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Contents

Executive summary

The Department of Child and Adolescent Health and Development (CAH) of the World Health Organization (WHO) works with countries, regions and a wide range of partners to reduce the high death toll among newborns and children under five, and to ensure that adolescents have access to health services tailored to their needs. This work is pivotal to the achievement of the Millennium Development Goals (MDGs) and other international health and development goals.

The stakes are high. Every year, over 10 million children die before their fifth birthday – including an estimated four million who die during the first month of life. Most under-five deaths are due to infectious diseases and neonatal causes – often exacerbated by poverty, malnutrition, and poor or delayed care-seeking. Those children who survive need attention to their healthy physical and psychosocial development. The recent series on child development published in *The Lancet* estimates the lost potential in the lives of more than 200 million children if they cannot be reached with effective care.

In addition, HIV continues to exert a heavy toll. In some of the worst affected countries in sub-Saharan Africa, over 50% of all deaths among children under five are now HIV-related. Worldwide, an estimated 4 000–5 000 young people (aged 15–24) are newly infected with HIV every day.

In order for countries to meet these urgent needs, WHO supports regions and countries to strategize and plan based on the best available information, apply tools and guidelines that incorporate the most up-to-date research findings, and monitor and evaluate process and impact in order to refine approaches. WHO uses recognized international instruments as an opportunity to incorporate health into other political fora and thus maintain a high position on international and national agendas. This includes building the capacity of WHO staff and national counterparts to apply the United Nations Convention on the Rights of the Child (CRC) in planning and programming, and supporting the reporting process of the UN Committee on the Rights of the Child.

Improving the health and development of children

To harmonize inputs and increase coverage of effective interventions, WHO is working with countries to develop national strategies and implementation plans for child survival, in partnership with all relevant stakeholders. To facilitate this process, most regions have developed strategies which serve as a platform for national action. Following the earlier adoption of newborn and child health strategies in the European, South-East Asia and Western Pacific Regions, the African Regional Committee adopted *Child Survival: A Strategy for the African Region* in September 2006.

National strategies and plans of action must be guided by local epidemiology and promote evidence-based, high impact interventions, tailored to national and sub-national levels. WHO is rapidly expanding its activities to support planning and management at country level, through the development of tools and by building capacity for their implementation. Achievements in 2006 include:

- **EPIDEMIOLOGY:** For the first time, WHO published country-specific estimates of causes of deaths in children under five years of age. The Department also began generating country profiles on newborn and child health, summarizing recent trends in mortality and coverage of interventions. These are crucial sources of information to guide planning and implementation.
- **NEWBORN HEALTH:** The Department led the development of guidelines to build capacity of programme staff to strengthen the newborn health component in maternal and child health programmes. With WHO/Making Pregnancy Safer and partners, inter-country workshops were held in Burkina Faso, Myanmar and Zimbabwe that led to national action plans.

- **PROGRAMME MANAGEMENT:** A field test of the Child Health Programme Managers course, conducted in Harare, confirmed the need for two components: strategic planning and operational programme management. A revised version of the materials will be finalized in 2007.
- **INFANT AND YOUNG CHILD FEEDING:** A planning guide to assist countries to translate the Global Strategy for Infant and Young Child Feeding into national action plans was finalized, based on experiences from the application of a working version in many countries. For the 25th celebration of the adoption of the International Code of Marketing of Breast-milk Substitutes by the World Health Assembly in 1981, WHO developed a booklet on Frequently Asked Questions on the Code and launched this during the 59th WHA.

Improved care for newborns and children in first-level facilities is a foundation of the continuum of levels of care. Recent research and development have led to the strengthening and updating of tools to improve the skills of health workers and strengthen system supports.

- **IMCI TECHNICAL UPDATES:** technical updates to the Integrated Management of Childhood Illness (IMCI) strategy were introduced in several regions and countries.
- **IMCI IN HIGH HIV SETTINGS:** IMCI guidelines were updated to incorporate clinical signs for identifying, and ways of managing, children infected with HIV. The *IMCI Complementary course for high HIV settings* became available in June and two intercountry workshops were held to introduce it in the African Region (AFR).
- **NEWBORN HEALTH:** Based on results of a multi-country study, the IMCI guidelines were updated to include the first week of life; the clinical assessment of children 0-2 months of age was simplified.
- **MANAGEMENT OF CHILDHOOD ILLNESS:** Implementation of the new treatment strategy for acute diarrhoea (reduced-osmolarity Oral Rehydration Salts (ORS) solution, combined with zinc supplements) was facilitated by the release of Guidelines for Policymakers and Programme Managers in four languages. The Department also supported countries in their application, through country visits and intercountry workshops.
- **MICRONUTRIENTS:** WHO published updated recommendations on the use of iron supplements for infants and young children in malaria-endemic areas, as well as a statement on the efficacy and safety of zinc supplementation in young children.
- **HIV AND INFANT FEEDING:** A review of new evidence and experiences resulted in a consensus statement on the prevention of HIV infection through infant feeding. While the general principles underpinning earlier recommendations were endorsed, a range of issues were agreed to refine and strengthen the operational guidance.
- **INFANT AND YOUNG CHILD FEEDING:** The Department was central to the finalization and application of the 5-day integrated course on infant and young child feeding (IYCF), to increase the number of staff skilled in counselling on breastfeeding, complementary feeding and HIV and infant feeding.

The quality of care in hospitals is critical for the survival of those at greatest risk; nonetheless it is a weak link in many settings. Progress was made in strengthening the evidence base and tools for improving hospital care in addition to building a network of concerned partners.

- **PLANNING:** a framework for planning hospital improvement was developed and supporting tools identified.
- **ASSESSMENT:** a tool to assess the quality of paediatric care in hospitals was finalized and introduced in several countries to initiate the quality improvement cycle.
- **EMERGENCY TRIAGE AND TREATMENT:** A four-day training course in how to prioritize emergency treatment for new admissions was finalized and introduced in a number of countries.
- **CLINICAL GUIDELINES:** The pocket book on hospital care for children continued to be in high demand and is now available in more than 15 languages.

Many children die with no prior contact with the health system. Strengthening community-based support for newborn and child health and delivery of essential health services is imperative to reducing child mortality in high burden countries. Achievements to advance this work include:

- **INDOOR AIR POLLUTION:** results from a WHO supported trial in Guatemala showed a 40% reduction in incidence of severe pneumonia with the lowering of indoor air pollution levels, strengthening the evidence base for WHO's efforts in environmental health.
- **NEWBORN HEALTH:** The Department is supporting three large-scale studies in Ghana, India and Pakistan to assess the feasibility and effectiveness of home visits on newborn health outcomes. Preliminary results from Pakistan show a 28% reduction in neonatal mortality.
- **MANAGEMENT OF CHILDHOOD ILLNESS:** The Department is supporting research to assess whether severe pneumonia can be safely treated with oral antibiotics at home, thus exploring ways to reduce the use of injectables, increase access to treatment and reduce costs.
- **MANAGEMENT OF SEVERE MALNUTRITION:** Building on a landmark consensus on community-based management of severe malnutrition, the Department initiated work on a field manual and the related adaptation of the IMCI guidelines.
- **COMMUNITY HEALTH WORKER TRAINING:** To respond to a need perceived in many countries, the Department started the development of training materials for community health workers, building on the IMCI approach. The package will include materials for managing sick children, home visitation in the newborn period, and promotion of good care practices.

Monitoring and evaluation is vital to assessing progress in programme implementation as well as to sustaining commitment and resources. The Department is strengthening its role by developing new tools and participating in global efforts to track progress towards achieving the health-related MDGs.

- **FRAMEWORK:** A framework for monitoring and evaluation was developed to determine measurement needs, map ongoing efforts by WHO and partners, and identify gaps that could be filled by the Department.
- **SURVEYS:** To complement existing tools for health facility and household surveys, the Department developed a rapid household survey to assess coverage of key maternal and child health interventions, that is now being finalized for field-testing.
- **GLOBAL MONITORING:** The Countdown to 2015 was launched in 2005 as a two-yearly effort to track progress towards achieving MDG 4 in 60 high-burden countries. The 2005 findings on intervention coverage and financial flows were published and planning for the next round of tracking has started with partners.

Improving the health and development of adolescents

WHO promotes a comprehensive, multisectoral approach to improving the health and development of adolescents. Using HIV and maternal mortality as entry points, the Department supports countries to apply evidence-based interventions through a four-pronged ("4-S") approach to strengthening the health sector contribution to adolescent health and development:

- developing **S**upportive evidence-based policies;
- gathering and using **S**trategic information;
- scaling up health **S**ervice provision and utilization;
- **S**trengthening action in other sectors.

In the area of supportive evidence-based policies, WHO synthesized and disseminated the evidence required for policy formulation and strategy development on the prevention of HIV and maternal mortality in adolescents and young people.

- **HIV PREVENTION IN YOUNG PEOPLE:** A systematic review and a series of policy briefs were completed and launched at the International AIDS Conference in Toronto, Canada.
- **ADOLESCENT PREGNANCY:** A literature review *Unmet Needs, Undone Deeds* highlighted the scale of the problem and noted the actions that would directly affect global efforts to meet MDGs 4 and 5. The related advocacy document *Pregnant adolescents: Delivering on global promises of hope* was made available.
- **PLANNING HIV/RH PROGRAMMES:** A training course for public health programme managers on planning effective HIV/reproductive health programmes for young people was developed and tested.

In the area of strategic information, WHO:

- reviewed the current state of **ADOLESCENT EPIDEMIOLOGY**, to update its fact sheet on adolescent health. It did this through a systematic review of available multi-national databases to identify relevant indicators and related data for the key public health problems in adolescents.
- identified **12 INDICATORS** for which comparable data are available in several countries.

WHO also finalized methods and tools to monitor health service provision to adolescents:

- Tools to **ASSESS THE QUALITY OF HEALTH SERVICES** were completed; others to assess the costs of delivering quality health services to adolescents were tested.
- Indicators and tools to **ASSESS THE COVERAGE OF HEALTH SERVICES** for young people, with a particular focus on HIV, were identified and developed for testing.

In order to scale up health service provision and utilization, WHO generated evidence and developed tools for country-level use.

- **YOUNG PEOPLE LIVING WITH HIV:** The Department organized a global consultation on strengthening the health sector's response to care, support, treatment and prevention among young people living with HIV/AIDS.
- **CONSENT AND CONFIDENTIALITY FOR ASRH:** A consultation was held in the South-East Asia Region (SEAR) to define procedures for providing health services to adolescents for their sexual and reproductive health needs.
- **HEALTH WORKER PRACTICE AND ATTITUDES TOWARDS YOUNG PEOPLE:** Additional modules for dealing with "most at risk adolescents" were developed and field-tested to supplement the Orientation Programme for health workers, and a Job Aid was developed to support the practices of health workers with clients who are young people.
- **SCALING UP HEALTH SERVICES FOR YOUNG PEOPLE:** WHO documented outstanding initiatives in scaling up health service provision to young people.
- **STANDARDS FOR IMPROVING THE RESPONSIVENESS OF THE HEALTH SYSTEM:** To guide the delivery of quality health services for adolescents and young people, the Department revised materials for the development of national standards and sub-national operational plans.

In the area of strengthening action in other sectors and civil society, the evidence base was strengthened and work began on developing tools to enable important figures in adolescents' lives to contribute meaningfully to their growth and development.

- **PARENTING AND ADOLESCENTS:** A review was completed of country initiatives to support parents to promote the health and development of adolescents, and a technical consultation organized to agree conclusions and recommendations for programmes.
- **FOOTBALL COACHES AND YOUNG MALE ATTITUDES:** The effect of building the capacity of football coaches to sensitize young boys on issues including gender, sexuality and violence was evaluated.

On the global front

In 2006 WHO continued to work closely with key partners including UNFPA, UNICEF and the World Bank. Collaboration on newborn and child health has expanded to an ever-widening range of partners through the newly-established Partnership for Maternal Newborn and Child Health (PMNCH), housed in WHO. Collaboration on adolescent health has been strengthened through the Strategic Partnership Programme with UNFPA.

Now is a time of many opportunities in the area of child and adolescent health. The stage is set for this work to continue in 2007 as the strategic vision of WHO's new Director-General, Dr Margaret Chan, comes into action. The renewed focus on primary health care is well-harmonized with the efforts to strengthen care close to the community and link with referral care. The past year has seen increased resources become available for child and adolescent health, and these efforts must be accelerated. As a critical half-way point in the countdown to the Millennium Development Goals (MDGs), 2007 will be decisive for making progress in the area of child and adolescent health. WHO is set to play its key role in meeting that challenge.

Chapter 1

The current context of child and adolescent health

Photo © WPRO

As countries scale up health services for children and adolescents to meet global goals, the Department of Child and Adolescent Health and Development is supporting the formulation of evidence-based strategies and policies in countries and regions. This involves efforts to build capacity for the collection and use of epidemiological data to ensure that limited resources are targeted most effectively and to monitor progress towards the goals. A major advance in 2006 was the publication of country-specific data on the main causes of death in newborns and children under five. These data are already being used to target resources to meet local needs.

In addition, CAH is working with countries and regions to support the inclusion of a human rights perspective in policies and programmes for children and adolescents. The aim is to ensure that the UN Convention on the Rights of the Child is used as a framework for improving child and adolescent health and development.

This chapter reviews progress in 2006 in: strengthening the evidence base to meet global goals for child and adolescent health; support for the development of rights-based policies and programmes; the formulation of regional strategies for child and adolescent health; collaboration and partnership.

1.1 A sharpened focus on child health data

WHO has helped to generate sound evidence of the magnitude and distribution of the main causes of death and illness among newborns and children under five – at both global and regional levels. However, since causes of death vary significantly according to levels of mortality, sub-regional and country-specific data are also needed for the development of evidence-based policies and strategies.

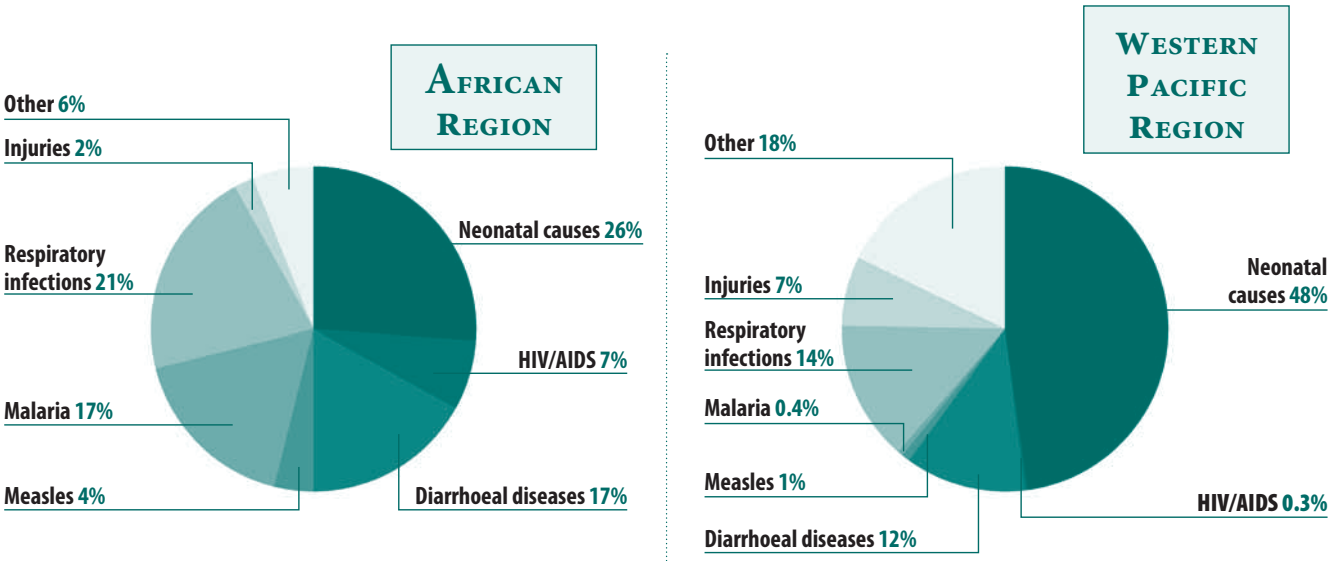
In response, WHO expanded its work to estimate sub-regional, country-specific and sub-national profiles for child morbidity and mortality – providing the more detailed picture needed to supplement global and regional information.

Over the past year, this work served as the basis for the development of strategies in both the AFR and the Western Pacific Region (WPR), as well as a solid foundation for both advocacy and resource mobilization. A major focus was the importance of evidence-based planning and assessment of needs, especially in relation to the achievement of the Millennium Development Goal for child survival (MDG4).

Targeting child health care to local needs

In 2006, support was provided for the development of strategies in the AFR and WPR as well as in individual countries. Of the estimated 10.3 million under-five deaths in 2004, 4.6 million were in the AFR and 766 000 in the WPR. Through the work carried out by the Child Health Epidemiology Reference Group (CHERG), WHO has calculated the distribution of the causes of death in these (Figure 1) and other regions.

Figure 1: Distribution of causes of under-five deaths in the African and Western Pacific Regions



In the African Region, infectious diseases accounted for at least two-thirds of all under-five deaths.

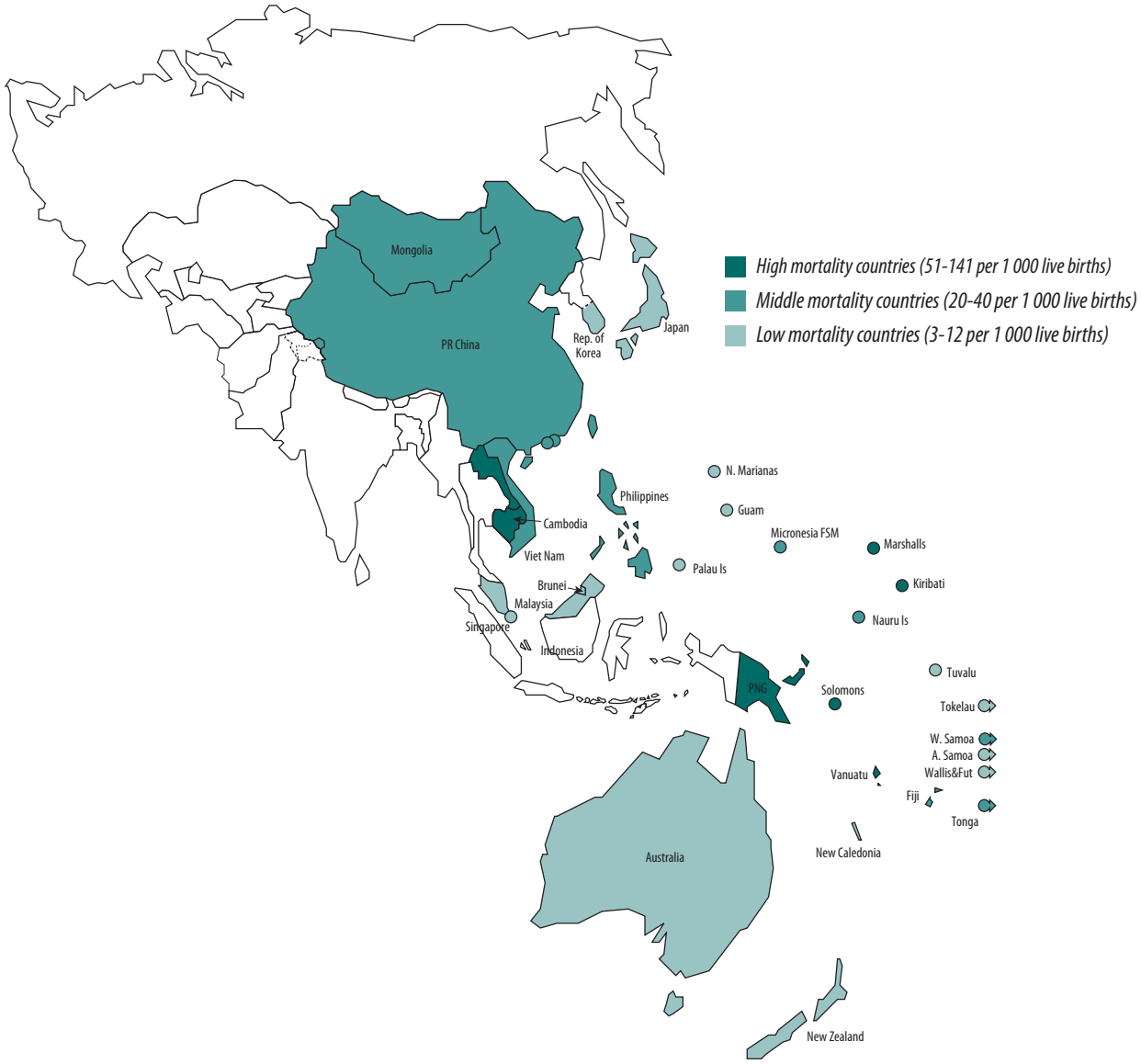
About one in four of these deaths was due to neonatal causes.

In the Western Pacific Region, about half of all under-five deaths were due to neonatal causes.

About one in four of these deaths was due to infectious diseases.

Source: CHERG/CAH/WHO, based on figures from 2000, as published in the World Health Statistics 2006.

Figure 2: Distribution of countries in the Western Pacific Region according to their level of under-five mortality



Source: WHO/UNICEF Regional Child Survival Strategy-Accelerated and Sustained Action Towards MDG 4, WHO Western Pacific Region, based on figures from 2004, as published in the World Health Statistics 2006.

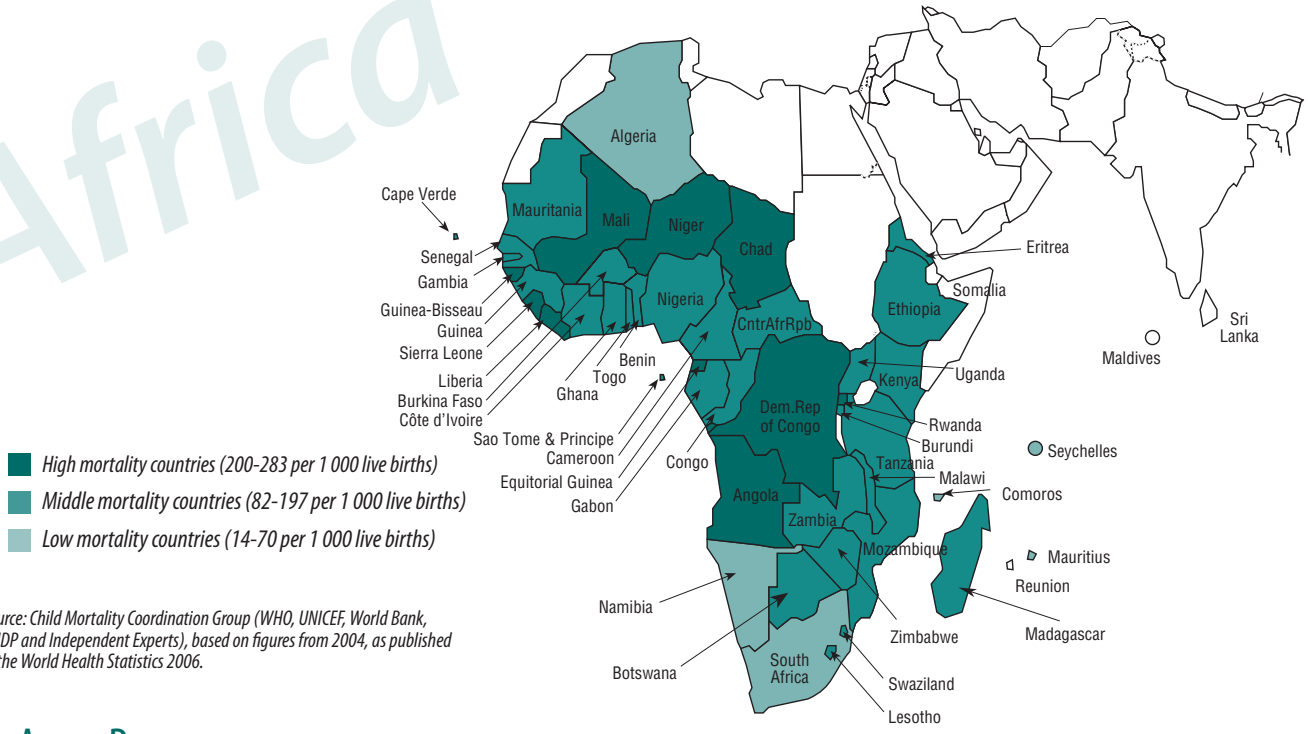
Cause-specific profiles according to levels of mortality

Western Pacific Region

In developing its Regional Child Survival Strategy, the WPR has used epidemiological profiles to rank countries according to their levels of mortality – high, middle or low (Figure 2) and to describe their cause-of-death profiles for under-fives.

In the WPR, causes of death in countries with high mortality differ significantly from those in low mortality countries. For example, in the low mortality countries, neonatal deaths and injuries together account for 65% of under-five deaths. In the high mortality countries, neonatal deaths and injuries together only account for 38% of deaths, and infections are responsible for one in every three deaths. On the basis of the mortality rates and disease profile of the three country groups, packages of priority interventions were then developed – each tailored to their specific needs.

Figure 3: Distribution of countries in the African Region according to their level of under-five mortality



Source: Child Mortality Coordination Group (WHO, UNICEF, World Bank, UNDP and Independent Experts), based on figures from 2004, as published in the World Health Statistics 2006.

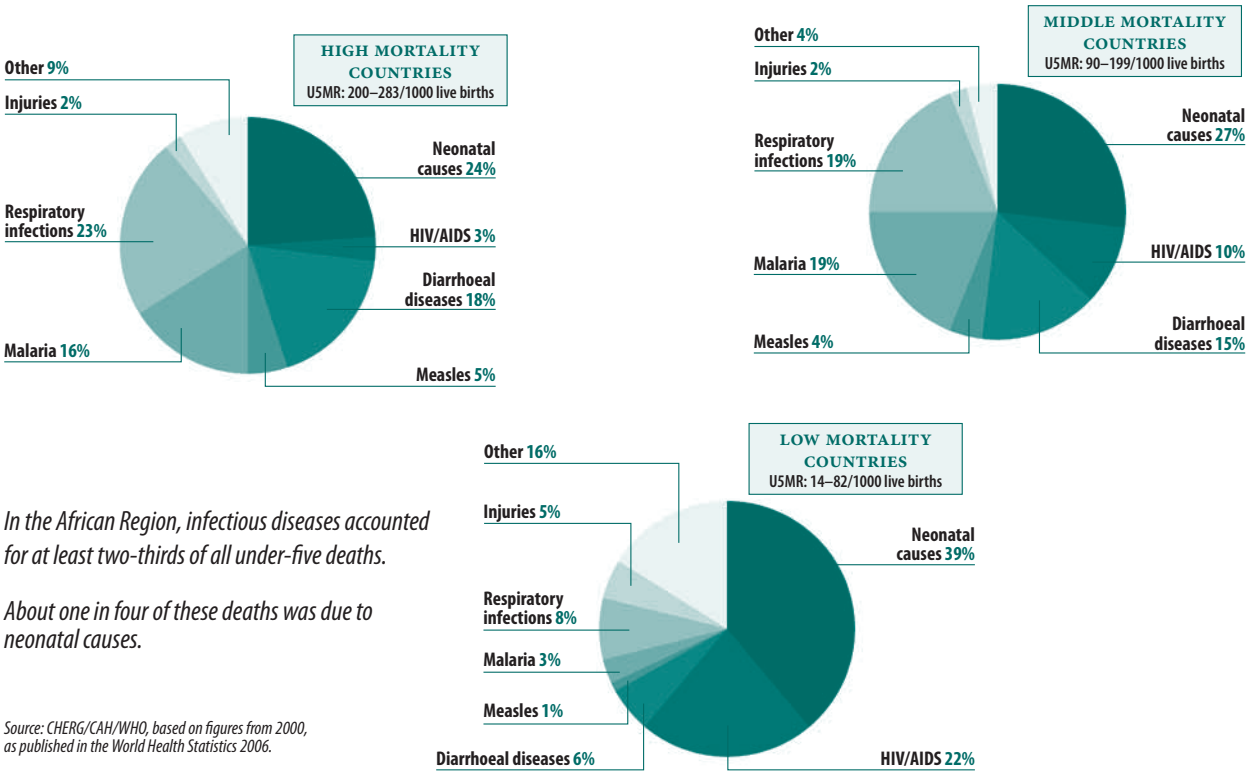
African Region

Similar profiles were developed for the AFR for use in the development of the joint WHO/UNICEF/World Bank Child Survival Strategy for Africa.

In this region, profiles in countries with high mortality rates differ significantly from those in low mortality countries (Figure 3). While in high mortality countries the main causes of death are infectious diseases (24% respiratory infections, 18% diarrhoeal diseases and 15% malaria), in low mortality countries, over 60% of deaths are due to neonatal causes (39%) and HIV (22%) (Figure 4).

The countries were also grouped according to their levels of under-five mortality due to HIV and malaria, both major causes of death in the AFR.

Figure 4: Distribution of causes of death according to levels of under-five mortality in countries from the African Region



In the African Region, infectious diseases accounted for at least two-thirds of all under-five deaths.

About one in four of these deaths was due to neonatal causes.

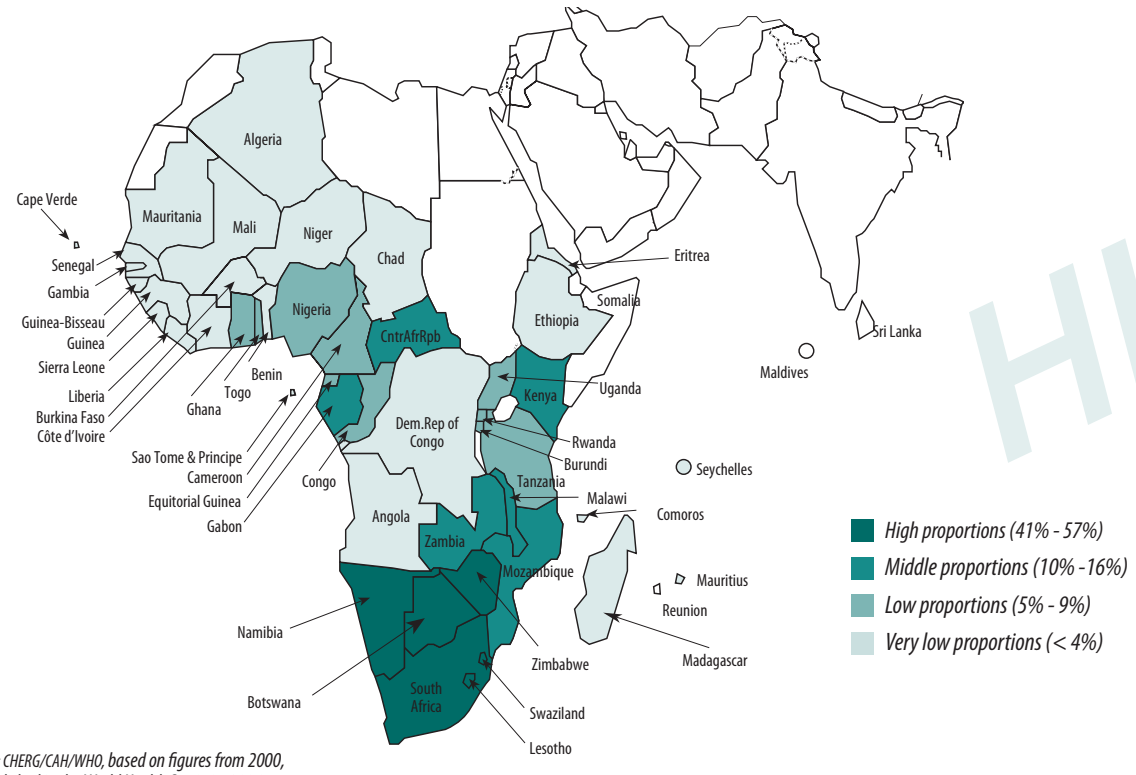
Source: CHERG/CAH/WHO, based on figures from 2000, as published in the World Health Statistics 2006.

HIV

In six African countries (Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zimbabwe), over 40% of under-five deaths are HIV-related. In this group of countries, the two major killers are AIDS (51%) and neonatal causes (34%), which together account for most deaths in this age group (Figure 5).

Elsewhere, in the 22 countries with very low HIV mortality (less than 5% of under-five deaths), most deaths (86%) are due to infectious diseases (56%) and neonatal causes (30%).

Figure 5: Proportions of under-five deaths due to HIV in the African Region



Source: CHERG/CAH/WHO, based on figures from 2000, as published in the World Health Statistics 2006.

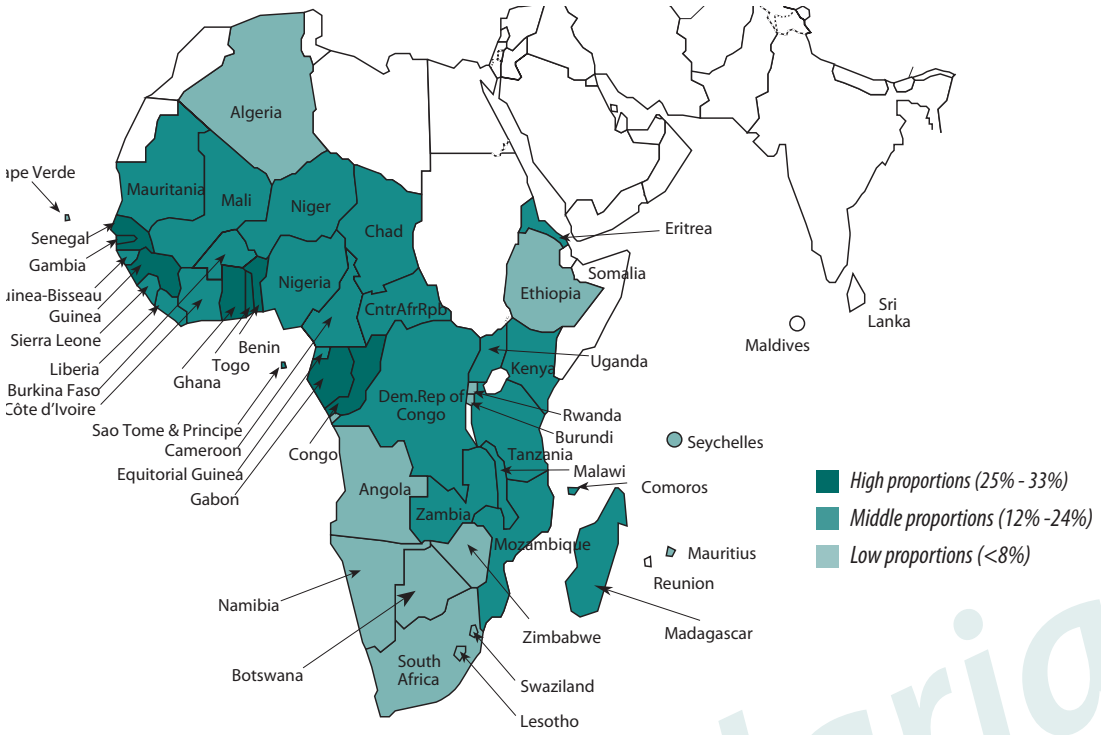
USING COUNTRY-SPECIFIC DATA TO MEET LOCAL NEEDS

In China, detailed epidemiological data on under-five mortality were compiled, analyzed and used to guide the development of the national child survival strategy. These included analysis of infant and under-five mortality trends, causes of death and the place where the deaths occurred, according to six geographical sub-regions. Three different packages of interventions were recommended for different areas, according to their level of development and the coverage and level of health services.

WHO also contributed technical expertise during a visit to China for the assessment of the Maternal and Child Surveillance Programme, providing feedback and suggestions for improvements. Meanwhile, technical support has also been provided to help build capacity for the collection, quality assessment, use, and analysis of epidemiological information.

WHO provided technical inputs, epidemiological information and recommendations on the use of data for the planning and development of national child survival strategies in Cambodia, Ethiopia, Lao PDR, Nigeria, Papua New Guinea, Philippines, Republic of Korea, and Viet Nam.

Figure 6: Proportions of under-five deaths due to malaria in the African Region



Source: CHERG/CAH/WHO, based on figures from 2000, as published in the World Health Statistics 2006.

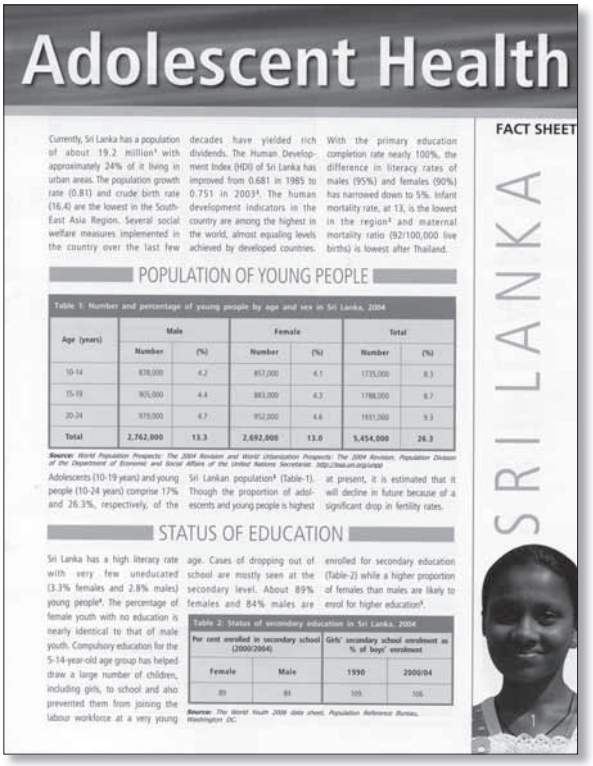
Malaria

Malaria

Seven countries (Benin, Congo, Gabon, Gambia, Ghana, Guinea, and Togo) have the highest proportion of malaria deaths (25% to 33%) among children under five. In these countries, malaria and other infectious diseases account for two-thirds of under-five deaths (Figure 6).

Elsewhere, in the 15 countries with a low or very low proportion of under-five deaths due to malaria (less than 10%), the main causes of death are other infectious diseases (22% HIV, 13% respiratory infections and 10% diarrhoeal diseases), which together account for almost half of all under-five deaths.

While this work has enabled more specific definition of strategies and planning at sub-regional level, more detailed information is still needed for evidence-based policy and strategy development at country level. Work on country-specific as well as within-country profiles has started and the compilation, analysis and use of available information is already proving helpful in defining packages of interventions as well as delivery methods for these at national and sub-national levels.



Adolescent Health

FACT SHEET

SRI LANKA

Currently, Sri Lanka has a population of about 19.2 million[1] with approximately 24% of it living in urban areas. The population growth rate (0.81) and crude birth rate (16.4) are the lowest in the South-East Asia Region. Several social welfare measures implemented in the country over the last few decades have yielded rich dividends. The Human Development Index (HDI) of Sri Lanka has improved from 0.681 in 1985 to 0.751 in 2003[2]. The human development indicators in the country are among the highest in the world, almost equaling levels achieved by developed countries. With the primary education completion rate nearly 100%, the difference in literacy rates of males (95%) and females (90%) has narrowed down to 5%. Infant mortality rate, at 13, is the lowest in the region[2] and maternal mortality ratio (92/100,000 live births) is lowest after Thailand.

POPULATION OF YOUNG PEOPLE

Table 1: Number and percentage of young people by age and sex in Sri Lanka, 2004

Age (years)	Male		Female		Total	
	Number	(%)	Number	(%)	Number	(%)
10-14	878,000	4.2	857,000	4.1	1735,000	8.3
15-19	905,000	4.4	883,000	4.3	1788,000	8.7
20-24	979,000	4.7	952,000	4.6	1931,000	9.3
Total	2,762,000	13.3	2,692,000	13.0	5,454,000	26.3

Source: World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2004 Revision, Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. http://esa.un.org/unpp

Adolescents (10-19 years) and young people (10-24 years) comprise 17% and 26.3%, respectively, of the Sri Lankan population[3] (Table-1). Though the proportion of adolescents and young people is highest at present, it is estimated that it will decline in future because of a significant drop in fertility rates.

STATUS OF EDUCATION

Sri Lanka has a high literacy rate with very few uneducated (3.3% females and 2.8% males) young people[4]. The percentage of female youth with no education is nearly identical to that of male youth. Compulsory education for the 5-14-year-old age group has helped draw a large number of children, including girls, to school and also prevented them from joining the labour workforce at a very young age. Cases of dropping out of school are mostly seen at the secondary level. About 89% females and 84% males are enrolled for secondary education (Table-2) while a higher proportion of females than males are likely to enrol for higher education[5].

Table 2: Status of secondary education in Sri Lanka, 2004

Per cent enrolled in secondary school (2000/2004)		Girls' secondary school enrolment as % of boys' enrolment	
Female	Male	1990	2000/04
89	84	105	106

Source: The World Youth 2006 data sheet, Population Reference Bureau, Washington DC.

1.2 Strengthening adolescent health epidemiology

Although adolescent health is a global health priority, information on the magnitude of health problems among this age group remains weak. In response, WHO is working to strengthen adolescent health epidemiology and to identify key indicators which can be used for global data collection and analysis. This work will support efforts by countries to develop policies and strategies for adolescent health and to monitor progress in meeting global goals.

In 2006, WHO supported a review and assessment of the information available on adolescent health globally, to identify indicators used in multinational surveys, to assess their quality and to specify the availability of those indicators at the national level. A systematic review was conducted of the available literature in the public domain, as well as a systematic internet search for databases containing data on adolescents, young people and youth. The inclusion of data was restricted to surveys or databases that were multinational and used consistent methodology across several different countries. This search yielded 18 multinational databases with more than 1 000 indicators, of which only 102 were relevant to issues in adolescent health. Of these, 12 indicators were found to be relevant to young people (15–24) and the most useful for monitoring global adolescent health:

1. percentage of students aged 13–15 who are current smokers;
2. percentage of students aged 16 who use alcohol;
3. obesity among students aged 13–15;
4. injuries among students aged 13–15;
5. young people with knowledge of a formal source of condoms;
6. median age at first sexual encounter;
7. young people having multiple sexual partners in the previous year;
8. young people who have sex with commercial sex workers;
9. young people using a condom at last higher-risk sexual encounter;
10. men and women seeking treatment for sexually transmitted infections;
11. age-specific fertility rate per 1 000 women;
12. HIV prevalence among young people (15–24) and adults (15–49).

Regional initiatives are also under way to meet the need for relevant epidemiological information on adolescent health. In the Region of the Americas (AMR), a user-friendly regional interactive database is under development, which will include selected adolescent health determinants and indicators. Elsewhere, in the SEAR, epidemiological data on adolescent health and development has been collected in all 11 Member States and developed into national fact sheets, one set focusing on adolescent health and development, and another on HIV among young people.

In the Eastern Mediterranean Region (EMR), a research module on adolescent health was implemented in Lebanon, Morocco, the Syrian Arab Republic and Tunisia, by the Pan Arab Project for Family Health (PAPFAM). WHO's Regional Office also assisted Member States to conduct other adolescent health-related surveys during 2006, including the Global Youth Tobacco Survey (GYTS), and Global School-based Student Health Survey (GSSHS).

1.3 Human rights-based policies and programmes

During 2006, WHO's work on child and adolescent rights focused on two key areas: building the capacity of WHO staff and national counterparts to apply the UN Convention on the Rights of the Child (CRC) in child and adolescent health planning and programming; and support to the reporting process of the UN Committee on the Rights of the Child.

CRC capacity building

WHO continued its efforts to strengthen the capacity of WHO staff, ministry of health officials and other partners in the application of the CRC as a normative and legal framework for improving child and adolescent health and development.

A regional workshop was held in Manila for staff in the Western Pacific Regional Office (WPRO) and selected country staff, with a focus on the importance of the CRC for the implementation of the recently adopted regional strategy on child survival. Elsewhere, a sub-regional workshop on the CRC and its reporting process was held for staff in the African Regional Office (AFRO) and four selected countries (Ethiopia, Kenya, Swaziland and the United Republic of Tanzania) in Brazzaville, Congo. Country representatives included WHO staff, ministry of health officials, and representatives from ministries responsible for national CRC implementation.

In the SEAR, human rights orientation was conducted in the context of informed consent and confidentiality for adolescents (see Chapter 3). In the AMR, support was provided to the Child Rights Education for Professionals initiative for the development and field-testing of its training module on the application of the CRC to the practice of paediatrics.

Other rights-based initiatives undertaken include the inclusion of human rights norms and standards in the development of the programme managers' guide for child health, and the development of:

- tools to strengthen rights-based planning and programming for child and adolescent health (in collaboration with the Harvard School of Public Health and UNICEF).
- a human rights checklist to assist WHO staff in the process of systematically incorporating human rights norms and standards in their research and development work.
- a rights-based situation analysis for child survival, with a focus on laws, regulations and policies.
- a joint WHO/UNICEF Working Paper on the role of laws and regulations in improving child survival.
- an internal briefing paper on rights-based indicators for child survival.

Support to the CRC reporting process and the UN Committee on the Rights of the Child

In the AFR, WHO provided technical assistance to the UN Committee on the Rights of the Child in its review of CRC implementation in selected countries. Technical health commentaries were prepared on Ethiopia, Kenya and Swaziland for use by the Committee in its dialogue with government delegations. Elsewhere, in the AMR, WHO provided technical support to and participated in the sub-regional meeting on follow-up to the concluding observations of the CRC for Central American countries, held in Costa Rica. WHO also provided input to the development of an operational framework for the Committee's General Comment on early childhood development (ECD) in the context of the CRC, and development of indicators for enhanced reporting by countries on ECD to the Committee.

1.4 Regional policy and strategy initiatives

In 2006, CAH provided support to countries and regions for the development of national and regional policy and strategy initiatives.

Child health strategies

African Region

In 2006, the WHO Regional Committee for Africa approved a joint WHO/UNICEF/World Bank regional strategy for child survival. The strategy report, *Child Survival: a Strategy for the African Region*, says that 63% of the 4.6 million child deaths a year in this region could be prevented through high population coverage with a limited set of interventions. Poverty, it says, is the single most important factor accounting for the low coverage of effective interventions.

The priority child interventions recommended in the strategy for implementation and scaling up include: promotion of newborn care; infant and young child feeding, including micronutrient supplementation; deworming; malaria prevention (including use of insecticide-treated bednets and intermittent treatment for pregnant women); immunization of mothers and children; prevention of mother-to-child transmission (PMTCT) of HIV; and management of common childhood illnesses.

During 2006, the strategy was used to mobilize resources, and new funds have been made available for Burkina Faso, Malawi and Mozambique. The regional strategy has been used to guide the development of national strategies and implementation plans for achieving the MDGs both in these countries and throughout the AFR. WHO provided support to Ghana, Malawi, Mozambique, Senegal, Uganda and the United Republic of Tanzania for developing rational child health strategies and policies.

European Region

The European Region (EUR) developed a set of tools to enable countries to assess national and sub-national policies and strategies and information related to child and adolescent health and to set programme priorities based on the national and local situation. Several countries in the Region (Armenia, Hungary, the Republic of Moldova, Slovakia, Tajikistan and Ukraine) have used these tools in 2006 to update and develop national child and adolescent health strategies. Strategies should be ready to present for government approval before the end of 2007.

Western Pacific Region

In the WPR, support was provided to national and international meetings for developing plans of action and orienting key stakeholders on the Regional WHO/UNICEF Child Survival Strategy. An international workshop was held in Lao PDR in May 2006 to launch the Strategy in the six priority countries with the highest burden of childhood deaths: Cambodia, China, Lao PDR, Papua New Guinea, Philippines and Viet Nam. While all six countries are implementing many aspects of the essential package of interventions, the level of coverage and quality of services is variable – due in part to socio-economic and geographic disparities and low health insurance coverage. The workshop highlighted the importance of a core set of interventions and associated indicators.

In Cambodia, a national Child Survival Strategy has been developed and efforts are under way to develop an operational plan. Costing tools developed by WHO are being used to estimate the investments required to support the operational plan (see Box).

South-East Asia Region

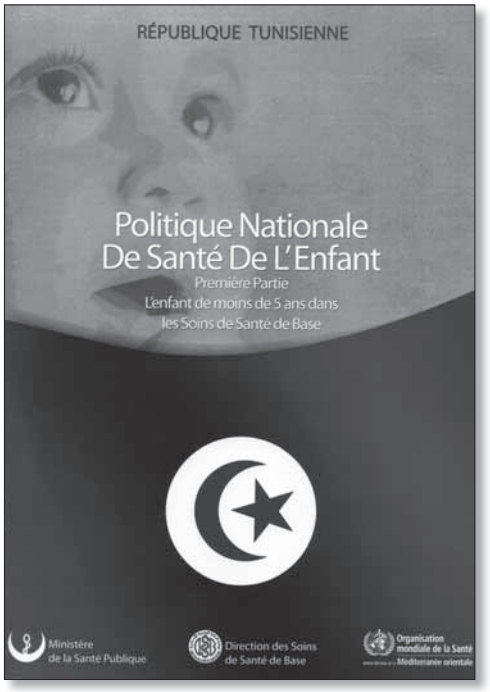
In the SEAR, efforts to scale up child survival programmes at national level require effective collaboration between all partners. To support this process, WHO is preparing a case study of effective country-level partnerships in Bangladesh that have contributed to a rapid scale-up of IMCI.

The South-East Asia Regional Office (SEARO) produced a paper *Operationalizing the Newborn Health Care Strategy in the South-East Asia Region* that was presented and discussed during the 11th meeting of the Health Secretaries of the SEAR. Secretaries of Health reiterated the need for intensified action for neonatal survival in national programmes as an imperative for the achievement of MDG4.

COSTING THE IMPLEMENTATION OF CAMBODIA'S CHILD SURVIVAL STRATEGY

In 2006, WHO supported efforts to estimate the costs involved in implementing the Child Survival Strategy in Cambodia in 2007-2010. This was part of a collaborative effort involving WHO, the Ministry of Health, USAID/BASICS and other partners in Cambodia, under the stewardship of the Cambodia Child Survival Working Group. The preliminary estimate of the total cost for implementing the Strategy is US$79 million over four years.

The costing exercise is seen as part of a long-term effort to use planning and financial information to help guide country programmes towards making efficient choices with the limited funds available. Next steps include looking at the capacity of the service delivery platform to scale up, assessing funding commitments and estimating the financing gap, followed by advocacy to close the resource gap.



Eastern Mediterranean Region

The Eastern Mediterranean Regional Office (EMRO) developed a child health policy initiative in 2003, based on the development of a comprehensive national child health policy document. The development of the policy document has three phases: situation analysis; development of a child health policy document; and efforts to secure the adoption of the policy at the highest political level. In 2006, Tunisia became the first country to finalize the national child health policy document. Egypt, Morocco and Sudan are currently in the second phase of the initiative, while Iraq, the Islamic Republic of Iran, Jordan, Oman, Pakistan, the Syrian Arab Republic and Yemen are in the first phase.

Region of the Americas

In the AMR, all priority and high impact countries have established plans and national programmes of health for the achievement of MDG4.

Adolescent health strategies

Eastern Mediterranean Region

In 2006, the EMR developed a regional framework for adolescent health: *Strategic directions for promoting adolescent health and development in the Eastern Mediterranean Region*. The priority strategies outlined in the framework include: ensuring that adolescent health and development is high on the political agenda; creating a supportive environment for legislation and policy making to support adolescent health and development; ensuring an integrated response that involves all key partners; and empowering adolescents so they can fully participate in the design, implementation, monitoring and evaluation of their own programmes and activities. In addition, EMRO provided technical support to the United Arab Emirates for the development of a national strategy document on adolescent health and development.

South-East Asia Region

In the SEAR, a regional strategy on adolescent health and development is currently being finalized. Meanwhile, WHO provided support for the development of country profiles to support the development of national strategies in several countries including Bangladesh, Indonesia, Myanmar and Sri Lanka.

Region of the Americas

In 2006, Venezuela and Paraguay have made significant progress in developing national health policies and programmes targeting adolescents and young people.

1.5 Collaboration and partnership

Stimulating concerted action for maternal, newborn and child survival

In response to the urgent need for harmonized action to improve the health of mothers and children, major actors joined together to create the Partnership for Maternal, Newborn and Child Health (PMNCH), with the secretariat housed at WHO/HQ. The Partnership focuses on:

- **country support** – actively promoting improved partner coordination in countries and supporting the creation of a single national plan for maternal, newborn and child health;
- **advocacy** – raising the profile of maternal, newborn and child health on political agendas and advocating for increased resources, financial and other;
- **effective interventions** – promoting the assessment, scaling up, and delivery of evidence-based, cost-effective interventions for maternal, newborn and child health, prioritizing the reduction of inequities;
- **monitoring and evaluation** – tracking progress in coverage of interventions, financial flows and follow-up to commitments for child survival made by governments and partners.

In 2006 the Partnership generated substantial funds to support scaling up interventions in six selected countries in Africa. Technical support for this will be provided mainly by WHO, UNICEF and UNFPA.

As a follow-on to the global Countdown on child survival, the Government of Senegal convened a national Countdown meeting in November 2006 to give a new impetus to child survival. The Countdown initiative is intended to stimulate such country-level actions which can then receive full support from global partners. In preparation for the next global Countdown event, it was agreed to expand the range of indicators that will be tracked to include the assessment of coverage of maternal and newborn interventions, human resources, financial flows, and possibly a composite indicator on health service delivery. An analysis of results from the 2005 Countdown exercise can be found in *The Lancet* (Bryce J et al Countdown to 2015: tracking intervention coverage for child survival. *Lancet*. 2006 Sep 23; 368(9541):1067-76.).

CAH collaborated closely towards the development of a Global Business Plan to help achieve MDGs 4 and 5, an initiative being led by the Government of Norway. A member of the Department's staff was seconded for three months to facilitate this support.

CAH strengthened its collaboration with different departments in the Organization in 2006. Joint capacity building events and country specific activities have been carried out with the departments of Making Pregnancy Safer (MPS), HIV/AIDS, Nutrition (NHD) and others. The 2006 CAH Regional Advisers (RAs) meeting was held parallel to the RAs meeting for MPS, allowing opportunities for the two departments' RAs to share experience and develop joint plans.

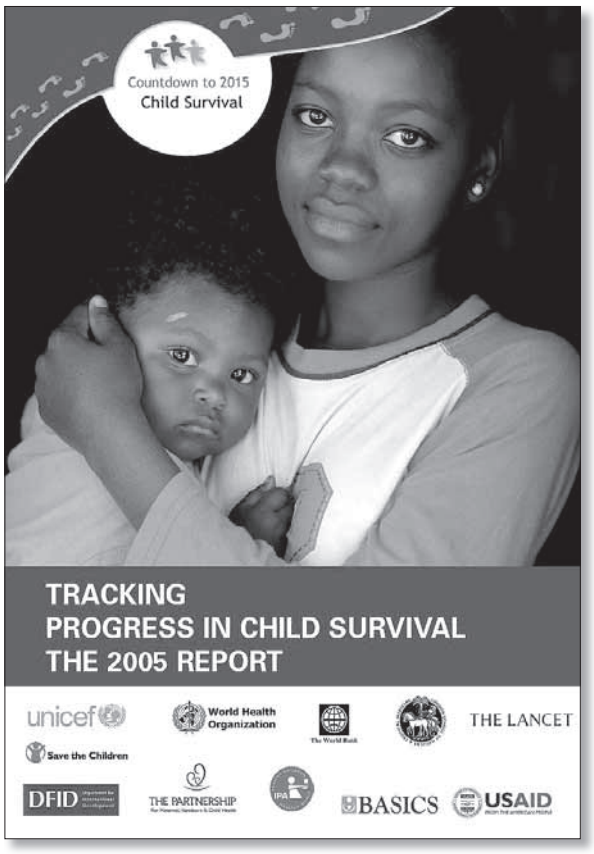
Partnerships for adolescent health and development

WHO has worked to build and strengthen partnerships, within and outside the UN system, to address issues of shared interest and concern in the area of adolescent health and development. The following are three specific examples of how WHO has engaged in partnerships to achieve specific objectives.

Collaboration has been strengthened through joint activities with UNFPA's Strategic Partnership Programme (SPP), with the aim of strengthening consensus, capacity and programme support tools. SEARO held an SPP regional capacity development meeting in March 2006 in New Delhi, India, with the involvement of staff from WHO, UNFPA, UNICEF, governments and NGOs. This meeting provided the groundwork for the development of a tool for the Guidance of UN Country Teams (UNCTs). It will provide the rationale, frameworks and linkage to other complementary tools to assist countries accelerate health sector action for the prevention and care of HIV/AIDS among young people in the Region.

WHO drew upon the strengths of the London School of Hygiene and Tropical Medicine to ensure that the report titled *Preventing HIV/AIDS in Young People: A Systematic Review of the Evidence from Developing Countries* was technically sound. In order to ensure wide dissemination, WHO worked with UNAIDS, UNFPA and UNICEF to publish the report under the auspices of the Inter-Agency Task Team on HIV/AIDS and Young People.

WHO drew upon the expertise of the International Paediatric Association, the International Association of Adolescent Health and the International Planned Parenthood Federation in organizing a consultation on addressing confidentiality and consent in the context of providing adolescents with sexual and reproductive health information and services.



Chapter 2

Newborn and child health and development

This chapter reviews progress during 2006 in CAH's work in improving the health and development of children under five.

Part I focuses on the survival and health of newborns;

Part II focuses on under-five health and development;

Part III reviews efforts to meet the nutrition needs of young children; and

Part IV reviews progress in the management, monitoring and evaluation of child health programmes.

Photo © WHO/ Martin Weber

Part I

Survival and health of newborns

The first few days and weeks of life are among the most critical for child survival. Every year, an estimated 4 million children die during the first month of life. Almost all of these deaths (98%) occur in developing countries.

Most neonatal deaths are due to low birth weight, asphyxia and infections such as sepsis, tetanus and pneumonia. An estimated two-thirds of these deaths could be prevented or treated with proven, cost-effective interventions that already exist. About half of these deaths occur at home, often among newborns who have had no contact with a health care provider.

Of the newborns who survive, many suffer the life-long disabling effects of low birth weight, infectious diseases and other conditions – physical and mental disabilities which severely limit their prospects in life and often impose a heavy burden on caregivers.

Since neonatal deaths account for about 40% of all deaths among children under five, sustained efforts are needed to increase neonatal survival rates in order to meet the global target of a two-thirds reduction in child mortality rates between 1990 and 2015 (MDG 4). To support efforts by countries and regions to reduce newborn deaths, WHO is working to:

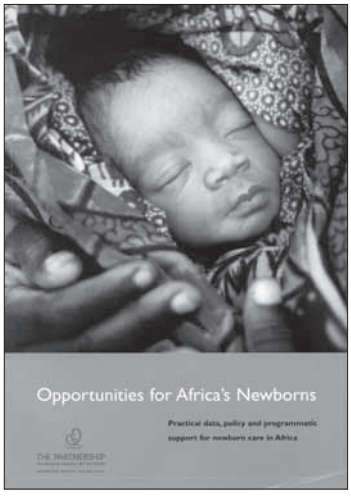
1. build capacity for the planning and management of newborn health care within existing national programmes for maternal, newborn and child health.
2. develop and evaluate new community-based delivery mechanisms to improve the quality of newborn care.
3. develop and implement new tools and guidelines to ensure that a higher proportion of newborns have access to effective management of illness.
4. develop and implement standard tools and methods to measure improvements in the implementation of neonatal health care as well as the impact on child mortality rates.

2.1.1 Guidelines for planning based on Newborn Health Framework

In 2006, WHO worked in collaboration with UNICEF and the Saving Newborn Lives initiative to develop tools to build the capacity of national programme managers to strengthen the newborn health component in maternal and child health programmes and in related programmes including family planning, nutrition, malaria and HIV. The tools – which are based on the steps outlined in the recently revised Newborn Health Framework and Guidelines for Planning – are used during a one-week workshop for programme managers. This includes a focus on: situation analysis, prioritizing and packaging interventions; setting realistic coverage targets, and planning for implementation. During 2006, two capacity development workshops, involving 14 African countries, were held to strengthen planning for newborn health care in Africa.

SPOTLIGHT ON AFRICA'S NEWBORNS: 800 000 DEATHS A YEAR COULD BE PREVENTED

In sub-Saharan Africa, an estimated 1.16 million newborn babies die during the first month of life and 250 000 mothers die from pregnancy-related causes. However, a report by the WHO-based Partnership for Maternal and Newborn Child Health (PMNCH) says that at least two-thirds of these deaths could be prevented if access to existing packages of essential interventions was scaled up – providing a comprehensive package of care for 90% of mothers and newborns.



The report highlights existing gaps in health care for both mothers and newborns: only 42% of mothers have access to a skilled attendant at birth and even fewer have access to postnatal care within the first two days.

2.1.2 New community-based delivery mechanisms

WHO is supporting a large research study in Pakistan to develop and evaluate the impact of community-based delivery of newborn care on neonatal survival. The pilot phase was completed in 2006 and the main study is now being implemented.

In India, the Government has adopted an Integrated Management of Neonatal and Child Illness (IMNCI) approach. An innovative feature of this approach is that it combines home visits by community health workers (*Anganwadi* workers and Auxiliary Nurse Midwives) to provide postnatal care three times in the first week of life, with training and support for improved management of neonatal illness in health facilities. The approach is currently being implemented in many districts. WHO is supporting a large study to evaluate the effectiveness of this approach, in collaboration with UNICEF.

Learning from the experience in South Asia, WHO is now supporting two studies to evaluate the feasibility and effectiveness of home visits by community workers during the first week of life in Ghana and Mozambique – the first studies of this kind to be carried out in Africa.

To provide guidance on how to develop community-based approaches for achieving optimal newborn care practices, WHO supported a meeting to discuss the methods and findings of formative research of several ongoing studies in 2006. The findings will be reported in a supplement to a peer-reviewed journal. The methodological lessons learnt are being used to develop guidelines for formative research for improving newborn care practices.

To support implementation of community-based delivery of newborn and child health interventions, WHO is developing an integrated package of guidelines and training materials designed to help build the capacity of community health workers to provide basic curative and preventive care for children, including basic newborn care.

COMMUNITY-BASED NEONATAL CARE IN PAKISTAN

A WHO-supported study in Hala, Pakistan, on the effectiveness of community-based care for newborns, has achieved a 28% reduction in newborn deaths during the nine-month pilot phase.

The ongoing study has three components:

- **training Lady Health Workers (LHWs) in basic newborn care, community mobilization and health education;**
- **a one-day voluntary training programme for traditional birth attendants (*Dais*) on basic newborn care, including basic resuscitation and immediate newborn care; and**
- **the use of community volunteers to establish village-level community health committees for maternal and newborn care and organize group health education sessions.**

The LHWs are asked to identify all pregnant women in their area, provide basic antenatal care, and work with the *Dais* to know when and where a baby is born. They are encouraged to visit mothers twice during pregnancy and within 24 hours of birth, and to make additional visits on days 3, 7, 14 and 28 after delivery. The Government of Pakistan employs about 100 000 LHWs in communities throughout the country– providing a vital service for millions of women for whom cultural constraints and geographical barriers limit access to health facilities. The LHWs undergo an initial three-month training course in maternal and child health care.

Shaban Rafik (left), a 20-year-old Lady Health Worker, consulting women in the town of Chikar, Paistan. Photo © Paul Garwood

2.1.3 New tools for effective management of newborn illness

The tell-tale signs of illness in newborns

Early identification of signs of serious illness in a newborn child and prompt referral to hospital can mean the difference between life and death. But until recently, no simple guidelines were available to help mothers, caregivers or health workers recognize the signs of life-threatening illness in the first week of life. The original IMCI guidelines did not include these due to lack of evidence at the time on the recognizable signs of illness at this age.

To meet this need, WHO developed and supported a multi-centre study in six countries aimed at identifying the best clinical signs indicating the need for hospital care for a newborn child. The study – carried out in collaboration with the Saving Newborn Lives initiative and the Applied Research on Child Health (ARCH) project – involved almost 9 000 infants aged under two months in Bangladesh, Bolivia, Ghana, India, Pakistan and South Africa, about 4 000 of them less than one week old.

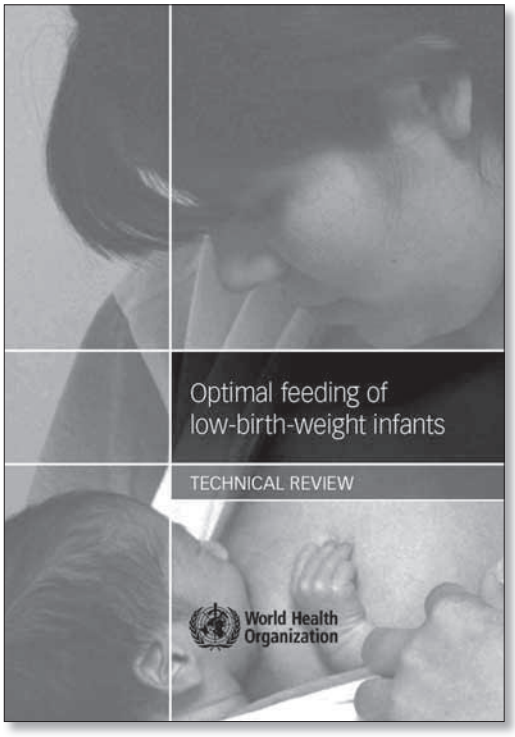
The new findings have helped WHO develop IMCI guidelines based on eight easily recognizable symptoms and signs of severe illness from birth up to two months of life. These symptoms and clinical signs – which should have an 80% success rate in both detecting those with severe illness and pinpointing those without it – are currently being field-tested in Pakistan and Viet Nam.

EIGHT SIGNS OF SEVERE ILLNESS IN INFANTS UP TO TWO MONTHS:

1. **history of difficulty feeding**
2. **history of convulsions**
3. **movement only when stimulated**
4. **respiratory rate ≥60 per minute**
5. **grunting**
6. **severe chest indrawing**
7. **temperature ≥37.5C**
8. **temperature <35.5C**

Improved feeding of low-birth-weight infants

Low birth weight contributes to up to 60-80% of neonatal deaths. Increased attention to feeding, keeping the infant warm and hygiene for low-birth-weight infants are key to improved newborn survival.



WHO supported the publication of a systematic review of evidence on feeding of low-birth-weight infants. Based on this review, guidelines for optimal feeding of low-birth-weight infants were developed in 2006, which are currently being field-tested in Ghana, India, Pakistan and Uganda.

2.1.4 Improved tools for finding causes of newborn deaths

Only 2% of neonatal deaths that occur globally are in countries with a complete Vital Registration systems. This implies that in addition to continued efforts to improving these systems, alternative methods like verbal autopsy need to be improved and used for obtaining mortality information for national health programmes. To support this, WHO is developing and evaluating standardized tools and process for verbal autopsy of neonatal deaths and stillbirths in India and Pakistan.

Part II

Health and development of children under five

Photo © PAHO

Most under-five deaths are due to infectious diseases and neonatal causes – often exacerbated by poverty, malnutrition, and poor or delayed care-seeking. Through the internationally agreed Millennium Development Goals, governments have made a commitment to reduce under-five mortality rates by two-thirds between 1990 and 2015. However, many resource-poor countries are not yet on track to meet this goal

Part II reviews progress during 2006 in WHO's work in improving the health and development of children under five. This work is based on efforts to support the implementation of the IMCI strategy. This evidence-based approach aims to reduce child deaths, illness and disability, and to promote improved growth and development among children under five.

To support efforts by countries to reduce child morbidity and mortality, WHO is working to:

1. develop and implement new approaches to bring essential care and treatment for children closer to home;
2. strengthen clinical guidelines and care for prevention and management of common childhood illnesses in first-level health facilities;
3. improve the quality of care for sick children in hospitals;
4. focus global attention on child development needs;
5. improve the attitudes and skills of health workers.

2.2.1 Bringing essential care and treatment closer to home

Promoting good health care practices at home and through support from a trained health worker at community level is one of the key tenets of the IMCI approach. This involves not only preventive health care (such as breastfeeding, good hygiene, and good nutrition) but knowing how to care for a sick child at home and when to seek medical advice. All too often, failure to recognize the signs of illness is compounded by failure to seek help before it is too late. WHO estimates that up to 70% of child deaths could be avoided by improved care-seeking practices and timely treatment.

Promoting an integrated approach in community-based care

As part of efforts to increase access to essential child survival interventions, WHO is developing a package of guidelines and training materials to help build the capacity of community health workers to provide basic curative and preventive care to children in the community. The main areas covered include basic care-giving skills, infant and young child feeding, newborn care, case management of common childhood illnesses, family response to illness and prevention of illness. The package will be delivered by the community health workers when caregivers seek care in the 'health house' and through home visitation, in particular in the newborn period. The package will be flexible and consist of a set of core modules and optional topics, suitable for use in block courses or individual sessions. It is targeted at community health workers who have basic literacy (grade 8 education) and who are well integrated and supported by the primary care system.

Planning community-based interventions to improve child care

BRIEFING PACKAGE ON PLANNING FOR COMMUNITY-BASED INTERVENTIONS. In 2006, WHO staff and key consultants from five regions participated in a capacity-building exercise to learn about and assess the potential for applying the Community Child Health *Briefing Package* in their regions. Participants requested guidance to help countries move from planning to intervention design and implementation. It was suggested that the materials be adapted to each region's specific context, and be expanded to include relatively new interventions such as those concerning newborn health.

During the year the first such adaptation was undertaken in the West African sub-region, in French. The draft adaptation was revised following the newborn capacity-building workshop in Ouagadougou, Burkina Faso in October, and used in an intercountry course in Libreville, Gabon in December.

CONTINUUM FROM MOTHER TO CHILD. HQ and regional colleagues from CAH and the Department of Making Pregnancy Safer advanced the development of an approach for working with individuals, families and communities across the spectrum of maternal, newborn and child health. In 2006, an orientation course on working with individuals, families and communities was tested in the Republic of Moldova as the first in a series of activities to guide the development of community-based interventions.

EXPANDING THE REACH OF COMMUNITY INTERVENTIONS IN THE REGION OF THE AMERICAS. In the AMR, the five-year collaborative project on the Social Actors Approach, with the American Red Cross and the United Nations Foundation came to an end. Participating countries and partners met in Santa Cruz, Bolivia to review the implementation and impact of the approach in ten countries and to agree on ways forward, taking into account the issues of sustainability and institutionalization of actions within national policies and programmes. Country teams expressed their commitment to continuing the social actors networks and expanding the work geographically.

Reducing indoor air pollution

Indoor air pollution – caused by burning biomass fuels such as wood, dung or coal in poorly ventilated homes – is a hidden killer of the poor. Exposure to small particles of soot or dust from open fires more than doubles the risk of pneumonia and contributes to the deaths of over 900 000 children under five. It is also believed that indoor air pollution – which affects mainly women and children – may contribute to low birth weight and perinatal mortality.

Guatemala intervention lowers incidence of life-threatening pneumonia

A mother in Guatemala cooks on a locally produced stove which reduces indoor air pollution.
Photo © WHO/Martin Weber

In the highlands of Guatemala, WHO and other partners have been supporting a large intervention trial to evaluate the benefits of reducing indoor air pollution. The trial measured the impact of using a locally produced chimney stove on exposure to indoor air pollution and on the incidence of respiratory infections.

INVESTING IN COMMUNITY ACTION FOR CHILD HEALTH IN PERU

In Chao, a town in northern Peru, active community involvement in IMCI is having a major impact on parents' knowledge about child health. A recent survey by the Pan-American Health Organization (PAHO), showed that 95% of mothers in Chao now know that babies should be breastfed exclusively for the first six months, compared with only 34% five years ago. Three-quarters of mothers know how to treat a child's infection compared with just over half before Community IMCI was introduced. And 90% of mothers have kept their children's vaccine schedule up to date, compared with only 58% in the past.

In an unexpected development, the number of cases of malaria dropped by almost 99% between 2000 and 2004 – a finding that public health workers attribute to IMCI's success in getting Chao's citizens active on public health issues.

The involvement of a wide range of actors in IMCI has helped raise awareness and encourage behaviour change. In Chao, as elsewhere, this has meant involving everyone from the mayor and the police to the Red Cross, labour unions, "mothers' clubs," and schools. Training teachers to include maternal and child health themes in their classrooms has proved a particularly effective way of reaching parents through their children.

In an effort to put an economic value on the non-financial resources contributed to IMCI by the community and social networks in Chao and elsewhere, PAHO has designed and implemented a new methodology. When used in Chao, it revealed that for every unit of financial resource invested in community IMCI, an additional 8.8 units of financial and non-financial resources were mobilized.

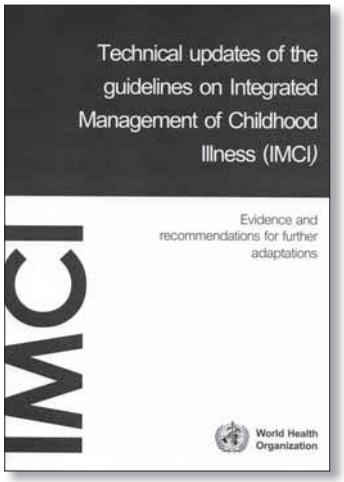
Although the average reduction of exposure to cooking smoke (44%) was more modest than expected, there was a similar reduction (about 40%) in the incidence of severe life-threatening pneumonia. More detailed analysis is currently under way.

New indoor air pollution studies in Pakistan

In Pakistan, WHO is working with researchers at two sites in the mountainous northern areas and in the lowland near Karachi to develop the pilot work for a study on the health impact of using improved stoves. Two large-scale proposals developed by Aga Khan University will require substantial amounts of funding both from within Pakistan and from international sources.

2.2.2 Strengthening care in first-level health facilities

The IMCI strategy promotes the identification of childhood illnesses in outpatient settings, ensures appropriate combined treatment of all major illnesses, strengthens counselling for parents and caregivers, and speeds up the hospital referral of children who are severely ill. WHO continues to support research to strengthen the evidence base for interventions and service delivery in health facilities and uses the findings to develop guidelines and tools to help improve the quality of care. A set of technical updates to the IMCI strategy was published and applied in 2006 to improve policies, guidelines and standards of treatment. 2006 was also marked by new developments in the areas of prevention and management of diarrhoea and pneumonia, HIV-related care for children, and childhood tuberculosis.



Preventing diarrhoea deaths in children

The widespread use of ORS over the past three decades has been one of the major public health success stories – reducing the number of diarrhoea deaths in children under five from 4.5 million a year in 1978 to 1.8 million in 2005. Today there is hope that many more lives can be saved through the use of a new and more effective combined treatment strategy.

The combined treatment strategy involves:

- a new formulation of ORS with reduced levels of glucose and salt (reduced-osmolarity ORS);
- zinc supplements – taken for up to 14 days, during and just after the episode.

Studies have shown that the new ORS shortens the duration of diarrhoea, reduces stool volume, and reduces the need for hospital-based intravenous fluids. The use of zinc supplements reduces both the severity and duration of the episode, and lowers the incidence of diarrhoea during the following 2–3 months.

In October 2006, TIME magazine highlighted the millions of child deaths which could be prevented through wider use of oral rehydration therapy, including access to ORS

Photo © TIME Magazine

WHO has been supporting efforts to build the evidence base for the safety and effectiveness of the new combined treatment strategy and to develop the related guidelines, tools and other resources needed to support its implementation, monitoring and evaluation.

GLOBAL GOAL SET BY UN GENERAL ASSEMBLY SPECIAL SESSION (UNGASS) ON CHILDREN, 2002

Reduce by one half deaths due to diarrhoea among children under five by 2010 compared to 2000.

Demonstrating the safety of new formulation ORS

In 2006 the Journal of the American Medical Association published the findings of a large study undertaken in Bangladesh on a priority research issue identified by WHO, which demonstrated the safety of the new ORS. This study found that the risk of symptoms associated with high levels of sodium in the blood (seizures or altered states of consciousness) was minimal (incidence 0.05%) and did not increase with the change in formulation. WHO is supporting a similar study in Calcutta, India.

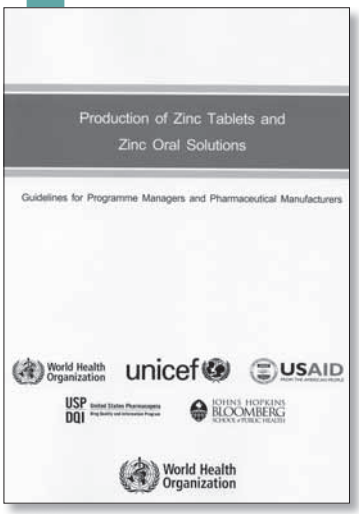
Manufacturing guidelines for ORS

In early 2006 WHO published a new set of guidelines for the production of the new ORS. It was distributed to all known manufacturers of ORS (almost 500) to help accelerate the adoption of the new formulation.

Zinc encourages greater uptake of ORS and reduces inappropriate drug use

With the evidence for the effectiveness of zinc supplements in the treatment of diarrhoea well established, studies are under way in India, Mali and Pakistan to assess the feasibility and constraints of incorporating zinc into routine treatment of acute diarrhoea at the local level. Preliminary results from India (after nine months) indicate that the addition of zinc supplements led to a five-fold increase in the uptake of ORS and a two-thirds reduction in the inappropriate use of drugs. In addition, the overall hospitalization rate (for all causes among children under five) was more than halved. The findings from a series of related studies on the effects of routine daily zinc supplementation on child health are reported in Part 3 of this chapter in the section on micronutrients.

New guidelines for use of zinc



In 2006, WHO developed a series of new guidelines on the use of zinc in treating diarrhoea, tailored to the respective needs of: policy-makers and programme managers; doctors and senior health workers; medicine procurement agencies; and manufacturers of zinc supplements. WHO also worked, together with USAID, to facilitate the transfer of technology for the production of zinc tablets to a number of countries, including Bangladesh, India and Pakistan.

From hospital-based care to treatment at home for severe pneumonia

WHO is supporting ongoing research to determine whether severe pneumonia in children can be safely treated with oral antibiotics at home. At present, WHO treatment guidelines recommend that children with severe pneumonia should be referred to a hospital, where they can be given antibiotics by injection.

However, recent research has shown that, in a controlled hospital environment, oral antibiotic therapy is just as effective as injectable therapy in treating severe pneumonia in children. Based on this finding, WHO is collaborating with Boston University, Johns Hopkins University and the International Clinical Epidemiology Network to examine whether severe pneumonia can be safely treated at home with oral antibiotics.

BENEFITS OF COMMUNITY-LEVEL TREATMENT FOR SEVERE PNEUMONIA

Pneumonia remains the leading cause of death among children under five, killing an estimated 2 million children every year. If community treatment of uncomplicated pneumonia can be expanded to include children with severe pneumonia, this would help:

- **reduce the use of injectable antibiotics**
- **reduce referrals and pressure on already overburdened hospitals**
- **cut health care costs for both families and the health care system**
- **save more lives by improving access to care promptly.**

Three research projects are under way:

In Pakistan, a trial has been carried out involving children aged 3 to 59 months with severe pneumonia. One group of children was treated in hospital with injectable antibiotics and the second group was diagnosed in the hospital and then treated at home with an oral antibiotic (amoxicillin).

In a second study, conducted in Bangladesh, Egypt, Ghana and Viet Nam, children aged 3 to 59 months with severe pneumonia were identified in the hospital outpatient department and sent home on oral amoxicillin therapy.

In a third study in Haripur, Pakistan, LHWs from the national programme assess children with acute respiratory infections at the village level. This study is looking at the impact of efforts by the LHWs to promote good care-seeking behaviour by mothers when children have pneumonia.

Although the LHWs cover about 76% of the population in Haripur, a relatively small proportion of children with pneumonia are brought to them for treatment.

In all three studies, all enrolled children are being closely monitored and followed up in their homes to document outcomes and any adverse events.

Improving HIV-related care for children

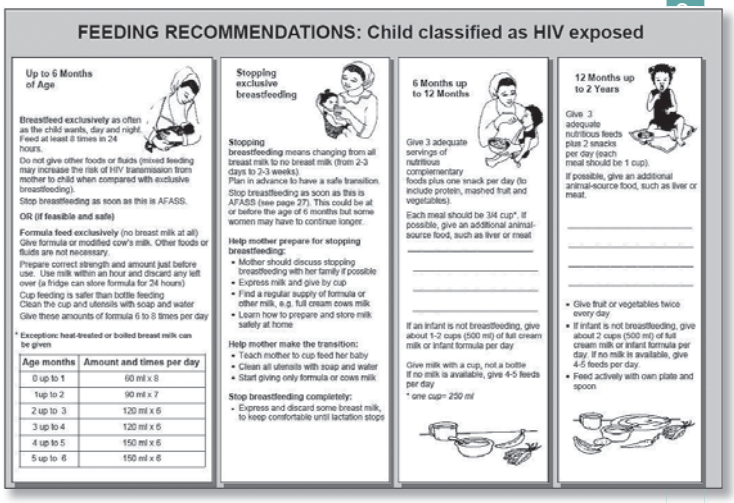
By the end of 2006, an estimated 2.3 million children worldwide were living with HIV. Without treatment, about 50% of children with HIV die before the age of two – mainly from opportunistic infections, pneumonia, diarrhoea and malnutrition. Although effective PMTCT interventions exist, these are not yet widely available or accessible in resource-poor settings. The problem is compounded by the limited availability of antiretroviral therapy (ART) for children.

WHO is supporting countries in their efforts to prevent and manage HIV infection in children and to ensure the healthy development of children in AIDS-affected families and communities. In 2006, CAH's work on paediatric HIV focused mainly on the development and field-testing of new training materials on IMCI-based management of paediatric HIV. Another key focus – the psychosocial needs of children affected by HIV/AIDS – is reported in section 2.2.4.

Early recognition of HIV in children and management of paediatric HIV

Early identification of HIV infection in children helps ensure early access to treatment and care as well as support for the family. Based on national adaptations initiated in several countries in Africa, WHO has worked with AFRO to develop an adaptation of the IMCI guidelines for use in settings with a high prevalence of HIV. The updated guidelines help to improve the identification of children with symptomatic HIV infection and include treatment guidelines for managing HIV in children. Interventions for PMTCT, particularly follow-up of children exposed to HIV, are also included.

The new chart booklet is accompanied by a set of training materials and referred to as the IMCI Complementary Course on HIV/AIDS. This course has been introduced in Ethiopia, Nigeria, Uganda and Zambia, and results from pre- and post-test assessment have shown that it leads to an overall improvement in the performance of health workers in relation to the management of children who are exposed to or living with HIV infection.



A study to evaluate the effectiveness of the HIV adaptation has been initiated in South Africa. It involves the observation of consultations with children attending first-level health facilities, who are then tested for HIV in order to determine the validity of the HIV guidelines in routine clinical practice and the burden of HIV among children under five attending first-level health facilities. Barriers to provision of care for children infected with or exposed to HIV are also being evaluated, including the attitudes of caretakers and health care providers.

INDIA LAUNCHES TREATMENT INITIATIVE FOR CHILDREN WITH HIV

In December 2006, on the occasion of World AIDS Day, India launched a National Paediatric HIV/AIDS Initiative. In addition to the 36 antiretroviral treatment centres that have been equipped to provide treatment for HIV-infected children, seven new Regional Paediatric Centres have been established. The regional centres will offer a range of HIV-related services for children, including diagnostic tests for children under 18 months, diagnosis and management of uncommon opportunistic infections and referral services for the management of complicated cases. Technical support for developing the guidelines and dosing schedules was provided by WHO.

Childhood tuberculosis (TB)

Putting childhood TB cases on the map

Until recently, data on childhood TB cases was collected for the 0-14 age group only. As a result, national TB programmes were unable to plan for effective and comprehensive management of childhood TB. In response, the Stop TB Partnership has now agreed to include two age groups for children, instead of one, in the standard recording and reporting system. To reflect this change, WHO has revised the standard recording and reporting system to include collection of TB data by 0-4 and 5-14 years age groups.

■ Accelerating the availability of anti-TB drugs for children

A new funding initiative was launched in 2006 to provide paediatric formulations of anti-TB drugs. During 2007, UNITAID, a new international funding mechanism, is to provide anti-TB drugs for 150 000 children under the age of 15 years - which represents 17% of the estimated 900 000 children who develop active TB every year. In addition, UNITAID, which is hosted by WHO in Geneva, is to provide funding to help accelerate the development of new paediatric formulations for children aged 0–4 years.

2.2.3 Improving hospital care for sick children

Implementation of the IMCI strategy at first-level health facilities results in the referral to district hospitals of up to 20% of the children diagnosed as severely ill. However, in many resource-poor countries paediatric hospital care is poor. In response, WHO is working on the development of a framework for the improvement of hospital care and providing direct support to selected countries to help them improve the standard of care.

Clinical manual on paediatric HIV care

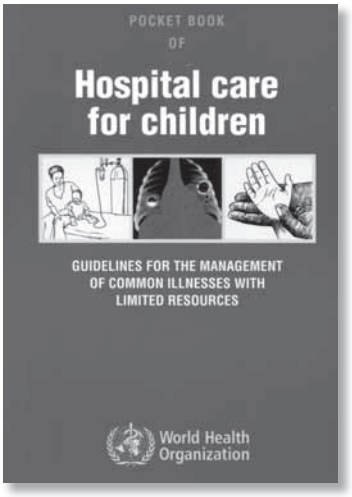
In 2006, WHO organized a meeting of partners and country experts to develop a paediatric HIV care manual and a training course for doctors, medical officers, and general practitioners working as clinicians at district hospitals in resource-poor settings. A working draft of the manual is now available, together with a series of PowerPoint presentations and a book of 20 case studies. The training materials are designed to provide initial training in anti-retroviral therapy and opportunistic infections, and include follow-up and clinical mentoring as an integral part of the approach.

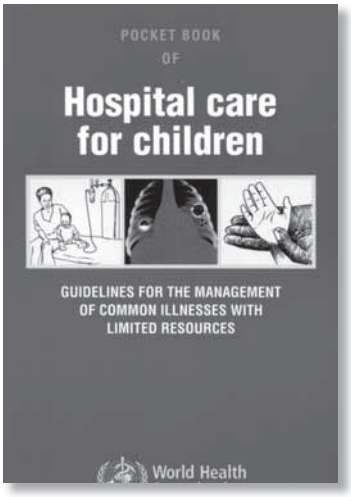
Developing standards for paediatric HIV care in hospitals

To respond to the need to broaden the scope of existing WHO tools for assessing the quality of HIV care in district hospitals, which focus almost exclusively on the availability and quality of PMTCT services, WHO commissioned work in Kenya to expand the current hospital quality assessment tools and incorporate simple approaches that assess the provision of services for children who may be or are confirmed to be HIV-positive. Following field tests in two district hospitals, a final draft tool is now available.

Production of materials

The *Pocket book of hospital care for children* which has been translated into 15 languages, continues to be in high demand, with 20 000 copies sold and disseminated within eight months of publication. The book, which includes guidelines on the management of all common childhood conditions, sets out to address many of the deficiencies in the quality and safety of hospital care for children identified in recent years.





In collaboration with the Universities of Melbourne, Edinburgh, Nairobi, Trieste and Karachi, a process was set up to review, in a transparent way, the evidence for the individual treatment guidelines, and to summarize the findings in brief papers.

Activities in countries

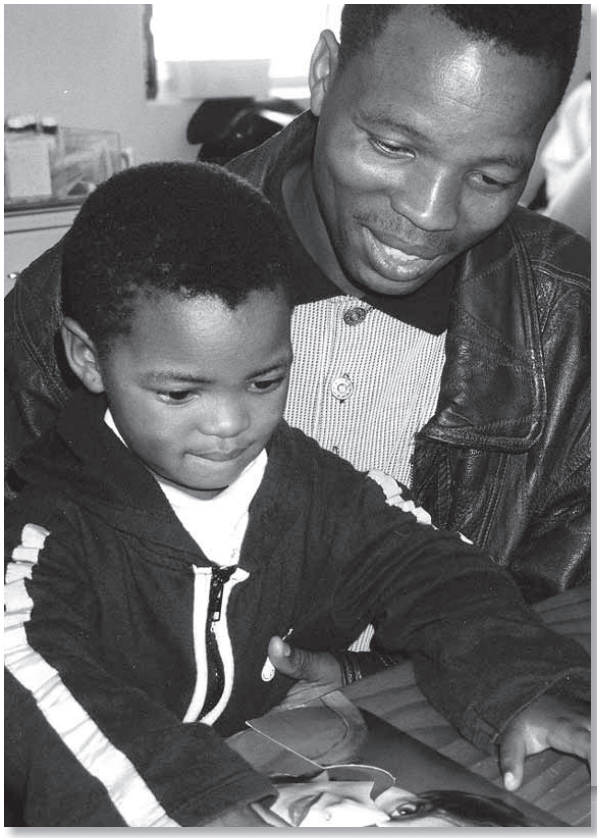
WHO continues to promote improvement in paediatric hospital care in Cambodia, Indonesia, Solomon Islands and Timor Leste. In Cambodia, the improvement process initiated in 2003 was continued, with nurses, doctors, midwives and hospital directors from the surveyed hospitals attending yearly workshops (in 2006 on newborn health and the management of diarrhoea).

Elsewhere, in Indonesia, a number of projects have been launched, including: the establishment of National Standards of Care of Children in district hospitals and health centres with beds; development of an assessment tool for assessing quality of care; and the launch of a quality improvement process in selected districts.

In Mali and Senegal, assessments of hospital care were conducted, resulting in key activities to address gaps in care. These include the initiation of ETAT, improvements in supervision, and review and dissemination of case management guidelines.

2.2.4 Focusing global attention on child development needs

The development needs of children are inextricably linked with their health and nutrition status – especially during the first few years of life. Children who are poorly nourished and frequently sick are least likely to thrive and most at risk of suffering developmental delays. For this reason, through its Care for Development training course, the IMCI strategy provides guidance on counselling parents and caregivers on ways of improving child care. This includes advice on: improved feeding practices; recognizing and knowing what to do when a child is sick; and how to stimulate growth and development through regular play and communication activities. A review of effective interventions to improve responsiveness in caregiver-child interactions and the effect of child health outcomes was published in the *Bulletin of the World Health Organization*. In addition, the IMCI training module for HIV care includes a focus on the development needs of children affected by HIV.



Play and interaction between parents and young children stimulates cognitive and social development.
Photo © Jane Lucas

This section highlights recent efforts by WHO and other partners to focus global attention on the unmet development needs of millions of children in resource-poor settings.

Lancet series on early childhood development

Over 200 million children fail to reach their educational and psychosocial development potential due to poverty, poor health and nutrition, and lack of stimulation by parents or caregivers during the first five years of life. A new *Lancet* series on child development, published in early 2007, estimates that this largely preventable loss in human potential accounts for a 20% deficit in adult income, contributes to inter-generational poverty and holds back national development.

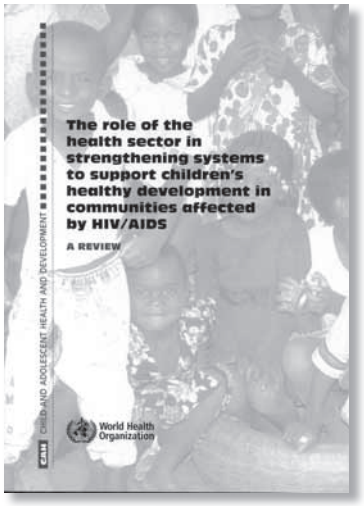
The series of papers reflects the experience and perspectives of child health and development experts, economists, statisticians and policy-makers from a range of agencies including UNICEF, WHO and the World Bank. The authors say that interventions to support early child development in poor settings should not fail to focus on four key risk factors: malnutrition leading to stunting; iodine and iron deficiencies; and inadequate stimulation.

Knowledge Network on Early Child Development

Early childhood development – and its long-term impact in shaping people's health, well-being and social status – is a key focus of the Commission on the Social Determinants of Health, which was established in 2005 by the Director-General of WHO.

The Commission has established a Knowledge Network on Early Child Development in order to create a global knowledge base on early childhood development (from pre-natal to eight years) and establish a database of the key interventions which are most effective in nurturing this. Current work involves the development of a method for measuring and comparing early child development in different countries and regions, and an indicator for this is being tested in seven countries.

Children in families and communities affected by HIV



In a review issued in 2006 on the role of the health sector in supporting the psychosocial needs of children affected by HIV, WHO called for a major increase in support for children and families in AIDS-affected communities. The review found that existing efforts are too fragmented, often inappropriate and badly targeted. Most interventions focus mainly on orphans – not all of whom need support – at the expense of other HIV-affected children in difficult circumstances, who are often equally if not more vulnerable.

What is needed instead, the review says, is a multi-sectoral response – spearheaded by the health sector – to ensure population-level improvements in children's health, psychosocial well-being and educational development. All children and families in AIDS-affected communities should have access to health care, education, social welfare and economic support in order to improve the health and well-being of children. Meanwhile, psychosocial support interventions should be reserved for the very small number of children who develop emotional, social and behavioural problems that may require specialized help.

In follow-up to the recommendations of this review, WHO will now work with governments and partners to develop models for an integrated approach to support children and families. This will include the development of tools for assessment, implementation and evaluation; training programmes; and pilot projects to support children's psychosocial development.

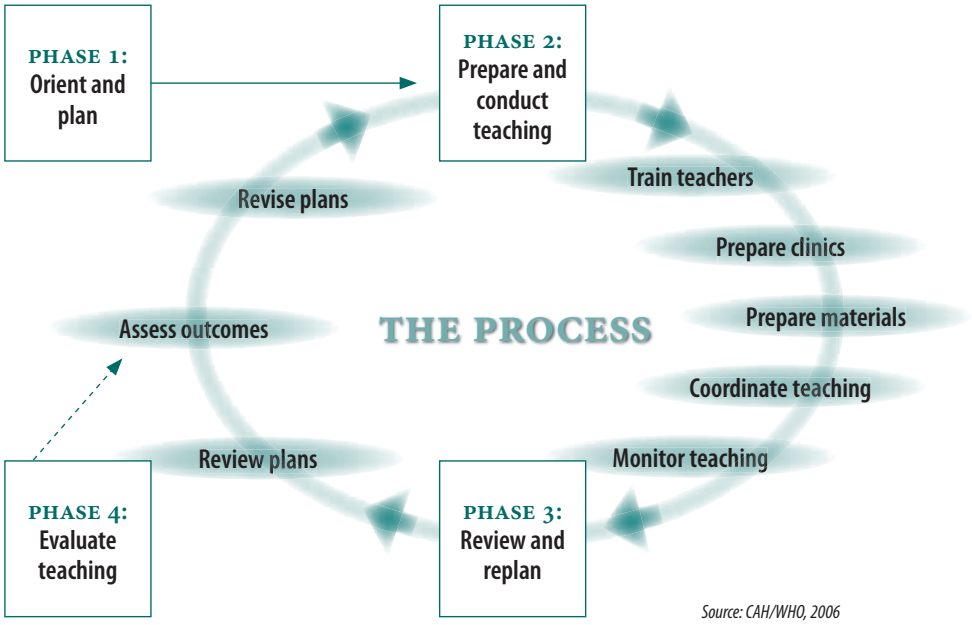
2.2.5 Improving the attitudes and skills of health workers

IMCI in-service and pre-service training

Strengthening the case management skills of health workers is an important objective of the IMCI strategy. IMCI in-service training of first-level health workers has been shown to be an effective method for achieving this aim. WHO is working with partners to look for alternative approaches to the standard IMCI course.

WHO in collaboration with Novartis Foundation for Sustainable Development has developed an IMCI

Figure 7: Phases of Strengthening Pre-Service Training



Source: CAH/WHO, 2006

computerized adaptation and training tool (ICATT). Tests were conducted to verify the functionality and usability of the model training course with the target users. It is anticipated that the tool will be ready for use in 2007.

CAH has initiated a systematic review process to evaluate the experience with IMCI training, looking at duration of training and approaches used. The result of the review will guide the Department in presenting options for IMCI training.

IMCI teaching in medical, nursing, and allied health professional schools is an additional opportunity to satisfy the same objective by broadening the coverage of a health system with IMCI-trained health workers. Numerous schools worldwide have now introduced IMCI in their teaching institutions.

In the EMR 26 medical schools in seven countries and 200 allied schools in three countries have introduced IMCI in their teaching curriculum. An evaluation carried out in Sudan and Egypt demonstrated a close partnership between the teaching schools and ministries of health. It also showed that IMCI teaching methods were appreciated by students and teachers, and that students were able to apply the IMCI algorithm in managing sick children.

Twenty five countries in the AFR have introduced or established IMCI pre-service training as a strategy for increasing access to quality care. During 2005-2006 evaluations were carried out in Namibia, Niger, Nigeria, Republic of South Africa and Democratic Republic of Congo. These evaluations showed positive results in terms of students' performance, teachers' attitudes, and improved teaching methods. Major challenges identified include the availability of teaching materials, adequate number of teachers and high turnover of teaching staff.

The process used for the introduction and implementation of the IMCI pre-service training is described in Figure 7.

In the AMR, a University Extension Course in Community Health and IMCI was established as part of the *Regional Community IMCI Partnership*. The course objectives are to:

- Increase the skill and abilities of participants in community health and IMCI with a special focus on engaging local actors in the promotion of key family practices.
- Contribute to the institutional strengthening of community health programmes in the Ministry of Health, the Peruvian Social Security, and the Regional Council of Nurses.

Part III

Meeting the nutrition needs of young children

Photo © WHO/Pierre Virot

It is estimated that malnutrition contributes to over half of the over 10 million deaths a year among children under five. Malnutrition not only increases a child's vulnerability to disease – but also reduces their capacity to fight it. Among the malnourished children who survive, many suffer frequent illness and impaired learning capacity.

It is estimated that early and exclusive breastfeeding for the first six months of life could save the lives of 1.3 million children under five every year. Yet WHO and UNICEF estimate that only about a third of infants less than six months of age worldwide are exclusively breastfed. Widespread improvements in infant feeding practices and child nutrition would have a major impact on efforts to meet the global targets for child survival.

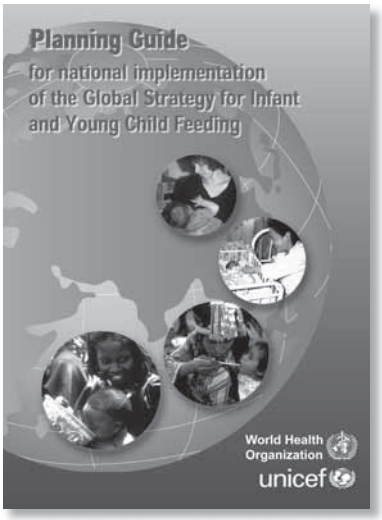
WHO is working with countries and regions to support efforts to improve childhood nutrition and reduce the number of deaths associated with malnutrition. Specifically, WHO is working to:

1. build capacity for planning and management of comprehensive policies and programmes to improve child nutrition following the WHO/UNICEF *Global Strategy for Infant and Young Child Feeding*;
2. develop standards and guidelines for improved infant and young child feeding, including for management of severe malnutrition, micronutrients and HIV and infant feeding;
3. build capacity among health professionals to support adequately infant and young child feeding;
4. evaluate the effectiveness of infant and young child feeding interventions and programmes.

2.3.1 Building capacity for planning and management of IYCF

During the 59th World Health Assembly, WHO celebrated the 25th anniversary of the adoption of the International Code of Marketing of Breast-milk Substitutes, which is one of the targets of the Global Strategy for Infant and young Child Feeding. Activities included the publication of a booklet on Frequently Asked Questions, a display of survey results on Code status by country and a celebratory event attended by many distinguished WHA delegates. It is clear that a lot remains to be done to create environments in which mothers and families are well supported to practice appropriate infant and young child feeding, including through provision of objective and consistent information. WHO called upon all concerned parties to step up their actions to make the complete implementation of the Code a reality.

During 2006, a Planning Guide was finalized to assist countries to translate the Global Strategy for Infant and Young Child Feeding into national action plans. The guide was developed collaboratively with programme managers in countries, and a working version has been available for the past two years and extensively used. Feedback has been incorporated in the final version and the Guide now serves as a platform not only for planning IYCF activities, but also integrating them with broader child survival strategies and action plans.



Progress was also made in the development of a practical manual to plan for community-based interventions to improve infant and young child feeding. The manual builds on the successful experience of implementing a large scale project to improve breastfeeding and complementary feeding in Haryana, India. It describes systematically all steps of planning including formative research to assess barriers and facilitating factors for changing feeding practices, and participatory approaches for intervention selection and design.

2.3.2 Developing standards and guidelines for improved IYCF

HIV and infant feeding

In October 2006, on behalf of the Inter-agency Task Team (IATT) on Prevention of HIV Infections in Pregnant Women, Mothers and their Infants, WHO held a technical consultation in Geneva on HIV and infant feeding. The participants included researchers, programme managers, infant feeding experts, representatives of relevant UN agencies, AFRO, and six WHO departments.* The aim was to review the substantial body of new evidence and most recent experience regarding HIV and infant feeding and to clarify and refine the existing UN recommendations.

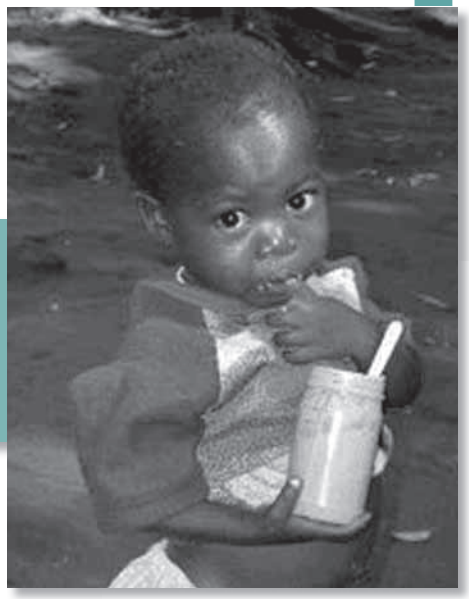
The group endorsed the general principles underpinning the earlier (October 2000) recommendations, and reached consensus on a range of issues to refine and strengthen operational guidance. A consensus statement was subsequently issued, which included the following key recommendations:

- The most appropriate infant feeding option for an HIV-infected mother should continue to depend on her individual circumstances, including her health status and the local situation, but should take greater consideration of the health services available and the counselling and support she is likely to receive.
- Exclusive breastfeeding is recommended for HIV-infected women for the first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time.
- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected women is recommended.

The Department has started updating existing guidelines for policy-makers, programme managers and health workers to include these new recommendations.

Major breakthrough in treatment of severe malnutrition

A recently developed home-based treatment for severe acute malnutrition could save the lives of hundreds of thousands of children a year. Over the past five years, the new formulation of ready-to-use therapeutic food (RUTF) has revolutionized the treatment of severe malnutrition – providing foods that are safe to use at home and ensure rapid weight gain in severely malnourished children.



A child in Domasi, Malawi eating peanut butter-based therapeutic food to recover from severe acute malnutrition.
Photo © Project Peanut Butter/ Mark Manary

* Child and Adolescent Health and Development, Nutrition for Health and Development, HIV/AIDS, Reproductive Health Research, Making Pregnancy Safer and Food Safety, Zoonoses and Foodborne Diseases

The advantage of the new RUTF is that is a ready-to-use paste which – unlike the previous powder-based formulations – does not need to be mixed with water, thereby avoiding the risk of bacterial contamination. The new product – which is based on peanut butter – can be consumed directly by the child and provides sufficient nutrient intake for complete recovery. It can be stored for 3-4 months without refrigeration, even at tropical temperatures. Local production of the new RUTF paste is already under way in countries including Congo, Ethiopia, Malawi and Niger.

Following the consensus on community-based management for severe malnutrition reached in a informal consultation in 2005, WHO is working with UNICEF on the development of a field manual on community-based management of severe malnutrition. In addition, the IMCI guidelines are being revised to take account of the new home-based treatment.

Impact of iron and zinc supplements in preventing child deaths

Analysis of the results of studies conducted to evaluate the impact of zinc and/or iron supplementation on childhood mortality in India, Nepal, the United Republic of Tanzania and Zanzibar, was completed in 2006.

■ Iron supplements

The findings of two large studies in Nepal and the United Republic of Tanzania on the effects of iron supplementation in reducing child mortality were published in early 2006. While confirming that iron supplementation is effective in reducing iron deficiency, the trial in Pemba, the United Republic of Tanzania – where malarial transmission is intense and year-round – showed that, under certain conditions, iron supplements can lead to increased hospitalization (mainly due to malaria and other infectious diseases) and deaths. As a result, the iron arms of these studies were halted after 20 months. In the light of these findings, WHO organized a meeting of experts in June 2006 to make recommendations on the prevention and control of iron deficiency in infants and young children in malaria-endemic areas.

The meeting of experts recommended that strategies to prevent and control anaemia should be carried out in the context of comprehensive and effective health care including measures for: the prevention, prompt recognition and treatment of malaria and its complications; control of other prevalent parasitic diseases and infections; and promotion of exclusive breastfeeding for the first six months of life followed by consumption of nutrient-dense and/or fortified complementary foods (WHO, UNICEF, 2005, 2006). They also recommended that universal iron supplementation (i.e. use of medicinal iron as pills or syrups) should not be implemented without the prior screening of individuals for iron deficiency since this mode of iron administration may lead to severe adverse events in iron-sufficient children.

■ Zinc supplements

Analysis of the zinc arms of these studies was completed in mid-2006. In September 2006, WHO organized a meeting to review the results of the studies in India, Nepal and the United Republic of Tanzania and the implications for the use of zinc supplementation in young children. In view of the 9% reduction in child deaths overall among children taking the zinc supplements, a consensus was reached on the need to develop new feasible approaches to improve the intake of zinc and its bio-availability in young children. This includes the provision of zinc as part of the routine management of diarrhoea (see 2.2.2) and potentially other infectious diseases. In collaboration with the Pollin Foundation, WHO is also supporting a study in India to determine the impact of daily zinc supplementation (over six months) on severe illness and zinc status in low-birth-weight infants.

2.3.3 Building capacity among health professionals to support IYCF

Implementing the Global Strategy for Infant and Young Child Feeding

In the AFR in 2006, five African countries developed national strategies and/or action plans for infant and young child feeding, making a total of 26. The Code of Marketing of Breast-milk Substitutes was enacted into national law in two countries (the Gambia and Zambia) and the process of enactment is currently under way in Malawi, Mozambique and South Africa.

In the AMR, progress during 2006 included the adoption in Bolivia of a national Code of Marketing of Breast-milk Substitutes and the development of guidelines and training materials to support the Zero Malnutrition initiative in the country. Several publications were translated into Spanish.

EMRO developed regional training materials on counselling for infant and young child feeding in Arabic after three regional field tests. A national course was conducted in the Sudan in 2006.

SEARO, in collaboration with UNICEF and CARE-India, organized a regional workshop in Jaipur, India to review progress on the implementation of the Global Strategy and develop recommendations for accelerating action.

In the WPR, after a regional introduction of the integrated IYCF counselling training course in 2005, several countries have continued to incorporate IYCF counselling into health services. In addition Cambodia, China and the Philippines developed educational and advocacy materials for a variety of audiences. In line with the Global Strategy, the Philippines continued efforts among multiple stakeholders to strengthen policies for protecting breastfeeding.

INFANT FEEDING IN EMERGENCIES

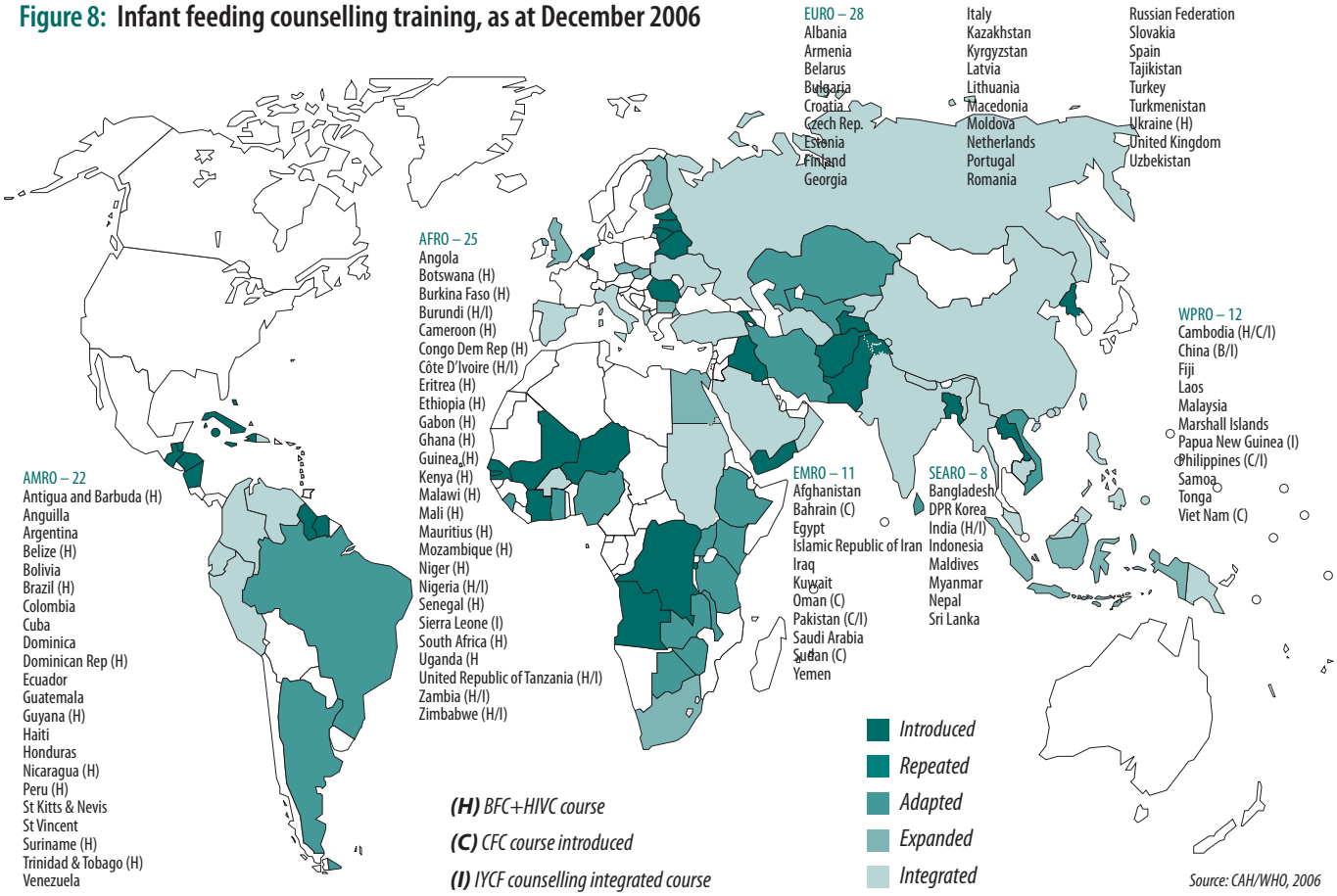
An updated version of the *Operational Guidance for Emergency Relief Staff and Programme Managers* (2001) was completed in 2006 through interagency collaboration involving the Emergency Nutrition Network (ENN), International Baby Food Action Network/Geneva Infant Feeding Association, CARE USA, Terre des Hommes, UNICEF, UNHCR, WFP and WHO, coordinated by the ENN. The new publication is intended for use by emergency relief staff and programme managers of all agencies working in emergency programmes, including national governments, United Nations agencies, national and international non-governmental organizations (NGOs) and donors. It is available at: www.ennonline.net

Training in counselling for infant and young child feeding

WHO finalized the five-day integrated training course in counselling for infant and young child feeding, developed in collaboration with the Africa Centre for Population Studies and Reproductive Health. The course is intended to increase the number of health professionals skilled in counselling on breastfeeding, complementary feeding and HIV and infant feeding. During 2006, the course was introduced to representatives from countries of the AFR, EMR and SEAR. National courses were adapted and/or conducted in Cambodia, China, Ghana, Nigeria, Papua New Guinea, the Philippines, the United Republic of Tanzania, Zambia and Zimbabwe.

Figure 8 shows the countries and territories that have trained health workers using the various counselling courses that are currently available. WHO has developed terms of reference for each course, to clarify their complementary roles and help identify the right target audience for each training.

Figure 8: Infant feeding counselling training, as at December 2006



2.3.4 Evaluating the effectiveness of IYCF interventions and programmes

The long-term benefits of breastfeeding

While evidence of the short-term benefits of breastfeeding – a reduction in early childhood illness and deaths due to infectious diseases - is well-established, the jury was still out on the long-term protective health benefits. However, a new analysis carried out in 2006 suggests that adults who were breastfed as children may be healthier and more intelligent than adults who were not.

Carried out by WHO in collaboration with the epidemiology unit of the University of Pelotas, Brazil, the study involved a review of the evidence on links between breastfeeding and blood pressure, diabetes, serum cholesterol levels, overweight and obesity and intellectual performance in adulthood. The researchers found that adults who had been breastfed experienced lower mean blood pressure and total cholesterol, as well as higher performance in intelligence tests. Meanwhile, the prevalence of overweight and obesity and of type-2 diabetes was lower among those who had been breastfed.

Indicators for assessing complementary feeding

WHO has been supporting research to identify suitable indicators which can be used to monitor complementary feeding practices. The study was carried out in collaboration with the International Food Policy Research Institute, the University of California at Davis, and the USAID Food and Nutrition Technical Assistance project. Analysis of data on infant and young child feeding from ten sites demonstrated that food group diversity is a useful indicator of dietary quality except for non-breastfed children who receive fortified products. Feeding frequency was associated with energy intake from foods, but correlations with total energy intake of breastfed infants (breast-milk and complementary foods) were weaker. In the meeting, there was a general consensus on the quality and accuracy of the data analysis in the ten sites and the validity of the results. However, consensus was not yet reached on indicator definitions and work to reach conclusions will be completed in 2007.

Evaluating the training course on complementary feeding counselling

The effectiveness of WHO's training course on complementary feeding has been confirmed by a study carried out in Egypt. The trial found that the training improved the ability of physicians to assess a child's nutritional status, improved mothers' knowledge of nutritional recommendations (at least in the short-term), and led to better weight-for-age among children in the intervention group compared with those in the control group. In view of the clear benefits, the investigators recommended including the elements of the course into the IMCI training programme for primary health care physicians in Egypt.

Part IV

Management, monitoring and evaluation of child health programmes

Strategic and operational planning

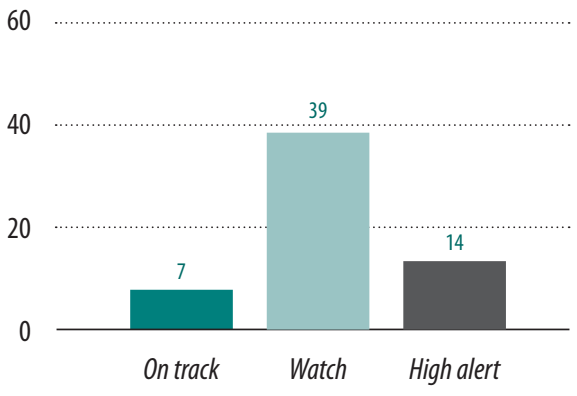
Numerous global and country-level programme reviews have highlighted the need for a programmatic approach to child survival, and tools to strengthen the planning and management of child health programmes. In response, CAH/HQ and regional offices have developed a set of tools to help programme managers plan and manage the delivery of core child survival interventions in an integrated and comprehensive way. This work builds on the methods and tools developed and tested in several regions, and is fully compatible with other planning materials for child health.

An initial field test of the programme managers course was conducted in Harare in November 2006, involving national child health programme staff from four African countries. This confirmed the need for two complementary components: strategic planning and operational programme management.

Progress towards MDG4

Tracking of global progress towards the MDGs reveals that seven of the 60 highest-mortality rate countries are on track to meet MDG4 (Bangladesh, Brazil, Egypt, Indonesia, Mexico, Nepal and the Philippines), 39 countries are making some progress but they need to accelerate, and 14 are cause for serious concern (see Figure 9). Although rates of coverage for some interventions are improving, for many interventions it remains low, and coverage rates for the most part have no indication of the quality of the interventions. In 2006, six countries reported that appropriate care-seeking rates for pneumonia had reached 70%, but in 12 others this figure remains under 30%. Six countries also reported the correct management of diarrhoea for half the child population; 15 countries report less than 30%. Ten countries reported a rate of 50% or higher exclusive breastfeeding under six months of age, while 23 countries reported rates of 20% or lower. The neonatal period stands out as one where too few children are reached by effective care, and data on postnatal visits are yet to be systematically collected and reported.

Figure 9: Progress for 60 *Countdown* priority countries



Source: Countdown to 2015: tracking intervention coverage for child survival, Bryce J., Terreri N., Victora C G, Mason E., Daelmans B., Bhutta Z A, Bustreo F., Songane F., Salama P., Wardlaw T., Lancet 2006; 368: 1067–76.

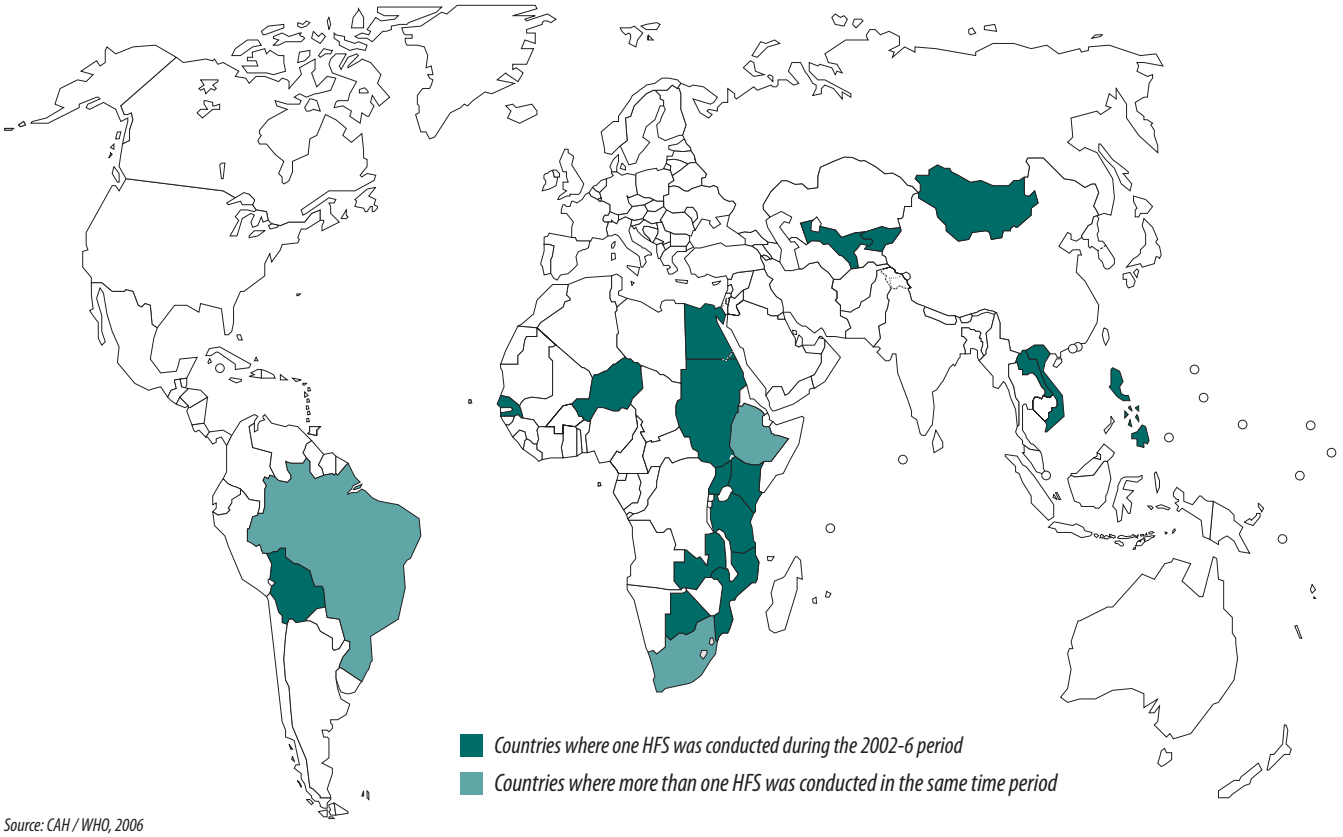
Monitoring and evaluation

Annual monitoring and evaluation of child health programmes by WHO was originally designed to keep track of critical milestones in the introduction of IMCI in countries – such as the number of countries implementing the IMCI strategy and the extent of coverage. Today, programme monitoring and evaluation encompasses key data on newborn, child, and adolescent health programmes which are not routinely collected elsewhere or measured through periodic surveys such as Demographic and Health Surveys. For each country, this information is complementary to the epidemiologic profiles currently under development (see Chapter 1).

In 2006, WHO developed a new framework for monitoring and evaluation. This identifies what needs to be measured, maps ongoing monitoring activities, and sets out who should do what in monitoring programmes at country, regional and global levels.

WHO works on the development of simple tools and methodologies for data collection at the country level to help programme managers to plan, strengthen and scale up newborn and child health programmes. This includes support for the intensification of periodic health facility surveys, development of a rapid coverage survey for key maternal and child health interventions, and the development of guidelines for carrying out both regular and short programme reviews.

Figure 10: Countries with one or more Health Facility Survey conducted during 2002-2006



Source: CAH / WHO, 2006

Health facility surveys

During 2006, health facility surveys were carried out in an increasing number of countries and used to guide decision making. These surveys are designed to assess the quality of care provided to sick children attending outpatient facilities and the impact of health system constraints on the quality of services.

A Health Facility Survey in Cambodia (Figure 11) shows the added value of IMCI training in increasing the quality of care.

MONITORING CHILD HEALTH ACTIVITIES AT GLOBAL AND COUNTRY LEVEL

Global and regional levels

- policies and political commitment
- financial flows for child health
- intensity of child health research

Country level

- policies and political commitment
- health system (human resources, supervision, health information systems, public-private mix)
- provision of preventive and curative services
- quality of services
- utilization of services and interventions
- costs of health services for children
- financial flows for child health
- coverage of existing evidence-based interventions
- impact of interventions on health status of children and newborns
- inequalities in coverage and impact

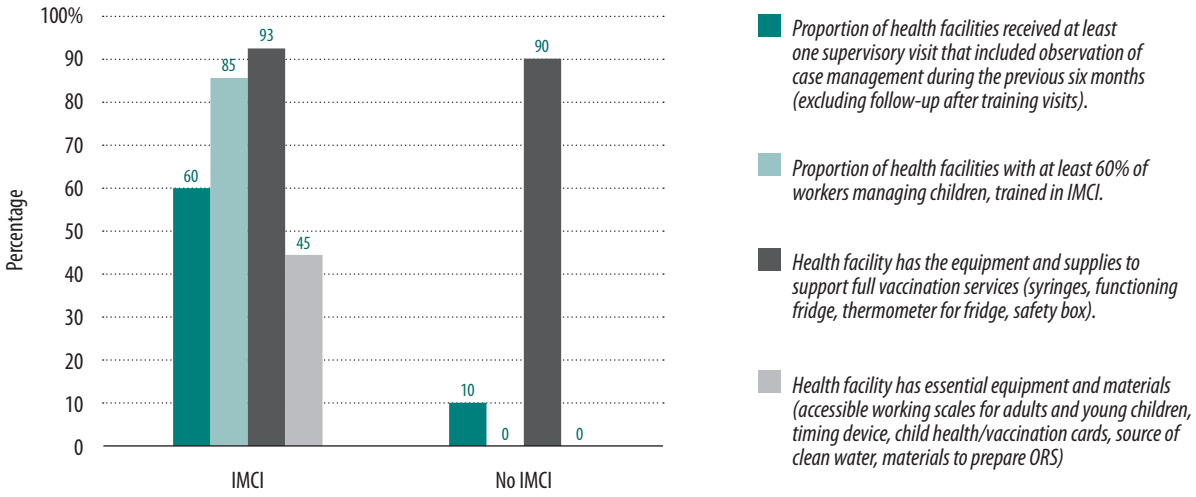
Household surveys

WHO is working with UNICEF on the development of a simple household survey to meet the increasing country demand for rapid and inexpensive tools for measuring the coverage and delivery of key maternal and child health interventions. The survey is designed to be conducted at district or provincial level and is intended to support operational decision making. These rapid household surveys are complementary to the larger ones such as Demographic and Health Surveys, which provide data on coverage levels broken down by socio-economic or ethnic groups, and measure national coverage and impact indicators.

Child health programme reviews

In response to the need for more structured guidance to help countries conduct a periodic review of newborn and child health programmes, CAH is working with AFRO and the Regional Office of the Americas (AMRO) in developing new guidelines and conducting reviews. Work started in 2006 with programme reviews carried out in Haiti and Niger.

Figure 11: Quality of assessment of sick children attending first-level facilities in three geographic areas in Cambodia



Source: Ministry of Health of Cambodia and WHO Cambodia, 2006.

Meanwhile, WHO continued its work with international partners to agree upon standard measures and indicators for newborn and child health interventions, and to promote the use of those indicators in measurement tools. For example, progress was made in the identification of indicators for the frequency of feeding in young infants and for the quality of referral care.

Financial flows for child health

In recent years, there has been growing concern that there should be better tracking of funds flowing to specified priorities or programmes in the health sector. National Health Accounts (NHA) are a standardized, internationally recognized tool that measure specific financial information on health systems. The analysis of most NHA data, however, remains at an aggregate level and lacks financial resource tracking for specific priority programmes or beneficiaries, such as children. In collaboration with EIP, CAH continued to support the development of a methodology for tracking financial resources for child health, through the use of NHA child health sub-analysis. Guidelines for country-level application are expected to be ready in 2007.

MULTI-COUNTRY EVALUATION

The Multi-Country Evaluation (MCE) of IMCI is designed to evaluate the impact, cost and effectiveness of the IMCI strategy. The results of MCE support planning and advocacy for child health interventions by ministries of health in developing countries, and by national and international partners in development. To date, MCE has been conducted in Brazil, Bangladesh, Peru, Uganda and the United Republic of Tanzania.

The results of MCE indicate that:

- **IMCI improves health worker performance and their quality of care;**
- **IMCI can reduce under-five mortality and improve nutritional status, if implemented well;**
- **IMCI is worth the investment, as it costs up to six times less per child correctly managed than current care;**
- **child survival programmes require more attention to activities that improve family and community behaviour;**
- **the implementation of child survival interventions needs to be complemented by activities that strengthen system support;**
- **a significant reduction in under-five mortality will not be attained unless large-scale intervention coverage is achieved.**

MCE has contributed to renewed global attention to child survival. For instance, it facilitated the development of the groundbreaking child survival series in *The Lancet*, which was followed by a series on newborn survival, maternal survival and child development. MCE also reinforced the "gold standard" of integrated guidelines for the case management of ill children in facilities, supported by high quality training and supportive supervision.

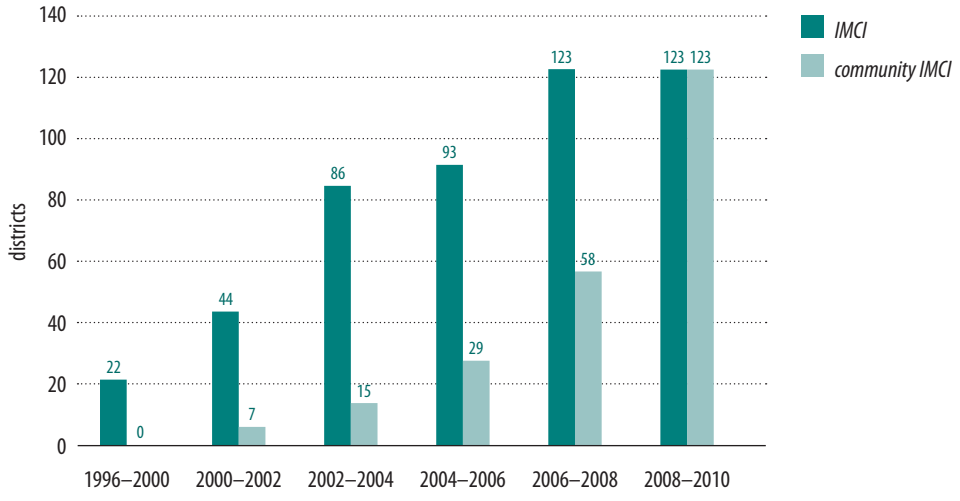
Costing tool for child health

Programme managers need tools and instruments to allow them to assess financial requirements for reaching programme targets. Efforts continued in 2006 to refine a national level costing tool for estimating the resources required to scale up essential child health interventions in the context of child survival, as developed by CAH in conjunction with Health Systems and Services (HSS) of WHO. The tool is part of a wider set of compatible costing tools developed by WHO departments to mirror the structure of disease programmes and strategies at country level.

CASE STUDY: THE UNITED REPUBLIC OF TANZANIA

The United Republic of Tanzania has shown significant progress in IMCI implementation since it began in 1996. National IMCI strategies and plans of action developed in 1998 and revised in 2006 guided the scaling up of IMCI. The following graph reflects the progress by number of districts, and projections for the future.

Figure 12: Scaling-up for case management and Community IMCI in the United Republic of Tanzania



Source: WHO Tanzania, 2006

Government commitment has markedly improved, reflected by increased budgetary allocation to the IMCI unit from US$ 280 000 in 2004/2005, to US$ 620 000 in 2005/2006 and US$ 920 000 for 2006/2007.

The infant mortality rate in the United Republic of Tanzania has reduced from 100 per 1 000 live births in the period 1995-1999, to 68 per 1 000 live births in the period 2000-2004.

Chapter 3

Adolescent health and development

Today there are over 1.2 billion adolescents worldwide – accounting for one-fifth of the world's population. While many adolescents are healthy, a significant proportion of them face a range of problems which have implications for their health both now and in the future, for this generation and the next.

There are sound public health, economic and human rights reasons for investing in the health of adolescents. The international development goals (IDGs), notably reducing the spread of HIV and reducing maternal and child mortality, cannot be achieved without addressing the health and development of adolescents. Similarly, addressing the needs of adolescents is central to tackling other priority public health problems such as obesity; tobacco, alcohol and other substance use; injuries and violence; and mental health.

There is much that needs to be done to improve adolescent health and development, with priorities differing between and within countries, and there are many international organizations active in this area. In line with WHO's mandate, CAH is responding to this by advocating for a comprehensive, multisectoral approach based on evidence and by clearly delineating and supporting the contribution of the health sector.

Using HIV and maternal mortality as entry points, CAH is supporting countries in the use of the "four-**S**'s" approach to strengthening the health sector contribution to adolescent health and development:

- gathering and using **s**trategic information
- developing **s**upportive evidence-based policies
- scaling up health **s**ervice provision and utilization
- strengthening action in other **s**ectors (such as education and the media).

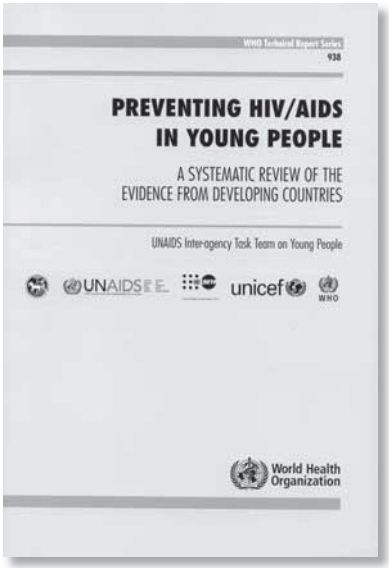
Working alongside other departments in WHO, and in partnership with other international organizations such as UNFPA and UNICEF, CAH is helping to accelerate action in countries by providing normative guidance and playing a key role in strengthening the health sector response to adolescent health and development and efforts to meet the IDGs.

Photo © WHO/Pierre Virot

3.1 Developing new policy and strategies

In 2006, work in policy and strategy development focused on efforts to synthesize and disseminate the evidence required for policy formulation and strategy development on the prevention of HIV and maternal mortality in adolescents/young people. This included: a systematic review of the effectiveness of a range of HIV prevention strategies targeting young people, and the development of a series of policy briefs on this for policy-makers, programme managers and researchers. In addition, a review on preventing maternal mortality in adolescents was finalized, providing the evidence base for an advocacy document on pregnant adolescents. Another significant piece of work in 2006 was the development and testing of a new course for public health programme managers on planning HIV and reproductive health programmes that are responsive to the needs of young people.

Preventing HIV in young people: steady, ready, go!



In 2006, WHO published a ground-breaking review of the effectiveness of different HIV prevention interventions for young people in developing countries. The review provides urgently-needed guidance for policy-makers on what works best – and what doesn't work – in preventing HIV infection in young people, so that limited resources can be targeted to the most effective interventions.

The review, which took two years to complete, involved the development of a new standardized methodology to evaluate more than 80 studies on HIV prevention interventions in developing countries - enabling each to be evaluated on a level playing field. The aim was to identify interventions that would contribute towards achieving the HIV-related global goals: increasing young people's access to information, skills and services; reducing their vulnerability to HIV infection; and reducing the prevalence of HIV among this age group.

Each intervention was graded on a four-point scale:

GO!	Evidence threshold met. Implement on a wide scale now – and monitor coverage, quality and cost.
READY:	Evidence threshold partially met. Implement on a wide scale now – but evaluate carefully.
STEADY:	Evidence threshold not met. Promising but not yet ready for implementation. More evidence needed.
DO NOT GO!	Strong evidence of lack of effectiveness. Not the way to go.

The report gave the green light to the following interventions:

- **In schools:** curriculum-based interventions, led by adults and based on defined quality criteria, can have an impact on knowledge, skills and behaviour.
- **Health services:** interventions can increase uptake of services by young people provided service providers are trained, changes are made to ensure that services are "adolescent-friendly," and activities are implemented in the community to increase demand and/or community acceptability.
- **Mass media:** interventions can have an impact on knowledge and behaviours if they involve a range of media (e.g. radio and TV, supported by print) and are explicit about sensitive topics but adapted to cultural sensitivities.

A series of eight-page policy briefs has been developed to support ongoing efforts to disseminate the findings of the report for use in countries and regions. The review was carried out under the auspices of the Inter-Agency Task Team on HIV/AIDS and Young People, in collaboration with the London School of Hygiene and Tropical Medicine, UNAIDS, UNFPA and UNICEF.

Preventing maternal deaths

Adolescent pregnancy: Unmet needs and undone deeds

In 2006, a WHO-supported review of the literature and programmes on adolescent pregnancy which highlighted the considerable risks faced by adolescent girls/young women during pregnancy and childbirth was finalized. The review outlined the scale of the problem and noted that action to address it would have a direct bearing on global efforts to meet the MDGs on child survival and mortality reduction (MDGs 4 and 5). This review provided the basis for an advocacy document (see below) aimed at ensuring that

pregnancy in adolescents is both wanted and safe for both mother and child.

Pregnant adolescents

Between 14 and 15 million adolescent girls aged 15-19 give birth every year – accounting for more than 10% of all births worldwide. The fertility rate for adolescents varies widely by region and country. Figure 13 shows data at two points in time for selected countries, demonstrating that births among adolescent women continue to be a significant issue. Efforts to provide care of pregnant adolescents and their newborns need to be undertaken alongside efforts to prevent unwanted adolescent pregnancies.

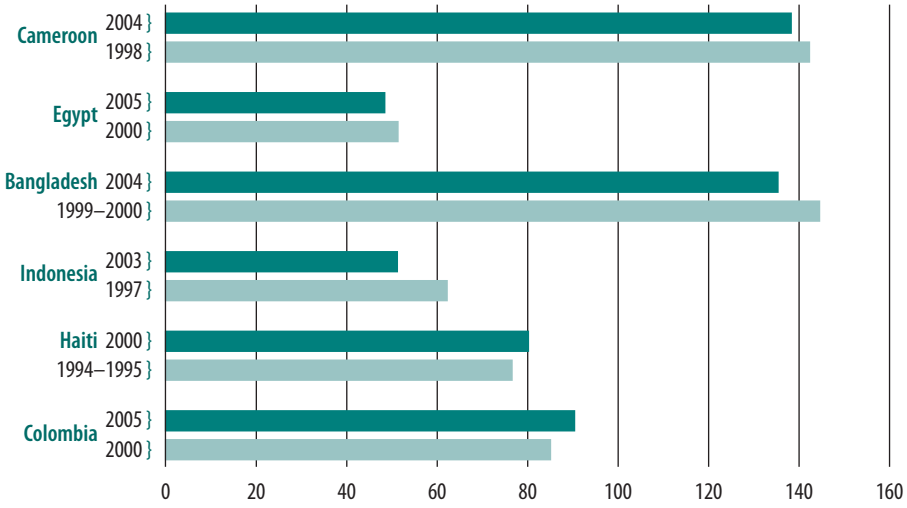
An advocacy report on pregnant adolescents published jointly by WHO and UNFPA in 2006 says that in many countries the risk of dying from pregnancy-related causes is twice as high for pregnant adolescents as for older mothers. And adolescent girls are more likely to give birth to pre-term or low-birth-weight babies. Pregnant adolescents may also face social exclusion and loss of opportunities.

The report, *Pregnant Adolescents: Delivering on Promises of Hope*, says the most critical needs for adolescent mothers are: social support, information about services and how to access them, better access to antenatal care, skilled attendance at birth, and access to emergency obstetric care if needed.

To strengthen pregnancy prevention programmes in the AMR, a regional meeting was held in Uruguay to review evidence, lessons learned and develop a strategic plan of action.

15-year-old mother Fatoumata holds her 9-hour-old son, Moussa, Mali.
Photo © Save the Children/Michael Bisceglie

Figure 13: Fertility rate for 15–19 year old adolescents



Source: Demographic and Health Surveys (DHS), 2006.

Policy developments at regional level

Initiatives at country-level in the AMR aimed at integrating a response to youth development and violence prevention in existing policy have resulted in official commitments in Honduras and Peru. Eleven municipalities in Peru, three in Argentina, 10 in Nicaragua and 31 in Honduras are developing Local Youth Violence Prevention Policies, plans and programme with active youth participation.

A regional strategy on adolescent health and development is under way in the SEAR. In addition, Indonesia, Myanmar and Sri Lanka are in the process of formulating national adolescent health strategies. WHO supported this process by providing epidemiological information by country to guide the strategy development. In 2006, SEARO also initiated a regional review of current laws and policies impacting adolescents and young people's access to health services and information.

EMRO developed a regional framework entitled: *Strategic directions for promoting adolescent health and development in the Eastern Mediterranean Region*. It also provided technical support to the formulation of a national strategy document on adolescent health and development in the United Arab Emirates.

3.2 Improving health worker attitudes and practices and health system responsiveness

In 2006, efforts to improve health worker practices and health system responsiveness involved work to strengthen the evidence base in selected areas and to develop tools for country-level use. This included a global consultation on strengthening the health sector response to the needs of young people living with HIV and a regional consultation on the application of sound consent and confidentiality procedures in the context of sexual and reproductive health service provision to adolescents. Follow-up activities are to be held and new tools developed to improve the competencies of health workers in both of these key areas.

Work was also carried out on the development of new tools to improve the way in which health workers deal with adolescent patients. These include additional modules for the orientation programme for health care workers on adolescent health and a user-friendly reference guide (Adolescent Job Aid). In addition, a guide to support the country-level adaptation of the orientation programme as well as a tool to assess its effectiveness were finalized.

A young woman in Ethiopia with a box of condoms.
Photo © WHO/Pierre Virot

Efforts to improve health system responsiveness involved support for evaluations of ongoing initiatives which have succeeded in scaling up the provision of health services to adolescents and the preparation of analytic case studies of outstanding initiatives in South Africa and elsewhere. The aim is to draw lessons from the many initiatives that are under way to improve health service provision for adolescents. Finally, work continued on the development of tools to support countries in scaling up the provision of health services to adolescents through actions at both the national and district levels.

Providing care and support for young people with HIV

In response to the increasing HIV-related health needs of young people, WHO and UNICEF held a global consultation in November 2006 on *Strengthening the health sector response to care, support, treatment and prevention for young people living with HIV*. The meeting in Blantyre, Malawi, included young people living with HIV, health workers and representatives of the UN and other organizations. The aim

was to review the needs and concerns of the participants, identify any barriers and gaps in the response of the health sector to young people living with HIV, and make recommendations on ways of improving its response. Eight priority issues were identified which require a health sector response (see Box).

PRIORITY ISSUES REQUIRING A HEALTH SECTOR RESPONSE

- **lack of relevant information targeting young people**
- **lack of services for young people (multiple barriers to provision, access and use)**
- **lack of support, especially psychosocial support**
- **non-adherence to treatment**
- **difficulties in disclosing HIV status**
- **dealing with stigma, discrimination and isolation**
- **issues of consent and confidentiality**
- **transition of care (from paediatric to adolescent and from adolescent to adult services).**

Participants identified a number of products or activities they would like to achieve over the next two years. These focus on: setting standards for the health sector response to young people and HIV; developing a minimum package of services for young people with HIV; providing psychosocial support; training service providers to meet the HIV-related needs of young people; training young people living with HIV to support the provision of care, treatment and prevention services; and ensuring linkages with other sectors.

In the AMR, guidelines on HIV were developed to strengthen service provision. A regional meeting was held in the Dominican Republic to develop specific considerations on children, adolescents, and youth within the HIV Counselling and Testing (HCT) guidelines. A pilot project to stimulate HCT among young people was initiated in El Salvador in November 2006.

Capacity building for professionals working with young people in the area of HIV prevention was rolled out in Bolivia, Paraguay and Peru using the Youth-Centered Counselling in HIV prevention methodology.

Adolescent rights: issues of confidentiality and consent

In many countries, adolescents can be criminally responsible, old enough to have sexual relationships, and old enough to shoulder responsibility within and outside the family – yet they may not be old enough to provide medical consent. This has serious implications for global efforts to ensure that adolescents have access to voluntary counselling and testing, prevention interventions and, where needed, treatment and care for HIV.

In an effort to provide guidance for health workers and middle-level managers on these potentially grey areas, WHO is to develop a guide book for health workers on issues of confidentiality and consent in adolescent health care. As a first step, in 2006 WHO organized a regional consultation with SEARO, in collaboration with the International Paediatric Association, the International Association of Adolescent Health and the International Planned Parenthood Federation (IPPF). The participants drew up a list of contents for the guide book and outlined a plan for training health workers, based on the use of the guide.

Strengthening the capacity of health care providers

Work has continued on the development of tools to strengthen the capacity of health workers to respond to adolescents effectively and with sensitivity. Three new modules on HIV, Substance Use and Injecting Drug Use among young people were finalized for the *Orientation Programme on Adolescent Health for Health Care Providers*. A guide for the country-level adaptation of the Orientation Programme was published jointly with UNFPA, and applied in Ukraine to adapt the generic modules for use by service providers working with adolescents who are injecting drugs users (see 3.6). The modules on HIV and injecting drug users were also adapted in Viet Nam.

A one-day course has been developed to help orient health workers to the specific needs of young people living with HIV. The course is for first-level health facility workers who have been trained in basic ART and chronic care for AIDS patients as part of the Integrated Management of Adolescent and Adult Illness (AMAI) strategy but need orientation to the particular needs of adolescents.

Work continued on the development of an Adolescent Job Aid – a user-friendly reference guide that provides health workers with step-by-step guidance on dealing with adolescent patients when they present with a problem or a concern. The Job Aid focuses on adolescent-specific health conditions which have not been addressed in existing WHO guidelines (e.g. puberty) as well as some health conditions that are not adolescent-specific and have been addressed in other WHO guidelines. The aim is to highlight some key "dos and don'ts" when dealing with adolescents. A draft version of the Job Aid is now ready for field-testing.

Trainers workshops were held in pilot districts in India with the nationally adapted Orientation Programme modules for health providers from private, public and NGO sectors. Sri Lanka and Nepal are in the process of adapting the packages. In Indonesia, the training package has been used to train providers in a number of provinces.

Meanwhile, a tool to evaluate the effectiveness of the Orientation Programme in the context of country-level application was finalized. In addition, preparatory work was done for a study to evaluate the effectiveness of the Orientation Programme and the Job Aid in improving the competencies of health workers and in building positive attitudes. This study is to be carried out in India in collaboration with the International Centre for Research on Women.

In the AMR, two alternative approaches to training were used in 2006:

- An interactive, auto-instructive CD-ROM, *The Adolescent Sexual and Reproductive Health Guidelines* has been published and disseminated in the Region along with *Putting it all Together*, which was designed to train health care providers in adolescent sexual and reproductive health.
- The Distance Education Initiative was expanded. The Adolescent Health Certificate course (Diplomado en Salud de Adolescentes) was offered through the Catholic University in Chile for students from priority and high impact countries of the Region, and it has been expanded to include a youth violence prevention module.

Best practices

In India, WHO is supporting an evaluation of a network of 14 adolescent-friendly health services established between 2000 and 2003 with support from the Government of India and WHO. The services are variously sited in hospitals, medical colleges and in a training institution, and one is community-based and run by an NGO. The study is evaluating the feasibility and sustainability of the adolescent-friendly health services and their role in relation to the national strategy for adolescent reproductive and sexual health; whether the centres have increased the quality of and access to health services.

A young woman in Mumbai, India.
Photo © WHO/Pierre Virot

THE NATIONAL ADOLESCENT-FRIENDLY CLINIC INITIATIVE IN SOUTH AFRICA

In South Africa, a nationwide initiative to establish adolescent-friendly health services has led to major improvements in the quality of care and an increase in the uptake of services by young people over a three-year period.

Among the 32 clinics that were in operation throughout 2002-2004, there was a 43% increase in the overall use of services by adolescents aged 11-19 – including a 60% increase in the uptake of voluntary counselling and testing for HIV. In addition, the use of STI services increased by 54% and contraceptive services by 40%.

The National Adolescent-Friendly Clinic Initiative (NAFCI) was launched in 2000 in response to the high prevalence of HIV, STIs and early pregnancy among adolescents in South Africa, and the low uptake of public health services among this age group. It was designed to be an integral part of loveLife, a successful sexual health campaign for young people, by providing services through the public health sector which would be sustainable and reach out to most adolescents.

From the outset, a key feature of the NAFCI was an emphasis on quality improvement, including capacity building to improve the management and delivery of adolescent-friendly health services. Following national and international consultations and critical input from young people on the kind of services they needed, ten key standards were established and a clinic accreditation system was launched to help guide and motivate health workers and district managers. Bronze, silver and gold awards were awarded on the basis of how many standards were met.

By the end of 2005, when the initiative had expanded to include 350 clinics, the majority provided services that met 80-90% of national standards and criteria for adolescent-friendly health services – an average improvement of 56% since joining the initiative.

Developing national standards for adolescent-friendly health services

In the SEAR, Bangladesh, India and Sri Lanka were assisted to develop national standards for quality improvement in adolescent-friendly health services. National level consultations and consensus meetings were held in these countries to finalize standards, and implementation guidelines were developed, printed and disseminated at state level in India. In Bangladesh, application of the standards started in pilot areas.

In the WPR, Viet Nam was supported to develop national guidelines and standards for youth-friendly health services.

Based on the experiences gained in several countries, a revised draft of a tool was developed to support countries in developing national quality standards for health service provision to adolescents. The tool is intended to support a consultative decision-making process that aims to:

- develop a common understanding on adolescent health and on making health service provision responsive to adolescents;
- establish the basis for the formulation of national quality standards in national HIV/reproductive health policies and strategies;
- examine programmatic opportunities and challenges in applying the national quality standards;
- formulate the national quality standards;
- define the preparatory work that needs to be done at national and district levels before the quality standards can be applied.

Work was also initiated to extend the process to the district level – with a focus on implementing and monitoring the quality standards.

3.3 Engaging families and communities

During 2006, work in supporting family and community action involved efforts to strengthen the evidence base and develop ways of enabling key figures in the lives of adolescents to contribute meaningfully to their growth and development. This included a review and technical consultation on initiatives by countries to strengthen the capacity of parents to promote the health and development of adolescents. In addition, CAH supported the implementation and evaluation of a project to build the capacity of football coaches to link football training with sensitization on areas such as gender, sexuality and violence. Finally, a review was initiated of the approaches used in developing countries to generate demand for adolescent sexual and reproductive health services and to encourage community acceptance and support for the provision of these health services and their use by adolescents. The aim is to develop a new tool which can be used by programme managers in developing countries to generate demand and encourage community support for adolescent sexual and reproductive health services.

Harnessing parent power

Parenting is one of the most important adult roles – yet it is one for which most parents have little preparation or support. During the adolescent period, parenting skills are often severely tested as adolescents assert their growing independence and are increasingly influenced by their peers, the mass media and the wider community. However, research and experience indicate that parents and families remain a key influence throughout adolescence.

THE STRONG FAMILIES PROGRAMME

In El Salvador, a parenting course established by AMRO to help reduce the high burden of health problems among adolescents is strengthening parents' capacity to give love – but set limits. The Strong Families Programme is based on the finding that adolescents have fewer problems when their parents demonstrate two key qualities: consistent discipline and support.

The parents attend seven three-hour parenting sessions, on the following topics:

- **making use of love and limits**
- **laying down house rules**
- **encouraging good behaviour**
- **making use of the consequences of acts**
- **building bridges**
- **protection against substance abuse**
- **help in meeting families' special needs.**

Parents and adolescents meet separately for two hours and together for the third hour. Over 50 families have completed the pilot programme and both parents and adolescents have reported that the programme has had a positive impact on their relationship. Parents have learned to express affection, while communicating clear expectations and limits – and keeping their anger in check. Meanwhile, adolescents reported that, for the first time, they feel that they are understood by their parents. The programme is now scheduled to be initiated in other countries in the AMR.

In an effort to find ways of harnessing this potential, WHO has reviewed current projects in developing countries that support parents in promoting adolescent development and preventing risky behaviour. The aim is to determine which parenting behaviours have a positive impact on adolescent health and development – and which have the opposite effect.

In 2006, WHO held a technical consultation in Geneva to help create a knowledge base on parenting and provide a framework for guiding the development of future projects for parents in developing countries. The participants identified five key parental roles which have a positive influence on adolescent behaviour: connection (love, acceptance); behaviour control (setting limits); respect for individuality; modelling appropriate behaviour; and provision and protection (using the resources they can and creating "social capital" to meet other needs, including additional adult guidance and support). An advocacy report is now in preparation, based on the findings of the technical consultation.

Football coaches promote gender equality and healthy behaviour

The magnet of football for adolescent boys – especially in Latin America – is being used by CAH and AMRO to promote gender equality and healthy behaviour among pre-adolescent boys (aged 8-12) in six countries. Football coaches have been engaged in a youth project that aims to link regular football training with a health education course focusing on issues relating to masculinity and the behaviour of adolescent boys.

The project is based on a curriculum that was developed and field-tested by the Centre for Investigation and Development of Education in Chile. It involves nine three-hour sessions on issues such as: gender and masculinity; respect for self and others; sexuality and HIV; substance abuse; and violence. With support from the Johan Cruyff Foundation, the curriculum was field-tested in Argentina, Brazil, Chile, Mexico, Paraguay and Venezuela in 2004-2006. More than 125 professionals and over 2 000 adolescent boys have been involved in the project so far. Implementing partners included football coach associations, football clubs and universities, as well as government ministries of sport, education and health. Plans are now under way for the development of a curriculum for football coaches, a training of trainers guide, and a set of evaluation tools.

Adolescents playing football at a field test in Santiago de Chile, Chile.
Photo © Francesco Aguayo Fuenzalida

Evaluations of the course carried out in Argentina, Brazil and Mexico (including use of the Gender Equitable Men scale) indicated that the course had a "promising" impact on gender norms, showing small but significant changes (see Box). Meanwhile, a recent review of the effectiveness of gender-based interventions carried out by the WHO Department of Gender and Women's Health described this initiative as one of the few promising programmes designed to address gender issues in young men in this age group.

MEXICO EVALUATION

At one of the sites in Mexico, over 30 adolescent boys said the football coaching project had helped increase their capacity to:

- **enjoy football in spite of losing**
- **express thoughts, feelings and ideas**
- **recognize feelings of sadness, happiness and fear**
- **have friendships with boys who are different**
- **create positive relationships**
- **identify and choose health activities to do**
- **resolve differences without hurting others**
- **choose how to express sexuality.**

In El Salvador, on the other side of the gender spectrum, AMRO provided technical and financial support for the evaluation of the Interagency (FAO, PAHO, UNDP, UNFPA and UNICEF) Adolescent Women's Empowerment Program (PIEMA).

3.4 Programme monitoring

In 2006, CAH finalized the development of methods and tools to monitor health service provision to adolescents. This involved completion of tools to enable countries to assess both the quality and coverage of health services for adolescents as well as a tool to assess the costs of making health service provision responsive to the needs of adolescents. In addition, key indicators for adolescent health were developed and included in the CAH Global Monitoring System.

Assessing the quality of health service provision for young people

Building on experience gained through quality assessments conducted in Mongolia and the Russian Federation, and through support to national quality standards development exercises in India, the United Republic of Tanzania and elsewhere, CAH finalized a tool kit for the assessment of the quality of health services. The tool kit contains a set of instruments for obtaining the perspectives of different stakeholders, including adolescent clients, health service providers, support staff, managers and community members, as well as observation by the assessor to determine whether quality characteristics that relate to equity, accessibility, acceptability, appropriateness and effectiveness have been met.

Assessing the coverage of health service provision for young people

As countries intensify their efforts to scale up access to HIV prevention services for young people, WHO is helping governments to monitor progress towards global goals. The aim is to meet the target set by the 2001 UNGASS on HIV/AIDS which aims to ensure that "by 2010, 95% of young people will have access to the services they need to reduce their vulnerability to HIV."

In order to determine whether this target has been met, coverage will need to be measured at the global, national and sub-national levels. Although some existing survey questionnaires already measure this as part of broader surveys of health service provision, these are too expensive and infrequent to meet the need for global monitoring of the UNGASS target.

To support the development of the new questionnaire, in April 2006 WHO organized an International Consultation on Measuring Coverage of Health Services for Young People, with funding from the Rockefeller Foundation. This group of experts helped to identify the key indicators which should be used to measure health service coverage for young people, to determine the scope of the questionnaire and to identify the key respondents. During 2007, the new tool will be field-tested in Africa (the United Republic of Tanzania), Asia (Viet Nam), and Latin America (Honduras or Nicaragua). In Peru, this questionnaire will also be part of a household survey at the sub-national level to determine channels for the delivery of maternal and child health interventions, and their coverage.

MEASURING SERVICE COVERAGE FOR HIV PREVENTION

This new assessment tool is designed to measure the proportion of young people (15-24) with access to HIV prevention services. The findings will be used to improve the availability and uptake of health services – with the aim of reaching 95% of young people with effective HIV prevention services by 2010.

The survey questionnaire helps to estimate the percentage of young people who:

- **have quality health services that are available**
- **are able to access available services**
- **are willing to use the available services**
- **actually use available services.**

Key respondents include: health service managers; service providers at health facility level; condom retailers; young people in the community; and high-risk groups such as injecting drug users, sex workers and men who have sex with men.

Assessing the cost of providing health services for young people

Over the past two years, WHO has worked with national policy-makers and programme managers to develop tools for estimating the cost of providing health services to young people. There is growing demand from countries which are seeking assistance in estimating resource needs and undertaking financial planning for scaling up health service delivery to young people at national and district level. Evidence on cost and cost-effectiveness can assist policy-makers and programme managers to set priorities and improve the performance of health systems in order to maximize health outcomes for the available resources.

The costing tools are intended to complement tools already developed for assessing the quality of health services

for young people. The tools were designed primarily for estimating the cost of health services relating to sexual and reproductive health and HIV prevention, but can be adapted to assess resource needs for additional interventions. Default interventions include: information and counselling for sexual and reproductive health, provision of contraceptives, management of sexually transmitted infections, counselling and testing for HIV, and harm reduction for injecting drug users.

In 2005-2006, the tools were field-tested in selected sites in India, Uganda and Viet Nam. A working meeting was held in Geneva in July 2006 to review the results and revise the methodology as needed. Recommendations from the meeting include further efforts by CAH to assess incremental costs associated with making services more youth-friendly, and assistance provided to countries in estimating the cost of scaling up service provision.

Monitoring global progress in adolescent health

Indicators relating to country-level progress in adolescent health work which are included in the CAH Global Monitoring System were revised in 2006 on the basis of experience gained during the first round of data collection in 2005. The revised set of indicators is more closely aligned to the international development goals and to WHO's institutional monitoring requirements. The implementation of the CAH monitoring system has proved very challenging. Two regions carried out data collection in 2006.

3.5 Capacity building for planning adolescent health programmes

WHO in collaboration with SEARO and AFRO developed a training workshop for capacity building based on the MAPM (Mapping Adolescent Programmes and Measurement) and the health sector based strategy for country programming (the "four Ss").

In the AFR in more than 30 countries, RAs, WHO national programme officers and adolescent health managers from ministries of health were oriented on adolescent health and development. As a follow-up, WHO conducted national-level planning workshops in Burkina Faso and Swaziland.

WHO collaborated with UNFPA in the development of a two-week programme managers course. The course was designed to ensure that HIV and reproductive health programmes meet the needs of young people more effectively. The course was field-tested in Jaipur, India, in late 2006. Many of the materials used were based on workshops held in the AFR and the SEAR over the past two years. The course is now being modified on the basis of feedback from the Jaipur participants, with a view to replicating the course in other WHO regions.

In the AMR, in Colombia, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru teams of professionals from diverse sectors working on topics related to adolescence, youth, sexual and reproductive health and violence prevention, were trained to take the lead in advocacy and technical cooperation with government entities and other key players working in these areas.

AMRO developed a training curriculum on youth violence *TEACH VIP Youth* for the development of Effective Programs in Youth Development and Violence Prevention. This course, which is available online and on CD-ROM, is being implemented in Argentina, Colombia, El Salvador, Honduras, Nicaragua, and Peru.

3.6 Focus country support

In 2006, CAH continued efforts to develop a systematic and integrated approach to adolescent health programming in countries. This involved working in partnership with regional offices to provide support to selected countries to strengthen the health sector response to HIV and reproductive health in adolescents/young people. The aim is to support a step-by-step process which can make a meaningful difference to the way in which programmes are planned, implemented and monitored, and to demonstrate this to others, through careful documentation, monitoring and, where appropriate, evaluation.

During 2006, the step-by-step process was implemented in a number of countries: Bangladesh, Burkina Faso, Cameroon, Honduras, India, Malawi, Nicaragua, Sri Lanka, Ukraine, the United Republic of Tanzania and Viet Nam.

In each country, this process was different. The processes followed in India and Ukraine are outlined in the following case studies.

CASE STUDY: UKRAINE

There are an estimated 600 000 injecting drug users (IDUs) in Ukraine and the age of IDU initiation has now dropped to the early teenage years. The HIV/AIDS epidemic in Ukraine is driven by injecting drug use and 25%-30% of all new HIV infections occur in the 15-25 age group.

The adolescent health programme in Ukraine which was established in 2004 set out to use HIV as an entry point for a long-term strategic action to address the priority health needs of adolescents and young people. As a first step, in 2005 a national assessment of HIV service provision for adolescents and young people was carried out. This revealed that: there was a lack of specific HIV services which young people could use; of the other initiatives which focused on HIV prevention, few had been monitored or evaluated; provision for young people most at risk was almost non-existent; and there was a lack of strategic data on adolescents and young people.

A meeting involving key government ministries and other stakeholders reviewed these findings and made recommendations based on the the "four Ss" approach used by CAH in strengthening the role of the health sector.

The next step was the development of a plan of action involving a systematic step-by-step approach to meet the priority health needs of adolescents and young people. By the end of 2006, some of the initial building blocks were already in place.

To help strengthen the capacity of health workers, the EUR Inter-Agency Group on young people is to support the adaptation and use of the WHO Orientation Programme on Adolescent Health for Health Care Providers. In addition, WHO is adapting the generic orientation programme modules to strengthen the capacity of health care providers working with most-at-risk young people. The next phase is expected to include the development of national quality standards for adolescent health services and identification of more accurate ways of monitoring the implementation of services and national standards.

CASE STUDY: INDIA

Studies suggest that nearly half of women in the 20-24 year age band have had their first child before the age of 20 years, and that only about 1/5 of women below that age deliver in health institutions. It is not surprising, then, that there are high levels of maternal mortality and morbidity in adolescent mothers, as well as higher rates of infant mortality.

Using Reproductive Health as an entry point, WHO has played a vital role in strengthening the health sector response in India to the sexual and reproductive health of young people. This has extended from the formulation of a national policy document, through to preparations for supporting implementation and monitoring in districts.

WHO worked closely with the Ministry of Health (MoH) on formulating Phase II of the National Reproductive and Child Health Programme (RCH II) to include an adolescent sexual and reproductive health strategy. Regional workshops were held with UN partners to develop further the strategy for strengthening the response of the health system and the capacities of health workers to deal with adolescents. WHO together with UNFPA also supported the MoH in formulating national standards and guidelines for making health services adolescent-friendly. Alongside this, WHO participated in a task force to suitably adapt the generic Orientation Programme for use in India. A significant innovation was the development of two sets of teaching-learning materials – one for medical officers and another for basic health workers. Workshops on the use of these materials were organized with national professional associations of paediatricians and obstetricians/gynaecologists.

In 2006, following the formal approval and launch of the national standards and guidelines, WHO supported the MoH in orienting senior officials from six states on the standards and guidelines, and assisted with the selection of districts for piloting their application. Drawing from experiences gained elsewhere, notably improving the quality of reproductive health services in Gujarat, WHO is supporting the development of district-level implementation and monitoring plans. WHO also worked in Tamil Nadu to bring together state-level programme managers in Reproductive Health and HIV for a workshop to strengthen effective collaboration in areas of shared concern such as the provision of information and counselling services to young people.

Concluding remarks

With the support of key stakeholders within and outside of the Organization, WHO has made a significant contribution in the field of child and adolescent health in 2006.

The stage is set for important progress to continue in 2007, as the strategic vision of WHO's Director-General, Dr Margaret Chan, comes into action. The renewed focus on primary health care is well-harmonized with efforts to strengthen care close to the community and link with referral care.

A key focus for the coming year will be on introducing new approaches to promoting effective ways to scale up the interventions.

Another important area of work for 2007 will be providing support for the development of strategies and action plans in countries, which are to be fully integrated into the Health Sector Development Plan and Poverty Reduction Strategy Papers. Strong support will also be provided to countries for implementation, monitoring, and evaluation.

WHO will continue working closely with its partners, including other UN organizations such as UNICEF, UNFPA (SPP), UNAIDS, as well as key bilaterals, NGOs and strategic partnerships such as the PMNCH.

The past year has seen increased resources become available for child and adolescent health, and these efforts will be accelerated. As a critical half-way point in the countdown to the MDGs, 2007 will be decisive for making progress in the vital area of child and adolescent health. WHO is set to play its key role in meeting that challenge.

Annexes

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