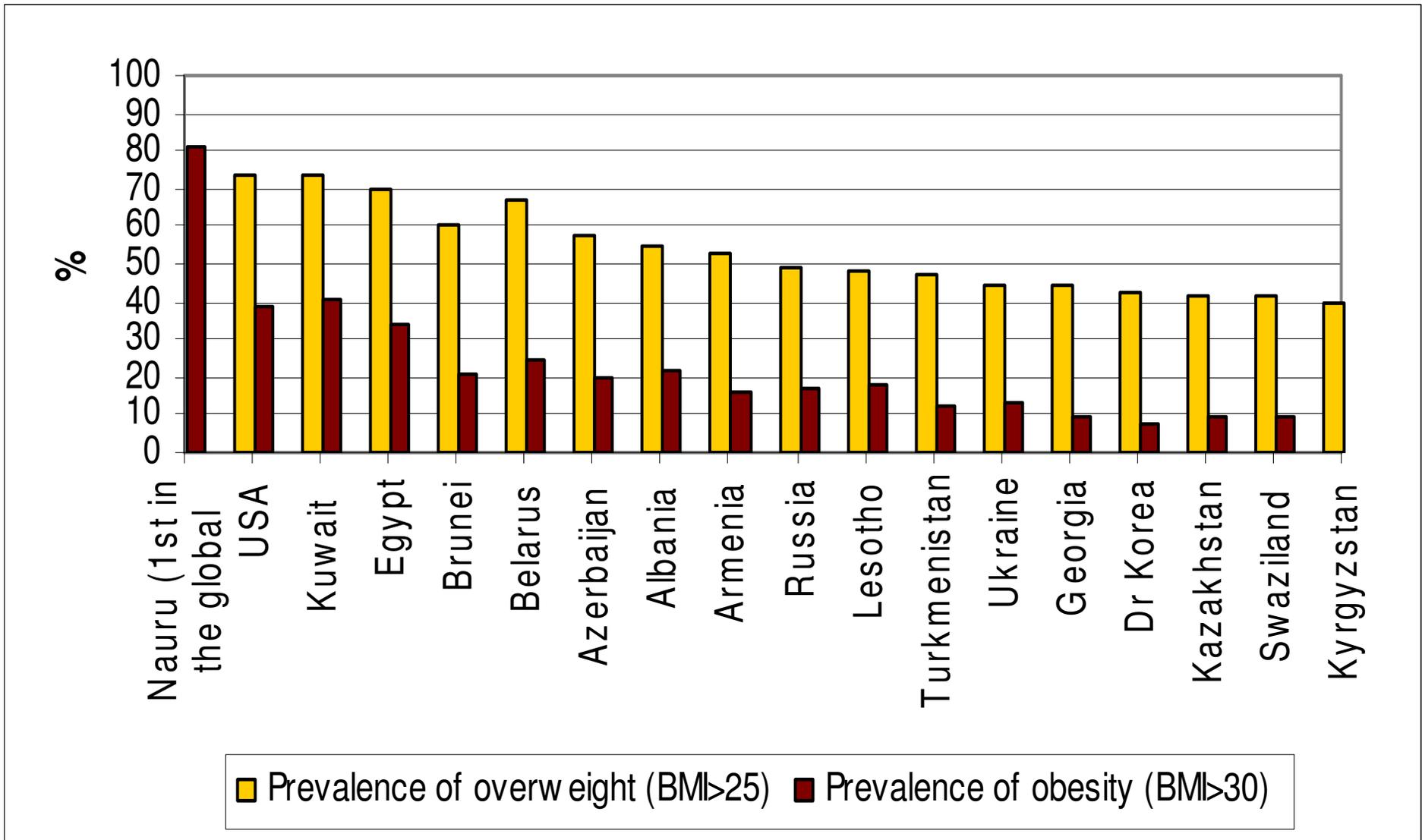
Tobacco

A risk factor for six of the eight leading causes of death in the world

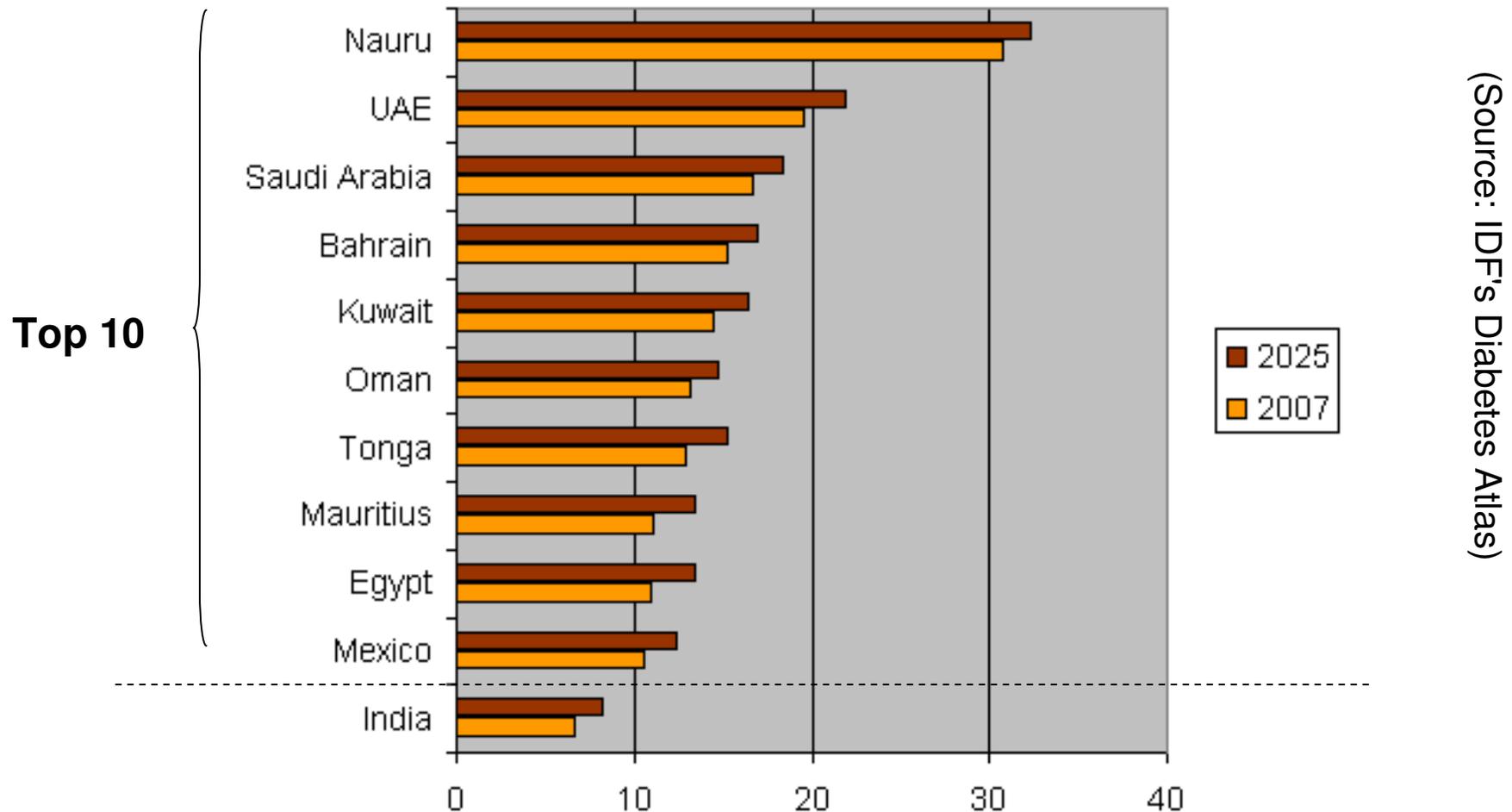


(WHO, 2008)

Overweight and obesity in people over 15 selected countries



Examples of countries with high prevalence of diabetes

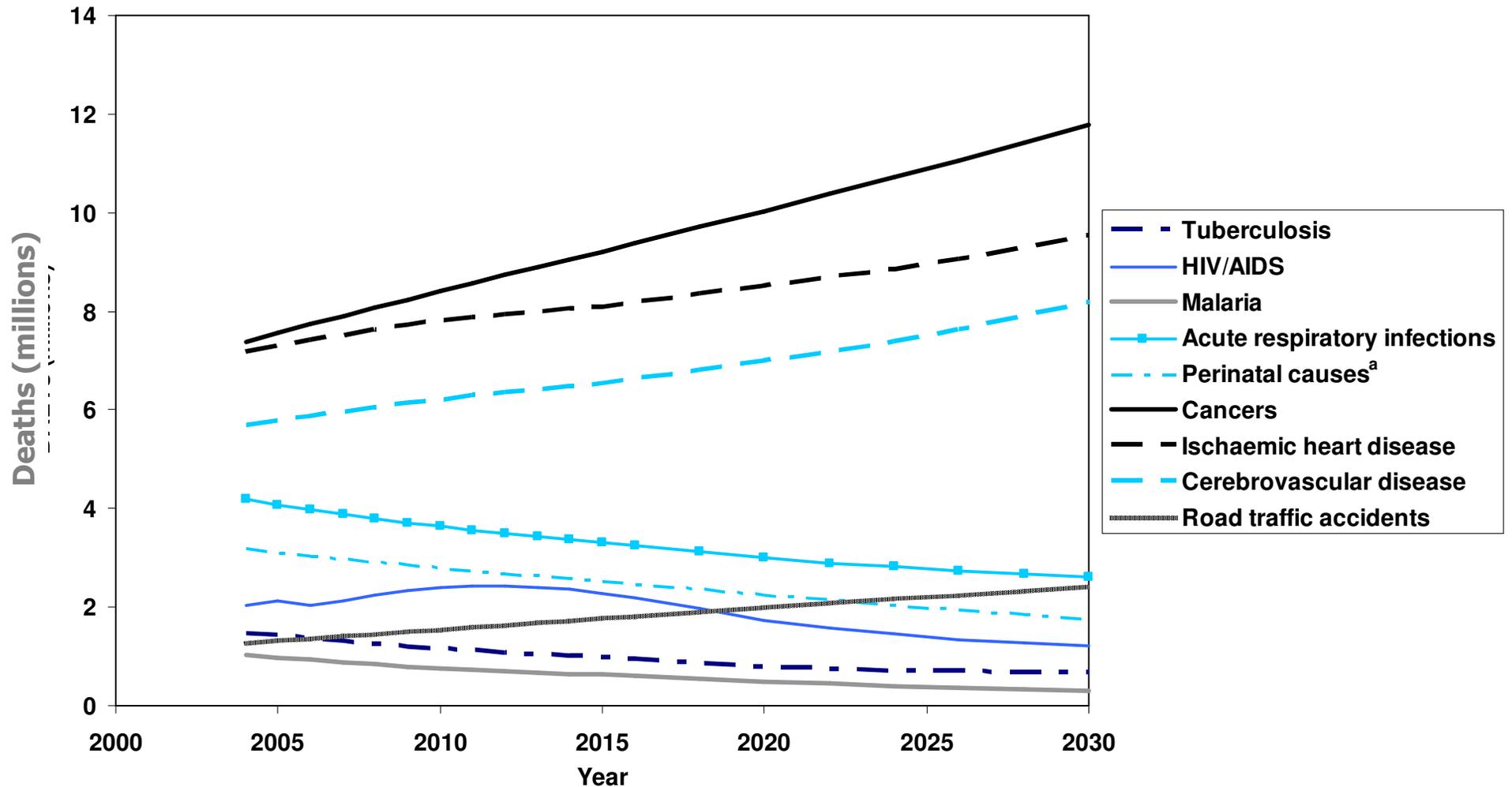


Deaths by cause in the world (2004, 2030)

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

(Source: World Health Statistics, 2008)

Results: global projections for selected causes



Mortality Trends (2006-2015)

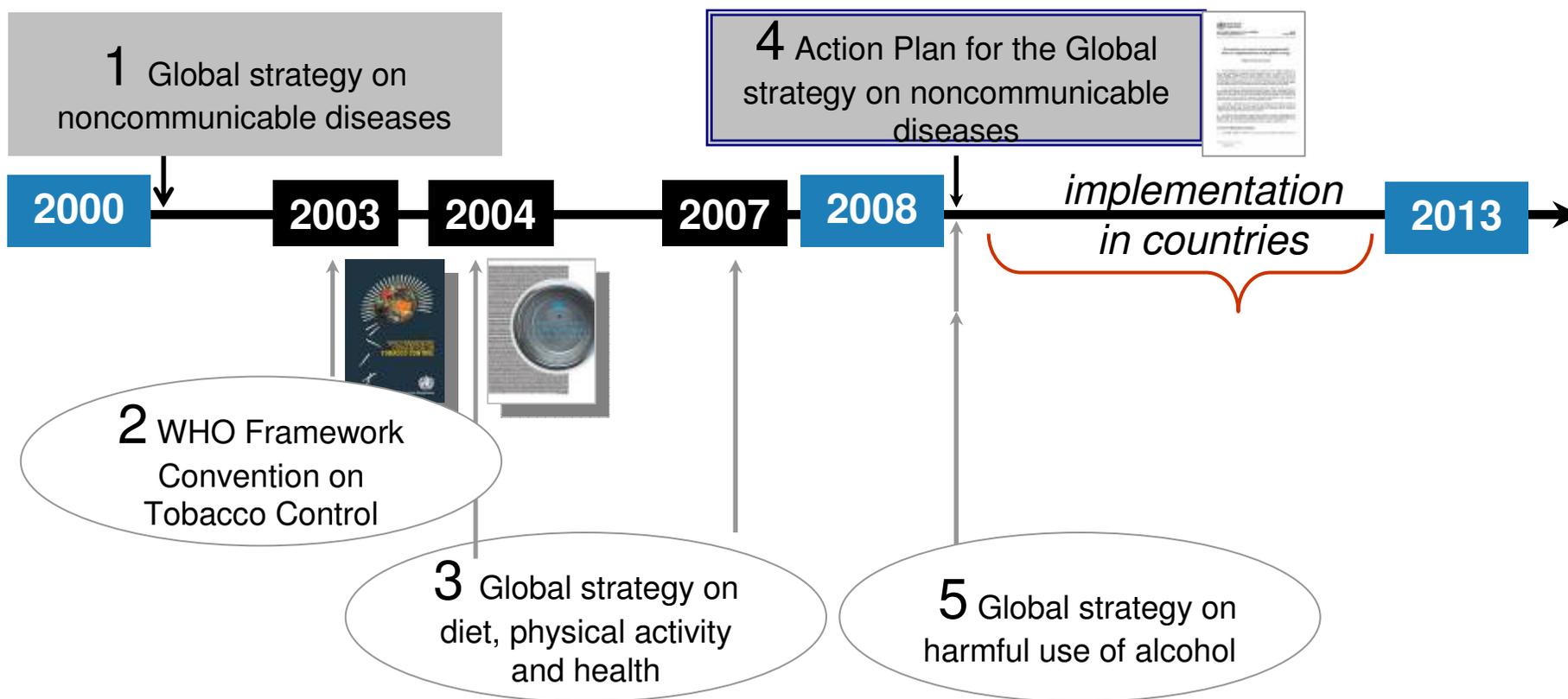
Geographical regions (WHO classification)	2005		2006-2015 (cumulative)		
	Total deaths (millions)	NCD deaths (millions)	NCD deaths (millions)	Trend: Death from infectious disease	Trend: Death from NCD
Africa	10.8	2.5	28	+6%	+27%
Americas	6.2	4.8	53	-8%	+17%
Eastern Mediterranean	4.3	2.2	25	-10%	+25%
Europe	9.8	8.5	88	+7%	+4%
South-East Asia	14.7	8.0	89	-16%	+21%
Western Pacific	12.4	9.7	105	+1	+20%
	58.2	35.7	388	-3%	+17%

WHO projects that over the next 10 years, the largest increase in deaths from cardiovascular disease, cancer, respiratory disease and diabetes will occur in Africa and the Eastern Mediterranean.



A Global Strategy and a six-year Action Plan to address cardiovascular disease, cancer, respiratory disease and diabetes endorsed by countries at the World Health Assembly.

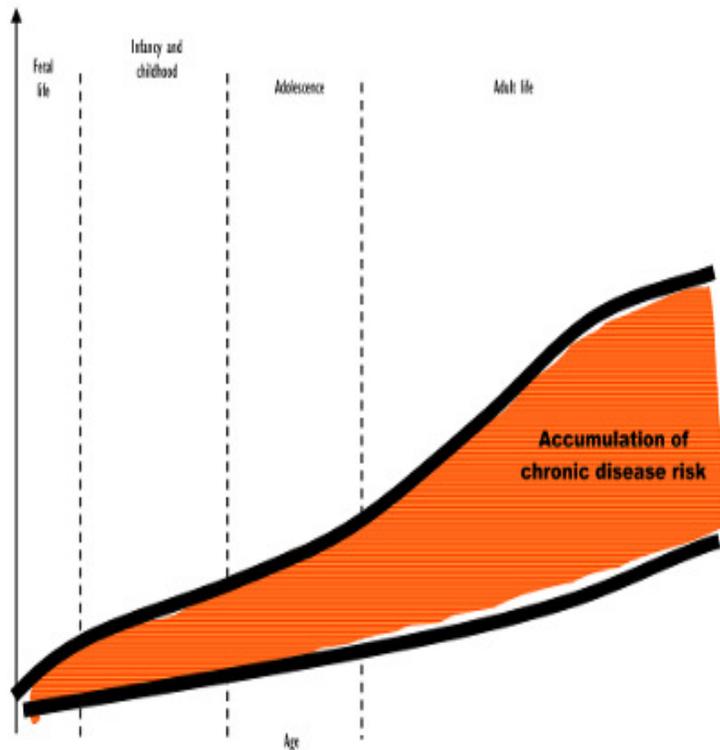
The global response to address NCDs and key risk factors



A six-year Global Action Plan to address cardiovascular disease, cancer, respiratory disease and diabetes was endorsed by the WHO World Health Assembly on 24 May 2008.

Lessons Learned From International Experience

- NCDs are preventable through interventions against the common risk factors and their determinants
- Strategies to reduce exposure to established risk factors should be combined with strategies to prevent the emergence of risk factors in the first place



Early life:
Nutrition in early life

Adolescence:
Smoking
Physical inactivity
Unhealthy diet

Lessons Learned From International Experience

- **Strategies should combine population and high risk approaches**
- **To have an impact, interventions should be of appropriate intensity and sustained over extended periods of time**
- **Success requires community participation, supportive policy decisions, legislation, intersectoral action and health care reforms**
- **More health gains are achieved by influencing public policies in other sectors like trade, education, agriculture, food production, urban development and taxation than by changes in health policy alone.**

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Key Components of the Global Strategy

- 1. Surveillance:** to quantify and track NCDs and their risk factors and determinants to provide the foundation for advocacy, national policy and global action
 - integrating monitoring of NCD trends into the national surveillance system
- 2. Promotion** of health across the life course and **prevention** of risk factors
 - Nationwide risk factors reduction through intersectoral action
 - Community-based primary prevention programmes
3. Improving access to, and quality of, **health care**, focusing on cost-effective and equitable interventions for people with chronic diseases (PHC reforms)
 - Integrating health care for NCDs into PHC
 - Strengthening health systems for more effective chronic care



Dr Leslie Ramsammy (Guyana)
President of the 61st World Health Assembly

... glaring omission ... MDGs ... failed to identify the NCDs, in spite of the fact that these diseases account for fully 60% of the global mortalities ... most of the morbidity and mortality caused by the NCDs are preventable ... a serious omission ... I propose we seriously consider an MDG+, which would set goals for the NCDs, as we have done for other ... challenges.

Global NCD Strategy and Action Plan

 **WORLD HEALTH ORGANIZATION**
FIFTY-THIRD WORLD HEALTH ASSEMBLY
Provisional agenda item 12.11 A53/14
22 March 2000

Global strategy for the prevention and control of noncommunicable diseases

Report by the Director-General

A CHALLENGE AND AN OPPORTUNITY

1. The rapid rise of noncommunicable diseases represents one of the major health challenges to global development in the coming century. This growing challenge threatens economic and social development as well as the lives and health of millions of people.
2. In 1998 alone, noncommunicable diseases are estimated to have contributed to almost 60% (51.7 million) of deaths in the world and 43% of the global burden of disease. Based on current trends, by the year 2020 these diseases are expected to account for 73% of deaths and 60% of the disease burden.
3. Low- and middle-income countries suffer the greatest impact of noncommunicable diseases. The rapid increase in these diseases is not unique; it is disproportionately in poor and disadvantaged populations and is contributing to widening health gaps between and within countries. For example, in 1995, of the total number of deaths attributable to noncommunicable diseases, 77% occurred in developing countries, and of the disease burden they represent, 85% was borne by low- and middle-income countries.
4. There now exists, however, a vast body of knowledge and experience regarding the preventability of such diseases and concrete approaches for global action to control them.

ADDRESSING COMMON RISK FACTORS

1. Four of the most prominent noncommunicable diseases – cardiovascular disease, cancer, chronic obstructive pulmonary disease and diabetes – are linked by common preventable risk factors related to lifestyle. These factors are tobacco use, unhealthy diet and physical inactivity. Action to prevent these diseases should therefore focus on controlling the risk factors in an integrated manner. Intervention at the level of the family and community is essential for prevention because the usual risk factors are deeply embedded in the social and cultural framework of the country. Addressing the main risk factors should be given the highest priority in the global strategy for the prevention and control of noncommunicable diseases. Containing cardiovascular levels and patterns of risk factors is of fundamental importance to planning and evaluating these preventive activities.

 **World Health Organization**
SIXTY-FIRST WORLD HEALTH ASSEMBLY
Provisional agenda item 11.5 A61/8
18 April 2008

Prevention and control of noncommunicable diseases: implementation of the global strategy

Report by the Secretariat

1. The global burden of noncommunicable diseases continues to grow; tackling it constitutes one of the major challenges for development in the twenty-first century. In resolution WHA53.17, the Health Assembly reaffirmed that the global strategy for the prevention and control of noncommunicable diseases¹ is directed at reducing premature mortality and improving quality of life, and requested the Director-General, inter alia, to continue giving priority to the prevention and control of such diseases. The global strategy sets out the roles of the main players in the struggle against noncommunicable diseases, namely: Member States, the Secretariat and international partners.
2. In 2007, the Health Assembly adopted resolution WHA60.23, entitled "Prevention and control of noncommunicable diseases: implementation of the global strategy", which requested the Director-General, inter alia, to prepare an action plan for the prevention and control of noncommunicable diseases, to be submitted to the Sixty-first World Health Assembly through the Executive Board, and to provide support where needed for elaboration, intensified implementation and monitoring of national plans for prevention and control of noncommunicable diseases.
3. Accordingly, a draft action plan was drawn up and discussed by the Executive Board at its 122nd session in January 2008. The Board decided in decision EB122(11) to organize an informal consultation for Member States, which was held in Geneva on 29 February 2008. In light of the comments made the draft action plan has been duly amended.
4. The draft plan, which is attached at Annex, sets out objectives, actions to be implemented over the six-year period of the Medium-term strategic plan 2008–2013, and performance indicators for Member States, the Secretariat and international partners in order to guide their work on the prevention and control of noncommunicable diseases at national, regional and global levels.

ACTION BY THE HEALTH ASSEMBLY

5. The Health Assembly is invited to note the report and to endorse the draft action plan.

¹ Document A53/14.

**2008-2013
Action Plan
for the Global Strategy for the
Prevention and Control of
Noncommunicable Diseases**



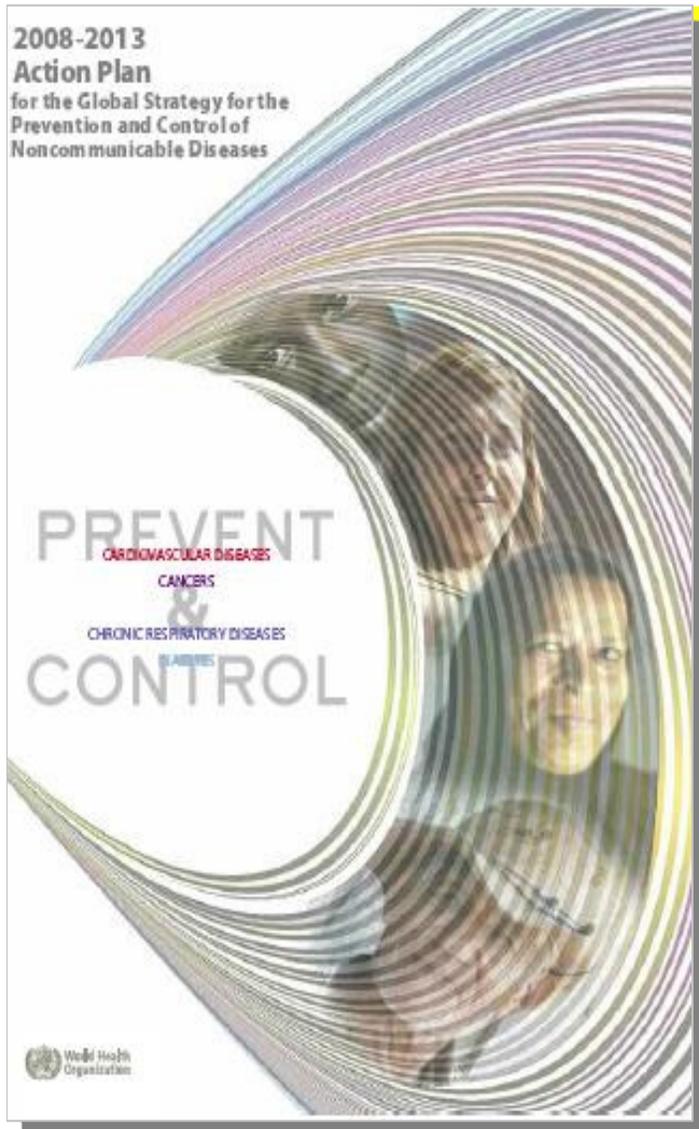
**PREVENT
&
CONTROL**

CARDIOVASCULAR DISEASES
CANCERS
CHRONIC RESPIRATORY DISEASES

 World Health Organization

Copies are available at <http://www.who.int/gb>

Six Objectives for the Global NCD Action Plan



1. Integrating NCD prevention into the development agenda
2. Establishing/strengthening national policies and programmes
3. Reducing /preventing risk factors
4. Prioritizing research on prevention and health care
5. Strengthening partnerships
6. Monitoring NCD trends and assessing progress made at country level

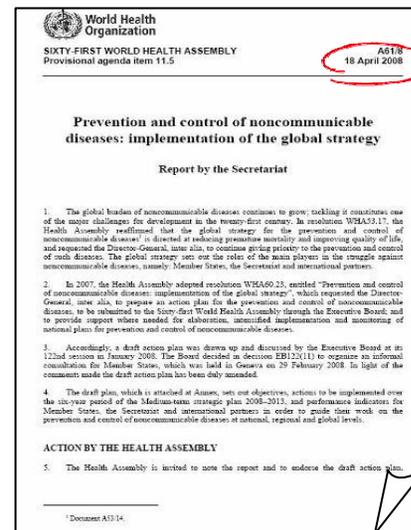
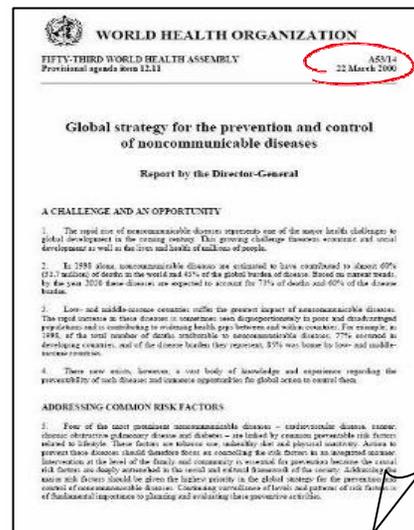
Under each of the 6 objectives, there are sets of actions for member states, another set for WHO and a third one for international partners.

Download:

www.who.int/nmh/NCD-action-plan-2008.pdf

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Implications for Countries



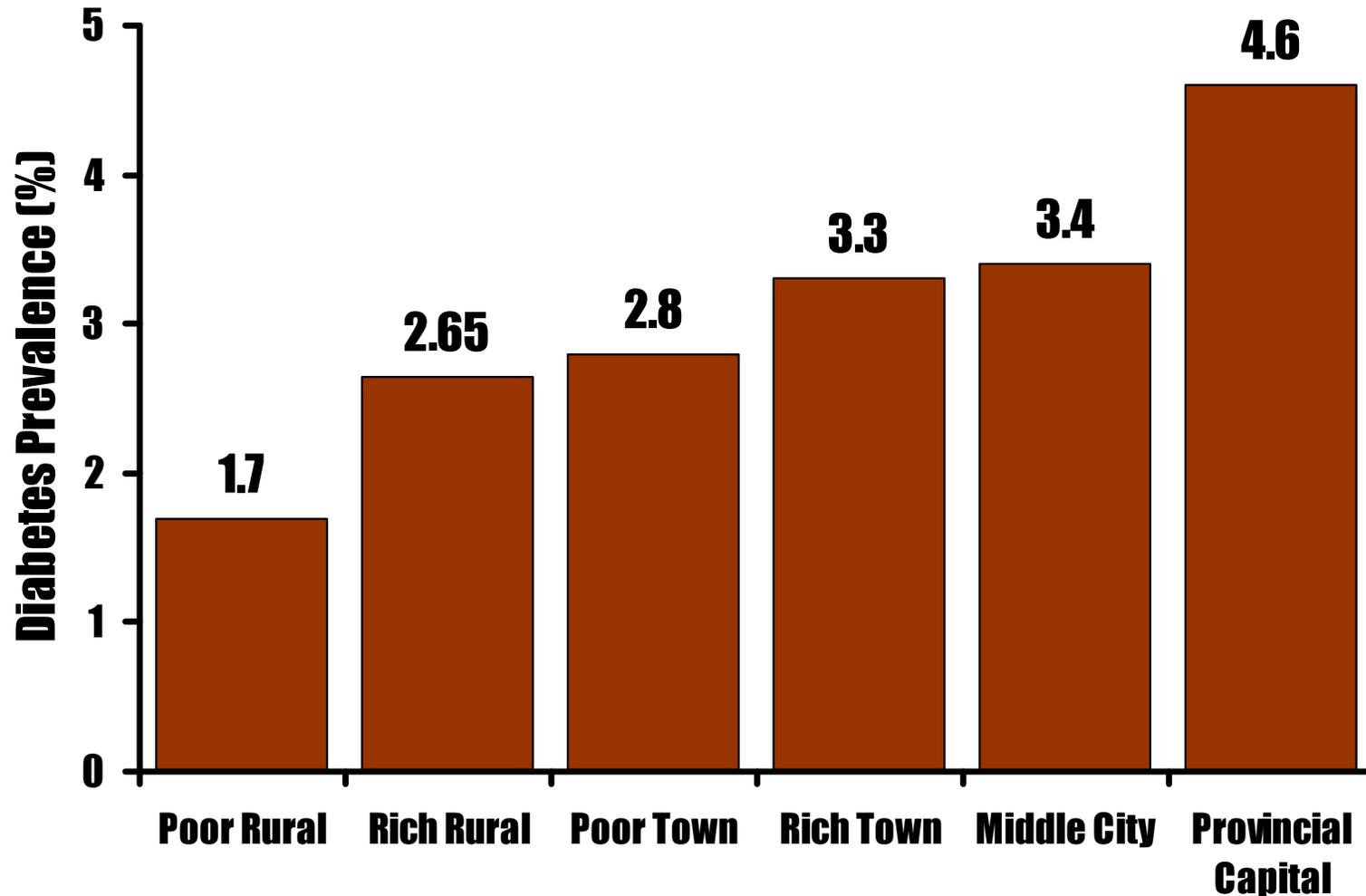
Objective 1

NCDs and Development

- Assess and monitor the public-health burden imposed by NCDs with special reference to poor and marginalized populations.
- Incorporate the prevention and control of noncommunicable diseases explicitly in all relevant social and economic policies.
- Adopt approaches to policy development that involve all government departments, ensuring that public-health issues receive an appropriate cross-sectoral response.
- Implement programmes that tackle the social determinants of noncommunicable diseases with particular reference to the following:
 - health in early childhood, the health of the urban
- poor, fair financing and equitable access to primary health care services.

Urbanisation and NCDs

Implications for Urban Planning

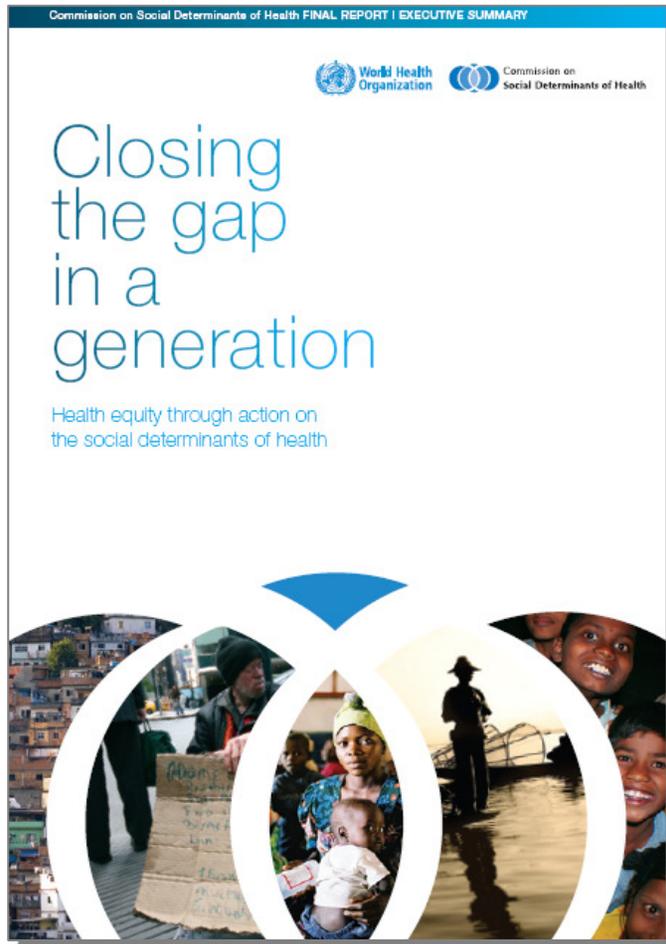


QIAN R-L et al, Chinese Diabetes Journal (Chinese National Diabetes Survey 1996)



Social Determinants of Health

Three Broad recommendations



- Improve daily living conditions
- Tackle inequitable distribution of power and resources
- Monitor inequalities and assess response

Objective 2: Establishing and strengthening national programmes with emphasis on PHC

Developing a national multisectoral framework for NCD prevention

- Mechanisms of ISA for Health
- Legislation and fiscal policies

Integrating NCD prevention into the national health development plan

- Comprehensive policy and plan
- Infrastructure
- NCD Surveillance and monitoring system
- Evidence-based and cost-effective interventions in primary and secondary prevention (packages)

Reorienting/strengthening health systems to address chronic care

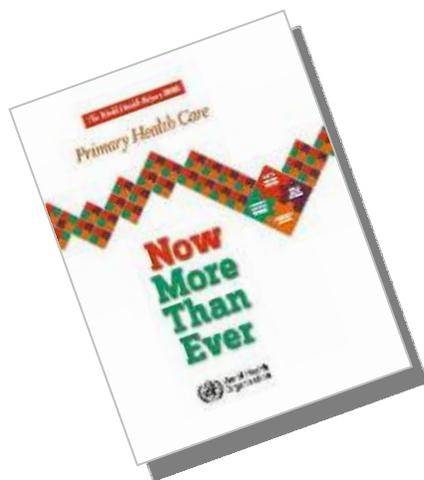
- Ensure that Health System Strengthening covers basic elements: appropriate policies based on PHC and integrated care, trained human resources, access to medicines and standards of care as well as a well functioning referral systems
- Address obstacles to continuity of care like patients records

Health reforms are driven by the challenges of a changing world

World Health Report 2008: PHC – Now More than Ever

- **A globalized, urbanized and ageing world**
- **Widening health gaps and unequal health outcomes**
- **Trends undermining health systems: hospital centricism, fragmentation, unregulated commercialization**

Underpinning principles for integrating NCD prevention and control into PHC



Universal coverage reforms:

- Ensure availability and eliminate barriers to access

Service delivery reforms:

- Organizing primary care networks accordingly

Leadership reforms:

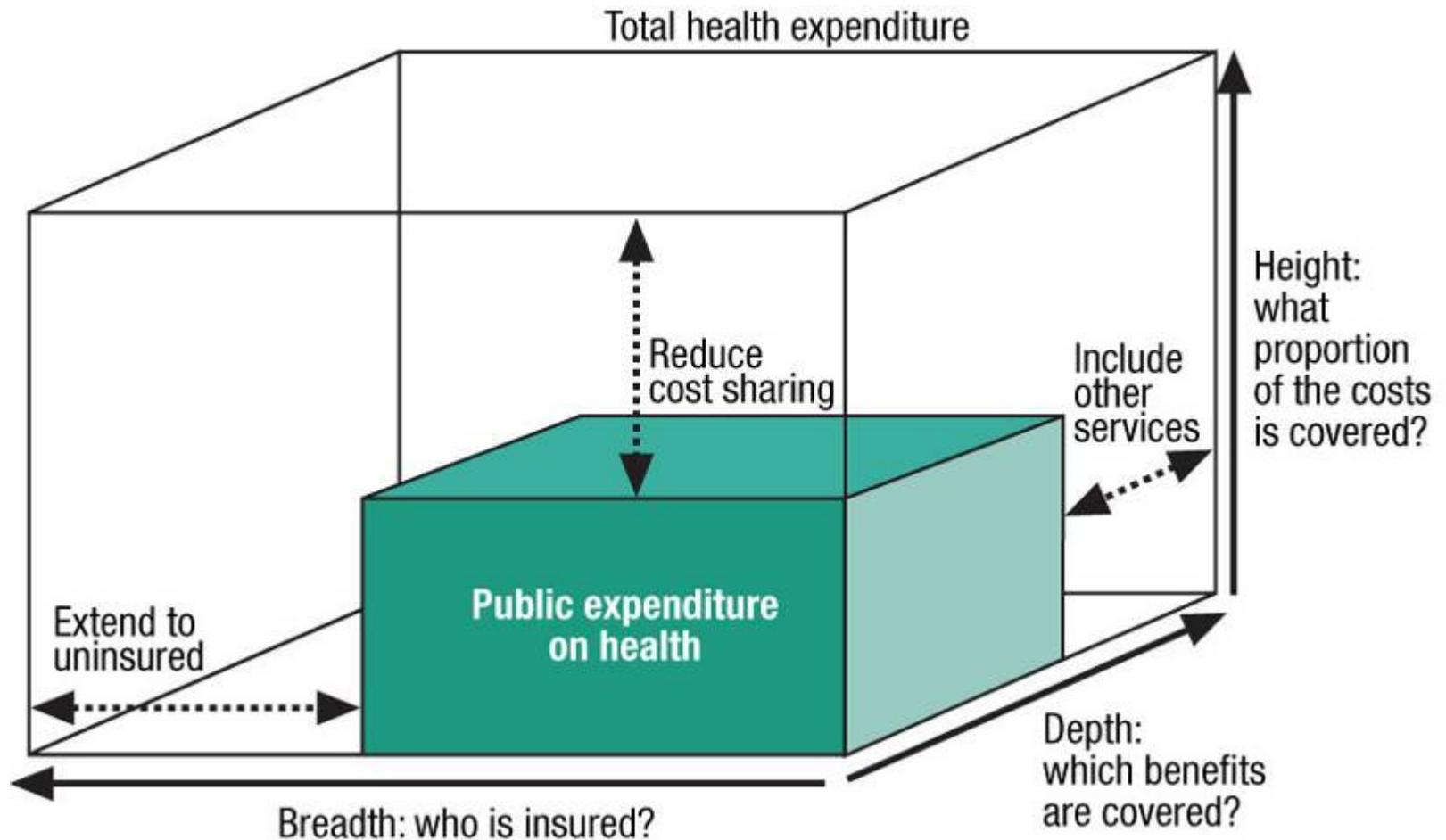
- Recognition of the key role and responsibilities of government
- Matching growth in health expenditure with massive reinvestment in capacity for leading and governing the health sector

Public policy reforms:

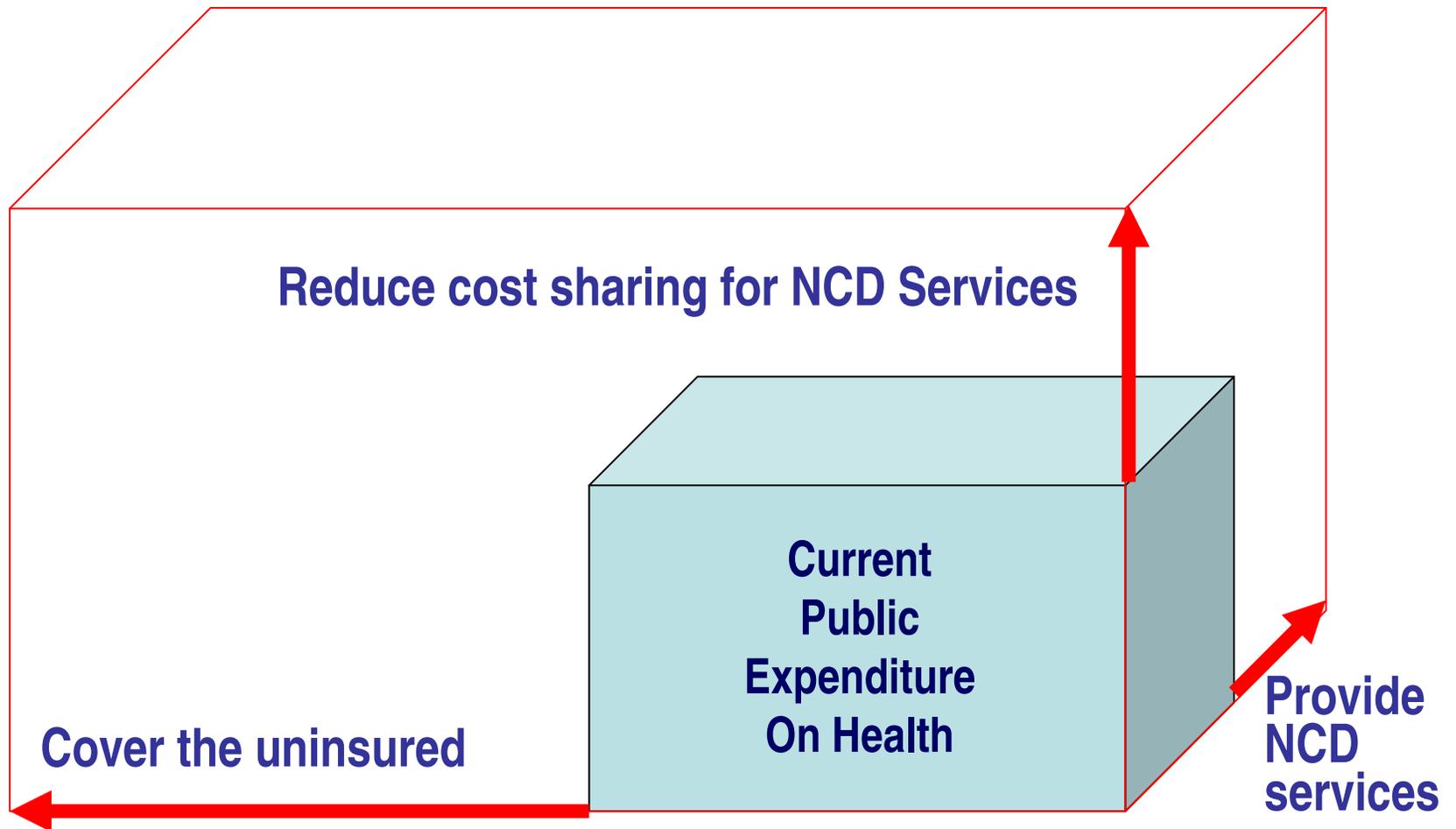
- Health systems
- Public health
- Cross-government: Health in All Policies



Integrating NCD Management into PHC



Three dimensions for universal coverage and financing of essential NCD interventions



Three levels of Public Policies

1. Systems Policies to achieve universal coverage

- Essential drugs and basic technologies
- Human resources

2. Public health policies to address priority NCDs

- Health promotion policies
- Monitoring health risks and behaviours; better information & evidence
- Secondary prevention; a package of cost-effective interventions

3. Policies in other sectors (Health in All Policies)

- Intersectoral Action for Health
- Healthy settings and healthy urbanization

Objective 3

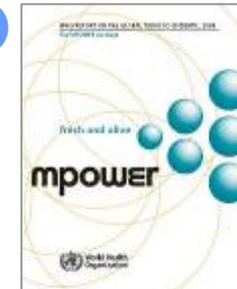
Addressing the main shared modifiable risk factors

- Actions for:
 - Tobacco control
 - Promoting healthy diet
 - Promoting physical activity
 - Reducing the harmful use of alcohol

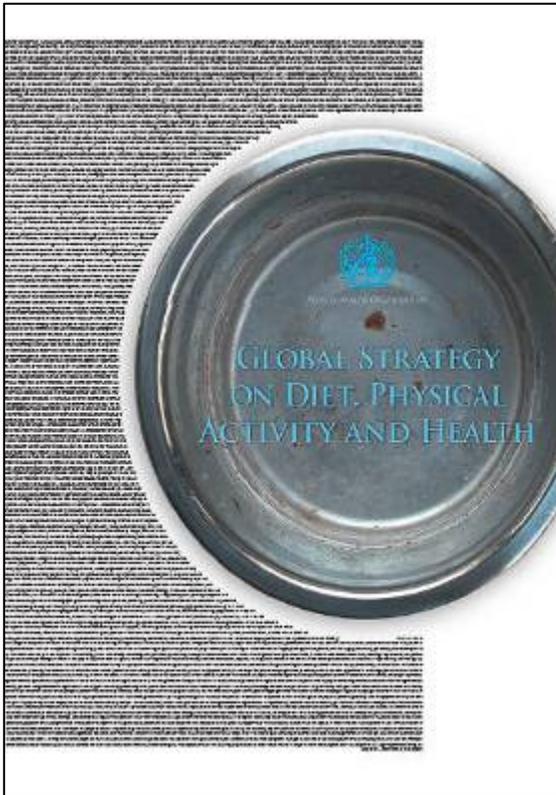
Example 1: Tobacco Control

**Six proven interventions
building on the WHO FCTC
demand reduction measures**

Six proven interventions building on WHO FCTC measures for reducing demand



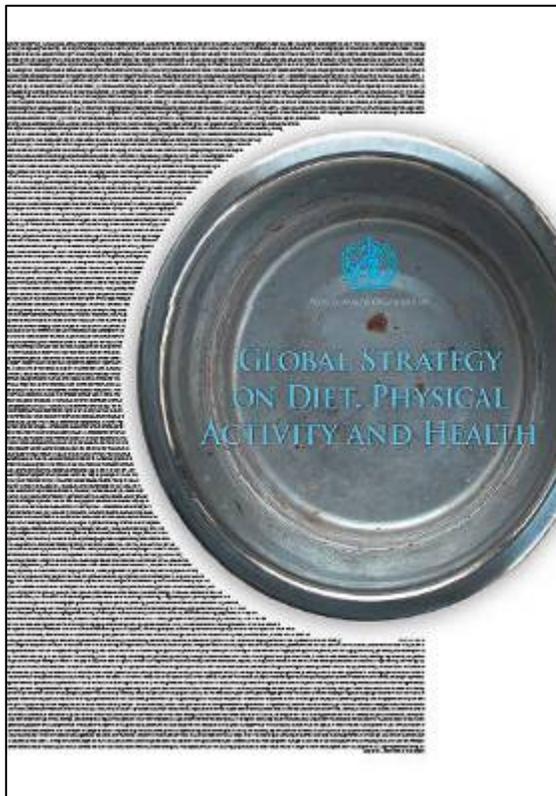
- **Monitor tobacco use and tobacco-prevention policies**
- **Protect people from tobacco smoke in public places and workplaces**
- **Offer help to people who want to stop using tobacco**
- **Warn people about the dangers of tobacco**
- **Enforce bans on tobacco advertising, promotion and sponsorship**
- **Raise tobacco taxes and prices**



The Global Strategy on Diet Physical Activity and Health (DPAS)

www.who.int/dietphysicalactivity

Example: Policies to promote healthy diet and prevent obesity Based on the Global Strategy on Diet Physical Activity and Health



- Reducing salt and trans fatty acids
- Restricting availability of sugar sweetened beverages
- Restricting availability of other high calorie snack foods: chips, chocolates and other sweets
- Increasing availability of healthier foods
- Protecting children from marketing and promotion practices
- Reshaping industry supply and consumer demands
- Labelling and calorie information
- Pricing measures

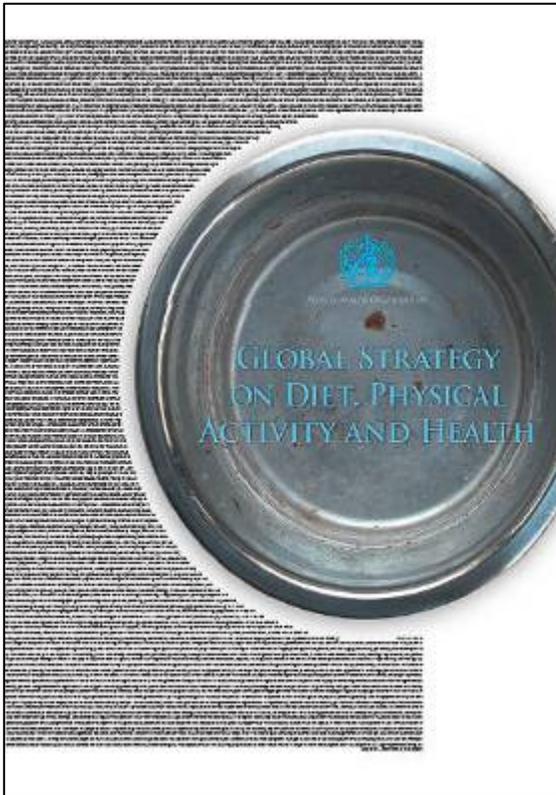
www.who.int/dietphysicalactivity



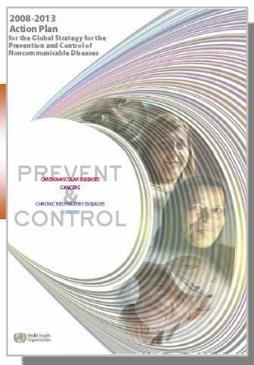
World Health
Organization

Policies to promote physical activity and prevent obesity

What works: Based on the Global Strategy on Diet Physical Activity and Health



- Urban design and land use to encourage PA as part of transportation
- Street design that make walking and biking safe and enjoyable (side lanes, bike lanes, improved lighting, public parks
- Encourage use of stair (burn calories and not electricity)
- Physical education as an important part of the school curriculum
- Facilities for sports for adults including women



Objective 4: To promote research for the prevention and control of noncommunicable diseases

Proposed action for Member States:

- Invest in epidemiological, behavioural, and health-system research as part of national programmes and develop – jointly with academic and research institutions – a shared agenda for research, based on national priorities.
- Encourage the establishment of national reference centres and networks to conduct research on socio-economic determinants, gender, the cost-effectiveness of interventions, affordable technology, health system reorientation and workforce development.

Global NCD Action Plan 2008-2013

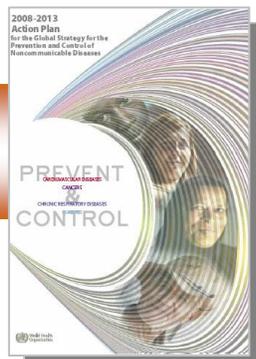


Objective 4: To promote research for the prevention and control of noncommunicable diseases

Action for the WHO Secretariat:

- Develop a research agenda for NCDs in line with WHO's global research strategy, collaborate with partners and the research community and involve major relevant constituencies in prioritizing, implementing, and funding research projects.
- Encourage WHO collaborating centres to incorporate the research agenda into their plans and facilitate collaborative research through bilateral and multilateral collaboration and multicentre projects.

Global NCD Action Plan 2008-2013



Objective 4: To promote research for the prevention and control of noncommunicable diseases



WHO Meeting on A Prioritized Research Agenda for Prevention and Control of NCDs (Geneva, 25-26 August 2008)



Global Ministerial Forum on Research for Health (Bamako, 17-19 November 2008)

A Prioritized NCD Research Agenda (2009)



- Circulate a draft NCD agenda
- Peer reviews and publish series
- Consultation to finalize (May 2009)



Objective 5 Partnerships

- Establish effective partnerships for NCD prevention and develop collaborative networks, involving key stakeholders, as appropriate

Objective 6

Monitoring & Evaluation

- Strengthen surveillance systems and standardized data collection of risk factors, disease incidence and mortality by cause, using existing WHO tools (action for Member States)
- Develop and maintain information system to collect, analyse and disseminate information on trends in mortality, disease burden, risk factors, policies, plans, and programmes (action for WHO)

Some Conclusions...

- **Diabetes and other NCDs are already leading health problems and their magnitude is still increasing**
- **As countries continue to develop, market forces will further promote unhealthy patterns. Action is urgently needed.**
- **Risk factors prevention is not just an issue of personal choices & behaviours. The Role of the Government is key and action by various sectors is mandatory**
- **Cost-effective interventions exist and can be implemented at the PHC level. Initial response should always include establishment of a surveillance system and initiate policy changes as early as possible**
- **Integrating interventions into PHC is effective and feasible even in low-income countries but health systems needs to be strengthened**
- **All the four sets of PHC reforms specifically address the gaps in diabetes prevention and control**