



**World Health  
Organization**

REGIONAL OFFICE FOR **Europe**

# The new European policy for health – Health 2020

## Policy framework and strategy

Draft 2

DRAFT

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## Introduction

1. Health and well-being are central to the lives of all people. Health and well-being affect society at present and affect future generations. Nevertheless, today all European governments face crucial decisions that will affect the health and well-being of their populations. Economic and social crises combined with environmental threats as well as major shifts in geopolitics, patterns of disease, demography and migration pose profound challenges to health and threaten the capacity of governments to fulfil their responsibilities for their people's health and well-being. The way forward is unclear, and today's political and economic models may undergo profound transformation that is unknown now.

2. Can health for all be achieved in this context of challenge and uncertainty? Like all ideals, health for all provides a vision, a sense of direction and an ultimate goal that transcends practical challenges. Despite present and future uncertainty, European countries can address these challenges and ensure that health and well-being will be preserved and further nurtured. Health has improved across the European Region but not by enough. Certainly health equity has not improved. The European Region still has extreme pockets of ill health and poverty that need to be urgently addressed. There are major inequities in health that need to be tackled.

3. Europe can perform better in terms of health and well-being. The present economic difficulties can indeed accelerate efforts to improve such performance, and health and well-being are key for economic recovery in and the sustainable development of the European Region. Today we can strengthen our commitment and leadership, as we have gained new understanding of the determinants of health. There is improved knowledge of the mechanisms by which the distribution of resources and the capacity for self-determination within our societies affects and creates health and health inequities. The range and depth of technologies available is being transformed. Without underestimating the current challenges, this is a time to be positive. We must strive to improve the level and distribution of health in the 21st century for all the peoples of the European Region as a key priority for the current and future opportunities of the 900 million residents.

4. The goal of health for all has a long history and tradition. The right to health was first proclaimed in 1948 in the preamble of the WHO Constitution (1) and later the same year in Article 25 of the Universal Declaration of Human Rights (2). In 1976, the International Covenant on Economic, Social and Cultural Rights (3) entered into force, reaffirming in its Article 12 the enjoyment of the highest attainable state of health as a human right under international law.

5. In May 1977, WHO Member States determined that the main social goal for governments and WHO should be for all citizens of the world to attain by the year 2000 "a level of health which will permit them to lead a socially and economically productive life" (4). This was followed in 1978 by the Declaration of Alma-Ata on primary health care (5). As part of this global movement, the Member States of the WHO European Region, at the thirtieth session of the WHO Regional Committee for Europe in Fez, Morocco in September 1980, approved their first common health policy: the European strategy for attaining Health for All. Then in May 1981, at the Thirty-Fourth World Health Assembly, WHO Member States adopted this goal within the Global Strategy for Health for All (6), which emphasized

the attainment by societies of the highest possible level of health as a basic human right and the importance of observing ethical principles in health policy-making, health research and service provision.

6. In 1998, the World Health Assembly declared in its World Health Declaration (7) that:

We, the Member States of the World Health Organization (WHO), reaffirm our commitment to the principle enunciated in its Constitution that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being; in doing so, we affirm the dignity and worth of every person, and the equal rights, equal duties and shared responsibility of all for health.

7. These global and regional commitments to the right to health are clear and precise and refer to a noble ideal. How then can health and well-being be achieved in a world that is very much more complex and uncertain? To effectively address the present challenges and seize new opportunities, the time is right for comprehensively and critically re-examining the current governance mechanisms for health, health policy, public health structures and health care delivery. It is time to renew European health policy and to address the human right to health in the context of what is known and what can be achieved in promoting and maintaining health. These benefits should be available for everyone as far as possible. Achieving them will require new and radically different leadership for health in the future. Health 2020 has been drafted with these fundamental goals in mind.

8. Health 2020 is a joint commitment between the WHO Regional Office for Europe and the 53 European Member States. The policy sets out an action framework based on key action principles (Box 1). It aims to accelerate the attainment of better health and well-being for all. The Health 2020 framework can be adopted and adapted to the different realities that make up the European Region. Its overall rationale is to describe how health and well-being can be advanced, sustained and measured through action that creates social cohesion, security, work-life balance, good health and good education. Health 2020 is consistent with existing commitments endorsed by Member States, including the United Nations Millennium Declaration (8) and Millennium Development Goals (9), which embrace a vision for a world in which countries work in partnership for the betterment of everyone, especially the most disadvantaged people.

**Box 1. Health 2020: key action principles 1–6**

1. Addressing the risks and opportunities and preparing for and anticipating change
2. Integrating strong, evidence-informed socioeconomic arguments to advocate for health and well-being
3. Developing, promoting and agreeing on a common policy framework for working together for health
4. Rigorously upholding a rights- and values-based approach to health and well-being
5. Committing to a whole-of-government approach to health and well-being
6. Crafting specific strategies for tackling the health divide between and within countries

9. A basic principle of sustainable development is that the present generation should not compromise the environment of subsequent generations. Social and economic inequalities, transmitted to subsequent generations, result in the indefensible persistence of health

inequalities. Improving health equity, including both intergenerational inequity and the transmission of inequity, is at the core of what Health 2020 aims to achieve.

10. Strategies for health equity and sustainable development should come together, recognizing the links between social, environmental and economic environments and intergenerational equity. For instance, the response to the economic crisis in Europe is likely to result in the unsustainable transfer of debt to subsequent generations, particularly in the context of the economic implications of an ageing population.

11. These principles are captured in the 2011 Rio Political Declaration on Social Determinants of Health, which states:

We reaffirm that health inequities within and between countries are politically, socially and economically unacceptable, as well as unfair and largely avoidable, and that the promotion of health equity is essential to sustainable development and to a better quality of life and well-being for all, which in turn can contribute to peace and security.

12. Health 2020 is organized in three parts (Fig. 1).

- Part 1: The context for the new policy
- Part 2: Strategies that work and key actors
- Part 3: Preconditions for effective implementation.

Fig. 1. The three parts of Health 2020

The context for the new policy	<b>A new policy for health and well-being for a new era</b>	Part 1
	Health 2020 vision and Health 2020 goals	
	The case for the big shift Health and well-being, drivers and trends, building on experience, the demographic and epidemiological situation, the determinants of health and economics and health	
	Values	
	Governance for health People and citizens – a whole-of-society approach A whole-of-government approach	
	Leadership for health	

Strategies that work and key actors	<b>Public health priorities in the European Region</b>	Part 2
	Tackling the health divide	
	Invest in healthier people, empower citizens and create resilient communities	
	Tackle the European Region's major disease burdens	
	Create healthy and supportive environments and assets for health and well-being	
	Strengthen patient-centred health systems, public health services and preparedness for emergencies	
	Promote and adopt health in all policies, whole-of-government and whole-of-society approaches	

Preconditions for effective implementation	<b>Making it happen</b>	Part 3
	Leadership and capacity for health and well-being; governance for health; institutional mechanisms to promote change and innovation; health policies, strategies and plans; strengthening public health capacity and services; strengthening health systems and services; citizens' and patients' voices and empowerment; partnerships and partners for change; information and research; and the role of WHO	



## **Part 1. The context for the new policy**



## Health 2020 vision

13. Box 2 shows the vision for Health 2020.

### **Box 2. Vision for Health 2020**

Our vision is for a WHO European Region in which all people are enabled and supported in achieving their full health potential and well-being and in which countries, individually and jointly, work towards reducing inequities in health within the Region and beyond.

## **New thinking and commitment is required: the case for the big shift**

### ***Goals and strategic objectives***

14. Health 2020 expresses this vision as a main goal (Box 3). Achieving the goal will require new approaches towards governance for health. Governance lies at the core of Health 2020. Achievement will also require shared strategic objectives (Box 4).

### **Box 3. The main goal of Health 2020**

To improve the health and well-being of populations, to reduce health inequities and to ensure sustainable people-centred health systems.

### **Box 4. The main strategic objectives of Health 2020**

Working together: adding value through partnerships

Setting common policy priorities

Improving governance for health and increasing participation

Accelerating the uptake of new knowledge and innovation through leadership.

15. Health is more than the absence of disease and is a state of complete physical, mental and social well-being (10). Well-being includes physical, cognitive and social and emotional dimensions and is influenced by biomedical, social, economic and environmental factors across the life course. The acknowledgement of health and well-being as a public good and an asset for human development requires constant vigilance. Health 2020 is therefore a dynamic process that requires the full and continuous engagement of WHO, Member States and a wide range of stakeholders. Health 2020 is shaped around six interrelated areas for policy action, which are shown in Box 5.

**Box 5. Health 2020: six areas for policy action**

1. Tackle the health divide
2. Invest in healthier people, empower citizens and create resilient communities
3. Tackle Europe's major disease burdens
4. Create healthy and supportive environments for health and well-being
5. Strengthen people-centred health systems, public health capacity and preparedness for emergencies
6. Promote and adopt health in all policies, whole-of-government and whole-of-society approaches

16. Health and well-being reflect many influences and interactions between individuals, populations and society. Health vulnerability results from various exclusionary processes related to inequalities in power and resources and to differences in the conditions and opportunities of life that result from these inequalities. These processes produce barriers to releasing and enhancing individual and collective capabilities. Exclusionary processes create a continuum of exclusion characterized by unequal access to resources, services, opportunities and rights. To the extent that these processes operate differently across the whole of society, they create the social gradient in health.

17. In creating good conditions for health and well-being to flourish, individuals, communities, and countries may have active coping strategies that draw on cultural resources and a wide range of positive social and environmental assets. Such resources need to be preserved and nurtured. The focus is on resilience and assets that protect against harm and on reducing or altering exclusionary processes. Health assets refer to any factors (or resources) that enhance the ability to maintain and sustain health and well-being. Asset-based approaches enable protective factors that create and support health and well-being to be identified. Such approaches offer the potential to enhance both life's quality and longevity by focusing on the resources that promote health and coping abilities.

18. Drawing on concepts that include salutogenesis, resilience and social capital, such asset-based approaches focus on well-being and seek to create conditions in which everyone in the European Region can flourish and lead lives that they value and not just avoid disease. These assets can be identified at the level of the individual, group or entire community. Health assets operate therefore as protective factors to buffer against life's stresses and as promoting factors to maximize opportunities for health and well-being.

19. Since 1990, the United Nations has regularly measured the well-being of countries through the Human Development Index, with the intention of "[shifting] the focus of development economics from national income accounting to more people-centred policies". Starting with the *Human development report 2010 (11)*, the Human Development Index combines three dimensions: a long and healthy life: life expectancy at birth; access to knowledge: mean years of schooling and expected years of schooling; and a decent standard of living: gross national income per capita (adjusted for purchasing power parity).

20. The relationship between affluence and well-being is becoming better understood. Research on the social gradient of health indicates that greater affluence at the individual and

societal level leads to higher levels of health. Nevertheless, many research studies in recent years have shown that unprecedented economic prosperity in the past 35 years has not necessarily made many people feel better as individuals or as communities. Economic output has increased in recent decades in many countries, but levels of subjective well-being and happiness have remained flat, and inequality has increased.

### Joint action for health and well-being

21. The idea of generating social wealth and social growth rather than focusing merely on economic growth measured only in terms of gross national income has been on the international agenda for some time. Accordingly, policies for well-being are considered one possible reorientation for 21st-century public policy goals. Supporting the development of Health 2020 requires a broad-based discussion of policies at the European Region and national levels that aim to increase health and well-being and to understand economic development as a means of enhancing people's potential and quality of life and freedom rather than as an end in itself.

22. A significant range of possibilities for partnerships and joint action for health and well-being emerge from such a discussion. Examples include the following.

- In 2009, the European Commission issued a communication *GDP and beyond: measuring progress in a changing world* (12), which built on extensive work by a group of partners, including the European Commission, European Parliament, Club of Rome, Organisation for Economic Co-operation and Development and WWF.
- Several countries – including Australia, Canada and the Netherlands – have developed measures of well-being at the national level during the past decade. In the United Kingdom, the Office of National Statistics has begun a national consultation on new measures of well-being, seeking the views of citizens and organizations. In Germany, the Bundestag launched the Study Commission on Growth, Well-being and Quality of life in January 2011 to explore how to complement gross national income measures with ecological, social and cultural criteria.
- The Commission on the Measurement of Economic Performance and Social Progress set up by the President of France and led by two Nobel Prize winners, Joseph E. Stiglitz and Amartya Sen, as well as Jean-Paul Fitoussi, provided suggestions on how to measure societal well-being in a 2009 report (13). The Commission also acknowledged the limits of gross national income as an indicator of economic performance and social progress. The report recommends shifting economic emphasis from simply the production of goods to a broader measure of overall well-being, which would include the benefits of common goods such as health, education and security. It calls for greater focus on the effects of income inequality as well as new ways to measure the economic effects of sustainability and recommended ways to include the value of wealth to be passed on to the next generation into today's economic conversation.
- The Council of Europe has introduced “well-being for all” and emphasizes that well-being cannot be attained unless it is shared. It is a relational and a participatory concept: “The well-being of one part of humanity is unattainable if another part is in a state of ill-being or if it is to be achieved at the expense of future generations, who thereby inherit an uncertain world stripped of resources” (14).
- The framework for a national account of well-being of the New Economic Foundation contains a view of well-being “as the dynamic process that gives people a sense of how

their lives are going, through the interaction between their circumstances, activities and psychological resources or ‘mental capital’”(15). It comprises two main elements: feeling good and functioning well (Fig. 2). Based on the evidence that feeling close to and being valued by other people is a fundamental need, a personal dimension and a social dimension are measured.

23. These initiatives emphasize that accepting well-being as a goal for public policies requires that it be measurable. A consensus is emerging that the most important characteristics of an overarching model for measuring well-being are its multidimensional nature and the combination of objective and subjective measures. Eurostat has underlined that it is critical in policy-making to work with a model of well-being that covers “all aspects of well-being, including outcome measures, personal characteristics, external ‘context’ factors and measures of what people actually ‘do’ with these characteristics and ‘societal’ conditions” (16). These types of measures complement the health data generated through research on the social determinants of health and provide a deeper understanding of well-being as expressed in the WHO definition of health.

24. In the spirit of the WHO definition, Health 2020 incorporates well-being into both the vision and main goal. It is hoped that developing and implementing Health 2020 will contribute to greater understanding and utility for the concept and to measuring it (Fig. 2).

### **Emerging drivers of health: trends, opportunities and risks**

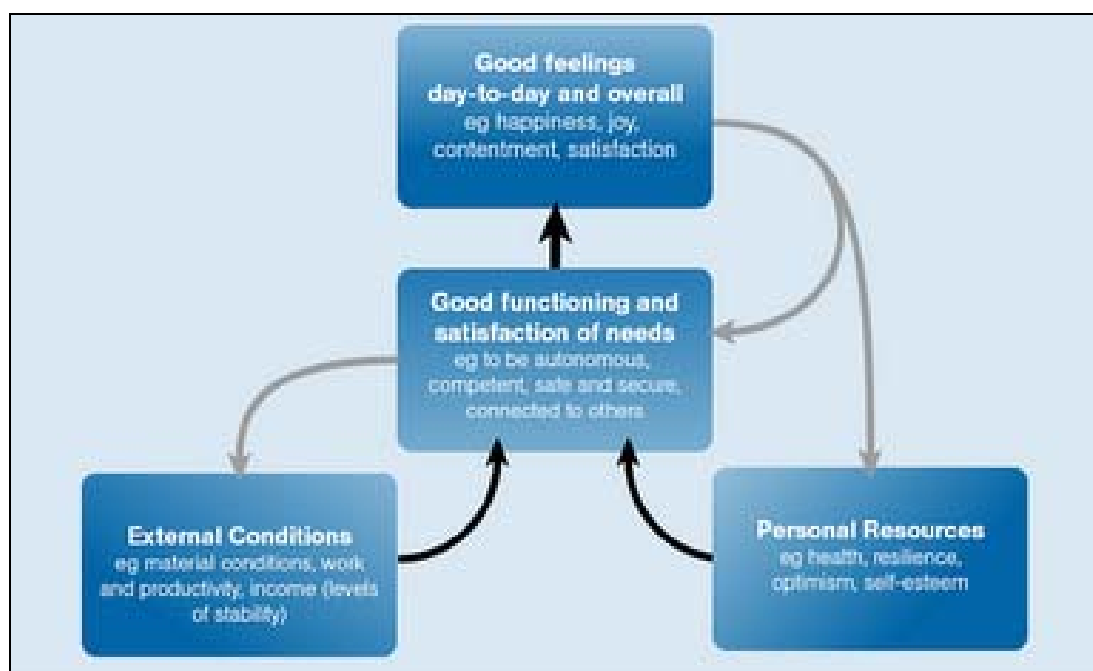
25. There have been real health improvements across the European Region. Interdependence, rapidly improving connectivity and technological and medical innovation have all created extraordinary new opportunities to improve health and health care. The technological capacity available to understand, prevent, diagnose and treat disease has been transformed in an almost exponential progression. Diagnostic and medical and surgical interventions have expanded dramatically, as has drug-based therapy. E-health and telemedicine are examples of the transformative effects of new information technology. Nanotechnologies are on the horizon. The possibilities emerging from the new medical genetics will be profound. It is important that these important developments benefit all of society and that their effects be equally distributed to avoid health inequities.

26. There is also significant new knowledge about the complex interrelationship between health and sustainable human development. Health needs to be changed from being merely perceived as a medically dominated money-consuming sector to a major public good bringing economic and security benefits and a key social objective. There is now a broad consensus that the health of populations is critical for social stability, social cohesion and economic growth and a vital resource for human and social development.

27. Citizens and patients are today much more involved than previously in governance for health, in developing policies for health and development and in the architecture and functioning of public health and health care services.

28. Health systems, including health care and thus the roles of patients, are shifting fundamentally with the development of chronic diseases as the largest cause of death and disability worldwide. Chronic diseases are enduring, necessitating a care strategy that reflects a long time frame and clearly defines people’s roles and responsibilities in managing their health problems.

Fig. 2. Dynamic model of well-being from the New Economics Foundation



Source: *Measuring our progress – the power of well-being* (17).

29. Although the doctor–patient relationship traditionally evolves in a context in which professionals possess the medical knowledge and decision-making power, the knowledge and experience of the patient is increasingly being recognized. Hence citizen’s empowerment, health literacy, patient’s rights and the empowerment and participation of citizens and patients in decision-making processes are vital to achieving health promotion and disease prevention objectives. This is particular crucial for health system objectives such as patient safety, quality of care, transparency and accountability.

30. Health policies are needed that aim to ensure decision-making power for citizen and patients, to protect their human rights and to implement legislation that forbids discrimination based on disease or disability. Needed also is access to knowledge and to health promotion and disease prevention activities as well as services based on respectful communication between caregivers and recipients. Shared decision-making, autonomy, independence and control over one’s health and disease are vital, as are communities in which people with chronic diseases or disabilities are provided with the structures and resources they need to fulfil their potential and to live and work socially included lives.

31. All these developments are potentially positive for health. Nevertheless, health policies today remain challenged fundamentally by a complex array of global and regional forces, with variable effects. These include a profound demographic shift with decreased fertility rates; a rise in the old-age dependency ratio if policies are not adjusted; the increasing privatization of economies; environmental pollution; climate change;<sup>1</sup> widening inequity in the distribution of income and wealth and access to health and social care; the changes in

<sup>1</sup> Climate change refers to a change in the mean and/or the variability of climate and its properties that persists for an extended period, typically decades or longer. The United Nations Framework Convention on Climate Change, in its Article 1, defines climate change as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”. (IPCC, 4th Assessment Report Glossary)

welfare policies already mentioned; increasing migration and urbanization; dramatic internal migration; significant shortages of health personnel in several areas of the European Region; the changing nature of work; recently growing unemployment and job insecurity; an unequal distribution of health, income and wealth; and changes in how people seek, obtain and act on information.

32. The forces of globalization are challenging all countries. The world is complex and uncertain and yet provides people with opportunities for health that they have historically never had before. However, no country can resolve challenges to health and well-being on its own nor can it harness the potential of innovation without extensive cooperation. Health has become a global economic and security issue, illustrated by the globally perceived threat from major outbreaks of communicable diseases and new environmental concerns. In an interdependent world, countries need to act together to ensure the health of their populations and to drive progress. These issues of managing interdependence are raised ever higher on the agenda of global policy-makers.

33. These are today's realities. Change and innovation therefore need to be managed to address such realities in ways that positively affect health and well-being. All these challenges and developments exemplify the move towards a new paradigm for governance for health. New thinking and structures for health development and the provision of services are required. Addressing these challenges requires resetting priorities; action for health in other sectors across the whole of society; and new approaches to organizing the health sector. Current health policy development, governance, communication and delivery mechanisms and instruments need to be critically re-examined and reconfigured.

34. Public health leaders too often lack the authority and instruments to lead a coherent integrated response to these challenges. Pressure is increasing inexorably to use health system resources more efficiently and to deliver higher quality. There has been an important shift in the role of health professionals and citizens, with the latter now having much higher expectations in terms of information and involvement relating to the services they receive.

35. Some important new global agreements and instruments have been developed to address common health challenges. These new forms have had profound regional and national influence, such as the Millennium Development Goals, the revised International Health Regulations and the WHO Framework Convention on Tobacco Control (18). More such instruments will surely follow.

36. Other recent developments include consideration of global health in key foreign policy arenas such as the United Nations General Assembly, the G8 (Group of 8 industrialized countries) summits and the World Trade Organization; the involvement of heads of state in health issues; and the inclusion of health issues in meetings of business leaders, such as the World Economic Forum. These developments all indicate that the political status of global health has been elevated. In 2009, United Nations General Assembly Resolution A/RES/64/108 (19) on global health and foreign policy reinforced this major change in perspective by urging Member States to "consider health issues in the formulation of foreign policy". In 2007, the European Union (EU) launched a new strategy for public health: *Together for health: a strategic approach for the EU 2008–2013*.



## ***Building on experience***

37. The past three decades within the European Region have seen tumultuous political and social change, but health for all and primary health care approaches have remained as key guiding values and principles for the development of health in the Region. Health for all policies has been really important in countries, and health for all has now returned to be acknowledged broadly as a key and much needed global strategy for achieving equity in health. Health 2020 builds on that experience, detailing ways to orchestrate around common health and well-being targets and outcomes the setting of priorities, catalysing action not only by health ministries but also by heads of government, as well as by other sectors and stakeholders.

38. The comprehensive overview of health for all conducted for the WHO Regional Committee for Europe in 2005 (20) showed that the core values of health for all have been broadly accepted. At the same time, it was concluded that every country had taken its own approach to developing policy and, although many countries had set targets similar to the targets for Health for All, a large gap remained between formulating policies and implementing and systematically monitoring and fine-tuning them.

39. The Tallinn Charter: Health Systems for Health and Wealth (21) aimed to build on that common core in 2008 and focused on the shared values of solidarity, equity and participation. It emphasized the importance of investing in health systems that offer more than health care alone and are also committed to preventing disease, promoting health and efforts to influence other sectors to address health concerns in their policies. The Tallinn Charter stressed that health ministries must promote the inclusion of health interests and goals in all societal policies, an approach that has been broadly supported under the term health in all policies. This approach aimed to establish health improvement as a shared societal goal to be reflected in the priorities across all parts of government. The policy has addressed complex health challenges by promoting an integrated policy response across the boundaries of sectors and portfolios.

## ***Demographic and epidemiological situation in the European Region today<sup>2</sup>***

### **Demographic situation**

40. The population of the 53 countries of the European Region has reached nearly 900 million in 2011 (22). Forecasts indicate that the population will actually decrease in the countries in the Commonwealth of Independent States (CIS),<sup>3</sup> in contrast with the increase in the other countries as a whole. Currently, many countries in the Region have the lowest fertility worldwide. On average, each European Region woman has an average of 1.7 children instead of the 2.1 that would be necessary to keep domestic populations constant. Countries in eastern, central and southern Europe have the lowest fertility.

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<sup>2</sup> Annex 1 provides more detailed information on demographic and epidemiological trends in the European Region.

<sup>3</sup> The CIS consisted of Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan when the data were collected.

41. In addition to decreasing birth rates, an increasing ageing of the population has been associated with the control of communicable diseases early in life, delayed occurrence of noncommunicable conditions and reduced premature mortality because of improvements in living conditions and health care. This increase in ageing in Europe will pose various challenges for health and welfare systems. Preparing and acting now on policies and strategies for improving the living and health conditions of the population in the future will be essential to mitigate potential negative effects.

42. An estimated 73 million migrants live in the European Region, nearly 8% of the population (23). Although the long-term effects on sustained population growth and structure are still uncertain, the health system and other sectors must focus additional attention on the current and future needs of this population. Indeed, all populations are generally more mobile now than before, and this mobility challenges health systems in terms of flexibility and availability. Nearly 70% of the population of the European Region lived in urban settings in 2010 (24), and this figure is expected to reach 80% by 2045.

### **Epidemiological situation**

43. Overall, health in the European Region is improving, as suggested by life expectancy at birth, which reached 75 years in 2010, an increase of 5 years since 1980. Projections suggest that it will increase to nearly 81 years by 2050, at a similar pace as from 1980 to 2010. Groups of countries differ considerably. For example, the 15 countries in the EU before 2004 (EU15) have already reached the 2050 level expected for the whole Region, and life expectancy should continue to improve to reach 85 years in 2050. In contrast, the CIS countries are only expected to reach 75 years of life expectancy by 2050: that is, the same level observed in the European Region 40 years earlier or that achieved in the EU15 countries 65 years earlier. There are also important differences between women and men's life expectancy across the Region, ranging from more than 13 years in the Russian Federation to 4 years in most EU countries.

44. In the European Region, noncommunicable diseases produce the largest proportions of mortality and premature death. Mortality from cardiovascular diseases accounts for nearly 50% of all deaths, ranging from 35% in the EU15 countries to 65% in the CIS. Cancer mortality accounts for 20% of deaths: 7% in the CIS countries and 30% in the EU15 countries. Injuries and violence represent 8% of all deaths, being twice as frequent in the CIS as in the EU15 countries and the EU12 countries (the 12 countries joining the EU since 1 May 2004).

45. For developing health policy, mortality data have to be complemented by the use of disability-adjusted life-years (DALYs) as a tool for assessing health status beyond mortality, as the burden of morbidity and disability is a critical focus in societies with high life expectancy. The four leading causes of lost DALYs in the Region are unipolar depressive disorders, ischaemic heart disease, adult-onset hearing loss and Alzheimer and other types of dementia.

46. Emerging and re-emerging communicable diseases, including human immunodeficiency virus (HIV) infection and tuberculosis (TB), also remain a priority area in many countries of the Region. Of special concern to all countries in the Region are global outbreaks such as pandemic H1N1 influenza in 2009 and silent threats such as the growing antimicrobial resistance.

## Determinants of health

47. The determinants of health underlying these differences are complex. They are both biological and social. There is a genetic component to individual health, and understanding more about this genetic variation and its implications for prevention and treatment represents a major current challenge in health. The social determinants comprise both structural determinants – the distribution of power, income, goods and services nationally and globally – and the conditions of daily life – the immediately visible circumstances in which people grow, live, work and age. These determinants interact, which influences both individual exposure to advantage or disadvantage and the vulnerability and resilience of people, groups and communities when exposed. Because these determinants are not equally distributed, this leads to the health inequities seen across the European Region – the health divide between countries and the social gradient between people, communities and areas within countries.

48. Many of the determinants are amenable to effective interventions, and increased investment in public health capacity, health promotion and disease prevention is essential alongside more efficient therapy and rehabilitation for those affected by disease. Unfortunately, in many countries, current investment in public health population-based health promotion and disease prevention services is currently lamentably low. Political will at all levels of governance is critical to improve this state of affairs and its implications for health and well-being.

## Social and economic determinants

49. The Commission on the Social Determinants of Health (25) concluded that social injustice was killing people on a grand scale, demonstrating the ethical imperative of acting on these forms of inequity. The magnitude and pattern of social inequities in a given country result from how policies and investment decisions shape living and working conditions and opportunities and how these effects can either accrue or be ameliorated over time.

50. The distribution of health and life expectancy in the countries in the European Region shows significant, persistent and avoidable differences in opportunities to be healthy and in the risk of illness and premature death. Many of these differences are socially determined. Unfortunately, social inequalities in health within and between countries persist and are increasing in most cases.

51. These avoidable differences in the opportunity to be healthy and in the risk of premature mortality and morbidity are a major public health challenge. Inequities in health are also a marker of the fairness and degree of social justice in a given society and a marker of government performance. Where social inequities exist, these also constitute significant losses to social and productive capital that are felt at the level of individuals, community and society as a whole. Inequities in health therefore undermine the development potential of a country at the local and national levels and are also a concern in realizing the values of health as a human right.

52. The effects of socioeconomic conditions on health are much better understood now than previously. Health experience disaggregates by socioeconomic condition, and the key determinants of the inequities in health lie in a toxic mix of poor social policies and programmes, low levels of education and unfair economic arrangements. Vulnerability results from exclusionary processes related to inequities in power, education, money and resources and the conditions in which women and men are born, grow, live, work and age, which taken

together constitute the social determinants of health. These processes operate differentially across the whole of society, create a continuum of inclusion or exclusion and give rise systematically to the social gradient in health. The lower a person's social position, the worse his or her health is. Inequities accumulate over the life course and often continue across generations, leading to persistent shortfalls in health and development potential in families and communities. Exclusionary processes produce barriers to releasing and enhancing individual and collective capabilities. When such groups as Roma,<sup>4</sup> migrants, people with disabilities and very old people experience multiple exclusionary processes, they become particularly vulnerable and such vulnerability becomes entrenched.

53. Within social systems, interactions between the four relational dimensions of power – social, political, economic and cultural – and the unequal access to power and resources embedded in them lead to differential exposure along lines of sex, ethnicity, class, education and age, for example. These reduce people's capacity (biological, social, mental and economic) to protect themselves from such circumstances, leading to health-damaging circumstances and restricting their access to health and other services and resources essential to protecting and promoting health. These processes create health inequities, which feed back to further increase inequities in exposure and protective capacity and to amplify social disadvantage.

54. Having the right and freedom to participate in economic, social, political and cultural relationships has intrinsic value, and experiencing restricted participation can be expected to adversely affect people's health and well-being. Restricted participation in these relationships results in other forms of deprivation: for example, being excluded from the labour market or included on disadvantaged terms will lead to low income, which can in turn lead to problems such as poor diet or housing, which create ill health.

55. Reducing health gradients requires a comprehensive policy goal of equalizing health chances across socioeconomic groups, including remedying health disadvantage and narrowing health gaps. Action to reduce these inequities will touch all those affected if it is applied universally across society. Universal social protection will reduce poverty and have greater effects on people in need than narrowly targeted programmes.

56. Nevertheless, inequity will only be reduced in a cost-effective way if the intensity of the action taken is proportionate to the needs of each individual or group in the society. In this context, referring to needs means the health and social problems that are amenable to action that is known to be effective. In this way, action is greatest in addressing the needs of the most deprived and vulnerable people but is not delivered exclusively to them.

57. Again, to reduce the socioeconomic gradient and the overall health gap within a given population, health needs to improve at a faster rate in the lowest socioeconomic groups than in the highest socioeconomic groups. Accordingly, addressing the social gradient requires efforts not only targeting the most vulnerable people. The gradient approach implies a combination of broad universal measures with targeted high-risk strategies. An approach targeting only disadvantaged groups would not alter the distribution of the determinants of health across the whole socioeconomic scale.

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<sup>4</sup> In this document, and in accordance with the Council of Europe's *Roma and Travellers glossary*, the encompassing term "Roma" refers to a various communities that self-identify as Roma and others (such as Ashkali) that resemble Roma in certain aspects but insist on their ethnic difference.

58. Most countries state that equity and fairness are core values guiding decision-making. However, if insufficient attention is paid explicitly to the effects of public policies on equity and to the processes and mechanisms that underpin policy and investment decisions, the consequence is often unintended effects in how the determinants of health are distributed and influence a given society. This produces and sustains the patterns of social inequities in society. Acting to reduce current inequities and to prevent future inequities requires greater efforts to strengthen governance for health on equal terms.

### **Environmental determinants**

59. The 21st century is characterized by many profoundly important environmental changes, requiring a broader conception of the determinants of population health. These include the large-scale loss of natural environmental capital, manifested as climate change, stratospheric ozone depletion, air pollution through its effects on ecosystems (such as biodiversity, acidification of surface waters and crop effects), degradation of food-producing systems, depleted supplies of fresh water, biodiversity loss and the spread of invasive species. These developments are beginning to impair the biosphere's long-term capacity to sustain healthy human life. The environmental burden of disease in the European Region has been estimated to be 15–20% of total deaths and 10–20% of DALYs lost, with a relatively higher burden in the eastern part of the Region.

60. Changing patterns of housing, transport, food production, use of energy sources and economic activity will have major effects on the patterns of noncommunicable diseases. Climate change will have long-term consequences on the environment and on the interactions between people and their surroundings. This will cause a major change in the distribution and spread of communicable diseases, particularly water-, food- and vector-borne diseases.

61. Efforts to curb greenhouse-gas emissions and other policies for mitigating climate change have significant side benefits for health. Currently accepted models show that reducing total CO<sub>2</sub> emissions in the EU from 3876 million tonnes in 2000 to 2867 million tonnes in 2030 would effectively halve the number of years of life lost from air pollution if CO<sub>2</sub> mitigation considers the health effects.

### **Lifestyle and behavioural factors**

62. Health status is determined by the interaction of biomedical, social, environmental and behavioural factors. Today health is foremost about people and how health is lived and created in the context of their everyday lives.

63. Health promotion is a process that enables people to improve control over their health and its determinants. Many opportunities to promote and protect health are lost without people's involvement. However, people are social actors, and if they are to make sustainable behaviour change, they must be in an environment that supports that change. In short, there needs to be a culture of health as one of the supportive and enabling factors for protecting and promoting the health of individual and communities. Increased health literacy is an essential prerequisite.

64. Societal processes also influence exposure to health-damaging (and health-promoting) conditions, vulnerability and resilience. Such exposure and vulnerability are generally unequally distributed in society according to socioeconomic position and/or other markers of



social position such as ethnicity. Gender norms and values also often determine exposure and vulnerability. They are also significantly influenced by a consumer society, extensive and unregulated marketing of products and, in many societies, inadequate regulation of harmful goods. The health literacy of the population has become a critical factor in enabling healthy choices.

65. Today a group of four diseases and their behavioural risk factors account for the majority of preventable disease and death in the European Region: cardiovascular diseases, cancer, diabetes and chronic respiratory diseases. Tackling issues such as smoking, diet, alcohol consumption and physical activity also means addressing the social determinants. The focus of action should be transferred upstream to the causes of these lifestyle differences (the causes of the causes), which reside in the social and economic environment.

### Capacity and efficiency of health systems

66. Finally, access to health systems and their capacity are factors that contribute powerfully to health and well-being as well as care. In this sense, the health system is a powerful social determinant of health. This contribution can be expected to increase as technologies improve still further across the whole spectrum of health promotion, disease prevention, diagnostic and treatment technologies and rehabilitation relevant in each disease category and entity.

67. The role of the health system is especially relevant because of the issues of access, which incorporates differences in exposure and vulnerability. Nevertheless, differences in access to health care by no means fully account for the social dimensions of health outcomes (26). Health systems can directly address differences in exposure and vulnerability not only by improving equitable access to care but also by promoting intersectoral action to improve health status.

68. In relation to health inequity, it has been argued (27) that the health system has three obligations in confronting inequity:

- to ensure that resources are distributed between areas in proportion to their relative need;
- to respond appropriately to the health care needs of different social groups; and
- to take the lead in encouraging a wider and more strategic approach to developing healthy public policies at both the national and local levels, to promote equity in health and social justice.

69. Unfortunately, the organization of health systems has not kept pace with the changes that societies are undergoing. Ministers and ministries of health have a vital role in shaping the functioning and contribution of health systems to improving health and well-being within society, but their capacity to do so often falls short of what is required. Public health services and capacity are relatively weak, and too little attention has been paid to developing primary care, including health promotion and disease prevention. Further, the usual hierarchical organization of health systems makes them less capable of responding rapidly to technological innovation and to the demands and desire for participation of service users. Because of these factors, health systems are significantly less productive in producing health than they could be.

70. These difficulties reflect in part the current rapid decline in societies' social capital (social networks and civic institutions). This decline has adversely affected the prospects for health by predisposing to widened gaps between people with high and low incomes.

### ***The macroeconomics of health and well-being***

#### **Health – a key factor in productivity, economic development and growth**

71. Health 2020 addresses the economic and funding aspects of health and health systems, identifying how health and well-being can be advanced, sustained and measured through action that creates social cohesion, security, good health and good education. Social progress and stability have been most successful in countries that ensure the availability of care and social safety nets through strong public services and sustainable public finances. The approach some countries in the Region have chosen of defining well-being policies that transcend measuring societal progress through gross national income alone are a case in point and open up new opportunities for the health and well-being agenda.

72. Health is increasingly acknowledged as significantly affecting both the economic dimensions of a society and its social cohesion. The macroeconomics of health and well-being therefore need to be better understood. In the past 30 years, the health sector has shifted from being a functional sector focused and invested mainly in health care services to constituting a major economic force. Today health is one of the world's largest and most rapidly growing industries, associated with more than 10% of the gross domestic product of most high-income countries and about 10% of their workforce. It encompasses a wide range of business sectors, services, manufacturers and suppliers, ranging from the local to the global. Nevertheless, its output and output efficiency clearly deserve to be maximized. During the recent economic recession, the continual growth of the health care industry was a stabilizing factor in many countries.

73. In some countries, increases in health care costs can no longer be managed and can put countries and industries at a competitive disadvantage. Health funding has therefore moved to the fore of the health debate, exploring new ways of raising revenue for health and moving away from exclusive reliance on labour-related direct taxes. The latter is especially relevant in social insurance systems, which traditionally use payroll taxes. As a result, the boundary between tax-funded and social insurance systems is becoming blurred, since many insurance-based systems use a mix of different revenue sources, including general taxes.

74. Economic and social distress tests commitment to solidarity. A crisis can lead to the erosion of solidarity but it also has the potential to generate increased popular support for solidarity, as more people become exposed to the risk of unemployment, feel less secure about the future and experience health problems. The challenge is to maintain equity, solidarity and health gain in the context of an economic crisis.

75. Policy tools can help sustain equity in funding and utilization. The larger the share of public financing, the greater is the scope for redistribution and hence solidarity. Redistributing resources to poor and vulnerable people is not just a question of the taxation system but can also be addressed by targeting benefits better. In many systems, people with high income benefit more from public funding than people with low income. Better targeting of benefits for poor and vulnerable people can also clearly improve equity in utilization.

76. Government expenditure on health is strongly correlated with the burden of out-of-pocket spending on the population. Government policies can clearly make a big difference. It is not just about the available resources and how wealthy a country is. It is also about good governance, the right decisions and the right policies. The argument is for more public spending and better public policies across the government.

77. Many people forego seeking care or may not buy prescribed medicines because of high out-of-pocket cost. Evidence indicates that the cost of medicines is by far the greatest burden for people with low income, whereas people with high income spend relatively more on other goods and services, some of which are discretionary. The poorest 20% of the population is most likely to delay seeking care because of fear of financial catastrophe. The economic downturn therefore led to a reduction in utilization even though health care needs probably increased. Options for protecting poor and vulnerable people include:

- exemptions from paying user charges or co-payments;
- extending coverage to long-term unemployed people;
- targeting health spending better; and
- targeting social assistance better.

78. Social welfare spending also has major effects on health. Evidence indicates that a rise in social welfare spending is associated with a sevenfold greater reduction in mortality than a rise of similar magnitude in gross domestic product (28). In countries that maintained or even increased social welfare spending when public expenditure on health was drastically reduced, the impoverishing effects of the cuts were very small.

79. A commitment to address inefficiency in the health sector is vital, to ensure that no public money is wasted in the system because of poor governance and organization of service delivery. Advocating more public spending on health is difficult when the system has waste and inefficiency. New ways of thinking about the organization and delivery of care that is coordinated around both population and individual needs offer the prospect of a radical transformation in both effectiveness and efficiency through how the health system meets the twin objectives of improving population health and delivery good quality care to those in need.

80. Improving efficiency thus can help reduce the adverse effects of crises and secure popular and political support for more spending in the future. Budget cuts create huge pressure on service providers to increase efficiency. However, there is a limit to how much and how fast efficiency gains can help deal with economic recession, and the transition to a new, lower-cost delivery system needs to be carefully managed. Short-term solutions are important to keep the system running during a crisis, although such balancing acts may not be sustainable in the long term and should not be accepted as good and safe practices.

81. Delaying investment and maintenance, for example, may provide temporary relief for the budget, but sustainable efficiency gains should also be sought, such as improving energy efficiency, shifting more care to outpatient settings, allocating more resources to primary care and cost-effective public health programmes, cutting the least cost-effective services and improving the rational use of medicines, to name a few.

82. Financial sustainability should not be seen as a policy objective worth pursuing for its own sake. The goal is financial sustainability while achieving equity, financial protection and



health. Public policy imperatives, such as the drive for improving competitiveness, must be seen not simply as ends in themselves but the means to improving well-being among people in the European Region.

### **The economic case for health promotion and disease prevention**

83. A large burden of disease, particularly from chronic noncommunicable diseases, in the European Region impacts heavily on labour markets and productivity. Diseases fuel disparities in employment opportunities and wages. They affect productivity at work, increase sick leave and the demand for welfare benefits.

84. Expensive medical treatments drive up the cost of managing chronic diseases and rising multiple morbidities. Health expenditure has grown at a pace exceeding economic growth in many Member States, resulting in increased financial pressures which threaten the long-term sustainability of health care systems.

85. A tangible share of the burden of disease and of the economic costs associated with it could be avoided through actions promoting health and well-being, and by deploying effective preventive measures within and beyond the health care sector.

86. A strong economic case can be made for action to promote health and prevent disease. This rests on a growing body of evidence from economic studies, which shows areas where appropriate policies can generate health benefits at an affordable cost, sometimes reducing health expenditure and helping to redress health inequalities at the same time.

87. The rationale for government action to promote healthy behaviours is particularly strong in the presence of negative externalities from unhealthy behaviours, or when behaviours are based on inadequate information. The victims of second-hand smoke and drunk drivers provide dramatic examples of negative externalities that can be corrected either by excise taxes on tobacco and alcohol, or other policies such as public smoking bans and drink-driving laws. Inadequate consumer information justifies interventions to promote healthier behaviours by informing people about the risks of smoking, obesity, and other causes of disease.

88. The complex nature of chronic diseases, their multiple determinants and causal pathways suggest that pervasive and sustained efforts and comprehensive strategies involving a variety of actions and actors are required for successful prevention. However, the reality is that governments spend, at best, only a small fraction of their health budgets on prevention (some 3% of total health expenditure, in the OECD area).

89. Expectations concerning the benefits of prevention must be realistic. Prevention can improve health and well-being, with a cost-effectiveness that is as good as, or better than, that of many accepted forms of health care. However, reducing health expenditure should not be regarded as the main goal of prevention, because many programmes will not have this effect. A narrowing of health inequalities may also be difficult to achieve through certain forms of prevention that have shown low uptake among the most vulnerable.

#### *The evidence base*

90. The WHO Regional Office for Europe has promoted collaborative work aimed at presenting the economic case for public health action, particularly with regard to the prevention of chronic noncommunicable diseases. This work moves beyond what is known

about the economic benefits of specific actions within health care systems, such as vaccinations and screening, to look at research endeavours to make the economic case for investing upstream – that is, prior to the onset of noncommunicable diseases and before health care services are required. The work highlights priority actions supported by sound cost-effectiveness or cost-benefit analyses, including actions to limit risky behaviours such as tobacco use and alcohol consumption, to promote physical and mental health through diet, exercise and the prevention of mental disorders, and to decrease preventable injuries, such as from road traffic accidents, and exposure to environmental hazards. The full results of this work are planned for publication in the autumn of 2012 (29), but some of the early evidence is presented below.

91. There is strong evidence of cost-effectiveness for tobacco control programmes, many of which are inexpensive to implement and have cost-saving effects. Such programmes include raising taxes in a coordinated way with high minimum tax (which is the single most cost-effective action), encouraging smoke-free environments, banning advertising and promotion, and deploying media campaigns. Adequate implementation and monitoring, government policies independent of the tobacco industry, and action against corruption are needed to support effective policies.

92. The cost-effectiveness of alcohol policies is supported by a substantive evidence base of systematic reviews and meta-analyses. Very cost-effective interventions include restricting access to retailed alcohol; enforcing bans on alcohol advertising, including in social media; raising taxes on alcohol and instituting a minimum price per gram of alcohol. Less, but still cost-effective measures include: enforcing drink-driving laws through breath-testing; delivering brief advice for higher-risk drinking and providing treatment for alcohol-related disorders.

93. Actions to promote healthy eating are especially cost-effective when carried out at the population level. Reformulation of processed food to decrease salt and saturated fat (*trans*-fat, in particular) is a low-cost intervention that may be pursued through multistakeholder agreements. Fiscal measures (including taxes and subsidies) and regulation of food advertising to children also have a low cost and a favourable cost-effectiveness. However, feasibility could be hindered by conflicting interests. Programmes to increase awareness and information, such as mass media campaigns and food labelling schemes, are efficient investments but with poorer effectiveness, particularly in lower socioeconomic groups.

94. The promotion of physical activity through mass media campaigns is a very cost-effective action and relatively inexpensive. However, returns in terms of health outcomes may be lower than those provided by more targeted interventions, for instance at the workplace. Changes in the transport system and the wider environment have the potential to increase physical activity, but they require careful evaluation to ascertain their affordability and feasibility. Actions targeting the adult population and individuals at higher risk tend to produce larger effects in a shorter time frame.

95. Robust evidence indicates that the prevention of depression, the single leading cause of disability worldwide, is feasible and cost-effective. Depression is associated with premature death and reduced family functioning, and it entails extremely high economic costs due to health care and productivity losses, which can be partly avoided through appropriate forms of prevention and early detection. Evidence supports actions across the life-course, starting with early actions in childhood to strengthen social and emotional learning, coping skills and

improved bonds between parents and children, which can generate benefits lasting into adulthood.

96. Actions to prevent road traffic accidents, such as road design modification, one-way streets, urban traffic calming (e.g. mandatory speed limits with physical measures), and camera and radar speed enforcement programmes, are supported by sound economic evidence, especially when applied in higher-risk areas. Active enforcement of legislation to promote good road safety behaviours can also be highly cost-effective.

97. Evidence from economic studies supports actions to tackle environmental chemical hazards. Examples include comprehensive regulatory reform such as that implemented in 2007 under the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); the removal of lead-based paint hazards; the abatement of mercury pollution from coal-fired power plants; and the abatement of vehicle emissions in high-traffic areas, e.g. through the congestion charging schemes used in many metropolitan areas, which may produce savings in health care and other costs associated with childhood asthma, bronchiolitis and other early life respiratory illnesses.

98. Investments in education are also investments in health. A growing body of empirical research suggests that when countries adopt policies to increase education, the investments also pay off in terms of healthier behaviours and longer and healthier lives. For example, studies of compulsory schooling reforms adopted in a number of European countries conclude that the reforms not only lead to additional years of completed schooling, but also that the additional schooling reduces population rates of smoking and obesity. When countries consider the return on investment in education and other social determinants of health, the analysis should factor in the potential health gains.

### *Key approaches*

99. Tackling chronic diseases through interventions aimed at modifying lifestyle risk factors is possible and cost-effective and is likely to decrease health inequalities within countries. However, turning the tide of diseases that have assumed epidemic proportions during the course of the twentieth century requires fundamental changes in the social norms that regulate individual and collective behaviours. Such changes can only be triggered by wide-ranging prevention strategies addressing multiple determinants of health across social groups.

100. Most countries are putting efforts into improving health education and information. Evidence suggests, however, that these measures alone are not sufficient, nor are they always cost-effective. More stringent measures, such as regulation of advertising or fiscal measures, are more intrusive on individual choices and more likely to generate conflict among relevant stakeholders, but they are also likely to weigh less on public finances and to produce health returns more promptly.

101. A wide range of regulatory and fiscal measures have been put in place in many countries, for instance to curb consumption of tobacco and alcohol. A minimum age has been set for purchasing cigarettes and alcoholic drinks, which often carry health warnings printed on their labels. Advertising has been severely restricted and high taxes have been imposed on the consumption of both commodities. All of these measures have contributed to containing consumption, and WHO work has shown that most have very favourable cost-effectiveness profiles. However, fiscal measures are complex to design and enforce; their impact may be

unpredictable; and they can bear more heavily on low-income groups than on those with higher incomes.

### Technological development in health care

102. The term “medical technology” can be used to refer to the procedures, equipment and processes by which health care is delivered. Examples include new medical and surgical procedures, drugs, medical devices and new support systems. The management of coronary artery disease provides a good example of how technology has changed the treatment and prevention of disease over time. In the 1970s, cardiac care units were introduced to manage irregular heartbeat after heart attack. Later beta-blocker drugs were used to lower blood pressure after the attack, and later thrombolytic drugs became to be used widely. Coronary artery grafting became more widespread. In the 1980s, blood-thinning agents were used after heart attack to prevent reoccurrences, and angioplasty came into use after patients were stable. In the 1990s, angioplasty was used more widely for immediate treatment and revascularization along with stents to keep blood vessels open. In the 2000s, better tests were used to diagnose heart attacks, drug-eluting stents were used and new drug strategies were devised.

103. Health care costs are greatly driven by such technological development, especially when numerous organizational and professional factors support their use. This is illustrated by the dramatic increases in health care costs in the last years of life. In the health systems of many countries, medical technology is a more important cost driver than medicines – this applies, for example, to new forms of diagnostic imaging, new medical and surgical treatment innovations and increasing opportunities within medical genetics.

104. New technologies affect the costs of health care through several mechanisms:

- developing new treatments for previously untreatable conditions;
- major advances in clinical ability to treat previously untreatable acute conditions;
- developing new procedures for discovering and treating secondary diseases;
- expanding the indications for a treatment over time, which increases the population to which the treatment is applied;
- ongoing incremental improvements in existing capabilities, which may improve quality; and
- clinical progress through major advances or by the cumulative affect of incremental improvements that extend the scope of medicine.

105. Whether a particular new technology will increase or decrease health expenditure depends on several factors. How does it affect the cost of treating an individual person? How many times is the new technology used? Does the new technology extend existing treatments to new conditions?

106. On the other hand, new technologies can reduce utilization: for example, by allowing more targeted treatment. Some technologies may cost more immediately but lead to later savings. New technologies may extend life expectancy, affecting both the type and amount of health care that people use in their lifetime.

107. Today developments in telemedicine, e-health (electronic health) and m-health (mobile health) already have a significant potential for reducing costs while increasing patient participation and empowerment and streamlining systems of monitoring and care. New patient-based connectivity and medical devices allow for increasing home-based care and allow patients to stay active and to contribute to society. Technologically based innovations, especially information technology, have already created extraordinary new opportunities to improve health and health care.

## **Genomics**

108. The Human Genome Project began in 1990 and published the working draft of the human genome in 2000, and a complete one in 2003. This work is currently changing public health research, policies and practice substantially, facilitating numerous discoveries on the genomic basis of health and disease. Rapid scientific advances and tools in genomics, such as epigenomics, microbiomics and systems biology, contribute to understanding disease mechanisms and to characterizing each person's unique clinical, genomic and environmental information and provide potential new applications for managing human health during the whole life course.

109. The concept of public health genomics emerged in the second half of the 1990s. In 2005, an international multidisciplinary expert meeting was held in Bellagio, Italy, and a formal definition of public health genomics was agreed as “the responsible and effective translation of genome-based science and technologies for the benefit of human health”. The mission of public health genomics is to integrate advances in genomics and biomedicine into public health research, policy and programmes. These advances will increasingly be integrated into strategies aiming at benefiting population health.

110. Current trends indicate that medicine and health care is going to be more personalized and individualized in several aspects, including health promotion, disease prevention, diagnosis and curative services. The future will enable more effective early detection and treatment tools. Developments in systems biology should enable the progression of diseases to be detected using molecular markers long before the first disease symptoms arise. These early markers are expected to be at the level of protein expression, as markers of the gene networks of the human genome.

111. Various characteristics of individuals will probably be used in an integrative way for risk management, disease management and case management in noncommunicable diseases and to promote health and improve the quality of life. These characteristics include genome-based information (covering not only the genetic level, but also epigenetic, expression and protein-level information); lifestyle factors including diet, physical activity, exercise and smoking habits; mental, economic and social factors covering home, work and social life; personal medical history and family health history; and the interaction of these factors.

112. Another field of application that already has started is using molecular markers to stratify diseases into subgroups to be treated with different medicines or interventions. Cancer is one of the leading fields here, with several current examples.

113. All diseases have a genomic component, and host genomic factors play an important role in whether and how a disease is manifested. For some disease, genetics is the only factor that makes a person sick, including genetic diseases (such as cystic fibrosis and Down

syndrome). The disease group defined as noncommunicable diseases, including cardiovascular diseases, diabetes, obesity, osteoporosis, mental disorders, asthma and cancer, has a varying degree of genetic background, but genetics is not the only factor, as behavioural and environmental factors interact with this genetic background. This disease group is therefore also called chronic complex diseases. Even the disease group that is currently called communicable diseases, which used to be considered to be caused solely by infectious pathogens, is known to have a genetic component. From this perspective, the separation between communicable and noncommunicable diseases is foreseen to diminish in the future and, similar to the concept of health, diseases are going to be approached holistically.

114. A real paradigm shift depends on the willingness to restructure policies and on the ability to provide necessary training to public health professionals. Health care systems and policy-makers urgent need to be prepared in time for responsibly and effectively translating genome-based knowledge and technologies into public health, which remains the major task of public health genomics and is an important area of potential innovation in Europe. Health policies should prepare to meet this future vision of medicine and health. This means that, instead of solely focusing on biological determinants of health or mainly emphasizing social determinants, health will need to be approached through the perspective of all of its determinants, including biological, lifestyle, environmental and social factors and the interactions between them. In the future, public health genomics will probably provide the vision and tools to integrate genome-based information as a part of the biological determinants of health in health care systems and policies.

## Values

115. Health policies and practices are based on social values. In many countries in the European Region, improving the health of the population and the system in place to achieve this are considered inherently valuable. Context shapes and constructs values, both explicit and implicit ones. Further, values determine how concepts are defined, how and what evidence is generated and how policy goals are formulated and translated into practice through decision-making and action.

116. Dissent over values, either explicit or hidden, is normal in democratic political systems. Values are also usually balanced against other concerns or traded off against each other. Such tradeoffs are often seen in the processes of developing health policy and setting priorities, partly because health is such a complex matter with many overlaps of interest between the government, civil society and the market.

117. For these reasons, when the groundwork for a health policy is being laid, it is important to create clarity on the underlying values and work through a process in which these values are promoted and upheld both in formulating and implementing the policy.

## ***The right to health and a human rights-based approach to health***

118. The human right to the highest attainable standard of health is increasingly recognized as key to protecting public health and integral to a governance approach. Importantly, the right to health means that governments must create conditions in which everyone can be as healthy as possible (33). Such conditions range from ensuring the availability, affordability



and accessibility of health services to public health measures for healthy and safe working conditions, adequate housing and nutritious food and other conditions for protecting and promoting health. Citizens, in turn, need to understand the value of their health and contribute actively to creating better health in society at large.

119. At the heart of human rights is the recognition that they are universal – that everybody should be treated equally and with dignity – and that all human rights are interrelated, interdependent and indivisible. A human rights-based approach to health is a governance approach aimed at realizing the right to health and other health-related rights. A common United Nations understanding of a human rights-based approach was agreed on in 2003, and at the 2005 World Summit, United Nations Member States unanimously resolved to integrate human rights into their national policies. Health policy-making should be guided by human rights standards, including eliminating all forms of discrimination and ensuring gender mainstreaming.

120. A human rights-based approach to health emphasizes not only goals and outcomes but also the processes. Human rights standards and principles – such as participation, equality, non-discrimination, transparency and accountability – should be integrated into all stages of the health programming process.

121. The primary responsibility for protecting and promoting the right to health lies with governments. All WHO European Member States have committed themselves in international treaties to promote, protect, respect and fulfil the right to health. In the European Region, two specific legal instruments are of particular importance for the right to health: the European Social Charter under the auspices of the Council of Europe, and the Charter of Fundamental Rights of the European Union, which forms part of the Lisbon Treaty.

122. As Member States of the WHO European Region are committed to the right to health under international law, treaty bodies at both international and regional level are regularly reviewing the implementation of these state commitments. There are also international independent experts appointed to monitor state compliance with health rights, such as the United Nations Special Rapporteur on the Right to Health and the Council of Europe Commissioner for Human Rights.

### ***Health equity and human rights***

123. Health equity is an ethical principle closely related to human rights standards that focuses attention on the distribution of resources and other processes that may cause avoidable inequities – it is a concept of social justice. Inequities in health are systematic inequalities that can also be considered as unfair or unjust. Pursuing health equity means minimizing inequities in health and in the key determinants of health. The right to health complements the concept of equity in health by implying that the reference for measuring and comparing equity should be the group in a society that has the optimal conditions for health.

124. Moreover, the human rights principles of non-discrimination and equality strengthen the conceptual foundation of health equity by detecting certain groups in society in which inequalities in health also reflect a lack of health equity. At the same time, health equity research and analysis is crucial for providing content to the concept of the right to health and for guiding the implementation of state obligations.

## ***The specific values of Health 2020***

125. The values of Health 2020 are full recognition and application of the human right to health, solidarity, fairness and sustainability. These values incorporate several other values that are deeply important within the European Region: universality, equity, the right to participate in decision-making, dignity, autonomy, non-discrimination, transparency and accountability. All these values underpin Health 2020.

126. Health and well-being are central to the lives of all people and at the core of human development, both individual and social. Further, health has clearly become a vital component of democratic rights, social stability and state legitimacy across the Region. Residents of the European Region expect protection from health risks and access to high-quality health care. New forms of governance for health are required to meet these expectations.

## **Governance for health in the 21st century**

127. Governance may be variously defined. The following definition of governance is used in Health 2020: “the attempts of governments or other actors to steer communities, whole countries, or even groups of countries in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches” (34).

128. This definition positions health and well-being as key features of what constitutes a successful and well-performing society in the 21st century, grounding policies and approaches in values such as human rights and equity. The inalienable human right to health, the complex nature of the context of and the drivers for health and the multiple determinants of the main burden of disease lead inexorably to this notion that governance for health must be a whole-of-government responsibility. This requires a new perspective on how to govern for health and well-being in the context of challenges for health in today’s rapidly changing Europe. Whole-of-government approaches for health are to be implemented in this context.

129. The influences on health are so diverse and so diffuse in modern societies that promoting and advancing health requires action based on new thinking and a new paradigm; old, linear, rationalist planning models will not suffice. Adaptive policies need to be sufficiently resilient to respond to complexity and to be prepared for uncertainty. All policy fields, not only health, need to reform their ways of working and use new forms and approaches to policy-making and implementation at the global, regional and local levels. Importantly, health is not the only field that requires action in other sectors: there are bilateral and multilateral needs for synergistically developing and implementing policy.

130. There has been an ongoing diffusion of governance from a state-centred model to a collaborative model in which governance is produced collectively between a wide range of state and societal actors, including ministries, parliaments, agencies, authorities, commissions, businesses, citizens, community groups, foundations and the mass media. Governance is also increasingly conducted across levels, from local to global arenas, with regional and local actors becoming increasingly relevant. In this sense, effective multilevel governance is just as important as intersectoral and participatory governance.



131. Such governance for health is dispersed and horizontal. It promotes joint action for a common interest between health and non-health sectors. Synergistic policies for health and well-being need to be supported by structures and mechanisms that enable collaboration.

132. Achieving intersectoral action within the machinery of government is clearly challenging. One reason is the complexity of the issues involved and the wicked nature of the challenges. Nevertheless, the challenges are also driven by the distribution of influence and resources within society, conflicts of interest within government, a lack of incentives and lack of commitment at the highest level.

133. This new concept of governance for health brings together and extends the prior notions of intersectoral action, healthy public policy and health in all policies within the more comprehensive and linked notions of whole-of-society and whole-of-government responsibility for health. These approaches emphasize not only the need for better coordinating and integrating government activities on health but also reaching out beyond government to others, thereby achieving a joint contribution to overarching societal goals such as prosperity, well-being, equity and sustainability. Ensuring accountability for health and equity through diverse monitoring instruments is also vital.

### **Health governance**

134. The new governance for health encompasses the governance of the health sector itself, which is referred to in Health 2020 as health governance. The health sector must engage in working with other sectors in ways that are mutually supportive and constructive, in engagements that are win-win for overall societal public health goals, in addition to delivering individual health care services. Ministers and ministries of health and public health agencies need to perform new roles in shaping policies that promote health and well-being, by reaching out and promoting health in all policies and partnerships beyond the health sector.

135. Health systems governance generates incentives to promote better performance, accountability and transparency through an institutional structure that enables the organization and management of resources, providers and their services towards accomplishing a common policy or national health goals. It initiates action based on clear goals and objectives, and a common understanding of evidence-informed means to attain these objectives. The responsibility and entitlement to implement these means consolidated through coordination and cooperation among agencies and among levels of care.

### **Smart governance**

136. Although any normative approach to governance may be contested, the principles and processes of good governance have been considered in relation to countries, for example through the World Wide Indicators Governance Project of the World Bank (35), which shows important correlations between good governance and health. Both governance for health and health governance are based around a system of values and principles referred to as good governance. Smart governance describes the mechanisms chosen to reach results based on the principles of good governance.

137. Research indicates the need for a combination of governance approaches – hierarchical, dispersed and participatory – to benefit health and well-being. Five types of smart governance for health may be considered.

138. **Governing through collaboration:** consideration needs to be given to the processes of collaboration, the virtuous circle between communication, trust, commitment and understanding, the choice of tools and mechanisms available and the need for transparency and accountability.

139. **Governing through citizen engagement:** as governance becomes more diffused throughout society, working directly with the public can strengthen transparency and accountability. Partnering and empowering the public are also crucial in ensuring that values are upheld. Technology, particularly networked social media, is a driving force enabling citizens to change how governments and health systems do business. Within these complex relationships, participation, transparency and accountability become engines for innovation.

140. **Governing through a mixture of regulation and persuasion:** governing is becoming more fluid, multilevel, multistakeholder and adaptive. Traditional hierarchical means of governance are increasingly complemented by other mechanisms such as soft power and soft law. This includes self-regulation, governance by persuasion, alliances, networks and open methods of coordination. Health promotion approaches are being revisited with the growing influence of nudge policies. Hierarchical multilevel regulations that extend from global to local levels, such as the WHO Framework Convention on Tobacco Control, are becoming more common, affecting many dimensions of individuals' lifestyles, behaviour and everyday lives.

141. **Governing through independent agencies and expert bodies:** such entities play an increasingly important role in providing evidence, watching ethical boundaries, expanding accountability and strengthening democratic accountability in health, related to fields such as privacy, risk assessment, quality control, health technology assessment and health impact assessment.

142. **Governing through adaptive policies, resilient structures and foresight:** whole-of-government approaches need to be adaptive and mirror the complexities of causality, because complex and wicked problems have no simple linear causality or solution. Decentralized decision-making and self-organizing or social networking help stakeholders respond quickly to unanticipated events in innovative ways. Interventions should be iterative and integrate constant learning, multistakeholder knowledge gathering and sharing and mechanisms to encourage further deliberation or automatic policy adjustment. Policy interventions in one area can have unintended consequences in another, and studies indicate the value of promoting a wide variation of smaller-scale interventions at the local and community levels for the same problem to encourage learning and adaptation. Anticipatory governance with participatory foresight mechanisms can also support societal resilience by shifting policy from “risks” to addressing more fundamental systemic challenges and jointly deliberating the social and value- and science-based dimensions of public policy.

### ***Wicked problems and systems thinking***

143. The term wicked problems has been applied to issues that are difficult to solve because of incomplete, contradictory and changing requirements. Many 21st-century health challenges

are wicked problems. Attribution is complex, and linear relationships between cause and effect are hard to define. Wicked problems need to be considered and analysed as complex open systems.

144. In the face of these challenges, policies should be implemented as large-scale experiments in which monitoring and evaluation efforts provide an essential mechanism for the policy community to learn from the experiences acquired in practice and to adapt accordingly. Obesity is an excellent example of a 21st-century wicked health challenge. The risk patterns for obesity are complex and multidimensional. Risks are local (such as the absence of playgrounds or lack of bicycle lanes) as well as national (such as the lack of food labelling requirements) and global (trade and agriculture policies). Only a system-wide approach and multiple interventions that recognize the complexity and wicked nature of tackling obesity will stand any chance of success (36).

## Partnerships for health

145. An approach to improving health based on responding to multiple determinants of health across the whole of society must involve all of society. Many of the health challenges need to be addressed through whole-of-government society approaches that include civil society and the private sector as well as the media. This is partly about making whole-of-government and intersectoral governance for health work better and partly about developing broad international, national and local constituencies for health. Partnerships for health will therefore be crucial and will be a core concept within Health 2020.



## **Part 2. Strategies that work and key actors**



146. Box 6 lists the action principles for the strategies that work and key actors.

**Box 6. Health 2020: key action principles 7–9**

7. Identifying and pursuing evidence-based pathways to health and well-being
8. Strengthening outcome-oriented and person-centred health systems – ensuring high performance and transparency
9. Investing in capacity for public health, change, innovation and leadership

## Public health priorities in the European Region<sup>5</sup>

147. Despite Europe's relative overall wealth, the European Region has stark inequities in health. The countries with the lowest and highest life expectancy at birth in the WHO European Region differ by 16 years, with men and women having different experiences. Male life expectancy at birth varies by 20 years between countries versus 12 years for women. Life expectancy also differs greatly within countries.

148. Noncommunicable diseases cause the largest proportion of mortality in the European Region, accounting for about 80% of deaths in 2008. Noncommunicable diseases are an increasing global priority, and the 2011 High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases at the United Nations in New York adopted by consensus a *Political declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases* (37).

149. In the WHO European Region, among broad groups of causes, mortality from cardiovascular diseases accounts for nearly 50% of all deaths, but this ranges from 35% in the EU15 countries to 65% in the CIS. Nevertheless, premature mortality (defined as deaths occurring before age 65 years) rather than all-age mortality is more informative for developing public health policy and programmes and interventions for delaying the onset of disease and disability. Premature mortality trends show that cardiovascular diseases have remained the most important causes of premature death in the European Region, with rates exceeding 110 per 100 000 population in 2008, but these levels have started to decline recently.

150. Noncommunicable diseases also dominate the list of the leading causes of the disease burden in the European Region, with unipolar depressive disorders and ischaemic heart disease the leading causes of lost DALYs. The burden of chronic and disabling diseases and conditions poses the main challenge to health systems.

151. Tobacco use among women and girls is increasing in the European Region, especially in the eastern part of the Region. Alcohol consumption is rising in the eastern part of the Region but is only declining slightly in the western part of the Region. The prevalence of obesity and overweight is rising alarmingly among both adults and children.

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<sup>5</sup> Annex 1 provides more detailed information on demographic and epidemiological trends in the European Region.

152. Emerging and re-emerging communicable diseases remain a priority area of concern in many countries of the Region. These diseases include HIV infection, multidrug-resistant TB and a growing threat from antimicrobial resistance. Also of note are alarming outbreaks of potentially global significance, such as pandemic H1N1 influenza in 2009 and the re-emergence of poliomyelitis in Tajikistan in 2010, which threatened the Region's polio-free status it has held since 2002.

## **Tackling the determinants of health and health inequities**

### ***Political, social and economic determinants***

#### **Situation analysis**

153. The inequities in health between and within most countries in the European Region are persistent and growing and offer a key indicator of societal performance and development. People with greater social and economic advantage have better health and longer lives than those with less. The groups most severely affected by exclusionary processes, such as Roma and migrant workers, have especially significant health disadvantages (38).

154. These current unacceptable gaps in health experience between and within countries will increase unless urgent action is taken to control and challenge the social determinants of health. This action must be both systematic and sustained. Addressing political, social, economic and institutional environments is therefore vital for advancing the health of the population. Intersectoral policies are both necessary and indispensable. Whole-of-government responsibility for health requires that the entire government fundamentally consider effects on health in developing all regulatory policies (39).

155. The health of any individual is almost inseparable from the health of the larger community: healthier lives achieve equity, create healthy social and physical environments and promote healthy behaviour. This means that everyone should have the material requirements for a decent life, access to education, control over one's life and a political voice and be able to participate in decision-making processes. Fully realizing these human rights is critical in improving health and reducing inequity (40–42).

#### **Solutions that work**

156. The recent World Conference on Social Determinants of Health held in Rio de Janeiro, Brazil adopted the Rio Political Declaration on the Social Determinants of Health.

157. There are several approaches to tackling the social determinants of health and inequity in health, including universal policies that improve everyone's health, targeted interventions that focus on the people most affected and addressing the gradient through interventions that are proportional in intensity to the level of health and social need. Underpinning each of these conceptually is the importance of empowerment: material, psychosocial and political (43).

158. Change requires more than declarations, even when they are backed by powerful evidence and good will. Addressing socially determined inequities in health requires strong political commitment, integrated action, a strong systems approach, effective and high-performing health systems and policy coherence across a range of government policies (44,45).



159. The 2008 report of the Commission on Social Determinants of Health makes the case that opportunities for promoting health and reducing inequity in health lie deep in society and that these opportunities must be seized through a comprehensive strategy. The Commission on Social Determinants of Health set out three main principles for action.

- Improve the conditions of daily life – the circumstances in which people are born, grow, live, work and age.
- Tackle the inequitable distribution of power, money and resources – the structural drivers of the conditions of daily life – globally, nationally and locally.
- Measure the problem, evaluate action, expand the knowledge base, develop a workforce that is trained in the social determinants of health and raise public awareness about the social determinants of health (46).

160. Addressing socially determined inequity in health requires dealing with the causes of the causes: the unequal distribution of power, income, goods and services, globally and nationally, that result in unfairness in the immediate, visible circumstances of people's lives – their access to health care, schools and education, their conditions of work and leisure, their homes, communities, towns or cities – and their chances of leading a flourishing, healthy life. The basic action needed is well summarized in the World Health Assembly resolution on reducing health inequities through action on the social determinants of health adopted in May 2009 (Box 7) (47–50).

161. Effective action requires a system-wide approach to ensure policy consistency across government. Many well-meant programmes to promote health and reduce socially caused inequity in health fail because they are not based on such a system-wide approach. Specific actions include systematically targeting public policies and private initiatives and aligning the financial, human and environmental resources that will mobilize action on better health and well-being and their equal distribution in society. Achieving such action requires well-functioning institutions capable of influencing policy-making across health and other policy sectors. The required capacity includes policy advocacy, formulation, implementation, monitoring and evaluation. The involved stakeholders range from academic and research institutions to ministries and governmental entities and nongovernmental organizations and civil society organizations (51–53).

162. Experience in the European Region shows that initiating, sustaining and mainstreaming the social determinants of health require a critical mass of human resources properly allocated within health systems and at the cross-government level. This critical mass should be appropriately allocated within the specific country policy context, have adequate skills and expertise and be accountable for achieving socially linked targets for reducing inequity in health (54).

163. Discussion of the social determinants of health may become intertwined with a debate on opportunities, free will and personal responsibility for health, for example for health-determining behaviour. In practice, however, a focus on outcomes and one on personal responsibility may not differ greatly. If analysis of high mortality rates (outcomes) shows that these result from the conditions in which people are born, grow, live, work and age, it is plainly difficult for individuals to take personal responsibility for health without social action creating the conditions for people to have control over their lives. In practice, the debate is not about whether reducing inequity in health outcomes is desirable but about what is avoidable

by reasonable and evidence-informed means that are capable of attracting public and political support (55).

**Box 7. World Health Assembly resolution WHA62.14 on reducing health inequities through action on the social determinants of health**

This resolution urges Member States:

- (1) to tackle the health inequities within and across countries through political commitment on the main principles of “closing the gap in a generation” as a national concern, as is appropriate, and to coordinate and manage intersectoral action for health in order to mainstream health equity in all policies, where appropriate, by using health and health equity impact assessment tools;
- (2) to develop and implement goals and strategies to improve public health with a focus on health inequities;
- (3) to take into account health equity in all national policies that address social determinants of health, and to consider developing and strengthening universal comprehensive social protection policies, including health promotion, disease prevention and health care, and promoting availability of and access to goods and services essential to health and well-being;
- (4) to ensure dialogue and cooperation among relevant sectors with the aim of integrating a consideration of health into relevant public policies and enhancing intersectoral action;
- (5) to increase awareness among public and private health providers on how to take account of social determinants when delivering care to their patients;
- (6) to contribute to the improvement of the daily living conditions contributing to health and social well-being across the lifespan by involving all relevant partners, including civil society and the private sector;
- (7) to contribute to the empowerment of individuals and groups, especially those who are marginalized, and take steps to improve the societal conditions that affect their health;
- (8) to generate new, or make use of existing, methods and evidence, tailored to national contexts in order to address the social determinants and social gradients of health and health inequities;
- (9) to develop, make use of, and if necessary, improve health information systems and research capacity in order to monitor and measure the health of national populations, with disaggregated data such as age, gender, ethnicity, race, caste, occupation, education, income and employment where national law and context permits so that health inequities can be detected and the impact of policies on health equity measured.

## **Investing in healthy people and empowering communities**

### **Introduction**

164. Health differences are shaped during the course of life. Adopting a life-course approach recognizes the complex interactions between life events, biological risks and the determinants of health. A life-course perspective in public health fosters a deeper understanding of how genetic, social, economic and environmental circumstances and interventions in childhood,

through adolescence, during the reproductive years and beyond affect health later in life across generations. Health is also determined by existing gender norms, roles and power relations that influence the behaviour of men and women, their vulnerability to risk, their access to services and the responses from systems (56).

165. Early life development is particularly important, in two ways. First, the rapid biological, cognitive and social developments taking place in childhood give rise to distinctive health outcomes during that period. Children are particularly vulnerable to a range of health risks but are also relatively free from many of the health problems affecting adults that are related to ageing or the various environmental hazards adults experience. Perhaps more important from a perspective of the social determinants of health, however, developments during childhood lay the foundation for health outcomes throughout the course of life. This is certainly true biologically, since weaknesses and problems developed during childhood may have lifelong effects on health. It is also true psychosocially, since children develop habits of mind and relationships that may prove difficult to change in adulthood.

166. However, childhood also affects health more indirectly. Much of how children develop and what they experience during childhood do not produce health outcomes in the short term but have longer-term effects on how healthy children are as adults. Much of childhood is about establishing who individuals are and how they will live. It is a period in which attitudes, values and behaviour become established, when children acquire skills and knowledge and when their encounters with their societal environment begin both to open up and to close down opportunities. All these things shape what will happen to the individual in later life – what kind of relationships they will have, what work they will do and how they will view themselves – and therefore influence health outcomes.

167. Not surprisingly, therefore, overwhelming evidence indicates that individuals who do well during childhood go on to enjoy better health outcomes over the life course. “Doing well” in this sense is best defined, like childhood itself, in terms of a variable list of indicators, depending somewhat on the cultural and systemic context. If the list is difficult to pin down precisely, it certainly includes achieving certain physical abilities and characteristics, being able to sustain a range of relationships and to handle a range of social situations, being able to take well-informed and considered decisions about one’s own life and acquiring cognitive skills and knowledge that will be useful in adulthood and that may well be formally accredited in the education system.

168. To some extent, “doing well” means developing the innate capacity of the individual. However, thinking solely of an internally driven developmental process is far too simplistic. Children develop within and in interaction with a range of environments. These contexts include the family (which in many ways is the most influential context), the peer group, the community and the service environment – most notably, the school. If these contexts are nurturing, they enable the child to develop and to achieve good outcomes. However, not all these contexts are equally nurturing for all children, and some may limit or even pervert development. Children can and do develop in ways that limit their life chances, turn them into unhappy adults and lead to their behaving in risky or unhealthy ways.

169. Moreover, the kind of life a child goes on to lead does not solely depend on how he or she develops. The contexts in which children develop also open up or close down opportunities for how the abilities developed during childhood can be exercised during adulthood. Families, for instance, can not only nurture more and less healthy, confident and skilled young people but can also set those young people on different trajectories, helping or

failing to help them access education or employment opportunities. In the same way, communities and places offer young people different opportunities or impose on them various constraints as they move into adult life.

170. The Marmot Review (57) established incontrovertible evidence that progress can be made in reducing lifelong health inequities if all children have the start in life typical of the most advantaged children. The virtuous and vicious cycles are well established and start before birth. A good start is characterized by a mother who is healthy during pregnancy, gives birth to a baby with a healthy weight, and the baby experiences warm and responsive relationships in infancy, has access to high-quality childcare and early education and lives in a stimulating environment that allows safe access to outdoor play. Children who experience such a positive start are likely to do well at school, attain more highly paid employment and enjoy better physical and mental health in adulthood. Alternatively, babies with mothers who smoke or drink during pregnancy and babies who are born with low weight have insecure attachment, experience a poor language environment, are exposed to frequent harsh verbal interactions and miss out on high-quality preschool education, starting school at a significant disadvantage. The best systems for families with young children include policies for excellent health care in the prenatal and postnatal period, a benefit system that recognizes the risks posed by poverty in early childhood and therefore provides adequate support, good parental leave arrangements and high-quality early education and care.

171. Protection during pregnancy and good early life years and education are essential for health equity. The following are needed to achieve greater equity in life skills: maternal health and education, parenting skills, employment, balancing work and family life of women and men. Delivering high-quality, universal early-years and educational services requires user involvement, high-quality staff, management and leadership, political will and sufficient and appropriate funding arrangements. Box 8 provides examples of specific recommended actions.

172. Although social class does not rigidly determine any of the above conditions, they are all closely associated with the social class gradient. Depressingly, the gap between the children with good and poor early environments widens through the school years. Hence, school does little to mitigate the effects of a poor early childhood.

**Box 8. Examples of specific actions to be recommended on early-years and child development**

Protecting pregnant women and unborn children from vulnerability through maternal education, minimum incomes, control over fertility, reducing domestic violence and good health care

Improving parenting through employment with adequate maternity and paternity leave, parenting training, minimum income, action on postnatal depression and bonding, maternity leave and active home visiting (such as family nurse partnerships)

Active universal childcare to provide a respite for parents, parental availability for employment and structured play for the child to develop learning skills

## ***Action for community empowerment***

173. Communities play a vital role in providing health promotion and disease prevention activities and ensuring the social inclusion of people with chronic diseases and people with disabilities. At the macro level, social and economic policies need to create environments that ensure that people at all times of life are better able to reach their full health potential. At the micro level, action initiated in specific settings where people live, love, work and play – homes, schools, workplaces, leisure environments, care services and older people's homes – can be very effective. Health and social services, and especially primary health care services reaching out to families in their homes, to workers at their workplaces and to local community groups over the lifespan, are important entry points for systematically supporting individuals and communities over the lifespan and especially during critical periods.

174. People cannot be empowered by others but can only empower themselves by acquiring more powers, making use of their own inherent assets, facilitated by external structures and life circumstances. Communities can support individuals and patients by establishing social networks and by mobilizing social support, which together promote cohesion between individuals and can support people through difficult transitions in life and periods of vulnerability and illness. Communities should provide structures, resources and opportunities for individuals, groups and neighbourhoods to network, to become better organized and build capacity with other actors, to develop leadership and to take responsibility for their health, their diseases and their lives.

175. Raising awareness in communities, families and individuals that there are opportunities for change and support and that everybody can help to remove barriers for a better and healthier life can offer greater freedom for people with health problems, in particular for individuals with chronic diseases and those with disabilities, and their meaningful contribution to the community. Key action points are:

- involving patient and family caregiver associations and related nongovernmental organizations in providing care for patients and supporting them by public funds;
- building supportive communities to enable people to live as independently as possible, socially included and free from discrimination;
- promoting support for disease self-management at workplaces;
- strengthening means of social support in communities that encourage participation and contact with people with chronic diseases and with disabilities; and
- initiating and funding anti-stigma programmes for the general public, for health professionals and among other community actors that affect health and its determinants, such as teachers, police officers, urban planners, journalists as well as in schools and universities to change negative attitudes towards people with chronic conditions and people with disabilities.

## ***Supporting the informal caregivers***

176. Informal caregivers carry the largest share of care provision. Supporting their role, training them and protecting their well-being create positive outcomes for the health of caregivers and the people for whom they care.

177. Key action points are:

- providing official recognition, financial support and social security benefits to informal caregivers;
- involving informal caregivers in decision-making processes on health policy and services;
- providing professional home visits and regular communication between professionals and informal caregivers, including assessing health and safety conditions and technical aids;
- using the informal caregivers' experience of the individual being cared for in training professional caregivers; and
- providing mental health protection measures for informal caregivers such as possibilities for flexible and part-time work, peer support and self-help, training and tools to evaluate caregivers' own mental health needs.

## **Healthy mothers and healthy babies**

### **Situation analysis**

#### *Mortality, disease burden and trends*

178. The life of a mother and her baby are inextricably linked. Safe pregnancy, childbirth and breastfeeding are the first conditions for growing up healthily, but for many women, pregnancy and childbirth are still a time of risk. The maternal mortality ratio, or number of reported maternal deaths per 100 000 live births, was 14.1 for the European Region in 2008. Although the maternal mortality ratio was almost halved in the European Region as a whole from 1990 to 2006, progress has been uneven. Striking inequities persist between and within countries in the European Region, with an estimated difference of 30- to 40-fold in maternal mortality ratio between the countries with the highest and lowest rates. Maternity can lead to complications: for every woman who dies in childbirth globally, at least 20 others are estimated to experience injuries, infection and disability (58).

179. Some women cannot choose pregnancy and motherhood, but the alternatives pose difficulties of their own. Many countries have great unmet need for safe and effective contraception, and the European Region has the highest levels of induced abortion of any WHO region, with unsafe abortion causing up to 30% of maternal deaths in some countries (59,60).

180. The infant mortality rate per 1000 live births was 7.83 for the European Region in 2008, although estimates suggest that it is even higher. The infant mortality rate for the European Region has also fallen by more than 50% since 1990, but again countries differ substantially, with a 25-fold difference between the countries with highest and lowest rates. For example, the infant mortality rate in the central Asian republics and Kazakhstan is more than twice the rate for the European Region and more than four times the rate for the EU15 countries. Children have the highest risk of dying during the first 28 days of life. Of all neonatal deaths, 75% occur during the first week of life, and of these, 25–45% occur within the first 24 hours (61,62).

### *Main determinants and risk factors*

181. The major direct causes of maternal morbidity and mortality include haemorrhage, infection, high blood pressure, unsafe abortion and obstructed labour. These can be prevented and treated with basic, cost-effective interventions, but not all women in the WHO European Region have access to the care or services they need. Evidence suggests that there are substantial inequities in the Region within and between countries in access to skilled workers at delivery, antenatal care, family planning and other reproductive health services by socioeconomic status (education and income), ethnicity and residence (urban versus rural).

182. Women's reproductive and fertile years have enormous effects on women's general health and well-being. Evidence suggests that a mother's educational level, her health and nutrition, her socioeconomic status and the quality of health and social services she receives profoundly affect her chances for a successful pregnancy and for delivering a healthy baby (63).

183. The age of sexual debut is decreasing in many countries in the European Region. In many cases, unsafe sex leads to sexually transmitted infections and unintended pregnancies. Women and men are planning and having children at later ages; this increases the risk of congenital malformation, infertility, medically assisted reproduction, high-risk pregnancies because of chronic diseases and other health problems (64,65).

184. The main causes of deaths among newborn babies are prematurity and low birth weight, infections, asphyxia, birth trauma and congenital abnormalities. These causes account for nearly 80% of deaths in this age group and are intrinsically linked to the health of the mother and the care she receives before, during and immediately after birth. In general, the proportions of deaths attributed to prematurity and congenital disorders increase as the neonatal mortality rate decreases, and the proportions caused by infections and asphyxia decline as care improves (66).

### **Solutions that work**

#### *Effective evidence-based action*

185. Contextual factors such as a healthy environment, women's empowerment, education and poverty play an important role in reducing maternal, newborn and child mortality levels, as does care provided through health systems. Although both care and contextual interventions make contributions to reducing maternal mortality, this probably depends more on the efforts of health systems and less on contextual factors than does child mortality. When the context is particularly challenging, even strong health systems can have only limited effects on mortality and, conversely, when there is an enabling context for health, a poor health system could hold back mortality reduction substantially.

186. Access to family planning services and safe abortion reduces the number of unintended pregnancies and mortality and morbidity from abortion without influencing the fertility rate.

187. Introducing the WHO Effective Perinatal Care training package has reduced maternal and perinatal mortality and reduced inequalities. Together with the introduction of maternal and perinatal audit, the package has been demonstrated to lead to better, healthier childbirth. The development and implementation of national clinical guidelines and a perinatal referral



system has resulted in a decrease in maternal and perinatal mortality. In addition, better registration of perinatal deaths has provided a basis for strategic planning.

188. Breastfeeding is an important aspect of caring for infants and young children. It leads to improved nutrition and physical growth, reduced susceptibility to common childhood illnesses and better resistance to cope with them, a reduced risk of certain noncommunicable diseases in later life and stimulating bonding with the caregiver and psychosocial development.

### *Key WHO strategies*

189. Key WHO strategies are relevant at both the global and regional levels.

190. At the global level these are:

- the WHO global reproductive health strategy (67);
- the WHO global strategy for the prevention and control of sexually transmitted infections (68); and
- the WHO global strategy on infant and young child feeding (69).

191. At the WHO European Region level these are:

- the WHO European strategy on sexual and reproductive health (70); and
- the WHO European strategy for child and adolescent health and development (71).

### *Challenges, promising developments and opportunities*

192. WHO's work on improving maternal and child health is linked with that of achieving the United Nations Millennium Development Goals adopted at the 2000 United Nations Millennium Summit (72,73). Millennium Development Goal 4 aims to reduce child mortality and Millennium Development Goal 5 aims to improve maternal health. Of additional relevance are the Millennium Development Goals not related directly to health. Millennium Development Goal 1 to eradicate extreme poverty and hunger includes a focus on infant and young child feeding. Millennium Development Goal 3 promotes gender equality and the empowerment of women. Although the WHO European Member States have made some significant advances in meeting the Millennium Development Goals, for some areas action has stagnated and inequities in progress persist.

193. The Global Strategy for Women's and Children's Health was launched at the United Nations in September 2010. It was developed under the auspices of the United Nations Secretary-General with support and facilitation by the Partnership for Maternal, Newborn & Child Health, drawing together leaders from government, international organizations, business, academe, philanthropy, health professional associations and civil society in recognition that the health of women and children is key to progress on all development goals (74–76).

194. WHO convened the Commission on Information and Accountability for Women's and Children's Health in December 2010 to improve global reporting, oversight and accountability for women's and children's health. It presented its first report *Keeping promises, measuring results* at the World Health Assembly in May 2011, aiming to address



the need to improve health information systems in countries and to track pledged resources and health expenditure for women and children.

### *The equity lens*

195. Evidence suggests that there is also substantial inequity within countries in the Region in terms of access to high-quality maternal health care, family planning and other reproductive health services by socioeconomic status (education and income), ethnicity and residence (urban versus rural).

196. Gender equality, through health promotion, more education, greater control over household resources, control over own fertility and better nutrition play an important role not only in improving expectant mothers' chances for healthy pregnancies and normal births but also in promoting children's survival and development.

197. Building universal coverage for sexual and reproductive health services and programmes needs to be supported. Gender inequities and other social determinants strongly influence reproductive and sexual health and rights. For example, intimate partner violence can remain invisible in the process of delivering services for reproductive health. Women and men need to be empowered to make informed sexual and reproductive choices across the life cycle, giving them autonomy over their reproductive lives.

### *Key actors*

198. The health, education, social protection, labour and employment sectors are jointly responsible for maternal and infant health. Reproductive health requires strong partnerships with other sectors such as education and the legal system, in addition to encouraging the involvement of civil society organizations or target groups, such as the Roma population and young people.

199. For maternal, infant and reproductive health at the international level and within countries, WHO needs to work in close collaboration with other partners such as the United Nations Population Fund, United Nations Children's Fund (UNICEF), United States Agency for International Development, European and professional organizations and the European network of the International Planned Parenthood Foundation.

### *Governance issues*

200. Supporting maternal and infant health requires a broad range of policies, not simply within the health sector. Enabling reproductive choice, protecting pregnant women in the workplace, enabling mothers to return to work, supporting parents with flexible working arrangements and parental leave, preventing child poverty, promoting gender equality and a range of other measures require the broad involvement of government and nongovernmental actors such as employers.

### *What can be achieved?*

201. Two thirds of newborn deaths could be prevented if well-known and effective health interventions were provided during pregnancy, at birth and during the first week of life. The interventions and approaches that can help save the lives of mothers and babies work even where resources are poor.

202. Evidence is mounting to show that investing in early childhood development is one of the most powerful measures countries can take in reducing the escalating burden of chronic disease (77).

## ***Healthy children and healthy adolescents***

### **Situation analysis**

#### ***Mortality, disease burden and trends***

203. The European Region includes the countries with some of the lowest child mortality rates in the world, and most children and adolescents in the WHO European Region enjoy a high standard of health and well-being. However, it also includes some wide variation: the rates in countries with the highest mortality among children younger than five years are 20–30 times the rates of the lowest.

204. The mortality rate in the European Region among children younger than five years is 9.81 per 1000 live births. Mortality among children younger than 15 years has decreased for all groups of countries in the European Region, and mortality among children younger than 5 years is now the lowest of any WHO region, although it can differ substantially between countries. For example, child mortality rates are declining more slowly in the CIS countries, where a child born is three times as likely to die before the age of five years as a child born in an EU country.

205. The leading causes of death of children younger than five years in the European Region are neonatal conditions, pneumonia and diarrhoea. Almost half the deaths are associated with undernutrition. Children are also at risk from hazardous environments, obesity and unhealthy lifestyles. Poor environments aggravate socioeconomic disparities in cities. Marked differences in mortality rates among children younger than five years between urban and rural areas and the households with the lowest and highest incomes have been demonstrated where data exist (78–83).

206. Suicide and accidents result in considerable deaths and disability among young people. Every day, more than 300 young people in the European Region die from largely preventable causes. Almost 10% of 18-year-olds in the European Region have depression. Injuries are the leading cause of death among young people, especially males; road traffic injuries are the leading cause of death and the leading cause of injury among people aged 10–24 years (84–88).

#### ***Main determinants and risk factors***

207. A healthy start in life establishes the basis for healthy life. The first year of life is crucial for healthy physical and mental development. Children and adolescents need safe and supportive environments: clean air, safe housing, nutritious food, clean water and a healthy way of life. They also need access to friendly and age-appropriate services.

208. The foundational strengths for well-being, such as problem-solving, emotional regulation and physical safety, are the positive underpinnings of early child health and development. Developing these skills and optimizing well-being in early childhood establish the basis for ongoing well-being across the life course.

209. Children born into disadvantaged home and family circumstances have a higher risk of poor growth and development. Optimizing health and well-being in later life requires investing in positive early childhood experiences and development. Good social, emotional and mental health helps to protect children against emotional and behavioural problems, violence and crime, teenage pregnancy and misusing drugs and alcohol and determines how well they do in school (89–97).

210. Many serious diseases and types of exposure to risk factors (such as tobacco use and poor eating and exercise habits) in adulthood originate in childhood and adolescence. For example, tobacco use, mental ill health, sexually transmitted infections including HIV and poor eating and exercise habits may all lead to illness or premature death later in life. The prevalence of overweight among children younger than 16 years is between 10% and 20% in the European Region, with prevalence higher among children in southern Europe. The dietary habits of young people are not optimal for health, including fruit and vegetable consumption below recommended levels and high consumption of sweetened beverages. Physical activity levels decrease during adolescence, more markedly among girls. The smoking prevalence at age 13 years is 5%, rising to 19% by age 15 years in the European Region. Almost two thirds of 16-year-olds have consumed alcohol in the previous 30 days. The percentage of 15-year-olds reporting as having experienced sexual intercourse ranges from 12% to 38% across countries in the European Region (98–101).

211. Adolescence is usually a time of good health for both girls and boys, with opportunities for growth and development. Nevertheless, it can also be time of risk, particularly with regard to sexual activity, substance use and accidents. The social and economic environment in which adolescents grow up often determines the behaviour they develop during adolescence (102).

## **Solutions that work**

### *Effective evidence-based action*

212. Several childhood illnesses can be prevented by immunization and relatively simple, low-cost measures. The WHO Integrated Management of Childhood Illnesses (IMCI) promotes a package of simple, affordable and effective interventions for the combined management of the major childhood illnesses and malnutrition, including antibiotics, treatment of anaemia, immunization and promoting breastfeeding (103,104).

213. Measures to control tobacco use and the harmful use of alcohol need to emphasize protecting children through effective population-level measures and regulatory frameworks such as banning advertising, banning sales to minors, promoting smoke-free environments and pricing policies. Children are vulnerable and exposed to marketing pressure, and interventions can reduce the effects on children of the marketing of foods high in saturated fat, *trans*-fatty acids, free sugar or salt. Environmental measures can be put in place to promote physical activity: for example, through urban design and planning the school day.

214. Numerous factors influence children's social and emotional well-being, from their individual make-up and family background to the community within which they live and society at large. As a result, a broader multi-agency strategy is required that includes school-based activities to develop and protect children's social and emotional well-being along with policies to improve the social and economic status of children living in disadvantaged circumstances (105–111).

### *Key WHO strategies*

215. There are key WHO strategies of particular relevance at both the global and regional levels.

216. At the global level, this is the:

- WHO global strategy on infant and young child feeding (2002).

217. At the WHO European Region level, these are the:

- WHO European strategy for child and adolescent health and development (2005); and
- Children's Environment and Health Action Plan for Europe (2004).

### *Challenges, promising developments and opportunities*

218. As already mentioned in the previous section on healthy mothers and healthy babies, work is already underway to meet Millennium Development Goal 4 to reduce child mortality as well as relevant Millennium Development Goals not directly related to health such as Millennium Development Goal 1 (which includes a focus on feeding infants and young children) and Millennium Development Goal 2 to achieve universal primary education. Monitoring progress faces significant challenges in the face of weak health information systems, underreporting and differences between official data and the estimates of international agencies.

219. Again, as mentioned in the previous section on healthy mothers and healthy babies, initiatives such as the Global Strategy for Women's and Children's Health and the Partnership for Maternal, Newborn & Child Health maintain a strong international focus on child health and bodies such as the Commission on Information and Accountability for Women's and Children's Health seek to hold governments to account for pledged resources and health expenditure for women and children (112–115).

### *The equity lens*

220. Boys and girls are affected not only by the socioeconomic circumstances of their community and their ethnicity but also by gender norms and values. They differ in exposure and vulnerability to health risks and conditions such as depressive disorders, accidents, substance abuse, eating disorders, sexually transmitted infections, violence and self-inflicted injuries, including suicide.

221. Access to high-quality health measures, such as school health services, whole-school approaches and curriculum-based health education, including sexuality education, remains a challenge in many countries of the European Region. Nevertheless, this is not sufficient – schools themselves must become environments for learning for well-being.

222. These actions should be informed by the overwhelming evidence from all fields of health research that girls and boys differ in biology (sex differences) as well as social and culturally constructed gender norms, roles and relationships (gender differences). Recognizing the root causes of differences between girls and boys in exposure and vulnerability to health risks is therefore crucial when national health policies design responses from the health and other sectors to be effective.

223. A satisfactory mental, social and physical environment during upbringing will produce people who are secure and less vulnerable to stresses and strain in later life. Society should compensate for what children and adolescents lack in their environment, including physical environment. The basic policy ought to be one of taking general measures aimed at all children and adolescents but with more support being provided for health care services for mother and children and for nurseries and schools in areas with many disadvantaged children (116–124).

### *Key actors*

224. The educational system plays a fundamental role in preparing children for life, giving them the knowledge and skills they need to achieve their full health potential. A well-functioning, non-discriminatory education system has tremendous potential for promoting health in general and for reducing social inequities in health in particular. Schools in less privileged areas should receive extra resources to meet the greater needs for special support for children from low-income and poor families. The goal should be that educational achievement not differ based on socioeconomic and ethnic background.

### *Governance issues*

225. The health, education, social protection, labour and employment sectors are jointly responsible for the health of children and adolescents. Such joint working should be assisted by having a framework of accountability of each sector for children's and adolescents' health and health-related issues, for example via a set of jointly owned targets and indicators, linked to financing. Having a national health information system with well-defined indicators would allow the trends in children and young people's health and development to be monitored in mainstream population and vulnerable groups. Reviewing the legal, policy and regulatory framework, in the context of a strategy for children's and adolescents' health, would allow necessary changes to be made to respect, protect and fulfil the rights of children and adolescents to health and their access to high-quality health services (125–127).

### *What can be achieved?*

226. Much of the morbidity and mortality among children and adolescents is preventable. Low-cost, effective measures could prevent two thirds of deaths.

## **Healthy adults**

### **Situation analysis**

#### *Issues and trends*

227. The adult stage of life entails events, such as taking up employment, parenting, citizenship and caring for parents. For many adults, there is challenge in achieving work–life balance and in reconciling private and professional responsibilities. The way in which individuals balance these demands has consequences for public policy. Half of EU residents surveyed in 2008 said that they had difficulty in combining work and family life, with women and single parents struggling the most. Women face disadvantage regarding access to and participation in the labour market, and men face disadvantage regarding participation in family life.

228. There is still a huge imbalance between men and women in the distribution of family and domestic responsibilities. This means that many women opt for flexible working arrangements or give up work altogether, affecting women's career development, the wage gap between men and women and pension rights. An EU review found that, on average, and in almost every EU country, parenthood negatively affects employment for women and positively for men. These effects of parenthood on employment rates are linked to the availability of childcare services. Not only does this hold back the rate of female employment; full employment of a parent, with decent pay, can also help combat the risk of poverty in lone-parent households.

### *Main determinants and risk factors*

229. Predetermined social models tend to presuppose that men are mainly responsible for paid work derived from economic activity and that women are mainly responsible for unpaid work related to looking after a family. In many countries and some cultures in the European Region, traditional gender norms still prevent women from taking up gainful employment and earning income.

230. The ability to successfully reconcile private and work life has implications for fertility rates and demographic renewal. With an ageing population, women and men frequently have a double burden of caring for children and caring for older dependants. Couples and individuals need to be able to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so. Sexual health and the reproductive years tremendously affect women's and men's general health and well-being. Nevertheless, sexual and reproductive health is often not addressed properly or at all because it is a private sphere and can be surrounded by cultural sensitivity.

231. Numerous social changes in the European Region affect adults disproportionately at different stages of life. A satisfactory job is an important prerequisite for health. For many young people, unemployment is still high and instability in early employment has become the norm, often with adverse effects on fertility and forming families. For older workers, standard retirement trajectories have eroded and become replaced by instability of employment late in people's careers and various pathways into early retirement. Women's increasing integration into paid employment is often associated with atypical forms of work. The intensity of these trends varies considerably between countries and among social groups, such as those differing in human or social capital or those enjoying different degrees of family support and well-being.

232. Lack of control over work and home life can harm health. Accumulation of psychosocial risk can increase long-term stress and the chances of premature death. Both jobs with high demands on employees and jobs with low employee control carry risk. Health suffers when people have little control over their work, little opportunity to use their skills and low authority to make decisions.

## **Solutions that work**

### *Effective evidence-based action*

233. Promoting the well-being of adults in the European Region requires a variety of approaches. Social innovation approaches that involve communities in policy-making processes can be used to optimize well-being by engaging citizens in addressing an array of



social and well-being issues and proposing solutions that are desirable to use and enrich people's daily lives. Workplace health promotion that is designed not just to prevent disease but also to optimize employee well-being can benefit employees and employers. Improved conditions of work, with mechanisms to allow people to influence the design and improvement of their work, lead to a healthier, more productive workplace.

234. Governments should make every effort to avoid unemployment, insecurity, discrimination and exclusion from work, which increase the risk of physical and mental disorders. Long-term unemployment is a grave concern for equity in health. Key health-related measures include promoting the use of permanent contracts for employment, adapting the physical and psychosocial working environment to meet the needs of individual employees, increasing the influence employees have over their work individually and collectively and strengthening occupational health services. As retirement ages are likely to rise, the needs of an ageing workforce must also be taken into account.

235. Recent research shows that social protection policies in the form of active labour market policies and return to work interventions can have a protective health effect in times of economic downturn and rising unemployment (128). EU mortality trends during recessions in the past three decades indicate that countries can avoid a rise in suicide rates by spending US\$ 200 per person per year or more on active labour-market programmes, designed to improve people's chances of gaining employment and protecting those in employment. In contrast, spending less than US\$ 70 per person per year correlates with a rise in the suicide rate. In countries that spend at least US\$ 300 per person per year, economic change and aggregate unemployment has no discernible short-term effect on overall population health.

236. However, the causal mechanisms or pathways responsible for these effects have not been fully examined. A small body of research originating primarily from vocational rehabilitation research in Scandinavia and the Institute of Social Research in Michigan, United States of America has identified positive health effects of training programmes, such as: reduced mental distress and depression; increased subjective well-being; higher levels of control and mastery of circumstances; improvements in motivation and self-esteem through feeling needed (having something meaningful to do, somewhere to go and meet people); less stigma of being unemployed; and improved support.

237. In achieving work-life balance, a number of supportive measures can be put in place including: granting family-related leave; improving the provision of childcare; organizing working time to include flexible arrangements; abolishing conditions that lead to wage differences between men and women; harmonizing school and working hours; and reviewing the opening hours of shops. Employment policies should also provide measures that encourage more equitable sharing between men and women of leave for childcare and care of older people.

238. Sexual health care aims to enhance life and personal relationships and not merely to provide counselling and care on reproduction and sexually transmitted infections.

### *Key WHO strategies*

239. Relevant WHO strategies include the WHO global reproductive health strategy (2004) and the WHO European strategy on sexual and reproductive health (2001), as both promote sexual health and reproductive choice. Resolutions relating to social inclusion and poverty and health at the global and regional levels are also relevant.

### *Challenges, promising developments and opportunities*

240. The Lisbon Strategy of the European Union, established in 2000, recognized the importance of furthering all aspects of equal opportunities. Improved reconciliation of family and working life is a guideline of the European Employment Strategy and is included in the European process for combating poverty and promoting social inclusion.

### *The equity lens*

241. Society needs to safeguard maternity, paternity and children's rights. Because of the gender-based division of labour, exemplified by the allocation of specific tasks to men and women, the workplace is a critical arena determining gender-based differences in health. Although paid employment generally benefits both women's and men's health, work may also involve exposure to risks and hazards that can impair health. These hazards are related to both physical exposure (such as heavy lifting, noise, chemicals and violence) and psychosocial exposure (such as stress, lack of social support, discrimination and harassment).

242. Unemployment is also still very widespread among migrants, Roma, people with disabilities and other socially excluded people in the Region. Health risks at work are strongly overrepresented among socially and economically disadvantaged populations.

### *Key actors*

243. Key actors to promote equality between men and women and help achieve reconciliation of family and working life are: ministries responsible for employment, education, health and social affairs; employers in the private and public sectors; social welfare partners; workers; and nongovernmental organizations.

### *Governance issues*

244. The social and economic development of society requires a balanced participation of men and women in the labour market and in family life, with consequences for growth and jobs, social inclusion of vulnerable groups, child poverty and gender equality. This requires broad-ranging social policies to be implemented in education, employment, health and social welfare to give men and women real choices.

### *What can be achieved?*

245. Childcare facilities, leave entitlements and flexible working time arrangements are core components of policy. Differences between countries demonstrate what can be achieved in supportive social policy.

246. In low- and middle-income countries, policy actions will include: promoting sustainable green economic growth; transferring knowledge and skills; increasing employability, especially among young people; achieving greater job stability among the most vulnerable people; reducing exposure to unhealthy work and the associated risks of disease and injury; and managing health risks by enforcing national regulations and providing good occupational health services.

247. In high-income countries, policy actions will include: maintaining high levels of employment through green, sustainable economies; preserving standards of decent work and social protection policies; developing standardized tools for monitoring and risk management;



and implementing known methods to improve safe and healthy work, with priority given to high-risk groups, including unemployed people.

## **Healthy older people**

### **Situation analysis**

#### *Mortality, disease burden and trends*

248. Overall, longer life expectancy for both women and men is a major achievement for which health and social policies play an important role. As life expectancy increases, more people live past 65 years of age and into very old age, thus dramatically increasing the numbers of older people. By 2050, more than one quarter (27%) of the population is expected to be 65 years and older. There are 2.5 women for each man for those aged 85 years or over, and this imbalance is projected to increase by 2050 (129).

249. Although women in the European Region live on average 7.5 years longer than men, they live a greater share of their lives in poor health than men. As women also have higher disability rates, women comprise the vast majority of very old people who need ongoing health care and social support (130).

250. As individuals age, noncommunicable diseases become the leading causes of morbidity, disability and mortality. Socioeconomic status greatly affects health with, for example, morbidity often higher in later life among people with lower-status occupations. A great proportion of overall health care needs and costs are concentrated in the last few years of life.

251. If people are empowered to remain healthy into old age, severe morbidity can often be compressed into a few short months before death. Nevertheless, any possible compression of morbidity would be too small to offset the effect of rising numbers of older people, so the number of older people with disabilities will also rise. About 20% of people aged 70 years or older and 50% of people aged 85 years and older report difficulties in performing activities of daily living such as bathing, dressing and toileting as well as other activities such as housekeeping, laundry and taking medication. Restriction of mobility is common, as is sensory impairment. About one third of people 75–84 years old report difficulties in hearing during conversation with other people, and about one fifth have problems reading daily newspapers or books.

252. Currently, many countries in the European Region have the lowest fertility worldwide and the highest life expectancy worldwide (131). Consequently, the support and care of an increasing number of older people depends on an ever-reducing number of people of working age. Care of older people is still considered a familial obligation in many countries rather than a government responsibility, and most informal caregivers are women. The status of the development and generosity of the care of older people differs more widely between countries in the European Region than for other health and social policy programmes. Formal social care for older people is more likely to be available in urban areas, and the access to and quality of nursing homes differs widely in Europe. Privacy and high-quality care may be limited, access to mainstream health care may be limited, medication may be inappropriate and preventive measures may fail.

### *Main determinants and risk factors*

253. Health and activity in older age are the sum of the living circumstances and actions of an individual during the whole lifespan. Experiences throughout the life course affect well-being in older age – lifelong financial hardship is associated with worse health outcomes later in life, and people who have been married all their adult lives outlive those who have not.

254. Older people are not a homogeneous group: individual diversity increases with age, and the rate of functional decline is determined not only by factors related to individual behaviour but also by social, economic or environmental factors that individuals may not be able to modify. For example, age discrimination in access to high-quality services is widespread, and inequities in the living conditions and well-being of older people are greater than among the general population because of substantial differences in pension incomes, accumulated assets and family situation (132).

255. Early age at retirement, experiencing a job loss and experiencing traumatic life events, especially later in life, are associated with poorer well-being in middle and later life. Social support, especially social relationships with family and friends, is one of the most important factors influencing the quality of life among older people. Sex (women), single marital status, lack of material resources (such as access to a car) and poor health are all associated with lower social contact in older adults.

### **Solutions that work**

#### *Effective evidence-based action*

256. Key needs of older people are being autonomous, having a voice and belonging to the community. One of the most powerful strategies to promote health and well-being in old age is preventing loneliness and isolation, in which support from families and peers plays a key role.

257. The decline in functional capacity in older people is potentially reversible and can be influenced at any age through individual and public policy measures, such as promoting age-friendly living environments.

258. Effective measures to promote healthy ageing include legislation, social and economic policies that provide for income support and supplementation, policies for supportive transport, neighbourhood and urban planning and public health promotion work related to the main risk factors – diet, exercise, alcohol, smoking and screening for treatable disease.

259. The life-course approach to healthy ageing allows people to influence how they age by adopting healthier lifestyles earlier in life and by adapting to age-associated changes. Healthy lifestyles needs to be encouraged among older people and facilitated with opportunities provided for exercise, healthy nutrition and smoking cessation, for example.

260. Vaccination is effective in both children and older people in reducing morbidity (and mortality) from several infectious diseases. Among older people, screening for treatable diseases such as breast cancer can reduce premature mortality and morbidity.

261. Putting an appropriate mix of services in place (such as health and social services, technical aids and support for informal care) is key to making health and long-term care

systems sustainable in the future (133). Creating environments and services that allow people to stay healthy for longer and active in the labour market will be crucial to reducing or containing long-term unemployment, disability benefits and early retirement. Adapting building design, urban planning and transport systems to meet the needs of older people and people with disabilities can maintain independent living, reduce the impact of disability and support social networks.

262. The promotion of health and well-being of older people should be mainstreamed into policies and initiatives on active, dignified and healthy ageing, on reducing health inequities, on retirement and on promoting the rights of people with disabilities. Key actions include:

- ensuring that older people are involved in developing health policy;
- involving older people in decision-making about their own treatment and care;
- developing tools to promote health literacy and disease self-management, including leadership training and tools for educating family caregivers;
- reducing mental health risks among older people with chronic physical disorders through specific training of health professionals;
- implementing suicide prevention action designed especially for the needs of older people;
- addressing negative societal stereotypes about old age through mass-media work and promotion activities in communities and in care settings; and
- implementing independent quality control measures to monitor the quality of the services provided in institutions.

263. Palliative care affirms life and regards dying as a normal process and intends neither to hasten nor to prolong death. It provides relief from pain and other distressing symptoms and should be offered as needs develop and before they become unmanageable (134). Traditionally, high-quality care at the end of life has mainly been provided for people with cancer in inpatient hospices, but this kind of care now needs to be provided for those with a wider range of diseases, including the increasing number of people with dementia, and needs to reach into people's homes and into nursing and residential homes within the community (135). Palliative care offers a support system to help people live as actively as possible until death and to help the family members cope during the person's illness and in their own bereavement.

### *Key WHO strategies*

264. No recent specific WHO strategies have been endorsed at the global and regional levels, but there are relevant resolutions and a policy framework. World Health Assembly resolution WHA52.7 on active ageing (136) called upon Member States to ensure the highest attainable standard of health and well-being for their older citizens, and the most recent, World Health Assembly resolution WHA58.16, included a focus on developing age-friendly primary health care.

265. Further, several United Nations General Assembly resolutions (58/134 and 59/150) called on governments, United Nations organizations and others to incorporate the concerns of older people into their programmes of work. The Second World Assembly on Ageing was held in Madrid, Spain in 2002 and led to the adoption of the International Plan of Action on Ageing (137). WHO developed *Active ageing: a policy framework* (138) as a contribution to

this meeting. In 2005, the WHO Secretariat reported to the World Health Assembly on implementation of the International Plan of Action on Ageing.

### *Challenges, promising developments and opportunities*

266. Although increased longevity is a triumph, it can also present a challenge. Projections foresee an increase in overall age-related public spending (pensions, health and long-term care) of about 4–5% of gross domestic product (GDP) between 2004 and 2050 for the EU15 and of about 3.5% of the GDP in countries in the Organization for Economic Co-operation and Development (OECD) if current trends in non-demographic drivers of health care spending continue (139).

267. Promoting healthy ageing directly affects the costs of health care and long-term care. Keeping individuals in good health and out of hospitals and other health care settings can soften the increasing share of overall health care costs accounted for by older people. Further, a healthier older workforce could be less inclined to withdraw from the labour force. This would reduce transfer spending, expand the labour force and raise government revenue. The economic impact of ageing populations on public-sector spending on pensions and on health during the coming decades can be substantially mitigated if longer lifetimes are accompanied by parallel increases in the age of retirement.

268. Public spending at the boundary between health and social care has important efficiency gains that are largely untapped, with evidence growing about cost-effective interventions to avoid emergency hospital admissions and long length of stay or how telemedicine and telecare can best be used. Better integration is needed between health care and long-term care and improvements in aspects related to dignity and human rights in long-term care. The quality of services needs to be improved through quality assessment and assurance mechanisms and through new models of care coordination and integration such as via care pathways that provide tailored packages of health and social care.

### *The equity lens*

269. In the European Region, all levels of government, stakeholders and citizen are concerned about rapid population ageing, changing family structures and the potential decline in the living conditions of older people. Sex differences in these factors are considerable in most countries. Old women with low incomes especially need access to financial support, which can take the form of old-age or widowhood allowances and special financial security measures.

270. Inequities in health status and well-being accumulate over the life course, and the risk of poverty and social isolation in old age is increasing for many older people in the Region (140). Ageing is an inevitable biological process, but how women and men approach it and the consequences are socially governed and can be changed. Social determinants of health in old age especially include wealth, income and poverty, work history and experience, ongoing social participation, patterns of dependence and social vulnerability to illness, disability, isolation and lack of social support. In addition, age discrimination in access to high-quality services is widespread, especially for the range of health and social services that older people with functional limitations need.

### *Key actors*

271. Given the issues identified, the key actors include ministries responsible for health and social affairs, employment, environment and education; employers in the private and public sectors; social welfare partners; nongovernmental organizations; and representatives of older people themselves and of their informal caregivers.

### *Governance issues*

272. Action to promote healthy ageing has been identified in fiscal policy, social welfare, health services, transport, urban planning, housing, justice and education. Wider policy frameworks that take into account the interactions between programmes are needed. Such strategies may be best achieved at the local level within the context of a broader national health strategy or plan (141). Nevertheless, there is also an international dimension of increasing numbers of migrant care workers, many of them in unprotected, non-recognized jobs within private households (142).

273. A variety of sectors can develop age-friendly policies and supportive environments to enable full participation in community life and to prevent disability. These include flexible working hours and modified working environments; urban design and road traffic measures to create streets for safe walking; exercise programmes for maintaining or regaining mobility; lifelong learning programmes; providing hearing and visual aids; cost-effective procedures such as cataract surgery and hip replacements; and schemes to enable older people to continue to earn a living.

### *What can be achieved?*

274. Better policies to combat noncommunicable diseases over the life course are key to healthy ageing, as are age-friendly communities and better access to good quality health and social services for older people. Supporting more people in remaining active at work for longer and redistributing work over the life course can both contribute to healthy ageing and make health and welfare policies sustainable in the long term. The increasing number of good practice examples of coordination and integration of care, including beyond the divide between health and social services, can help countries with health care reform that aim at much better coverage and social protection of older people with care needs.

### ***Vulnerability, vulnerable groups and health***

275. Vulnerability sometimes refers to a lack of physical and/or mental resilience among individual people, but vulnerability here is mainly related to a person's social position. This results from exclusionary processes related to inequities in power, money, rights and other resources. These processes comprise barriers to releasing and enhancing individual and collective capabilities. When such groups as migrants, Roma and other ethnic minorities experience multiple exclusionary processes, they may become particularly vulnerable and this becomes entrenched.

276. Exclusionary processes create a continuum of inclusion and exclusion characterized by unequal access to resources, capabilities and rights. To the extent that these processes operate differentially across the whole of society, they give rise to the social gradient in health. Although recognizing that social exclusion is a dynamic and gradual phenomenon and that

actions should focus on addressing exclusionary processes is important, identifying individuals or groups who are socially excluded and considering them in both research and policy-making are equally important.

## **Migrants**

### **Situation analysis**

#### *Mortality, disease burden and trends*

277. Migration in Europe today involves a diverse group of people: including regular and irregular migrants, victims of human trafficking, asylum-seekers, refugees, displaced people and returnees. About 75 million migrants live in the WHO European Region, amounting to 8% of the total population and 39% of all migrants worldwide (143). Of the 10 countries with the highest numbers of international migrants, 6 are in the European Region. The number of migrants is expected to increase in most countries in central Europe. Most migrants in the European Region are young adults. Women comprise half of all migrants and are often overrepresented in vulnerable groups, such as victims of human trafficking for sexual exploitation (144).

278. Few generalizations can be made regarding the state of health of migrants, as variation is substantial between groups, countries and health conditions, and the health problems of first-generation migrants may differ from those of their descendants. Nevertheless, the burden of ill health among certain migrant groups is often unacceptably large (145).

279. Where figures on mortality rates and life expectancy do exist, they generally indicate lower life expectancy for migrants, and some communities also show increased rates of infant mortality. Migrants' illnesses are largely similar to those of the rest of the population, although some groups may have a higher prevalence of health problems, including communicable diseases; poor nutrition; reproductive and sexual ill health; occupational health problems; and mental disorders (146–148). The movement of people also implies the movement of “new” (or old) types of diseases, and the health facilities in the European Region are not well equipped to deal with these. Increasingly heterogeneous populations also mean greater variation in people's health-seeking behaviour and perceptions of risk.

280. Most migrants are exposed to hazardous working environments, poor housing, labour exploitation and inadequate access to health care. Occupational accident rates are about twice as high for migrant workers as for native workers in the European Region (149).

281. Gaps in health services are particularly challenging for migrants. Migrants may experience obstacles in accessing services because of stigmatization, lack of information about services and lack of information in other than the predominant languages of host countries. Outreach work is required to overcome these barriers and to provide care equally for everyone.

282. Many European countries have recently seen anti-immigration parties winning parliamentary seats and making strong gains in elections. As a result, anti-immigrant sentiments and xenophobia in many European countries are on the rise. Recent findings indicate that, as institutional support for immigrants increases (such as substantial increases in expenditure on social protection), the mean level of anti-immigrant sentiment decreases (150).



### *Main determinants and risk factors*

283. The health conditions and the physical and socioeconomic environment at the migrants' place of origin determine many baseline health characteristics. The migratory journey can affect health, with increased health risks most often seen among migrants in an irregular situation, refugees and displaced people. After arrival, poverty and social exclusion exert the greatest influence on health outcomes, with the availability, accessibility, acceptability and quality of services in the host environment influencing the health of migrants (151).

284. All phases of the migration process can affect communicable diseases among migrants (152). TB, HIV infection, vaccine-preventable diseases and several parasitic diseases have high prevalence in global regions where migrants who eventually come to the European Region originate. The migration process can also affect the development of infectious diseases, such as multidrug-resistant TB, which can be linked to migrants not completing TB treatment before travelling to the destination country, to increased immigration from countries with unsuccessful TB control and to migrants having poor access to health care in destination countries.

285. Mental health is a particular health concern, and high rates of alcohol and drug abuse, depression and anxiety, traumatic experiences before departure or during the migration process, such as armed conflict, hunger and physical and sexual abuse can adversely affect migrants' well-being (153). On arrival, a variety of factors may increase psychosocial vulnerability and hinder successful integration.

### **Solutions that work**

#### *Effective evidence-based action*

286. The development of health programmes and policies at the regional level needs to reflect the basic principles of modern migration and draw on aspects of successful programmes that can be replicated. Accomplishing this will require systems that collect longitudinal data on health status and socioeconomic circumstances. Many of the health and socioeconomic challenges associated with migration are the product of global inequity, and local and regional actions that focus solely on countries that receive migrants will be less effective than integrated and globally focused programmes designed to mitigate the factors in both the country and region of origin and destination.

287. Migrants also confront gender-specific challenges, particularly maternal, newborn and child health and sexual and reproductive health. Migrants should have early access to reproductive health services, preventive health services and health promotion, screening and diagnostic care as well as prenatal and obstetric services. Special attention should be paid to women and girls who have been trafficked, as many have been exposed to gender-based violence.

#### *Key WHO strategies*

288. In May 2008, the World Health Assembly approved resolution WHA61.17 (154), which urged Member States to include migrants' health in regional health strategies; to develop and support assessments and studies and share best practices; to strengthen service providers' and health professionals' capacity to respond to migrant needs; to engage in bilateral and multilateral cooperation; and to establish a technical network to further research and enhance



the capacity to cooperate. As follow-up, Spain hosted a WHO/International Organization for Migration global consultation during its EU Presidency in March 2010, seeking further input on the health of migrants from Member States, experts and a broad range of other stakeholders. The outcomes of that consultation included an operational framework on how to move forward in implementing the World Health Assembly resolution. (155)

289. Other WHO initiatives of relevance include World Health Assembly resolution WHA62.14 on reducing health inequities through action on the social determinants of health (156) (Box 7) and the work done to follow up resolution EUR/RC52/R7 on poverty and health (157) and especially the WHO Regional Office for Europe policy brief on addressing health inequities linked to migration and ethnicity (158).

### *Challenges, promising developments and opportunities*

290. Migrants are important resources for the European Region, contributing to economic development, compensating for skill shortages and counterbalancing an ageing population in destination countries. For example, through remittances, the migration process contributes to reducing poverty and enhancing social protection in the countries of origin, both outside and within the European Region. In the EU15 countries, migration accounted for an estimated 21% of the average growth in gross national income from 2000 to 2005 (159).

291. Various policy processes and conferences are considering the need for coordinated and sustained action to address migration-related health challenges in the European Region and globally. In November 2007, the Eighth Conference of European Health Ministers highlighted migrant health by focusing on people on the move, human rights and challenges for health systems. During this event, the 47 Council of Europe Member countries signed the Bratislava Declaration on Health, Human Rights and Migration (160). On 16 November 2011, the Committee of Ministers to the Member countries of the Council of Europe adopted recommendations on mobility, migration and access to health care (161).

292. Other relevant work being carried out by the EU and European Council include: the European Council communication on solidarity in health; the European Council's conclusions on Roma (162); the work of the EU to promote the health of migrants; and the activities of the Portuguese EU presidency concerned with migrant health. There is also the broader framework of international covenants and conventions that endorse the universal human right to health without discrimination, such as the International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families.

### *The equity lens*

293. Despite the obvious benefits resulting from migration and the existing and ratified international human rights standards and conventions that protect the rights of migrants, including their right to health, most migrant populations are at risk of poverty, social exclusion, abuse, violence, exploitation and finding barriers to access health and social services. Migrants in an irregular situation especially have little or no access to health and social services because of their legal status, lack of an adequate social protection floor and inability to affiliate with health insurance schemes (163).

### *Key actors*

294. Implementing policy measures calls for a multisectoral and multistakeholder strategy involving all levels of government as well as civil society, local communities, businesses, professional, educational and scientific bodies, media, global forums and international agencies. Fragmentation of effort should be combated by encouraging cooperation between countries, disciplines and professions.

### *Governance issues*

295. Policies that promote social inclusion include measures to combat discrimination, educational policies that pay special attention to the needs of migrants, employment policies aimed at removing barriers in the labour market, social protection policies, housing and environmental policies to improve living condition and health policies to ensure equitable access to services.

296. Equity-oriented health impact assessment can be used to review how policies across sectors affect the social determinants of health.

### *What can be achieved?*

297. Policies should address inequities in the state of health of migrants and the accessibility and quality of health and social services available to them.

298. Since the health problems of migrant groups can result from or be worsened by their disadvantageous social position, measures that combat social exclusion are likely to have the most fundamental effect on health.

## **Roma**

### **Situation analysis**

#### *Mortality, disease burden and trends*

299. About 12–15 million Roma live in the European Region, and an estimated 10 million live in the EU alone. Although estimates of the total number of Roma living in a given country vary considerably, average estimates indicate that some countries have Roma populations comprising a substantial proportion of the total population. For example, Roma account for 10% of the population of Bulgaria, 9% in Slovakia and 8% in Romania. As Roma tend to have higher birth rates than majority populations, these proportions are likely to increase (164,165).

300. Data on mortality rates and other health statistics may be unreliable because, for example, members of Roma communities may be reluctant to disclose their ethnic identity. Nevertheless, there are indications that life expectancy among Roma communities is 10–15 years lower than average, the rates of infant mortality are increased and the levels of maternal and child mortality and morbidity are alarmingly high. For example, infant mortality rates are reported to be twice as high among the Roma as non-Roma in the Czech Republic, Hungary and Slovakia (166–168).

301. Higher rates of illness among Roma populations than among majority populations have been reported, with higher rates of type 2 diabetes, coronary artery disease and obesity among

adults and nutritional deficiencies and malnutrition among children. Many Roma women in settlements near Belgrade in Serbia are undernourished (51%) and smoke tobacco (almost all). A United Nations Development Programme (UNDP) survey of vulnerability in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia, Kosovo (in accordance with United Nations Security Council Resolution 1244 (1999)) and the former Yugoslav Republic of Macedonia found that 50% of Roma children face malnutrition risks more than twice monthly, in contrast to 6% of majority children (169–171).

### *Main determinants and risk factors*

302. Roma disproportionately have low income in many countries, and evidence suggests that Roma are concentrated among the people with the lowest incomes. Exclusion linked to discrimination because of Roma ethnicity may be an independent risk factor for poverty (172,173).

303. Although data on Roma health are lacking, existing evidence points to significant inequity in health system access and health status between Roma and majority populations. For instance, data regarding antenatal care coverage, low birth weight, prevalence of breastfeeding, maternal smoking, nutrition status and vaccination rates reveal marked inequity between the Roma and the majority population, including (in some contexts) when Roma are compared with the poorest quintile of the general population. The State Statistical Office of the former Yugoslav Republic of Macedonia and UNICEF jointly undertook a Multiple Indicator Cluster Survey, revealing that only 78% of Roma women who had given birth in the two years preceding the survey received skilled antenatal care versus 94% of the quintile with the lowest income. UNICEF reports that low birth weight rates are 6 times the national average among the Roma in Serbia versus 3 times the national average among the quintile with the lowest income (174,175).

## **Solutions that work**

### *Effective evidence-based actions*

304. Policies need to address both inequities in the state of health and the accessibility and quality of health services available to the Roma communities. Many of the strategies for achieving this are not specific to the Roma but are similar to those needed for ethnic minorities in general, such as training health care workers in working with minority and marginalized populations, involving Roma in designing, implementing and evaluating health programmes and improving health information systems so that data are collected and presented in an ethnically disaggregated format.

### *Key WHO strategies*

305. No WHO strategies are related to Roma specifically, but the WHO resolutions relating to social inclusion and poverty and health are relevant at the global and regional levels.

### *Challenges, promising developments and opportunities*

306. The Decade of Roma Inclusion 2005–2015 is a political commitment by European governments to improve the socioeconomic status and social inclusion of Roma. It brings together governments, intergovernmental and nongovernmental organizations as well as Romani civil society to accelerate progress towards improving the welfare of Roma. The 12

countries participating in the Decade are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Montenegro, Romania, Serbia, Slovakia, Spain and the former Yugoslav Republic of Macedonia, with Slovenia having observer status.

307. Health is a priority area of focus together with education, employment and housing. The Decade also commits governments to take into account poverty, discrimination and gender mainstreaming. Each government participating has to develop a national Decade action plan that specifies the goals and indicators in the priority areas. Although WHO is not an international partner organization for the Decade, other United Nations agencies are, such as UNDP, UNICEF, the United Nations Human Settlements Programme (UN-HABITAT) and the World Bank. In April 2011, the European Commission launched an EU Framework for National Roma Integration Strategies by 2020. With this, the European Commission requests that all EU countries develop and implement targeted strategies, with sufficient resources attached, for promoting integration in health, housing, education and employment. There will be a robust monitoring mechanism, with annual reporting on progress (176).

### *The equity lens*

308. The inequity in health experienced by Roma is socially determined, being driven by multifaceted social exclusion processes and inequity within the health sector and in other sectors that influence health.

309. Responding to this inequity in health requires an approach that:

- addresses inequity across all health system functions: financing, service delivery, resource generation and stewardship;
- engages other sectors for meeting objectives on equity in health through public health governance that entails action on the social determinants of health;
- is grounded in human rights and gender approaches; and
- enables the mainstreaming of Roma health and health equity across health policies and programmes.

### *Key actors*

310. In accordance with the EU Framework and the Decade of Roma Inclusion 2005–2015, the priority areas are health, housing, education and employment.

311. Although each country is primarily responsible for the social and economic integration of disadvantaged Roma people, the EU has confirmed since 2007 that it also has a role. A series of European Council conclusions (177) have endorsed the European Commission's assessment that more needs to be done to apply the EU framework of legislative, financial and policy coordination tools to promote Roma inclusion.

### *Governance issues*

312. Governments need to adhere to and implement the commitments already made through international instruments around social inclusion, poverty and health and discrimination. For example, the 12 countries participating in the Decade of Roma Inclusion 2005–2015 have committed to developing a national Decade action plan. Further, the issue of Roma rights and inclusion will be relevant when new countries wish to join the EU.

313. In September 2010, the European Commission established a task force to assess how EU countries use EU funding to promote the social and economic integration of Roma. Its initial report found that, although EU funds offer considerable potential for supporting Roma inclusion, funds were not being used properly. Effective use was apparently limited by a lack of expertise and capacity to absorb EU funds, compounded by weak inclusion strategies and bottlenecks at the national, subnational and local levels. Other problems identified included a lack of involvement by civil society and the Roma communities themselves.

#### *What can be achieved?*

314. The European Commission commissioned a comparative study of the 18 EU Member States with sizeable Romani populations (178) to consider measures addressing the situation of Roma. This found that integrated policy approaches designed to tackle the multiple causes of social exclusion affecting Roma are the most successful. It identified the following factors for success: effective coordination of policies at the national, subnational and local levels; sustainable programmes with reliable, multi-year budgets; effective participation and consultation of Roma in inclusion efforts; and reliable data and evaluation of results.

## **Tackling systemic risks**

### **Noncommunicable diseases**

#### **Situation analysis**

##### *Mortality, disease burden and trends*

315. In the European Region, noncommunicable diseases produce the largest proportion of mortality, with about 80% of deaths in 2008. Among broad groups of causes, mortality (all ages) from cardiovascular diseases accounts for nearly 50% of all of deaths, but this ranges from 35% in the EU15 countries to 65% in the CIS. Cardiovascular diseases are also the most important causes of premature death in the European Region, with rates exceeding 110 per 100 000 population in 2008, but their levels have started to decline recently.

316. The patterns of mortality and burden of disease are shifting within noncommunicable diseases and relative to other disease groups within the European Region. During the past two to three decades, overall mortality from cardiovascular diseases has declined in the European Region, but some gaps have widened: mortality has been halved in the EU15 countries during that period but has increased by one tenth in CIS countries. The overall cancer mortality situation may appear relatively unchanged but masks differences, such as a steep decline in death rates from lung cancer among men but a rise of the same magnitude among women (179).

317. Noncommunicable diseases also dominate the list of the leading causes of the burden of disease in Europe, with unipolar depressive disorders and ischaemic heart disease the leading causes of lost DALYs in Europe. Noncommunicable diseases interact, with mental disorders overrepresented among people with cardiovascular disease, cancer and diabetes. Depression adversely affects the course and outcome of chronic diseases, and, in turn, the presence of other disorders worsens the prognosis of depression (180).

318. These diseases have a significant economic impact. For example, cardiovascular diseases cost the EU economies an estimated €192 billion per year (181). Apart from growing

costs to the health care system, there are broader effects. Employers carry a burden of absenteeism, decreased productivity and employee turnover, while individuals and their families face reduced income, early retirement, increased reliance on welfare support and a burden of health care costs (direct and indirect) (182,183).

319. The outlook for the burden of these main diseases is a balance of three contributory factors: demographic changes with ageing of populations and shifts through migration; temporal and geographical changes in modifiable risk factors linked to urbanization and economic globalization; and a relative decline in infectious diseases, meaning that people live long enough to acquire other diseases, such as cancer (184). Tobacco use among women and girls is increasing in the European Region, especially in the eastern part of the Region. Alcohol consumption is rising in the eastern part of the Region but is only declining slightly in the western part of the Region. The prevalence of obesity and overweight is rising alarmingly among both adults and children (185).

320. The share of people aged 80 years and older will grow by almost 50% within the EU during the next two decades. Migration into and within the European Region is increasing. Migrants are typically younger, have lower income, have greater health needs, experience greater exposure to noncommunicable disease risk factors and have less access to social protection and health care. Social inequity within and between countries is increasing, with proven negative effects on the health and well-being of children and adolescents.

#### *Main determinants and risk factors*

321. The determinants of health underlying these differences are complex and involve both individual and societal factors. Individual variation in susceptibility and resilience to disease is genetically determined in part. Other determinants include social and economic status, the physical environment, lifestyles and behavioural factors, which are themselves centred in and profoundly influenced by the social and economic environment and the capacity and performance of health systems (186).

322. Most serious adult diseases have long courses of development: the health effects of health-damaging behaviour and environmental hazards often do not manifest themselves until some considerable time after people have been exposed to them, usually as adults or older. For many people and groups, the interaction of multiple disadvantages, individual choice and life circumstances results in an increased likelihood of premature death and disability. At each transition point in life, supportive action at both the macro and micro levels can enhance health and well-being.

323. Societal processes influence exposure to health-damaging conditions, vulnerability and resilience. Such exposure and vulnerability are unequally distributed in society according to socioeconomic position and/or other markers of social position such as race, ethnicity or sex. They are also significantly influenced by a consumer society, extensive marketing of products and – in many societies – a lack of regulation of harmful goods. The health literacy of the population has become a critical factor in enabling healthy choices (187).

324. Higher educational status is closely associated with healthier eating and less smoking. Tackling issues such as tobacco use, unhealthy diet, harmful use of alcohol and physical inactivity means addressing the social determinants of health and transferring the focus of action upstream to the causes of these lifestyle differences – the causes of the causes – that reside in the social and economic environment (188).



325. Evidence indicates that risk factors for noncommunicable diseases, such as diabetes and heart disease, start in early childhood and even earlier during fetal life. Socioeconomic status in early life greatly influences health, including noncommunicable diseases in later life. Health and activity in older age are the sum of the living conditions and actions of an individual during the whole lifespan. Adopting a life-course approach is required to reduce the human and social costs associated with the current burden of noncommunicable diseases.

## **Solutions that work**

### *Determinants and risk factors*

326. Four common risk factors need to be addressed: tobacco consumption; the harmful use of alcohol; physical inactivity; and unhealthy diets (189–192). Although specific interventions are described, since individuals and populations carry multiple risk factors, an integrated approach is more likely to be effective, combining multiple interventions.

327. Evidence-informed and cost-effective strategies for reducing tobacco use have been identified, comprising the WHO Framework Convention on Tobacco Control (193) and six MPOWER (194) strategies supporting the Convention at the country level: (i) monitoring tobacco consumption and the effectiveness of preventive measures; (ii) protecting people from exposure to tobacco smoke; (iii) offering assistance for smoking cessation; (iv) warning about the dangers of tobacco; (v) enforcing restrictions on tobacco advertising, promotion and sponsorship; and (vi) raising taxes on tobacco. Tobacco control interventions are the second most effective way to spend funds to improve health after childhood immunization. If only one article of the WHO Framework Convention on Tobacco Control can be implemented, increasing the price of tobacco through higher taxes is the single most effective way to decrease tobacco consumption and encourage tobacco users to quit (195).

328. For reducing the harmful use of alcohol, interventions that can provide a change of context to encourage healthy decisions can include, at the discretion of each country: (i) establishing a system for specific domestic taxation on alcohol accompanied by an effective enforcement system, which may take account of, as appropriate, the alcoholic content of the beverage; (ii) regulating the number of and location of on-premise and off-premise alcohol outlets; (iii) regulating the days and hours of retail sales; (iv) establishing an appropriate age for purchasing and consuming alcoholic beverages and other policies to raise barriers against sales to and consumption of alcoholic beverages by adolescents; (v) introducing and enforcing an upper limit for blood alcohol concentration, with a reduced limit for professional drivers and young or novice drivers; (vi) promoting sobriety checkpoints and random breath-testing; (vii) supporting initiatives for screening and brief interventions for hazardous and harmful drinking in primary health care and other settings; such initiatives should include early identification and management of harmful drinking among pregnant women and women of childbearing age; (viii) developing effective coordination of integrated and/or linked prevention, treatment and care strategies and services for alcohol-use disorders and comorbid conditions, including drug-use disorders, depression, suicide, HIV infection and TB (196).

329. Regular physical activity provides significant benefits for health, reducing the risk of most chronic noncommunicable diseases and contributing to mental health and overall well-being (197). Taking part in physical activity also increases opportunities for social interaction and feeling like part of the community (198). The health benefits of moderate to intense physical activity must be emphasized: adults should accumulate at least 30 minutes per day and children and adolescents at least 60 minutes per day (199). Getting inactive or almost



inactive groups to engage in some activity will produce the greatest health gains. Social and physical environments need to be designed so that physical activity can be safely and easily integrated into people's daily lives: for example, urban planning and integrated transport systems to promote walking and cycling (200).

330. The promotion of a healthy diet for preventing noncommunicable diseases needs to give priority to interventions: to achieve energy balance and healthy weight; to limit energy intake from total fat and shift fat consumption away from saturated fats to unsaturated fats and towards eliminating *trans*-fatty acids; limit the intake of free sugar; limit salt (sodium) consumption from all sources and ensure that salt is iodized; and increase consumption of fruit and vegetables, legumes, whole grains and nuts. As indicated in the WHO Global Strategy on Diet, Physical Activity and Health (201), countries should adopt a mix of actions in accordance with their national capabilities and epidemiological profile, including: education, communication and public awareness; adult literacy and education programmes; marketing, advertising, sponsorship and promotion; labelling; and controlling health claims and health-related messages. Further, national food and agricultural policies should be consistent with the protection and promotion of public health.

331. In addition to health promotion and disease prevention in relation to the four main risk factors outlined above, linkage should be made to sexual health, infectious diseases and environment and health, particularly in relation to preventing cancer, as well as medical genetics. Legislation and enforcing regulations can limit exposure to carcinogenic substances in the workplace and environment. Promoting safe sex and vaccination can prevent the transmission of viruses known to cause cancer such as human papillomavirus and hepatitis B.

332. The risk of a person developing diseases depends on interaction between the individual, his or her personal susceptibility and the wider environment. Many diseases, such as diabetes and asthma, have a complex pattern of inheritance (202). Understanding individuals' genetic make-up may enable more personalized prevention of disease, but good evidence that this improves on already effective population-level prevention strategies is still needed (203). In contrast, the evidence on the role of environmental determinants of chronic diseases is growing. For example, indoor and outdoor air pollution increases the risk of asthma and other respiratory diseases, and fine particulate matter in the air increases the risk of cardiovascular disease and lung cancer, significantly affecting life expectancy (204). Radon is the second leading cause of lung cancer after tobacco smoking. Primary prevention of disease – avoiding its occurrence – focuses on eliminating or reducing exposure to environmental risk factors (205). Declining cardiovascular mortality after smoking is banned in public places or ambient air pollution is reduced are examples of how successful actions addressing the environmental determinants of health benefit health.

#### *Early disease: screening and early diagnosis*

333. The earliest possible detection of disease and the best possible integrated and multidisciplinary care are required when the disease is established and effective treatment exists. For example, about one third of cancer cases can be cured if they are detected and effective treatment is started early enough. Raising awareness of the early signs and symptoms of cancer among the public and health professionals can lead to its detection at earlier stages of the disease (down-staging) and more effective and simpler therapy. Where health systems can support an organized, population-level screening programme, screening can prevent disability and death and improve the quality of life. For example, evidence

indicates that screening is effective for the early detection of breast and cervical cancer in countries with sufficient resources to provide appropriate treatment. (206)

334. Other proven screening procedures include screening individual people for elevated risk of cardiovascular disease using an overall risk score approach, based on age, sex, smoking history, diabetes status, blood pressure and the ratio of total cholesterol to high-density lipoproteins. Combination drug therapy (aspirin, beta-blockers, diuretic agents and statins) for people with an estimated overall risk of a cardiovascular event exceeding 5% during the next 10 years has been shown to be very cost-effective in all WHO regions (207).

### *Preventing disability*

335. Chronic noncommunicable diseases can be major causes of disability, such as blindness and lower-limb amputation for people with diabetes or motor dysfunction following stroke. Musculoskeletal disorders are estimated to account for half of all absence from work and for 60% of permanent work capacity lost in the EU.

336. This is not inevitable. Prompt and effective treatment can be curative and/or reduce the chances of recurrence or long-term consequences; rehabilitation and improved models of care can shift conditions from being disabling to manageable; and adjustments to the home and work environment can keep people independent and economically active. For example, following myocardial infarction, cardiac rehabilitation with a focus on exercise is associated with a significant reduction in mortality; treatment of stroke, for example, through stroke unit care, reduces the proportion of those dying or depending on others for their primary activities of daily living by 25%. Further, although the prevalence and severity of many chronic conditions typically increase as people get older, they are not an essential consequence of ageing.

337. Palliative care is an integral part of long-term care, supporting people so they can achieve the best quality of life possible at the end stages of their disease and providing a peaceful and painless end to life. Most typically associated with cancer, such end-of-life care benefits people with several chronic conditions. Simple and relatively inexpensive measures such as improving access to oral morphine for adequate pain relief can improve the quality of life of many people.

### *Challenges, promising developments and opportunities*

338. There were several important developments in noncommunicable diseases during 2011. Actions plans for both noncommunicable diseases and alcohol (208) were presented to the WHO Regional Committee for Europe at its sixty-first session in September 2011.

339. The First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control took place in Moscow in April 2011 with its outcome, the Moscow Declaration (209), then being endorsed by the World Health Assembly in May 2011 (210). Attended by representatives of 160 Member States, the Conference aimed to raise political awareness about the importance and potential of preventing and controlling noncommunicable diseases. In September 2011, a High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases was convened. This particularly featured the four main noncommunicable diseases – cardiovascular disease, cancer, chronic lung diseases and diabetes – and it linked the noncommunicable disease and development agendas. The resulting Political Declaration (211) outlined the magnitude, threat

and impact of noncommunicable diseases, with agreement on ways to respond to the challenge through whole-of-government and whole-of society efforts. WHO, working closely with the United Nations Secretary-General, is leading the development of a comprehensive global monitoring framework and a set of voluntary global targets and identifying options to strengthen and facilitate multisectoral action for preventing and controlling noncommunicable diseases. To provide a baseline to chart future trends and responses related to noncommunicable diseases in countries, WHO has published a *Global status report on noncommunicable diseases* (212).

### *The equity lens*

340. Inequity in noncommunicable diseases accumulates over the life course, and a whole-of-life approach is needed. Recognizing that perinatal and early life influences can affect the development of disease in later life, a focus on improving outcomes would consider interventions throughout life: for instance, measures not just to reduce cardiovascular deaths and smoking rates but also to address low birth weight and improve childhood development scores.

341. In tackling lifestyle behavioural risk factors, a debate can arise over public-sector intervention versus personal responsibility: either way, creating conditions so that people can take control over their lives is important. Powerlessness has emerged as a key risk factor in causing disease (213), and evidence suggests that empowerment is not just a set of values but also leads to improvements in illness course and outcome. Empowerment, especially of the most vulnerable groups such as people with disabilities, leads to tangible benefits at the biological, mental and societal levels. Improving health literacy and providing people with the tools to self-manage their health conditions improves clinical outcomes and the quality of life.

342. Health information systems need to allow disaggregation of data, for example by sex, ethnic group and socioeconomic status, for better analysis of causation, understanding of links with other factors and designing, monitoring and evaluating interventions. For example, a review of cervical screening programmes in 57 countries worldwide found that women who are older and have lower income, which are those with the highest risk of developing cervical cancer, are least likely to be screened (214). A review of 22 countries in the European Region found greater inequality in the use of cancer screening according to socioeconomic position in countries without population-based cancer screening programmes (215). These and similar studies highlight the potential benefits of population-based rather than opportunistic screening programmes and the importance of monitoring the uptake of screening programmes to take account of sex, socioeconomic status, ethnic group and other determinants.

343. Involving family, informal caregivers and patient and voluntary groups in designing and delivering care can lead to more person-centred approaches (216). Improving health literacy can help people to interact effectively with health and other services and be active partners in managing their disease (217).

### *Key actors*

344. This is a complex area, with many of the risk factors and determinants lying outside the health sector. Collaboration between the ministries responsible for health, finance, development, agriculture, transport, environment and education is particularly important. The most challenging health problems require engaging stakeholders outside of government: international bodies, bilateral agencies, professional associations and nongovernmental

organizations, the private sector and academe. Many of the influences on noncommunicable diseases cross borders, such as tobacco and food products, as do some of the potential solutions such as financial and development assistance and health care workers. Supranational influences need forums for finding supranational solutions. Noncommunicable disease impact assessment needs to be carried out on national human and economic development policies, policies on bilateral and multilateral aid and regional trade agreements, to name but a few.

345. Alliances and networking are a fundamental mechanism for achieving results. A promising development in the last few years has been the development of the NCDnet (Global Noncommunicable Disease Network), which is a partnership between United Nations agencies, intergovernmental organizations, academe, research centres, nongovernmental organizations and business communities (218). Within Europe, a Chronic Disease Alliance has developed, with 10 not-for-profit, science-based organizations representing more than 100 000 health professionals joining forces (219).

346. In addition, a Global Alliance for Chronic Disease (220) has also emerged for concerted action against noncommunicable diseases between institutions collectively managing an estimated 80% of all public health research funding. Further to this is the need to get research evidence into the hands of policy-makers to avoid the potential disconnect between experts on noncommunicable diseases, who are already aware of what the data show, and the non-experts, who are relatively unaware. Data, analysed, interpreted and communicated, can be powerful and add strategic value.

347. The private sector, including industry, is an important actor both in terms of the health of employees and the wider influence in terms of specific products, such as food, drinks and pharmaceuticals. There is wide scope for interaction with the private sector, but the interaction can be challenging, and clarity is needed on potential conflicts of interest to avoid the private sector gaining competitive advantage or influencing norms.

348. Finally, given the long-term and often lifelong nature of noncommunicable diseases, interaction between social actors needs to be involved for both health and social care and addressing how disease affects everyday life. For example, people with chronic conditions can face discrimination in workplaces and schools.

### *Governance issues*

349. Preventing and controlling noncommunicable diseases require first and foremost a whole-of-society response between the public sector, civil society and the private sector. For wicked problems such as obesity, tackling the problem requires collaboration between stakeholders inside and outside government with governance mechanisms that facilitate joint working across sectors and between levels of government (221).

350. Tobacco and alcohol control provide further examples for which collaborative and regulatory efforts are needed. The WHO Framework Convention on Tobacco Control requires multilevel regulations extending from the global to local levels together with whole-of-government action on legislation, prices, access to tobacco products and an increase in nonsmoking environments. Whole-of-government interventions are also needed to control availability and to reduce alcohol consumption through prices and other mechanisms.

351. Within the European Region, countries already have many types of broad and issue-specific policies relating to preventing and controlling noncommunicable diseases in place,

but the coordination between these may be weak. An overarching policy framework and mechanisms such as defining shared goals and targets, common information systems, joint project implementation, common mass-media messages, joint planning and priority-setting activities can achieve a more integrated policy approach (222).

352. Modern health services need to be capable of meeting the long-term needs of people with chronic conditions. Problems of integrated and coordinated care often arise at the interface of primary and secondary care, health and social care and curative and public health services and among professional groups and specialties. These can be exacerbated by structural divisions, separate legal and financial frameworks, separate cultures and differences in governance and accountability. Structured approaches to managing these conditions are needed, with service delivery models characterized by collaboration and cooperation across boundaries and among professions, providers and institutions to benefit the people with chronic conditions. Partnering with people with diseases, their families and caregivers can help to design more person-oriented disease pathways. Health system mechanisms, such as payment systems, need to encourage rather than discourage coordination and to facilitate continuity of care (223).

#### *What can be achieved?*

353. Two disease groups, cardiovascular diseases and cancer, cause almost three quarters of mortality in the WHO European Region, and three main disease groups, cardiovascular diseases, cancer and mental disorders, cause more than half the burden of disease (measured using DALYs). Much premature mortality is avoidable: estimates indicate that at least 80% of all heart disease, stroke and type 2 diabetes and at least one third of cancer cases are preventable (224). Inequality in the burden of noncommunicable diseases within and between countries demonstrates that the potential for health gain is still enormous.

354. The main priority is to implement effective interventions more equitably and to scale, ensuring that existing knowledge is better and more equitably applied. The noncommunicable diseases share many common risk factors, underlying determinants and opportunities for intervention along both the course of disease and the life course. For example, seven leading risk factors (tobacco use; alcohol consumption; high blood pressure; cholesterol; overweight; low fruit and vegetable intake; and physical inactivity) account for almost 60% of the burden of disease in Europe. Taking an integrated and common risk factor approach to disease prevention and a chronic care approach are likely to benefit several conditions simultaneously (225).

355. The European Strategy for the Prevention and Control of Noncommunicable Diseases (226) promotes a comprehensive and integrated approach to tackling noncommunicable diseases; promoting population-level health promotion and disease prevention programmes; actively targeting groups and individuals at high risk; maximizing population coverage of effective treatment and care; and integrating policy and action to reduce inequity in health. In accordance with an international focus on “best buys” (227,228), the action plan for implementation of this Strategy (229) has focused particular attention on a set of priority interventions for their potential effects on mortality and morbidity: promoting healthy consumption via fiscal and marketing policies; replacing *trans*-fatty acids in food with polyunsaturated fat; reducing salt consumption; assessing and managing cardio-metabolic risk; and early detection of cancer. These are supported by interventions to promote active mobility and promote health in settings, for example through urban design and promoting health in the workplace.

356. Added to this is consideration of vaccination for the vaccine-preventable types of cancer (hepatitis B for liver cancer and human papillomavirus for cervical and other types of cancer). In terms of potential effects on quality of life, a further area deserving special mention is palliative (end-of-life) care, especially effective pain management.

## **Mental health**

### **Situation analysis**

357. Mental disorders are the second largest contributor to the burden of disease (DALYs) in the European Region (at 19%) and the most important cause of disability. The ageing population leads to an increase of the prevalence of dementia. Common mental disorders (depression and anxiety) affect about 1 in 4 people in the community every year. However, about 50% of people with mental disorders do not receive any form of treatment. Stigma and discrimination are major reasons why people avoid seeking help.

358. Mental health is a major contributor to inequity in health in Europe. Mental health problems have serious consequences not only for the individual and their families but also for the competitiveness of the economy and the well-being of society. Poor mental health is both a consequence and a cause of inequity, poverty and exclusion. Mental health is also a strong risk factor for the morbidity and mortality of other diseases. It has been demonstrated that the presence of especially depression strongly affects the survival rates of people with cardiovascular diseases and cancer. Depressive disorder is twice as common among women as among men.

359. Nearly all countries in the European Region have mental health policies and legislation, but the capacity and quality of services is uneven. Whereas some countries have closed or reduced the number of institutions and have replaced them with a variety of community-based services, many other countries still rely on basic and traditional psychiatric services and use up to 90% of the mental health budget on mental institutions. Investment in well-being programmes and preventing disorders in childhood, often the precursors of lifelong suffering, is negligible.

360. The most cost-effective intervention at the population level is creating employment, either in the public sector or by creating incentives for expanding the private sector. Of growing interest is the interface between employment and mental health, since occupational health services can identify people at risk at an early stage. This can also contribute to a healthy and productive workforce, with secondary benefits for families and communities.

361. For groups at higher risk, public health interventions such as screening and information can be effective. People with mental health problems need to be detected in primary care, and people with severe conditions should be referred to specialist services.

### **Solutions that work**

362. Challenges for mental health include sustaining the population well-being at times when economic growth is small and public expenditure is facing cuts. This may result in higher unemployment and an increase in poverty, with an associated risk of depression, while mental health services risk cuts.

363. Some countries are responding to the threat to population mental health by expanding counselling services. Awareness is also growing of the association between debt and depression, and debt advice services are playing crucial roles in providing financial security.

364. A rights-based approach to health care requires that mental health services be safe and supportive and every patient be treated with dignity and respect. People receiving mental health care should be involved in decision-making concerning their individual care. Mental health professionals should encourage patients to make their own choices regarding their health care, facilitated by providing appropriate information, and people who use mental health services should be involved in designing, delivering, monitoring and evaluating them.

365. The threat to public mental health offers opportunities to establish links between sectors that rely on each other but do not traditionally work together such as benefit offices, debt counsellors and community mental health services. Coordination is essential for effectiveness and efficiency, and community mental health personnel are well positioned to take this role.

366. WHO has produced the mental health Gap Action Programme (mhGAP), which specifies effective interventions for mental disorders. The WHO Regional Office for Europe is producing a mental health strategy that addresses ways to improve the mental well-being of the population, prevents the development of mental disorders and offers equitable access to high-quality services. The Regional Office is also working with countries to develop a mental health workforce competent to face the challenges.

### *Equity lens*

367. People with mental health problems are particularly affected by inequality, stigmatization and discrimination both within the health system and at all levels of societal life. Such barriers can make it challenging for certain population groups such as ethnic, religious or other minorities, migrants, refugees and people with disabilities to receive appropriate mental and physical health care and the support and treatment needed from their community during and after mental health care.

### *What can be achieved?*

368. Mental health care systems have expanded beyond the former focus on treating and preventing disorders. Mental health policies, legislation and implementation strategies are in a process of transformation towards creating structures and resources that aim to empower people with mental health problems to make use of their inherent potential and to participate fully in societal and family life. This task can be achieved only by providing services and activities that empower individuals as well as communities and that protect and promote human rights. The new European mental health strategy will support Member States in achieving these goals.

## ***Injuries and violence***

### ***Situation analysis***

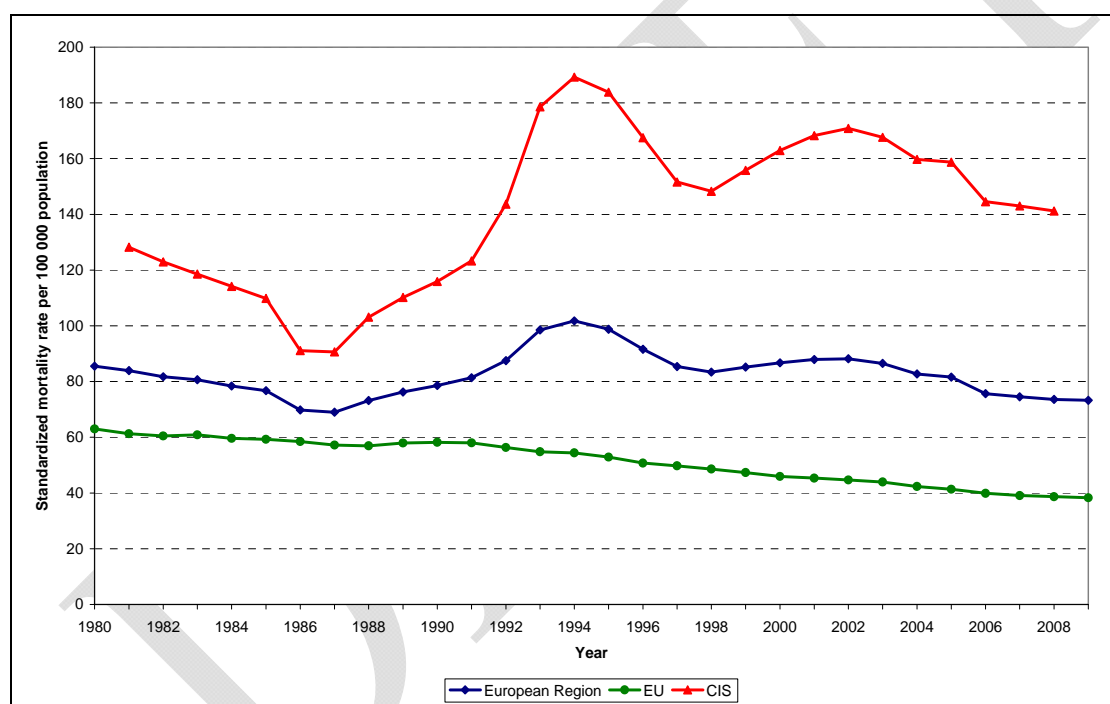
369. Injuries, whether unintentional (from road traffic, poisoning, drowning, fires and falls) or intentional (from interpersonal and self-directed violence), cause 700 000 annual deaths in the WHO European Region (230). They are the leading causes of death among people aged 5–44 years. The leading causes of injury are road crashes, poisoning, interpersonal violence



and self-directed violence. Injuries are responsible for 9% of the deaths in the Region but are responsible for 14% of the burden of disease as measured by DALYs (231). Although there has been a general downward trend, mortality rates from injuries have increased in times of socioeconomic and political transition (Fig. 3) (232). Injuries are a major cause of health inequities in the Region. Mortality rates in CIS countries are still 4 times higher than those in the EU, and 76% of the deaths are in the low- and middle-income countries.

370. Within countries, injuries and violence are strongly linked to socioeconomic class and cause health inequities. There are cross-cutting risk factors for the different types of injury, such as alcohol and drug misuse, poverty, deprivation, poor educational attainment and unsafe environments (233,234). These cut across other disease areas such as noncommunicable diseases, presenting opportunities for joint action. Many of these risk factors are socially determined. In developing preventive strategies, the underlying structural factors need to be addressed individual and population-level risk behaviour needs to be modified.

Fig. 3. Standardized mortality rates per 100 000 population for all injuries in the WHO European Region, EU and CIS, 1980–2009



Source: European Health for All database [online database].

## Solutions that work

371. The Region has some of the safest countries in the world. If all countries were to match the lowest national mortality rates from injuries, an estimated half million annual lives lost from injuries could be saved in the Region. Countries with low injury rates have invested in safety as a societal responsibility and have achieved this by combining legislation, enforcement, engineering and education to achieve safe environments and behaviour (such as on the roads, at home and in nightlife venues) (235). These responses involve sectors other than the health sector, and the challenge in preventing and controlling violence and injuries lies in ensuring that these are placed high on the agenda of policy-makers and practitioners from the health sector and other sectors (236). A life-course approach is advocated, and interventions targeted early in life will lead to benefits in later years and across generations.

372. Evidence on effective strategies to prevent injuries and violence is growing, and many strategies have been shown to be cost-effective, showing that investing in safety produces benefits for society at large. For example, every €1 invested in child safety seats saves €32; for motorcycle helmets the saving is €16, €69 for smoke alarms, €19 for home visitation schemes educating parents against child abuse, €10 for preventive counselling by paediatricians and €7 for poison control centres (237). WHO has proposed 100 evidence-informed interventions, and implementing these would dramatically reduce the inequities in the burden of injuries across the Region. These include a range of population-level and individual approaches to prevention, such as mitigating alcohol misuse, a major risk factor for injuries and violence. Interventions at the population level that are cost-effective are regulation, considering pricing policies, regulating advertising and, at the targeted level, brief counselling by physicians. The WHO strategy is to work with Member States to advocate for implementing the 100 programmes, underpinned by WHO Regional Committee for Europe resolution EUR/RC55/R9 on the prevention of injuries (238). Periodic surveys show that good progress is being made, although much more needs to be done.

373. Examples of specific areas of action include the United Nations Decade of Action for Road Safety 2011–2020, launched on 11 May 2011. Many countries in the Region have mainstreamed road safety into their national agenda. WHO is working with health ministries and other partners to try to achieve national targets, which in many countries include halving the number of road traffic deaths by 2020. To advocate for halting the cycle of violence, surveys of adverse childhood experience are being undertaken in several countries. The survey results are presented at national policy dialogues at which interventions for child maltreatment prevention are given priority for mainstreaming into child health and development programmes. Greater action is also being sought in two other neglected areas of policy: preventing youth violence and preventing elder maltreatment.

### *Key actors and partners*

374. Preventing injuries and violence requires multisectoral action. Health systems have a leadership role in coordinating a response from sectors and stakeholders to ensure that prevention is put at the forefront of their business. There is a wide range of stakeholders in the Region, including the European Commission, other United Nations organizations such as UNICEF and the United Nations Economic Commission for Europe, bilateral agencies, philanthropies, professional associations and nongovernmental organizations, WHO collaborating centres, academe and the private sector, such as the transport industry. Existing public health groups, such as the European Public Health Association (EUPHA) and the Association of Schools of Public Health in the European Region (ASPHER), have a growing interest in preventing violence and injury. Health ministry focal points for violence and/or injury prevention (at least one in each country) are key national partners for WHO. They shape and deliver on the regional agenda at the national level and are working with WHO to implement the shared vision Live without Injuries in Europe (LIVE). To achieve this, focal points are developing partnerships with other sectors at the national level.

### *Governance issues*

375. Dealing with the wider societal and environmental determinants of injuries and violence requires a whole-of-society approach. Preventing injury and violence is multisectoral, and governance mechanisms are needed for the health sector to engage with other sectors that are critical as partners in prevention, such as those responsible for justice, transport, education, finance and social welfare. This requires a whole-of-government approach and can be

facilitated by United Nations General Assembly resolutions (such as those on road safety and the rights of the child). Safety has to be put at the forefront of the agenda of other sectors. The United Nations Decade of Action for Road Safety is one example in which multisectoral action has been promoted.

### *Equity lens*

376. Many countries need to develop a more just and equitable social and health policy to overcome the steep social inequities in health. Investing in prevention programmes in early childhood with a focus on socioeconomic deprivation at the population level (such as universal access to education for all children and social skills training in school curricula) or targeted programmes (such as positive parenting training and health visitation programmes in deprived neighbourhoods) will help to mitigate against inequity in early life and therefore help to prevent violence in later life, thereby breaking the cycle of violence and promoting equity in health. Promoting greater gender equity (such as by implementing gender equality laws) will contribute towards preventing gender-based violence. Implementing population-based measures through legislation (such as minimum pricing for alcohol and speed control on roads) would help address the inequities in interpersonal violence and road traffic injuries.

### *What can be achieved?*

377. Implementing evidence-informed interventions can reduce inequities in the burden of injuries. WHO has proposed 100 such programmes for implementation and is monitoring this (239). The challenge for preventing injuries and violence is to promote the implementation of such measures. Since some are outside the remit of the health sector, health systems need to strengthen their role as a steward for equitable prevention. This includes: advocacy and policy development, prevention and control, surveillance, research and evaluation and providing services for the care and rehabilitation of injury victims. To assist the health sector in fulfilling these roles, capacity can be built through WHO's TEACH VIP curriculum by mainstreaming it into curricula for health professionals (240).

## **Communicable diseases**

### **Situation analysis**

378. Despite ranking low as a cause of DALYs in the European Region (241,242), communicable diseases continue to cause significant avoidable illness and premature death throughout the European Region. Although spectacular progress has been achieved in many countries, such as in controlling poliomyelitis, measles, malaria and the mother-to-child transmission of HIV, the European Region is experiencing serious challenges in the prevention and control of HIV infection and TB, a resurgence of vaccine-preventable diseases and the emergence of antibiotic-resistant organisms. This raises general concerns about sustaining the overall progress made in controlling infectious diseases in the Region. In addition, the continual introduction of exotic infectious agents, many with epidemic potential, by international travellers and a global food chain, further underline the importance of remaining highly vigilant and committed to preventing and controlling communicable diseases.

379. A general complacency regarding the risk posed by most infectious diseases hampers the prevention and control of communicable diseases in the European Region (243–245), too

often leading to poor infection control, insufficient vaccination coverage and misuse of antibiotics. This complacency exists despite:

- the worrying emergence of pathogens resistant to antimicrobial drugs, especially to antibiotics (246);
- the dramatic return in the European Region of vaccine-preventable diseases previously close to elimination such as measles, rubella and poliomyelitis;
- frequent foodborne outbreaks; and
- an increasingly globalized and interconnected world that has led to the importation into the European Region in recent years of epidemic-prone diseases such as the severe acute respiratory syndrome (SARS) and H1N1 influenza (247).

380. However, one of the main obstacles to effectively controlling communicable diseases, especially in vulnerable, mobile, stigmatized or hard-to-reach populations, remains inadequate access to and utilization of health services in many parts of the European Region.

381. Uncontrolled communicable diseases in the European Region also cause significant economic damage that could often be prevented (248). This includes substantial absenteeism due to vaccine-preventable diseases such as seasonal influenza as well as significant losses in tourism, trade and transport caused by unexpected outbreaks such as meningitis or *Escherichia coli*. In addition to influenza, TB and HIV infection, communicable diseases of significant public health importance in the WHO European Region include:

- viral hepatitis (A, B and C);
- infections associated with health care, many with drug-resistant organisms;
- several epidemic-prone diseases leading to outbreaks of vaccine-preventable diseases such as measles and poliomyelitis;
- legionellosis;
- foodborne outbreaks;
- typhoid;
- zoonoses such as brucellosis and anthrax; and
- outbreaks of vector-borne diseases such as leishmaniasis, tick-borne encephalitis and borreliosis, Crimea-Congo haemorrhagic fever, West Nile fever or dengue.

382. The Region also continually imports infectious agents endemic in other regions, notably Chagas disease, *Plasmodium falciparum* malaria and cholera.

383. To meet these challenges, WHO works in active partnership with Member States and with key institutions in the European Region such as the European Centre for Disease Prevention and Control (ECDC), United States Centers for Disease Control and Prevention, specialized WHO collaborating centres, large national institutions such as the Russian Agency for Health and Consumer Rights (Rospotrebnadzor), international organizations such as UNICEF, the Joint United Nations Programme on HIV/AIDS (UNAIDS), the Food and Agricultural Organization of the United Nations, World Organisation for Animal Health, the Global Fund to Fight AIDS, Tuberculosis and Malaria, Global Alliance for Vaccines and Immunization (GAVI) and major foundations such as the Bill & Melinda Gates Foundation.

## **Solutions that work**

384. There are many proven, evidence-based and cost-effective interventions to address many of the challenges in combating communicable diseases. Policy-makers, faced with the need to make informed decisions on implementation, require tools to evaluate these interventions in light of local disease burden, economics and available resources. Since 1998, WHO has been developing a global, standardized set of methods and tools under the WHO-CHOICE (CHOosing Interventions that are Cost Effective) project that contributes to evidence-based priority-setting by analysing the costs and effects on population health of current and possible new interventions. Most of the “global best buys” defined in WHO-CHOICE are in communicable diseases: examples include vaccinating children against major childhood diseases; providing insecticide-treated bed nets, household spraying with insecticides and preventive treatment for malaria in endemic areas; ensuring universal access to TB diagnosis and DOTS-plus and effective diagnosis and sustained treatment of multidrug-resistant TB cases; preventing the transmission of HIV through coordinated approaches, condom use, providing of antiretroviral therapy and implementing harm reduction strategies; avoiding unsafe health care injections and controlling health care-associated infections and community-acquired infections. Strong health information systems, including surveillance for early detection of outbreaks, are also crucial for identifying, planning and investing in the most appropriate health interventions. The WHO Regional Office for Europe is currently reviewing new tools and evidence to guide decision-making, including considerations for implementation that include the social and legal contexts that can affect the effects of interventions. We discuss many of the specific challenges and interventions that are known to be effective for the major categories of communicable diseases below.

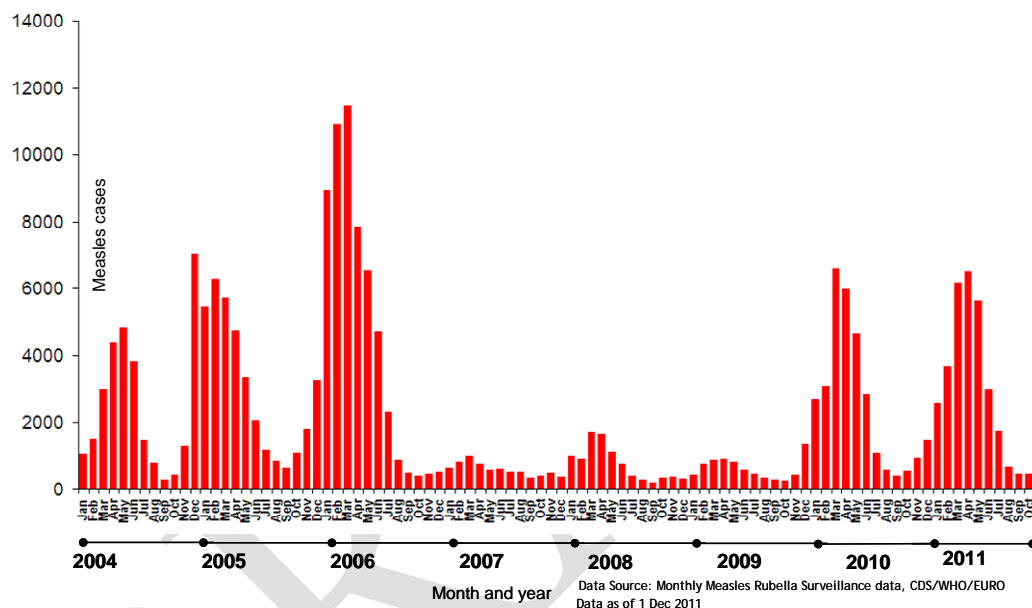
### ***Vaccine-preventable diseases and immunization***

385. The creation of national immunization programmes several decades ago led to a high public acceptance and achieved great success, with coverage rates exceeding 90% for most of the routinely administered vaccines (249). Such a prolific success can be illustrated by two examples: the certification of the Region as polio-free in 2002 and reducing measles morbidity by more than 90% since 1990. Lately, however, the public risk perception has shifted towards the adverse events associated with vaccination rather than the dangers of the actual disease. Subsequently, anti-vaccination groups have exacerbated this altered risk perception. For example, the annual regional incidence of measles dropped to an all-time low in 2007 (0.8 per 100 000 population) because countries made efforts to eliminate the disease. The incidence increased again, however, to more than 3 per 100 000 population in 2011, with outbreaks occurring predominantly in the western and central parts of the WHO European Region (Fig. 4). The return of measles, especially in western Europe, and of poliomyelitis in Central Asia recently should be received as a serious wake-up call for all Member States in a European Region declared polio-free and that initially committed to eliminating measles and rubella by 2010, with this goal now postponed until 2015 (250,251). Despite generally high immunization coverage, there remain pockets of susceptible people among anthroposophical and religious groups that refuse immunization based on their beliefs. Further, national immunization programmes often miss underprivileged populations of different ethnic origin, and an increasing number of parents intentionally skip or delay vaccination of their children based on misinformation circulating on the Internet.

386. Despite these challenges, measles and polio vaccines along with other childhood vaccines against mumps, hepatitis B, *Haemophilis influenzae* b, varicella, tetanus, pertussis and diphtheria remain crucial public health tools and life-saving interventions.

387. Several important new vaccines, such as pneumococcal and rotavirus vaccines, have recently been licensed in Europe. These new or underutilized vaccines provide immunity to diseases associated with important public health burdens including sepsis, pneumonia, meningitis and diarrhoea and can prevent cases and deaths among vulnerable individuals, especially young children. Vaccines against hepatitis B and human papillomavirus show the recently proven importance of infectious agents in developing specific types of cancer, building a bridge between communicable and noncommunicable diseases (252–255).

Fig. 4. Measles incidence in the WHO European Region, 2004–2011



Source: WHO Regional Office for Europe.

388. Many countries in the WHO European Region have successfully planned and implemented the introduction of new or underutilized vaccines. As of June 2011, *Haemophilis influenzae* b–containing vaccines were introduced in the routine immunization programmes of 51 of 53 countries of the Region. In addition, 23 countries have recommended vaccination with pneumococcal conjugate vaccine in children, and 15 have included vaccine against type C meningococcal disease in their immunization programme. In addition, rotavirus vaccines are included in the routine immunization schedules of five countries.

389. Adding new vaccines to routine infant immunization schedules requires careful consideration including setting priorities, developing detailed long-term introduction and funding plans to ensure sustainability, supervision, monitoring and evaluation after introduction. Countries in the Region differ significantly in their capacity and resources to evaluate the evidence, make national decisions and implement the introduction of new or underutilized vaccines. This may delay access to these preventive interventions among vulnerable individuals in certain low- and medium-income countries where the burden of disease is the most significant. Facilitating the evidence-based decision-making regarding the



introduction of new or underutilized vaccines in the Region is a priority of the WHO Regional Office for Europe.

### **Solutions that work**

390. Vaccines are the most cost-effective intervention and have largely been responsible for the dramatic decrease in mortality among children in the European Region, especially in the second half of the 20th century (256). This gain should not be lost, and specific advocacy campaigns must be developed further. Annual European Immunization Weeks (257) spearheaded by the WHO Regional Office for Europe offer countries an opportunity to launch widespread immunization campaigns and increase awareness towards the regional commitment to maintaining high immunization coverage.

391. Surveillance systems must be maintained and strengthened for all vaccine-preventable diseases. The WHO Regional Office for Europe has multiple disease-specific laboratory-based surveillance systems in place to detect cases, trace chains of transmission and even detect pathogens before clinical cases occur. Such systems involve clinicians, epidemiologists and networks of more than 200 fully accredited laboratories using WHO standards for case definition, surveillance protocols and laboratory methods to ensure that high quality of work is maintained throughout the Region.

392. Laboratory capacity is essential in maintaining the fight against communicable diseases. The networks of laboratories supported and coordinated by the WHO Regional Office for Europe help detect the circulation of pathogens in humans and environment, determine the origin and transmission pathways of infectious agents based on genetic data and monitor the effects of vaccination once implemented (258).

393. The WHO Regional Office for Europe will continue its work on linking disease surveillance networks and improving the timeliness and accuracy of data sharing. The WHO Regional Office for Europe offers the Centralized Information System for Infectious Diseases (259) (CISID) as a service to the Member States; countries have used this for several years. The Regional Office has recently launched the Laboratory Data Management System for the Polio Laboratory Network (260), which is linked to CISID and provides laboratory-related data for every case in near real time with precision never available before. Similar platforms are under development for other Regional Office laboratory networks.

394. The history of smallpox eradication (261) as well as recent episodes of laboratory-acquired (SARS) (262) indicate that laboratories may become sources of infection. Since poliovirus is targeted globally for eradication, laboratory biosafety and biosecurity must be priorities for the laboratory community in the European Region to provide reliable poliovirus containment.

### ***Key actors and partners***

395. Although the implementation of national immunization programmes and the introduction of new vaccines are a challenge in some countries, the mobilization of WHO and its partners such as UNICEF, GAVI, United States Centers for Disease Control and Prevention, European Center for Disease Prevention and Control, the Rotary Foundation and the Bill & Melinda Gates Foundation will significantly contribute to rebuilding the momentum on these evidence-informed interventions (263,264). This has culminated in the Decade of Vaccines 2011–2020 initiative (265), which involves the whole health system as



well as the private sector, including industry and nongovernmental organizations, to engage the whole society, emphasizing the fact that, when countries share borders, they share health threats. Coordinated joint planning and response often result in strengthened preventive measures.

### *Governance issues*

396. A combination of political and public complacency regarding the value of immunization challenges many national immunization programmes. In the absence of disease, immunization can lose priority. Political commitment at the regional, national and subnational levels is needed to reinforce positive public attitudes towards vaccination, together with mobilizing the required resources.

### *Equity lens*

397. The Global Immunization Vision and Strategy 2006–2015 aims to achieve greater coverage and equity in access to immunization, to improve access to existing and future vaccines and to extend the benefits of vaccination, linked with other health interventions, to age groups beyond infancy (266). There should be special emphasis on immunizing susceptible populations, especially the high-risk and vulnerable populations that still lack adequate immunization coverage because of limited utilization of primary health care services for geographical, cultural, ethnic or socioeconomic reasons.

### *What can be achieved?*

398. By 2015, through the achievement of high levels of vaccination coverage and the introduction of new or underutilized vaccines, immunization could reduce about 25% of current child mortality at a cost of substantially less than US\$ 1000 per death prevented. This represents a substantial proportion of the two thirds mortality reduction target of Millennium Development Goal 4 (267).

399. Member States should implement a multisectoral approach to ensure that the required resources are available for immunization activities and use the European Immunization Week as an advocacy tool to strengthen efforts towards achieving their goals. Immunizing susceptible populations should be emphasized, especially the high-risk and vulnerable populations that have limited access to primary health care services, and addressing the concerns of parents influenced by misinformation about vaccines, resulting from anti-vaccination movements or inaccurate media reporting. Further, laboratory-based surveillance activities must be sustained for monitoring and documenting progress towards eliminating and eradicating diseases and reducing morbidity.

## ***Antimicrobial resistance***

400. Between 1944 and 1972, life expectancy increased by eight years in the European Region, in part because antibiotics were introduced after the Second World War. This gain is at risk today, because antimicrobial resistance is becoming a growing and alarming problem in the European Region and across the world. Life-saving antibiotics are becoming ineffective or dramatically expensive, posing serious technical and financial challenges to physicians, health systems and patients in all countries, especially resource-limited countries. This is true for drugs that treat many common bacterial infections, such as urinary tract infections and

pneumonia, but even more striking in the treatment of TB, which increasingly faces resistance to both first- and second-line treatments (multidrug-resistant and extensively drug-resistant TB).

401. Resistance to antibiotics is high in the 27 EU countries, reaching 25% or more of bacterial infections in several countries. This has led, in the EU alone, to an estimated 25 000 extra deaths each year and additional health care and societal costs of at least €1.5 billion.

402. Further, antibiotic-resistant bacteria easily cross borders, as shown with the well-documented international spread of bacteria containing the New Delhi metallo-beta-lactamase 1 (NDM-1) enzyme that makes them resistant to a broad range of antibiotics, including those, such as carbapenem, already used to treat antibiotic-resistant infections. This situation is of particular concern in the absence of new classes of affordable and effective antibiotics, especially against gram-negative bacteria, during the past three decades.

403. The evolution of drug-resistant organisms is a well-understood process that is accelerated by misuse of antibiotics: underuse and overuse in human medicine and in animal agriculture. Poor infection control measures, especially within hospitals and clinics, directly contribute to spreading drug-resistant health care-associated infections.

### Solutions that work

404. Broad intersectoral initiatives will reduce the misuse of antibiotics and slow the development of resistance to existing drugs. Strengthened surveillance capacity will better document the extent of antibiotic resistance in the European Region. Joint work is also needed with the agriculture sector, where antibiotics used as a growth promoter in animals contribute to the evolution of resistant organisms in livestock. The strategic action plan to contain antibiotic resistance in the WHO European Region builds on interventions that, carried out together, are known to be effective. The action plan includes seven key areas:

- promote national intersectoral coordination;
- strengthen surveillance of antimicrobial resistance;
- strengthen surveillance and promote stewardship of antimicrobial drug use;
- strengthen surveillance of resistance to and use of antimicrobial agents in the food animal industry;
- improve infection control and stewardship to prevent antimicrobial resistance in health care settings;
- promote research and innovation on new drugs and technology; and
- ensure patient safety and improve awareness of antimicrobial use and resistance.

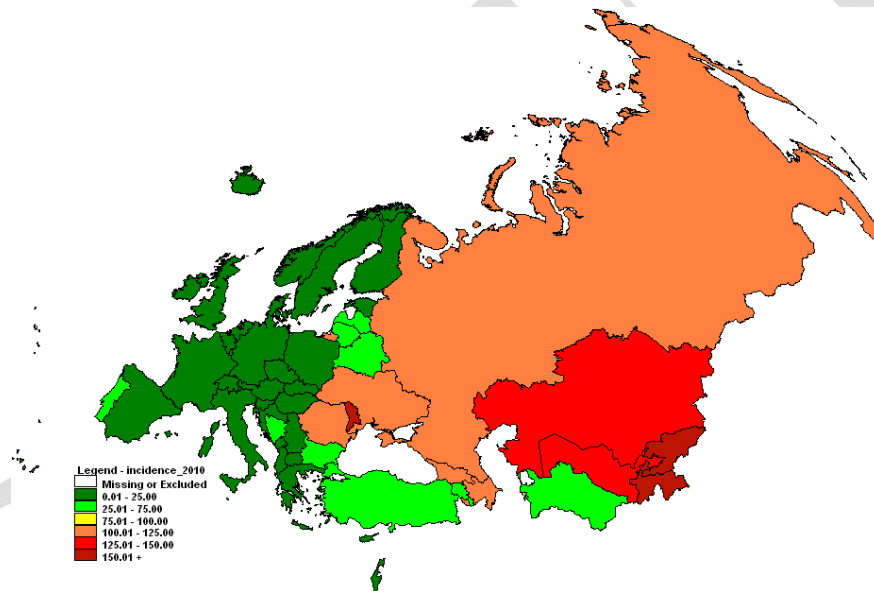
405. Importantly, studies have shown that simple infection control measures such as washing hands can alone significantly reduce the prevalence of antibiotic-resistant bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA), a major nosocomial (hospital-acquired) infection.

406. The WHO Regional Director for Europe has made containing antibiotic resistance a special programme under her leadership.

## Tuberculosis

407. In 2010, an estimated 420 000 (confidence interval 390 000–450 000) new cases of TB and relapses (47 (44–50) per 100 000 population) occurred in the European Region (Fig. 5), and about 61 000 (48 000–75 000) deaths were attributed to TB (6.8 (5.4–8.3) per 100 000 population). The European Region has achieved the 70% STOP TB target for case detection (74% (69–79)), and the vast majority of TB cases occur in the eastern and central parts of the Region, accounting for 87% of the new cases of TB and 94% of the mortality caused by TB. The Region also has the lowest treatment success rate globally, at 69% among newly treated people with TB and only 48% among previously treated people with TB. This shows a highest rate of TB resistance to antibiotics; the percentages of multidrug-resistant TB were 13% among newly treated people with TB and 42% among previously treated people with TB. If this situation is not contained, it may lead to the general loss of effective drugs against TB and a return to the disease burden of the pre-antibiotic era.

Fig. 5. TB incidence (per 100 000 population) and case detection and treatment success rates (percentage), WHO European Region, 1990–2010



Source: Tuberculosis surveillance in Europe 2009 (268).

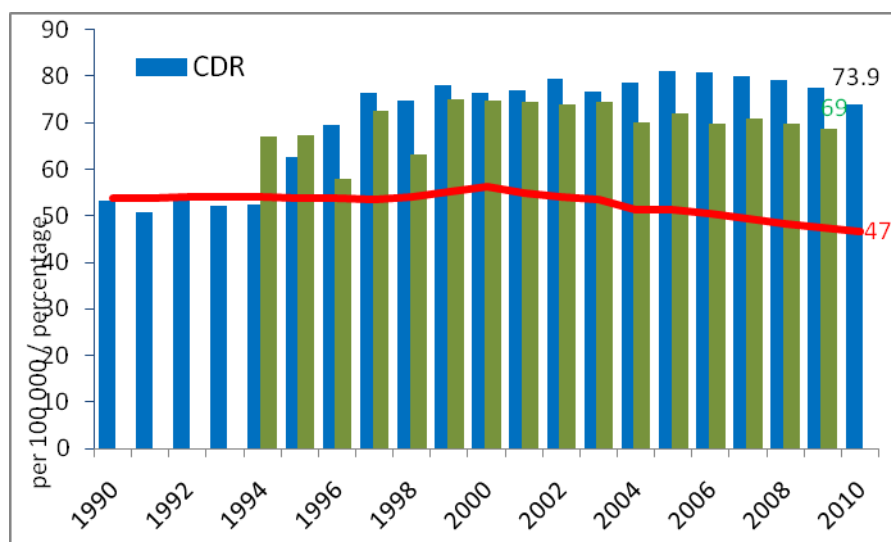
408. The re-emergence of TB and the growing problem of drug-resistant TB and particularly multidrug-resistant TB in some countries are linked to a failure of health systems to implement patient-friendly services. Although TB is not the exclusive preserve of any social class, the disease is often linked to poor socioeconomic conditions and other determinants, including homelessness. Similar to HIV, people who inject drugs and prisoners are at higher risk for acquiring TB, as are alcoholics and homeless people. TB and HIV are a deadly tandem, as TB is a leading killer among people living with HIV. It is also a challenging disease for the 9800 children with TB notified each year in the Region.

## Solutions that work

409. Some countries, including the Baltic countries, have demonstrated that with long investment and a comprehensive and participatory approach, it is feasible to control TB and multidrug-resistant TB. It is necessary to ensure that everyone with TB, including those co-infected with HIV or who have multidrug-resistant TB, benefits from universal access to

high-quality diagnosis and treatment, including effective diagnosis and sustained treatment of multidrug-resistant TB cases. This has been shown to be effective in many countries in the European Region, but it has to be implemented in all of them (Fig. 6).

Fig. 6. Treatment success rate for people with new cases of sputum smear-positive pulmonary TB, WHO European Region, 1990–2010



CDR: new TB case detection rate.

Source: WHO global tuberculosis database [online database]. Geneva, World Health Organization, 2012 (<http://www.who.int/tb/country/data/download/en/index.html>).

410. The WHO Regional Director for Europe has made containing TB, and especially multidrug-resistant TB, a special programme under her leadership. This high-level commitment is intended to promote the commitment of all Member States to preventing and controlling TB and drug-resistant TB (269). In close consultation with Member States, WHO has prepared a five-year Consolidated Action Plan to Prevent and Combat Multidrug- and Extensively Drug-Resistant Tuberculosis. The WHO Regional Committee for Europe endorsed the Action Plan and its accompanying resolution at its sixty-first session in 2011. Many Member States have adopted the targets and actions outlined in the Action Plan. The WHO Regional Office for Europe and partners will work with the Member States to develop and endorse budgeted action plans to prevent and combat multidrug- and extensively drug-resistant TB.

411. Under each area of intervention, the best practices have been provided as examples of interventions that can be adapted by other countries. Activities under the Action Plan will be implemented by working in close partnership with national and international institutions, civil society organization and funding agencies, especially the Global Fund to Fight AIDS, Tuberculosis and Malaria, and in a cross-cutting approach aiming at improving the health system overall.

412. The cost of implementing the Action Plan has been calculated using a meticulous method. Based on the epidemiological modelling and costing tool, diagnosing and treating people with multidrug-resistant TB is a highly cost-effective intervention. Implementing the Action Plan would cost US\$ 5.2 billion and would save the Member States US\$ 12 billion. Rational use of resources is extremely crucial: improving governance, surveillance and using data for decision-making are crucial elements (270).

413. The WHO Regional Office for Europe and other partners have developed a rapid assessment tool to identify and remove the key health system challenges in preventing and controlling TB. This tool needs to be implemented in all the countries facing TB as a major public health problem. Primary health care services need to be fully involved in detecting and following up people with TB. Health funding models need to promote the rational use of hospital resources and to promote ambulatory and alternative models of care, including home-based treatment. WHO has validated and endorsed the new molecular diagnostic tests. With appropriate use of these new tests, TB and multidrug-resistant TB can be diagnosed in less than two hours. These tests need to be introduced and scaled up in a rational manner (271).

414. Since TB is strongly associated with poverty and poor living conditions, efforts to combat it effectively must include improving living standards and nutrition and therefore must involve other sectors.

415. Interventions should include addressing the need of special populations, including prisoners and migrants. It is important to bring services closer to the people with TB and to minimize the referral systems for TB among children and people with TB and HIV.

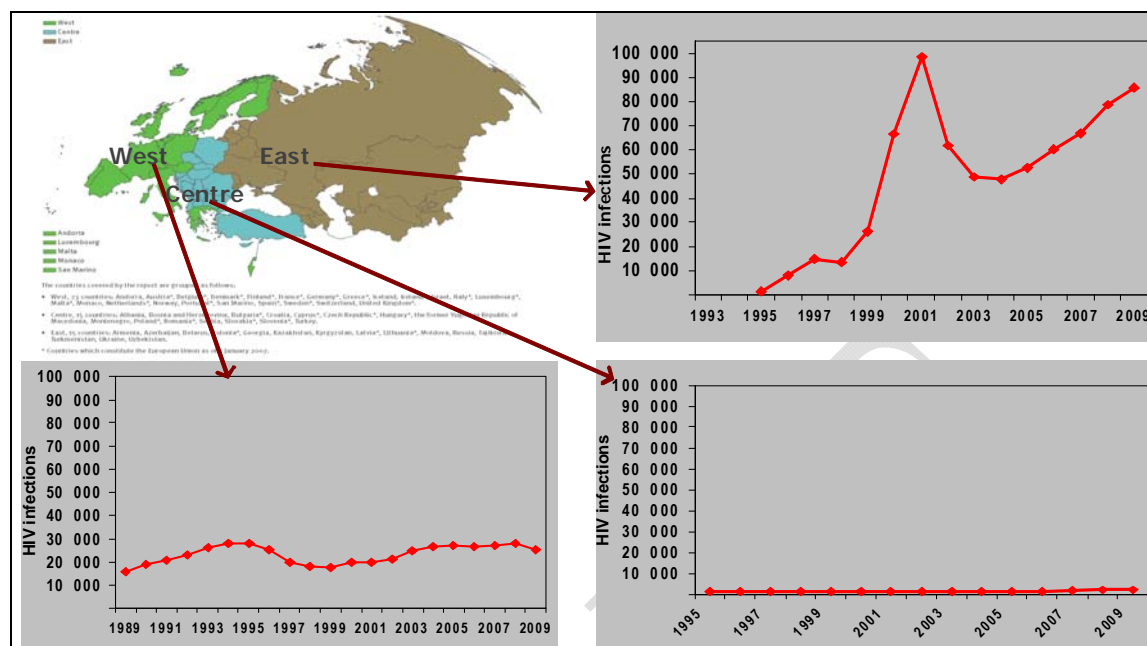
416. The WHO Regional Office for Europe and its partners have developed a minimum package for cross-border TB control and care. The minimum package highlights the necessary steps needed to achieve timely diagnosis and adequate treatment and follow-up of people with TB.

### ***HIV infection***

417. In the European Region, the HIV epidemic (Fig. 7) shows striking different epidemiological patterns: the epidemic is contained in the western part of the Region, at an early stage in the centre of the Region and still rapidly increasing in the eastern part of the Region. Although the epidemic is limited largely to defined populations at higher risk, the continuing increase in the number of people newly diagnosed with HIV infection in the eastern part of the Region is a feature unique to Europe in the global epidemic.

418. Contributing to this unique epidemiological feature, eastern Europe and central Asia have some of the lowest global rates of coverage of antiretroviral therapy for people living with HIV who need treatment: less than 20% (272).

Fig. 7. Number of people newly diagnosed with HIV infection by geographical area in the WHO European Region, 1989–2009



419. Overall, the prevalence and economic burden of HIV infection are likely to increase as a result of increasing numbers of people acquiring HIV infection and prolonged survival because of antiretroviral therapy. In the near future, HIV will rank as one of the most costly chronic diseases.

420. Further, within the WHO European Region, people living with HIV have been and still are denied entry into or deported from some countries because of their positive HIV status, which contribute to stigmatization and do not help to control the epidemic. Controlling the epidemic is mainly based on universal access to HIV prevention, treatment, care and support.

421. However, there are positive signs of change: for example, countries in the eastern part of the European Region have demonstrated good progress in integrating HIV prevention with maternal, newborn and child health services and, as a result, 93% of pregnant women who test positive for HIV in the European Region receive antiretroviral prophylaxis to prevent mother-to-child transmission (274).

### Solutions that work

422. Sufficient scientific evidence and experience from projects and interventions implemented in the European Region has identified effective policies and interventions that can promote an effective response to the HIV epidemic. There is clear demonstrated value in strengthening political mobilization and leadership in the response and concentrating on key populations at higher risk of exposure to and transmission of HIV. These interventions include mass media and education; promoting 100% condom use among key populations at higher risk; expanding the treatment of sexually transmitted infections that are known to increase the risk of transmission of HIV; universal access to antiretroviral therapy and HIV counselling and testing; providing antiretroviral prophylaxis as a highly effective method to prevent heterosexual transmission in discordant couples and mother-to-child transmission;



and harm reduction such as opioid substitution therapy and safe injection programmes such as needle syringe programmes.

423. In close partnership with governments, UNAIDS, civil society and the Global Fund to Fight AIDS, Tuberculosis and Malaria, the time has come to increasingly promote linkage and integration of HIV and AIDS national programmes with broader health and development agendas. This is the aim of the European Action Plan on HIV/AIDS 2012–2015 based on four strategic directions:

- optimizing HIV prevention, diagnosis, treatment, care and support outcomes;
- leveraging broader health outcomes through HIV responses;
- building strong and sustainable systems; and
- reducing vulnerability and the structural barriers to accessing services (275).

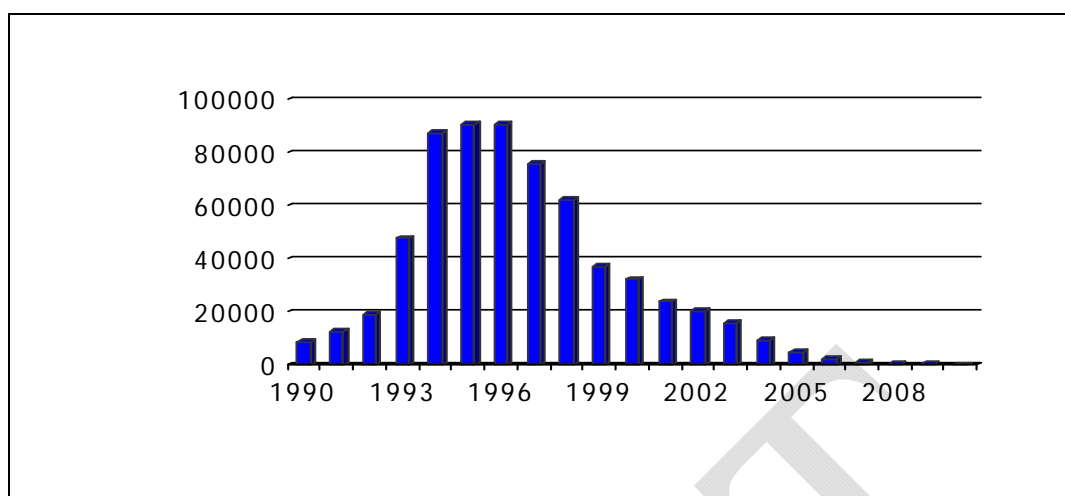
424. Prevention strategies can be adopted more widely to control the growing burden of the HIV epidemic and other chronic diseases affecting people living with HIV, and experience has shown that groups of people living with HIV, and other civil society groups, can best propose these strategies. Ways should be considered to enable such groups to have a voice in countries in which the prevalence of HIV infection is increasing and treatment is not keeping pace. The challenge is to rethink the approach to improving quality in prevention by starting with the needs and expectations of the clients and not with the assumption the experts know what is best for them. Participation of the target group is often symbolic in contemporary public health. However, only true participation at all levels allows targeted and effective interventions in diverse settings and contexts. Quality improvement has to become a continued process of self-reflection and participation (276).

### ***Eliminating malaria by 2015***

425. Spectacular progress has been made towards eliminating malaria (Fig. 8) in the European Region. Thanks to effective intervention against mosquito vectors, autochthonous (indigenous) cases of malaria have dropped from more than 90 000 cases in 1995 to less than 200 in 2010, all the latter caused by *Plasmodium vivax*. This remarkable achievement largely resulted from the strong political commitment of the affected countries, reinforced in 2005 by the Tashkent Declaration: the Move from Malaria Control to Elimination, signed by Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan.



Fig. 8. Autochthonous malaria cases, WHO European Region, 1990–2010



Source: CISID [online database].

### Solutions that work

426. Eliminating malaria by 2015 is the key objective today. This can be achieved by providing insecticide-treated bed nets, household spraying of insecticides and preventive treatment for malaria in endemic areas. These efforts led to recent successes, such as when Turkmenistan was declared malaria-free in 2010 and Armenia in 2011, and great progress was reported in Georgia. Assuming that malaria can be eliminated, preventing the re-establishment of malaria transmission will be crucial, especially in the context of climate change and the re-emergence of other mosquito-borne diseases recently observed in the southern part of the European Region, including West Nile fever, dengue and chikungunya. Key partnerships have to be pursued with the Global Fund to Fight AIDS, Tuberculosis and Malaria and with new partners such as the European Mosquito Control Association.

427. Importantly, further research into vector biology is needed to make vector control in the European Region more effective, for controlling malaria and other mosquito-borne diseases but also for improving the control of significant foci of other vector-borne parasitic diseases such as leishmaniasis in the southern part of the Region.

### *Influenza and other respiratory pathogens*

428. Influenza and other pathogens causing acute respiratory infections contribute to a high burden of disease in the European Region, both in terms of DALYs and deaths. Influenza A and B viruses cause winter-season epidemics of respiratory illness in the Northern Hemisphere that affect 5–15% of the population each winter, with highest attack rates generally among children younger than five years. Seasonal influenza epidemics alone lead to significant direct and indirect social and economic costs. Recent estimates from the EU alone are that the direct costs of clinic visits and hospitalization for seasonal influenza approach €10 billion per year (277).

429. Pandemics caused by a new subtype of influenza A occur at intervals. Although severity and impact varies and are difficult to predict in advance, the four pandemics that occurred since 1900 all caused significant deaths and affected the health sector and also non-health sectors. The four pandemics varied from very severe (1918) to moderately severe (1957 and

1968) to relatively mild (2009). Influenza A viruses infect a wide range of animals as well as humans, and pandemic viruses are usually of animal origin. Since 1997, avian influenza virus H5N1, which is highly pathogenic to poultry, has caused widespread economic losses in South-East Asia, Egypt and some European countries. Humans are also sporadically infected, with a high fatality rate (of 573 confirmed cases globally, 336 have died), especially among people who present late to a health care facility.

430. Vaccination is a safe and the most cost-effective means of reducing influenza-related morbidity and mortality. However, influenza vaccine uptake in groups at higher risk (such as older people and people with chronic underlying disease) remains low in most countries in the Region. In addition, low vaccination uptake among health care workers in direct contact with groups at higher risk presents a serious threat to their patients and has economic implications because of high staff absenteeism (278). The most recent survey of seasonal influenza vaccination recommendations and usage among the 53 Member States of the WHO European Region shows that, in addition to low vaccine uptake (only two countries met the 2010 WHO target of 75% vaccine uptake among older people), only 9 countries reported having systems in place to monitor vaccine uptake in health care workers and only 6 countries monitored uptake in clinical risk groups. Access to influenza vaccine is also limited in some countries.

431. Severe disease associated with influenza occurs each year in groups at higher risk during seasonal epidemics as well as during pandemics. People experiencing severe symptoms due to a respiratory infection that present late at a health care facility have poorer outcomes than those who present early. Although routine monitoring of influenza in outpatient settings occurs in most countries in the European Region, routine surveillance for severe disease and deaths associated with influenza is limited. Lack of data on severe disease, as well as low awareness among hospital and outpatient facility physicians, contributes to the misconception that influenza is a relatively mild disease and precludes comparisons of severity across seasons as well as estimates of the severity of an eventual pandemic.

432. The National Influenza Centres that are recognized by WHO and are part of the Global Influenza Surveillance and Response System (GISRS) play a key role in global virological and epidemiological surveillance (279). Their capacity to perform virological surveillance of seasonal influenza and to detect influenza viruses with pandemic potential need to be maintained and further developed.

433. Before the 2009 pandemic, countries in the Region invested considerably in pandemic preparedness because of the experience with SARS, the threat of avian influenza H5N1 and the coming into force of the International Health Regulations (IHR) (2005). Although the 2009 pandemic caused mild disease in the majority of cases, severe disease and deaths occurred in a significant number of people, in the same groups that are at higher risk of complications from seasonal influenza infection and in other groups at higher risk and even in previously healthy individuals. As a result, health care services (especially intensive care units) were stressed, and early recognition of severe disease could save lives. Countries experienced gaps in their surveillance systems, were confronted with communication issues, especially with respect to acceptance of the pandemic vaccine among health care workers and the general public, experienced logistical, ethical and legal problems related to the procurement and delivery of pandemic vaccine and failed to reach front-line health care responders.

## Solutions that work

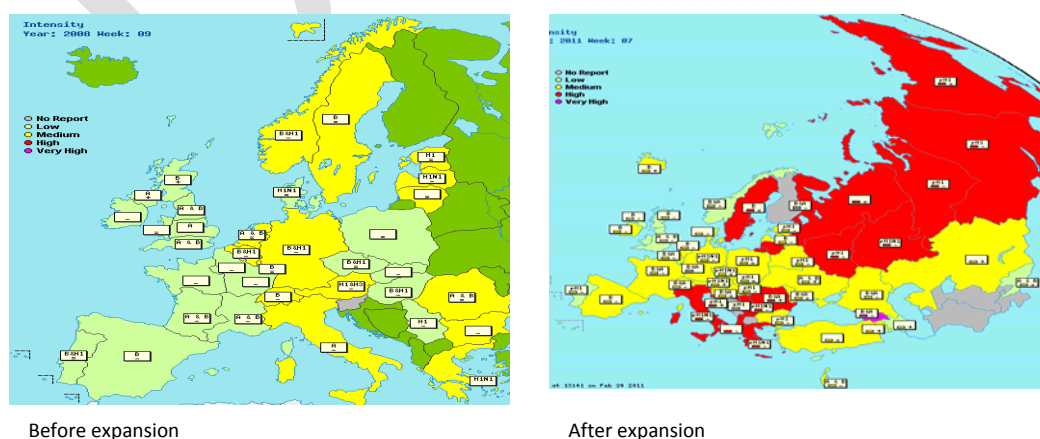
434. Influenza is a vaccine-preventable disease. Countries need to further develop and maintain robust vaccination programmes to increase the use of influenza vaccine in higher-risk groups according to the WHO targets, but also among health care workers, to protect themselves and their patients and because they influence vaccine acceptance in the general public. Through annual surveys of country policies, recommendations and coverage of influenza vaccines in the Region, the WHO Regional Office for Europe identifies gaps and assist countries in taking informed decisions to improve their influenza prevention and control programmes. Many Member States run information campaigns to raise public awareness about influenza, about how to prevent spread and about the benefits of influenza vaccination as an important support to influenza vaccination campaigns.

435. Access to expert care in hospitals and in equipped intensive care units for people experiencing severe disease associated with respiratory infections is supported by training health care workers on the risk factors for severe disease associated with influenza and other respiratory infections and training them in recognizing the symptoms.

436. It is also essential to further develop influenza outpatient surveillance and to implement surveillance for severe disease associated with influenza and national mortality monitoring within national surveillance systems. The data obtained allow countries to estimate burden, provide empirical support for national decision-making about which risk groups to target for vaccination and enable influenza-associated mortality to be estimated.

437. The WHO Regional Office for Europe contributes to Member States' influenza surveillance efforts through the regional influenza surveillance platform, EuroFlu, which presents data in a weekly bulletin published in English and Russian for all 53 Member States, by providing surveillance guidance and through technical assistance at the country level. The data collected through EuroFlu in combination with work in countries to estimate mortality associated with influenza lead to better documenting its actual health and economic burden. This work is coordinated with the ECDC, forms the cornerstone of the programme and should be maintained and further developed as needs are identified (Fig. 9).

Fig. 9. Expansion of surveillance from EU and EEA countries only to all 53 WHO European Member States



438. Sustaining the capacity of national influenza centres (280) by providing quality assurance programmes, training and exchange of information and best practice is crucial (1)

to detect influenza activity in a timely manner to inform about the seasonal burden of disease and guide the health care system response, (2) to contribute to GISRS and annual recommendations for the selection of virus strains for inclusion in influenza vaccines and (3) to identify and contribute to risk assessment associated with influenza viruses with pandemic potential.

439. Continued investment by Member States in pandemic preparedness planning (281) will facilitate the response to a future pandemic and contribute to the implementation of the IHR and generic preparedness capacity in the interpandemic period. In particular, the preparedness of health care services to respond to severe influenza seasons as well as emerging respiratory infections will benefit from this approach. The WHO Regional Office for Europe, in coordination with the European Commission and the ECDC, supports national pandemic preparedness planning and the intercountry interoperability of plans.

### ***Trends in communicable diseases***

440. With an ageing population, the European Region faces a growing population at greater risk for communicable diseases such as influenza and severe complications such as septicaemia. In the future, we may anticipate routine immunization programmes for older people just as there are for children. Vaccinations against influenza, pneumonia and herpes zoster may become part of these routine programmes and will require strategies for delivering the vaccines (such as at the workplace) and monitoring their administration.

441. As a centre of worldwide trade and travel, the European Region will continue to be exposed to the importation of infectious diseases from countries outside the Region, some being epidemic-prone, such as foodborne outbreaks and emerging zoonoses. Further, as conflicts and political tensions remain in a world in which biotechnology becomes increasingly accessible, the deliberate use of infectious agents to cause harm cannot be ruled out.

442. The European Region, and particularly its growing large urban centres, will continue to attract migrant populations, and with them large pockets of poverty and vulnerable groups with limited access to health care. These groups will be at higher risk for diseases such as diphtheria and TB, which may spread to the general population from time to time.

443. Uncertainty remains on the effects of the development of rapid and do-it-yourself diagnostic tests, together with the proliferation of online medical advice. It may improve infectious disease awareness, prevention and control, but it may also lead to an increase in the misuse of antibiotics and fuel the emergence of drug-resistant organisms.

444. Overall, the WHO European Region must remain focused on achieving regional targets related to controlling, preventing and, where possible, eliminating communicable diseases and must remain vigilant to the risk posed by communicable diseases in an ageing population that will become more and more vulnerable to severe complications of infection. Strong disease surveillance systems, strict infection control, universal access to and prudent use of antibiotics, comprehensive vaccination programmes and strengthened health systems are essential to guaranteeing the regional capacity to control and reduce the burden of communicable diseases.

## Critical factors for implementation

445. Even in the presence of proven and cost-effective interventions, critical factors affect the full implementation of interventions. Countries are often faced with a menu of interventions from which they must choose in accordance with local contexts and national priorities. In evaluating and deciding on all these interventions, many complex factors need to be taken into account, such as the burden of disease; cost and affordability; political commitment and public acceptance; health system capacity to absorb new products and modes of delivery; access, particularly for reaching populations at higher risk; and public demand and risk perception about health threats. For example, new vaccines, such as those that protect against the cancer-causing human papillomavirus, pneumococcal pneumonia and rotavirus diarrhoea, are expensive and may need to be evaluated against effectiveness measures such as cost per DALY averted, which will depend on price and the burden of disease. Another example is antiretroviral prophylaxis to prevent HIV transmission in discordant couples and transmission from mothers to infants, and harm reduction strategies such as opiate substitution therapy and needle exchange depend on political commitment and risk perception. Public acceptance and trust in the safety and efficacy of vaccines can be threatened by anti-vaccine propaganda and media reports of rare adverse events following vaccination, whether related to the vaccine or not.

446. The role of other sectors and social and economic determinants in preventing and controlling communicable diseases is often not adequately understood when planning interventions, but sectors such as law enforcement, transport, water and sanitation, food and agriculture, and manufacturing all contribute to effectively implementing communicable disease control interventions. For instance, many harm reduction programmes that involve providing opiate substitution therapy and needle and syringe programmes require appropriate legal policies and the cooperation of law enforcement. Food outbreaks tied to *Escherichia coli* contamination are best prevented through adequate regulatory and monitoring capacity in the food and agriculture and water and sanitation sectors. Surveillance and alert and response capacity at points of entry (ports, airports and ground crossings) are essential components of the transport sector to protect against the importation of diseases with outbreak potential. In short, successful interventions require the cooperative and integrated efforts across many sectors if they are to maximize their effectiveness.

### *The equity lens*

447. Although anyone may acquire a communicable disease, epidemiological evidence shows clearly that some populations are more vulnerable than others. Poorly integrated ethnic and socioeconomic groups with limited access to the health care system are often more likely to acquire infectious diseases or suffer disproportionately from their effects. For instance, some socially marginalized groups are more likely to have a higher prevalence of HIV; poor and homeless people are more likely to contract symptomatic TB; and older people are known to be at higher risk for severe complications of influenza and bacterial pneumonia. There are many social determinants of the inequity that results in population groups with greater vulnerability to communicable diseases. Children younger than five years of age, who must rely on adults to ensure their health, are especially susceptible to both communicable diseases and the effects of socioeconomic inequity. Access to preventive services is also a matter of equity. If access to preventive services requires user fees – especially for critical interventions such as childhood vaccines and annual vaccines such as influenza – people with low income are unlikely to receive them.



## ***Health security, International Health Regulations, emergency preparedness and response to public health emergencies***

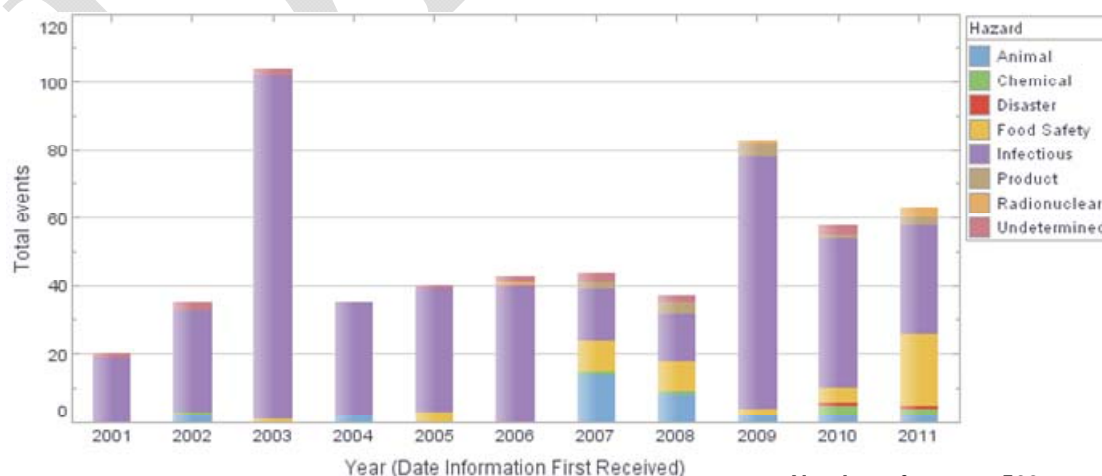
448. WHO has been and remains an essential actor for health security in the European Region. It actively supports European Member States in strengthening their capacity to tackle health security threats to respond to all types of public health emergencies and plays a central role in regional and global information exchange and response coordination.

449. An all-hazard approach is applied to detect and respond to acute events that require an immediate public health response. These events may be caused by a wide range of hazards — including biological, chemical and radionuclear hazards – and natural or human-made disasters. The IHR (2005) provide an essential framework for the international preparedness and response to any events that may constitute a public health emergency of international concern.

450. The WHO European Region is significantly exposed to health security threats associated to emerging diseases, infectious disease outbreaks and epidemics, natural and human-made (technological) disaster and conflicts, including armed conflicts, linked to its cultural diversity or disputed territories. In addition, the Region faces challenges from global changes such as climate change with increased frequency and severity of extreme weather events, continuing urbanization, growing hubs for international air travel and an increasing number of mass-gathering events such as international sports or cultural events.

451. Preparedness efforts are also challenged by social diversity and inequitable access to health care, leaving some populations much more vulnerable to public health emergencies. This situation is made worse by the effects of economic crises. Last but not least, although the risk of accidental release of biological, chemical or radionuclear material is increasingly controlled by improved safety rules and procedures, the deliberate release of such material is more and more a concern as access to sensitive information and increasingly powerful technology becomes easier.

Fig. 10. Reported public health emergencies in the WHO European Region, 2001–2011



Number of events: 562

Source: WHO Regional Office for Europe.

## **The renewed framework for managing health security threats and humanitarian emergencies**

452. The IHR (2005) entered into force on 15 June 2007 and provide an international legal and operational framework for WHO Member States to better protect the health of their populations. The IHR specifically require all Member States to develop core capacity for surveillance and response, to detect, assess and report in a timely manner events involving disease or death above expected levels that may constitute a public health emergency of international concern. Countries should also have the capacity to rapidly share and access relevant information and implement WHO recommendations in the context of a coordinated international response.

453. WHO, as the lead agency of the Global Health Cluster, has a unique international mandate within the international humanitarian system. This unique roles under the IHR and under the United Nations humanitarian response are embedded in the global WHO Emergency Management Framework into a comprehensive common platform approach, underlining the cross-cutting nature of crisis management. This approach is also followed in WHO Regional Office for Europe Public Health Emergency Procedures and the day-to-day operations of the WHO Regional Office for Europe Emergency Operations Centre.

## **Building on lessons learned**

454. Evidence from past events indicates that weak and unprepared health systems hamper the timely and effective management of health crises and increase the risk of international consequences. Many countries in the Region need further support to strengthen their core capacity to detect and respond to potential public health threats, and some countries will require an extension beyond June 2012 to meet the IHR core capacity requirements.

455. Important concepts – such as strengthening governance, implementing emergency preparedness planning as a continuous process, in an all-hazard approach, establishing sustainable crisis management and health-risk management programmes in health ministries and enhancing multisectoral coordination mechanisms – are effective strategies for preventing and mitigating future health crises.

456. An evaluation performed in the WHO European Region showed that the considerable investment made by Member States in pandemic preparedness before the 2009 pandemic were critical in the response (282). However, more efforts are needed since, in 2011, the Review Committee on the Functioning of the IHR (2005) in relation to pandemic H1N1 influenza in 2009 assessed that “The world is ill-prepared to respond to a severe influenza pandemic or to any similarly global, sustained and threatening public-health emergency.”

## **A partnership approach to regional health security**

457. Because health security challenges are complex, an effective response requires transparent and timely sharing of information and data between WHO and its Member States and the close collaboration of governments, international organizations, civil society, the private sector and other partners. In this context, WHO closely collaborates with the ECDC and the European Commission, to enhance health security at the pan-European level. As part of the humanitarian reform of the United Nations System, WHO is the lead agency of the



United Nations Inter-Agency Standing Committee Global Health Cluster for the coordination of the humanitarian health response.

458. In collaboration with partners and institutions, WHO has established mechanisms, such as Global Outbreak Alert and Response Network (GOARN), to rapidly mobilize the most relevant international expertise to respond to emergencies and communicable disease outbreaks. WHO collaborating centres in support of IHR implementation have been established such as the Global Disease Detection Program of the United States Centers for Disease Control and Prevention, which has a hub in Kazakhstan.

459. In the field of biosafety and biosecurity, new actors, such as the security sector, are investing in public health infrastructure and human resource development, particularly in laboratory and epidemiology capacity in countries in the eastern part of the European Region. An example of this is the opening of a state-of-the-art BSL-3 public health laboratory in Georgia, supported by the Biological Threat Reduction Program of the United States Defense Threat Reduction Agency. Such investment is in accordance with the intersectoral investment for improved health security promoted by international diplomacy through, for instance, the Biological Weapons Convention, the United Nations High Level Panel on Threats, Challenges and Change or the EU Health Security Committee.

460. Further evidence needs to be compiled and the lessons learned to be applied to better involve all government sectors, such as agriculture, transport and defence, as well as relevant communities and civil societies, into emergency preparedness and response efforts. Emergency preparedness plans must include exercises and drills to regularly test the actual level of preparedness.

### **Strengthening national and local capacity**

461. Strengthened, well-prepared and well-managed health systems can effectively contribute to preventing and responding to health crises and are legally binding requirements under the IHR. Assessment tools (283,284) help countries to evaluate their own systems, to identify strengths and weaknesses to develop capacity-building programmes on public health and emergency management. The Safer Hospitals Initiative is another concrete example of the promotion of measures to reduce the vulnerability of health facilities and to ensure that they remain fully functional in times of public health crisis. Initiatives to enhance multisectoral coordination and interdisciplinary approaches are central to improve the prevention, early detection and timely management of events, and should be further strengthened during international mass gatherings. Improved alert and response systems and effective emergency preparedness can trigger significant improvements in the health system and give all actors, including civil society, a unique opportunity for recognition of their respective role and responsibility in improving the health of the population.

### **Supporting good governance**

462. Good governance is essential to promote emergency preparedness, particularly through improved transparency and multisectoral coordination. Transparency and timely information-sharing must continue to improve, within countries, with particular attention to federal structures, and between countries and WHO according to the IHR procedures and the central role of the national IHR focal points.

## **Increasing regional partnerships**

463. New partnerships, particularly with regional institutions, will be developed, aiming at a better geographical balance of technical partners across the WHO European Region. Better involvement of regional institutions in networks such as GOARN will be essential to ensure both technical expertise and cultural understanding.

464. Closer collaboration with EU institutions, such as the Health Threats Unit of the European Commission and ECDC, will continue particularly in support of the EU Health Security Initiative. This includes, where possible, further developing joint reporting tools and procedures, joint field missions and joint reports. This will continue to allow for single reporting by countries to both WHO and the EU, to share expertise and risk assessment, and will avoid conflicting messages in risk communication.

## **Improving the capacity of the WHO Regional Office for Europe**

465. The WHO Regional Office for Europe will continue to strengthen its daily operations, including joint operations with WHO headquarters in the areas of epidemic intelligence, risk assessment, logistics support and communication. It will also work closely with the headquarters IHR Coordination Department to support European Member States in the areas of IHR core capacity monitoring, IHR legal issues including national legislation, IHR training and country support for IHR capacity at points of entry. The operational capacity of the Regional Office will benefit from an enhanced infrastructure for its Emergency Operations Centre, improved connections with the European regional network of WHO country offices, with the emergency operations centres of neighbouring WHO regions and with the Strategic Health Operations Centre at WHO headquarters. Dedicated staff will continue to maintain the WHO IHR Focal Point for Europe, accessible at all times for communication with the national IHR focal points of the Region.

## **Creating healthy and supportive environments for health and well-being**

### **Physical environments**

466. The European Region is characterized by a significant spread in Human Development Index, level of environmental performance and environmental disease burden. Low levels of human development are typically associated with low levels of environmental performance and high levels of environmental disease burden. All countries in the European Region have experienced a reduction in the Human Development Index in the past five years.

467. Ageing and longevity, urbanization, mobility, changing patterns of food production and consumption, water use, economic and political activities, occupational exposure, changes in land use and spatial planning and changes in biodiversity and exploitation of natural resources including energy are the main environmental determinants of health. Consequently, public health interventions addressing these factors through primary disease prevention significantly influence human health and well-being.

468. The changing climate, the rapid introduction of new materials and technologies at the workplace and the increasing number of environmental health emergencies, both natural and

human-made, can amplify existing health problems or the weaknesses of health systems. Socioeconomic inequities and the current global economic downturn hamper progress in reducing environment and health risks. In all countries, irrespective of country income, people with low income are much more at risk from unhealthy environments than those with higher income.

469. Achieving the Millennium Development Goals on environmental sustainability and reduced maternal and infant mortality requires that public health policies address environmental risk factors through evidence-informed approaches combined with multisectoral strategies. Emerging risks can require policy-makers to make rapid decisions, often in the face of high scientific uncertainty.

470. Sustainable development, including its most recent facet of green economics, is mainly driven by economic arguments and objectives aiming at increasing the overall wealth of countries (although not always reducing inequities) and does not profile human health and well-being very prominently. WHO, as the primary international health agency that defines health very broadly as well-being more than the mere absence of disease and as a fundamental human right, should attempt to influence the global agenda by advocating for stronger focus on the health and well-being objectives of sustainable development. These are important public goods in their own right, even when they do not result in immediate economic gains and may require public investment.

### **Situation analysis**

471. Within the EU, total water abstraction is expected to decline by more than 10% between 2000 and 2030, mostly as a result of changes in industrial needs. Pronounced reductions are expected in western Europe, but water abstraction for the domestic sector is expected to increase significantly in the eastern countries of the EU. Under mid-range assumptions on temperature and precipitation, water availability is expected to decline in the southern and south-eastern parts of the EU. Many countries in the WHO European Region are implementing adaptation measures that have resulted in declining municipal water withdrawals in the period 1998–2012.

472. The population of the European Region has increased by about 5% since 1990 (5%); 69% live in urban areas and 31% in rural areas.

473. The proportion of the urban population served with improved sources of water supply is 99%. An improved source is protected from outside contamination, especially faecal matter. Access to an improved source of water supply through a connection in the home is important to ensure adequate hygiene. In the European Region, 96% of the urban population received piped water inside the home, and only 3% of the urban population uses other improved sources of water (such as standpipes). One per cent of the urban population still uses unimproved water. In contrast, only 94% of the rural population has improved water, but only 66% of the rural population has piped water, 28% use other improved water and 6% use unimproved water.

474. With regard to sanitation, 97% of the urban population is supplied with improved sanitation and 3% of the urban population shared sanitation. In rural areas, 86% of the population has improved sanitation, and 14% has other unimproved sanitation.

475. Especially in rural areas, water is supplied through small-scale systems such as private or individual wells, community-managed supplies and public supplies. Several sources concur that the number of people depending on small-scale water supplies is about 10% of the rural population. These water supplies are often weakly regulated, receive less political attention and are managed by personnel who enter the profession with marginal qualifications and are not integrated in professional networks that can offer additional training. Further, the resources on which the small-scale water supplies depend are often vulnerable to contamination, systems suffer from deficient operation and maintenance and obtaining funding for improvements may be difficult or impossible.

476. Access to water does not guarantee its safety. For example, in the EU, where the legal requirements are based on the WHO Guidelines for Drinking-Water Quality, frequent non-compliance is observed for enterococci, arsenic, lead, nickel, nitrate and other pollutants. Major derogations are in place for several parameters, thus temporarily reducing the degree of non-compliance. Water quality problems are more severe in the eastern part of the European Region, both the level of non-compliance and the pathogens present in the drinking-water supply systems. Many countries in the eastern part of the Region are in the process of creating multi-year clean water programmes, often under the leadership of the national health ministry and its associated institutions.

477. The lack of universal access to safe water and adequate sanitation causes a significant burden of water-related diseases to the population in the European Region. Classic water-related diseases with high epidemic potential are in decline in the European Region. Only 19 cases of cholera were registered in the WHO European Region in 2010; the four major water-related diseases with high epidemic potential (cholera, typhus, shigellosis and enterohaemorrhagic *Escherichia coli*) accounted for 150 157 cases. The situation is significantly more worrisome for emerging diseases: diseases that were either unheard of in a certain country or that have been registered only sporadically and are now developing explosively. For the four most important emerging water-related diseases (cryptosporidiosis, campylobacteriosis, giardiasis and legionellosis), 310 756 cases were reported in 2010 alone versus only 104 000 in 2000. The fact that not all national health services can effectively clinically and environmentally detect the causative pathogens is a basis for the argument that the numbers cited probably underestimate the reality.

478. Important health gains could be obtained by more closely adhering to the WHO recommendations on vaccine-preventable diseases. This is the case for viral hepatitis A, for which 53 105 cases were recorded in 2010; it is certainly the case for rotavirus, which continues to impose a very high burden, both physically and economically, on the children of the European Region but less than 10% of the countries in the European Region follow the WHO recommendation for universal inclusion of preventive vaccination.

479. Attention should also be given anew to neglected diseases, especially helminths. WHO estimates indicate that more than 1 million preschool children and more than 3 million school-aged children in the European Region require preventive chemotherapy for soil-transmitted helminthiasis and associated measures to strengthen the basic hygiene provisions for hygiene, water supply and sanitation in dwellings and other child-intensive environments.

480. Foodborne diseases are a growing public health problem, as the amount of food prepared outside the home has steeply increased recently. Ensuring safety throughout the increasingly complex food chain requires collaboration between the health sector, agriculture, food transport, food service establishments and the food industry. Food safety and security

depends strongly on the availability of safe water, land-use policies and the availability of technological advances for improving food production, storage, transport and preparation.

481. Climate change is an especially compelling current issue. Climate scientists forecast that the continued accumulation of heat-trapping greenhouse gases in the troposphere will change global patterns of temperature, precipitation and climatic variability during the coming decades. A rise of 1–3°C during the next 50 years, greater near the poles than near the equator, would occur faster than any rise encountered by humanity since agriculture started about 10 000 years ago. Climate change challenges further improvement in sustainable development, poverty, inequity, food availability, income and livelihood, aggravates environmental determinants of health (such as water and air) and significantly burdens health services (285). Although climate change is often framed in terms of environmental and economic concerns, the health sector has to deal with immediate and projected health effects. In the European Region, some of the effects of climate change are already being felt: changes in vector and allergen distribution (such as the *Aedes albopictus* mosquito and ragweed) and more frequent and intense heat-waves and heavy precipitation events. The 70 000 deaths in the 2003 heat-wave (286) provided a wake-up call on what could happen if no anticipatory action is taken.

482. The greatest public health risks projected for the European Region are: an increase in the frequency of extreme weather events (heat-waves, droughts, floods and fires); a rising sea level, with consequences for coastal areas and settlements; permafrost melting in the north with risks to infrastructure, viability and access to health services; aggravation of some of the current environmental problems (such as air quality and water quality); risks to food security; and a change in the geographical distribution of infectious diseases, with possibilities of localized outbreaks of new or re-emerging infectious diseases (such as dengue) (287). Many effects of climate change can be felt far beyond the locations in which they originally occur. They can also create conflicts and competition for resources as well as migration. The estimated economic damage costs are huge and range between 5% and 10% of GDP (288).

483. Water stress is projected to increase in central and southern Europe and central Asia, affecting between 16 million and 44 million additional people by 2080. Water quality is under constant pressure, and safeguarding it is important for the drinking-water supply, food production and recreational water use.

484. There are very significant environment and health problems in air pollution, noise, transport, urban health and housing. Examples include the following.

- In the European Region alone, exposure to particulate matter reduces every person's life expectancy by an estimated average of almost 1 year, mostly because of an increased risk of cardiovascular and respiratory diseases as well as lung cancer.
- Indoor air pollution from biological agents in indoor air related to damp and mould increases the risk of respiratory disease by 50%.
- Road traffic injuries remain the leading cause of death among people aged 5–29 years.

485. Social determinants play a significant role in the levels of exposure to environmental factors and the severity of effects on the health of individuals and populations. For example, high and in many cases growing poverty levels in European populations lead to a weakening of the protective functions of the water supply and sanitation sector as an integral component of the national health systems. Poor households not only are less connected to such utilities as

water and sewerage systems but the very significant increases in the prices of water and sanitation, especially when combined and charged at full cost recovery, often raise barriers to economic accessibility such that government intervention is needed to ensure access to minimum quantities of water to people with low income. Poor people tend to live in less sanitary conditions, in less safe neighbourhoods, closer to sources of industrial pollution and other sources of chemical and other types of contamination and in low-quality housing and have less access to spaces promoting healthy living.

486. These situations are unlikely to be remedied without collaboration between the health sector and, among others, urban planners, manufacturing industries, the motor vehicle industry and the transport sector as well as those who design housing and legislate for housing standards. One way forward is to use the settings approach. In the 2008 Zagreb Declaration for Healthy Cities: Health and Health Equity in All Local Policies, city leaders stressed the importance of “integrating health and sustainable development considerations in how we plan, design, maintain, improve and manage our cities and neighbourhoods and use new technologies”. Here WHO has catalysed action by other sectors that promotes health.

### **Solutions that work**

487. Although environment and health interventions involve a wide range of actors, the various environmental elements (such as air, water and noise) should be seen as a whole (the environment). Sectors such as transport, water management, sanitation, energy production, agriculture and others play a more significant role in protecting health than the health sector alone. Nevertheless, environment and health has been one of the oldest areas of public health from ancient times, producing major improvements in human health and longevity. Provision of safe water and sanitation have been known since antiquity, and even modern public health has its origins in addressing occupational and living environments that were considered as causes of ill health.

488. The core work of WHO, especially strengthening national health sectors to improve national surveillance, alert and response systems, remains essential in the fight against water- and food-related diseases, as does its work on vaccine-preventable and neglected diseases. Health impact assessment of the environmental determinants of health and of policies across sectors are a core function of the health sector, identifying the risks, understanding how they are related to human health and developing effective and efficient measures to address them. Health impact assessment has been essential for developing and implementing environmental standards and reducing or eliminating environmental risks and exposure.

489. As part of the primary prevention of diseases, efforts to improve urban planning, to enable increased physical activity and to enhance the mobility of ageing populations or people with disabilities improve people’s health and well-being. Safer workplaces, public places and improved housing standards reduce the number of injuries and the exposure to environment and health risks from heat and cold and to chemicals and noise. Engineering solutions to road traffic significantly improve road safety for drivers and for pedestrians, greatly reducing the numbers of deaths and injuries in transport. Fiscal measures, including the pricing of water and sanitation services and taxing the emissions of pollutants (including greenhouse gases), promote clean technologies and the rational use of natural resources and conserve biodiversity.



490. The WHO Regional Office for Europe also has an important advisory and supportive role to play in cooperation with other agencies of the United Nations System. Clear examples are the cooperation with WHO headquarters, and through it, with UNICEF in the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, the official United Nations mechanism for monitoring progress towards target 7.C of Millennium Development Goal 7 (halving, by 2015, the proportion of the population without sustainable access to safe drinking-water and basic sanitation); the cooperation with UN-Water (an interagency mechanism) in the Global Annual Assessment on Sanitation and Drinking-water; and the cooperation with the United Nations Economic Commission for Europe to ensure equity in access, even for the economically weakest population groups.

491. This is a field of public health in which intersectoral policies work on all levels, from a local community to the international arena. This is also a field in which the health sector has a distinctive role of precipitating public health interventions by other sectors, identifying the risks to and determinants of health and monitoring and evaluating the effects of policies and interventions.

492. One of the most effective tools to address environmental health challenges is the many multilateral environmental agreements that have been instrumental in bringing about a shared international legal framework in recent decades. Especially legally binding multilateral environmental agreements have forced governments to take action on several fronts, delivering major health improvements.

493. For example, the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes has forced 25 countries in the European Region to set targets and monitor and report progress in such key areas as access to water and sanitation, reduction of water-related diseases and protection of aquatic resources. The Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean has had major effects in developing health-protecting measures through the safe treatment of wastewater and its reuse as irrigation water as a measure to adapt to climate change. Such multilateral environmental agreements provide Member States with the necessary legal basis to take action to protect the health of millions of Europeans.

494. WHO supports the implementation of water safety plans: comprehensive risk assessment and risk management processes for all water suppliers in the European Region, regardless of their size. The second Meeting of the Parties to the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes recognized small-scale systems as a special area of concern. Under the leadership of the Czech Republic and Germany, a programme is underway for developing water safety plans in small-scale systems, for training personnel and for assessing the quality of supply and the burden of water-related disease in the service area. Fieldwork is ongoing in the eastern part of the European Region. A similar programme led by the Women in Europe for a Common Future is active in the field of sewerage and sanitation.

495. Developing and promoting the use of biofuels provide a healthier alternative to carbon fuels used for indoor heating, removing one of the major causes of lung diseases and, as recent research demonstrates, pollution from particulate matter that is directly linked to cardiovascular diseases.



496. As a result of climate change, societies will need to prepare for gradual changes in health outcomes, sudden extreme events (such as heat-waves and infectious disease outbreaks), an extra burden of disease and potential new conditions. Adaptation to climate change and action to reduce greenhouse-gas emissions require the active engagement and support of various sectors of government, the economy and civil society.

497. The World Health Assembly recognized the threat of climate change to public health in resolution WHA61.19. In 2009, the WHO Executive Board approved the WHO work plan on climate change and health (EB124.R5). The WHO Regional Office for Europe has a mandate since 1999, through the Ministerial Conferences on Environment and Health, to work on climate change and health – and at the Fifth Ministerial Conference on Environment and Health, health and environment ministers endorsed a stronger commitment to act and welcomed the regional framework for action and its approaches. Within the commitment to act, the ministers committed “to protecting health and well-being, natural resources and ecosystems and to promoting health equity, health security and healthy environments in a changing climate” (289) (Box 9).

**Box 9. Parma Conference: commitments by the ministers on climate change and health**

... we will:

- integrate health issues in all climate change mitigation and adaptation measures, policies and strategies at all levels and in all sectors ...;
- strengthen health, social welfare and environmental systems and services to improve their response to the impacts of climate change in a timely manner, for example to extreme weather events and heat-waves ...;
- develop and strengthen early warning surveillance and preparedness systems for extreme weather events and disease outbreaks, for example vector-borne diseases, at the animal-human-ecosystem interface, where appropriate;
- develop and implement educational and public awareness programmes on climate change and health, to encourage healthy, energy-efficient behaviours in all settings and provide information on opportunities for mitigation and adaptation interventions, with a particular focus on vulnerable groups and subregions;
- collaborate to increase the health sector's contribution to reducing greenhouse gas emissions and strengthen its leadership on energy- and resource-efficient management and stimulate other sectors, such as the food sector, to do the same; and
- encourage research and development, for example with tools for forecasting climate impacts on health, identifying health vulnerability and developing appropriate mitigation and adaptation measures.

Further, the ministers called on the WHO and other partners to set up European information platforms for systematic sharing of best practices, research, data, information, technology and tools focused on health at all levels.

498. The role of civil society groups is likely to be a particularly important factor in environment and health governance in the future. In many places, official concern for environment and health is a belated reaction to pressures from civil society. Conceiving of a future for environment and health without the active participation of civil society in both policy-making and implementation is difficult.

## The European environment and health process

499. European Region countries launched the European environment and health process 20 years ago. The Fifth Ministerial Conference on Environment and Health took place in Parma, Italy in 2010. Countries adopted a new environment and health vision oriented towards health in all policies and made an explicit goal of using environment and health policies as a means to prevent noncommunicable diseases by addressing their environmental determinants. This significantly raised the profile of the European environment and health process.

500. The European environment and health process is a unique governance mechanism, as it involves ministries responsible for health and environment on equal footing, amplifies the links and synergy with a number of multilateral environmental agreements and enhances the partnership with other intergovernmental bodies, such as the United Nations Economic Commission for Europe, the United Nations Environment Programme and the European Commission, and with civil society organizations.

501. Functioning environment and health governance at the European Region level plays a major role in bringing stakeholders from across the sectors together and stimulating coordinated action to address the environmental burden of disease. A combination of voluntary action and of legally binding multilateral agreements and conventions has proven in the course of the past decades to be an effective mechanism for steering policy action in this area.

502. The work of the WHO Regional Office for Europe focuses on public health programmes that address the burden of disease attributable to the natural and human-made environments in which people live and work. The technical areas specifically addressed in the European Region include:

- environmental exposure through air, chemicals, noise, soil, waste, housing, urban planning, occupational hazards, industrial contamination, new and emerging technologies and materials – nanotechnologies, etc.;
- environment and health security: environment and health risk assessment and management and human-made and natural environmental emergencies;
- management of natural resources and health: water and sanitation, food safety and security, energy and health and environmental protection for human health and well-being; and
- climate change, green health services and sustainable development.

503. Just as the quality of the environment and the nature of development are major determinants of health, health is also an important stimulus to other aspects of development. Human health depends on society's capacity to manage the interaction between human activities and the environment in ways that safeguard and promote health but do not threaten the integrity of the natural systems on which the environment depends.

## Environment and health and the health sector

504. The health sector is one of the most intensive users of energy, a major source of employment and a significant producer of waste, including biological and radioactive waste. An important new topic is therefore the greening of health services. Hospitals and clinics can achieve substantial health and economic benefits through energy efficiency measures such as

developing low-energy medical devices, using renewable energy, conserving water and storing it safely on site, improving the management of procurement, recycling waste and using locally grown food. The health sector must also play an essential part in mitigating the effects of climate change and in reducing environmental exposures by taking steps to limit its own significant climate footprint and its negative impact on the environment.

## **Sustainable development**

505. The goal of sustainable development is to meet the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development is more than sustainability. Sustainable development implies a paradigm shift from a model of development based on inequity and exploitation of resources to one that requires new forms of responsibility, solidarity and accountability not only at the national level but also at the global level and across generations.

506. This approach has frequently been represented as the interaction between three pillars or three circles: economy, society and the environment. Sustainable development is a normative concept that aims to bring about a significant paradigm shift in how societal development is understood: it aims at nothing less than redefining the interface of society with biological and ecological systems. The aim is to achieve transformative change in society and propose new governance mechanisms in various sectors and spheres of activity.

507. Healthy population and people are central to human progress and sustainable development. Health – a complete state of physical, mental, and social well-being and not merely the absence of disease (290) – is central to the 1992 Rio Declaration on Environment and Development (291): “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.”

508. The global plan of action agreed at the United Nations Conference on Environment and Development in 1992 (292) and the Rio Declaration are as valid today as they were 20 years ago. The links between better health, the economy and the environmental sustainability are well established: people who are healthy are better able to learn, to earn and to contribute positively to the societies in which they live. Conversely, a healthy environment is a prerequisite for good health (293).

509. Currently, the balance is not right. Although the WHO European Region has witnessed strong economic growth and significant progress in health, including reduced child mortality, increased life expectancy and progress towards attaining several of the Millennium Development Goals, these positive trends have been accompanied by increasing disparities and inequalities, health inequity, deterioration of the environment, climate change and recurrent economic, financial, energy and food crises (294).

## **Solutions that work**

510. Several national and local case studies have illustrated the promotion of the health benefits of policies of productive sectors and settings. Many of them use green-economy approaches. The following examples link decisions in one area (such as transport or urban planning) with better health and well-being.

511. The United Nations (295) argued that, without real action to address levels of consumerism and resource use, systemic changes are barely possible. However if action is taken, for example, to reduce excessive consumption of energy, limit the use of some hazardous substances and promote changes in consumption patterns, the result would be to reduce both noncommunicable diseases such as type 2 diabetes and cardiovascular diseases. For example, WHO and the Food and Agriculture Organization of the United Nations recommend the daily consumption based on need of about 2200 kilocalories (kcal) for women and 3000 for men. However, in 2007, consumption was an estimated 3466 kcal per day for adults in western Europe and 3255 kcal per day for eastern Europe (296). Reducing overall energy intake could not only improve health and reduce obesity but also improve the environment by reducing transport and greenhouse gas emissions. Reducing the consumption of animal fat and protein would further increase the benefits, given the land, water and energy required for their production. Much work is going into finding ways to promote healthy diets, making them the easy and popular choice and enhancing public understanding of them. Policy-makers in the Region are supported by some mechanisms and internationally agreed plans to reduce the consumption of *trans*-fatty acids and salt, such as the action plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012–2016 (297).

512. One key area for action is promoting active mobility and public transport. There are numerous examples of how public transport can reduce air pollution, noise and greenhouse-gas emissions, energy consumption and congestion, can improve road safety and can better protect landscapes and urban cohesion. Increasing mobility and physical activity reduces the risk of cardiovascular diseases, type 2 diabetes, some forms of cancer and hypertension. Only recently evidence began to emerge that this mix of transport policies can also provide opportunities to create new jobs or to green existing jobs.

513. A mix of measures yields great health benefits in the housing and construction sector. The mix of measures includes more effective use of active and passive natural ventilation for cooling; measures to reduce mould and damp; energy-efficient home heating, appliances and cooking; providing safe drinking-water; and improved sanitation and stronger building. Many countries, regions and cities are experimenting with cost-effective, healthy strategies for mitigating climate change for housing; these should be systematically studied and evaluated for their health benefits (298).

514. Green spaces in urban areas positively affect health. Many measures taken at the local level produce major health benefits. Where there are public green spaces and forests, people use them. They do a lot more: they walk, they play and physical activity becomes part of their daily lives, reducing the risk of injuries and the urban heat-island effect, reducing stress levels and noise pollution and increasing social life. They can also contribute to flood management (299).

515. Health care is often technologically and resource intensive, so some advances in health and population well-being can be assumed to have come at the expense of the environment (300). Increasing evidence indicates that becoming greener would lead to further growth in the health sector with a concomitant decline in energy- and resource-intensive activities. For example, a sustainable-development approach focusing on changes through innovation, standards and behavioural measures has been proposed for the National Health Service of the United Kingdom (301). Investment in low-carbon technologies will help to drive and deliver some of the transformations required for more sustainable health systems. Nevertheless, the potential and capacity for greening health services varies very much

between countries, with a west–east gradient. Proper legislation, providing incentives to increase the institutional capacity of initial investment, providing renewable and energy-efficient technology and raising awareness can help to overcome the obstacles to implementation in the eastern part of the European Region. Green growth and prosperity will not necessarily be inclusive or catalyse poverty reduction unless accompanied by approaches to benefit poor people and to focus on health integrated into a green development approach. Economic affordability is but one component of inclusive growth and equitable access. Several economic support measures have been proposed, across a variety of sectors to deal with access to water, food, sanitation and household energy. These range from direct financial support and technological improvements to ensuring minimum service provision for the people most in need.

516. There is relatively little information on how green development can benefit health and equity. Four areas of research are of particular importance:

- the health effects of new technologies and innovation;
- the health and equity benefits of green and inclusive growth policies in other sectors;
- the benefits health sector action for social, environment and economic development; and
- small- and large-scale opportunities of green growth for health development.

517. Demonstrating the relationship between sustainable development and health is a powerful argument to support climate change mitigation and adaptation in particular and sustainable development in general. Health outcomes can be measured and can generate public and political interest. Health will be a critical component in how the progress and impact of sustainable development are tracked after the United Nations Conference on Sustainable Development (Rio+20). The following initiatives are suggested to be further developed and implemented:

- opinion surveys of the general public and climate negotiators as well as economic valuation of health effects of climate change mitigation and adaptation measures, arguing for a much stronger role for health in climate and related development processes; and
- indicators to measure progress on environment and health in the European Region, such as
  - improving access to safe water and sanitation;
  - reduce obesity and injuries through ensuring safe environments, physical activity and healthy diets;
  - prevent disease through improved outdoor and indoor air quality and greater chemical, biological and physical safety;
  - action to protect health and the environment from climate change;
  - WHO tools and indicators to assess the impact of policies in various sectors and how they potentially affect people's health; and
  - health measurements in the framework to follow up the Millennium Development Goals after 2015.

### ***Health in the urban context: applying the urban lens***

518. Living and working in urban areas affects health and health prospects both positively and negatively through a complex array of types of exposure and mechanisms. In addition, cities concentrate population groups with various demographic, economic and social characteristics, some with particular health risks and vulnerability. Examining health through the urban lens allows increased understanding of disparate risks and emphasizes the essentiality of collaborative efforts in protecting and enhancing the health of populations, especially those living in cities. Urban health has emerged in recent years as a framing paradigm for a field of research and policy that serves to unite and focus the variety of forces determining the health of city-dwellers.

519. City living can affect health through the physical and built environment, the social environment and access to services and support. The quality of housing, neighbourhood design, density of development and mix of land uses, access to green space and facilities, recreational areas, cycling lanes, air quality, noise and exposure to toxic substances have been shown to affect the health and well-being of the population in many different ways. Some circumstances of urban life, especially segregation and poverty, contribute to and reinforce these discrepancies by imposing disproportionate exposure to health-adverse and socially undesirable patterns of response to economic and social deprivation. The numbers of older people living in cities is increasing, which requires rethinking urban planning and standards for providing services.

520. Urban areas provide great opportunities for individuals and families to prosper and can provide environments conducive to health through enhanced access to services, culture and recreation. These positive aspects of city life attract people to come to and stay in urban areas. Inhabited by political elites, cities are the engines of economic prosperity and the location of the highest incomes and greatest wealth in the Region's countries. Nevertheless, they are also the sites of the most concentrated poverty and ill health and thus centres of social contrast and inequity (302).

521. In all but the very smallest countries, formal powers and competences are allocated to nested tiers of elected government – differing combinations of central, regional, provincial and local tiers. In parallel, central governments often operate from decentralized offices, usually at the provincial level.

522. Central and regional governments usually directly administer hospital treatment and care; primary care is usually decentralized. Local governments often take primary responsibility for managing long-term illness and disability. Local governments administer or directly provide many health and social support services, especially for older people. In addition, local governments provide many housing services for older people, such as sheltering housing schemes, residential homes, dual care homes, hospices and community nursing.

523. Until the mid-20th century, public health and environment and health functions were combined at the municipal level. Sanitary and epidemiological centres characterized the systems in most of the eastern part of the European Region until the USSR dissolved in 1990. Currently the functions tend to be separated, with public health typically allocated to central and regional governments as part of the health service and environment and health to municipalities, although this varies between countries. Public health professionals tend to focus on the immediate physiological risk factors for poor health such as obesity, high blood



pressure and susceptibility to infection, whereas environmental health services focus on proximal causes such as air pollution and unsanitary living conditions.

524. Most local governments in the European Region have a general duty to promote the well-being of their citizens and provide equal and similar access to municipal resources and opportunities. Cities can achieve this through their influence in several domains such as health, social services, environment, education, economy, housing, security, transport and sport. Intersectoral partnerships and community empowerment initiatives can be more easily implemented at the local level with the active support of local governments.

525. Cities significantly influence people's health and well-being through various policies and interventions, including those addressing social exclusion and support; healthy and active living (such as cycling lanes and smoke-free public areas); safety and environmental issues for children and older people; working conditions; preparedness to deal with the consequences of climate change; exposure to hazards and nuisances; healthy urban planning and design (neighbourhood planning, removal of architectural barriers, accessibility and proximity of services); and participatory and inclusive processes for citizens.

526. Applying the urban lens has several implications for those who are concerned with action for health and well-being:

- understanding and taking into account the urban specificity and distribution of the socioeconomic and environmental determinants of health;
- addressing the conditions that increase people's potential exposure and vulnerability to communicable and noncommunicable diseases;
- addressing the changing demographic and social landscape of cities, such as the ageing of the population and migration;
- incorporating urban health issues in national health policies, strategies and plans; and
- acknowledging the importance of the role of local governments in promoting health and health equity in all local policies and whole-of-society engagement.

## ***The social environment: social determinants of and assets for health***

### **Situation analysis**

527. The health of any individual is almost inseparable from the health of the larger community. Whole-of-government responsibility for health requires that the effects on health be fundamentally considered in developing all regulatory policies (303). Such change requires more than declarations, even when they are backed by powerful evidence and good will. The persistence of socially determined inequity in health and often increasing inequity require integrated action and a strong systems approach (304,305). Addressing socially determined inequity in health requires strong political commitment, effective and high-performing health systems and policy coherence across government policies. Achieving these goals requires that a given country have well-functioning institutions capable of influencing policy-making across health and other policy sectors.

528. The required capacity includes policy advocacy, policy formulation and implementation, monitoring and evaluation, with stakeholders ranging from academic and



research institutions to ministries and governmental entities and to nongovernmental organizations and civil society organizations (306).

529. The organized efforts to improve population health and reduce inequity in health so far have mainly been aimed at removing hazards and influencing individual behaviour. Although these actions are necessary, there are other opportunities, including systematically targeting public policies, private initiatives and aligning the financial, human and environmental resources that will mobilize action on better health and well-being and its equal distribution in society (307–309).

530. Experience in the WHO European Region shows that creating healthy and supportive environments and initiating, sustaining and mainstreaming the social determinants of health require a critical mass of human resources properly allocated within health systems and at the cross-government level. This critical mass should be appropriately allocated within the specific country policy context, have adequate skills and expertise and be accountable for achieving socially linked targets for reducing inequality in health.

### **Solutions that work**

531. Addressing the social determinants of health and tackling health inequities requires going further than the traditional model for providing health and social care. In addition to providing public services to address the deficiencies in a given community, efforts should also be directed to harnessing any inherent assets and support that may exist within communities and that may enhance and complement the offerings of the public sector (310).

532. Many well-meant programmes to promote health and reduce socially caused inequity in health fail because they are not based on such a system-wide approach. Some actions are common to the health and well-being of all groups and, at the macro level, social, economic and other social policies need to create environments that ensure that people at all stages of life are better able to reach their full health potential. At the micro level, action initiated in specific settings where people live, love work and play – homes, schools, workplaces, leisure environments, care services and old people's homes – can be very effective. Health and social services, and especially primary health care services reaching out to families in their homes, to workers at their workplaces and to local community groups over the lifespan, are important entry points for systematically supporting individuals and communities throughout life and especially during critical periods (311,312). Numerous actions aim to embed the principles of health promotion, including asset-based approaches, life-course and environmental approaches, approaches focusing on communicable and noncommunicable diseases, mental health, accidents, integrated and comprehensive programmes and adapting health services more towards disease prevention and chronic care (313,314).

533. As health assets relate to the social determinants of health, asset-based approaches have the potential to unlock some of the existing barriers to reducing health inequities. Such approaches are strongly linked with health promotion and intervention models and emphasize the importance of strengthening protective and promoting factors for individual and community health by identifying the skills, strengths, capacity and knowledge of individuals and the social capital of communities. These models focus on identifying what assets are available to protect, maintain and promote the health of individuals and communities. The aim is to maximize these assets to sustainably solve local health issues and ensure that any

external support (by providing services to enhance health and well-being) can be used more effectively (315–317).

534. Efforts to reduce vulnerability and the operation of exclusionary processes are important. Smarter governance is necessary to enable communities to steer governments and other agencies to pursue health and well-being as collective goals. New structures for governance and leadership are needed to do this. Rather than building capacity from outside, empowering social, political and economic systems should be created that release capacity within organizations, professional groups, communities, families and disadvantaged groups. To create this empowerment, various types of knowledge and evidence are needed, built on the experience and interpretation of people in the groups and communities affected.

535. These approaches help to translate such concepts and principles into local action. The goal is public investment in local communities, building on local strengths and assets to raise levels of aspiration, build resilience and release potential (318). Thus, asset-based approaches are an integral part of health promotion and should become an integral part of strategies to improve health and reduce health inequities (319,320).

### *Social protection*

536. The existence and generosity of the social protection system influence health and health equity. Government social spending substantially affects poverty rates which, in turn, are associated with higher mortality, especially among women and children, and particularly women with a low educational level. Total social protection generosity influences health among adults, especially in low- and middle-income countries. Integrated social and labour market policies make a difference (such as active labour market programmes). Older people require adequate pensions and social protection.

537. A key aim of policy should be the maintenance of minimum standards needed for healthy living. The evidence shows that social spending is more generous in countries with more universal social protection policies and higher rates of labour force participation. Box 10 shows examples of specific actions to be recommended on social protection.

#### **Box 10. Examples of specific actions to be recommended on social protection**

Ensure that women and children have access to the minimum income needed for healthy living

Ensure that social spending is sufficiently generous, especially among women with a low educational level

Ensure the generosity and universality of social protection systems in low- and middle-income countries

Ensure active labour market programmes, linked to generous social protection, to promote high rates of labour force participation

## **Strengthening people-centred health systems, public health services and preparedness for emergencies**

### ***Situation analysis***

538. Despite diversity in the financing and organization of health systems in the European Region, they are faced with similar challenges of providing comprehensive approaches to reducing the burden of chronic diseases and halting the growth in communicable diseases. Health care has become more complex, with rapidly advancing technological progress, ageing populations, more informed service users and increasing cross-border movement. Health system response to these changing trends requires innovative solutions that are focused on the end-users, both healthy and less healthy people, are systematically based on sound evidence and are as resilient to economic cycles as possible.

539. European health systems have been adjusting to these challenges with continual reform and innovation. The WHO European Ministerial Conference on Health Systems, held in Tallinn on 25–27 June 2008, was a milestone that marked the importance that Member States placed on both improving and being accountable for the performance of their health systems. The political commitment was marked by the signing of the Tallinn Charter: Health Systems for Health and Wealth, and its later endorsement in a Regional Committee resolution on stewardship/governance of health systems in the WHO European Region (EUR/RC58/R4). Most countries have remained committed to the principles of solidarity even in the aftermath of the economic downturn and others continue to move towards universal coverage. Value-for-money considerations have come to the fore of public policy discussions both in response to long-term trends in ageing and the recent economic crisis. This is leading many countries to examine and adjust how they deliver services and their purchasing and governance arrangements.

540. National health policies, plans and strategies should be based on an understanding of the health needs of the population and a vision of the requisite public health and health care responses. These will entail a mix of appropriate interventions at all levels of government, including the individual citizen. However, many weaknesses in the design of the structure and function of service delivery solutions in European health systems undermine moving towards an evidence-informed and people-centred approach.

- Modern public health concepts and approaches have not been put into practice in many countries; they lack national strategies for developing public health services, outdated public health laws and ineffective partnership mechanisms. Disease prevention and health promotion are especially important elements of public health, but lack of investment and sometimes the unintended consequences of reform lead to weak infrastructure and low-quality services.
- The structure of service delivery (both population and individual services) often reflects the past burden of disease and historical investment patterns, which is not conducive to people-centred 21st-century care processes for chronic illness and an ageing population. For example, public health services in many countries continue to focus on communicable diseases and have only slowly begun to integrate structures and activities for noncommunicable diseases. Specialist-driven and hospital-focused health care misses important health and welfare needs and is expensive. Primary care continues to present challenges in many countries with a narrow task profile, poor teamwork, limited recognition, weak links to higher levels of care and inadequate funding. These patterns often result from skewed health expenditure trends that favour acute curative services

and high-tech diagnostics at the expense of prevention, health promotion, rehabilitation and social care.

- There is often poor coordination of structures and integration of processes between public health services, health care services and social care services in all types of services, including health promotion, disease prevention, responding to acute illness episodes, care management and rehabilitation. There are many reasons for poor coordination, including weak health system governance and fragmented service delivery arrangements, lack of the financial incentives and financial policies conducive for good coordination of care, variation in doctors' clinical practice (both general practitioners and specialists) and lack of evidence-informed pathways for the whole continuum of a care episode or the pathways not being followed.
- There has been variable commitment to developing a culture of continual quality improvement in both public health and health care services. This requires developing a culture of continual learning, removing administrative complexity, ensuring that safety is a key design element, ensuring that appropriate incentives support improvement, ensuring a culture of measurement and feedback, and implementing team-based approaches to delivery. These elements are not yet routinely present in service delivery organizations of the Region, resulting in care that is not evidence informed and not patient centred.

541. There have been many innovations in health funding arrangements in recent years, but much needs to be done to eliminate catastrophic and impoverishing payments in the Region, in particular, for chronically ill people and vulnerable populations. Many countries have achieved universal health care coverage, providing reasonable levels of financial protection and access to health care for the whole population. Nevertheless, 19 million people in the Region experience out-of-pocket health expenditure that places a catastrophic burden on their household budgets, and more than 6 million people have been impoverished because of it. Further, many people with chronic diseases face severe barriers to accessing high-quality, continuous care management. Public coverage of chronic care services is far from universal in many countries. Countries differ widely in their cost-sharing requirements for health services and drugs for people with chronic diseases. This leads to delays in seeking health care, which in turn affects treatment outcomes, especially for low-income and vulnerable people, contributing significantly to the observed health divide throughout the Region.

542. Moving to a more evidence-informed and people-centred approach to health-improving services poses significant human resource challenges. The skills necessary for sound health system design are in short supply everywhere. Health systems have shortages of the right people with the right skills in the right place, especially nurses and general practitioners. The distribution of health workers is uneven, characterized by urban concentration and rural deficits. Poor working environments, lack of flexible working arrangements (with a feminization of the health workforce), including unsupportive management and insufficient social recognition, undermine the morale of health workers. Lack of opportunities for career development, low wages and lack of incentives limit enthusiasm for continual learning. In many countries, the migration of health workers and leaving the public sector for the private sector severely affects the quality and accessibility of care.

543. High-quality and affordable medicines are not yet systematically available in all countries, even for widely prevalent conditions such as hypertension, asthma and diabetes. Medicines are essential for preventing and treating diseases, and poor-quality medicines represent a public health hazard. Medicines are also responsible for a substantial part of health

care costs: from 10–20% in EU countries to up to 40% in countries in the eastern part of the European Region. In several countries in the eastern part of the Region, ensuring regular access to high-quality, safe and affordable medicines is still a challenge because budgets are insufficient, supply systems are weak, supplies are often unregulated and out-of-pocket payments are high. For example, one month of treatment for simple hypertension can cost up to 35 days' wages, most of which is paid out of pocket. Funding and regulating the supply of medicines strongly influences health outcomes and the financial protection of individual people.

544. Finally, governance needs extended partnerships and alliances to better reorient health systems to evidence-informed and patient-centred approaches. This may include, among others, granting wider levels of decision-making to providers, enhancing the culture of performance and accountability based on high-quality and widely shared information and engaging with the population and communities in designing health care solutions. Strengthening governance at the policy, planning, purchasing and provision levels boosts rapid changes in the service delivery culture.

## **Solutions that work**

545. Strengthening the performance of health systems has been high on the agenda of countries throughout the European Region, with new approaches and innovations for improving health and health equity. Improving the delivery of public health and health care services, generating key health system inputs such as human resources and medicines in higher quality, strengthening health funding arrangements and enhancing governance are key focus areas of Health 2020. This section highlights policy shifts and innovations in health systems that have been proven to or have the potential to directly improve health outcomes and health equity. These proposed solutions are valid in a variety of health systems regardless of their form of funding (general tax revenue versus contributory), organization of service delivery (integrated versus fragmented), ownership of health care providers (public versus private) and the governance arrangements (centralized versus decentralized).

## **Strengthening public health services**

546. Across the European Region, public health capacity, infrastructure and services need to be significantly supported and strengthened. The following policy shifts and innovations can make public health services more effective.

547. Strengthening 10 essential public health operations is a cornerstone of a modern health system. The proposed essential public health operations are to become the unifying and guiding basis for the health authorities in any country in the European Region to establish, monitor and evaluate strategies and actions for public health. Box 11 shows these 10 essential public health operations.

548. Strengthening the 10 essential public health operations requires mainstreaming the whole-of-government approach to improving health. Public health leaders must be capable of initiating and informing the policy debate at the political, professional and public levels to advocate for policies and action to improve health. Of particular importance is the acceptance that public health goes beyond the boundaries of the health sector, encompassing a wide range of stakeholders throughout society. Health in all policies addresses complex health challenges

by promoting an integrated policy response across sector and portfolio boundaries, incorporating concern with effects on health into the process of developing policy of all sectors and agencies. A framework for strengthening public health capacity and services in Europe has been developed, and it lays out specific policy shifts and innovations to make public health services more effective and cooperative.

**Box 11. Ten essential public health operations**

1. Surveillance of diseases and assessment of the population's health and well-being
2. Identification of priority health problems and health hazards in the community
3. Preparedness for and planning for public health emergencies
4. Health protection operations (environment, occupational, food safety and others)
5. Disease prevention
6. Health promotion
7. Assuring a competent workforce for public health and personal health care
8. Core governance, financing and quality assurance for public health
9. Core communication for public health
10. Health-related research

549. At the request of Member States (321), the WHO Regional Office for Europe is leading the development of a new European Action Plan for Strengthening Public Health Capacities and Services. The Action Plan will be underpinned by a substantial body of evidence, including a review of the institutional arrangements through which the 10 essential public health operations can be delivered and a review of the main policy tools and instruments for public health. The Action Plan will outline the following eight avenues for action: wide use of essential public health operations, where appropriate, strengthening regulatory frameworks for protecting and improving health, improving health outcomes through health protection, improving health outcomes through disease prevention, improving health outcomes through health promotion, assuring a competent public health workforce, developing research and knowledge for policy and practice and reforming organizational structures for public health services.

550. Changing the behaviour of the population and fostering healthy lifestyles is notoriously difficult and requires a multifaceted approach. Although the conventional approach is to attempt to raise awareness through communication campaigns, the evidence indicates that simply providing information on (un-) healthy behaviour is not effective in achieving sustained behaviour change. Health communication and education initiatives should be delivered as part of a wider portfolio of interventions aimed at creating a social and physical environment that fosters healthy behaviour.

551. Experience in community-based social marketing indicates that, in addition to health communication, the range of effective behaviour change strategies includes interventions aimed at changing social norms, financial instruments to provide an incentive to make healthy choices, measures aimed at obtaining a commitment from people and prompting them to make healthy choices as well as measures aimed at making healthy behaviour the convenient



behaviour. For example, in recent years financial instruments, in the form of conditional social cash benefits, are awarded to low-income and vulnerable populations if eligible beneficiaries meet certain conditions such as having their children in school and immunized or having received five antenatal care visits. The various behaviour change strategies are mutually reinforcing, and the effectiveness of the overall behaviour change campaign will increase as additional strategies are brought to bear.

552. A new development in public policy in recent years has been to nudge people to change their behaviour. Increasingly, legislation has been used to make certain types of behaviour illegal. A legal ban on smoking has been an effective instrument and is increasingly being adopted by countries despite being considered impossible previously. This approach is now being adopted elsewhere, such as in nutrition policy.

553. An ambitious idea is to integrate graduate training in public health across Europe. A starting-point could be adopting shared criteria for competencies and integrated curricula across current degree programmes for the master of public health. A more ambitious proposal would be to work towards establishing a European School of Public Health, which would work within a network with existing national schools of public health. Such a new institution could be a driving force behind a cultural and institutional change needed to improve health and public health capacity in Europe.

554. The performance of public health services could benefit from greater attention to monitoring and evaluation. Little is currently known about the effectiveness and cost-effectiveness of many public health policies, and this area of health systems has not been subject to as many rigorous policy evaluations and studies as the funding and organization of health care services. As new approaches are implemented, social determinants of health are mainstreamed into the health system reform agenda and whole-of-government approaches are used, subjecting these approaches to rigorous evaluation is critically important.

### **Improving access to and the quality of individual health services**

555. There are effective interventions for strengthening the delivery of health services to improve access to high-quality, people-centred and evidence-informed care. The themes highlighted below are relevant in a wide range of service delivery settings including organizations with various task profiles (public health, primary care, hospital, social care and others) and organizations with various form of ownership (public, private for-profit and private not-for-profit).

556. Health care services need to become more people-centred to accelerate gains in health outcomes in the era of chronic diseases. Chronic illness is long term, requiring repeated interactions between the patient and the health system, and in most cases it progresses. The objective of modern service delivery solutions, thus, is to create mechanisms to support self-management where appropriate and delivery of care as close to home as is safe and cost-effective. This will empower patients, who can then participate in decision-making about their own care and plan for this. This requires creating sources of information, decision aids and other mechanisms to support patient empowerment and decision-making. Action to build empowering services includes:

557. ensuring that patients receive good, accessible and affordable treatment and care based on their expectations and needs;



- ensuring patients' participation and feedback in designing, implementing and evaluating health policies and services;
- implementing models of partnership and shared decision-making between patients and health care providers, supported by training and skill development programmes;
- providing patients with appropriate information about treatment options and their rights;
- mapping barriers to access to information, care, rehabilitation and assistive devices for people with chronic diseases and people with disabilities; and
- creating ways to measure the degree to which care in organizations and systems is people centred and publishing comparable performance indicators.

558. Particular attention needs to be paid to vulnerable populations, with stronger outreach programmes and new models of delivery. Mechanisms for delivering health care services often do not reach low-income and vulnerable people. For example, internal and external migrants, the Roma, groups living in remote mountainous areas and drug users have difficulty in accessing publicly provided health services, contributing to the health divide. Ensuring that they receive needed care across the care continuum and life course requires new approaches to service delivery through outreach programmes rather than waiting for them to seek care in traditional service delivery settings. The public sector needs to remain an important catalyst in encouraging the development of outreach programmes by providing appropriate funding, creating enabling regulations and reward mechanisms and entering into partnerships with key stakeholders.

559. On the provider side, further efforts are needed to ensure that patients systematically receive evidence-informed care and determined efforts are made to reduce undue variation in health care practice. Effective and even cost-effective interventions are well known for much of the disease burden affecting the European Region. Nevertheless, studies show that many people do not receive these preventive, diagnostic, treatment and rehabilitation services. For example, surveys in several European countries show that many people with elevated blood pressure are not aware of their condition and do not take medication. Improving the coverage of cost-effective treatments for cardiovascular diseases, diabetes, managing pregnancy and delivery, children's health, TB and mental health problems would go a long way to improve health outcomes in the European Region. Further, patients often present with more than one condition, whereas guidelines are often based on single conditions. New lines of research are needed to support decision-making in the era of advanced chronic disease.

560. Enhancing care coordination across providers and over time requires new organizational and information technology solutions and new attitudes and skills among personnel. These solutions should be built on a platform of primary care, the nexus between public health and individual health care services, and include the following design features:

- ensuring accountability for a defined population;
- ensuring a care coordinator and the use of case and care management and the chronic care model;
- using registries and risk stratification;
- ensuring anticipatory care and not just responding to events;
- carefully managing the end of life using appropriate advanced planning; and

- attempting to create scale in primary, care including multidisciplinary and multi-specialty models.

561. Primary health care is a fundamental part of the health system and key to addressing the challenges faced by health systems. Primary care is a key vehicle for delivering health promotion and disease prevention services and a hub to link other forms of care. A pathway of coordination of care needs to evolve, fostering a balanced system of community care, disease prevention, primary care settings, outpatient care and secondary and tertiary hospital care. In many countries, primary health care is evolving to meet these increasing demands, but in others, it needs to be further enabled to improve performance, with a good regulatory environment, management autonomy, improved funding, training of health personnel in public health, evidence-based medicine and management and facility-based continual quality improvement practices.

562. For some time, concern has been growing that the current clinical and economic model that underpins hospitals is no longer appropriate. Too many hospitals are trying to provide too wide a range of services. Many countries respond by trying to centralize more specialist work into larger centres. At the same time, the growing number of patients with multiple conditions challenges hospitals organized based on clinical silos. Primary care requires the support of hospitals and their specialists to manage patients with chronic conditions effectively, but the incentives for hospitals often mean that this is not in their interests. Financial incentives structured by level of care undermine efforts for better integrated care processes, including shrinking hospitals.

563. Complexity makes the management of modern health care one of the most difficult managerial tasks in the whole economy. Nevertheless, many countries still consider investing in management a waste. There is more scope for significantly improving health care delivery by applying modern methods of quality improvement and management than by any clinical innovation currently in trials, and yet too little effort is put into basic systems and organization.

564. High levels of coordination need to be ensured between primary care, home care, social care, ambulances, nongovernmental organizations and specialist care with care pathways, shared record systems and other systems to support more integrated processes. This also includes solutions to properly integrate mental health services into family medicine and hospital care to recognize the growing burden of illness and the increasing connection between mental ill health and physical ill health.

565. An important supporting factor is adopting advanced information technology solutions that can provide timely access to comprehensive clinical information that allows health care professionals and service users to make the right decisions at the right time with no delays and no need for duplicating services or unnecessarily using inappropriate care, with the resulting public and private costs. Sadly, trends have been leading to opposite directions, with different information technology solutions at the primary care and hospital levels, with poor communication between them. Commitment, leadership and investment will be required to change this.

## Generating high-quality health system input

### *Human resources*

566. The education of health professionals needs to be rethought and transformed to improve the alignment between the education of health professionals, health systems and population health needs. In many countries, the education and training of health professionals have not kept pace with the challenges facing the health system. The systemic problem is demonstrated by fragmented and static curricula that produce ill-equipped graduates, a mismatch between competencies and the needs of service users and the population as a whole, and a predominant orientation towards hospital-based services and a narrow technical focus without broader contextual understanding.

567. To support the transformation of service delivery towards an evidence-informed culture with strong coordination across levels of care, education and training need to reflect several specific factors: producing a more flexible multi-skilled workforce to meet the growing challenges of changes in epidemiology, supporting team-based delivery of care, equipping personnel with improvement skills, supporting patient empowerment and learning new approaches to consultation and building of leaders' capabilities at all levels of various organizations to support these changes. The ability to update knowledge and competencies and to respond to new health challenges is a prerequisite for the health professionals of the future that should be supported by lifelong learning opportunities provided by the system of education for health professionals.

568. At the policy level, greater attention needs to be given to the future health care needs of an ageing population and its implications for the health workforce of the future. This includes revisiting the balance between the types of health workers trained and the need for new types of professionals at all levels of care. For example, increasing numbers of people with multiple health conditions requires more skilled generalists even at the hospital level. The education, training and regulation of health professionals should be based on the best available evidence on the future health care needs of an ageing population.

569. Improving the performance of the existing health workforce is critical, as it immediately affects health service delivery and, ultimately, population health. Improving performance is also important from the perspective of efficiency, since hiring the extra personnel needed to deal with growing demand is often not affordable. The quality of services should improve through accreditation and compliance with appropriate national standards for educational institutions and individual health workers in both the public and private sectors. Supportive and respectful management styles and working conditions have an empowering effect on the workforce, which in turn leads to higher morale and commitment and thus to better, more respectful and empowering relationships with patients.

570. Performance and productivity can also be enhanced by:

- improving the care process by creating lean pathways and care bundles;
- establishing coherent interdisciplinary health care teams with effective management;
- establishing competency-based curricula reinforced through in-service and out-service training;
- establishing enabling practice environments, including fair remuneration, appropriate incentives, access to necessary resources and the prevention of professional hazards;
- and

- enhancing the role of information, feedback and appraisal and ensuring that these are aligned with supportive and respectful management styles and working conditions.

571. Nurses and midwives have key and increasingly important roles to play in society's efforts to tackle the public health challenges of our time and in ensuring the continuity of care and addressing people's rights and changing needs. Nurses and midwives together form the largest group of health professionals in the Region. Because nurses and midwives have intimate contact with many people, they should be competent in the principles and practice of public health, so that they can use every opportunity to influence health outcomes and the policies necessary to achieve them, especially those who work in community settings as well as in schools, industry, prisons and facilities for displaced people. Political influencing, decision-making skills as well as financial, business and cultural competencies will be an important part of the new repertoire of all nurses and midwives, thus equipping the professions to work effectively beyond the confines of health and illness and enabling them to work at all levels across all relevant sectors.

572. Suitable policies and strategies should be adopted to attract and retain health care workers in rural and underserved areas. The specific challenges of the migration of the health care workforce should be addressed by putting in place necessary regulatory, governance and information mechanisms in accordance with the provisions of the WHO Global Code of Practice on the International Recruitment of Health Personnel adopted by the Sixty-third World Health Assembly. As stated in the Tallinn Charter: Health Systems for Health and Wealth: "the international recruitment of health workers should be guided by ethical considerations and cross-country solidarity, and ensured through a code of practice".

### *Medicines*

573. To ensure the quality, efficacy and safety of medicines, the following mechanisms need to be verified and put in place:

- countries develop and implement appropriate regulatory structures and legal frameworks;
- medicines are appropriately manufactured, stored, distributed and dispensed;
- health professionals and medicine users have the necessary information to enable them to use medicines rationally; and
- promotion and advertising are fair, balanced and aimed at rational drug use.

574. To improve access to life-saving medicines, a comprehensive set of policy instruments should be considered, including the selection of medicines and their rational use, streamlined systems for provision, funding policies, pricing, reimbursement and cost-containment policies and patent issues. Life-saving medicines are expensive in many countries in the European Region, contributing to both the observed health divide and inequities in use across countries in the Region. Many countries have implemented supply and cost-containment policies that aim at optimizing the equitable access to medicines given the constrained health system budgets. High prices are one factor affecting access to medicines and are in part caused by intellectual property rights granted to promote scientific innovation.

575. Countries should maximize the use of generic medicines where possible. Countries should also promote research and development for the diseases for which no good treatment is currently available. Although discussions on this topic have been ongoing for years, further

support is needed for innovation for the diseases that disproportionately affect people with low income.

576. Appropriate use of medicines will enhance the quality of care and improve the efficiency of the use of scarce health care resources. WHO estimates that more than half of all medicines worldwide are prescribed, dispensed or sold inappropriately and that half of all the people prescribed medicines fail to take them correctly. Overuse, underuse and misuse result in wasting scarce resources, continuing health problems or adverse reactions to medicines. Increasing drug resistance is a key problem in the region and undermines accelerating progress in responding to TB, for example. Rational use of medicines means that conditions are diagnosed correctly, the most appropriate medicine is prescribed and dispensed and the patient and the health system can afford this medicine. It also means that the patient is well informed about the medicine, understands the importance of the prescribed treatment and takes the medicine as required.

577. The rational use of medicines requires, first and foremost, the commitment and competence of doctors, nurses, pharmacists and users of medicines but also of politicians, policy-makers, user groups and professional associations. Innovative and effective strategies exist to improve the use of medicines through therapeutic committees, electronic formularies and clinical guidelines, feedback of data on medicine use, medicine information policies and evaluation of health outcomes.

578. Regulating the promotion of medicines is an enormous challenge for the European Region and must be high on the policy agenda. Pharmaceutical companies market many products and influence the prescribing practices of doctors and the demand for medicine and compliance of medicine users. This may potentially lead to the irrational use of medicines. The promotion of medicines can indirectly influence medical guidelines. Regulation of the promotion of medicines has so far eluded a satisfactory solution in many countries. This must be a high priority considering the increasing tension between the demand for health care services and the limited resources available. Good practices and lessons learned need to be shared widely.

### *Strengthening health funding arrangements*

579. Improving health funding arrangements can address these problems and will thus improve equity and solidarity as well as health outcomes across the Region.

580. Improving and maintaining universal coverage remains high on the agenda in the European Region, especially in the aftermath of the economic downturn. In the European Region, universal health care coverage is often undermined by shallow depth of coverage, exposing people to financial risk through formal and informal payments when seeking care. In addition, countries that have achieved universal coverage face challenges of sustainability and how to maintain universality in the face of increasing demand and limited resources.

581. *The world health report – Health systems financing: the path to universal coverage* provides a comprehensive overview of the global situation of universal coverage and offers actionable recommendations on how to move forward in strengthening the health financing systems of Member States. Universal coverage can be approached or maintained through one or a combination of the following policies: greater public financing for health through general taxes and/or a payroll tax; reducing fragmentation in the funding channels of the health system (pooling); adopting purchasing mechanisms that incentivize efficient behaviour among

providers; reducing inefficiency in the structure of service delivery systems; and implementing pricing and regulatory mechanisms to control the growth in the price of medicines (322).

582. Recent experiences in reforming health financing show that moving away from broad classifications of health systems, or labels such as the Beveridge, Bismarckian and Semashko models, allows increased innovation and experimentation. For example, the boundaries between social insurance systems financed through general taxes and payroll taxes are becoming blurred as countries are increasingly realizing that a mixed revenue base is most conducive to achieving high levels of coverage in a sustainable manner without unduly burdening the economy (323).

583. Well-tested financial instruments are available for health care purchasers to influence and measure the behaviour of health service providers and encourage evidence-informed clinical behaviour. These instruments improve the quality of care by reducing variation in practice, inappropriate utilization and health care errors, which contribute greatly to the health divide across countries in the European Region. In addition, orienting providers towards improving health could also be enhanced by paying for results defined and measured in terms of health gain. In particular, purchasing mechanisms should be developed that support and strengthen efforts to enhance care coordination. Non-financial instruments are equally important to encourage greater provider orientation towards evidence-informed health care. These include professional recognition, development opportunities and performance-oriented peer culture and working environments.

584. There are health financing solutions that ensure stable revenue flow to health during economic cycles. Lessons learned during the recent financial crisis and economic downturn can help policy-makers to better respond to future crises with effective policy instruments and preparing better for the times when the public budgets come under greater pressure. Economic downturns and their adverse effects on health and social budgets may not be able to be completely prevented, but vulnerability to these shocks can be reduced. Countries that accumulate reserves during economic growth or at least reduce budget deficits and external debt can opt for deficit financing through borrowing or depleting reserves when the economy performs poorly. Even when these options are not available, countries can decide to give higher priority to health within the available government budget and therefore reduce the adverse effects of the economic downturn. However, this is politically more difficult to implement.

585. A commitment to address inefficiency in the health sector is vital to secure popular and political support for more spending, especially during economic downturns. Advocating for more public spending on health is difficult when the system displays inefficiency and waste. Budget cuts create huge pressure on service providers to exploit efficiency reserves, but there is a limit to how much and how fast efficiency gains can help deal with economic recession, and the transition to a new, lower-cost delivery system needs to be carefully managed. Short-term solutions are important to keep the system running during a crisis, but such balancing acts may not be sustainable in the long term. For example, delaying investment and maintenance may provide temporary relief for the budget, but sustainable efficiency gains should also be sought, such as improving energy efficiency, shifting more care to outpatient settings, allocating more resources to primary care and cost-effective public health programmes, cutting the least cost-effective services and improving the rational use of medicines, to name a few. Finally, cutting investment in human resources such as education

and training for health professionals may adversely affect access to and the quality of care in the long run.

586. Financial sustainability should not be seen as a policy objective worth pursuing for its own sake (324). Fiscal constraints need to be respected while pursuing the goals of equity, financial protection and health gain. Economic policy imperatives, such as the drive for improving competitiveness, must be seen not simply as ends in themselves but the means to improving well-being among people in the European Region.

### *Enhancing the governance of health systems*

587. In an increasingly complex environment, health has become the business not only of health ministries but of a vast range of stakeholders, including purchasers of health services, professional organizations, educational institutions, donors, industry, advocacy groups, citizens and users of health services. Governments are becoming increasingly aware of the importance of broad public participation in policy-making and the demand for duly considering public values, priorities and concerns. Good governance strengthens health systems by improving performance, accountability and transparency. Informing policy-makers about the performance of health systems and the effects of implemented action is a key instrument of good governance that allows incentives and reward mechanisms to be designed and implemented in a sound and consistent legislative framework to achieve health systems goals.

588. A cornerstone of health system governance in the 21st century is making health policies more evidence-informed, intersectoral and participatory and transforming leadership accordingly. Most health policies have been developed using top-down approaches. However, in a whole-of-government environment, horizontal relationships across the whole of government need to be encouraged. Greater participation of citizens and civil society would enhance the orientation of new national health plans and strategies towards citizens and the users of health services and would articulate social values.

589. Systems thinking should be the predominant approach informing the design of national and subnational health plans, policies and strategies as the process is reoriented towards a more participatory process. This approach ensures that the objectives for the health system chosen based on social values match well the instruments used to strengthen health systems to respond to these objectives. Health policy challenges such as the current epidemic of chronic illnesses are increasingly recognized as complex problems, involving large numbers of variables, many causal linkages and positive and negative feedback loops. Only a long-term, broad and diversified approach will stem the rising prevalence of chronic disease. Intervention in just one area, or at just one level, may precipitate compensatory changes elsewhere that dampen the effect. Unintended consequences from specific interventions are to be expected, and monitoring and evaluation should form an integral part of policy implementation to ensure learning and adaptation.

590. Health ministries and their partners at the finance, environment and education ministries need to be better empowered to make the case and advocate for investing in health. Evidence abounds that health contributes to greater social and economic well-being for the entire society. Nevertheless, health and policies that can improve health are often given low priority, intentionally or unintentionally, during the budget negotiation process, especially if health policy-makers do not make convincing arguments. Importantly, health systems need to function as efficiently as possible in the face of increasing demand, and health ministries



should take the lead for ensuring as well as demonstrating the value produced by the health system for the investment. Finally, the capacity of health ministries to set priorities for resource allocation decisions also needs to be enhanced, especially during economic downturns, to protect low-income and vulnerable people.

591. The new generation of health system reforms requires creating an enabling environment for partnerships to thrive, for civil society to participate in priority setting and decision-making and for individuals to take better care of their own health. Beyond public-public ones, partnerships can take a multitude of forms, such as public-private partnerships, with some services outsourced to private organizations; public funding for private not-for-profit outreach workers; private health organizations with administrative boards that include local politicians; private health organizations owned by charitable organizations; and public health organizations managed by private entities. Achieving greater diversity in relationships requires that regulatory and institutional frameworks become more open and flexible to support the formation of partnerships. At the same time, health ministries need to improve their stewardship role and ensure that the actions of all its constituents, whether public or private, are in concert and working towards improving the health and welfare of the population.

592. Much remains to be done to ensure that evidence is systematically used in developing and implementing policy although this area has been developed in recent years. This requires continually disseminating new knowledge, building the capacity of policy-makers and policy analysts and implementing sustainable institutional solutions that link the demand for and supply of evidence in a mutually beneficial, respectful working relationship. Knowledge brokerage, creative forums for knowledge translation and co-production of knowledge are key to strengthening the link between evidence and policy to reduce the divide between those who produce evidence and those who use it.

593. Assessing regularly the performance of health systems is a key instrument for strengthening governance, provides input into policy development and contributes towards increased accountability. The results of performance assessment should feed any policy dialogue within the government and between programmes, public authorities at the national, subnational and local levels, health care providers and citizens. Fully developed systems for assessing health system performance expand beyond a list of indicators and targets. It measures the achievement of high-level health system goals based on health system strategies. They are comprehensive and balanced in scope, covering the whole health system and not limited to specific programmes, objectives or levels of care. This information is used to regularly report publicly and to ensure that new policies are developed based on evidence on the experience in implementing previous policies enhancing the accountability of government and agents.



### **Part 3. Making it happen**



594. Box 12 lists the action principles for making it happen.

**Box 12. Health 2020: key action principles 10–12**

10. Promoting health and equity in all policies by ensuring that all sectors understand and act on their responsibility for health

11. Paying attention to the voices and expectations of citizens and creating empowering care and community systems

12. Working together for health and well-being in the European Region – Member States, international strategic partners and public health constituencies

## **Making it happen**

595. In addressing Health 2020, Member States have different starting-points, and they will choose different approaches on how to move forward. A critical factor will be for countries to align their actions and choices to their contextual, political, social, epidemiological and economic realities and consider their capacity for developing and implementing policy. Member States need to identify whether their legislative, organizational, human resource and fiscal situations and measures are appropriate to the remit and main components of Health 2020.

596. Although every country will have its unique approach, it is suggested that Member States particular emphasize the following components of Health 2020: leadership, governance, institutional mechanisms and partnership. Action in these areas is critical to the implementation of Health 2020 in all contexts.

## **Leadership, innovation and capacity for health and development**

597. Health 2020 is a policy framework for improving health and well-being. It provides leadership and innovation for health. Health 2020 asserts health as a joint societal and whole-of-government responsibility. Health 2020 is built around the idea that health is everybody's business. When health is everybody's business, it can become nobody's business unless leadership is present. Policy, action and a social commitment to health will not happen by themselves. The people who are committed to protecting and improving health have an essential task to create awareness about the need to make health objectives part of society's overall socioeconomic and human development. This requires new forms of governance for health in the 21st century and poses tremendous demands on health leadership. Policy development processes for health should be transparent and open, ensuring as broad participation as possible by different sectors, levels and interest groups.

598. Health leadership can take many forms and reside with many actors: for example, international organizations setting standards and goalposts; heads of government giving

priority to health and well-being; health ministers reaching out beyond their sector to the ministers in other sectors; parliamentarians; business leaders seeking to reorient their business models to take health and well-being into account; civil society organizations drawing attention to deficits in disease prevention or in service delivery; academic institutions providing evidence for innovation; and local authorities taking on the challenge of health in all policies. Individuals such as philanthropists or media personalities have also increasingly taken on leadership roles for health and equity issues and have campaigned with great influence.

599. Leadership for health in the 21st century requires new skills. Much of the authority of health leaders in the future will arise not only from their position in the health system but from their ability to convince others that health and well-being are highly relevant in all sectors. Such authority needs to be performed through influence rather than control. Leadership has many forms and includes not only individual leaders but also institutional leadership, community-centred leadership as well as collaborative leadership. Collaborative leadership for health is already present in many areas. Groups of stakeholders are increasingly coming together to address key health challenges at the global, regional, national or local level. The global movement on HIV is a good example of such collaborative leadership. Similar movements are emerging around noncommunicable diseases, environmental health issues and health promotion.

600. The leadership role of health ministers is vitally important. Such leadership is key for developing and implementing national and subnational health strategies focused on improving health and well-being; advocating for and achieving effective intersectoral working for health; engaging the active participation of all stakeholders; delivering high-quality and effective core public health functions and health care services; and defining and monitoring standards of performance.

## **Governance for health**

601. Today new thinking is emerging about the interrelationship between the state and society to produce governance for health. Health has become a critical political and macroeconomic factor in societies. Health and well-being are key features of what constitutes a successful society and vibrant economy in the 21st century. Achieving Health 2020 needs to be underpinned by policies and approaches that address core values and goals such as human rights and equity.

602. Accordingly, the health and well-being of people must be positioned as a whole-of-society and whole-of-government goal and responsibility. Implementing governance for health and health equity requires governments to strengthen the coherence of policies, investment, services and action across sectors and stakeholders. Such governance for health requires a synergistic set of policies, many of which reside in other sectors other than health, supported by structures and mechanisms that foster and enable collaboration. Effective governance uses collaborative models of working to increase resource flows; improves the distribution of determinants affecting the opportunity to be healthy and redress current patterns and magnitude of health inequities; and reduces the risk and the consequences of disease and premature mortality across the whole population. Achieving whole-of-government governance for health is difficult and challenging. Much more is required than a

simple mandate. A key action area is to develop new or strengthened instruments and mechanisms that ensure equity of voice and perspectives in decision-making processes.

603. Many determinants of health and health equity are shared priorities with other sectors. These include goals such as improving educational performance, promoting social inclusion and cohesion, reducing poverty and improving community resilience and well-being. These provide a convening point for action across sectors that will produce benefits for health and health equity.

604. Better ways of measuring health and well-being are required to support governance for health, considering both objective and subjective data and applying equity and sustainability lenses in developing policy. One practical way forward would be new types of public health reporting, using new methods of measurement, to promote political, professional and public accountability debate and accountability. Another possibility would be to initiate a systematic effort to continually collect robust evidence on how a wide range of policies affect health and how health affects other policies.

## **Institutional mechanisms to promote change and innovation**

605. Political commitment is vital to focus the responsibility and accountability for improving health at all levels in society. Governments must have the ultimate responsibility and a commitment to protect and promote health and well-being for the people and societies they serve and to whom they are accountable. Nevertheless, governments alone cannot do all that is needed. Achieving collaborative leadership for health requires new ways of working by initiating governance action that can bring partners together and mobilize broad-based political and cultural support for equitable, sustainable and accountable approaches to developing health.

606. Engaging and catalysing action for health and well-being by all these people who make and influence policy require new systems for multisectoral and organizational cooperation to promote health and well-being. Such systems should be capable of building and ensuring joint action and the accountability for health of the health sector and non-health sectors, public and private actors and citizens. Clear evidence indicates the importance of developing local solutions to tackle long-standing patterns of social inequities in health. Integrating equity into equity into both urban and rural governance is also critically important.

607. Collaborative leadership can build on a multitude of very different intersectoral actions between ministries and societal sectors. Evidence support to develop a common understanding of facts, figures, analysis and interpretations allows common ground for dialogue and collaboration. Coordination across departmental boundaries is also necessary to promote mutual adjustment in agreed fields of action. Another intersectoral governance action is monitoring and evaluating common joined-up policies programmes and projects for health, as these are developed and implemented. Interdepartmental committees are another commonly used governance structure. Many examples show how they facilitate evidence provision, policy development and coordination. Some countries have tried to combine government budgets for funding intersectoral activities. Others have set up foundations to pool various budgets externally.



608. Countries should take opportunities to review and strengthen their existing governance arrangements for intersectoral policy development and working, including their incentive and accountability schemes. Providing legal mandate is a governance action that reflects high-level support for action on the social determinants of health. It is a tangible, rather “hard” governance action for aligning sectors. To facilitate intersectoral action, countries can build on institutionalized mechanisms or intersectoral governance structures. For example, at the cabinet table, ministers can develop joint policies either under the auspices of the head of government or through collaboration between selected ministries. Public health ministers who have an explicit intersectoral mandate can also support whole-of-government action. Some countries have used cabinet subcommittees to deal with health issues as part of a whole-of-government approach. Institutional platforms can be utilized, such as a jointly staffed health policy unit embedded in the prime minister’s office or joint committees or working groups. A small, dedicated resource unit may be needed to keep the issues of health and development alive and influential, moving across communities and sectors freely, creating and promoting regular dialogue and platforms for debate. Some countries have introduced joint targets and budgetary mechanisms for joint funding and accountability. Financial support may be from financial resources that are mobilized through pooling the budgets of different departments.

609. Governments need to reach out when trying to engage people, patients and societal stakeholders, including the private sector when appropriate. Public consultations, state health conferences and thematic platforms have served this purpose. Such advocacy can relate to government policies, laws and regulations to favourably modify issues such as taxation, marketing and advertising arrangements. Advocacy may not only aim to induce acceptance of legal changes but also to promote a shift in attitudes, culture and the social and physical environment.

610. A further requirement is to ensure mechanisms and resources that enable regular joint review of progress and the effects of policies and interventions through clear and multiple-stakeholder mechanisms for accountability. The available possibilities here include arms-length independent bodies, formal consultative groups and making documents and decision-making processes and outcomes widely available for debate. The aim is to capture learning and to strengthen the evidence base for effective policy and governance responses that can sustain action to improve health equity over time.

611. Intersectoral governance structures are not limited to the government. Parliaments can also advance the case for improving health and tackling the social determinants for health and health equity by using intersectoral committees.

## **Developing, implementing and evaluating national health policies, strategies and plans**

612. A key governance challenge is building a common vision for health improvement and mechanisms to provide accountability for measurable results. If such a vision is to be relevant to today’s pluralistic, mixed health systems, it needs to be aligned to today’s environment and challenges at the national and local levels and address the whole of the health sector, both public and private. Publishing regular health policies, strategies and plans and using health targets are means of bringing forward shared values, fostering synergy, mitigating overlaps between actions and promoting transparency and accountability. For low- and medium-

income countries, the process of developing health policies, strategies and plans also assists donors in health planning.

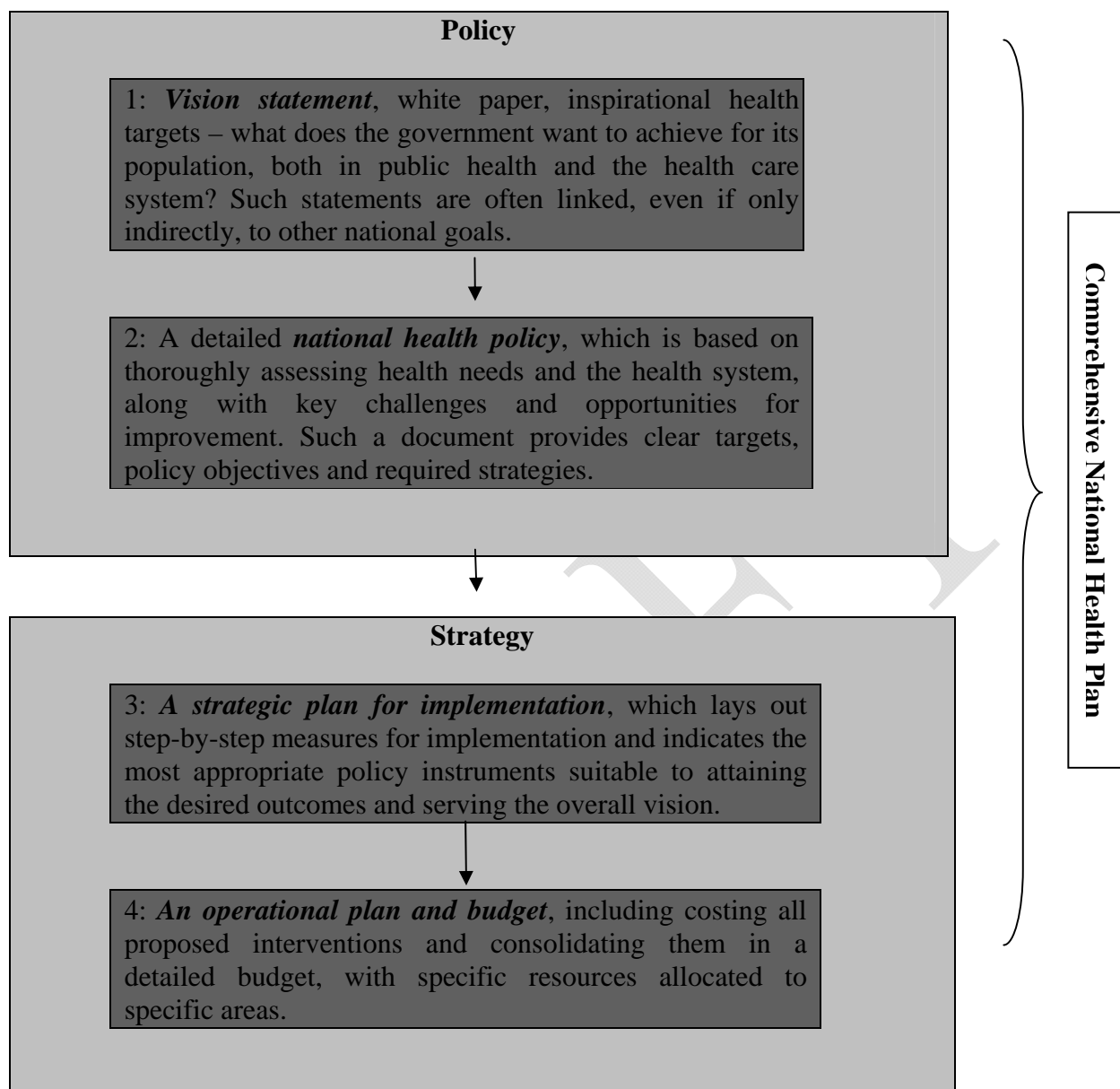
613. Preparing a comprehensive plan for developing the health system can inform the development of a comprehensive approach towards achieving universal access to care and contributing to the right to health more broadly. This is a core obligation arising from the right to health: the right to an effective and integrated health system, serving public health needs and encompassing both health care and the underlying determinants of health, which is responsive to national and local priorities and accessible to all.

614. Such a policy framework for health and well-being (with overall goals) should be clearly articulated and accepted across the whole of government. This process is relevant wherever such plans are developed: for example, at the national or subnational levels. This process with its proposed plans and instruments must reflect an understanding of current contextual challenges and should address the whole of the health sector, both public and private, especially in pluralistic, mixed health systems. Such instruments must go beyond delivering health care and address the broad public health agenda as well as the social determinants of health and the interaction between the health sector and the other sectors of society. Concern for public health is vital as a key policy at all levels of governance, contributing to advancing an effective and integrated health system serving public health needs and focusing on primary health care. Related to this is the aim of strengthening intersectoral approaches.

615. This comprehensive plan for developing the health system can provide an overarching inspirational umbrella policy focusing on improving population health under which sector strategies will fit. This umbrella is not a health care strategy but a health strategy involving a full range of stakeholders and with shared responsibilities to achieve health targets. This is the first stage of a continuum of strategic planning, from inspirational health targets that form a vision statement; through a health policy based on assessing health and health system needs, challenges and opportunities, and including policy objectives, strategies and targets; through a strategic plan for implementation; to operational plans and budgets. Together these elements make up a comprehensive health plan (Fig. 11).

616. Health policy is developed through diverse approaches and levels and with differing aims (Fig. 11). This is a simple linear representation of the key elements in national health planning, whereas health improvement is a more complex adaptive system working within a broad vision and framework strategy. Mechanistic approaches are not sufficient and do not work. More flexible and integrative approaches, managing and improving performance and consistency in decision-making are required. Indeed, comprehensive health strategy development is by nature a political process, and this has to be considered at every stage (including policy, planning and programming).

Fig. 11. Four elements in developing a comprehensive national health plan



617. The value resides in the process, and hence the importance of the national ownership to make the full benefits of the process. Such plans are more likely to be implemented if they are made by the people who will implement them and are compatible with the sectors' capacity, resources and constraints. The instruments must chart realistic ways of developing capacity and resources by mobilizing the government and partners. Political and legal commitments are vital to ensuring long-term sustainability. Flexibility is needed to adapt to unexpected developments in the political, economic and health environment. Such instruments also need to ensure the acceptance and support of many stakeholders who may have competing interests.

## Strengthening public health capacity and services

618. Public health services inform policy-making, resource allocation and strategic development for promoting health. However, in many countries within the WHO European Region, a common understanding of what constitutes public health and public health services has been lacking; skills and infrastructure across the European Region are patchy; and the capacity to meet contemporary public health challenges remains very limited in many countries. In some countries, lack of political commitment has held back the development of public health. A key element in further developing public health is to integrate its principles and services more systematically into all parts of society through increased whole-of-government working, including intersectoral action, health in all policies and strengthening health systems.

619. If public health is to be at the centre of improving health, then investing in public health services must be seen as an investment in the long-term health and well-being of the population as a whole, which is both of intrinsic value and a contributing factor to economic productivity and creating wealth. Public health leaders must be capable of initiating and informing the policy debate at the political, professional and public levels to advocate for policies and action to improve health. This debate will draw on a comprehensive assessment of health needs and capacity for health gain across society. It will require analysing broader strategies for health, creating innovative networks for action across many different actors and acting as catalysts for change.

620. Public health goes beyond the boundaries of the health sector, encompassing a wide range of stakeholders throughout society.

621. Health promotion and disease prevention are particularly important elements of public health, and further developing primary health care provides a key strategic method for effectively delivering these services. A combination of previous lack of investment in disease prevention and recent reforms and changes, including decentralizing and privatizing health care services, has meant that many countries lack the relevant infrastructure and services. The overall share of health expenditure allocated to public health programmes remains relatively small.

622. Many of the most pressing policy challenges affecting public health involve addressing complex problems such as climate change, obesity and health inequities. These wicked problems transcend the capacity of any one organization to understand or address. There is often disagreement about the causes of such problems and a lack of certainty about the best way to tackle them. An approach based on systems thinking and analysis is required to understand the complexity of the processes underpinning health and disease and for formulating the complex whole-of-government interventions required.

623. Protecting and promoting population health inevitably reaches far beyond effective delivery of the public health function in any single country. It involves countries working together to address problems arising from globalization, the impact of the global economy and the challenges associated with global communication strategies.

## Investing in health

624. Ensuring adequate investment in health is vital, and operational expenditure for health-improving activities must be a cornerstone of operationalizing Health 2020 in the European Region. Public spending on health is at or below 10% of total government spending in one third of the countries in the Region. Experience suggests that, below 12%, ensuring sufficient financial protection is difficult. At such low levels of spending, maintaining the health system (infrastructure and staff) absorbs funds, often without adequate funds for key medicines and supplies, and certainly without adequate funds for investing in transforming the present structures and processes to the people-centred health system of the future.

625. Investing in health must be seen as an investment in the long-term health and well-being of the population as a whole, which is both of intrinsic value and a factor contributing to economic productivity and creating wealth. Public health leaders must be capable of initiating and informing the policy debate at the political, professional and public levels to advocate for policies and action to improve health. Further, moving towards the people-centred health system described in Part 2 requires ensuring adequate investment for the transformation, including changing service delivery structures and processes, the education and training of health professionals and further investing in health management.

626. Catastrophic and impoverishing expenditure still remains in the Region despite good progress at moving towards and maintaining universal coverage. A large share of this results from outpatient medicines, hospital care and diagnostics, some of which are discretionary. The poorest 20% of the population is most likely to delay seeking care because of fear of financial catastrophe. Although there are several policy options for protecting poor and vulnerable people (exemptions from paying user charges or co-payments; extending coverage to long-term unemployed people; targeting health spending better; and targeting social assistance better), international evidence shows that adequate public funding for health is needed for achieving reasonable levels of financial protection.

627. Along with advocating for investing in health, value-for-money considerations need to be at the fore of the policy discussions as future needs continue to grow at a pace that is often much greater than economic growth and the potential of the public purse. A commitment to address inefficiency in the health sector is vital to secure popular and political support for more spending. Efficiency gains need to be a key part of national health plans and strategies rather than a short-term response to budget cuts because the transition to a new, lower-cost delivery system needs to be carefully managed and may require investment in the short term. Sustainable efficiency gains should be sought, such as improving energy efficiency, shifting more care to outpatient settings, allocating more resources to primary care and cost-effective public health programmes, cutting the least cost-effective services and improving the rational use of medicines.

## Operationalizing people-centred health systems

628. Operationalizing people-centred health systems requires (1) specifying expected health gain in priority areas to provide focus to drive policies; (2) ensuring universal coverage for the core services that contribute the most to achieving specified health gain for the investment; and (3) removing the health system barriers that limit coverage with core services. This

operational approach is a way to identify the health system bottlenecks that need to be tackled to ensure maximum synergy with health improvement priorities.

629. The performance of often-fragmented health systems may currently be mismatched with the rising expectations of societies and citizens. The changing sociocultural and demographic landscape, the migration flows, the coexistence of different epidemiological profiles and the environmental challenges across the European Region imply rethinking a wide range of assumptions about health and social care, participation, empowerment, fairness and human rights, all happening in a situation of increased domestic expenditure on health with limited resources. In this context, strengthening health systems and health system governance are crucial. Health ministers and ministries, and other national authorities, need help and support in improving health system performance and in increasing accountability and transparency.

630. The pursuit of specific and measurable health gain should drive the actions of governments at the intersectoral level, health ministries, health system managers and the health professionals involved. Selecting priority areas for improving health, rather than focusing on all conditions, is an important opportunity for making focused national health plans and strategies with achievable results. For most countries in the European Region, priority health outcomes are likely to include, but not be limited to, cardiovascular disease, cancer, maternal and child health, mental health, HIV infection and TB. Adding priority target populations that are at higher risk by criteria of sex, socioeconomic status, social exclusion and other criteria further sets priorities for and adds focus to the action that will follow.

631. To accelerate gains in selected health outcomes, coverage levels with evidence-informed core services, both population and individual, that lead to the greatest health gain for the investment need to be better understood. Scaling up coverage with core services remains relevant in the European Region, since evidence increasingly shows that many services with an established evidence base do not reach populations in need (such as reducing salt and saturated fat in diets, increasing taxes on tobacco, detecting and managing hypertension, managing stroke by multidisciplinary teams and actively managing the third stage of labour). To scale up the delivery of core cost-effective services and free up resources, efforts need to be made to expand evidence-informed intervention and reduce the delivery of inappropriate care.

632. Evidence-informed core services for key health conditions of the Region are well known to health policy-makers and health professionals, and key technologies and medicines are available in most countries in the Region. Lack of knowledge and lack of technologies are rarely a cause for low coverage with core services. Several health system barriers may often prevent the delivery of core services to people in need: health financing, the structure of service delivery, the distribution and practice of health professionals, the availability and price of medicines and governance arrangements. The same barrier may affect several health programmes: for example, lack of leadership and effective mechanisms for intersectoral work may prevent key population behaviour change programmes from being implemented; excess infrastructure may absorb a disproportionate share of the budget, requiring high informal payments for care, which ultimately undermines access to needed care; and lack of provider autonomy may undermine programmes and efforts to improve quality at the facility level. A health system perspective is therefore necessary to achieve people centeredness and better and more equitable health gains.



## People and patients' voices and empowerment

633. A core principle of Health 2020 is the importance of participation and responsiveness, with the full engagement of citizens. These are part of the fundamental values that underpin modern health systems and vital to achieving health promotion objectives and health system objectives such as patient safety, quality, transparency and accountability.

634. Citizen empowerment is a multidimensional social process through which individuals and populations gain better understanding and control over their lives. As part of the emancipation and literacy movement in general, citizens are increasingly seen as the co-producers of their own health. Health education and health promotion activities are aimed at making people more aware of the effects of all kinds of factors (personal, environmental and behavioural) on their health status and showing them ways to prevent ill health by acquiring healthy lifestyles. Further, as patients they are becoming active and informed actors in making decisions on their own treatment. Increasing evidence demonstrates that health care becomes more effective if patients are more involved in the whole health care process. Patients need to be placed in the centre of the health care process and participate in managing it, especially since health care itself is becoming ever more complex and personalized but also as an ageing population increasingly has multiple and chronic conditions that require involving a team of health professionals.

635. The term civil society refers to the wide range of nongovernmental and not-for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, religious or philanthropic considerations. Civil society organizations include a wide array of organizations, such as community groups, nongovernmental organizations, labour unions, indigenous groups, charitable organizations, faith-based organizations, professional associations and foundations.

636. The European Region has been at the forefront of forming innovative partnerships with civil society (325), including with communities of key populations at higher risk, people living with HIV and nongovernmental organizations that advocate for and provide services. Several pan-European networks and organizations have emerged, and the number and size of networks of people living with HIV have increased (326).

637. Civil society is a key actor in formulating, promoting and delivering change. Civil society should be considered as equal actors in delivering health services. Civil society organizations have proven to be able to provide health services, especially to populations that would otherwise not be accessing health services, because of widespread stigma and discrimination among health professionals and other reasons. The peer-to-peer and outreach work is an important approach that increases the reach of such groups as people who inject drugs or men who have sex with men, especially in countries where this behaviour is criminalized.

638. Such community engagement not only increases the effectiveness and scope of implementation efforts but also plays an important part in developing policies, programmes and research. The people who have such diseases as HIV infection and TB need to shape a truly patient-centred approach. Civil society is being consulted more often in the European Region, and its involvement in formulating HIV policy and in decision-making has increased in many countries in the Region and serves as a useful model for other conditions. Civil



society should be consulted and involved in a meaningful way, more often and to a greater degree throughout the Region.

639. For all these reasons, citizen and patient empowerment and patient-centred care are considered important elements for improving health outcomes, health system performance and satisfaction. It can reduce the use of health services and health care costs and bring about better communication between patients and health professionals and better adherence to treatment regimens. Eventually it will lead to better life expectancy, more control over the disease, increased self-esteem, inclusion in society and improved quality of life.

640. Care that is truly patient-centred improves the perception of care quality, can improve compliance, can reduce unnecessary care and can improve treatment outcomes. Patients and their families become part of the health care team in making clinical decisions. In addition, patient-centred care considers cultural traditions, personal preferences, values, family situations and lifestyles. This approach requires greater investment in patient education and health literacy by fostering civil society involvement.

641. Patients can be more involved at various levels. At a more collective level, it is important that citizens can take part in the societal debate around health and health care. Important issues such as the definition of entitlements, the quality of health services, priority-setting in health and ethical questions around life and death require the voice of the public. Increasingly, advocacy and patient groups are invited to formally represent the interests of patients and their families in political and administrative bodies in the health sector. At a more individual level, information is provided to better enable people to take informed decisions about their health and treatment and to monitor the quality of services. This also includes increased choice of provider, public reporting of providers' outcome data and access to personal medical records.

642. Finally, individual patients' rights are defined and formally adopted to enforce the fundamental human rights of privacy and personal integrity in the specific context of health care. Where these patients' rights have a more preventive and sometimes a more declaratory nature, they are complemented by legal provisions on professional liability, compensation and redress to take action in case patients are harmed.

643. Although patients can be empowered in different ways, many barriers still need to be overcome, including cultural, social or even health care. Indeed, not everyone is capable or willing to take control over his or her health and treatment. Patients are often in a vulnerable position and lack the knowledge or the information to make decisions about their health status. The effect of health promotion may vary according to social and educational backgrounds. More strongly emphasizing patient empowerment, people's responsibility for their health and choice even risks exacerbating health inequities. Besides, health professionals also need to be convinced and motivated to allow patients to take a leading role in their treatment. For a long time, physicians commonly had a paternalistic and patronizing approach to their patients. Education and training today must teach health professionals to stop acting like hosts to patients and their families and start acting like guests in their lives.

644. Next to these mental shifts, policy-makers face other important challenges when designing a framework for patient empowerment. An important one is how to establish effective information strategies. Again, increasing health literacy will be needed. Despite a growing wealth of information, patients still seem to make irrational choices. Another challenge is how to strengthen consumer choice as a way to ensure trust and self-

determination without falling into the pitfall of consumerism that, in turn, may jeopardize efforts to improve the quality of health care by making health care more evidence informed and coordinated.

## Target setting

645. Setting targets for health has a tradition in public health practice. In 1981, the Global Strategy for Health for All by the Year 2000 set 12 global targets for health. A European strategy called for formulating specific regional targets to support the implementation of the strategy, and the WHO Regional Committee for Europe adopted 38 specific regional targets at its thirty-fourth session in Copenhagen in September 1984, together with 65 regional indicators to monitor and assess progress. By the year 2000, more than half the Member States had approved or were formulating targets for health at the national, subnational or city levels.

646. Since then, interest in setting targets for health has surged. Targets, however, are not an end in themselves. Their use should promote health and well-being, by improving performance and accountability as the Health 2020 policy is implemented. Targets strengthen accountability for implementation and measure progress. They can be quantitative or qualitative but should always be SMART: specific, measurable, achievable, relevant and time-bound. Every target should represent real progress and should probably be set for the input, processes, output and outcomes of the Health 2020 policy.

647. A working group has been established comprising seven members of the Standing Committee of the Regional Committee with expertise in this area supported by the WHO Regional Office for Europe and co-chaired by the WHO Regional Director of Europe. This working group has now proposed targets and indicators in each of the following three areas: the burden of disease and risk factors; healthy people, well-being and determinants of health (life expectancy, inequalities and vulnerable groups); and processes, including governance for health and health systems (Annex 2). The group has also proposed indicators or indicator areas for each proposed target. Member States will discuss and approve the final proposed targets at the sixty-second session of the WHO Regional Committee for Europe in Malta in September 2012.

## Partnerships and partners for change in the European Region and globally

648. Partnerships for health will be crucial and will be a core concept within Health 2020. An approach to improving health based on responding to multiple determinants of health across the whole of society must involve all of society. Many of the health challenges need to be addressed through whole-of-government and whole-of-society approaches that include civil society and the private sector as well as the mass media. This is partly about making whole-of-government and intersectoral governance for health work better and partly about developing broad international, national and local constituencies for health.

649. Effective partnerships with institutions, citizens and communities and with public and private stakeholders will be essential at several levels in gaining insight into local

determinants of health, winning support for action at the grassroots level and contributing to community development. Accordingly, Health 2020 will take a broad and inclusive view of the European Region public health community. Partnerships for health will work to create unity at all levels by actively promoting and adopting a common outcome-focused Region-wide policy, Health 2020. Health 2020 will map options and tradeoffs that can be used in advocating for policies that support health in all sectors.

650. The European Region is already a major setting for international and global health actors, not just the WHO Regional Office for Europe but also the EU (an essential international partner for the WHO Regional Office for Europe in its quest to improve the health of the Region's inhabitants in all 53 countries), the Global Fund to Fight AIDS, Tuberculosis and Malaria, and a wide variety of other bodies, including many nongovernmental organizations of differing size and scope.

651. The role of WHO in this process will rest not only on its pursuit of technical excellence, evidence-informed practice and results-based management but also on its commitment to helping its Member States fully realize these principles within their own health systems and development context. Indeed, the overarching mission of WHO is to support national structures, policies and institutions, thereby improving not only health but also health system capacity.

## Information and research

652. All policies and actions to improve health need a firm knowledge base, and implementing Health 2020 will require improving the evidence base for health action. Policy-makers need trustworthy, up-to-date information on health and well-being status, on health needs and on health system goals and outcomes. Health information is a policy resource that is vital to health planning, implementation and evaluation. Health-related information aligned to research is needed on health needs and health system functioning, effectiveness, efficiency and outcomes. Developing and evaluating policy depends fundamentally on aligning and combining the health-related information obtained from both sources.

653. Health information systems and services need significant development across the Member States of the WHO European Region. The WHO Regional Office for Europe works to assist Member States in their assessments and technical improvements and by providing health information to Member States through:

- working with international partners to ensure the standardization, international comparability and quality of health data;
- working with a network of health agencies dealing with health information and evidence; and
- actively compiling, disseminating and granting easy access to both health data and research evidence.

654. The databases of the WHO Regional Office for Europe are the main repository of health statistics in the European Region. This key resource provides authoritative health data on the 53 countries in the WHO European Region. This enables comparative analysis of the health situation and trends in the Region and surveillance of disease and monitoring of trends in policy areas, including key determinants of health (such as alcohol, tobacco and nutrition).

655. Similar repositories of health data are provided by other organizations interested in health in Europe, such as the EU and the Organisation for Economic Co-operation and Development.

656. In addition, good health-related research is among society's most valuable and important tools for laying the foundations of better strategies to improve health and health care. The European Region can draw on the work of many of the world's leading research institutions. More anticipatory analysis is required. What effects will new technologies have? What are the best strategies to address the health of very old people? What could the health systems of the future look like? What effects will climate change have? What effects will the new communication technologies for health have? Will there be enough physicians and other health care practitioners? What sort of skills and competencies will they need? Will new types of hospitals be needed? What is the potential of home care and community-based care? In short, what are the best ways to prepare for an uncertain future in health?

## The possible roles of WHO

657. The WHO Regional Office for Europe will work with Member States, WHO headquarters and other regional offices, as well as international partners, to support the implementation of Health 2020, so that European Member States can derive benefit from the wide experience and potential for action inherent in the global nature of WHO.

658. Against this background, the Regional Office will:

- act as a health conscience, advocating for the principle of health as a fundamental human right and identifying and drawing attention to health issues and concerns;
- act as a major centre for information on health and health development;
- promote Health 2020 throughout the Region and ensure that it is periodically updated;
- provide up-to-date evidence-informed tools for Member States to help them turn Health 2020 into action;
- catalyse action by:
  - providing technical cooperation and assistance to Member States;
  - exercising regional leadership to eradicate, eliminate or control diseases that are major threats to public health;
  - promoting the implementation of Health 2020 through partners and networks across the European Region;
  - facilitate the coordination of emergency preparedness and response to public health disasters in the Region; and
- ensure links and coherence with global WHO developments.

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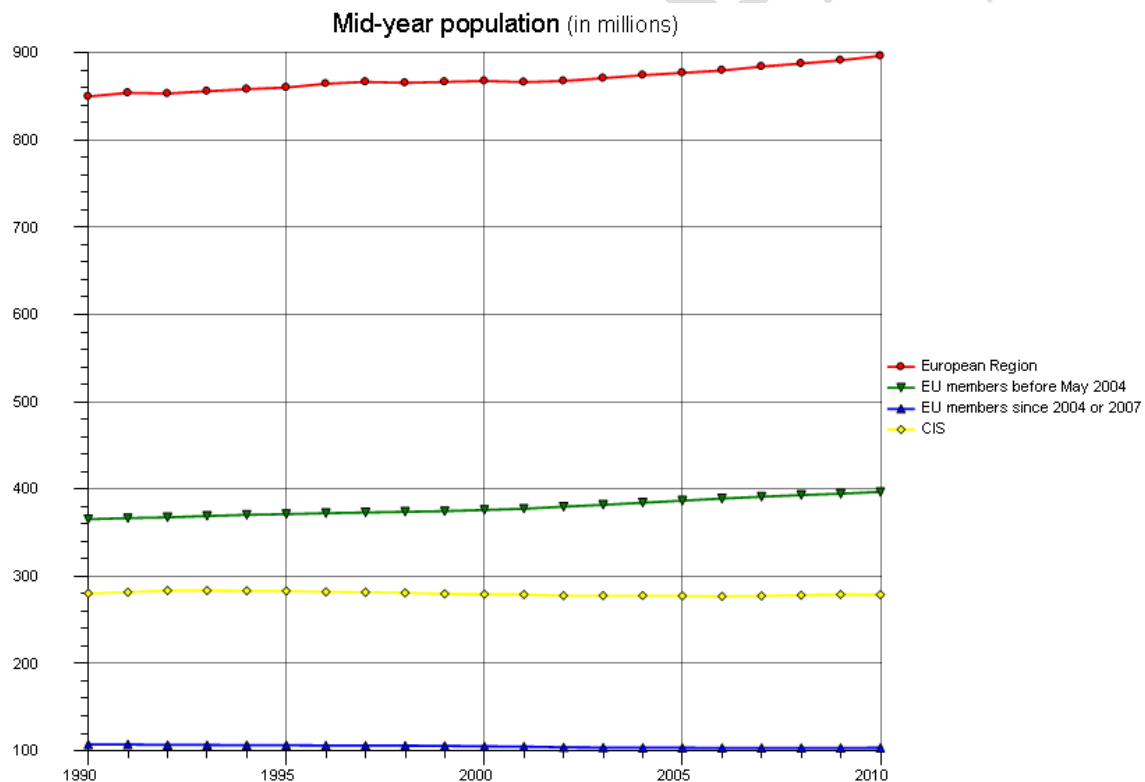
## Annex 1. Demographic and epidemiological trends in the WHO European Region

### Demographic trends

The WHO European Region is undergoing important demographic and epidemiological changes that are shaping the needs for health promotion, disease prevention and care in the future. The population of the 53 countries of the European Region reached 904 million in 2008; 44% live in EU15 countries and another 33% in CIS countries (Fig. 1).

Decreasing crude birth rates (with fertility lower than 1.7 children per woman) coupled with relatively stable or slowly increasing crude death rates and migration result in a decreasing or negative annual population increase, notably in the EU12 and the CIS countries in the early 1990s until the early 2000s.

Fig. 1. Estimated mid-year population in the WHO European Region, 1990–2010



Source: European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

Migration, generally resulting from natural and human-made disasters and social, economic and political disruptions, is an additional factor influencing the demographic transitions observed in Europe. An estimated 73 million migrants live in the European Region, or nearly

8% of the total population, with women representing 52% of the migrants.<sup>1</sup> Net migration estimates and projections show dramatic changes between 2000 and 2020, especially for CIS countries and the other country groups. Net emigration rates in CIS countries reached nearly 16 per 1000 population in 2000, whereas most EU15 and EU12 countries, where two thirds of migrants in the European Region live, witnessed an increase in net immigration.

According to geographical distribution, 69% of the population of the European Region lives in urban settings;<sup>2</sup> this is expected to exceed 80% by 2045.<sup>3</sup>

## Epidemiological situation

Overall, health in the European Region is improving, as suggested by life expectancy at birth, which has increased nearly 5 years since 1980 and reached 76 years in 2010 (Fig. 2). Projections suggest that it will increase to nearly 81 years by 2050 at a similar pace as from 1980 to 2010.<sup>4</sup> Nevertheless, there are important gaps between groups of countries. For example, the EU15 countries have already reached the 2050 level expected for the whole Region and will continue increasing, reaching 85 years in 2050. In contrast, the CIS countries are only expected to reach 75 years of life expectancy by 2050, the same level observed in the European Region as a whole 40 years earlier or that achieved in the EU15 countries 65 years before.

Moreover, life expectancy presents other important differences according to country and sex: between 1980 and 2010,<sup>5</sup> women in France gained nearly 6 years of life expectancy to reach nearly 85 years, the highest level in the European Region; women in France outlive men in France by 7 years. In contrast, men in the Russian Federation gained only 1.4 years, reaching the lowest life expectancy in the European Region of 62.8 years in 2010. Although men's absolute life expectancy levels were lower, men generally had larger proportional gains for 1980–2010 than women did.

In addition, life expectancy may be further broken down to account for the length of life lived in less than full health because of disability and disease at different ages. In the European Region, although women live on average 7.4 years longer than men, the average difference in healthy life is only 5 years, indicating that women live a smaller share of their lives in good health than men.

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<sup>1</sup> World Population Prospects: The 2008 Revision [database]. New York, United Nations, Department of Economic and Social Affairs, Population Division, 2008 (<http://esa.un.org/unpd/wpp>, accessed 1 September 2011)

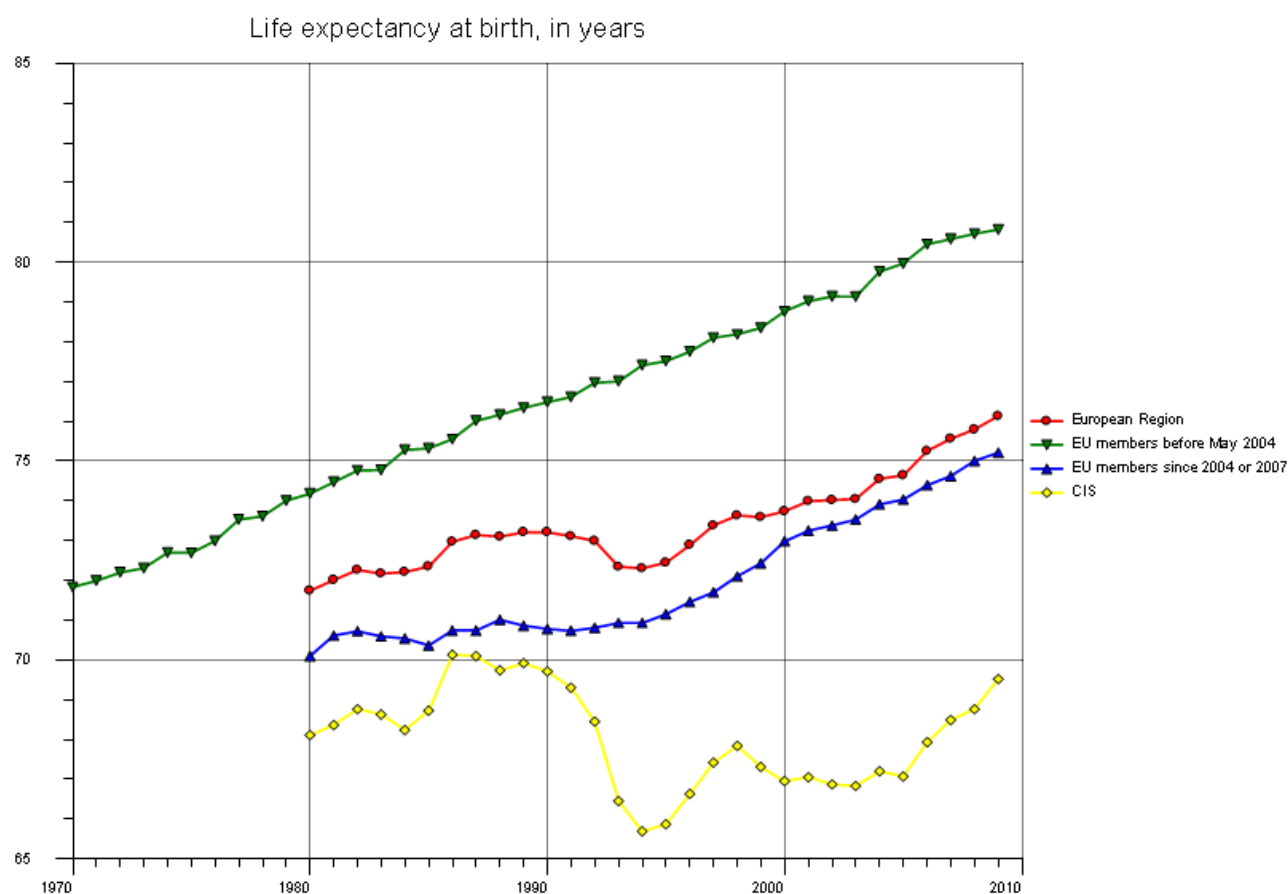
<sup>2</sup> European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

<sup>3</sup> World Urbanization Prospects, The 2009 Revision [online database]. New York, United Nations, Department of Economic and Social Affairs, Population Division, 2009 (<http://esa.un.org/unpd/wup/index.htm>, accessed 27 June 2011).

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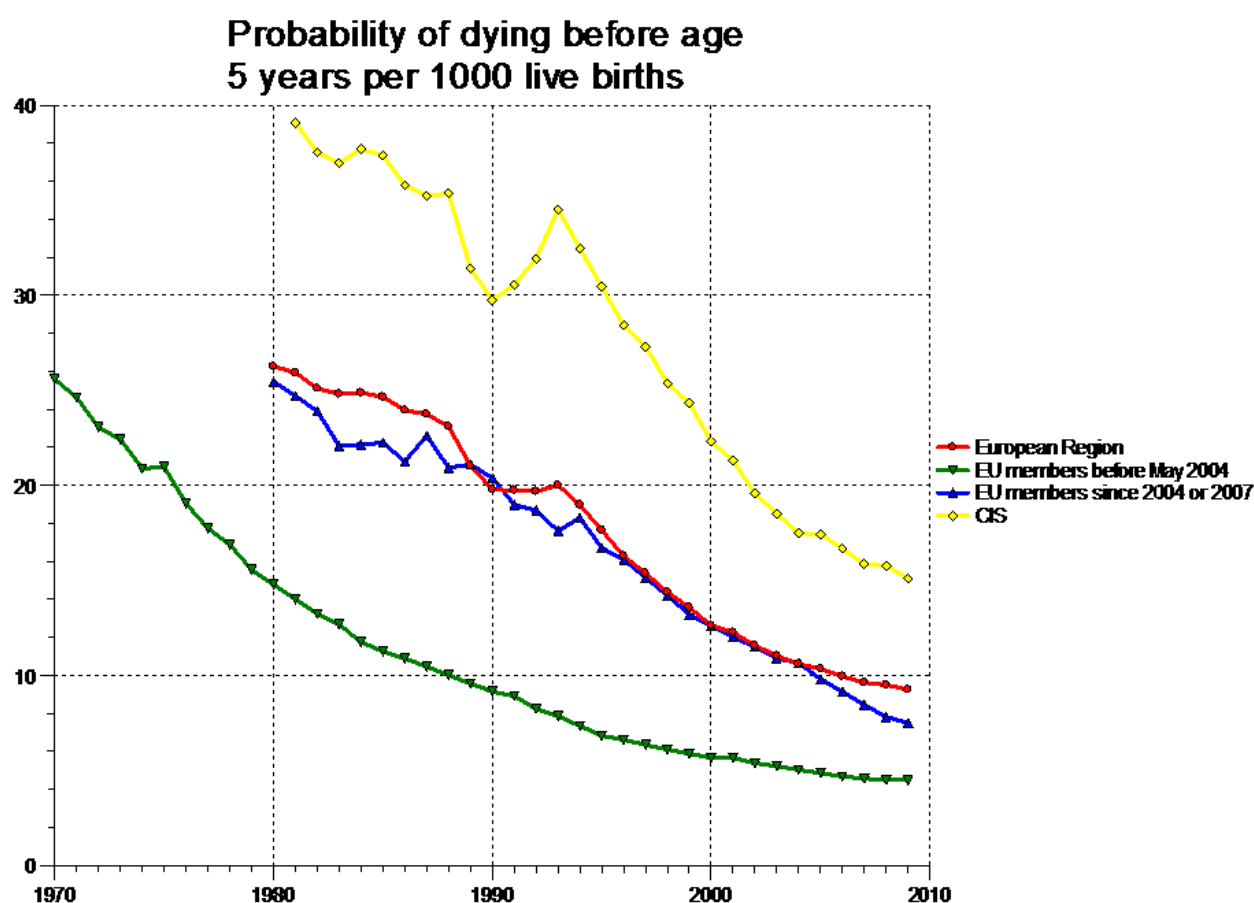
Fig. 2. Life expectancy in country groups in the WHO European Region, 1970–2010



Source: European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).  
://data.euro.who.int/hfadb, accessed 23 January 2012).

Mortality trends by age and country groups across the European Region show important differences. For example, the average child mortality in 2010 in the Region was nearly 9.3 per 1000 live births, which means a near 50% reduction from its levels in 1990 (Fig. 3).

Fig. 3. Child mortality trends by country group in the WHO European Region, 1970–2010



Source: European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

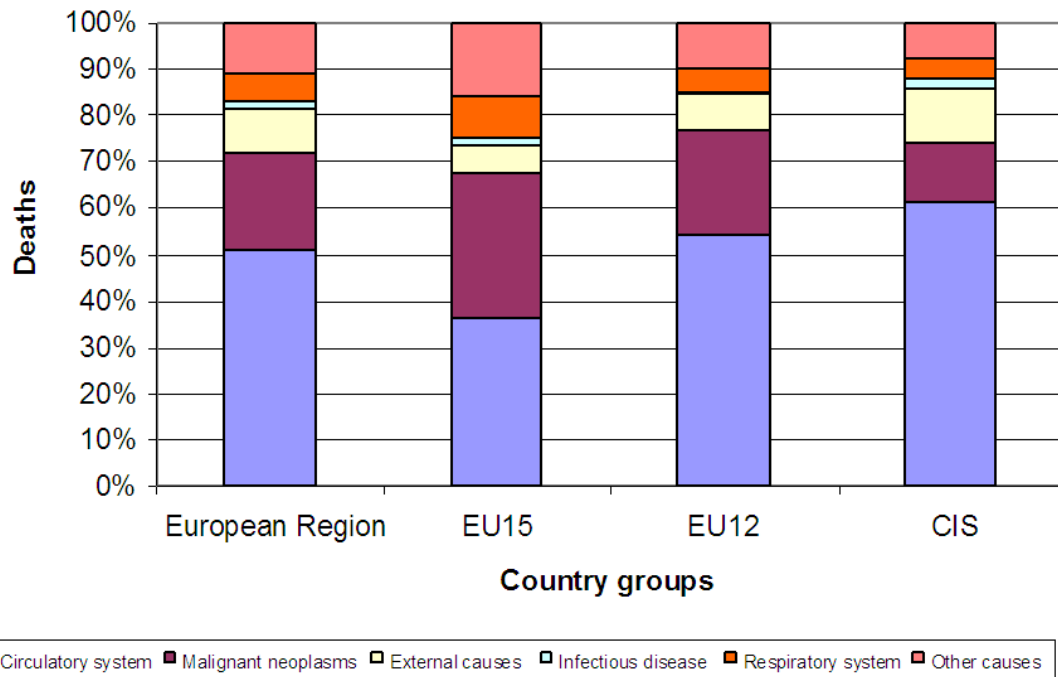
The increasing ageing of the population has been associated with the increased control of communicable diseases early in life, the delayed occurrence of chronic noncommunicable conditions and reduced premature mortality because of improvements in living conditions and health care. Today in the European Region, noncommunicable diseases produce the largest proportion of mortality, accounting for about 80% of deaths in 2008.<sup>6</sup>

Among broad groups of causes, mortality from cardiovascular diseases accounts for nearly 50% of all deaths (Fig. 4) but ranges from 35% in the EU15 countries to 65% in the CIS. Cancer mortality follows in frequency, accounting for 20% of deaths in the Region, varying from 7% in CIS countries to 30% in EU15 countries. Injuries and violence are the other major causes of mortality, representing 8% of all deaths and twice as frequent in the CIS countries as in the EU15 and EU12 countries.

Moreover, reflecting the changing disease patterns in Europe, mortality trends show that cardiovascular disease deaths declined by more than 50% in the EU15 countries and 30% in the EU12 countries between 1981 and 2008, coinciding with a 10% increase in the CIS (Fig. 5). This contrasts with the cancer situation, which has remained largely unchanged in the EU and CIS groups.

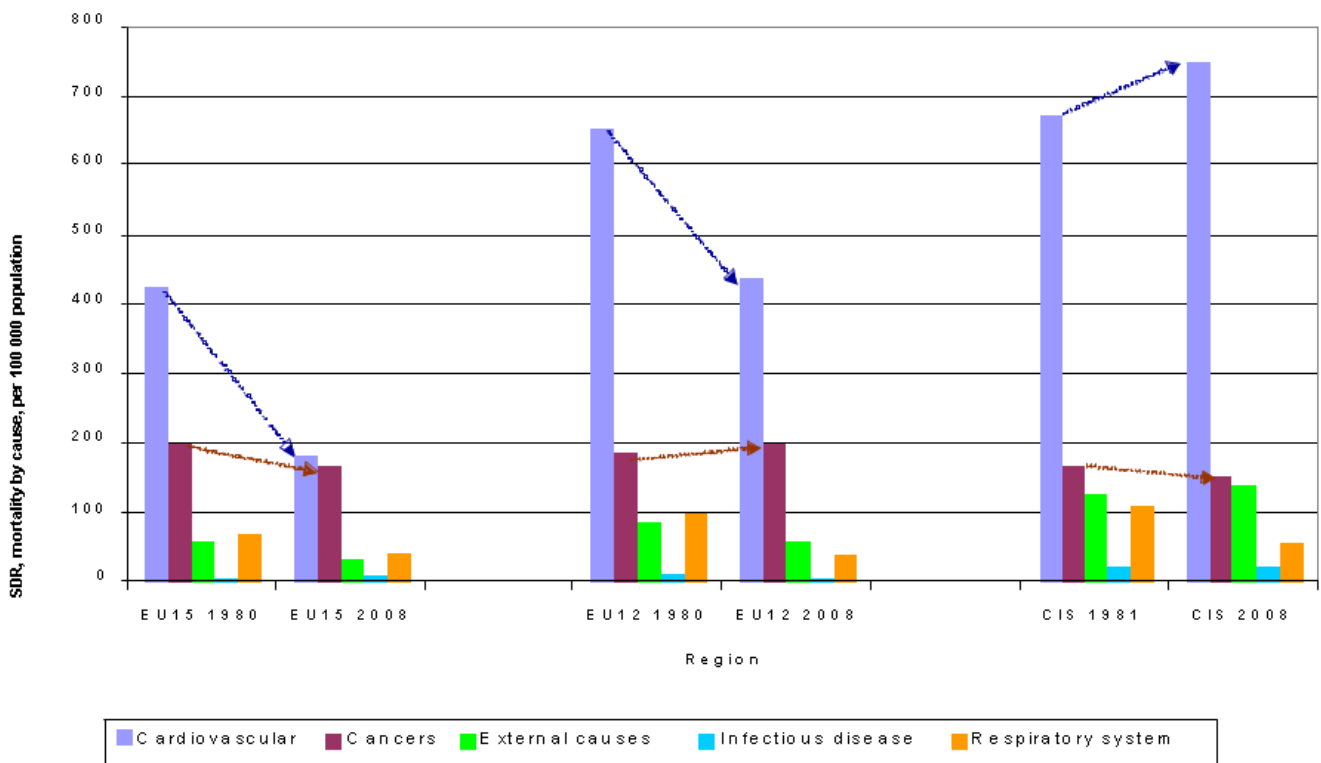
<sup>6</sup> European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

Fig. 4. Proportionate mortality by broad group of causes of death by country group in the WHO European Region, 2008



Source: European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

Fig. 5. Changing disease patterns by country group in the WHO European Region, 1980–2008



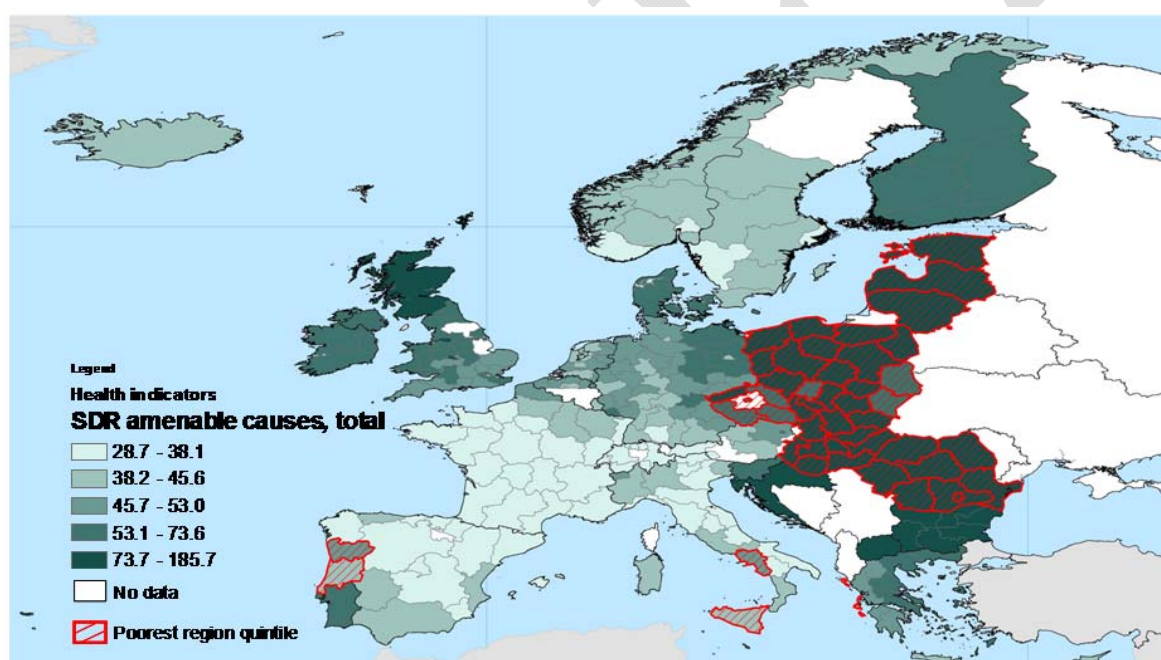
Source: European Health for All Database [online database]. Copenhagen, WHO Regional Office for Europe, 2011 (<http://data.euro.who.int/hfadb>, accessed 23 January 2012).

Because more than 70% of mortality occurs at ages older than 65 years, when disease processes have been underway for several years, premature mortality (deaths of people before age 65 years) is more informative for developing public health policy and programmes and interventions for delaying disease and the onset of disability.

In this regard, mortality trends show that cardiovascular diseases have remained the most important causes of premature death in the Region, with rates exceeding 110 per 100 000 population in 2008, but the level recently started to decrease.

Socioeconomic factors such as disposable income are associated with the occurrence of avoidable mortality: the lower the disposable income, the higher the mortality (Fig. 6). Superimposing a layer showing the regions in the poorest quintile (hatched) tends to validate the association with higher avoidable mortality. However, there are some poor regions where mortality levels are relatively low. This observation requires additional information and research to identify other potential explanations.

Fig. 6. Inequality in health in the EU and neighbouring countries: avoidable mortality and lowest disposable income per capita at the subnational level in about 2005–2007



Source: Inequalities in Health System Performance and Their Social Determinants in Europe – Tools for Assessment and Information Sharing Project [online database]. Copenhagen, WHO Regional Office for Europe, 2010 (<http://data.euro.who.int/equity>, accessed 23 January 2012).

The use of disability-adjusted life years (DALYs) as a tool for assessing health status beyond mortality provides another focus for this evaluation process (Box 1). Because morbidity and disability may be linked to other important aspects such as determinant factors and exposure and to interventions, the DALY approach has been used for assessing and comparing the magnitude and relative importance of risks, effectiveness, cost-effectiveness (efficiency) and priority-setting. The latest revision of the Global Burden of Disease study<sup>7</sup> in 2008 produced a list of leading causes of DALY loss for EU countries (Box 2). The ordered list, with unipolar depressive disorders and ischaemic heart disease as the top ones, also includes many nonfatal

<sup>7</sup> *The global burden of disease: 2004 update*. Geneva, World Health Organization, 2008 ([http://www.who.int/healthinfo/global\\_burden\\_disease/2004\\_report\\_update/en/index.html](http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html))

outcomes or disease with low case fatality but that may cause severe and/or long-standing disability, most of them related to chronic noncommunicable diseases and external causes (injuries and violence).

**Box 1. Watching health status in Europe through another lens: the value of using DALYs**

Focus on loss of health not only loss of life (mortality)

DALYs therefore incorporate mortality, morbidity and disability

DALYs can be linked to determinant factors and interventions to assess risk, effectiveness and cost-effectiveness

DALYs enable direct and internally consistent comparisons between disease groups

Source: The global burden of disease: 2004 update. Geneva, World Health Organization, 2008 ([http://www.who.int/healthinfo/global\\_burden\\_disease/2004\\_report\\_update/en/index.html](http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html)).

**Box 2. Leading causes of DALY loss in EU countries, 2004**

Unipolar depressive disorders

Ischaemic heart disease

Hearing loss, adult onset

Alzheimer and other types of dementia

Chronic obstructive pulmonary disease

Cerebrovascular disease

Osteoarthritis

Diabetes mellitus

Cataracts

Road crashes

Trachea, bronchus and lung cancer

Poisoning

Alcohol use disorders

Cirrhosis of the liver

Inflammatory heart disease

Self-inflicted injuries

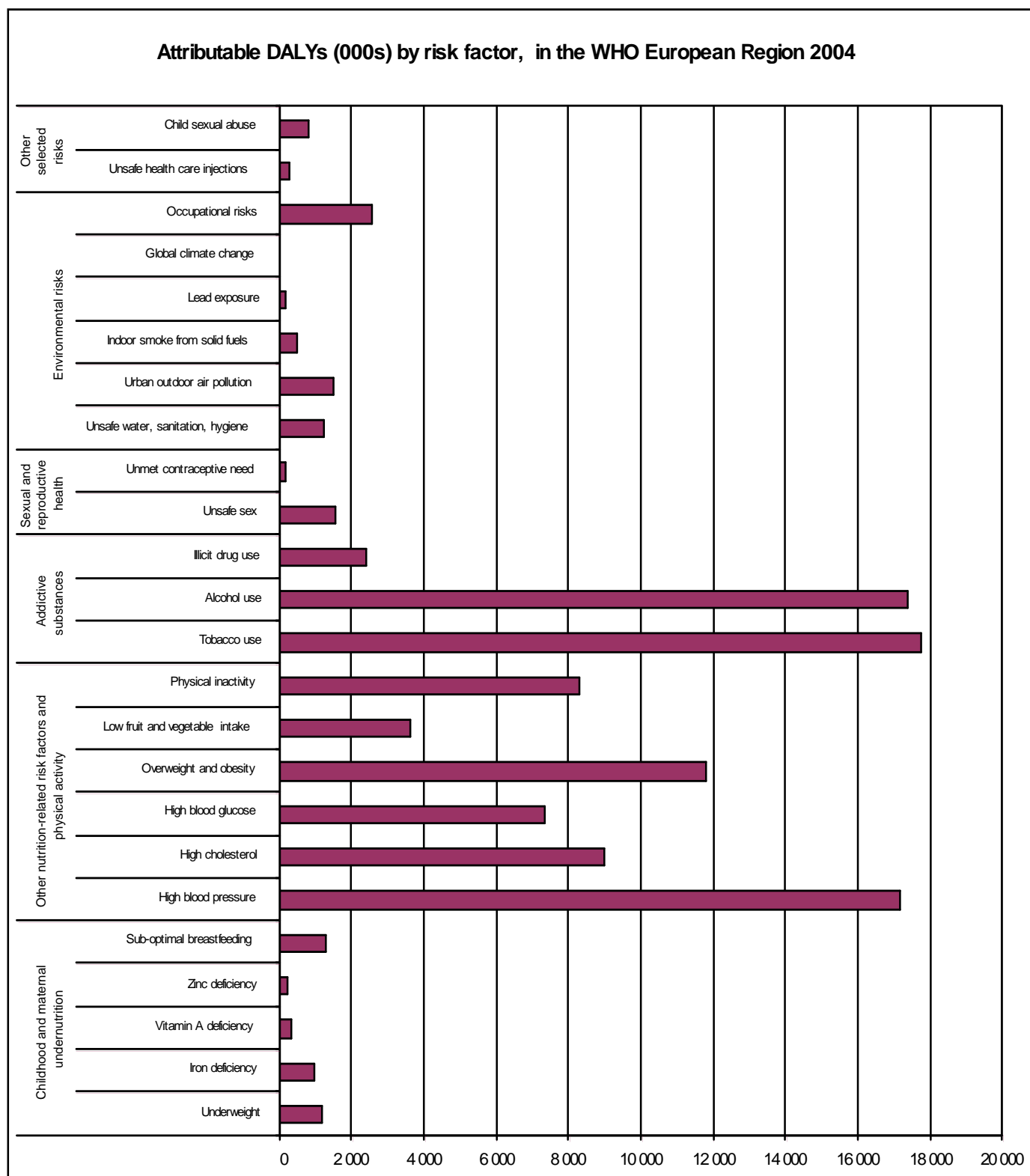
Source: The global burden of disease: 2004 update. Geneva, World Health Organization, 2008 ([http://www.who.int/healthinfo/global\\_burden\\_disease/2004\\_report\\_update/en/index.html](http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html)).

Although the DALYs are continually revised, the total DALYs have been attributed to different leading risk factors in the European Region (Fig. 7). As a result, the most important areas for intervention can be identified, such as diet, physical activity and addictive substances, mainly to reduce overweight, obesity, high cholesterol and blood pressure and alcohol and tobacco use.

Finally, interventions can be identified by using these types of data and building a causal or pathway model for a given disease or sets of diseases (Fig. 8). In the example for ischaemic heart disease, once developed, links can be established and areas or factors identified that require intersectoral participation.

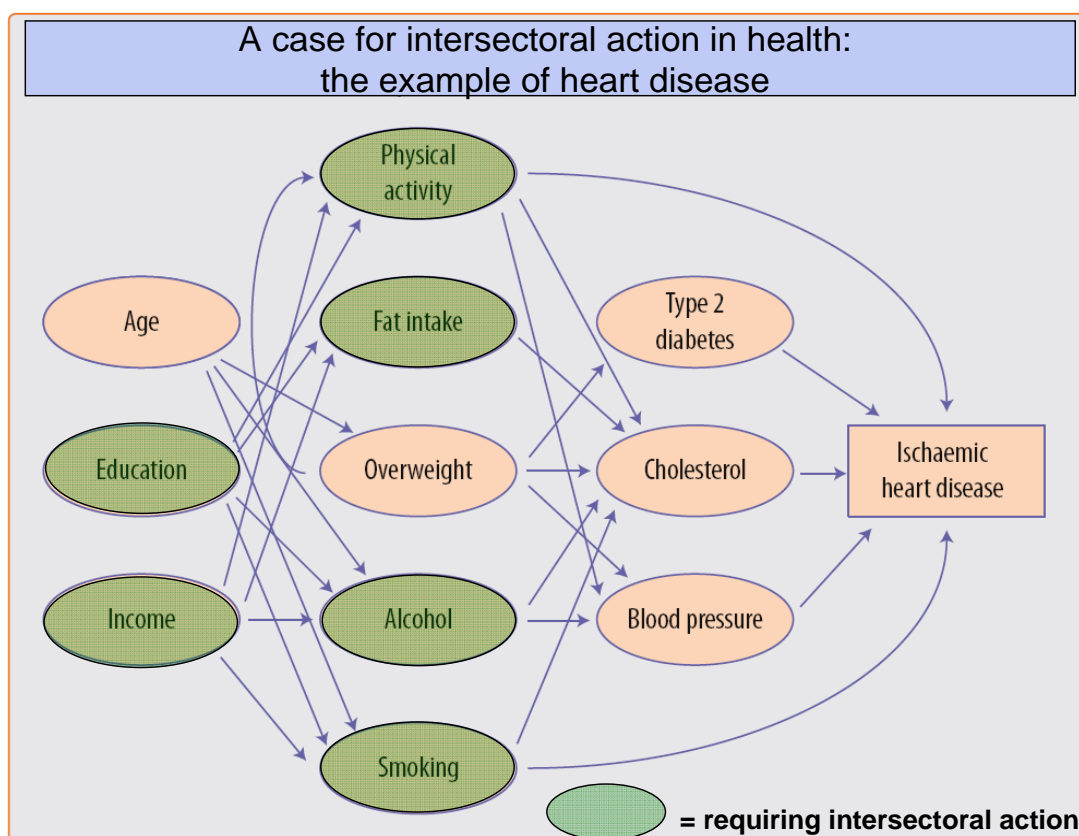


Fig. 7. Total DALYs lost attributed to leading risk factors in the WHO European Region, 2004



Source: *Global health risks: Mortality and burden of disease attributable to selected major risks*. Geneva, World Health Organization, 2009  
([http://www.who.int/healthinfo/global\\_burden\\_disease/global\\_health\\_risks/en/index.html](http://www.who.int/healthinfo/global_burden_disease/global_health_risks/en/index.html), accessed 23 January 2012)

Fig. 8. Intersectoral action for health: the example of heart disease



Source: *Global health risks: Mortality and burden of disease attributable to selected major risks*. Geneva, World Health Organization, 2009  
([http://www.who.int/healthinfo/global\\_burden\\_disease/global\\_health\\_risks/en/index.html](http://www.who.int/healthinfo/global_burden_disease/global_health_risks/en/index.html), accessed 23 January 2012)

## **Annex 2. Setting targets for Health 2020**

### **Process**

#### **Background**

The *European health report 2012* will be closely aligned with the new European health policy, Health 2020. It will provide the epidemiological evidence base for the policy, the baseline for agreed targets in six areas, and approaches to monitoring implementation. Specifically, it will give a solid rationale for the selection and monitoring of Health 2020 targets in the areas of:

- governance for health and well-being;
- tackling the determinants of health and health inequalities;
- investing for healthy people (including well-being) and empowering communities;
- tackling systemic risk: the major burden of disease;
- creating healthy and supportive environments and assets for a healthy environment (including risk factors); and
- strengthening people centred health systems.

This annex summarizes the outcomes and recommendations of the target working group established by the Standing Committee of the WHO Regional Committee for Europe (SCRC).

#### **Methods**

##### **Step 1**

The SCRC target working group previously agreed on the criteria to review a long-list of potential targets from the divisions at the WHO Regional Office for Europe, so that the SCRC members could reduce the long list down to a short-list. The criteria for reduction are:

- SMART (specific, measureable, achievable, relevant, timely)
- Good coverage of age groups
- Good coverage of countries
- Methods clearly stated
- Do not repeat targets from existing target setting efforts (e.g. Millennium Development Goals)
- Be in line with other efforts (e.g. global targets for noncommunicable diseases after the United Nations summit in New York).

This approach was further supported by the European Health Policy Forum of High-Level Government Officials at its second meeting on 27 November 2011. At this high-level meeting, it was also agreed that a proposed short-list could consider three groupings of targets, in order to capture different stakeholder perspectives and highlight the essence of Health 2020:

1. targets for burden of disease, mortality and risk factors;
2. targets for healthy people and the life-course, including inequalities, well-being and vulnerable groups; and
3. process targets in the areas of governance, values and health systems, including human rights, strengthening public health and the whole-of-government approach.

### **Step 2**

During November 2011, all technical divisions at the Regional Office were requested to submit potential indicators and targets aligned with the new European health policy, Health 2020, and for inclusion in the European health report 2012. Reflecting these contributions, the Secretariat compiled a list of 51 proposed targets and indicators (available upon request).

### **Step 3**

The working group recommended that 17 proposed targets (21 if ‘or’ targets are counted separately) could be considered in a short-list. It also identified targets that merited further consideration but which required significant clarification. Table 1 summarizes the proposed short-list and comments from the working group.

## Proposed targets and indicators for short-listing

Table 1. Burden of disease and risk factors

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Outcome – Reduce vaccine-preventable diseases</b>	1. Achieve and sustain elimination/eradication of selected vaccine-preventable diseases (polio, measles, rubella, prevention of congenital rubella syndrome)	<ul style="list-style-type: none"> <li>- High immunization coverage (&lt;90%)</li> <li>- No indigenous wild polio cases in people under 15 years of age with high-quality surveillance of acute flaccid paralysis (AFP)</li> <li>- No indigenous measles and rubella ceases under suspected measles/rash and fever surveillance</li> </ul>	
<b>Outcome – Reduce HIV, treat AIDS</b>	2. Halt and reverse the spread of HIV in Europe by 2020	<ul style="list-style-type: none"> <li>- Scale up coverage with antiretroviral treatment (ART) to at least 80% of people in need of treatment</li> <li>- Reduce transmission of new HIV infections by 50%</li> </ul>	Also a Millennium Development Goal (MDG) – carefully reformulate target and indicators to be Europe-specific and yield clear added value
<b>Outcome – Reduce antimicrobial resistance</b>	3. Reduce morbidity, mortality and related direct and indirect costs associated with antibiotic resistance by 2020	<ul style="list-style-type: none"> <li>- Incidence and prevalence of specific bacteria resistant to antibiotics, such as methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)</li> <li>- Diagnose at least 85% of all estimated MDR-TB patients</li> <li>- Statistics related to hospital acquired infections</li> </ul>	Include both outcome and process indicators
<b>Outcome - Reduce suicide</b>	4. 20% reduction in deaths from suicide	<ul style="list-style-type: none"> <li>- Mortality statistics; data available in Health for All database</li> <li>- Disaggregate by age and other social stratifiers</li> </ul>	Baselines being ascertained as part of production of the Mental Health Action Plan

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Outcome – Reduce mortality from noncommunicable diseases (NCD)</b>	5. 1.5% relative annual reduction in overall mortality from cardiovascular disease, cancer, diabetes, and chronic respiratory disease until 2020	- Standardized mortality from NCDs. A number of targets are being examined: <ul style="list-style-type: none"> <li>• All four NCDs</li> <li>• Only circulatory diseases</li> <li>• All-age mortality</li> <li>• Mortality below 65 years</li> </ul>	Requires a SMART reformulation of target and indicators, focusing on specific causes, such as ischemic heart disease
<b>Outcome – Improved road safety</b>	6. Reduction in road traffic injury mortality of 40% by 2020	- Road traffic injury mortality per 100 000 population	
<b>Outcome – Reduction in tobacco use</b>	7. 40% reduction in prevalence of daily tobacco smoking in population aged 15 years and over by 2020.	- Prevalence of daily tobacco smoking in population aged 15 years	Consider additional indicators in line with the Framework Convention for Tobacco Control, to which Health 2020 can add value
<b>Outcome – Reduce higher levels of alcohol use</b>	8. 10% reduction in per capita adult (15 years +) consumption of alcohol	- Calculation in pure alcohol using all alcohol products/population 15+ (to be clarified)	Consider reformulation of target and indicators to measure shift in population distribution from higher to lower levels of alcohol use  Indicators available in the European Information System for Alcohol and Health (part of Global Information System for Alcohol and Health). Using data from national statistics in countries, the United Nations Food and Agriculture Organization (FAO), producers, industry and surveys

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Outcome – Reduction in childhood obesity</b>	9. 10% reduction in the average prevalence of childhood overweight and obesity by 2020	- Prevalence of childhood overweight and obesity	Consider if this is an indicator for the Child well-being target.  COSI (Childhood Obesity Surveillance Initiative) already routinely measures overweight and obesity prevalence in children 6 to 9 years old based on national representative samples

Table 2. Healthy people and well-being, and determinants (life expectancy, inequalities, vulnerable groups)

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Process (to be an outcome) – Child health and well-being</b>	10. X% increase in child health and well-being by ...	- Countries with evidence-based policies for child maltreatment prevention - Child-friendly environments (to be made specific, for example enabling walking, cycling, access to green spaces to play and undertake physical activity, etc.)	Be in line with the process adopted at the Fifth Ministerial Conference on Environment and Health (Parma, March 2010)  Reformulate target as an outcome, not process  Include an indicator on processes and at least one outcome that is SMART
<b>4. Outcome – Enhance youth health and development</b>	11. 20% reduction in unintended pregnancies in adolescents	- Registration of abortions by age of pregnant woman and by age of mother - Self-reported condom use in sexually active young people (15-24 years of age) at last sexual encounter	Consider other indicators, or reformulation of target



<b>Process or Outcome</b>	<b>Proposed target</b>	<b>Proposed indicator or indicator area</b>	<b>Comments/Justification</b>
<b>Outcome – Reduction in violence</b>	12. X% reduction in European prevalence rates by 2020	<ul style="list-style-type: none"> <li>- Number of countries that systematically collect data on violence against women</li> <li>- Number of women who have experienced physical or sexual violence by intimate partner during the last year</li> <li>- Reduction in youth homicide rate by 20% by 2020</li> <li>- Reduction in intentional injuries and homicide</li> </ul>	<p>Consider different target levels in light of what is achievable</p> <p>Include indicator that considers boys and men</p>
<b>Outcome – Reduce avoidable mortality</b>	13. 50% reduction in the difference in premature or avoidable mortality in European populations	<ul style="list-style-type: none"> <li>- Premature or avoidable mortality per 100 000 population</li> <li>- Cardiovascular mortality by social stratifier</li> <li>- Cancer mortality by social stratifier</li> </ul>	<p>Consider different target levels in light of what is achievable; 50% selected as this would bring the inequality level back to that of 1980.</p> <p>Consider ways to express reduction in inequalities.</p>
<b>Outcome – Greater health equity</b>	14. Reduce the gap in health status between population groups experiencing social exclusion and poverty and the rest of the population.		<p>Venice Office suggested to reformulate target and propose SMART indicators, with at least two social stratifiers</p> <p>Take into account social gradient within countries, with target to level up social gradient</p>
<b>Outcome – Increase gender equity</b>	15. Reduce gender disparities in health by x% across the Region	<ul style="list-style-type: none"> <li>- Increased evidence of the impact of gender inequities in health informing health policies</li> <li>- Number of Member States that target gender inequalities in their national health policies.</li> </ul>	Venice Office suggested to reformulate target and propose SMART indicators, with at least 2 social stratifiers

Table 3. Processes, including governance and health systems

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Process – Ensure health in all policies</b>	16. Whole-of-government approach to health and well-being (mechanisms and processes in place)	<ul style="list-style-type: none"> <li>- Health policy coordinating unit</li> <li>- Minimum budget for public health and health promotion</li> <li>- Capacity for public health and intersectoral work</li> <li>- Mechanisms and platforms for active engagement of civil society</li> <li>- Health Impact Assessment</li> </ul>	
<b>Process - Adhere to International Health Regulations</b>	17. Achieve core capacity requirements by strengthening early warning surveillance, preparedness, prevention, control and response systems	<ul style="list-style-type: none"> <li>- Number of events notified under the IHR; number of events recorded, independent of the source of information</li> <li>- Number of events verified and assessed; number of events having required WHO assistance; number of events having required the activation of the UN Health Cluster at country level</li> <li>- Strengthen public health security in travel and transport</li> </ul>	

Process or Outcome	Proposed target	Proposed indicator or indicator area	Comments/Justification
<b>Process - Reduce direct payments for health services</b>	18. Share of out-of-pocket payments (OOP) in total health expenditure (THE) below 30% in low- and lower-middle income countries and below 20% in upper-middle and high-income countries	- OOP as share of THE – total, and where possible, by household wealth/assets such as quintiles or deciles	<p>The two-tiered target is based on deliberation across the Region. If this needs to be reformulated as a single target for all countries, take 20%</p> <p>Total public and private health expenditures</p> <p>This is a proxy indicator for impoverishing effects of ill health. These data exist and are readily available for all 53 Member States</p> <p>Note that although WHO headquarters breaks down the reporting of “OOP expenditure as % of private expenditure on health”, the key for policy is OPP as % of THE.</p>
<b>Process - Generating sufficient public financing for health in under-financed areas</b>	19. Increase government expenditure on health in under-financed areas  (needs further work)	<p>- Expenditure on prevention and promotion services increased by 20% in 2020 (data available?)</p> <p>- Consider adding an indicator in the area of governance/oversight that is linked to financial management of government funds</p>	The NHA data on breakdown components, such as disease prevention and health promotion, is not necessarily valid or reliable – preventive/promotive action is often within primary health care, for example

<b>Process or Outcome</b>	<b>Proposed target</b>	<b>Proposed indicator or indicator area</b>	<b>Comments/Justification</b>
<b>Process - Improving distribution of human resources for health</b>	20. Improving distribution of human resources within and across countries (reformulate)	Difference between the Member States with the highest and lowest ratio of physicians per 100 000 population	<p>Reformulate target and indicators to focus on the enforcement of ethical recruitment of physicians and nurses across the Region</p> <p>Health worker migration is a main cause of intercountry inequality in access and quality of care. Achieving the target indicates reduced physician migration and improved mechanisms for coping with migration</p>
<b>Process - Generating high-quality health system inputs</b>	21. Increased access to medicines of assured quality, at least by xx%	Access to quality medicines	Look at global targets and reformulate target and indicators with specific added value for the European Region

## **Additional comments**

- Attempt to strike a ratio of 1 to 3 between process and outcome targets and indicators
- Align with other efforts under way at regional or global level, including the Marmot working group on indicators and the global roadmap on NCDs
- Targets and potential indicators for well-being will be discussed during several expert consultations on measuring well-being (first 8–9 February 2012)
- Areas proposed for target development:
  - right to health
  - ageing
- Highlight in the report the European Region's progress on attaining the MDGs and note that Health 2020 does not repeat these targets
- Highlight and expand in the report areas identified as measurement challenges:
  - monitoring of health inequities in terms of developing norms and standards for stratification and data collection from different sources, including vital registration
  - monitoring progressive achievement of universal coverage without financial burden, along its three dimensions (people covered, effective services offered, and progressivity in financing).