Prevention in practice

Preventive health care strategies for children

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Article 24 of the United Nations Convention on the Rights of the Child calls on States to implement measures to reduce infant and child mortality, to ensure medical assistance and health care to all children, to combat disease and malnutrition and to ensure that parents and children have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breast feeding, hygiene and environmental sanitation and the prevention of accidents [*1*].

As the Director-General of WHO said in her speech to the 22nd International Congress of Pediatrics in Amsterdam [*2*], we should continue to put children first. The wealth of a nation can be judged by the wealth of its members. Likewise, the health of the world should be judged by the health of its most vulnerable population. That means children, and especially children of the developing world.

Health status of children in the Region

The current situation of the health of children in some countries of the Eastern Mediterranean Region is briefly reviewed [*3*].

Table 1 shows infant and child child mortality trends in some countries of the

Table 1 **Infant and child mortality trends in some Eastern Mediterranean Region countries**

Country	Infant mortality rate		Under-5 mortality rate	
	1960	1997	1960	1997
Bahrain	...	9	...	11
Djibouti	...	114	...	164
Egypt	179	36	300	55
Iraq	139	112	222	140
Jordan	135	32	218	39
Kuwait	89	11	128	14
Lebanon	68	28	92	32
Libyan Arab Jamahiriya	160	24	268	30
Morocco	163	37	265	85
Oman	214	18	378	28
Palestine	...	25	...	28
Qatar	...	12	...	15
Saudi Arabia	170	21	292	...
Somalia	175	126	294	265
Sudan	170	108	293	157
Syrian Arab Republic	135	30	218	36
Tunisia	159	35	255	43
United Arab Emirates	145	8	239	11
Republic of Yemen	214	83	378	122

... Data not available
Source: WHO EMRO

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Region. Table 2 gives immunization coverage and Table 3 shows nutritional status of children in some countries.

Communicable diseases, mainly diarrhoeal disease and respiratory infections, are the main causes of death. In spite of widespread vaccination programmes in most countries of the Eastern Mediterranean Region, measles and tuberculosis are major causes of morbidity and mortality in several countries. Widespread prevalence of mild to moderate malnutrition, usually associated with micronutrient deficiencies, is a major factor in this. Severe malnutrition and famine are occasionally encountered in some vulnerable low-income countries of the Region.

Perinatal disorders, congenital anomalies and accidents come next in importance on the list of causes of morbidity and mortality, followed by other noncommunicable disorders. As sanitary and health conditions improve, these disorders will acquire a higher position on the list. A forecast of the global disease burden indicates that communicable diseases, by the year 2020, will be responsible for 22.2% of the total disease burden compared to 48.7% in 1990, while noncommunicable diseases will be responsible for 56.7% as compared to 36.1% in

Table 2 **Immunization coverage in some Eastern Mediterranean Region countries**

Country	Immunization coverage				
	DPT	Poliomyelitis	BCG	Measles	Hepatitis B
Bahrain	98	98	–	95	95
Djibouti	49	49	58	47	–
Egypt	94	94	98	92	93
Iraq	92	92	97	98	65
Jordan	93	97	–	95	85
Kuwait	97	100	–	95	98
Lebanon	92	92	–	89	–
Libyan Arab Jamahiriya	96	96	99	92	–
Morocco	95	95	94	92	–
Oman	99	99	96	98	100
Palestine	96	96	89	96	100
Qatar	92	92	99	87	90
Saudi Arabia	92	92	91	92	91
Somalia	–	–	–	–	–
Sudan	75	75	79	71	–
Syrian Arab Republic	95	95	100	93	84
Tunisia	96	96	93	92	90
United Arab Emirates	90	90	98	90	90
Republic of Yemen	57	57	62	51	98

Source [3]

1990. Injuries will responsible for 21.1% in 2020 compared to 15.2% in the year 1990 [4].

There has been great progress during the past few years in child health in the Region. Vaccination coverage increased from 30% in the 1980s to 80% at present. Utilization of oral rehydration during diarrhoea increased from 5% in 1980 to 70% at present. Availability and accessibility to maternal child health services are improving although maternal mortality remains unacceptably high in many countries. These forward strides in child care have resulted in a marked decrease in infant and under-5 child mortality.

Integrated management of childhood illness (IMCI)

In spite of these positive trends, greater improvement could be achieved within the existing socioeconomic situation if countries adopted a clearly enunciated child health policy based on the principles of the IMCI concept adopted by WHO. The main components of IMCI are vaccination, improving nutrition, injury and other disease prevention, psychological support and stimulation, together with steps to improve management of the leading causes of childhood morbidity and mortality. These inter-

Table 3 **Nutrition indicators in some Eastern Mediterranean Region countries**

Country	Mothers breast-feeding (%)		Newborns with birth weight	Children with acceptable
	at 6 months	at 12 months	at least 2500 g (%)	weight for age (%)
Bahrain	20	11	91	91
Djibouti	32	26	80	–
Egypt	86	75	91	88
Iraq	72	60	76	77
Jordan	70	41	98	91
Kuwait	32	12	94	90
Lebanon	40	15	81	97
Libyan Arab Jamahiriya	–	–	96	85
Morocco	61	–	96	91
Oman	–	–	92	77
Palestine	–	–	94	95
Qatar	–	–	91	–
Saudi Arabia	91	52	95	93
Somalia	78	54	–	28
Sudan	86	72	–	67
Syrian Arab Republic	72	60	93	85
Tunisia	92	71	95	91
United Arab Emirates	–	–	94	–
Republic of Yemen	60	55	53	61

Source: WHO EMRO

ventions are carried out through clear identification of the role of the family, community and health services. The new approach, through integrating child care in one package emphasizing prevention, health promotion, nutrition and common health problems, makes it possible to save human and material resources with an acceptable cost–benefit ratio.

Preventive health strategies for children

In adopting the IMCI approach, the following points need to be considered:

- Flexibility in adapting the new strategy to suit the various differences between countries of the Region—economic, sociocultural, demographic, availability of health care facilities, trained personnel, transportation, communication and referral system and pattern of disease. Priority should be given to prevention, health promotion, primary health care and emergencies.
- The strategy adopted should involve all existing health care systems in the country—public (free or cost sharing), voluntary, health insurance or private. The role of each system in child care should be clarified.
- Community participation in formulating child health care policy as well as in monitoring and evaluation is crucial to ensure success of implmentation.
- The role of women should be highlighted. This not only includes the relationship between maternal and child health, but should also include empowering women in the community and proper health education for girls. Women are the caretakers of children during health and illness
- The important role of health-related factors in influencing child health should be considered. Foremost among them are sociocultural and economic factors, safe water and sanitation, housing, food security and proper nutrition, family planning education, communication, transportation, information, etc.
- Poverty will always remain a problem. Although it is true that poor people and poor countries are more vulnerable to ill health, several studies have shown that only one half of the gain in life expectancy could be explained in terms of changes in per capita income, adult literacy and calorie intake. There is evidence that investing in health, if properly targeted, can have a disproportionately powerful effect on the reduction of poverty and vulnerability. Child health in particular is a clear example. The long-term negative effects of infant and early child illness and malnutrition on cognitive and immunological capabilities are well documented [*5*].

Future trends

The strategy for promotion of child health should be dynamic, allowing modifications of this strategy to cope with the futuristic changes that may affect health during the coming decade.

Demographic changes

There will be a greater number of adolescents who survive the challenges of child illness and who will need health services. Care of adolescents is unfortunately a grey area shared by paediatricians, internists and psychiatrists.

The trend for urbanization will continue with more squatter areas and slums in megacities. There is evidence that the health of children in slum areas is worse than in rural areas, necessitating special consideration.

Because of improving health care, a greater number of children with disabilities will be able to survive, putting a greater burden on health care and rehabilitation facilities. The greater numbers of the elderly might drain the limited resources available for health, thereby affecting childcare.

Sociopolitical changes

There will be a greater trend to privatization of health services, which might negatively affect equity and quality of health care. The supportive, regulatory and monitoring role of the government should be strengthened to cover all types of health services.

With improvement of education and communication, public awareness and demand for health care might increase out of proportion to available resources. There should be a greater role for the professional organizations and the government to prioritize preventive and primary health care, especially in the face of increasing cost of health services.

Advances in science and technology

Positive aspects include advances in vaccination. Recent reports indicate that, in the near future, one-shot heat-stable, more effective, safer vaccines will become available. New vaccines will soon be developed against pathogens responsible for diarrhoeal disease, respiratory infections, malaria, schistosomiasis, AIDS and others [6].

However, new technological advances will render health care more costly and might unnecessarily raise public demands for more expensive advanced curative services at the expense of preventive childcare. The role of public health professionals and paediatricians in this respect is of great importance.

Changes in disease patterns

With the foreseen regression in the prevalence of communicable diseases, noncommunicable diseases and accidents will be among the main causes of ill health in children for the next few years. Countries of the Eastern Mediterranean Region will have to face the double burden of dealing with both communicable and noncommunicable diseases. Many noncommunicable diseases start in childhood. Their prevention depends on a change in lifestyle, a challenge which has to be faced. Smoking is an example. Recent studies indicate that those who cannot quit smoking usually started the habit in childhood.

Emergence of new diseases, as well as the reemergence of previously controlled diseases, will continue during the next decade, especially with advances in transportation facilities. AIDS, tuberculosis and malaria are current examples.

Industrialization and stress of life

The increasing number of working women, with its positive effects on family income, might affect promotion of breast-feeding, a major preventive strategy for infant health. Home health care might also be affected.

The stress of life, economic competition etc. will precipitate psychological stress on the caretaker of the child as well as on the child. This is particularly important for the vulnerable adolescent, who will also be exposed to the different cultures of the world through the communication revolution. Psychiatric health care will be a major component of child health in the 21st century.

The health and environmental hazards of industrialization and increasing use of transportation facilities will result in increase of environmentally related diseases and accidents. Injury and accident prevention could become a main priority in childhood strategies.

Towards a strategy for child health care

Child health policy

A clear and integrated child health policy should be formulated within the framework of the health policy of the nation. Specific issues to be included are: antenatal, natal and perinatal care, promotion of breast-feeding, vaccination, nutrition, health promotion and health education, school health, accident prevention and emergency care, early detection, case management, psychological support, proper referral system and basic care for the handicapped.

The proposed policy should give priority to prevention, emergencies and primary health care. It should be coordinated with related health disciplines, especially maternal health and preventive health services. Community participation in formulating child health policy as well as monitoring its implementation is a key to success.

Combined committees may serve to link child health policies with non-health disciplines related to health in order to achieve an integrated child development approach.

Resources

Child health policies should receive priority at the governmental level. These policies should be specified to particular items and not merely included within broader items of health care such as prevention, health education, etc. Because of the rising cost of health care and the limited government resources available for health in many countries, innovative approaches should be developed. Child health insurance, cost sharing systems, and involvement of the voluntary health facilities and the private sector might save funds for those who cannot afford it. The cost of vaccines and drugs can be reduced through regional cooperation and developing regional standards for quality control.

Legislation

This would cover various areas: vaccination, promotion of breast-feeding, food safety and food labelling, antenatal, natal and perinatal care including neonatal screening, premarital counselling, maternal leave, accident prevention and needs of children under special circumstances, including the disabled and handicapped. Each nation should develop its own legislative package according to its economic, health, political and sociocultural situation.

Health and nutrition education

Health and nutrition education will always remain a most rewarding and cost-effective approach to health care. All methods of communication should be made use of: person to person, community, school health facilities and mass media. The main target is the mother but the father, who is usually the decision maker, and child, especially the girl, are also important target groups. Educational messages should be clear and adapted to the available resources and sociocultural backgrounds.

Training

This is a crucial component of child health care strategy. Maternal and child health care should receive priority in the curricula of all medical, nursing and health schools. Continuous training for all levels of health professionals caring for children should be

made available. Training programmes for noncertified health personnel, such as traditional birth attendants or community health leaders, should be developed when needed. Training programmes should be tailored to the educational level of the trainees, the health needs and the facilities of each country.

Monitoring and evaluation

This is necessary to ensure quality of care, equity and sustainability. It should be carried out by independent teams, composed of professionals, health care providers and community representatives. Evaluation of service performance, as well as evaluation of impact and cost-effectiveness are needed. Development of appropriate criteria and indicators may vary according to existing situations. Step-by-step indicators might be helpful, moving from service provision to their utilization, followed by achievement of a given target and finally impact on health.

References

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Note from the Editor

We are pleased to inform readers that Volume 5 (1999) of the EMHJ will consist of five regular issues, instead of three, and one supplement.

The 1999 supplement will be devoted to genetic disorders.