Strategic Directions

for Improving the Health and Development of Children and Adolescents

World Health Organization

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WHO Library Cataloguing-in-Publication Data

World Health Organization.
Strategic directions for improving the health and development of children and adolescents.

1.Child health services 2.Adolescent health services 3.Program development 4.World Health Organization I.Title.

ISBN 92 4 159106 4 (NLM classification: WA 320)

Printed by the WHO Document Production Services, Geneva, Switzerland

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Foreword

Children and adolescents bear an undue share of the global burden of disease. While major gains were made in reducing childhood mortality during the previous decades, stagnation or even reversal of trends has been observed in many countries since the 1990s. In 2001, almost 11 million children died before reaching the age of five – mostly because they were not reached by known and effective interventions. Most of the unfinished health agenda at the doorstep of the 21st century is due to inadequate efforts to address childhood illness. Adolescence is now widely recognized as a time of great opportunity but also major threats. Considerable progress has been made in understanding the factors that affect a healthy transition into adulthood. Nevertheless, many adolescents still lack the support they need for their development, including access to information, skills and services.

WHO developed the Strategic Directions for Improving the Health and Development of Children and Adolescents in response to a global call for renewed and intensified action to promote and protect the health and development of the 0 – 19 years old age group. Preparations for the United Nations General Assembly Special Session on Children called attention to the uneven progress that had been made in the achievement of the goals adopted in the World Summit of Children in 1990. The adoption of the development goals of the Millennium Declaration (MDGs) by Heads of State in 2000 provided further impetus to the need to develop a road map for action.

This document was developed as a collaborative effort of relevant departments within the Organization at all levels and in consultation with Member States and partners. It summarizes seven priority areas for action and defines principles to guide their implementation. The document is intended to contribute to the definition of a new and common agenda for children and adolescents with Member States and partners, and to guide the work within the Organization.

Fostering healthy families and individuals is a global imperative to break the vicious circle of poverty and ill health that affects too many children and young people. Investing in comprehensive and integrated efforts to improve child and adolescent health and development is a cost-effective way of securing future prosperity of nations.

We are pleased that the Member States unanimously endorsed their support of these strategic directions during the Fifty-sixth World Health Assembly in May 2003. The first necessary political step has been taken. It is now necessary to move swiftly to focused and coordinated action, to strengthen health systems and community responses, and reduce the inequities in access to and use of effective interventions that can save lives and support children and young people in reaching their optimal development potential. It is time to translate knowledge into action.

WHO cannot take this challenge alone. Collaborative partnership is needed. These will build on the complementary strengths of ministries of health, related ministries and national institutions, and national and internationals partner organizations. We appeal to all concerned parties to join hands to help children and young people realize a better future.

LEE Jong-wook
Director-General

Our vision is a world in which children and adolescents enjoy the highest attainable standard of health and development, a world that meets their needs, and respects, protects and fulfils their rights, enabling them to live to their full potential.

Introduction

The world has witnessed a remarkable achievement: child mortality has decreased from 97 per 1000 live births in the early 1980s to 67 per 1000 live births in 1999[1]. Effective public health interventions delivered to large numbers of children are responsible for a major part of this success.

Nonetheless, the prevailing situation is unacceptable. In the year 2000, 10.8 million children under five years of age died, over half of them due to just five preventable communicable diseases compounded by malnutrition. In many countries the progress in reducing deaths has slowed and in some past gains have been reversed. Failure to effectively address neonatal mortality is one important reason for these trends. Other reasons include the limited impact that has been made in addressing determinants of ill health such as malnutrition, unhealthy environments, and low levels of access to and utilization of quality health care services. Knowledge about the management and prevention of childhood diseases and injuries has increased, but coverage of essential interventions is modest and is not sufficiently expanding. At the same time, many of the children who survive are held back from reaching their full potential by poor health and inadequate care for their intellectual and social development.

Over the past decade, considerable progress has been made in understanding the factors that affect adolescents, age 10-19 years, and in introducing interventions to address their health needs. Nevertheless, many adolescents still lack the support they need for their development, including access to information, skills and health services. New threats, such as the HIV pandemic, take their toll particularly during the adolescent period, and rapidly changing socio-economic circumstances pose considerable challenges for young people to make a safe transition into adulthood by adopting healthy behaviours and resisting risk factors.

[1] Ahmad OB, Lopez AD, Inoue M. The decline in childhood mortality : a reappraisal, *Bulletin of the World Health Organization*, 2000, 78 : (1175-1191)

Poverty is an underlying theme in the health of children and adolescents. Under-five mortality currently ranges from 4 deaths per 1000 live births in the high-income countries to as high as 279 per 1000 in low-income countries. Within countries, child health also tends to be worse among the poor: in some countries children in the poorest third of the population are six times more likely to die before the age of five years than those among the richest ten per cent. These inequalities are ethically indefensible, and they extend far beyond survival to documented inequities in exposure to risks through the physical and social environment, and access to information and services.

In reviewing past achievements and the remaining inequities at the start of the new millennium, world leaders adopted the development goals of the Millennium Declaration as landmarks of what can and needs to be done, and challenged the global public health community to develop a road map toward their achievement. A commitment to go beyond mere survival to the development of the full potential of children and adolescents is reflected in the recommendations of the United Nations Special Session for Children[1] and the conclusions of the Global Consultation 'A Healthy Start in Life', convened by WHO and UNICEF in collaboration with UNFPA and the World Bank in March 2002[2].

This commitment must now be translated into action. Children, their parents, and their broader social networks must have opportunities for healthy growth and development; they will not only survive, but will also live to their full potential and contribute to healthy and productive communities.

This document describes a strategy for turning this vision into reality. It brings together the most critical areas of work for improving the health and development of children and adolescents. It provides a framework for planning, implementing and evaluating complementary, efficient, and effective interventions, whose effects can be amplified by their greater coordination. The major components are:

- *Rationale,* the needs that require an integrated and comprehensive strategy to improve child and adolescent health and development.
- *Guiding principles* to guide this work.
- *Future directions* for major areas of work to intensify and extend advances in health for all children and adolescents.
- *Implementation* of the strategic directions with Member States and partners.

This strategy provides a road map for the great opportunities and formidable challenges ahead.

[1] United Nations, Report of the Ad Hoc Committee of the Whole of the twenty-seventh special session of the General Assembly (A/S-27/19/Rev.1)

[2] A Healthy Start in Life : Report of the Global Consultation on Child and Adolescent Health and Development (WHO/CAH/02.15)

Rationale: The Need for Action

Children and adolescents represent nearly 40% of the world's population. They are also among the most vulnerable groups. Their health problems account for over half of the gap in health equity between the world's richest and poorest.

The foundations of health in adulthood and old age are laid during childhood and adolescence. Newborns and young children have basic survival needs for warmth and adequate feeding, but also require social interactions and play to nurture their optimal development. Adolescents have similar needs. In addition, they face the challenge of adopting healthy behaviours as they move toward adulthood. All three age groups need safe and supportive environments including families to foster growth and development.

Many threats facing children and adolescents are well documented, but others remain disregarded and ignored. For example, political, social and economic policies and practices that allow children to be exposed to acts of violence or hazardous labour, and practices such as advertising and entertainment that encourage unhealthy behaviours, have a direct impact on the capacity of children and adolescents to develop to their full potential.

Areas Requiring Action

Based on current evidence, certain areas, described below, call for focused attention. The risks in these areas not only affect physical well being, but also limit the psychosocial development of children and adolescents, and effectively undermine the economic development of their communities.

Further reductions in childhood deaths and long-term disabilities require making the ***health of mothers and newborns*** a higher priority. Declines in neonatal mortality rates over recent decades have been much smaller than for older children. Among the 8 million infants who die each year, possibly half die within the first month of life. Fifty million women each year deliver with no skilled birth attendant, and many more mothers and newborns go without any care during the most vulnerable days and weeks after birth. The HIV pandemic poses a particular challenge, with an estimated 800 000 infants infected in 2001, mainly through Mother To Child Transmission (MTCT). Children born to unhealthy mothers are also more likely to be underweight and to have

Priority Areas for Action

- Maternal and newborn health
- Nutrition
- Communicable diseases
- Injuries and violence
- Physical environment
- Adolescent health
- Psychosocial development and mental health

difficulty combating illness. They face an environment that is less able to provide the safe and nurturing conditions that are necessary for their healthy growth and development.

Good ***nutrition*** is a foundation for healthy development. Furthermore, nutrition and ill health are part of a cycle: poor nutrition leads to ill health and ill health causes further deterioration of nutritional status. These effects are observed most dramatically in infants and young children, who bear the brunt of malnutrition, and the highest risks of death and disability associated with it. More than half of all child deaths in 2000 were associated with malnutrition. But the children who die represent only a small part of the total health burden due to nutritional deficiencies. Maternal malnutrition and inadequate breastfeeding and complementary feeding represent huge risks to the health of those children who survive. Deficiencies in the diet of vitamin A, iodine, iron, and zinc are still widespread and are a common cause of excess morbidity and mortality, particularly among young children. Over 50 million children are wasted, and in low-income countries one in every three children under age five is stunted. Anaemia affects two out of every five children under two years of age, as a result of the interaction between poor nutrition and infectious and parasitic diseases. The effects of poor nutrition continue over the child's life, contributing to poor school performance, reduced productivity, and other measures of impaired intellectual and social development.

Preventable ***communicable diseases*** (pneumonia, diarrhoea, malaria, measles and HIV infection) account for about half of childhood deaths. The fact that over 99% of these deaths in 2000 occurred in low-income countries demonstrates that they can be prevented. Communicable diseases also lead to considerable morbidity and in some cases long-term disability. Helminth infections, such as schistosomiasis, represent a significant public health burden, particularly among children aged five to fourteen. These intestinal parasites harm health and nutritional status, contributing to severe outcomes from measles, malaria, pneumonia and other diseases. Repeated bouts of illness prevent the young child from learning through exploration and interaction with the world. For older children, illness limits their opportunities for further development and affects school attendance and performance. The devastating consequences of the HIV pandemic on children, adolescents and their families are felt worldwide. In addition to the children with HIV who must be cared for, many more children are indirectly affected through the loss of one or both parents, or the overwhelming emotional and financial burden of the disease on their families. However, even where HIV is prevalent, attention should not be diverted from the pressing need to attain and maintain high levels of coverage with basic child survival interventions.

Each year ***injuries and violence*** account for almost 1 million deaths of children and adolescents. Although most of these deaths occur in the low- and middle-income countries, injuries are among the leading causes of child and adolescent mortality in high-income countries. In the European region, for example, three to four out of every 10 deaths that occur in children less than 15 years old are due to injuries. Many of those who survive suffer life-long disability. For instance, victims of inter-personal violence involving child sexual abuse are twice as likely in later life to become depressed and four times as likely to attempt suicide.

Preliminary estimates suggest that a large proportion of the global burden of disease that can be attributed to ***threats in the physical environment*** falls on children under five years of age. Inadequate drinking water and sanitation, indoor air pollution, and injuries and other environmental risk factors are the root cause for almost half (4.7 million) of the 10.8 million deaths a year in this age group. More than half of the 2.1 million annual deaths in children under five caused by acute lower respiratory infections may be associated with indoor air pollution. Interventions to improve water supply, sanitation and hygiene alone are estimated to reduce child mortality by 65 per cent. These environmental factors also contribute to life-long illness and disability triggered by the risks encountered in childhood.

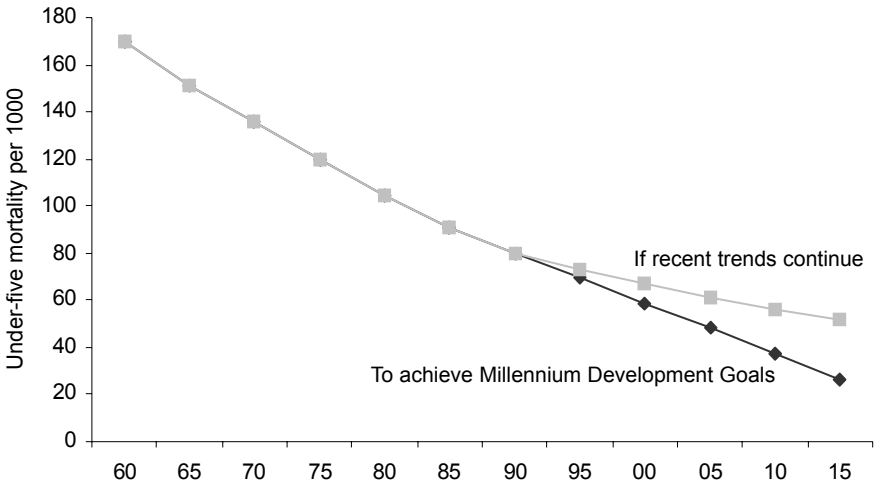
One out of every five people in the world, or 1.2 billion people, are ***adolescents***. Adolescents are generally thought to be healthy. They have survived the diseases of early childhood, and health problems associated with ageing are still many years away. As a result, their needs have drawn less attention. A tragic marker of the consequences of inattention to their health and social needs is that approximately half of all new HIV infections in 2000 occurred in this age group. Further, an estimated 1.4 million young women and men between the ages of 10 and 19 years lose their lives – mostly through injuries due to unintentional causes, suicide, violence, pregnancy-related complications and illnesses that are either preventable or treatable. Reproductive health problems are the major cause of death among women aged 15 to 19 years. They also have tremendous negative consequences on educational attainment, employability and the income-earning potential of young women. Young people aged 15 to 24 years continue to have the highest rates of new sexually transmitted infections. In 2000, unintentional injuries and violence claimed the lives of over 350 000 young men aged 10 to 19 years. The use of psychoactive substances such as amphetamines, opioids, and cocaine is also rising in many parts of the world, and the injection of these substances is an important route of HIV transmission. Adolescent nutrition remains a problem in all regions. Undernutrition and micronutrient deficiencies in girls are associated with adverse pregnancy outcomes; unhealthy diets and lack of physical activity fuel a rapid increase in obesity in young people. Many premature adult deaths are due to behaviour initiated during adolescence, including the adoption of poor dietary and physical activity patterns, as well as the obvious examples of tobacco and alcohol use. The choices of adolescents today will influence their health as adults and that of their children.

Major concerns for children and adolescents extend beyond survival and physical growth to include their ***psychosocial development and mental health***. Approximately 10-20% of children have one or more mental or behavioural problems. The period of adolescence can be stressful, and substance abuse and other harmful behaviours are a risk. Mental health problems can interfere with thinking, studying, and social relationships. Unresolved identity problems, anger or depression may lead to violence or suicide. Globally, an estimated 90 000 adolescents lose their lives each year due to suicide alone. Adolescence is also a period when mental disorders, including debilitating schizophrenia, anxiety, and phobias, may become apparent. Where families are particularly challenged by poverty, conflict and forced migration, the required supports for intellectual and social development also suffer. These barriers have long-term consequences for individual well-being and productivity, and for the health of communities.

Global Calls for Action

Fostering healthy families is increasingly recognized as a global imperative. The development goals of the Millennium Declaration call for ambitious increases in resources and efforts to improve the health and development of the world's population.[1] The goal of reducing mortality in children under five years of age can only be achieved by finding new ways to expand the coverage of available, effective interventions and to extend their benefits to those who have been most difficult to reach (Figure 1).

Figure 1 Global trends in under-five mortality, 1960–2000, with projections to 2015



Source: Data from Ahmad OB, Lopez AD & Inoue M. The decline in child mortality: a reappraisal. *Bull WHO*, 2000, 70(10), with recent trends extended through 2015 and linear trend needed to achieve a two-third reduction from 1990 levels.

Supporting healthy families, however, will also require the achievement of all the other goals of the Millennium Declaration. Improving the health of mothers, reducing the spread of major communicable diseases, ensuring a sustainable environment, reducing poverty and improving nutrition are all essential minimum requirements for healthy growth, development and childbearing. At the United Nations Special Session for Children in 2002, heads of state renewed their commitments to sustainable development,

[1] The Millenium Declaration was signed by 189 countries, including 147 Heads of State, in September 2000 (www.un.org/documents/ga/res/55/a55r002.pdf – A/RES/55/2)

nutrition, and the reduction of communicable diseases, demonstrating the growing need and recognition for a new social agenda for children and families.

The Global Consultation 'A Healthy Start in Life' emphasized the importance of investing in child and adolescent health and development as a cost-effective way of securing future prosperity for nations. Participants called for immediate action to break the vicious circle of poverty and ill health that affects too many children and adolescents worldwide. Moving beyond survival to ensure healthy growth and full development for children, adolescents and their families will require strong commitment from political leaders, clear identification of child and adolescent health as a priority, and strategic investments from national budgets. Investment in comprehensive and integrated efforts that improve child and adolescent health is sound economics.

Guiding Principles

Three principles guide the implementation of the strategic directions outlined in this document: (1) addressing inequities and facilitating the respect, protection, and fulfilment of human rights, as stipulated in internationally agreed human rights instruments including the Convention on the Rights of the Child, (2) taking a life course approach that recognizes the continuum from birth through childhood, adolescence and adulthood, and (3) implementing a public health approach by focusing on major health issues that challenge populations as a whole and applying a systematic development model to ensure the availability and accessibility of effective, relevant interventions to address them. These principles form the basis for planning complementary, efficient, and effective interventions to protect the health of children, adolescents and their families. In addition, the guidance provided here reinforces the strategic directions set out in WHO's corporate strategy.

Address Inequities and Facilitate the Fulfilment of Human Rights

Inequity and lack of opportunity are incompatible with healthy growth and development. International human rights instruments provide a holistic framework to reducing poverty and inequities demanding consideration of a spectrum of approaches, including legislation, policies and programmes. Human rights can help to equalize the distribution and exercise of power both within and between societies.

WHO will help countries seek creative and effective approaches to cross political, socioeconomic and cultural barriers in order to address the needs of children who have been inadequately served, supported and protected. It will contribute to efforts at all levels to redress underlying inequities, poverty and the marginalization of groups of children and families.

Effective programmes incorporate the views of children and adolescents. Quality of care, including issues related to confidentiality and respect, is an important determinant of appropriate careseeking among both mothers and adolescents. It is particularly important that mechanisms be identified through which adolescents can help shape health services and ensure that appropriate care is truly accessible for themselves and their peers.

Reducing poverty. Poverty and health are inextricably linked. Children in poor families are more likely than their better-off peers to die in the first month of life, in the first year of life, and before they reach the age of five. Children in poor families are sick and injured more often, and more seriously. They are less well nourished and are more likely to lag behind in growth and psychosocial development. Poor adolescents are more likely to engage in unhealthy behaviours, and have physical and psychosocial environments that are less safe and less supportive. A girl living in poverty today has a greater risk of an unwanted pregnancy, of dying in childbirth, and of giving birth to a baby who is premature, malnourished, or who becomes sick and dies in infancy.

Although globalization has created unparalleled opportunities, it has not prevented a deepening of socioeconomic disparities. Access to essential knowledge, skills and commodities for health and health care continue to be out of reach for many families, especially among the poor.

Children and adolescents from marginalized groups are especially vulnerable. Overt or implicit discrimination often lies at the root of both their poverty and their poor health status. Examples include children who are permanently disabled or seriously injured by armed conflict, children displaced as refugees, street children, children suffering from natural and man-made disasters, children of migrant workers and other socially disadvantaged groups, and children who are victims of racial discrimination, xenophobia and related intolerance. Special attention must be given to rising numbers of orphans who have lost one or both parents due to HIV infections. Trafficking, smuggling, physical and sexual exploitation, as well as economic exploitation, are realities for children in all regions of the world, and poverty is a pervasive underpinning to their daily life.

Addressing gender inequities. Gender commonly plays a role in the differential prevalence and fatality of many health problems and behaviours. In some parts of the world there are continuing inequities in the care and feeding of girls, leading to their higher rates of infant and child mortality. Disparities persist in access to schooling, work and leisure among girls and boys. Gender roles and relations, in addition to biological vulnerability, often make it difficult for girls to have control over their sexual and reproductive lives so that reproductive health problems, including STIs and HIV infection, affect girls more severely than boys.

Efforts to address some health issues need to be targeted to gender-specific behaviours and attitudes. In some parts of the world families are more reluctant to take girls for treatment than boys. The ability of girls to exercise choice in matters affecting their health can be constrained, including the timing of marriage and access to information and health care. Gender-linked behaviours among adolescent boys put them at higher

risk of injuries due to violence and unintentional causes, and of their becoming perpetrators of violence. Addressing the different needs of boys and girls requires gender-specific programmatic approaches.

Take A Life Course Approach

Taking a life course approach involves moving beyond child survival, adopting a broader and longer perspective that aims at optimal physical and psychosocial development, both immediately and as the infant moves through childhood and adolescence to adulthood. The life course approach reflects the principle that support provided to children will affect their immediate well-being *as well as* have an impact on their health and development in later years. The benefits of healthy development, but also any damage inflicted during the formative years of childhood and adolescence, accrue to continue through later generations.

During the first two decades of life a child needs to grow and develop to become a healthy, responsible and productive adult. Physical growth and psychosocial development is a process that is fostered by enabling environments within families, schools and communities. The crucial link between maternal health, education, and infant survival and development is well known. Research has also demonstrated a strong correlation between the quality of life in early childhood and later behaviour that supports or undermines adolescent health and development. In addition, many of today's leading causes of death, disease and disability among young people and adults are largely due to behaviour initiated during adolescence, exacerbated by the social and economic conditions and practices that encourage such behaviour.

The health and development needs of children and adolescents change as they move from birth to adulthood. To be effective, public health interventions must respond to these changing needs. Five developmental phases can be identified from birth to age 19 years. Making sure that each child has the best possible outcome at the end of each phase supports the child's transition to the next (Figure 2).

Priority areas for intervention are those that help protect children and adolescents from the age-specific challenges shown in Figure 2, and help them grow and make a successful transition to the next phase. This strategic approach unites various efforts at country level and throughout the Organization to promote the healthy growth and development of children and adolescents. (See Annex 1 for a more complete list of priority areas for intervention.)

Implement a Public Health Approach

Public health approaches seek the highest possible levels of health and well-being for the population as a whole. The strategic directions outlined in this document describe how WHO will support Member States as they work to improve health and psychosocial outcomes for all children, adolescents and their families, especially among the poor.

Figure 2 Developmental Phases from Birth to Age 19 Years

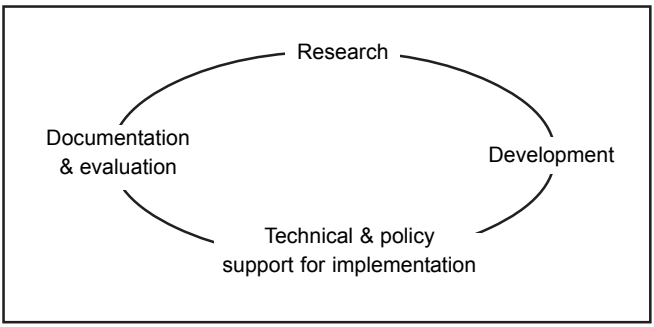
Phase	Ideal Outcome	Examples of Areas for Intervention (for a full listing of priority intervention areas, see Annex 1)
Before and Around birth	A healthy baby is born *Babies are wanted, have been delivered safely, have adequate birth weight and are well developed*	Well-nourished and healthy mother Safe pregnancy and childbirth with skilled attendant and management of complications Special care for newborn infants born too small and/or with complications Exclusive breastfeeding Bonding with primary caregiver
The first year of life	Survival through the most vulnerable period *Children have survived and have grown adequately, are in good health and are well nourished*	Exclusive breastfeeding for 6 months Appropriate complementary feeding from 6 months onwards with continued breastfeeding Stimulation through communication and play Full immunization Prevention, early recognition and timely management of main communicable diseases
Early childhood (up to age 5 years)	Ready to enter school *Children have survived and have grown adequately, are in good health, well nourished and socially developed, thus ready to start school*	Adequate varied diets with sufficient micro-nutrients Prevention, early recognition and timely management of main communicable diseases Detection of and attention to delayed development and learning disabilities Protection from environmental hazards Access to schooling
Late childhood (up to age 10 years)	Entering puberty *Children are healthy, and are physically, mentally and socially prepared to enter puberty*	Promotion of healthy lifestyles Prevention, early recognition and management of infections, infestations and injuries Prevention, early recognition and management of mental health problems Opportunities to develop healthy relationships with peers Universal school enrolment
Adolescence (up to age 19 years)	A healthy adolescent *Adolescents are free from illness, are able to adopt healthy behaviours and to resist risky behaviours, and are prepared to enter adulthood*	Promotion of healthy development and lifestyles and prevention of health risk behaviours Access to appropriate adolescent friendly health services Opportunities to continue education Opportunities to participate in and contribute to pro-social activities in the community Protection from hazardous child labour
Across the lifespan	Living in a safe and supportive environment	Safe home and community environment with clean indoor air, access to safe water and sanitation, and effective waste management Protection from abuse, neglect, exploitation and violence Prevention of health compromising practices due to gender discrimination

A public health approach (1) focuses on the major public health issues challenging the population as a whole, and (2) applies a systematic development model to ensure that public health programmes are relevant and effective in addressing major health issues.

Public health issues. WHO will focus its efforts in child and adolescent health and development on those diseases and conditions that represent the greatest health burden to a population, due to their contributions to mortality, morbidity and disability. Working with countries, the Organization will seek to reduce exposure to known risk factors and to support healthy environments including healthy families for optimal growth and psychosocial development. Within areas that represent the largest burden, WHO works to develop cost-effective public health interventions for both prevention and care. A forward-looking perspective is reflected in strong support for research and development to address new health problems as they emerge.

A development model for public health programmes. WHO's work with Member States and partners is guided by a systematic model for developing effective interventions and coordinated programmes to address the major health issues for children and adolescents. The model illustrates a process that moves in a cycle from research to development to implementation to evaluation, with improved quality and increased coverage in each iteration (Figures 3 and 4). This approach ensures that research and development are focused, relevant and productive; that countries are supported in their efforts to implement evidence-based interventions; and that monitoring and evaluation stimulate and define the continuing research and development agenda.

Figure 3 Cycle of Functions in a Model for Developing Public Health Programmes



Underlying this model of programme development is the conviction that public health actions should be based on the best available scientific evidence from a wide range of disciplines. Epidemiological data on the incidence and prevalence of health problems, and protective and risk factors, are needed to estimate disease burden, to develop appropriate interventions and to evaluate their outcomes and impact. Evidence about the safety, efficacy and cost-effectiveness of interventions are prerequisites for

Figure 4 Tasks in a Model for Developing a Public Health Programme

Function	Tasks
Research	■ Describe the health problem (or outcome) ■ Describe determinants, risk factors, protective factors
Development	■ Define broad programme objectives ■ Describe plausible interventions ■ Demonstrate efficacy and cost-effectiveness of interventions ■ Define programme strategies ■ Develop and test necessary tools
Technical and policy support for implementation	■ Plan activities and set targets ■ Implement
Documentation and evaluation	■ Monitor and evaluate ■ Document and disseminate

implementation at population level. Both qualitative and quantitative data can contribute to an understanding of the needs of children, adolescents and families, and the types of interventions that can result in improved health, growth and development.

Some priorities for work to improve child and adolescent health can be linked to the functions in this model and their evidence-based foundations:

- **Research and development.** Priority will continue be given to conducting and stimulating research and development activities that will inform policy, lead to new technologies, and improve delivery strategies, relevant to the needs of children and adolescents. Needs identified in the field, including problems in the implementation of programmes – at health facilities and in communities – are an important stimulus for the identification of global priorities for research and development.

- **Technical and policy support for implementation.** Priority is given to the development and promotion of key interventions and policies that are useful and feasible for implementation with countries. WHO takes full advantage of its three-tiered structure to assist countries in translating knowledge into action in support of child and adolescent health and development:

  - Regional and country staff work with Ministries of Health and other partners to define local priorities, to adapt guidelines and tools to the specific situations in countries, including emergency situations, and to respond to the realities of health systems operations and community resources.
  - Regional offices provide coherent programmatic and technical support, ensuring that the full array of knowledge, experience, and tools is made available to countries.

- Headquarters provides normative guidance, synthesizes research and experience to ensure up-to-date technical knowledge and policy guidelines, and assists in building capacity at global, regional, and country levels for the implementation of effective health system and community interventions.

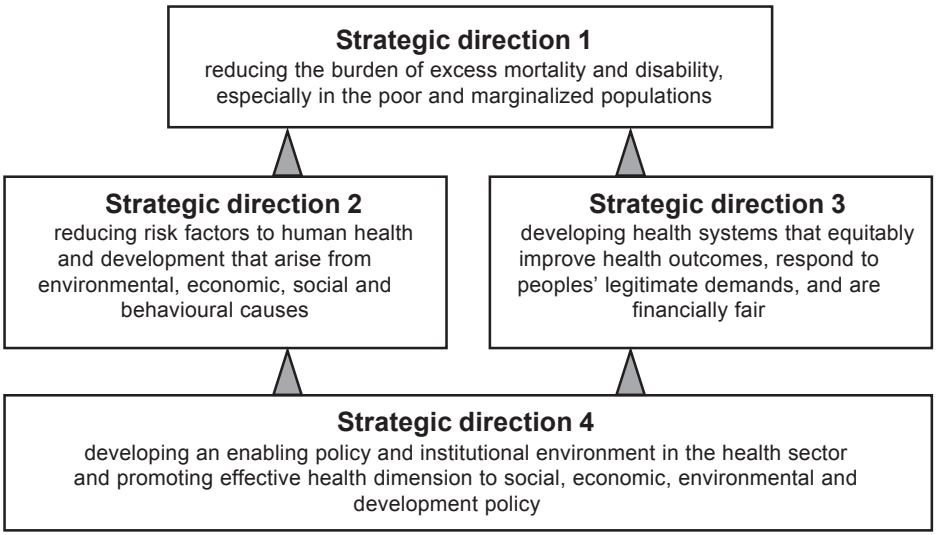
Most interventions, whether health facility or community-based, can only be delivered with the support of health systems that function reasonably well. WHO assists Member States in the reform and strengthening of the health sector to support more efficient and effective delivery of essential child and adolescent health services, and in creating an enabling policy environment.

- **Documentation and evaluation.** Documenting the process and collecting evidence to ensure that tools, interventions and strategies are feasible for effective use in reducing the burden of disease in country settings is essential. Ongoing monitoring of implementation with feedback to programme planners and managers, as well as periodic evaluations of outcomes and impact, contribute to sound programme management. At times WHO also mounts, or advocates for, effectiveness evaluations after the safety and efficacy of an intervention have been demonstrated, but before the intervention can be recommended for widespread use in countries.

The Strategy within WHO's Corporate Strategy

This strategy for improving child and adolescent health and development contributes to the four strategic directions of the WHO corporate strategy (Figure 5). It de-

Figure 5 WHO's corporate strategic directions



scribes how WHO will work to reduce the burden of excess mortality and disability among children and adolescents, particularly those who are poor and marginalized. This is achieved by working to provide safe and supportive environments and by improving services within the health sector and other sectors that can influence the determinants of child and adolescent health and development.

Future Directions

The future lies in continuing and expanding those programmes and interventions with proven effectiveness, and in charting a new agenda where evidence has demonstrated that the need is greatest. What needs to be done in each of the priority areas for action is presented below. Governments and concerned parties will identify priorities for implementation based on the epidemiological situation and other factors relevant to specific contexts.

Supporting Maternal and Newborn Health

The health and survival of the child, especially in early infancy, is intricately linked with the health of the mother and the care she receives. Pre-pregnancy health, nutrition, social status, the social and physical environment, maternal behaviour and emotional well-being determine intrauterine growth and development. The timing of pregnancy, its course and complications determine the pregnancy outcome for the mother and her baby. The neonatal period is a very vulnerable phase of life associated with high mortality and disability unless appropriate care, including early breastfeeding, ensure smooth transition into postnatal life.

It has long been recognized that maternal health and survival are critical for early child health. More recently, a consensus has emerged that access to care is the single critical determinant of survival or death for the infant and the mother-in pregnancy, during birth or in days following birth, particularly when complications arise. Infections, pregnancy- and delivery-related complications, preterm births and congenital malformations can be largely prevented with effective care. The prevention of HIV infections in infants and young children poses a special challenge in settings with high HIV prevalence.

The way forward is to ensure that all women start a wanted pregnancy at the time of biological and social maturity, are well nourished, are in good health and have knowledge on how to protect themselves and their baby in pregnancy, and have access to physical care and emotional support in the critical period of life for their child. Thus, to reduce neonatal (and maternal) deaths, quality pregnancy and childbirth services should be available to all women and newborns when needed. A key element is the presence of a skilled attendant at birth, with adequate facility support – including drugs and equipment – to allow delivery of a broad range of essential and effective interventions and to

manage complications in a timely manner. Families and communities also need to provide improved care at home, including warmth, cleanliness, and exclusive breastfeeding. Caregivers need to be able to recognize early signs of illness and seek appropriate, timely care for their young infants. Community networks play an important role in enabling families to provide this care for the child's health and development. Making Pregnancy Safer is helping countries to set up policies, including support for maternity and paternity leave, to create enabling environments for families to care for their children. Integrated approaches are needed to address maternal and newborn health, at the health facility and in the community. Pregnant adolescents should be given special attention.

The future also requires intensified efforts to prevent HIV infections in infants and young children through a comprehensive approach including: primary prevention of HIV infections in women of childbearing age; prevention of unintended pregnancies in HIV-infected women through family planning; prevention of HIV transmission from HIV-infected women to their infants through anti-retroviral drug use, safer delivery practices and infant feeding counselling and support; and provision of care and support to HIV-infected women, their infants and families. Improving access to HIV testing and counselling services is a key entry point for these programmatic efforts to reduce transmission to infants and young children.

Improving Nutrition

While access to sufficient amounts of adequate foods is an important determinant of nutritional status, repeated infections and inappropriate feeding practices are the two major direct causes of the onset of malnutrition in young children. Children who are not breastfed are almost six times more likely to die by the age of one month than children who receive at least some breastmilk. From the end of six months onwards, when breastfeeding is no longer sufficient to meet all nutritional requirements, infants enter a particularly vulnerable period of complementary feeding during which they make a gradual transition to eating family foods. The incidence of malnutrition rises sharply from 6 to 18 months in most countries, and the deficits acquired at this age are difficult to compensate later in childhood.

The Global Strategy for Infant and Young Child Feeding[1], endorsed by the 55th World Health Assembly in 2002, provides a framework for action to protect, promote, and support appropriate infant and young child feeding. That strategy defines responsibilities for all concerned parties: to enable mothers and families to exclusively breastfeed their infants for six months, to introduce adequate complementary foods after six months with continued breastfeeding, and to implement the best feeding option for special circumstances, such as with low birth weight babies, infants of mothers living with HIV, and families living in emergency situations. The strategy also recognizes the intricate links between maternal nutrition and child health outcomes, and promotes effective interventions to improve maternal nutritional status.

[1] WHA55/2002/REC/1, Annex2

Improving the access of caregivers to a person who can provide feeding counselling is one of the critical pillars in the strategy. While breastfeeding and complementary feeding seem natural acts, they are also learned behaviours. Recent research has demonstrated that, when mothers are counselled on infant feeding, exclusive breastfeeding improves dramatically in infants less than six months of age. Similarly for older children, feeding counselling improves maternal knowledge and practice related to appropriate complementary feeding and continued breastfeeding, leading to increased energy and nutrient intakes and child growth.

Where local diets lack essential micronutrients, successful experiences with iodine fortification and vitamin A supplementation have shown that it is possible to make rapid improvements through focused interventions. WHO, in partnership with other agencies, will assist governments to develop cost-effective and integrated strategies to alleviate the burden of micronutrient deficiencies in a sustainable way.

The immediate risks of clinical malnutrition become mitigated when a child grows older. There is increasing evidence, however, on the accumulated risks of poor diets and growth to the school and work performance of older children and adolescents. At the same time, there is a rapid increase in the incidence of obesity in adolescents, with immediate as well as long-term health consequences. WHO fosters the development of effective school health programmes as a means of improving nutrition among young people, through school health policies, health education, a health supportive environment, and nutrition, hygiene and health services, including school feeding and supplementation programmes.

Preventing and Managing Communicable Diseases

In addition to malnutrition, there are five preventable communicable diseases that account for the vast majority of childhood deaths: pneumonia, diarrhoea, malaria, measles and HIV infection. To a lesser extent, syphilis, tuberculosis and meningitis contribute to mortality of children up to 15 years old, particularly in the period from birth to four years. Other communicable diseases that kill children in childhood and early adolescence are dengue, Japanese encephalitis, leishmaniasis, and trypanosomiasis.

Communicable disease infections also lead to considerable morbidity and in some cases long-term disability. Mental retardation, epilepsy, deafness, physical disability and learning problems are among the consequences of infections from polio, sleeping sickness, malaria and meningitis. Schistosomiasis and other helminth infections, such as ascariasis and trichuriasis, represent a significant public health burden, particularly for children aged five to fourteen. These diseases affect children immediately, but also have longer-term consequences on school performance and productivity for older children and families.

Disease control programmes, when possible, need to move beyond addressing single diseases and conditions by moving towards integrated approaches for the prevention and management of common diseases. This can be done despite important differences

in the threats to health by region. In South East Asia, for example, pneumonia and diarrhoea account for two in five child deaths, while in Africa malaria is an additional major cause of mortality responsible for 20% of all childhood deaths. Also in Africa, mother-to-child transmission of HIV is eroding gains in child survival in many countries. WHO assists countries in adapting guidelines to address the most common diseases, making sure that interventions are appropriate for local conditions – including emergency situations – that affect the care of children in the health facility and at home.

The burden of communicable diseases in early and late childhood can be drastically reduced through the full implementation of three principle strategic areas: Expanded Programme on Immunization (EPI), Integrated Management of Childhood Illness (IMCI), and school health programmes. EPI includes the promotion of immunization against traditional antigens as well as Hepatitis B and region-specific vaccines, such as yellow fever and Japanese encephalitis, and vitamin A supplementation. IMCI is a comprehensive strategy to reduce mortality and morbidity and promote the health, growth and development of children under five years of age. It includes complementary interventions to prevent and treat malnutrition and common communicable diseases by improving health worker performance, health systems, and family and community practices. Combating helminth infections through school health programmes is a priority for improving the psychosocial development of children in poor communities, as well as their healthy growth. All three strategic areas involve delivery systems that can be usefully expanded to include mutually supportive and reinforcing interventions. In addition to these strategic areas, the global community has nearly eradicated polio, and WHO must help complete this work to realize the financial and public health benefits of eradication.

WHO places high priority on working with countries to prevent HIV transmission and to care for persons living with HIV. A strategy has been developed to support governments to meet the global goals of reducing HIV prevalence among young people by 25% in the 20 most affected countries and ensuring that 90% of young people have access to appropriate and relevant information, skills and services by the year 2005. The strategy is based on a three-pronged approach: to provide data for the development of HIV/AIDS policies and programmes by monitoring related indicators (HIV, STI, substance use, and violence); to increase young people's access to quality HIV/AIDS services such as condom distribution, STI diagnosis and treatment, voluntary testing and counselling, and care; and to create a supportive policy environment for improving HIV programming for young people.

Preventing and Managing Injuries and Violence

Efforts to reduce injuries and violence must continue and be strengthened. Evidence suggests that certain groups of children and adolescents are more vulnerable to certain types of injuries. For example, poisoning, drowning, burns and maltreatment by caregivers affect primarily small children, whilst road traffic, interpersonal violence and sports injuries tend to affect older children and adolescents. In addition, injuries tend to be more prevalent in boys. Poor children, who commonly live in unsafe environments, are

exposed to risks that increase their likelihood of being injured. These children are particularly vulnerable as they have less chance of overcoming these risks, and have less access to educational opportunities and health services.

Injury rates and patterns differ from country to country, even within the same region, and from urban to rural areas. For example, in rural areas injuries are related mainly to farming activities, pesticide poisoning and drowning. In urban areas, most injuries in small children are either traffic related, linked to gadgets and electrical appliances, falls or poisonings resulting from the ingestion of household chemicals and pharmaceuticals. In adolescents most injuries are due to violence and road traffic.

The factors leading to injuries are often associated with environmental health risks. For example, home and school construction and furnishing materials can lead to unintentional injuries, and poisoning may result from exposure due to the improper storage and use of chemicals. Urban transport, land use patterns and recreation areas are linked to road traffic injuries, and to exposure to air pollution and noise. Workplaces pose specific physical and chemical risks to adolescent workers, whose vulnerability is increased by unsafe behaviours. The environmental factors leading to injury may also be associated with social factors, such as low social cohesion, family stress and critical life events (e.g. hospitalisation or chronic disease of a parent, a change of residence). Intentional injuries resulting from child maltreatment are associated with physical and cognitive deficits in the abused infants, poor parenting skills, marital conflict, alcohol and substance abuse and the lack of social support systems for families.

There is a need to identify how these multiple environmental health risks cluster in certain settings in order to plan preventive strategies that can lead to cost-effective health gains among children and adolescents. The key settings to consider include, for example, the home, the school and route to school, playgrounds, leisure and sports areas, the rural-agricultural environment and urban transport.

Community-based interventions using relevant information on local patterns of injury and their causes have reduced the rates of injuries in many countries. The prevention of injuries is achieved through environmental modifications, changing designs or structures, applying and/or reinforcing regulatory measures, providing parent training and social support to families, and changing unsafe behaviours through education. The most successful interventions combine three approaches: regulatory measures, environmental changes and education.

Further work is required on the review of the existing evidence on the links between environmental factors and injuries occurring in specific settings. The preparation and dissemination of reports on the magnitude of those risks, their common determinants and the most susceptible groups would help communities to plan interventions. Strategies should be defined and proposed for each of the settings considered (home, school, playground, roads, public areas etc), based upon the priority issues identified and the experience with preventive interventions and their effectiveness.

The implementation of pilot interventions to address childhood environmental and injury risks through integrated preventive strategies and their evaluation – especially in low-income countries – will inform the policy process and ensure that changes are based on evidence.

Reducing Threats in the Physical Environment

Although the environmental burden of ill health affects all children, it is greatest among the poor. WHO has launched the Healthy Environments for Children Alliance, through which thirteen environmental risk factors to children's health have been identified. Focusing on six priority issues – household water security, hygiene and sanitation, air pollution, disease vectors, chemical hazards, and injuries and accidents – will achieve significant progress in reducing the environmental burden of diseases.

Environmental Risk Factors to Children's Health

- Housing conditions
- Indoor air
- Food safety and supply
- Water, sanitation and hygiene
- Outdoor air
- Lead
- Pesticides and other chemicals
- UV radiation
- Disease vectors
- Occupational environments
- Transportation
- Recreational activities

The major elements of the implementation of the Healthy Environments for Children Alliance are:

- Taking stock of ongoing efforts to evaluate work currently under way;
- Creating commitment amongst all concerned parties to take relevant actions that encompass all children, rich and poor, living in rural and urban communities, both in low- and middle- income countries and in industrialized countries;
- Consolidating and disseminating scientific knowledge;
- Research and development to build a knowledge base on children's environmental health risk factors and the development and evaluation of operational interventions;
- Influencing policies by placing healthy environments for children high on the public health agenda and as an integral part of development policies;
- The healthy settings approach – health promoting schools, healthy homes, and healthy communities, including the promotion of cost-effective, economically sustainable and culturally appropriate interventions;
- Support to the health sector, raising the awareness of health professionals about environmental risk factors in children, and expanding monitoring, surveillance and response systems to allow the detection and management of paediatric disease outbreaks of environmental etiology;
- Intersectoral cooperation to produce multi-sectoral, integrated approaches involving environment, transport, agriculture, housing, energy, education and other sectors.

Supporting Adolescent Health

Adolescence is a time of great opportunity as well as risk. A common set of determinants underlies a variety of risk behaviours associated with health problems. Similarly, protective factors influence positive health behaviours and outcomes. Across cultures and settings, adolescents who have meaningful relationships with parents or other trusted adults and peers, who are provided with structure and boundaries around behaviours, who have a supportive school environment, and who are encouraged in their self-expression, are much less likely to initiate sexual activity early, to use substances such as tobacco and alcohol, and to experience depression. These factors are the target for the development of effective interventions.

Unfortunately, the capacity to collect relevant data to quantify adolescent health behaviours and problems and to identify important risk and protective factors is still weak in most countries. To fill this gap, WHO works to identify age-specific indicators to standardize data collection on adolescent health status, develop epidemiological evidence of health needs, and gather evidence on effective interventions. The Organization also needs to marshal expertise and public opinion to address traditionally sensitive health areas and interventions. Information to inform policy makers is needed, for example, about key interventions such as the effects of tobacco pricing policies on adolescent smoking; about the needs and behaviours of groups that have been overlooked to date, including married adolescents, very young adolescents, boys, and intravenous drug users; and on other sensitive topics, including adolescent sexuality. While the education system provides an important channel for reaching many adolescents, interventions should also be designed to reach those adolescents who are out of school.

Experience has shown that critical elements for adolescent health programming include access to age-appropriate information, skills, counselling and adolescent-friendly health services. WHO has a particular responsibility in strengthening the role of the health sector in the promotion of adolescent development, and the prevention and care of health problems. The Organization develops and promotes guidelines that enable health professionals to provide services that are adolescent-friendly and responsive. It also shares responsibility for the development of effective school health programmes with the education sector, as a major entry point for skills-based health education and provision of essential health services.

Several areas have been identified for priority attention. The need for supporting mental health in adolescents has become clearer as the effects of depression and other conditions are seen in suicide and lost productivity. Adolescent sexual and reproductive health is recognized widely as a critical part of the normal development process requiring support. The rights of adolescents to information, skills, services and protection from exploitative relationships are rarely respected. The results of this failure affect not only adolescents and their families, but also society as a whole, in the form of early, unwanted pregnancies, sexually-transmitted diseases, and poor school attendance and performance. Adolescents need support to develop responsible behaviour. They need information and counselling on safe sexual behaviours, including delayed sexual debut. They also need to have access to a range of contraceptive methods, including condoms,

so they can protect themselves not only from unintended pregnancy but also from sexually transmitted infections including HIV. They need quality health services designed to meet their special developmental needs.

Promoting Psychosocial Development and Mental Health

The new agenda includes increased attention and action to psychosocial development and mental health. This reflects progress in the estimation of the burden of depression and other mental conditions, the recognition of the need to support the development of young infants, children and adolescents for a healthy start in life, and the view of a continuum of psychological health, and disability across the life course.

Evidence suggests that, regardless of differences in ways of life and culture, infants are similar across a wide range of dimensions, including the sequence and timing of sensori-motor milestones, infant gestures, and vocalisation. Nurturing environments consist of finely-tuned emotional contacts and communication between children and their caregivers. These ties constitute the blocks for building cognitive capacities, the acquisition of language, and empathic identification with other human beings. Emotional contact and responsive communication with caring adults are necessary for the coordination of all aspects of children's healthy development, including physiological, social and intellectual. The absence of these basic foundations in life is associated with poor nutrition, faltering growth, frequent illness, poor school and work performance, and accumulating limitations on the individual's potential to take greater responsibility in the larger community.

Early interventions have the greatest impact; the highest impact is achieved among children in greater need; multiple interventions and channels are more effective and cost-effective than unidimensional approaches; the involvement of caregivers and families in programmes increases their effectiveness. Applying these tested principles, WHO promotes simple recommendations for caregivers in three major areas – feeding, play and communication – through feasible interventions for reaching families and children in their communities and clinics. The aim is to assist families in meeting the special needs of their infants under two years of age. The interventions also attempt to reverse the consequences of inadequate nutrition and psychosocial care, especially for all poorly nourished children.

As children grow, their families and communities need to continue to protect them and provide opportunities to develop increasingly complex intellectual skills, to express their emotions appropriately, to develop supportive friendships, and to assume new responsibilities. Adolescents need to gain confidence in a range of skills that will help them live independently and contribute to their families and communities. Special resources are needed to help adolescents affected by major depression and other serious mental illness. WHO will promote a wide range of community activities and health system interventions to be effective in assisting children and adolescents through a range of mental health needs.

Implementing the priority areas for action in especially difficult circumstances

In addition to the challenges outlined above, new threats are emerging. Millions of children and young people are displaced or living in conflict situations, leading to increased risk of adverse health and development outcomes. Complex emergencies, whether due to natural or man-made disasters, are marked by a dramatic increase in mortality rates, particularly among young children. Girls and women are often victims of actions that have life-long physical and psychosocial consequences. WHO contributes to international efforts to stabilize and rebuild the health sector during emergency situations, by developing guidelines and interventions and working with partners in their implementation.

Children and adolescents living in especially difficult circumstances or with special needs also include orphans, street children, children at work, children and adolescents subject to commercial exploitation, or those living with disabilities. The number of orphans is on the rise due to unprecedented numbers of deaths due to HIV in men and women of childbearing age. The specific situation of these children and adolescents make them more vulnerable to ill health, violence or exploitation and they tend to be more to prone to various forms of discrimination. Ensuring their access to effective health care remains a major challenge.

Disabilities affect at least one in ten children in developing countries. The major causes of childhood disability – premature birth, malnutrition, infections, injuries, child neglect and under-stimulation – are preventable. WHO will also work to prevent disabilities and to promote early identification, early interventions and rehabilitation of children at risk for or with already existing disability.

Implementation

The greatest challenge to promote the health and development of children and adolescents in the future will be transforming knowledge into action. The most important single example of this challenge will be scaling-up interventions that are known to be effective at reaching more children and adolescents, and at having an impact on coverage levels that will affect health outcomes at population level.

Ensuring that all children and adolescents who should benefit from efficacious and cost-effective interventions actually receive them will require three simultaneous efforts:

- Formulating and operationalising global, regional and national child and adolescent health policies, and ensuring strong and steadfast political commitment to

a child and adolescent health and development agenda;

- Establishing safe and supportive environments by engaging families, schools and communities in the prevention of ill health, injuries and violence, and in providing appropriate care for their children and adolescents for their well-being; and
- Increasing the efficiency and responsiveness of the health system to provide services that respond to community needs for adequate quality at high and sustained levels of coverage.

Within the range of potential areas for action, Member States will identify priorities bearing in mind the local context, and taking into account *inter alia* the burden of disease, the epidemiological situation, the capacity of the health system, and the resources available. WHO will provide guidance to Member States and partners to identify priorities and develop strategic operational responses.

At the same time, WHO will continue to assume leadership to improve existing preventive and curative interventions, and develop interventions for the new challenges children and adolescents are facing. WHO will respond to the changing needs of children and adolescents with safe, efficacious, cost-effective strategies that are feasible for use in low-income countries. The knowledge of how to strengthen health systems and collaborate with other relevant sectors to deliver coordinated and integrated programmes and services continues to expand rapidly as a result of focused research and development efforts across the Organization. Given the disastrous effects of poverty as the single most important factor determining the opportunity and capability of children and adolescents to reach their optimal development potential, WHO will intensify its efforts to document how poverty affects underlying causes of ill health and access to appropriate health care, and identify the strategies that are most effective in reaching the poor and marginalized with relevant interventions.

Working with Partners and in Joint Initiatives

The growing awareness of world leaders of the importance of investing in health and human development provides an opportunity for WHO to strengthen its partnerships and focus the global community on the tasks to be done. The Organization is in an advantaged position to draw attention to the investments needed to move forward the priority areas in health.

From this perspective, WHO will reach out to work with others to establish effective partnerships. Member States and their Ministries of Health will collaborate with other sectors with responsibility for contributing to the health and development of children and adolescents. WHO will also work in partnership with other United Nations agencies, multi-lateral and bilateral development agencies, non-governmental organizations and, increasingly, civil society and the private sector.

In defining its own role in moving forward an area of work, WHO will consider two factors. First, the area must be central to the mission of the Organization and reflect the public health content and focus of the work plan. Second, the level of effort must

complement and build on the strengths and initiatives of other United Nations agencies and technical assistance partners. WHO will take one of three roles with respect to specific areas of work within child and adolescent health and development:

- ***A normative, technical role.*** WHO acts on its mandate by proactively formulating agendas for action, by establishing national and international consensus on health policies, strategies and standards based on the best available evidence, and by applying high levels of effort through its core functions.
- ***A partnership role.*** WHO works closely with others to formulate agendas, plans, and complementary actions to implement and achieve its goals and objectives, by applying moderate levels of effort through its core functions.
- ***A supportive role.*** WHO seeks to add value to the impact of health actions undertaken by others, monitoring progress and providing technical inputs as needed.

Examples of partnership initiatives that have been established to achieve improved health and development outcomes for children and adolescents, especially among the poor, are Education for All, Health for All, A Culture of Peace, the Tobacco Free Initiative, Focused Resources on Effective School Health, Roll Back Malaria, Partners for Parasite Control, Global Alliance for Vaccines and Immunization, Making Pregnancy Safer, the Healthy Environments for Children Alliance, the Heavily Indebted Poor Country Debt-Relief Initiative and the Global Fund against AIDS, Tuberculosis and Malaria. These initiatives provide strategic frameworks and partnerships through which national and international commitments can be transformed into effective action.

Working with Other Sectors

Supporting healthy families is an intersectoral endeavour. The responsibility for setting and implementing healthy public policies involves stakeholders beyond the Ministry of Health. Working with the ***education*** sector is critical for promoting and sustaining good health and development among mothers, children and adolescents. Children and adolescents need to be protected against abuse, exploitation and violence through interventions in the ***legal and social welfare sectors*** to provide safe and supportive environments. Effective collaboration with ***transport, agriculture, housing, energy, water, sanitation*** and other sectors – public and private – is needed to create and maintain safe and healthy environments. The implementation of the strategic directions presented requires partnerships at local, national and international levels.

Monitoring Progress in Implementing the Strategic Directions

Continuous improvement in meeting the needs of children, adolescents and their families results from information about what is being implemented, at what levels of coverage, and with what outcomes. Documentation and monitoring of processes and outcomes are essential for effective planning and management at all levels. They pro-

vide the information needed to promote sound policies, to refine interventions and delivery strategies, and to support analysis and decision making about achieving and maintaining adequate levels of coverage among target populations. Documentation and monitoring, as well as evaluation, are also needed to identify gaps in coverage and to identify needs for new or improved interventions.

The challenge lies both in developing systems that provide useful information at all levels, and in building capacity to ensure that the resulting data are analysed appropriately and used to inform decision making. WHO works to support countries in the development and use of effective monitoring systems, and builds on these systems to collect, analyse and disseminate information at regional and global levels that can guide public health decision making. The Organization will also contribute to global efforts to monitor progress towards the achievement of the development goals of the Millennium Declaration and the goals and targets described in the outcome document of the United Nations Special Session on Children, 'A world fit for children'.

Annex 1

Child and Adolescent Health Interventions by Phase from Birth to Age 19 Years

Phase and Outcome	Priority Areas for Intervention
Before and around birth: A healthy baby is born	*Before and during pregnancy:* ■ Delayed child-bearing ■ Well-timed, well-spaced and wanted pregnancies ■ Well-nourished and healthy mother ■ Pregnancy free of drug abuse, tobacco, and alcohol ■ Tetanus and rubella immunization ■ Genetic counselling, prevention of congenital defects (pre-or peri-conceptually) ■ Prevention of HIV infection *During pregnancy:* ■ Early detection and treatment of maternal complications ■ Monitoring of fetal well-being and timely interventions for fetal complications ■ Birth and emergency preparedness ■ Tetanus immunization ■ Prevention and treatment of anaemia ■ Prevention and treatment of infections (malaria, hookworm, syphilis and other STIs) *At birth and soon after delivery:* ■ Safe delivery by skilled attendant ■ Early detection and prompt management of delivery and fetal complications ■ Obstetric care for complications ■ Newborn resuscitation ■ Newborn care ensuring warmth, cleanliness ■ Early initiation of exclusive breastfeeding ■ Early detection and treatment of complications of the newborn ■ Special care for newborn infants born too small and/or with complications ■ Prevention of mother-to-child transmission of HIV *During first month of life:* ■ Immunization ■ Exclusive breastfeeding ■ Prompt detection and management of diseases in newborn infant ■ Bonding with primary caregiver ■ Detection of and care for mothers with postpartum depression ■ Prevention of mother-to-child transmission of HIV

Phase and Outcome	Priority Areas for Intervention
First year of life: Survival through the most vulnerable period	■ Exclusive breastfeeding for 6 months ■ Appropriate complementary feeding from 6 months onwards with continued breastfeeding ■ Forming positive attachment to primary caregiver ■ Stimulation through communication and play ■ Full immunization ■ Prevention, early recognition and timely management of main communicable diseases including acute respiratory infections, diarrhoea, malaria, measles, HIV/AIDS ■ Prevention and management of malnutrition, including micro-nutrient deficiencies ■ Detection and management of vision and hearing disabilities ■ Detection of and care for mothers with postpartum depression
Early childhood (up to age 5 years): Ready to enter school	■ Appropriate complementary feeding with continued breastfeeding up to 2 years or beyond, leading to adequate varied diets with sufficient micro-nutrients ■ Stimulation through communication and play ■ Full immunization ■ Prevention, early recognition and timely management of main communicable diseases including acute respiratory infections, diarrhoea, malaria, measles, HIV/AIDS ■ Regular deworming ■ Prevention and management of malnutrition, including micro-nutrient deficiencies ■ Detection and management of vision and hearing disabilities ■ Detection of and attention to delayed development and learning disabilities ■ Protection from environmental hazards
Late childhood (up to age 10 years): Entering puberty	■ Adequate varied diets with sufficient micro-nutrients ■ Promotion of healthy lifestyles ■ Prevention, early recognition and management of infections, infestations and injuries ■ Regular deworming ■ Prevention, early recognition and management of mental health problems ■ Detection and management of vision and hearing disabilities ■ Detection of and attention to learning disabilities ■ Universal school enrolment ■ Opportunities to learn and play in a child-friendly environment ■ Opportunities to develop healthy relationships with peers ■ Protection from risk behaviours such as use of tobacco, alcohol, and drugs ■ Protection from child labour ■ Promotion of healthy school environments that facilitate the physical and psychosocial well-being of children

Phase and Outcome	Priority Areas for Intervention
Adolescence: A healthy adolescent prepared to enter adulthood	■ Promotion of healthy development and lifestyles including adequate diet, regular exercise, good oral hygiene, and delayed sexual debut ■ Prevention of health risk behaviours including use of tobacco, alcohol and other substances, and unsafe sex ■ Delay in age of marriage and child bearing ■ Access to appropriate adolescent-friendly health services for family planning, pregnancy and childbirth, prevention and care of STI, HIV, other infectious diseases, nutritional deficiencies, injuries and mental health problems ■ Access to counselling services, including HIV testing and counselling ■ Enhancing capacity of adults, including within the family, to provide caring and responsible relationships with adolescents ■ Promotion of healthy school environments that facilitate the physical and psychosocial well-being of adolescents ■ Opportunities to develop healthy relationships with peers ■ Opportunities to participate in and contribute to pro-social activities in the community ■ Opportunities to continue education or vocational training in healthy (school) environments ■ Protection from hazardous child labour ■ Protection from harmful cultural practices including female genital mutilation and marriage before social and biological maturity
Across the age span: Living in a safe and supportive environment	■ Safe home and community environment with clean indoor air, access to safe water and sanitation, effective waste management, smoke-free homes and spaces ■ Prevention of environmental exposure to physical and chemical hazards ■ Protection from abuse, neglect, exploitation and violence ■ Prevention of injuries due to unintentional causes including poisoning, burns, falls, drowning, road traffic injuries and violence ■ Prevention of health compromising practices due to gender discrimination

Annex 2

WHO Areas of Work and their contribution to child and adolescent health and development

WHO areas of work	Nature of contribution (examples)
Child and adolescent health	Integrated Management of Childhood Illness (IMCI), child development, infant and young child feeding, neonatal health, clinical research, adolescent sexual and reproductive health, HIV and young people, adolescent-friendly health services, determinants of adolescent behaviours, measurement of adolescent health status and programme indicators
Communicable disease prevention, eradication, and control	Helminth control in children; malaria in adolescence; integrated management of adolescent and adult illness
Communicable disease surveillance	Surveillance of HIV/AIDS, childhood infectious diseases
Disability/injury prevention and rehabilitation	Injury prevention among children and adolescents; definition of magnitude of specific injuries; prevention and detection of child abuse and neglect
Emergency preparedness and response	Adaptation of IMCI guidelines for emergency situations; infant feeding in emergencies
Essential medicines: access, quality, and rational use	Compatibility of essential drugs lists with IMCI requirements; drug supply management; drugs and breastfeeding
Evidence for health policy	Disease burden statistics to provide evidence for strategy development and evaluation; statistical and modelling work related to child health and equity; health systems evaluation
Health and environment	Indoor air pollution; water quality and sanitation; children's environmental health
Health promotion	Health promoting schools, healthy lifestyles; multi-risk youth behaviour; prevention of alcohol use in young people
HIV/AIDS	Prevention of mother-to-child transmission of HIV; focus on young people as major vulnerable population; care of people living with HIV/AIDS; care of AIDS orphans

WHO areas of work	Nature of contribution (examples)
Immunization and vaccine development	Linking EPI and IMCI; research and guidelines on vaccines for adolescents; vitamin A supplementation and immunization; vaccine development
Making pregnancy safer	Integrated interventions in pregnancy, during childbirth and in the postnatal period to improve pregnancy outcomes for the mother, including adolescents, and the newborn to improve newborn health, low birth weight; early initiation of exclusive breastfeeding; mother-to-child transmission of HIV; adolescent pregnancy outcomes
Malaria	Integration of malaria and IMCI activities, at facility and community levels
Mental health and substance abuse	Depression and suicide prevention; substance use in adolescence
Nutrition	Infant and young child feeding; micro-nutrient supplementation; growth reference data; management of malnutrition; eating disorders; adolescent nutrition
Organization of health services	Pre-service education of health professionals; district management of IMCI; adolescent-friendly health services
Research and programme development in reproductive health	Adolescent sexual and reproductive health research
Research and project development for communicable diseases	Research on malaria control and on antimicrobial resistance
Sustainable development	Collaboration with civil society; child and adolescent rights; children's environmental health
Surveillance, prevention, and management of non-communicable diseases	Asthma management in children
Tobacco	Prevention of tobacco use among young people
Tuberculosis	Tuberculosis control in children
Women's health	Female genital mutilation; gender mainstreaming

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ISBN 92 4 159106 4