

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE COPENHAGEN

REGIONAL COMMITTEE FOR EUROPE

Fifty-first session, Madrid, 10 – 13 September 2001

Provisional agenda item 7(a)

EUR/RC51/7 + EUR/RC51/Conf.Doc./4 19 July 2001 10100M ORIGINAL: ENGLISH

THE EUROPEAN HEALTH REPORT

SUMMARY OF PRELIMINARY FINDINGS

By resolution EUR/RC49/R10, the Regional Director was requested to report to the Regional Committee, at its fifty-first session, on the health situation in the Region.

This document contains the preliminary findings of the Health for All monitoring exercise and summarizes the most important trends in the European Region, using available data.

The Regional Committee is asked to comment on these preliminary findings in view of the forthcoming final report on health in Europe, which will provide a more detailed analysis of the situation in the Region.

A draft resolution is attached for consideration by the Regional Committee.

CONTENTS

	0
Introduction	1
The health situation within WHO's European Region	1
Life expectancy and mortality	1
The burden of ill health	2
Communic able diseases Noncommunicable diseases Mental health Accidents	2 3
Distribution of health in populations	
Child health Adolescent health Women's health Aging and health	4 4 5
The major determinants of health	5
Socioeconomic inequalities	5
Lifestyles	6
Nutrition Physical activity Tobacco Alcohol Drugs	6 6 7
Environment	
Air quality and health Food safety and health Water and health Ionizing radiation and health	8 8 8
Health care systems	8
Health systems policies	9
Organization and management Financing Quality development Pharmaceuticals Patients' rights	9 9 10
Health service delivery	10
Trends in health systems reforms	.11
Comprehensive health policies	11
Conclusion	

Page

INTRODUCTION

1. The European Region of WHO includes some of the richest countries in the world, while others are extremely poor. Worse, a larger group of countries now belong to the less "well-to-do" than ten years ago. In 1999, per capita gross domestic product (GDP) ranged from US \$255 to over US \$41 000. The further east one goes, the bleaker the situation is. The countries of central and eastern Europe (CCEE) and the newly independent states (NIS) have seen the greatest deterioration in the past decade. Income poverty has spread from affecting only a small part of their population to a substantial part in some countries. Even in most of the richest countries, the distribution of wealth is far from equitable, and pockets of poverty still exist.

2. In addition, during the 1990s, the Region experienced a number of serious emergencies, involving armed conflict, in several Member States. The violent disintegration of the former Yugoslavia was the most egregious example – the war there killed more than 200 000 people between 1992 and 1996, wounded hundreds of thousands, and displaced close to 4 million individuals from their homes. The resulting migration – both cross-border and internal movements – raised major health concerns.

3. This paper is an attempt to summarize the most important trends in the Region, using available data with their limitations in terms of accuracy, completeness and comparability. Many more details will be found in the forthcoming European Health Report. In both documents, the traditional groupings of countries are used, i.e. western Europe – developed market economies within and outside the European Union (EU); NIS – the 15 newly independent states formed after the dissolution of the Soviet Union; and CCEE – the 12 countries of the formerly centrally planned economies of central and eastern Europe.¹ It is recognized that these groupings are often of little relevance in view of the heterogeneity of countries' situations. The question of subregional groupings will need to be reviewed for future reports.

4. The report stresses the increasing gap in health status between countries in the European Region, reflected in the wide range of variation in several health indicators. It also underlines the important role played by socioeconomic determinants of health in the formation of this gap. More than ever before, the major challenge to each Member State and to the community of European countries is to achieve solidarity and multisectorality in health.

THE HEALTH SITUATION WITHIN WHO'S EUROPEAN REGION

Life expectancy and mortality

5. The last decades of the 20th century have been marked by an increasing east-west gradient in mortality and an increasing gap in life expectancy between people living in the eastern and western parts of WHO's European Region. All western countries have enjoyed a continuous increase in life expectancy. In the EU countries, the average gain was about four years between 1970 and 1995, at ages 15 and 65 as well as at birth. Although in 1970 life expectancy at birth was on average similar in the eastern part of the Region, a gap has opened up between CCEE and EU countries, amounting to about five years in 1990 and six years around 1999. The gap between EU countries and NIS is even wider (six and ten years, respectively). The NIS have experienced large fluctuations in life expectancy, and in particular a marked decline between 1986 and 1994. The latest figures, although still below the 1970 values, show an improvement of the situation. The trends are similar for men and women, with the traditional male disadvantage. However, the femak-male difference in life expectancy is much greater in NIS (more than 10 years, on average) and in CCEE (about 7.5 years) than in the EU (about 6 years). According to the most recent reports, 25 countries in the Region have already reached a life expectancy at birth above 75 years, while 12 countries are below 70 years.

¹ These groupings are primarily to enable valid comparisons to be made of historically similar trends (especially for mortality among the 15 NIS). As these trends change, the question of subregional groupings will need to be reviewed.

6. Data available at the subnational level suggest that the regional differences within countries are larger in the eastern part of the Region. For instance, the difference between the highest and lowest figures for life expectancy among counties in Sweden is about 2 years; among *oblasts* in the Russian Federation, it is as much as 15 years.

7. Analysis of mortality patterns in Europe by age and sex shows that the largest differences between the EU and NIS averages are in the mortality of the population aged 25–34 years. With age, the relative difference gradually diminishes. Mortality in the age group 15–64 years contributes 7.5 years (58%) of the overall (12.8 years) east-west difference in male life expectancy. Analysis of the changes in mortality during the decline in life expectancy up to 1994 and the subsequent improvement in 1995–1997 shows that those changes were mainly the result of fluctuations in rates of death due to external causes and cardiovascular diseases among middle-aged adults.

The burden of ill health

Communicable diseases

8. Western European countries have experienced a steady decline or stabilization of morbidity and mortality due to communicable diseases. In the eastern part of the Region, the situation is far less satisfactory. The CCEE showed a moderate increase in morbidity and mortality during the 1990s, while sometimes dramatic increases were observed in the NIS. According to latest available data, the situation started to improve at the end of the decade.

9. The re-emergence of diphtheria resulted in a huge epidemic that has affected the NIS since 1990, with a number of cases in other European countries. The diphtheria epidemic has now been controlled and the incidence has returned to pre-epidemic levels in most countries.

10. Epidemic malaria, almost eliminated from Europe in the 1980s, has again affected some countries of the Region since 1990. In 1997, 76 996 cases were reported in Azerbaijan, Tajikistan, Turkey and, to a lesser extent, in Armenia and Turkmenistan, with a number of imported cases in other countries. At present, malaria is assuming epidemic dimensions in Georgia and Uzbekistan. Since 1996, the trend has been downward (32 724 cases in 2000).

11. WHO's campaign to eradic ate poliomyelitis has been successfully implemented. No case of infection with wild poliovirus has been identified in the Region for two years. Two cases occurred recently in Bulgaria, showing that in some vulnerable groups, who are not vaccinated, the imported virus remains a threat. Good surveillance by local authorities has allowed for a rapid response.

12. The global goal of WHO's Expanded Programme on Immunization -a 95% reduction in measles mortality -has been achieved.

13. Tuberculosis and HIV/AIDS are major issues. In countries of western Europe the incidence of AIDS cases has started to decline, in part due to the efficacy of antiretroviral therapy to delay the onset of the disease in HIV carriers. An alarming rise in the spread of HIV infection and sexually transmitted infections has been observed in the NIS in the past few years. In 1999, there were more than 370 000 newly detected cases of tuberculosis in the Region, the highest figure in two decades. Most of these cases occurred in CCEE and NIS. In addition, multidrug-resistant tuberculosis, which is more difficult and about a hundred times more expensive to treat, is spreading through the Region. Tuberculosis epidemics in prisons, and the association between tuberculosis and HIV infection, are further causes of concern.

Noncommunicable diseases

14. Noncommunicable diseases impose the greatest burden everywhere in the Region. Cardiovascular diseases, cancer, diabetes and chronic pulmonary disease are the main problems in terms of ill health. In 1990, the loss of years of healthy life (disability-adjusted life-years – DALYs) due to noncommunicable

diseases was 73% of the total DALYs in the former socialist economies and 82% in the developed market economies. It is estimated that by 2020 those proportions may increase to 80% and 84%, respectively.

15. Cardiovascular diseases (CVDs) are responsible for about half of all deaths in Europe, with a range from 60% in some CCEE and NIS to 35% in some EU countries. Cardiovascular mortality accounts for more than half of the east-west gap in life expectancy. Average CVD mortality rates per 100 000 population under the age of 65 years were similar (around 100) in 1970, but they are now approximately 50 in western Europe, 106 in CCEE and 240 in NIS. However, the value of these figures for comparing countries or groups of countries is affected by differences in the way causes of death are certified. For instance, as discussed in the last report on health in Europe $(1997)^2$, a part of the excess cardiovascular mortality among men in some eastern European countries might in fact be attributed to alcohol intoxication.

16. Cancer is responsible for close to one fifth of all deaths, ranging from about 30% in some western countries to about 10% in some eastern countries. The average cancer mortality rate in people aged 0–64 years is 80 per 100 000 population in the EU, 106 in CCEE and 101 in NIS. In the western part of Europe, the rate has decreased and is now about 13% lower than the 1980 level. Most CCEE experienced an increase until 1990, followed by a levelling off and even a slight decrease since 1995. In the NIS, the same pattern is seen. Among people aged 65 years and above, cancer mortality is higher in the western part of the Region.

17. With the aging of the population, other chronic diseases such as diabetes, chronic respiratory diseases and musculo-skeletal disorders pose increasing health problems. Diabetes affects 20–25 million people in Europe. Mortality data show stable or downward trends in EU countries and CCEE, but rising trends in some NIS.

Mental health

18. The magnitude of the burden of mental disorders is generally underestimated. Disorders affecting mental health, ranging from stress through depression and neurosis to major psychosis, are the most prevalent disorders in any population. The proportion of the population with severe mental disorders, as registered and reported by countries, varies from under 1% to 6%, with most countries in the range of 1-3%. But less serious disorders, frequently unregistered, are much more prevalent.

19. According to the Global Burden of Diseases estimates, mental and neurological disorders accounted for 11% of the total DALYs due to all diseases and injuries in 1999. Depression alone accounted for 4.1% of the total, ranking fourth among the leading causes of disease burden. It is expected to become the second leading cause of DALYs by 2020, second only to ischaemic heart disease. Depression has considerable disabling effects and also leads to increased mortality. Although the mortality rates due to suic ide and self-inflicted injuries show a slow decline on average in EU countries and CCEE, the trend in NIS, after a sharp decrease in 1984–1986, showed an increase in the period 1990–1995.

20. The causes and impact of mental health disorders vary with differing social and economic factors. In eastern Europe, mental health problems have been associated with the decrease in life expectancy over the past decade, related to economic and social changes over the same period. In particular, there is some evidence for a relationship between socioeconomic disadvantage and the prevalence of depression.

21. Standards of mental health care differ greatly across Europe. Very large hospitals still exist in eastern countries, while western countries give preference to treatment in the community. This model also encounters problems, however, such as the lack of accessibility of professionals and the attitude of communities that are not always prepared to accept people with mental disorders.

² Health in Europe 1997: report on the third evaluation of progress towards health for all in the European Region of *WHO (1996–1997)*. Copenhagen, WHO Regional Office for Europe, 1998 (WHO Regional Publications, European Series, No. 83).

Accidents

22. Accidents and other causes of injuries and poisoning are responsible for about one tenth of overall mortality (around 6% and 12% on average, respectively, in the western and eastern parts of the Region). External causes are the leading causes of mortality in younger age groups, and they therefore account for a large proportion of premature death. On average, the standardized death rate due to external causes in 1999 was below 40 per 100 000 population in the EU (a reduction of more than 30% as compared to 1980). From 1980 to 1992, CCEE had an average mortality rate of around 80 per 100 000, but the rate then declined steadily to 65 per 100 000 in 1999. In the NIS there was, on average, a considerable decline from 140 to 92 per 100 000 between 1980 and 1987, followed by a sharp increase up to 188 in 1994. Since then the situation has improved, but the average figure is still above the 1980 level.

Distribution of health in populations

Child health

23. The chances of a child being born healthy and surviving the first year of his or her life are unequal throughout the Region. Western European countries have achieved remarkably low levels of infant mortality. However, there are still significant inequalities between social groups. In the eastern part of the Region, infant mortality rates decreased steadily in the past two decades, but they are still high compared to western European countries. According to the latest reported official data, six countries in the Region still have infant mortality rates above 20 per 1000 live births (but other sources report higher levels and in more countries), while 30 countries record rates below 10 per 1000. Unwanted pregnancies and teenage pregnancies are among the most important risk factors of infant mortality in both eastern and western Europe.

24. There are also major inequalities with regard to the probability of dying before five years of age: figures range from less than 5 to more than 50 per 1000, with averages of 6 per 1000 in the EU, 15 per 1000 in CCEE, and 26 per 1000 in NIS. Children are still dying from diseases that are preventable or curable. In many countries, diarrhoeal diseases and acute respiratory infections are responsible for a large proportion of morbidity and mortality among children under five years of age. Under-five mortality due to accidents and other external causes is decreasing sharply in most countries of the Region, but some NIS still experience levels several times higher than the European average.

25. Poverty and uncertainty are important determinants of child health. The most significant factors in this respect are the social unrest and armed conflicts that have affected several countries in the Region. Another major factor is the considerable inequity in the provision and quality of perinatal and postnatal services between and within countries.

Adolescent health

26. The leading cause of mortality among adolescents is accidents. Mortality rates due to external causes in the age group 5–19 years have decreased in most European countries, but they seem to be levelling off at around 28–29 per 100 000 population in the NIS.

27. Teenage pregnancy rates in most European countries range from 12 to 25 per 1000 girls aged 15–19 years, but some countries are experiencing much higher rates. In certain countries, increases in teenage pregnancies have been observed in girls as young as 12 and 13 years. These unwanted pregnancies often lead to dangerous abortions, with severe health consequences for adolescent girls.

28. Among other priority issues for adolescent health are the use of illicit drugs, alcohol and tobacco. In particular, alcohol consumption and smoking among adolescents have increased in many countries, indicating the limits of current policies aimed at young people.

Women's health

29. Maternal mortality rates show important differences. Western European countries have reached very low rates, levelling off at around 5–6 per 100 000 live births for the past decade. CCEE and NIS had average maternal mortality rates of around 40–50 per 100 000 until 1990. Since then, the figures have dropped in CCEE to around 15 per 100 000, while the decrease has been much slower in NIS, where the current average is 35 per 100 000 live births.

30. Women's health encompasses not only health conditions related to women's reproductive function but indeed every aspect of their physical and emotional reality through their life cycle. In CCEE and NIS, a decade of transition has resulted in losses of the previous improvements in women's health, greater morbidity and mortality disparities within and between countries, and a reduction in women's fertility. The health of women in war and refugee situations has been even more compromised.

31. Gender-based violence encompasses a number of different forms of abuse, including domestic violence, rape, sexual assault, childhood sexual abuse, trafficking, prostitution and sexual harassment. Across the Region, between 20% and 50% of women have been subjected to one or more forms of abuse. Migrant and refugee women are particularly vulnerable and require special attention.

Aging and health

32. Eighteen out of the 20 countries in the world with the highest percentages of older people are in WHO's European Region. In these countries, between 13.2% and 17.9% of the population are over 65 years old.

33. Life expectancy at age 65 shows a steady increase in EU countries, where it has reached an average of more than 18 years (a gain of about 2.5 years since 1980). The increase has been much slower in CCEE, where the average was about 15 years in 1999 (a gain of less than one year since 1980). In NIS, the situation has deteriorated since 1990, giving an average of 14 years in 1999 (a loss of half a year since 1980). Available data in some countries of western Europe suggest that the gain in life expectancy at age 65 is not accompanied by an increase in the time lived with severe disability. Women's greater life expectancy at age 65 remains stable, at around three or four years on average in the Region.

34. In nearly every European country, the broad group of cancer and cardiovascular diseases together accounts for around two thirds of all deaths in people aged 65–74, and half of the deaths in those aged over 75. Accidents are also a major cause of disability and death in this age group.

35. Physical violence to older people by carers, in the home or in institutions, has gained increasing recognition across Europe, along with different forms of abuse, exploitation and neglect. Research is currently at the stage of mapping the extent of the problem and identifying risk factors.

THE MAJOR DETERMINANTS OF HEALTH

36. It is now traditional to review a long list of determinants of health, such as genetic and individual factors, lifestyles, environment, and the availability and effectiveness of health services. The great differences in health status observed across countries and among groups within countries have thrown into sharp focus the fact that all these determinants are linked to social and economic factors that are at the core of political and societal development.

Socioeconomic inequalities

37. Poverty – whether defined by income, socioeconomic status, living conditions or educational level – is one of the largest single determinants of ill health. Poverty results in increased personal and environmental risk, increased malnutrition, less access to information and knowledge, and reduced ability to access health care. In a vicious circle, ill health causes poverty by lowering productivity, income and

quality of life. Some countries still report high proportions of people living on less than US \$2 per day. However, relative poverty is a serious problem in the Region, where approximately 165 million people live below the poverty line.

38. The effects of socioeconomic inequalities on the health of populations are not simply a matter of poverty. There is a body of evidence showing that health differences between countries and among social groups within countries are related not only to income levels but also to inequalities in the distribution of income. Analysis of health inequalities in countries in the European Region shows that differences in mortality according to social position follow a clear gradient: the mortality rates are inversely related to people's place in the social hierarchy. The worrying trend is that the magnitude of these socioeconomic differences in mortality appears to be increasing in the eastern part of the Region. To a large extent, the changes in life expectancy seen in CCEE and NIS can be associated with increases in poverty and in income inequality.

39. Poverty and low economic status are shown to be associated with the spread of such diseases as tuberculosis and HIV/AIDS, with maternal and infant mortality, with the spread of the smoking epidemic, and with the risk of living in an unhealthy environment. Strategies to address poverty and socioeconomic inequalities are therefore essential for improving health and reducing health inequity.

Lifestyles

Nutrition

40. The burden of disease attributable to inappropriate nutrition is greater than is often appreciated. Preliminary analysis suggests that 4.5% of the DALYs in EU countries are due to poor nutrition, with an additional 3.7% due to obesity. The main nutrition-related health problems are: insufficient breastfeeding (with large variations between countries), overweight and obesity (rapidly increasing in all age groups), non-insulin dependent diabetes (with about 4% of the population affected in most countries), too high fat intake and insufficient consumption of fruits and vegetables, and iodine and iron deficiency. Nevertheless, the underlying issues are again: (i) relative and absolute poverty, especially among unemployed and old people, who have to eat on a low budget, and (ii) unsustainable food production and distribution.

Physical activity

41. While previous recommendations emphasized vigorous uninterrupted aerobic exercise for fitness benefits, recent evidence indicates that health benefits are also accrued through moderately intensive intermittent daily activity. It is estimated that eliminating physical inactivity would result in 15–39% less coronary heart disease, 33% less stroke, 12% less hypertension, 12–35% less diabetes, 22–33% less colon cancer, 5–12% less breast cancer, 18% less osteoporotic fractures, etc.

42. Only a few European countries conduct regular monitoring of physical activity patterns. A study across the 15 EU countries shows that 57% of the populations, on average, are insufficiently active for health benefits. Figures range from 32% (Sweden) to 83% (Portugal).

Tobacco

43. Tobacco consumption is responsible for 1.2 million deaths (14% of all deaths) each year. The greatest burden is in eastern Europe. Unless stricter tobacco control measures are implemented by 2020, tobacco could be responsible for more than 2 million deaths per year in the Region.

44. In the first half of the 1980s, around 40% of adult males in Europe were daily smokers, and prevalence among women and young people was increasing in most countries. In late 1999, the percentage of the population over 15 years of age who were daily smokers ranged from 14% to 48%. About one third of the male population in the western part of the Region smoked, while another one third were former smokers. In the eastern part of the Region, smoking rates among men were above 50% in

many countries. In most countries, the prevalence of smoking in women is at least 15% lower. It has stabilized in the western part of the Region but increased in the Mediterranean countries.

45. Among young people, smoking is a well established behaviour that shows few signs of diminishing; on the contrary, it is increasing in many countries. According to the "Health Behaviour in School-aged Children" study covering 24 European countries, few changes are seen between the 1993/1994 and the 1997/1998 surveys. Gender differences between countries are particularly noticeable: boys over 15 years report higher rates of smoking than girls in all CCEE, while in most western European countries girls tend to smoke more than boys.

46. The changes in mortality due to cancer of the trachea, bronchus and lung are a useful marker of trends in smoking prevalence and its health consequences. The standardized death rate in males increased throughout Europe until around 1990. Since then, it has stabilized or decreased in most countries of the Region. From 1994 to 1998, the average annual rate per 100 000 population decreased from 83 to 73 in the NIS and from 73 to 69 in EU countries, while it stabilized around 88 in CCEE. This trend corresponds to the observed changes in smoking prevalence. Among women, the mortality rate increased both in EU countries and in CCEE.

Alcohol

47. Each year over 55 000 young Europeans die owing to alcohol abuse: one in four deaths in European men aged 15–29 years is related to alcohol. Alcohol is responsible for about 9% of the total disease burden in the Region, increasing the risk of liver cirrhosis, heart diseases, stroke, cancers, mental disorders and other conditions. In addition, between 40% and 60% of all deaths from injuries are attributable to alcohol. Alcohol consumption, and particularly acute alcohol intoxication, seems to explain a considerable portion of the differences in young adult mortality observed between EU countries and CCEE/NIS. The Region has the highest recorded average alcohol consumption in the world – 7.3 litres of pure alcohol per person in 1998. Adding estimates of unrecorded consumption brings some countries to about 20 litres per person.

48. Alcohol abuse increases the risk of family, work and social problems. The relationship between alcohol and crime is complex, but alcohol is directly or indirectly implicated in various types of violence, criminal behaviour, homicide and suicide. Alcohol generates an enormous cost to society, which accrues as a result of the welfare, health service, enforcement and penal costs associated with drinking, and the costs resulting from loss of production. The total societal costs of alcohol amount to between 1% and 3% of a country's gross domestic product.

49. In general, western European countries have moved towards stricter control policies, reduced consumption levels and lowered alcohol-related harm to a greater degree than have many countries in the central and eastern parts of the Region. Eleven countries in western Europe, four CCEE and three NIS have moved towards more restrictive alcohol control policies.

Drugs

50. The drug use situation in Europe is further deteriorating. In western European countries, the use of cannabis is widespread among young people; the consumption of amphetamine-type stimulants and cocaine, and multiple drug use, continues to increase, while the use of opiates (heroin) is stabilizing. The more one moves to the east, the more worrisome the picture becomes, particularly the increased injecting of opiates apparent in several CCEE and the dramatically rapid rise in this practice in most NIS. Concomitantly, there is a very serious outbreak of HIV infection in the NIS. The sharing of contaminated needles and syringes is one of the major causes of the rapid spread of infection. Hepatitis is also highly prevalent – up to 60% and more – among drug-using populations. Another strong correlate of drug use in many communities is psychiatric comorbidity. Some studies show that the prevalence of major depression can be three times higher among drug users than in the general population.

Environment

51. The human health effects of environmental hazards have been of growing concern to the populations of Europe over the past 20 years. The mechanisms behind environmental impacts on the health of populations are of a complex nature. Experience has shown that environmental health effects can be ameliorated only within a context of sustainable development, by working together with the relevant authorities and stakeholders. The present situation in the Region for the most important domains of environmental health is summarized below.

Air quality and health

52. Recent studies reveal that adverse effects do occur at pollution levels commonly encountered in Europe. For example, each year suspended particulate matter may well cause between 100 000 and 300 000 deaths, while environmental tobacco smoke may cause 5000 to 10 000 cardiovascular deaths, 1000 lung cancer deaths in nonsmokers, and 500 000 episodes of lower respiratory infections in children in the EU countries.

Food safety and health

53. Many countries have documented significant increases in the bacterial contamination of food. The EU countries and Norway have monitored pesticide residues in fruit and vegetables since 1996. In 1998, pesticide residue levels exceeded guideline values in 3.1% of all samples. Almost 100 people have died from infection with the agent of bovine spongiform encephalopathy. (More than 180 000 cases in cattle have been reported from the United Kingdom and 1674 from the rest of Europe).

Water and health

54. Recent reports revealed more than 700 waterborne disease outbreaks in 19 countries, each affecting 220 people on average. However, the reported outbreaks reflect differences not only in incidence but also in outbreak detection, investigation and reporting. Eight countries consider contamination by pesticides to be a major problem for drinking-water quality, and several countries report high nitrate concentrations in drinking-water, which can affect babies and young children.

Ionizing radiation and health

55. Exposure to natural radioactivity can be quite significant in terms of the health burden in some populations. For example, radon in the domestic environment can give rise to annual doses that exceed the dose limit for occupational exposure.

56. Few releases of ionizing radiation have been reported due to accidents at nuclear power plants and weapons testing and disposals. Increases in leukaemia have been attributed to the Kystym accident in the Russian Federation, and 1800 cases of thyroid cancer to the Chernobyl accident in 1986. Exposure to sources of ionizing radiation is often associated with a psychosocial effect. In addition to the induced thyroid cancer, the Chernobyl accident has had significant health consequences in terms of its psychosocial effects.

HEALTH CARE SYSTEMS

57. The performance of a health system is closely related to the way it is designed, financed and managed, and to the absolute amount of financial resources available. Countries in the European Region take different approaches towards the design and management of their health systems. Major differences exist, for example, in the method of financing (with implications for access, equity and cost-containment), the degree of centralization, the balance between prevention and treatment and between primary, secondary and tertiary care, the attention given to evaluation and patient's rights. WHO collaboration in this sector aims at helping Member States understand how they can measure their own system's

performance, identify the factors that determine performance, and improve their system to better respond to the needs of their population.

Health systems policies

Organization and management

58. The area of health system organization and management ranks high among the Member States' priorities, as growing demands for more and better health care need to be matched with stable or declining resources. In this domain, the experience of the past few years is dominated by two observations. First, market-oriented policies for health systems, including such measures as privatization, reliance on user charges or fee-for-service compensation schemes, provider or purchaser competition, and advanced forms of decentralization have shown their limitations in terms of their impact on equity and their capacity to achieve the expected efficiency gains. Second, the convergence of different health systems, which was predicted by some people, has not yet happened. Many problems are common to all systems, a few technical solutions enjoy wide popularity, but the broad features of health systems in Europe do not seem to be evolving towards one single model. Rather, different solutions continue to be tried out across the Region, thus strengthening the available information base on the effectiveness of alternative approaches that can be used by Member States to improve their own system according to their needs, resources, experience and sociocultural environment.

Financing

59. The concept of "fair financing" of health systems extends the notion of equity to distribution of the burden of funding across the population. It incorporates the concept of financial risk protection, meaning that the need to pay for health care should not impoverish families.

60. Several studies of equity in the financing of health systems in western Europe have shown that as the dominant source of funding, general tax revenue may be the most equitable, closely followed by social health insurance. Voluntary health insurance (usually private) and of course out-of-pocket payments seem less equitable. But all health systems are funded from a mix of at least two of these sources, and the equity consequences of any source depend on the specific institutions governing the mix in a particular country.

61. The equity characteristics of the different methods of financing found in western European countries do not necessarily translate to CCEE and NIS, where tax collection levels are much lower. One result is that out-of-pocket expenditures there have increased significantly, affecting low-income households most. It appears that health financing has become less equitable since the early 1990s in many countries undergoing economic and social transition.

Quality development

62. Quality development implies the pursuit both of a degree of excellence and of a reduction of inequities in health care provision. The most important approach is to facilitate evidence-based decisions at all levels in everyday practice. To improve health outcomes, systematic health technology assessment must be in place, the results of which need to be implemented in the framework of appropriate policies. At the clinical level, models are now available in Member States, and their implementation is ongoing. The challenge is to promote quality development at system level through policies, legislation, accreditation, etc. The main problems in quality development are the difficulty in bringing together the stakeholders within the framework of a common strategy and in making policy decisions in situations of incomplete and inadequate evidence. Most quality development initiatives in Europe still operate as separate entities, rather than as parts of a coherent system. There is usually a lack of integration between quality development and health technology assessment. The future of quality development depends on giving effect to three guiding principles: the process must be knowledge-based, system-oriented, and patient-focused.

Pharmaceuticals

63. Too many patients in Europe still do not benefit fully from existing pharmacotherapy, because health care providers and users lack adequate knowledge and financial resources. In the eastern part of the Region, counterfeiting and unlicensed sales of drugs are common, as is the ineffective implementation of drug legislation and regulations. Bad quality products add further to the problem. In the Region, per capita expenditure on medicines varies from less than US \$10 in several NIS to more than US \$350 in western Europe. In the poorer countries, drugs are largely paid out-of-pocket by patients. This means that poorer and sicker patients have great difficulties in receiving proper treatment.

Patients' rights

64. Since 1993, no less than 14 European countries have introduced laws on patients' rights or patients' charters. The WHO European Declaration on the Promotion of Patients' Rights was drawn up in 1994, and the European network on patients' rights and citizens' involvement was established in 1997. Perhaps the most significant obstacle to implementation of legislation on patients' rights is the lack of knowledge among health professionals.

Health service delivery

65. The aim of health service delivery systems is to translate health policies into practical health care for individuals and populations, including health promotion, disease prevention, diagnosis and treatment, palliative and support services. These systems are undergoing transformations due to demographic changes, increasing demands by better informed populations, the need for equity and accessibility that has been endorsed by most governments, new biomedical and communication technologies, and the need to control the cost of health services. In eastern Europe, the systems are additionally faced with unresolved long-standing problems, such as excessive number of hospital beds and personnel, too long inpatient stays, inefficient infrastructures and equipment, and poor motivation and inadequate education of health personnel.

66. Useful data on outpatient services are lacking at international level. Inpatient care is dominated by a striking convergence of admission rates throughout Europe, to about 18 cases per 100 population per year. Some 10 years ago the difference was quite significant, but the NIS rates have decreased rapidly, while those in the EU and CCEE have increased slightly but steadily. At the same time, numbers of hospital beds have decreased in all countries – very significantly in the NIS, and dramatically in the central Asian republics. The average length of hospital stay has decreased in all countries (in the EU, for instance, from 14 days in 1990 to 10 days in 1997).

67. The ongoing changes in the NIS are also apparent in the reduction of the number of health personnel who graduate each year, in particular pharmacists and nurses. However, the average number of available physicians in CCEE is low as compared to the EU average, and the decreasing number of graduating physicians is worrisome. The number of dentists available in many eastern European countries, both CCEE and NIS, is about half the EU rate.

68. Health service delivery needs to adapt to the health care reforms in every country. There are three main objectives in this process: (i) to focus on primary health care; (ii) to provide efficient services; and (iii) to increase patients' satisfaction. The debate should be centred on the moral imperative of maintaining equity and solidarity, considering health and health care as a social right, versus the need to control and reduce costs. The dilemma is that, although evidence proves that investment in tackling the social determinants of health is more cost-effective, health care services are perceived as a priority by the population and thus by politicians.

Trends in health system reforms

69. The *World Health Report 2000*³ outlines four functions of health systems: delivering services; financing services; creating human and physical resources; and exercising stewardship of the resources and powers entrusted to the system. In the light of this framework, there are four key trends in health system reform.

70. First, countries are striving to better **balance sustainability and solidarity in financing**. Most western European countries maintain relatively high levels of solidarity in the collection and pooling of financial resources. CCEE and NIS are also committed to solidarity in finance, but problems with the economic sustainability and implementation of new insurance mechanisms have led *de facto* to considerable reductions in the accessibility and affordability of health services.

71. Second, there is an increasing trend towards **strategic purchasing** as a mechanism to allocate resources to providers so as to maximize health gain. In national health service countries, this involves a separation between the provider and purchaser functions. In social health insurance countries, insurers are moving from passive reimbursement to proactive purchasing services and selecting providers according to cost–effectiveness criteria. Contracting mechanisms and performance-based payment have become central to effective purchasing.

72. Third, countries have adopted strategies to **increase efficiency in health service delivery**, including decentralizing provider management; restructuring hospital services with an increased role of substitution between different levels of care; strengthening primary health care services based on the family practitioner model; increasing patient choice and participation in health services; and improving outcomes through technology assessment and quality development initiatives.

73. Fourth, evidence from European countries shows that **effective government stewardship**, involving health policy leadership, appropriate regulation and effective intelligence, is central to the success of health system reform efforts.

COMPREHENSIVE HEALTH POLICIES

74. Evidence of the need to shift from a narrow focus on health care to a broader focus on community health, to take an integrated approach to health and development, has come from many quarters.

75. In 1984, the Member States in WHO's European Region adopted the first common Health for All policy for Europe. It was agreed that they would develop, at national, regional and local levels, intersectoral policies for health based on the principles of equity in health and participation in decision-making. This European-level policy was revised in 1991 and again in 1998. The response to it was extremely mixed. By 1990, half of the then Member States had developed intersectoral policies documents. In fact, only a small number of countries made a serious attempt to develop outcome-oriented policies, while others attached little value to this approach. In most cases, public health policies were developed in parallel with and almost independently from health care reforms took centre stage, mainly prompted by a perceived need to restrain growing health care costs. In particular, there is little information on the links made between health policy and health care reforms, and how health care reforms affect equity in health. Apart from three or four instances in western Europe, there are no studies evaluating the implementation of the policies developed.

76. Owing to the deteriorating health situation in CCEE and NIS, and the recognition by WHO, EU and the World Bank of the effect of poverty on health, attention has once more turned since the mid-1990s

³ The World Health Report 2000. Health systems: Improving performance. Geneva, World Health Organization, 2000.

to tackling the determinants of health. By 1998, there was clear evidence that there is a need for health policy to look at the causes of inequities in health.

77. The emerging role of health impact assessment offers the hope of creating a different relationship between health and other sectors. Countries such as the Netherlands, Sweden and the United Kingdom have already gained valuable experience in this field. This is expected to be further strengthened as the EU, on the basis of Article 152 of the Maastricht Treaty, develops a tool for assessing the health impact of its own policies.

78. For the NIS, it is not yet clear whether the formulation of national policy frameworks has had an influence on negotiations with investment organizations. As national policy-making and management skills improve, they should have a better chance of determining their own future, even when some powerful institutions or donors still come with their own agendas.

CONCLUSION

79. An east-west health divide has opened up within WHO's European Region, with a significantly worsening health experience in the east. In some CCEE and NIS, falling life expectancy and birth rates have contributed to negative population growth rates. In the context of the 1998 World Health Declaration, and its commitment to the highest attainable level of health for all, it is difficult to see such differentials in economic and health experience in anything other than human rights terms.

80. A heightened level of commitment and more forceful action are needed to deal with the determinants of health. The policies that are most successful in sustaining and improving the health of the population are those which deal with development and health in an integrated way. Income differentials, health choices, environmental protection, and the availability of education and employment are all variables that are amenable to public policy and where changes can lead to improved health and wellbeing for the whole population. Fiscal and legal measures are powerful regulatory instruments for tackling the underlying causes of ill health. If such regulations are to be implemented effectively, all the sectors and institutions concerned within society must uphold them and they must, above all, enjoy public support and confidence. This can be achieved by mobilizing society at large, assessing all public policy for its impact on health equity and generating informed discussion through effective communication.