

Achieving health for all

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In 1997, 158 Member States (representing 91% of the global population) reported to WHO the findings of an evaluation of progress in the implementation of the strategy for health for all in their countries. Based on data and information provided by these reports, supplemented from international sources, WHO estimates that:

- In 1995, 102 Member States, with a total population of 3.4 billion (60% of the global population) had reached at least the minimum life expectancy at birth of above 60 years; infant mortality rate of below 50 per 1000 live births; and under-5 mortality rate of below 70 per 1000 live births.
- Immunization coverage of infants in 1996 was nearly 90% for BCG and about 80% for DPT3, measles and poliomyelitis. For tetanus toxoid, however, coverage of pregnant women was below 50% of live births in developing countries.
- In the developing world in 1996, coverage for antenatal care was 65% of live births; for deliveries in health facilities, 40%; and for skilled attendance at delivery, 53%. About 90% of newborns weighed at least 2500 g at birth, and the available limited data show an increase in infant care coverage since 1986.
- In 1994, at least 75% of the population in the developing world had access to safe water, and 34% to sanitation services, compared with 61% and 36% respectively in 1990.
- Over one-third of the world population still lack access to essential

drugs. On average, only 50% of patients take their medicines correctly, and up to 75% of antibiotics are prescribed inappropriately, even in teaching hospitals.

Findings show that substantial, though only partial, progress has been made in achieving the goals of the global strategy for health for all. Overall *survival* prospects of the population worldwide have improved, but *disparities* in health levels between and within countries have persisted and in many cases increased. In spite of political commitment by Member States and the development of health systems based on primary health care, issues of inequalities in health status and health care access seem not to have been adequately or effectively addressed during the past two decades. The stage has been set however for developing and sustaining health systems that are dynamic, effective and able to meet changing health care needs.

More details are given in this chapter, which can be supplemented by reports prepared in each WHO region for the third evaluation of the implementation of the global strategy for health for all, and reviewed by the respective regional committees in 1997.

Health for all and primary health care

Since 1952, the World Health Organization, in its capacity as the directing and coordinating authority on international health work, has periodically

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assessed the global health situation. Reports on the world health situation were used to convey salient findings and main problems and achievements to the World Health Assembly. *Table 10* gives selected extracts from the first eight reports on the world health situation spanning from 1954 to 1989. The Fifth report, covering the period 1969-1972, underlined in particular the slow progress in improving the health status of developing countries, and the widening gap in health status and access to health care between and within countries. The report alerted the global community through the World Health Assembly to the continuing inability of health services to reach out to those in dire need and to provide, on a permanent basis, access to health care for the entire population at a price that they could afford. Over 5 million children were dying annually of diarrhoea, and more than half of all child deaths could be traced to malnutrition, and diarrhoeal and respiratory diseases. Failure to control such diseases of poverty prevented further reductions in mortality rates, and in incidence rates of major diseases such as malaria, schistosomiasis, filariasis, cholera and leprosy – which had even increased.

The imperative for change

Too few resources were being invested in the health sector, and these were usually spent on meeting the needs of 10-15% of the population. Richer countries had been attracting doctors from the poorer ones – over three-quarters of the world's migrant physicians were to be found in only five countries: Australia, Canada, Germany, the United Kingdom and the United States. Although the training of a physician was eight times more expensive than that of a medical auxiliary, many developing countries were still stressing the training

of physicians. Moreover, ordinary people had little control over their own health care, as health professionals were rarely willing to trust them to make decisions about their own health.

In 1977, the World Health Assembly reaffirmed that health is a basic human right and a worldwide social goal, that it is essential to the satisfaction of basic human needs and quality of life, and that it is to be attained by all people. The Assembly called for the vigorous transformation of existing health care strategies to facilitate the attainment of health for all as defined in the Constitution of WHO, and decided that the main social target of governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. In other words, as a minimum, all people in all countries should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live.

There was a realistic expectation that by the year 2000 no country, or no individual citizen, should have a level of health below an acceptable minimum, and that the world community would later adopt a new strategy to take people further towards the goal of health for all in the future. The target date of 2000 was intended as a challenge to all Member States. If this initiative was successful, the next intermediate target would be to achieve further improvements in health beyond the year 2000, with a better quality of life for all people, taking into account changes in the demographic, socioeconomic, environmental and epidemiological situation.

The strategy for health for all

Achieving even this minimum level of health for all people in all countries implied transforming health care delivery and health services support and management so that health services were made accessible to each and every member of the community.

As stated in the Declaration of Alma-Ata adopted in 1978, the key to attaining the goal of health for all by the year 2000 is primary health care. Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods, and made universally accessible to individuals and families, at a cost they can afford. It should address their main health problems, providing promotive, preventive, curative and rehabilitative services accordingly. Since these services reflect and evolve from the local economic conditions and social values, they vary in different countries and communities, but should include at least education concerning prevailing health problems and the methods of preventing and controlling them; promotion of proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment for common diseases and injuries; and provision of essential drugs.

The three prerequisites for successful primary health care are a multisectoral approach, community involvement and appropriate technology. All health programmes and the health infrastructure should be built on primary health care. The individual, the family and the community are the basis of the health system, and

the primary health worker, as the first agent of the health system that the community deals with, is the central health force. A thorough reorientation of the existing health systems is required to be made as soon as feasible in each country – developed or developing, rich or poor – through an evidence-based managerial process and through health systems research. In order to achieve this, the prime driving force is political commitment.

Political basis

Public health is the art of applying science in the context of politics so as to reduce inequalities in health while ensuring the best health for the greatest number. Health outcomes are related to political democracy, social and cultural development, and economic efficiency. Countries with a culture of democratic values and egalitarian aspirations tend to be less hierarchical, and participation of people in the design of their own future is more acceptable, and even desired. In countries that exhibit a rigid social and political structure, the participation of people in shaping their own future has been perceived by some as a loss of their own power and a risk. The style of socioeconomic development of a nation, its political orientation and the priority assigned to social sectors, including investment in health promotion and disease prevention, illustrate the level of commitment to the global goal of health for all.

Due to the political nature of health care, it is not surprising to note that in all WHO regions intersectoral coordination and the formulation and implementation of a healthy public policy have been the most difficult achievements. The third evaluation of the global strategy for health for all brings out the following issues:

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Socioeconomic development			Health system
Report 1 1954-56	Main problems		<ul style="list-style-type: none"> Degree of incompleteness varied considerably between different diseases, countries and parts of the same countries and from one period to another (notification of communicable diseases). Two parallel and more or less disconnected systems of «medical» and «health» services – greater attention to medical side. Modern concept of health as a state of physical, mental and social well-being and not merely the absence of disease and infirmity offered new horizons to health workers. Importance of public health recognized by nations/governments as a factor in social and economic development. People's awareness for their own participation to build up the health of the nation. Effort to improve the quality of human life – adding life to years. Realization that health cannot be imposed: its promotion requires teamwork within the community
	Main achievements		
Report 2 1957-60	Main problems		<ul style="list-style-type: none"> Understanding that the problem of health must be based on precise information and precision implies measurement. Work on establishment of indicators which would mark definitely the signs of improvement and achievements in health matters.
	Main achievements	<ul style="list-style-type: none"> There had been scientific, economic and political changes, from 1959 to 1960 which positively influenced health development. Political changes, independence, enough freedom of thought and action and of association in the councils of the world. The great boom of education in some developing countries. 	
Report 3 1961-64	Main problems		<ul style="list-style-type: none"> Substantial increase in general government health expenditure. Express desire to organize health planning as a part of total planning for socioeconomic development. Establishment of central bodies for health research in the countries.
	Main achievements		
Report 4 1965-68	Main problems	<ul style="list-style-type: none"> Large-scale migration from rural to urban areas. 	
	Main achievements	<ul style="list-style-type: none"> More attention being given to social and economic factors influencing health. 	
Report 5 1969-72	Main problems		<ul style="list-style-type: none"> General morbidity statistics very incomplete or non-existent in most countries.
	Main achievements		<ul style="list-style-type: none"> % of GNP on health – general trend increasing. Public health research becoming more attractive. Concept of national health planning in general accepted by developing countries.
Report 6 1973-77	Main problems	<ul style="list-style-type: none"> Urbanization (all over the world) and migration (in Europe). 80% of adult population illiterate in low-income countries. 	<ul style="list-style-type: none"> % of GNP spent on health in developing countries, 2-3% (a few US\$ per capita expenditure).
	Main achievements		<ul style="list-style-type: none"> 30th World Health Assembly in 1977: Health-for-all strategy – primary health care. % of GNP spent on health – slow increase. Global expenditure on health research – increase.
Report 7 1978-84	Main problems	<ul style="list-style-type: none"> Number of illiterate persons increased from 1970-1980. 1000 million people living in absolute poverty, 90% of whom in rural areas. GDP per capita had fallen – especially in Latin America and Caribbean. Increase in unemployment from 1970-1980. 	<ul style="list-style-type: none"> Some factors affected the evaluation process: not yet suitable methods, no definite baseline for measuring, lack of information support to managerial process.
	Main achievements	<ul style="list-style-type: none"> Illiteracy of adults from 48% in 1970 to 40% in 1980. 	<ul style="list-style-type: none"> Impressive analytical contribution from 177 Member countries for first evaluation. Endorsement of health-for-all strategy from almost all countries. Positive trends in mobilizing communities for health and allocation of resources.
Report 8 1985-89	Main problems	<ul style="list-style-type: none"> Disparities between the least developed and other developing countries had increased. Degradation of living conditions in developing countries, especially in urban areas. 	<ul style="list-style-type: none"> Slow progress due to slow reorientation of disease control programme towards people's needs, difficulties in involving all those concerned with health, weak management of health care delivery system etc. National health expenditure devoted to local health services had decreased in least developed countries. In 1/4 African countries per capita expenditure on health was under US\$ 5.
	Main achievements	<ul style="list-style-type: none"> Per capita GNP – some increase in developed countries. Adult literacy rate increased from 62% in 1985 to 66% in 1991. 	<ul style="list-style-type: none"> Slight increase in % of GNP spent by national governments for health in developing countries. Increasing number of countries adopted policy of decentralization and delegation of responsibility to district level. People increasingly involved in improving their own health.

Health status

Health services

- Very high infant mortality rate and maternal mortality rate in developing countries.
- Half of the children died before they reached the age of five years.
- Disease problems: malaria, 1.5 million deaths, smallpox still a menace.
- Prevalence (millions): trachoma 400, malaria 150, yaws 50, onchocerciasis 20, leprosy 12.

- Very low vaccination coverage (no exact data).
- Water supply and waste disposal systems quite inefficient.
- Great shortage of water supply and sanitation in larger cities: 10-30% of dwellings without these facilities.

- General trends towards the improvement of health status (decline in increase in height and weight and improvement in nutritional status).

- Application of some simple technology (chlorination, fluoridation, long-acting penicillin, etc.).
- Dental health services had been expanding rapidly in many countries.

- Still very high infant mortality rate and maternal mortality rate in developing countries.
- Half of the children died before reaching the age of five years.
- Rate of population growth of 3% and more per annum in some countries.
- Increase in number of venereal diseases, mental disorders and anxiety states and accidents.

- Preventive and curative medicine are not easily «integrated» (antithesis between preventive and curative medicine).
- Antisocial concentration of medicine and nursing skills in the larger cities.

- Reawakening of the interest in the environment influenced development of «sanitary policy» which helped in the control of communicable diseases.

- Recurrence of certain diseases: venereal, rabies, viral hepatitis, trypanosomiasis, plague.
- «Population pressure» – dramatic projection of the population growth.
- Malnutrition: anaemia, goitre.

- Great disparity in wealth, health and educated manpower.

- Substantial reduction in infant mortality rate (in Africa by 20-30 %).
- Decrease of some communicable diseases (cholera, smallpox, leprosy, yaws, trachoma, etc.).
- Further development and enlargement of health services (hospitals, health centres, manpower).
- Recorded progress in general education (proportion of children attending schools has risen from 2.3% to 9%, especially in Africa).

- High prevalence of parasitic diseases.
- No sign of decreasing plague, venereal diseases, etc.
- Increase of some diseases: cardiovascular, cancer, mental, accidents.
- Big economic burden of some diseases: tuberculosis, syphilis, etc. (in USA).

- Some efforts in control of communicable diseases influenced decline of some of them: smallpox (40% less than in previous years), polio in developed countries, leprosy, cholera.
- Savings from some eradication programmes, for example measles in USA (1963-68), had averted 10 million acute cases, saved 1000 lives and prevented more than 3000 cases of mental retardation.
- Proportion of the population over 65 expanded.

- Considerable attention had been paid to the education and training of manpower (more doctors, new schools, more nurses, etc.).
- Some progress had been made in the provision of community water supply – especially in Latin America.
- Main progress in structural development of health services, rather than in performance.
- The period 1965-68 was notable for the growing appreciation of the dangers of environmental pollution.

- Malnutrition (protein-calorie malnutrition) a big problem – more than 100 million cases in children under 5.
- Increase of population growth rate from 1.82% in 1950-55 to 2.08% in 1965-70.

- Increase in life expectancy at birth, highest values in Europe and the Americas.
- Some diseases show «withdrawal» – rapid decrease in number (smallpox in the Americas – since April 1971 – last case in Brazil, cholera fewer notified cases, etc.).
- Treatment of some diseases effective: plague, tuberculosis, yaws, etc.

- No improvement in some diseases/conditions: diabetes, acute respiratory infection, malaria, malnutrition, accidents, maternal mortality (developing countries), etc.
- Food and nutrition, 1000 million globally without enough food.
- Annual increase of global population: 80 million.
- Infant mortality rate decreasing in developed (8.3-40.3/1000 live births) and in developing (130-200/1000) countries.
- Life expectancy at birth increasing (male: 53.9 years, female: 56.6).
- Population over 65 increased. ● Smallpox – no new areas.
- Endemic treponematoses – low prevalence.
- Mortality from cardiovascular and ischaemic heart disease – decrease in some developed countries.

- Low % of children immunized – less than 10%.
- Inadequate distribution of manpower: urban/rural.
- % of population with access to safe drinking-water not satisfactory in rural areas in developing countries.

- Contraceptive methods – slow increase.
- Number of medical schools – increase.
- Drinking-water supply improved in urban areas.
- Drug control laboratories established in some countries.

- Infant mortality rate – still high: over 50/1000 live births in 79 countries.
- Mortality from ischaemic heart disease increased in under 65s in most countries.

- Immunization coverage (DTP-3rd dose low – 15%)
- Some improvements in water supply and sanitation – nullified by population growth and drought.

- Eradication of smallpox declared 1980 by 33rd World Health Assembly.
- Infant mortality rate less than 50/1000 live births in 80 countries.
- Life expectancy at birth over 60 years in 98 countries.
- Diarrhoeal diseases – decline in mortality, morbidity.
- Mortality from cardiovascular disease in developed countries – decline.

- Coverage with primary health care from 80 to 100%.
- Immunization coverage by DTP – 15%.

- Maternal mortality rate still high in some developing countries (up to 737/1000 live births).
- More than 3 million people dually infected by tuberculosis and HIV.
- Increased number of HIV infections.
- Nutrition of children in developing countries not yet satisfactory.

- Local health services still not reaching 10-20% of population.
- 2 million children still dying because of not being immunized.
- Maldistribution of health personnel (among countries, within countries, urban/rural, etc.).
- Shortage of nurses – especially in Asia.

- Life expectancy at birth increase of 1 year from 1985 to 1990.
- Infant mortality rate decrease from 76 per 1000 live births in 1985 to 68 in 1991.
- Birth weight over 2500 g improved from 79% in 1985 to 88% in 1991.
- Disparities in health status between developed and developing countries reduced, but problem remains.

- Immunization coverage increased globally – to 80%.
- Safe water coverage increased from 68% in 1985 to 75% in 1991.
- Adequate excreta disposal increased from 46% in 1985 to 71% in 1991.
- Availability of essential health care increased globally.

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- The political nature of health, illness and health care.
- The value of representative democracies in all countries where human, political and socioeconomic rights are truly respected.
- The inextricable play of economics, religion and culture with politics in decision-making and priority-setting in health.
- The value of peace and conflict resolution as essential conditions for physical, mental and spiritual health.
- The value of institutional designs that ensure government capacity to manage political struggles where the results affect people's well-being negatively.
- The essential importance of governance in managing transitions, crises and new paradigms.
- The implications of politics and policy-making for WHO's technical cooperation in the future: political contexts should be monitored in a systematic way so as to be able to foresee some possible impacts on health development; and to support ministries of health and other partners in the formulation of better health policies.

Experience of the past 20 years shows that governance is one of the decisive factors in securing the implementation of primary health care goals. It is also essential to strengthen the social, political and psychological capacity of people to facilitate the shifts in values and behaviours required to participate and be active in decision-making. Trust in the systems of justice, protection and security must be secured. Transparent assignment of resources, financial execution and social participation in the process of decision-making are also part of good governance.

Managing progress in implementation

To ensure that governments and WHO know whether they are making progress with the implementation of their strategies and whether these strategies are effective in addressing the health concerns and improving the health status of the people, the Organization's Member States agreed at the World Health Assembly in 1981 to monitor progress and evaluate the effectiveness of their strategies at regular intervals, and to report their findings to the WHO governing bodies. Implementation was monitored in 1983, 1988 and 1994, and evaluated in 1985, 1991 and 1997. The findings were then reviewed by the regional committees and by the World Health Assembly.

The process and progress in health systems development and the trends in health care coverage during the last two decades are highlighted below.

Health systems development

Up to 1978, the biomedical model of health systems predominated, and the health sector was confused with the medical sector. To develop a health system, doctors and nurses were trained, hospitals established, infrastructures created and medicines distributed, especially in towns and for populations that could afford them. Access to modern health care was extremely limited in many developing countries, particularly for rural populations. The limitations of the biomedical model were evident. Fortunately, following the Declaration of Alma-Ata in 1978, new channels and alternative experiments opened up increasingly credible options worldwide.

The three main elements of the strategy (which went far beyond the prevailing biomedical model) were: the development of peripheral services, an intersectoral approach and community participation. The strategy was adopted, more or less explicitly, by the vast majority of countries.

Changes in the economic and political situation in the 1980s proved to be a major obstacle to the implementation of the health-for-all strategy. It was adopted several years too late for the political and social movements that could have provided support and served as a springboard for development. So, before long, it was criticized, distorted, taken over and interpreted more and more restrictively. In general, however, the results of the health-for-all strategy have been encouraging as regards the development of peripheral health services, but little has been done to promote an intersectoral approach and community participation.

WHO continued to support the principles of health for all, but organized itself in such a way as to deal with prevalent *diseases* in developing countries. It pushed the medical approach as far as it could go, even in prevention, by giving greater emphasis to vaccinations and vertical programmes.

Appropriate preventive, curative and community care has a central role in the pursuit of the health-for-all targets. Using adequate policy instruments and cost-effective management of resources, appropriate care focuses on accessible primary care, supported by strong secondary and tertiary care, including services for people with special needs, in order to ensure a high quality of care, and maximum health gains.

Resources for health

Countries can be divided into three groups according to the predominant method of **financing** their health system: mainly based on taxation; chiefly based on social insurance; characterized by centrally-planned normative distribution of government budget funds. With a significant increase in most countries in the role of the private sector in the delivery of services, both equity and allocation issues are receiving more attention. Concerns have also been raised about the quality of care.

In all countries, the reform process is bedeviled by the growing costs of health services. The ageing of the population, associated with an increased need for health care, the availability of new treatments and technologies and rising public expectations, all exert financial pressures. Most countries are responding with a series of measures to control rising costs. In western Europe, for example, successful macroeconomic measures have given way to additional efforts to restrain escalating costs at the institutional level. In the countries in transition, this approach has been less successful, although there is some evidence of improving efficiency. The quest for cost-containment and more efficiency, and the imperative to identify more resources, frequently take precedence over the health-for-all principles and values. Consequently, from the patient's point of view, often what is referred to as "reform" does not contain any elements of improvement. Patients are asked to pay more and receive less.

A core concern in countries engaged in reforming their funding system is to balance the principle of solidarity with pressures to establish competition among insurers and providers. Private health insurance schemes are often operated in a manner that

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corrodes social solidarity. On the whole, the western European countries decided to retain their general health care policy orientation as before, but they have made major changes. More choice, competition and pluralism have been introduced in tax-based systems. Insurance-based countries are paying more attention to cost containment, primary health care and preventive services. In other regions, countries where the tax-based systems are deemed to be insufficient are reviewing the option of health insurance; for example, the Philippines has adopted an expanded comprehensive national insurance system, although the need to subsidize the poorer segments of society is limiting its success. In the Eastern Mediterranean, growth of health expenditure since 1990 has been rather slow, partly because of the difficult economic environment prevailing since the mid-1980s and the consequences of the structural adjustment programmes in several developing economies of the Region. Several countries have tried to mobilize the necessary funds through alternative financing schemes based on cost-sharing and the development of health insurance schemes.

A central issue for many countries, such as China, is improved coordination and management of multiple funding sources. Many health systems struggle to keep up with rising costs or are affected by national decisions to reduce expenditure on health. Various cost recovery mechanisms are therefore being explored. Malaysia and Mongolia are investigating user charges to finance certain health services, although possibly not critical care services.

In Africa, investment in health has virtually ceased. The social sectors, including the health sector, have been hardest hit by the worsening budget deficits. The proportion of the GNP

allocated to health has failed to increase, or has even diminished. There is still a gross imbalance between expenditure on tertiary care and expenditure for local care, to the detriment of the latter. Progress in this area has been marginal.

In general, reliable and valid data on health care financing are sparse in most developing countries. In addition, data on expenditures in the private sector are often difficult to obtain. Yet in most countries of South-East Asia, for example, 60-75% of the total health expenditure occurs in the private sector. Direct out-of-pocket spending by households appears to account for a major portion of private spending in most countries in the Eastern Mediterranean, while private insurance premiums account for a limited fraction of private spending. This means that households bear a substantial proportion of health care costs while having little or no financial protection (i.e. insurance) in the event of major illness or injury.

In many developing countries, additional resources for the health sector are provided by nongovernmental organizations and bilateral and international donors. The role played by nongovernmental organizations in both the provision and financing of health services is growing in many countries as a consequence of diminishing resources in public sectors. As the prospects of financial assistance from many donor countries are not optimistic, owing to economic recession and cuts in developing assistance programmes, financial institutions are being approached for loans aimed at supporting health development programmes. In many less developed states, external sources of funding support disease control activities and critical health promotion services, such as campaigns related to maternal and child health and immuniza-

tion. In these countries aid coordination remains a concern.

Few countries, even the most prosperous, are satisfied with the distribution of financial resources between promotive and curative services.

In Europe, redistribution of financial resources towards primary health care could not be confirmed by the few existing data. Some evidence about the outcome of such reform policies comes from other indicators, such as immunization rates and infant and perinatal mortality, which mostly improved, although this was not consistent. Disparities in access between social groups also persist, and in some cases have even worsened.

In the Western Pacific most countries devote sufficient resources to the health sector and thus express their priority concerns in terms of issues of equity, appropriate allocation of the resources and efficiency. This has become an important issue for China, where central funds are used to balance regional and rural funds. Malaysia, for example, recognizes that the public system should ensure that appropriate social safety nets are in place for those who, for economic reasons, have difficulty accessing appropriate care. In most countries of the Region, basic care of children, older citizens and those with other special needs is met by governments. In Cambodia and the Lao People's Democratic Republic, however, the allocation to the health sector is 2% or less of the gross national product, and is not sufficient to meet basic needs.

Data from some countries in the Eastern Mediterranean show that public resources are not equally distributed between geographical regions and between social classes. They tend to favour urban and well-off populations and to generate polarization with regard to accessibility

to health care. This aspect is further worsened by privatization policies. An important share of recurrent budgets of ministries of health is allocated for tertiary care, thus limiting resources for primary health care services, and preventive and promotive programmes. On average, 43% of national health expenditure is devoted to local health care, down from 50% in the early 1980s.

Experience in some countries has shown, however, that decentralization may also have negative effects such as fragmented services, or inequity. Successful decentralization requires sufficient local administrative and managerial capacity and appropriate mechanisms for accountability and citizens' participation. In addition, there is evidence that certain areas such as the basic framework for health policy, or regulations concerning public safety, are better managed centrally. Decentralization of responsibility for primary health care to local authorities is not always accompanied by a shift of financial resources. In Europe, for example, the reluctance of hospital-based medical specialists to accept policies that strengthen primary health care and/or restrict direct access to secondary care are a continuing feature. Services are still often characterized by the existence of parallel vertical programmes. Integrated horizontal services are nevertheless being developed in some European countries, providing a full range of outpatient services supplemented by home care, in cooperation with the social welfare services.

Problems associated with **human resources** vary in different regions. In the Americas, the expansion of human resources has in particular been limited by recent cutbacks in spending by the public sector, precipitated by the downturn in the economy. Another factor has been high management turnover because

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of changes in government and direction and the lack of a personnel policy and of appropriate incentives to motivate personnel.

In South-East Asia, on the other hand, the absolute and relative numbers of most categories of health personnel have risen. Most countries are examining their personnel policies and formulating plans; expanding and strengthening the capacities of education and training institutions; and updating and reorienting the curricula to meet the changing needs of the health services. Countries continue to make use of other training resources in the Region to supplement their own training opportunities.

Investment in human resources for health has been such that in most countries in the Eastern Mediterranean Region, the resources allocated for personnel consume 60-70% of the total budget of ministries of health. Recent demographic and epidemiological changes have resulted in an increase in the overall ratios of human resources for health, especially nursing and midwifery personnel. This can be attributed to the increased number of nursing institutes and increased demand, and is the outcome of health policies launched several years ago. Measures adopted include incentives to work in remote and rural areas (e.g. in Iraq), and the involvement of nongovernmental organizations in training health personnel (e.g. in the Islamic Republic of Iran).

In many African countries, the low output of health institutions and poor performance of health personnel remain major concerns. The brain drain continues, undermining the public sector's capacity to respond to health needs. The phenomenon of unemployment among school leavers is particularly affecting the health sector. Although some initiatives have been taken, they are of limited scope

and will need to be encouraged and expanded since they have proved their effectiveness in some cases.

In the Eastern Mediterranean, although human resources have been produced and deployed in larger numbers, their distribution is not balanced among the different levels of care, nor is it always equitable within countries, or balanced between various categories. Some countries (e.g. Lebanon and Pakistan) have more physicians than nursing/midwifery personnel because of cultural or employment factors, or shortages in education and training facilities. There are problems of absorbing graduates (e.g. in the Islamic Republic of Iran), and of low intake of nationals in nursing institutes, for cultural reasons. The recruitment and deployment of health personnel may be carried out by a central government body irrespective of real needs, and rapid progress in technology and increased public awareness of needs may also be causing pressure. Health personnel are concentrated in the capital or other cities, where university hospitals and other secondary and tertiary care institutions exist. This disparity – fewer physicians assigned to primary health care despite more physicians joining the services – raises several issues. In addition to the factors mentioned above, primary health care may not be attractive for physicians when it is remote and without incentives.

Examples in other regions include the Philippines, where the output of educational institutions does not match what the service needs. Among its many health initiatives, New Zealand is attempting to address this issue with specific purchasing agreements for educational institutions. Singapore has recognized the need to support the training of nurses in order to address similar concerns. China is exploring market mechanisms to meet

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health service needs – encouraging practitioners to run their own clinics or consultations, and encouraging healthy competition between medical institutions to improve efficiency and reduce costs, thus matching demand for care at different levels.

In the Americas, the most important constraint is the failure to develop a model of human resource needs in health in coordination with training institutions, and the trend towards professional medical specialization persists, with a steady rise in the number of physicians. The health workforce continues to be largely female and concentrated in nursing. Reduced employment in health and the changes in financing resulting from state reform have influenced policies related to the development of new human resources for health in most countries. At the same time there are no signs that the geographical and social distribution of health workers has improved; they remain highly concentrated in the cities, to the detriment of rural areas and urban peripheries. Virtually all countries are aware of the urgent need to rectify this situation. The appearance of new factors in the health sector job market (banks, NGOs, other agencies) has meant significant changes in the mechanisms and processes involved in the regulation of health care and the health professions. Meanwhile, however, structural action needed for solving the problem is often postponed or considered unviable.

In the Western Pacific, the main strategy is continually to upgrade the skills of the workforce through education and training, with particular emphasis on continuing education. Upgrading is seen as a particularly important issue in China. Cambodia is revitalizing its health system through a national continuing education programme. Continuing education is an explicit priority in Kiribati and the Philippines.

In Europe, the implementation of policies to develop primary health care is accompanied by the introduction of schemes for training general practitioners/family physicians, or for the retraining of physicians already in practice. Some countries are developing family physician services with a parallel community nursing service, where one did not already exist. Also there is a tendency to create academic departments of general practice/family medicine and to introduce the subject into the undergraduate curriculum of medical students.

Most countries in South-East Asia have also taken steps to increase production of certain categories of health personnel, including voluntary workers, in order to improve and expand coverage, especially at the community level. A few have established new categories of personnel and new training programmes in an effort to meet increasing and changing health service needs. For example, Maldives is now conducting a diploma course in primary health care to train middle-level managers and Myanmar has established a new institute which offers a degree in community health to prepare public health officers in charge of basic health services in peripheral areas. There is, however, a tendency of educational institutions to seek “quality” in the abstract, with insufficient attention to the real needs of the communities and their limited resources. Deficiencies in training facilities, teaching capability and resources are also constraints.

In the Americas, on the other hand, countries usually have a variety of institutions that, working in isolation, make decisions about training and education needs. The institutions responsible for training human resources have tended to neglect education in public health, health policy, and health management.

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In Africa, many countries made the development of *infrastructure* the focus of their health policy, but the results obtained were uneven in view of limited investment capacity. Hospitals continue to consume the largest share of the health budget, sometimes at the expense of health centres. Maintenance of facilities and equipment is inadequate, not only because of financial constraints but also for cultural reasons. Quite often, achievements could not be sustained without international cooperation.

In the Americas, in contrast to the 1970s, infrastructure development policy in the past 15 years has stagnated and is currently one of the components with the greatest need for support. Generally, health policy does not provide for the development of physical infrastructure such as facilities and equipment. This means that equipment is not procured on the basis of an evaluation of the health needs of the population. In the majority of countries, technical services are not an integral part of the health care system, nor are maintenance plans for hospital equipment. Equipment is not utilized because it is inappropriate, because of lack of personnel who know how to use it, or because of minor faults and a lack of spare parts. In addition, ministries of health generally do not have a sufficient budget for repairing and maintaining infrastructure and equipment, so that international assistance is often the only recourse.

The physical infrastructure in many South-East Asian countries has continued to expand, particularly at the primary and first referral levels. Health care facilities in the private sector have expanded, as reflected by the increasing number of private hospital beds. However, maintenance of infrastructure appears to be a problem in many countries, and communities are becoming involved in estab-

lishing, equipping and maintaining the health infrastructure in some countries. Most countries have given priority to upgrading the health infrastructure, particularly in rural areas. Remote health facilities are often linked by telecommunications. Improving the infrastructure is often hampered by staffing difficulties and shortage of spare parts. Moreover, improvements may not systematically benefit poorer populations. Nepal, Sri Lanka and Thailand have comprehensive networks of health facilities extending to the village level. Access to primary health care has been considerably improved, and work is now being undertaken to ensure planned development and maintenance. Assistance from international funding agencies has also been very useful in that respect.

In the Eastern Mediterranean, initiatives have recently been taken to ensure equitable distribution of the infrastructure. Many countries have opted to specify catchment areas as the unit for planning health services, and in general physical infrastructure has received considerable attention and investment, often benefiting from bilateral and multilateral assistance projects. Construction and renovation of secondary and tertiary hospitals has also developed, but at a slower rate. Accessibility to health services reached 82% in 1990 and has been sustained. Further expansion of coverage has been hampered by civil strife in some countries and by the high cost in remote areas. Outreach and mobile teams are used as alternatives to static units to serve scattered and remote populations. Linked to accessibility are two other parameters, coverage and utilization. The reported pattern of utilization varies among and within countries. Underutilization is sometimes due to a lack of availability of budgetary resources for drugs, physicians, health

staff and equipment or to the availability of alternative acceptable services, whether provided by traditional, private or nongovernmental organizations. Facilities constructed thanks to donations from nongovernmental organizations or communities or through loans are often not included in proposals for recurrent budgets due to poor coordination between planning and financial departments.

Public facilities – buildings, equipment and supplies – are not usually well maintained, because of lack of financial resources and qualified personnel. Few countries have adequate repair and maintenance workshops, whether centralized or decentralized. Some countries contract out for maintenance and repair of biomedical equipment. Underuse of equipment may result from poor maintenance or from shortage of necessary supplies such as chemicals. Ministries of health cannot compete with private firms in attracting scarce qualified repair and maintenance technicians. There is a need for resources to be provided through bilateral and multilateral cooperation in this area.

Since hospitals are the main consumers of health care resources, they have been at the centre of health care reform in every European country. There have been many changes aimed at increasing patient satisfaction, rationalizing resources and achieving better outcomes. Most countries claim moderate to good development in this area, although the pace of change has been slower than desired. The number of hospital admissions has varied widely, even between countries with similar levels of economic and health development. Hospitalization all over Europe has shifted further from chronic and simple surgical procedures to acute, day hospitals and shorter length of stay, and complicated pathologies and treatments. On average, the number

of hospital beds per 1000 population has decreased in all parts of the Region, most notably in some countries of eastern Europe. On the whole, however, the costs of hospital treatment have probably increased, both in absolute terms and as a proportion of total health expenditure. Progress has been made regarding alternatives to hospitalization such as day surgery, day care and home care.

Increasingly, countries in all regions are endeavouring to ensure **quality of care**, through the identification and constructive use of best practices and the optimal use of existing resources. In 1993, the European Forum for Medical Associations stated that ensuring quality of care is an ethical, educational and professional responsibility inherent in the medical professions. Good progress is being made in European countries following the achievement of consensus on quality indicators, e.g. for diabetes management and obstetrical and perinatal care. Outcomes in central European countries have been identical to those in western Europe, while at the same time quality of care has been achieved with less frequent use of technology-intensive interventions.

In the Americas, although some countries have set up a classification system to define the levels of potential risk to the health of the population, based on quality and safety criteria, greater organization is still needed for its use in practice. In one country for example, only 0.8% of the facilities evaluated had some method for treating hazardous solid waste.

In the Eastern Mediterranean, countries have undertaken assessment of health services to identify new entry points to improve performance. Some countries (e.g. Bahrain, Egypt, Jordan, Morocco) have initiated quality control programmes at selected levels of care. Capacity-

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building and training of health personnel in techniques and methodologies of quality of care continue.

Many countries are turning to **community participation** as a part of the action needed to reinvigorate the strategy for health for all, e.g. Bahrain, Egypt, Oman and Sudan. Other examples include Mongolia, which is redirecting services by making use of a new type of family-oriented practitioner, and Cook Islands, Samoa and Vanuatu, where nurse/community practitioner programmes are being pursued. In India, community participation is being encouraged for the procurement of medical equipment for hospitals, and cost-sharing schemes have been introduced for the maintenance of health facilities. For improving drug accessibility and affordability, community cost-sharing schemes are being implemented in Indonesia, Myanmar, Nepal and Thailand. Some communities are also participating in the procurement of equipment.

Health care coverage

Health care delivery systems

The objective of a comprehensive health care delivery system is to provide services to deal with existing health problems through the best utilization of available resources. National health care delivery systems are measured against four criteria: impact on the health problems of the population; coverage of the population in relation to the resources allocated; efficiency of services in attaining the objectives at minimum possible cost; and the effectiveness of activities that are health-related, though not carried out by the health services. As a rule, only a small number of patients require the intervention of highly specialized medical care services, and

most can be satisfactorily treated through adequate primary care, supported by appropriate technology, and by people themselves through guided self-care.

Major difficulties in the functioning of health care facilities are: the lack of specific definitions of promotive, preventive, curative, rehabilitative and supportive functions for each level of care; the uneven distribution of health care facilities; the absence of regional networks with proper referral links; the lack of appropriately trained personnel, its maldistribution and the inappropriate combination of education and specialization; insufficient management training; and the lack of simple low-cost material and methods designed for, and adapted to, local conditions.

Conventional health care delivery systems, as developed in some affluent countries, are unlikely to provide a suitable model for other countries because the solutions they imply are too costly and, therefore, irrelevant. The aim is to achieve a proper balance between need and supply, centralization and decentralization, and costs and effects, and greater flexibility of the whole system of health care delivery, including referral.

In integrated health services all service units in a geographical area form a functional unit. The trend is to extend the range of the service unit to the periphery. In the more affluent countries where chronic conditions prevail, high priority should be given to integrating acute care in a general hospital with the functions of outpatient care and institutions for extended care. In the developing countries, where infectious conditions prevail, the emphasis should be on the integration of preventive programmes in existing or developing health care services. Integrated disease control should be part of the development process.

Many countries are turning to community participation as a part of the action needed to reinvigorate the strategy for health for all.

Since 1981, the trend has been towards improvement in health care coverage as a result of the following factors: the extent of government, political and social commitment to achieving health for all; the commitment of financial resources for health by governments and the mobilization of resources by individuals and communities; growing management capabilities for programme implementation among health personnel and at community level. In general, health personnel are being better trained and oriented to communicating and working more effectively with their peers, with government, with other sectors, and with individuals and communities.

But many problems still remain. The percentage of the population covered with essential services has increased, but millions of people remain without access to water and sanitation services and to the basic elements of care because the increases in the services available have not kept pace with the increases in population. The gap between the availability of different elements of health care in developed countries and in the least developed countries is widening, although there are general improvements, even in the poorest group of countries. There are also wide gaps within countries, between rich and poor and even between different areas within countries, often exacerbated by the economic decline of the 1980s and 1990s. Services are often fragmented and coordination between the public and private sectors and with nongovernmental organizations needs improvement. The quality of care is generally high in most developed countries, although the overavailability of drugs and of technology can lead to other problems.

Health education

In the late 1970s health education units were set up in many countries throughout the world, but policy development was not a priority. Activities focused mainly on information-giving and on campaigns around lifestyle-related issues in the developed world, and infectious diseases in developing countries. Starting in 1986, the five action areas of the Ottawa Charter for Health Promotion (healthy public policy, supportive environments, community action, personal skills and reorienting health services) set the agenda for health promotion. Follow-up conferences in Adelaide (1988) and in Sundsvall (1991) elaborated the concept further and developed a more holistic and intersectoral approach to promoting and protecting health, particularly in developed countries. Greater emphasis was given to a settings approach to health such as, for example, the development of healthy cities, health-promoting schools, islands, municipalities and villages, hospitals and workplaces. Gradually a more decentralized approach to health education and health promotion developed, with subregions or provinces taking over responsibilities from national institutions. Health promotion with its emphasis on intersectoral action and settings provided the framework within which health education remained an important component. Developments in communications technology revolutionized the potential for health promotion. Meanwhile, increasingly greater emphasis is given to the development of healthy public policies backed up by the necessary legislation and resources.

Nutrition

One-fifth of the population of developing countries does not have access to enough food to meet basic needs.

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Public policies
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Low-income countries with a food deficit continue to face declining food production and complex emergencies that have displaced massive numbers of people, (see *Chapter 4*). The prevalence of protein-energy malnutrition in children under 5 in developing countries declined from at least 42% in 1975 to over 31% in 1996, indicating that in general dietary protein had become widely available. Anaemia, mostly due to iron deficiency, was the most common nutritional deficiency worldwide in the 1970s and remains so. Over the past 20 years there has been some decrease in the prevalence of iodine deficiency disorders, particularly in recent years following near-universal salt iodization by 1995 in most countries affected. Vitamin A deficiency is decreasing worldwide, but severe forms are still common in parts of sub-Saharan Africa. Foodborne illnesses continue to be a major public health concern in both developed and developing countries.

Water supply and sanitation

In 1972, the United Nations Conference on the Human Environment brought environmental concerns to global attention for the first time. In the mid-1970s there were approximately 3 billion people in the developing world, only 38% of whom had safe drinking-water and 32% adequate sanitation. In 1978 the International Drinking-Water Supply and Sanitation Decade was launched with the stated goal of clean water and adequate sanitation for all by the year 1990.

In 1980, safe water supply was available to about 50% of the world population, while adequate sanitation was available to about 35%. In 1985, an average of 55% of the populations in developing countries had safe water. By 1990 the figure had risen to 66%. The figures for excreta disposal

were 31% in 1985 and 53% in 1990. There are great differences between and within countries, particularly between urban and rural areas. From 1990 to 1994 the number of people without sanitation increased by nearly 300 million, totalling almost 3 billion for developing countries in 1994 (see *Fig. 17*). This figure is projected to increase to over 3 billion by the year 2000. From 1990 to 1994 nearly 800 million people gained access to safe water supplies but, due to population growth, the number of unserved decreased only from 1.6 billion in 1990 to 1.1 billion in 1994. The rural population remains at a disadvantage: in 1994, sanitation coverage in rural areas was a mere 18% whereas it was 63% in urban areas; access to water amounted to 70% in rural areas and 82% in urban areas.

There are positive developments however. The focus is shifting from drinking-water quality alone towards overall improvement of the environment. Public policies aimed at creating a healthy environment are becoming more generally accepted.

Maternal and child health

The range of health care needs that can arise during and just after pregnancy make the challenge of ensuring the access of all women to relevant services complex. Current global estimates show that in the developing world approximately 65% of pregnant women receive at least one antenatal visit during pregnancy; 40% of deliveries take place in health facilities; and slightly more than half of all deliveries are assisted by skilled personnel. This contrasts sharply with developed countries, where practically every woman receives regular care during pregnancy, delivery and the postpartum period.

Postpartum care has been a relatively neglected aspect of maternity

care. It does not feature in the goals set at major international conferences and the lack of reporting is an indication of low priority. Less than one-third of developing countries report national data, and levels of coverage can be as low as 5%. Estimates based on the limited data available indicate a coverage of 35% at the global level. This low level of care is disturbing, since timely interventions during the postpartum period can prevent deaths of both mothers and newborn infants, and can reduce the incidence of long-term pregnancy-related illnesses.

In developed market economies and economies in transition, well over 90% of pregnant women received antenatal care in 1996. Deliveries took place in health facilities and were attended by skilled personnel. In the least developed countries, while nearly 50% receive antenatal care, only 30% deliver in health facilities or have skilled attendants. In other developing countries the numbers are around 70% and 60% respectively. Worldwide, only every third woman receives care from a skilled health professional in the postpartum period. Estimates of anaemia in pregnancy are less than 20% in developed market economies and economies in transition, but are above 50% elsewhere.

In 1965, only about 9% of all married women of reproductive age in developing countries, or their partners, were using a method of contraception. Today this figure is approaching 60% worldwide. However, the fertility-regulating needs of large segments of the world population remain unmet by the currently available methods and services.

These indicators of maternal health care utilization have a number of limitations. They do not, for example, reflect the content or quality of the care provided.

Just as maternal health is dependent on many factors, newborn and

Box 26. WHO's Expanded Programme on Immunization (EPI)

One of the most dramatic current goals for EPI is the *eradication of poliomyelitis* by the year 2000. While there are still difficulties in raising the resources needed to ensure that the job is finished on time, all the indications are that progress towards the goal is on target. Reported BCG and DTP3 coverages have remained steady since 1990 at about 90% and 80%, respectively. Countries in greatest need have reported a slow, but steady improvement for DTP3 coverage, increasing from 26% in 1988 to 44% in 1996. At least 86 countries have now introduced hepatitis B vaccine into their routine immunization programme, and at least 25 have introduced *Haemophilus influenzae* type B (Hib) vaccine.

The *managerial process* of immunization programmes has particular features which differ from those of other programmes. EPI has strongly recommended that annual operational plans be developed looking at all managerial aspects of health. Such activities have provided a good basis for measuring programme effectiveness.

EPI has been instrumental in establishing *links between partners* in immunization, enhancing the use of funds in ways which support other parts of the health sector as well as immunization.

EPI has focused attention on *countries in greatest need* – those requiring technical and financial support. Such countries have low national programme implementation capacity and have received little support compared to other countries which are financially and technically stronger. Support for immunization in the area of, for instance, training has resulted in improvements in other areas of health care.

For a long time, *surveillance* has been regarded as an unwelcome necessity for immunization programmes, and not carried out well. Through the polio eradication initiative, the entire surveillance system has been revitalized to the extent that many countries now report polio data weekly. In addition, an effort has been made to include other infectious diseases in the same reporting system, e.g. yellow fever, dengue and meningitis.

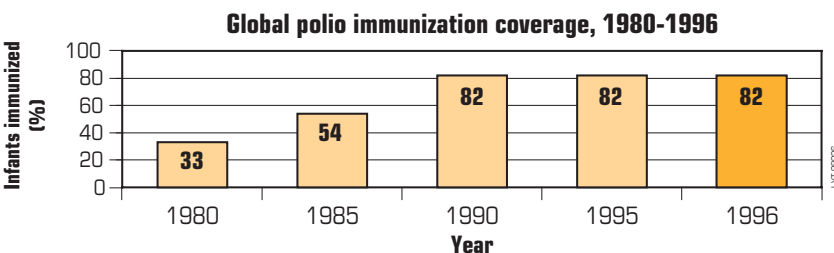
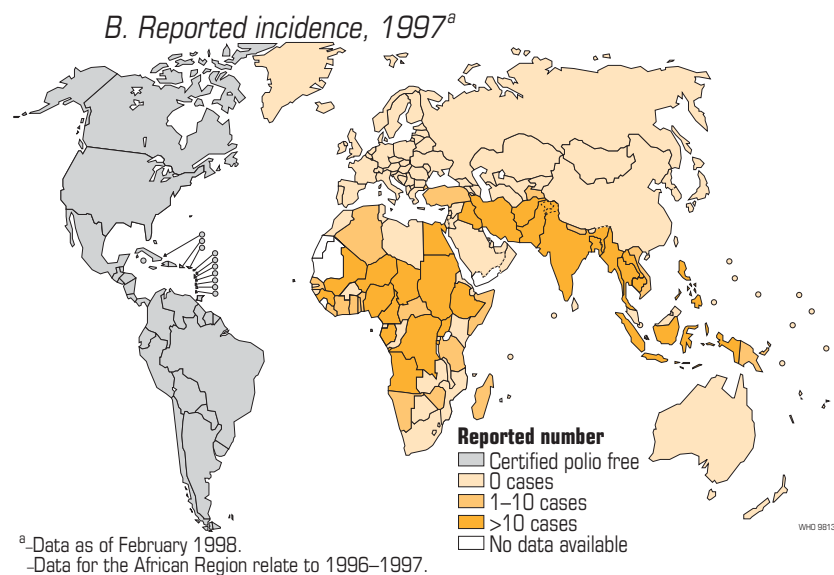
A basic requirement for all national immunization programmes is an intact and functional *cold chain*. This facility is useful for many other primary health care products not used by EPI. Stock control training for management of vaccines also facilitates the management of other commodities used in health centres.

EPI promotes *safe injections* for immunization and for all other purposes. EPI has developed auto-destruct syringes which can be used only once before they block and have to be disposed of. The method of disposal of any autodestruct or disposable syringe and needle is important, and EPI has developed and promoted the use of "safe boxes" which successfully dispose of them and prevent these sharp items from contaminating the environment.

While *vitamin A* is not a vaccine, the target group of infants and mothers is the same, at least in countries where the vitamin deficiency exists. By giving the inexpensive vitamin orally at the same time as immunizations, the cost for both commodities is reduced.

The most devastating illnesses (including measles) of children living in developing countries is dealt with by the strategy of *integrated management of childhood illnesses*. By supporting this initiative, EPI has helped to produce a comprehensive teaching programme for training health care workers.

Map 9. Polio



child health are also strongly related to the social, economic and health status of the mother. Most infant morbidity and mortality could be prevented through the provision of adequate water supplies and sanitation facilities at community level, good nutrition of mother and child, and access to first-level care including good immunization coverage. Available – often limited – information shows that coverage of infant care by trained personnel has increased since 1985, but more importantly indicates the large differences that continue to exist between countries.

Immunization

In the early 1980s there were three concerns with regard to immunization: immunization levels were low; supplies of vaccines and infrastructure for their dissemination were inadequate; and the immunizable diseases were limited primarily to diphtheria, pertussis, tetanus, polio, measles and tuberculosis.

The Expanded Programme on Immunization was established in 1974 and immunization service delivery was rapidly improved by staff training; the development of secure cold chains; and the availability of routine immunization. Success was measured by vaccine coverage levels, and successful reduction in the incidence of some diseases through widespread immunization made it possible to consider the elimination of diseases such as measles and neonatal tetanus, or even the eradication of some diseases such as poliomyelitis (Box 26). Since 1991, polio has been eradicated from the Americas and many other parts of the globe. The target is its eradication by the year 2000. Map 9 shows reported incidence in 1987 and 1997.

Global policies and strategies for immunization have been adopted by

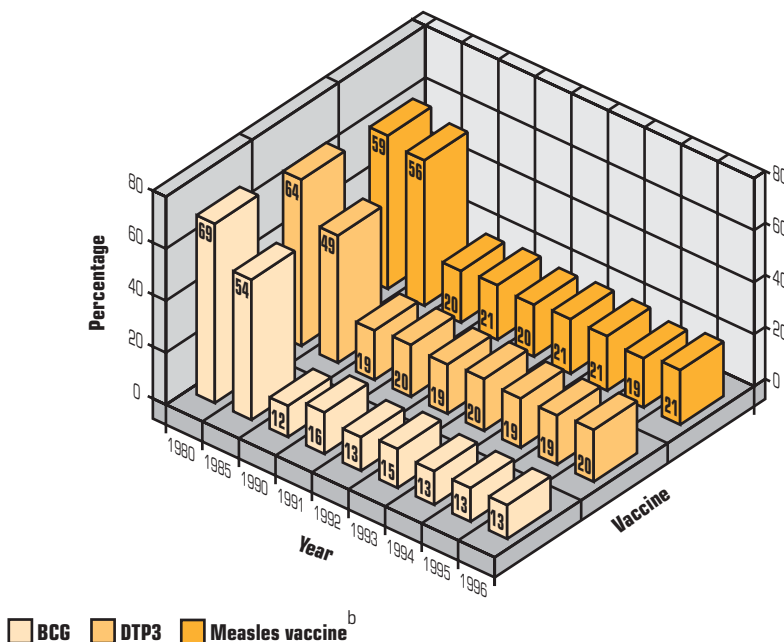
virtually all countries of the world. Overall immunization rates against the six vaccine-preventable childhood diseases have increased from less than 50% in 1980 to over 80% worldwide in 1995.

Neonatal tetanus is now a target for elimination with a possibility of success by 2000. A time-frame for the global elimination of measles will be set by the year 2000. The vaccine for hepatitis B has been added to the standard list, as has the vaccine for yellow fever in endemic areas. Meanwhile, some 20% of the world's children, most of whom are among the poorest and least privileged, continue to be unreached by immunization (Fig. 20). Some countries, even some with adequate infrastructure and financial capacity, report consistently low coverage.

In developing countries and economies in transition, constraints to the maintenance of even 80% immunization coverage include inadequate financing, poor facilities and the need to upgrade the entire system. In many least developed countries, especially in Africa, sustaining high coverage remains problematic owing to the almost universal constraints of insufficient funding, equipment, supplies, cold-chain and transport; lack of trained personnel; inadequate access to facilities; and poor receptivity on the part of the population.

In the developed market economies, immunization rates have been increasing since the early 1990s. In the economies in transition they declined in the early 1980s but have been increasing in recent years. In the developing countries, immunization rates have increased dramatically, while in the least developed countries, immunization rates increased from less than 20% in the early 1980s to more than 60% in the mid-1990s. In the developing countries, where neonatal tetanus remains a major

Fig. 20. Unimmunized infants, 1980-1996^d



■ BCG ■ DTP3 ■ Measles vaccine^b

^a These data include only those countries that have reported data as of 22 October 1997.

^b Measles vaccine coverage is among children up to 2 years.

problem, immunization rates with tetanus toxoid have grown but still remain quite low at below 50% coverage.

Locally endemic diseases

Approaches and progress in the eradication, elimination and control of infectious diseases have been dealt with elsewhere in this report, especially in *Chapter 2*. In the context of primary health care, the approach to disease control is the following:

- Selected diseases are targeted for eradication, elimination and control where cost-effective interventions are available and their wider application operationally feasible, e.g. poliomyelitis, leprosy and filariasis.
- Integrated packages of cost-effective interventions are developed and promoted for disease clusters to ensure optimal impact on health status and make better use of re-

sources. Examples of this approach are the Expanded Programme on Immunization which aims to control six major childhood diseases through immunization; the Integrated Management of Childhood Illness that focuses on five major childhood killers; and the recent move towards integrating activities for the control of clusters of tropical diseases (Box 27).

- Capacity at national and global levels is reinforced to recognize and respond rapidly and effectively to outbreaks of emerging and re-emerging diseases. For example, mechanisms are being established by WHO for a global surveillance system supported by a team of experts who can be at the location of an outbreak anywhere in the world within 24 hours of being officially notified.

Box 27. Integrated disease control

An integrated approach to disease control requires the establishment of clear priorities on the basis of epidemiological analysis and existing resources and opportunities, as well as careful assessment of the potential effectiveness and sustainability of proposed interventions. Such an approach should be initiated as a development process, which could be progressively extended to other priority areas, and eventually become a sustainable health care service.

Action has been taken since 1996 to integrate activities between groups of diseases where appropriate, starting in five countries, the Islamic Republic of Iran, Mauritania, Saudi Arabia, the United Republic of Tanzania (Zanzibar) and Yemen. The geographical distribution of intestinal parasitic infections, schistosomiasis, filariasis, malaria, leprosy, vaccine-preventable diseases and other diseases and the approaches to their control are quite different in these countries. As a consequence these Member States, working closely with the programme on control of tropical diseases in WHO, have developed national plans of action for integrated disease control, which include surveillance activities, and which are now being implemented. This work was carried out by the ministries of health in collaboration with other ministries as well as with the WHO regional offices and the relevant programmes at WHO headquarters. Particular attention is being paid to the most common requirements for disease control and to the most pressing needs of the population.

With the tools and strategies now available, the integrated approach can become a reality in many areas where there are various communicable diseases and where the epidemiological circumstances and the resources are such as to provide a good opportunity for success. However, as much more experience is needed in this area, it will be necessary to continue the initiative for several more years.

Better coordination and the combining of resources would appreciably enhance the health impact of control efforts against communicable diseases in tropical areas, an approach that is attractive to both ministries of health and development agencies because it is more cost-effective. However, very careful joint planning is essential if the expected benefits are to be realized. The activities in the five countries should yield valuable information that will enable this approach to be progressively extended to other areas.

Provision of essential drugs

In 1978, the lack of drugs for the public sector, especially for primary health care, was identified as a significant problem. Although countries were spending 20-40% of their scanty health budgets on importing drugs, most of the people in rural areas and urban slums had no access to these drugs. At all levels of the health system – from the national level to the hospital to the patient – many countries lacked drugs in sufficient quantities. At the same time, many drugs were available in private pharmacies but were out of reach of the majority of the population. Today although some problems (unequal access, irrational use, lack of resources) remain unchanged, new challenges have emerged. Securing rational use of drugs by health care providers and the public is not easy in an environment where resistance to antibiotics is increasing rapidly and where new diseases are emerging. Also difficult is the implementation of existing rules, regulations and standards to ensure that drugs on the market are safe, effective and of acceptable quality in the absence or the scarcity of human and financial resources, political commitment and physical infrastructure.

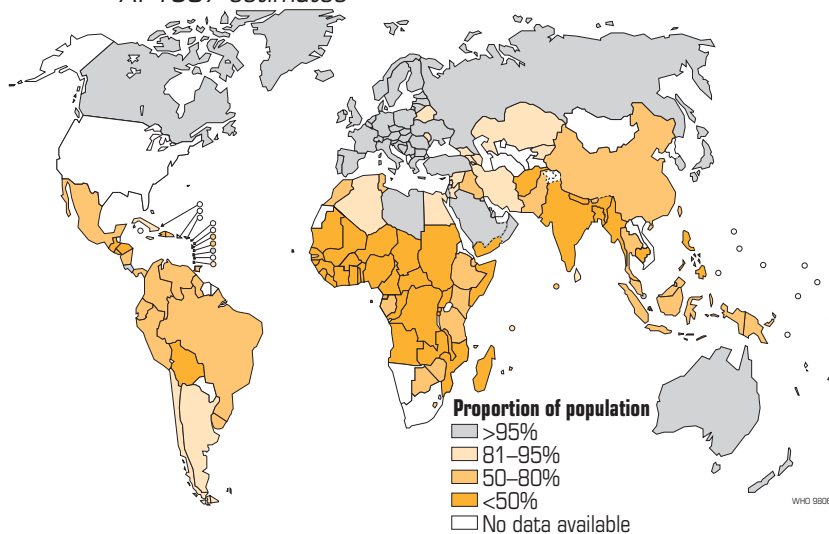
There have nevertheless been improvements in a number of countries in the Eastern Mediterranean and South-East Asia Regions. In

Africa, access to drugs is still inequitable even though it has been improved by introducing cost recovery as part of the Bamako Initiative and other similar initiatives (Map 10).

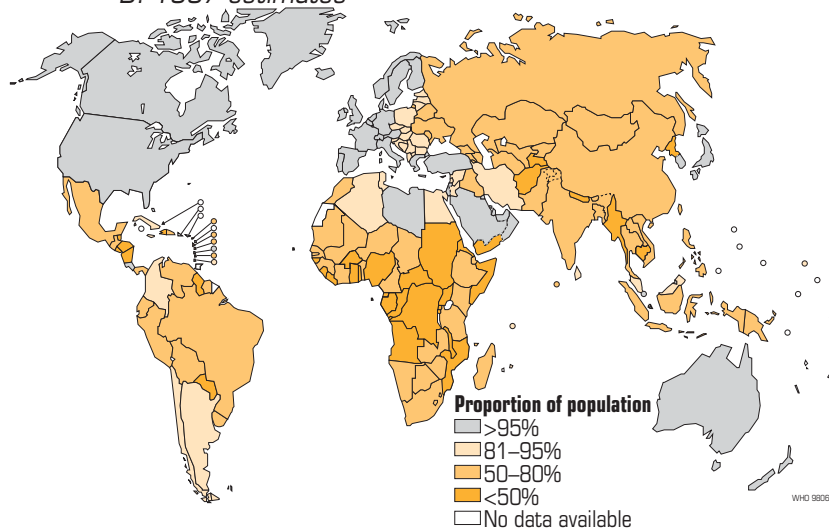
In the Americas, drug legislation and regulation have constituted a priority component of health sector reform in many countries – the objective being to create and/or update the legal framework to improve the supply and rational use of drugs. Three major problems have been identified with respect to public policies on essential drugs: the annual budget is low in terms of the need for coverage; the supply is ineffective; and while a distribution system exists, it does not function properly. There have been budget cutbacks in the social sector, and many countries have adopted different sources of financing, with patients paying more of the costs. The private sector constitutes 78% of the total pharmaceutical market in Latin America.

Drug consumption accounts for about one-third of total health spending in the Eastern Mediterranean, and in many countries a relatively high percentage of private spending goes towards the purchase of drugs. This pattern is especially pronounced in Egypt, Morocco and Yemen, where up to 70% of total health spending is for pharmaceuticals, most of it through private financing. Drug selection, procurement and distribution present the most problems, especially for countries in greatest need. Limited budgets for drugs have stimulated the search for alternative financing methods, such as cost-sharing or revolving funds to ensure accessibility of drugs for those in real need. Local drug production in Egypt, Islamic Republic of Iran, Jordan, Morocco and Pakistan covers more than 80% of the total drug consumption, and is rapidly growing in other countries of the Region,

Map 10. Populations with regular access to essential drugs
A. 1987 estimates



B. 1997 estimates



strongly supported by governments. However, most countries have no clear policy regulating drug production to ensure the availability of essential drugs and vaccines.

A common constraint in countries in South-East Asia is the limited government budget for drugs. Distribution systems are inefficient, are not well planned, and do not take into account seasonal variations in drug requirements related to epidemio-

WHO's Ninth
general programme
of work placed
"integrating health
and human
development into
public policies"
as the top priority.

logical disease patterns. In many countries, donor support from international agencies is making a significant impact on the availability of good-quality essential drugs. Tax exemption for the importation of essential drugs and the introduction of generic drug policies and price regulations in general, and for essential drugs in particular, is facilitating access to essential drugs in many countries. In addition, the increasing involvement of the private sector in the provision of health services including drugs is making essential drugs more accessible to all citizens in several countries that have introduced cost-sharing mechanisms. Public health services are focusing more on the sections of the population who are less able to fend for themselves, while wealthier people use the services of the private sector. Availability has improved, and eight out of 10 countries in the Region produce essential drugs.

Although European countries spend up to 30% of health care funds on medicines, in all countries there is widespread unnecessary and inappropriate prescription, dispensing and use of medicines. A carefully planned combination of regulatory and educational measures accompanied by continuous monitoring can be effective in improving drug use, but too little is known about the final effect on the health of patients. In western Europe access to drugs is ensured through extensive publicly-financed health care delivery schemes, but in central and eastern Europe there has been a marked shift towards private financing of drugs. The accompanying irrational use of drugs has created problems as regards access and affordability for larger parts of the population.

WHO's response

Strengthening national health administrations has been one of the major objectives of WHO since its creation. Starting in 1950, WHO has advocated the integration of specialized health service activities in a general health programme. The focus was on strengthening local health services, integrating mass campaigns against specific diseases into general health services, carrying out research on public health practices, and providing essential preventive and curative health facilities to all the population, especially in remoter districts where health services are often non-existent. In 1962, the World Health Assembly considered that the creation of a network of minimum basic services must be regarded as an essential pre-investment operation, without which agricultural and industrial development would be hazardous, slow and uneconomical. In 1965, WHO outlined two possible approaches for integrating mass campaigns into the general health services: sequential campaigns and the pre-eradication programme. The need for evaluation was recognized, but progress was slow.

In the 1970s WHO took up the concept of country health programming as "a significant innovation". It was understood as a systematic process of assessing a country's health problems in their socioeconomic context, identifying areas susceptible to change and formulating priority programmes to induce such change. A new approach of primary health care for the promotion of national health services was adopted in 1975, taking into account the socioeconomic aspects of health and the related intersectoral action. In 1994, WHO's Ninth general programme of work placed "integrating health and human development into public policies" as the top priority.

Current trends in health system reform include increased openness to market forces and recognition of the role of the private sector, at times coupled with reduction – or what is sometimes referred to as “rightsizing” – of public institutions; decentralization; and an emphasis on health care financing methods, including insurance and user fees, with widespread concern about resource mobilization and cost containment. WHO has pioneered work on monitoring health equity to inform national policies in the health and other sectors, for example supporting work in Lithuania, Sri Lanka and Zimbabwe, that explores ways of using existing routine data to produce policy-oriented reports on national trends in equity in health and health care. Other countries now are asking for practical, low-technology methods to carry out similar work. A review of international experience with health insurance schemes covering people in the non-formal sector of the economy has been completed, as part of research into ways of moving from limited to universal risk-sharing in low- and middle-income countries.

Technological progress can improve prevention, diagnosis and treatment, but cannot substitute for **human resources**. The quantity, distribution and performance of health workers is central to the efficiency of the health system since they account for as much as 70% of the recurrent health budget.

From 1948 to the late 1960s, WHO's objective was to increase numbers of conventional health personnel, with special emphasis on doctors and nurses and the rapid expansion of medical and nursing schools. Training in public health was also expanded. In the 1960s and 1970s, the emphasis was on auxiliary personnel to ensure services in isolated rural and difficult-access areas, spurred by the

health-for-all policy in the latter period. From the 1970s to the present, the health personnel teacher training initiative achieved a worldwide impact, with the recognition of health personnel education as a career specialty. Health personnel education research has led to many innovations and improved understanding of adult learning and clinical decision-making behaviour. Starting in the 1980s, the relevance of health personnel to national needs has been assessed, to bring about a reorientation of planning, training and utilization. The WHO fellowships programme has always been considered relevant to these processes.

The present concerns over cost and value for money have resulted in important changes in the way health care is being provided. A greater emphasis on outpatient and home-based services has led to the growth of new categories of providers in developed countries, often with very narrow scopes of practice. In the early 1990s a project was initiated to provide Member States with a set of tools to facilitate the planning of human resources for health as well as the monitoring of performance. Some of the materials which have been developed include the WHO toolkit for planning, training and management; models for projecting workforce supply and requirements; and a manual on workload indicators of staffing needs.

The cost and availability of resources will continue to be a preoccupation in the health sector. The emphasis on care throughout the life span will require close coordination and continuity in the provision of preventive and promotive, curative and rehabilitative services. Health services of the future will be provided by multidisciplinary teams and the existing mandates of the established health professions cannot continue to be maintained. The public and

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Box 28. Global medicine needed in the 21st century

Medical schools rightly focus teaching on the national disease and public health panorama. However, many fail to teach even a minimum about the global health situation. Students of natural science, humanity, economics and agronomy in most countries are generally taught more about global aspects of their disciplines. Consequently, the medical profession has a weaker voice than other professions in the discourse about global development. The situation is improving in some medical schools, partly because of the inclusion of international health as a discipline.

A five-week full-time course in global medicine has been given twice a year since 1996 at the Karolinska Institute, the medical university in Stockholm, Sweden. It has become the most popular of the elective courses in the curriculum and is presently taken by half of the students. The aim is to teach how socioeconomic, cultural and environmental factors determine the health of nations and how the global burden of disease and demographic patterns vary between and within countries. Later training in clinical medicine is put in both a historical and a global perspective by a review of the disease transition, from infectious diseases and malnutrition affecting mainly children to various patterns of chronic diseases in adults. Students learn to use different sources of health and demographic indicators in problem-based learning sessions where they analyse the health profiles of different countries. The division of countries into developing and industrialized is replaced by a new taxonomy with several groups reflecting the continuum of health status that is determined by both economic development and degree of equity. Global variations in health policy and health service systems, modern as well as traditional, and the work of international health organizations are reviewed. Teaching about food security and food culture ends the first part of the course.

The last two weeks of teaching are given by either of the Medical Colleges in Blantyre, Malawi, and Trivandrum, India. Students pay for their own travel and the Karolinska Institute pays the tuition fees from its core budget. Students learn about cost-effectiveness as they admire the clinical skills of the teachers in India and in Africa with access to few of the diagnostic techniques used in Sweden. It comes as a surprise to students to learn how much health can be improved with few resources if the primary health care strategy is optimally applied. Home visits to families under guidance from community nurses provide unique understanding of the tremendous global inequity in health-determining life conditions. Collaborative projects and reciprocal exchanges of students and teachers result from the contact created. Students' evaluations are very positive and their comments (e.g. "I lost prejudices and gained a new view of the world") indicate that the impact goes far beyond learning new facts. The course provides knowledge and perspectives that will be useful in the next century whether the student goes on to work in pharmaceutical research, clinical practice or becomes an actor in the discourse on global development.

Personal communication from Dr H. Rosling, Professor in International Health, Karolinska Institute, Stockholm, Sweden.

private sectors need to develop effective partnerships, and the existing discrepancies between them in incentives and rewards need to be narrowed. Regardless of which sector is providing services, clinical decisions should take into account social and economic implications and moral and ethical aspects. The client communities of the future will be much better informed and more discriminating, and will demand a direct role in decisions over their health. In order to cope with these changes, all health professionals will need new core skills, none of which are at present adequately addressed – such as health economics and management, ethics and computer skills – in addition to the skills required in their own special fields.

In recognition of the need for the medical profession to participate in global development, some medical schools have decided to teach international health as a discipline (*Box 28*).

As **health technologies** become more complex and costly, and as the application of new and existing technologies becomes more refined, making the right decisions about the allocation of often scarce resources has become more difficult.

Reproducibility and comparability of results are essential to the success of health laboratories. In 1972, the World Health Assembly adopted a resolution on standardization of diagnostic materials. In 1976, WHO established the first international external quality assessment scheme (IEQAS) in clinical chemistry to assist countries in developing their own national schemes for laboratory standardization and quality assurance. Currently, 262 key laboratories in 113 countries are participating in the WHO IEQASs. Unfortunately, the high cost of modern laboratory technology is an impediment to its transfer to countries in need.

WHO has always emphasized the provision and improvement of the quality of radiological services for diagnosis and therapy in public health care, areas that have seen spectacular progress. In industrialized countries a number of technologically advanced imaging modalities (e.g. computerized tomography and magnetic resonance imaging) have become available not only in university hospitals and specialized health centres but also in regional and district hospitals. In developing countries the most positive trend is the rapid increase of diagnostic ultrasound units, including their availability in rural areas.

About two-thirds of the population in developing countries have no access to essential radiological services. To respond in the most optimal way to the needs of such countries, WHO developed the basic radiological system during the period 1975-1985 and in 1995, technical specifications were published for its updated version, the *WHO imaging system for radiography*. Technical specifications for general-purpose and special-purpose ultrasound scanners were published, as well as four manuals to provide logistic support in using these technologies.

The international pharmacopoeia, which was established by the First World Health Assembly in 1948, sets out recommended procedures of analysis and specifications for *pharmaceutical substances*. It offers an alternative to the often very sophisticated and expensive methods described in other pharmacopoeias. It is most typically used as a reference tool for the development of national standards, as well as for day-to-day

quality testing of imported pharmaceutical products for locally manufactured drugs and for teaching material.

Since 1982 WHO has documented the increase in counterfeit and poor-quality drugs in international commerce. Most counterfeit drugs contain fewer active ingredients than claimed, wrong ingredients, or no ingredient at all, which makes them less effective or even toxic. WHO organized an international workshop on the subject in 1997, which recommended the establishment of adequate and vigorous national regulatory systems and of an international network of drug regulatory offices, as well as closer collaboration with customs, police, professional organizations and the pharmaceutical industry.

The Organization first recognized the potential benefit of *traditional medicine* and launched an initiative to assess health services provided by traditional practitioners in 1978. To this day, a large proportion of the population in many developing countries still relies mainly on traditional practitioners and medicinal plants to satisfy primary health care needs. Since 1991, WHO has promoted the integration of traditional medicine into national health care systems and the proper use of traditional medicine through the development of technical guidelines and international standards, particularly in the field of herbal medicines and acupuncture. The major objective now is to reach international agreement on policies, regulations, registration and technical standards in traditional medicine, particularly at the regional level.

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