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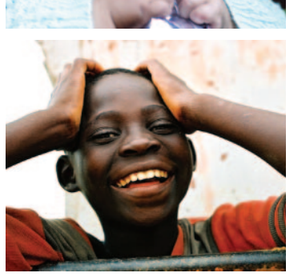
2004–2005



CHILD AND ADOLESCENT HEALTH AND DEVELOPMENT

World Health Organization

PROGRESS REPORT 2004–2005 CHILD AND ADOLESCENT HEALTH AND DEVELOPMENT

WHO

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Acronyms and abbreviations

AAA	Auto-Apprentissage Assisté (Assisted self-learning)
ADH	Adolescent Health and Development Team
AIDS	Acquired immunodeficiency syndrome
APADOC	Alliance of Parents, Adolescents and Community
BASICS	Basic Support for Institutionalizing Child Survival
CAH	WHO Department of Child and Adolescent Health and Development
CDS	WHO Cluster of Communicable Diseases
CHD	Child and Adolescent Health and Development Unit
CIS	Country Implementation Support Team
CHERG	Child Health Epidemiology Reference Group
CHOICE	Choosing Interventions that are Cost-Effective
CORE	Child Survival Collaborations and Resources Group
CRC	United Nations Convention on the Rights of the Child
CSP	Child Survival Partnership
DFID	United Kingdom Department for International Development
DHS	Demographic and Health Surveys
EIP	WHO Cluster of Evidence and Information for Policy
ENN	Emergency Nutrition Network
ETAT	Emergency triage assessment and treatment
GEM	Gender Equitable Men
GTZ	Gesellschaft für Technische Zusammenarbeit (Germany)
HAC	WHO Department of Health Action in Crises
HIV	Human immunodeficiency virus
IBFAN	International Baby-Food Action Network
ICATT	IMCI computerized adaptation and training tool
IFA	Iron + folic acid
IFMSA	International Federation of Medical Students' Associations
IMAI	Integrated Management of Adolescent and Adult Illness
IMCI	Integrated Management of Childhood Illness
INCLEN	International Clinical Epidemiology Network
IVB	WHO Department of Immunization, Vaccines and Biologicals
JHPIEGO	International health organization affiliated with The Johns Hopkins University in Baltimore, Maryland
JICA	Japan International Cooperation Agency
LBW	Low birth weight
MAPM	Mapping Adolescent Programming and Measurement

MHI	WHO Department of Measurement and Health Information Systems
MICS	Multiple Indicator Cluster Surveys
MOST	USAID Micronutrient Programme
MPS	WHO Department of Making Pregnancy Safer
NCH	Newborn and Child Health and Development Team
NFSD	Novartis Foundation for Sustainable Development
NHA	National Health Accounts
NHD	WHO Department of Nutrition for Health and Development
NMH	WHO Cluster of Noncommunicable Diseases and Mental Health
NORAD	Norwegian Agency for International Development
ORS	Oral rehydration salts
RHR	WHO Department of Reproductive Health and Research
RUTF	Ready-to-use therapeutic food
SAVY	Survey Assessment of Vietnamese Youth
SSSS	Strategic information, services, supportive evidence-based policies, strengthening other sectors
TDH	Terre des Hommes
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDAF	United Nations Development Assistance Framework
UNFIP	United Nations Fund for International Partnerships
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

Executive summary

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

In its work towards attaining this vision, the WHO Department of Child and Adolescent Health and Development (CAH) plays multiple roles in a cycle of actions. We support research, review evidence, develop guidelines and tools, and support regions and countries in implementing activities at community level, first-level health facilities, referral-level facilities, and in policy-making at national level. We monitor and evaluate implementation of activities, and use the results to improve existing tools and inform further research. In particular we promote a continuum of care between the different levels of the health system, and along the life-course, from birth through childhood and adolescence.

CAH is working towards global goals. The goals of the Millennium Declaration and the United Nations General Assembly Special Sessions on HIV/AIDS and on children are central to our work. We particularly focus on goals related to reducing child mortality, eradicating extreme poverty and hunger, reducing maternal mortality, and reducing the spread of HIV/AIDS.

CAH works across all levels of WHO, conducting joint planning, implementation and review activities with all regions. At least five regional offices have launched policy and strategy initiatives for child and adolescent health or for child survival, and all are intensifying support for child survival to those countries with the highest burden.

As an expression of renewed commitment to maternal, newborn and child health, WHO dedicated *The world health report 2005: make every mother and child count* and World Health Day 2005 to this theme.

In **keeping abreast of the situation**, CAH identifies priority health and development needs, including assistance to national authorities in developing, implementing and monitoring effective policies, strategies, programmes and interventions to improve the health of newborns, children and adolescents. A significant achievement in this area was the development of estimates of cause-specific proportional mortality during the first 28 days of life.

By **strengthening the implementation of national programmes**, CAH helps accelerate the transformation of policies and strategies into action at country level. CAH does this through the development of methods and tools that aim to strengthen the planning and management of child and adolescent health programmes, and in particular to incorporate a rights perspective into those programmes.

In 2004, the Department continued to promote equity and rights through its collaboration with the United Nations Committee on the Rights of the Child, and through activities aimed at building global capacity to apply human rights principles in the development of relevant national policies and programmes. Within CAH, human rights norms and standards were increasingly applied in a range of areas, including adolescent-friendly health services, guidance on policy development for adolescent health, and work to address inequities in child health.

Every minute 20 children under 5 years of age die, leading to more than 10.6 million deaths each year. The majority of these deaths are caused by conditions that are either preventable or treatable. CAH work on **meeting the needs of infants and young children** includes the development of methods, tools and human capacity for improving newborn care and survival, promoting appropriate feeding practices, preventing mother-to-child transmission of HIV, and refining, expanding, monitoring and evaluating Integrated Management of Childhood Illness (IMCI).

An estimated 40% of child deaths occur among newborns (0–28 days); most of these deaths are attributable to preterm delivery, birth asphyxia and severe infection (for example, neonatal sepsis, pneumonia, meningitis, and tetanus). CAH is refining clinical guidelines for the management of neonatal problems during the first week of life, to be incorporated into IMCI. In addition, the Department is supporting research on the best ways to improve care-seeking practices and to promote community-level care and support for the newborn.

CAH was pivotal in the development of a series of articles on newborn survival, published in the *Lancet* in 2005, and continued working on refining a framework that aims to motivate, mobilize and assist the development of national strategies for improving newborn survival in countries with high rates of neonatal mortality.

Undernutrition is associated with more than half of all child deaths. CAH provides support to countries, through regional offices, to strengthen actions to improve nutrition, using the Global Strategy for Infant and Young Child Feeding as a guide. At the same time, the Department is moving forward with studying the long-term protective effects of breastfeeding, developing community-based interventions to improve complementary feeding, and studying how best to prevent mother-to-child transmission of HIV through breastfeeding.

Tools and training courses have been developed and promoted to support countries and regions in the implementation of the Global Strategy for Infant and Young Child Feeding. Advances were made in developing guidelines and tools for health workers in relation to infant-feeding counselling in the context of HIV.

IMCI continues to be a principal strategy for reducing deaths and improving the health of children under five years of age. CAH activities in the past year focused on building the technical capacity and tools needed to support the adaptation (including for HIV/AIDS), introduction and expansion of IMCI in countries. At the end of 2005, a total of 100 countries reported having completed a national adaptation of the IMCI case management guidelines for first-level health facilities, and 70 of these countries were in the process of expanding training in clinical IMCI beyond a few districts.

Since families and communities are at the centre of all child care, promoting adequate care in the home (including adequate care-seeking) is vital to improving child health. In collaboration with partners, CAH produced an extensive review of the evidence of the impact of key family and community practices on child survival, growth and development; this should provide the basis for informed policy decisions. In order to assist countries in the development and implementation of coherent strategic and operational plans to promote family and community practices, CAH produced a briefing package for facilitators of the planning process. This was developed with the WHO Regional Office for Africa, and has been used mainly in the African Region. In the Region of the Americas, a five-year project continued with the American Red Cross and the United Nations Foundation, and has now reached more than 1.8 million people.

Clinical research remains fundamental to the work of CAH. Recent results show, for example, that a new reduced-osmolarity formulation for oral rehydration salts is safe, and that adherence to recommendations for zinc supplementation in the treatment of diarrhoea is good; clinical guidelines are being modified in consequence. The HIV component of the IMCI clinical guidelines was validated in a further two sites, and training materials to introduce the component to health workers were developed. Guidelines for the treatment of HIV-infected children with antiretroviral therapy were developed in collaboration with the HIV/AIDS Department. A multi-centre study confirmed the advisability of continuing to use ampicillin and gentamycin for very severe pneumonia. Guidelines were developed for the treatment of shigellosis, and for the use of zinc in the treatment of diarrhoea.

Countries continued to invest in improving the skills of health workers as a means of improving the quality of care at first-level health facilities. Alternatives to the standard 11-day IMCI training course have been developed and are under evaluation. Extending treatment into the community via community health workers is ongoing in several regions. The Department continued work on the development of a set of complementary materials intended to improve the inpatient care given to seriously ill children, and published the *Pocket book of hospital care for children*, intended for use by health workers in small hospitals. CAH also supported initiatives in four countries aimed at improving the quality of hospital care.

The Multi-Country Evaluation of IMCI showed consistently across countries that IMCI training improves health-worker performance, specifically in the assessment and treatment of sick children and in caregiver counselling. Nurses trained in IMCI performed as well as, if not better than, medical officers. In Bangladesh, IMCI also led to a threefold increase in the use of health-care services, and in the United Republic of Tanzania, to a 13% decrease in mortality over two years.

CAH work on **meeting the needs of adolescents** focuses on reducing maternal mortality, reducing the spread of HIV/AIDS, and improving policies and programmes for adolescents, including their access to information, skills and health services.

Progress was made in 2004 and 2005 in improving the health sector response to the needs of adolescents, particularly in the area of reducing the spread of HIV infection among young people. In addition, CAH made

significant contributions to developing and supporting the response by other sectors to addressing the specific needs of adolescents.

Young people are at the centre of the HIV/AIDS pandemic in terms of transmission, impact, vulnerability and potential for change. Three strategic areas have been identified for WHO support to preventing HIV infection among young people: strategic information, such as surveillance and monitoring; services; supportive, evidence-based policies; and strengthening other sectors. During 2004 and 2005, CAH developed and refined technical materials to support the strategy, and supported its application in countries. Given the nature of work on HIV/AIDS, these activities are carried out in collaboration with partners, including UNAIDS, UNICEF, UNFPA and nongovernmental organizations.

CAH works to maintain its **collaboration and partnerships** within WHO and with external partners. The main areas for collaboration included: child survival; infant and young child feeding; paediatric HIV/AIDS; HIV and young people; malaria control; family practices for child survival; and adolescent health and development.

Partnership is a principal means of extending the reach of policies, interventions and tools, and for strengthening efforts through synergy. In 2005, the Global Partnership for Maternal, Newborn and Child Health was formed through a merger of the three partnerships: Partnership for Safe Motherhood and Newborn Health, Saving Newborn Lives, and Child Survival Partnership. Its secretariat is hosted by WHO. The Global Partnership for Maternal, Newborn and Child Health is a response to the challenge of meeting Millennium Development Goals 4 (reduce child mortality) and 5 (improve maternal health), and aims to accelerate the spread of coverage with effective interventions in countries with a high burden of maternal and child deaths. In 2004–2005, the Partnership initiated activities in Cambodia, Ethiopia, India and Pakistan. Partners convened a conference on "Tracking progress in child survival: countdown to 2015" in response to the call for action made by the Bellagio Group on Child Survival in their *Lancet* series of 2003. The Conference was the first of a series of two-yearly rolling reviews to assess progress towards achieving Millennium Development Goal 4 and hold relevant stakeholders to account.

This progress report is intended to give only an overview of the accomplishments and directions of the Department of Child and Adolescent Health and Development during 2004 and 2005. Readers are invited to contact the Department for any additional information or details they would like.

CHAPTER 1

Working towards global goals

Children and adolescents represent nearly 40% of the world's population. They are also among the most vulnerable; their health problems account for over half the gap in health equity between the world's richest and poorest people. The foundations of health in adulthood and old age are laid during childhood and adolescence. Infants and young children have basic survival needs for warmth and adequate feeding, but also require social interactions and play to nurture their development. Adolescents have similar needs. In addition, they face the challenge of adopting healthy behaviour as they move towards adulthood. All three age groups – infants, young children and adolescents – need safe and supportive environments, including families, to foster growth and development.

Through its child and adolescent units at country, regional and headquarters levels, the World Health Organization (WHO) promotes the survival, health, growth and development of children and adolescents from birth up to 19 years. The Department of Child and Adolescent Health and Development (CAH) covers one of the few areas of work within WHO that has a population group as its mandate. It cooperates closely with WHO staff working in other areas and having responsibilities that also concern this group. These areas include those covered by the Departments of Immunization, Vaccines and Biologicals (IVB), Nutrition for Health and Development (NHD), Making Pregnancy Safer (MPS), Reproductive Health and Research (RHR), and HIV/AIDS.

CAH focuses on supporting action in countries that contributes to the achievement of globally agreed international goals. The Department works across the Organization at country, regional and headquarters levels, as well as with external partners. In 2004 and 2005, a number of WHO initiatives were launched to increase global awareness of the unmet needs of children and adolescents, and to pave the way for efficient and effective action at country level. These initiatives included regional and national strategy and policy development, as well as *The world health report 2005: make every mother and child count* and World Health Day 2005, both dedicated to the theme of maternal, newborn and child health.

The purpose of this report is to document CAH's activities and achievements during the biennium 2004–2005 in its main areas of work: research, development of tools and materials, influencing policy, and implementing, monitoring and evaluating activities. The papers and documents arising from CAH work are listed in Annexes A and B.

What guides our work?

The work of CAH is guided by the WHO Constitution and the Organization's corporate strategy, the vision and guiding principles set out in *WHO strategic directions for improving the health and development of children and adolescents*. The document on strategic directions was developed by CAH in consultation with relevant departments within the Organization, as well as with Member States and partners. It was approved by the Fifty-sixth World Health Assembly in May 2003.

> **WHO vision for child and adolescent health and development – Our vision is a world in which children and adolescents enjoy the highest attainable standard of health and development, a world that meets their needs and respects their rights, enabling them to live to their full potential.**

The strategic directions document describes three principles that form the basis for planning complementary, efficient and effective interventions to protect the health of children, adolescents and their families:

- addressing inequities and facilitating the respect and protection of human rights, as stipulated in internationally agreed instruments including the United Nations Convention on the Rights of the Child (CRC);
- taking a life-course approach that recognizes the continuum from birth through childhood, adolescence and adulthood;
- implementing a public health approach by focusing on major health issues that challenge populations as a whole, and applying a systematic development model to ensure the availability and accessibility of effective, relevant interventions to address them.

BOX 1.1

Millennium Development Goals related to child and adolescent health

Goal 1: Eradicate extreme poverty and hunger.
Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

Goal 4: Reduce child mortality.
Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

Goal 5: Improve maternal health.
Target 6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

Goal 6: Combat HIV/AIDS, malaria and other diseases.
Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

The work of CAH is also guided by international goals, including the Millennium Development Goals and those outlined by the United Nations General Assembly Special Sessions on HIV/AIDS (2001) and on children (2002). The Millennium Development Goals establish clear targets for improving the health of children and adolescents (see Box 1.1). The United Nations goals on HIV/AIDS include reducing the percentage of young people aged 15–24 years who are HIV-infected, and the percentage of HIV-infected infants born to HIV-infected mothers. The outcome document of the 2002 United Nations General Assembly Special Session on children, *A world fit for children*, includes 21 specific goals and targets for the next decade. Reaching these ambitious targets will not be easy, but CAH is committed to concerted efforts as a matter of human rights, development and security.

How do we function?

Child and adolescent health and development is an area of work that runs through all levels of the Organization – countries, regions and headquarters. The aim is to accelerate action at country level to improve the health

and development of children and adolescents. The presence of CAH staff in regional and country offices, and coordination of activities between WHO country, regional and headquarters offices, are critical for the effective development and implementation of policies, strategies, programmes and interventions.

At WHO headquarters, CAH is organized into three teams, two of which address research and development across the life-course (Newborn and Child Health and Development – NCH; and Adolescent Health and Development – ADH); and one that provides technical support to regions and countries (Country Implementation Support – CIS). This structure facilitates the ongoing cycle of research, development, implementation, documentation and evaluation, which in turn informs further research and development.

Regional review and planning exercises

In 2004 and 2005, staff from WHO headquarters and regional offices worked together, as is done each year, to review global developments in the area of child and adolescent health, analyse experiences in implementation, and use available information to prioritize and plan for future activities based on country needs. Headquarters staff participated in review and re-planning exercises in the WHO Regional Offices for Africa, the Americas and South-East Asia. In addition, other meetings were used as opportunities for regional and headquarters staff to review ongoing activities.

Annual meetings of CAH regional advisers and country staff

The theme of the 2004 meeting of regional advisers and country staff was "Supporting countries in achieving the Millennium Development Goals for child and adolescent health and development". Participants emphasized that this work requires accelerated efforts to implement priority interventions in countries on a large scale. Recommendations included that WHO be more active at country level, and in work with governments, to guide the use of resources that are increasingly being channelled directly to countries. At the same time, WHO must fulfil its role in generating evidence and developing globally relevant guidelines and tools. This role requires adequate human and financial resources to be made available at headquarters, regional and country levels.

In 2005, the meeting focused on accelerated action, including the need to maximize opportunities such as those presented by the new Partnership for Maternal, Newborn and Child Health; the importance of the continuum of care across the life-course (e.g. integrating newborn care into child health programmes); guidelines for managers of child health programmes; and HIV as an entry point for adolescent health and development work. The meeting also provided an opportunity for meetings of the working groups set up to accelerate action (which include members from headquarters and regional offices), and for the review of organization-wide and office-specific expected results.

Annual meetings are also held in regions. For example, a meeting in the WHO Regional Office for Africa in 2005 involved the Integrated Management of Childhood Illness (IMCI) focal persons, partners and other staff working in child health-related programmes in 22 countries of the African Region.

Thematic working groups

Four working groups were established in 2005 to intensify CAH's response to global and country needs in the following areas:

- policy and strategy development
- monitoring and evaluation
- health system support
- community practices.

These working groups comprise headquarters and regional staff. All began with a review of CAH's activities in their area to identify needs. They have proceeded to develop frameworks and workplans, in some cases with the support of outside experts.

Regional policy and strategy initiatives

National strategy and policies on child and adolescent health are useful tools for guiding countries towards the achievement of clearly identified goals and targets, and WHO regional offices are assisting countries in this process.

Child health policy initiative in the WHO Eastern Mediterranean Region

The WHO Regional Office for the Eastern Mediterranean launched a child health policy initiative in 2003, aiming to establish a legal framework that gives clear direction and support to improving the health status of children. In 2004, Egypt, Morocco, the Sudan, the Syrian Arab Republic and Tunisia embarked on a detailed situation analysis to identify relevant policy issues. Experiences were shared with five other countries and as an outcome each country developed a plan of action for the process of developing national child health policy. Based on this experience, the Regional office has produced a guide entitled *Development of national child health policy – Phase I: the situation analysis*.

National child survival strategies in the WHO African Region

In the WHO African Region, an increasing number of countries worked towards the development of an overall child survival strategy. Ethiopia hosted a conference in 2004, which resulted in the development of a national child survival strategy that forms the foundation for the design of health plans in the decentralized regions. This was a milestone for raising the profile of child survival on both national and global agendas. Madagascar completed child health policy development in 2005, and the Democratic Republic of the Congo, Mozambique, Nigeria, the United Republic of Tanzania and Zambia are in the process of developing policies or strategies. A draft regional child survival strategy was discussed by representatives from countries and partners during a conference convened by the Regional Office for Africa, in Addis Ababa, in 2005, with the intention of presenting the strategy to the Regional Committee in 2006.

Child and adolescent health strategy for the WHO European Region

Based on the request of the WHO Regional Committee for Europe in 2003, the WHO Regional Office for Europe developed a European child and adolescent health strategy and a set of accompanying tools to facilitate national strategy development. In 2005, the strategy was unanimously endorsed

by the Regional Committee. The Regional Office directly supports twelve countries to develop or strengthen their national policies and strategies.

Child survival strategy for the WHO Western Pacific Region

Based on the request of the WHO Regional Committee for the Western Pacific, a regional child survival strategy was developed integrating current knowledge in child survival with the needs of the Region and particularly of the high-burden countries. The process included coordination with other agencies and partners, with the final product being the WHO/UNICEF Regional Child Survival Strategy. The Strategy includes a new classification of countries in the region with recommended interventions for each group. It was endorsed by all Member States during the Regional Committee Meeting in 2005, and countries were urged to move forward with one coordination mechanism, one plan, and one monitoring and evaluation system; to mobilize for advocacy and communication; and to mobilize resources to accelerate and sustain child survival. Translation of these recommendations into country-specific actions has been initiated in key countries.

BOX 1.2

World Health Day 2005 - Make every mother and child count

The aim of World Health Day 2005 was to create momentum that compels governments, the international community, civil society and individuals to take action to improve the health and well-being of mothers and children – and especially to help save the lives of millions of mothers and children who are dying each year during childbirth and early childhood. The overall message was one of hope for all mothers and children. The future will be healthier and more productive for all societies if we act now to make every mother and child count.

Renewed WHO commitment to child survival

During the biennium, WHO launched high-level initiatives to raise awareness of the unmet needs of infants and children, and to accelerate action in countries towards achieving international goals related to child survival.

World Health Day and *The world health report*

The world health report 2005 was launched on World Health Day (WHD), 7 April 2005. CAH developed the chapter on child health and provided relevant input to most other chapters. The report contains new data on causes of child mortality, including for the newborn period, and on the costs of achieving universal coverage of a set of interventions essential to reducing child mortality. To discuss the key policy messages emerging from the report and develop policy briefs that would be useful for national decision-makers, WHO convened a High-Level Policy Meeting in March 2005. During the meeting, representatives from 15 countries and 30 partner agencies systematically reviewed policy recommendations regarding the continuum of care for maternal, newborn and child health services, the financing of those services, human resources development and management strategies, and partnerships including with civil society. As an outcome, a set of five policy briefs were developed to accompany *The world health report*.

World Health Day 2005 served to raise the profile of maternal and child health at national and international levels (see Box 1.2). CAH was instrumental in the preparations, which included events in many countries and the launch of the *The world health report* in New Delhi by the Government of India. The Department also contributed to organizing a global conference on maternal, newborn and child health, "Lives in the balance", sponsored by the partnerships for maternal, newborn and child health in New Delhi following the launch of the report. The conference brought together delegations from 12 governments with a host of partners. The resulting

Delhi Declaration on Maternal, Newborn and Child Health (see Annex C) was read out by Ms Sonia Gandhi. WHO Member States at the Fifty-eighth World Health Assembly reiterated their commitment to achieving the Millennium Development Goals for improving maternal and child health by adopting resolution WHA58.31 on universal coverage.

Global workshop on child survival

The Department participated in a global workshop in 2004 in Venice, Italy, on "Child survival: from knowledge to action", cosponsored by the World Bank, WHO and the Disease Control Priorities Project. Among the participants were the WHO Assistant Director-General for Family and Community Health, the Director of Family Health from the WHO Regional Office for Europe, and senior ministry of health officials from several countries.

The participants recognized the need for:

- integrating and building on successes, and for using these to promote and scale up interventions;
- more resources, particularly at country level, to scale up coverage of child survival interventions, and for tools to estimate costs (such as Marginal Budgeting for Bottlenecks);
- continued monitoring of progress, including better measurement of outcomes.

Innocenti Plus 15

The Department participated in an event in Florence, Italy, to mark the 15th anniversary of the *Innocenti Declaration* on protection, promotion and support for breastfeeding. The meeting reviewed progress over the past 15 years, and presented a vision for the future of "an environment that enables mothers, families and other caregivers to make informed decisions about optimal feeding and provides the skilled support needed to achieve the highest attainable standard of health and development for infants and young children". The participants issued a call to action, noting that the Millennium Development Goal for child survival will not be met without improved infant and young child feeding practices (see Chapter 4 for more information).

Tracking progress in child survival

In 2005, recommendations for measuring progress towards the international goals for maternal and child survival were discussed at an international conference in London, on "Tracking progress in child survival: countdown to 2015". During the conference, participants agreed on indicators to serve as the basis for monitoring coverage outcomes in child survival. They also proposed a process for measuring these indicators. The conference is described in more detail in Chapter 6 of this report.

Renewed focus on prevention of HIV – young people at the forefront

Young people are at the centre of the HIV pandemic. About half of all new HIV infections are among people below the age of 25 years. Each day, 5000–6000 young people contract HIV. Among the 40 million people infected with HIV, an estimated 10 million are between the ages of 15

and 24 years. Sub-Saharan Africa and South Asia are the most affected regions, with the highest rates of new infections and the highest absolute numbers of young people living with HIV/AIDS. Both boys and girls are at risk. In areas with generalized epidemics, more girls than boys are infected because of biological, sociocultural and economic reasons. In other areas, boys form the majority of new infections because in conentrated epidemics they are more likely than girls to be part of the groups most at risk of HIV infection (e.g. injecting drug users, and men who have sex with men).

At the turn of the century, a number of international goals were formulated with the aim of reducing the prevalence of HIV among young people. The 2001 United Nations General Assembly Special Session on HIV/AIDS called for reducing HIV prevalence among young people by 25% in the most affected countries, and reaching at least 95% of young people with the information, skills and services needed to reduce their vulnerability to HIV, by 2010. The 2002 United Nations General Assembly Special Session on children highlighted the importance of developing and implementing national health policies and programmes for adolescents, including goals and indicators, to promote their physical and mental health, and reinforced the targets that had been endorsed during the Special Session on HIV/AIDS.

There are a number of strategic reasons for focusing on HIV and young people:

- HIV provides a good entry-point for a broader focus on young people's health and development, allowing CAH to capitalize and expand on the political commitment and resources that are being allocated to HIV. The problems that undermine adolescents' health and development tend to have common roots and to be linked in terms of cause and effect.
- HIV provides an opportunity to focus on sensitive issues, such as sexual health and development, which many politicians and community leaders tend to ignore, despite the fact that these are crucial issues for young people's health, development and rights.
- HIV provides an opportunity to focus attention on particularly vulnerable and marginalized young people, who are often at the centre of HIV epidemics but receive scant attention in national efforts to improve adolescent health and development.

In 2005 CAH initiated work with UNAIDS cosponsors and other partners to develop more robust approaches for monitoring the United Nations General Assembly Special Session health services coverage goal for young people. This work will have wide implications for monitoring the implementation of adolescent-friendly health services in countries.

CHAPTER 2

Keeping abreast of the situation

A strong evidence base on child and adolescent health and development is critical for the development of effective policies, strategies, programmes and interventions. In 2004, CAH supported the development of data collection tools, the implementation of studies, and the dissemination of results. These activities led to the development of guidelines and tools, as well as advocacy for action and resource mobilization.

Addressing epidemiological information on children under 5 years of age

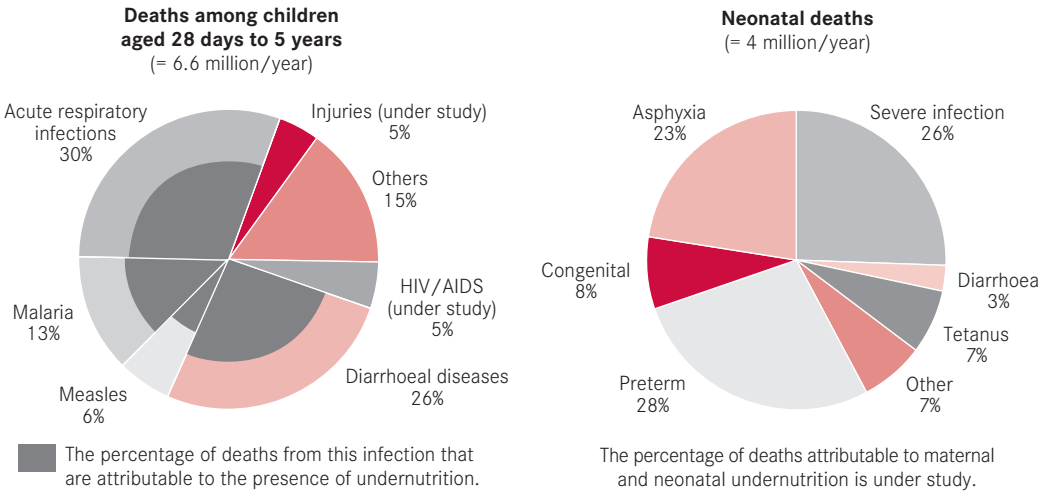
The Department strengthened and expanded the work on neonatal and child health epidemiology. During the past biennium, the main achievement in this area was the conclusion of the work on under-five and neonatal cause-specific mortality estimates, which was carried out in collaboration with the Child Health Epidemiology Reference Group (CHERG), the WHO Department of Measurement and Health Information Systems (MHI), and the UNICEF Division of Policy and Planning. In 2005, CAH expanded the work on child health epidemiology to include the identification of gaps in relevant information on the burden of disease in children, to assist in the estimation of the distribution of etiological agents of diarrhoeal disease, and to provide technical support on the use of indicators for child health rights. Most importantly, CAH recently initiated, together with MHI/WHO Cluster of Evidence and Information for Policy (EIP), WHO regional offices and Member States, work with a special focus on country-specific epidemiological profiles.

Cause-specific estimates for neonatal mortality

During 2004–2005, CAH worked with partners through CHERG to improve cause-specific estimates of newborn mortality. A systematic review of the literature was carried out, a database was constructed containing information from the papers reviewed, and methods were developed to estimate cause-specific proportional mortality among newborns. This effort resulted in a new chart, which includes separate estimates of causes of death for children 28 days to 5 years of age and for neonates (Figure 2.1). Additional results from this work have shown the different patterns in the distribution of causes of death, according to neonatal mortality levels: where neonatal mortality rates are higher than 45 per 1000 live births, severe infections, tetanus and diarrhoea account for about 50% of neonatal deaths; where neonatal mortality rates are less than 15 per 1000 live births, sepsis or pneumonia are responsible for less than 20% of these deaths (Figure 2.2). These estimates were published in *The world health report 2005* and in the neonatal health series in the *Lancet* (2005).

FIGURE 2.1

Major causes of death in neonates and children aged 28 days to 5 years (yearly average for 2000–2003)



Newborn health situation analysis in Zambia

A study to assess the situation of maternal and newborn health was initiated in the United Republic of Tanzania and Zambia in 2005. Preliminary results from the desk review and key informant discussion in Zambia indicate that neonatal mortality increased from 35 to 37 per 1000 live births between 1996 and 2001, with asphyxia accounting for 40% of the deaths. The results also indicated that the lack of human resources constrains all levels of care, contributing to the unavailability of skilled care during pregnancy, childbirth and the immediate postnatal period.

Estimates of cause-specific mortality and of the contribution of undernutrition to the different causes of death among children 28 days to 5 years of age

During the biennium, CHERG finalized global, regional, and country estimates of mortality attributable to the major causes of death among

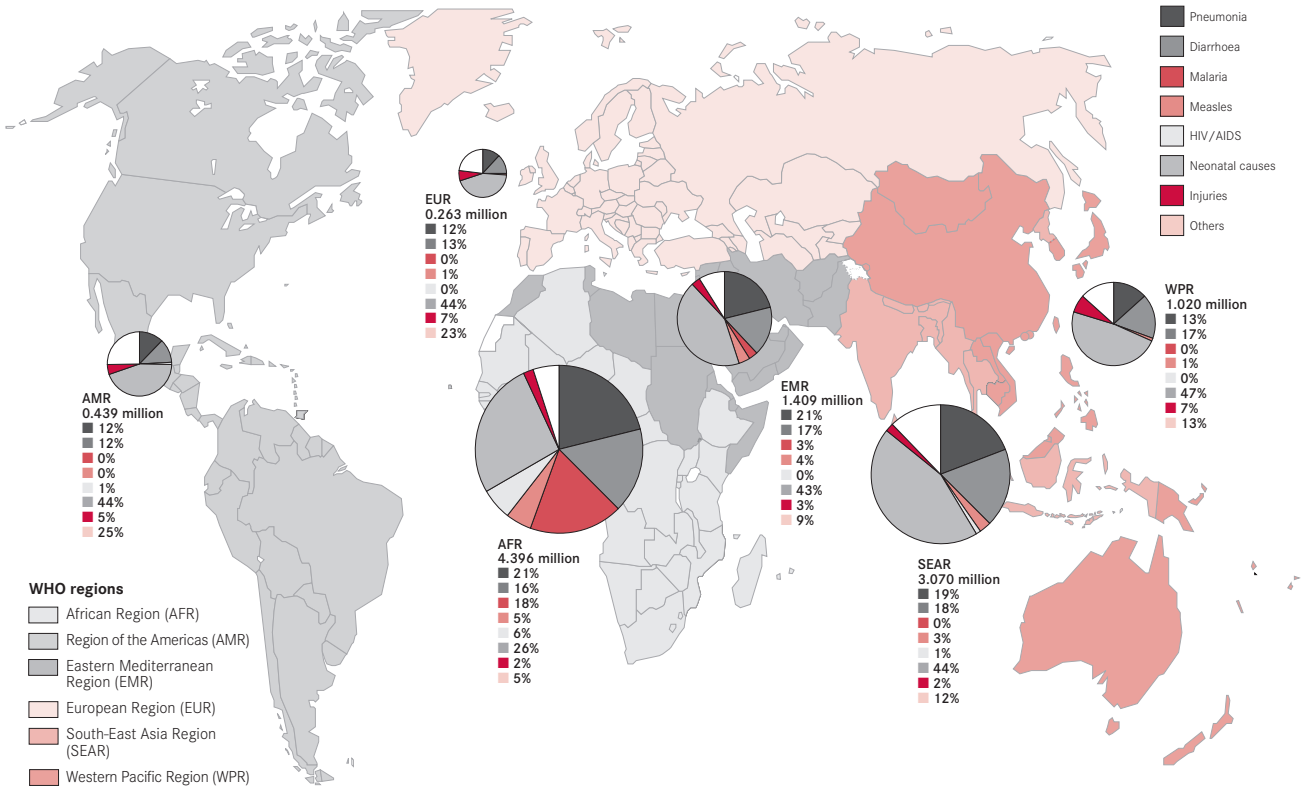
FIGURE 2.2

Distribution of causes of death among neonates according to neonatal mortality rates

Source: Lawn JE, Cousens S, Zupan J, for the Lancet Neonatal Survival Steering Team, 4 million neonatal deaths: when? where? why? *Lancet*, 2005; 365:891–900.

FIGURE 2.3

Causes of under-five mortality by WHO region, 2000–2003



Source: Bryce J et al. WHO estimates for the causes of death in children. *Lancet*, 2005, 365:1147–1152.

children from 28 days to 5 years of age. The global and regional estimates shown in Figures 2.1 and 2.3, respectively, were derived from single-cause and multi-cause models and were triangulated with the results of other available studies published in the literature. All results were jointly reviewed by WHO, UNICEF and independent senior investigators. The new set of cause-specific estimates reflects the best available epidemiological evidence and estimation methods. These results were included in WHO's official estimates of proportional mortality among children under 5 years of age in *The world health report 2005*, and were published in the *Lancet* in 2005.

Country-specific estimates have revealed that only 15 countries account for more than 70% of both pneumonia and diarrhoea deaths worldwide.

The contribution of undernutrition to the different causes of child death was estimated, and two papers describing the methods and results were published in 2004. The graphic representation of this contribution is the result of an extensive consultative process between CHERG, CAH, MHI/EIP, NHD/WHO Cluster of Noncommunicable Diseases and Mental Health (NMH) and UNICEF. It is illustrated in Figure 2.1 as a shaded area in the pie-chart and shows the following contribution of undernutrition to child deaths: diarrhoea, 61%; malaria, 57%; pneumonia, 52%; and measles, 45%.

Estimates of cause-specific morbidity among children less than five years of age

During the last biennium, global estimates of morbidity from acute lower respiratory infections were finalized and published in the *Bulletin of the*

World Health Organization. These calculations yielded an annual incidence of 150.7 million new pneumonia cases among children under age 5 years in developing countries, of which 7%–13% were estimated to be severe enough to require hospital admission. A paper on quality and methodological issues related to the development of these estimates was published in a peer reviewed journal.

Country-level work and estimates

WHO information on neonatal and under-five cause-specific mortality at global and regional levels is calculated as aggregates of country-specific estimates. In order to publish individual country profiles during the next biennium, CAH has started a country consultation process, together with MHI/EIP, and WHO regional and country offices. Countries are provided with the information on estimated proportions of child deaths by cause, with corresponding explanatory notes on how such estimates were derived. Member States are expected to review the estimates and comment on any relevant missing data, or to send available updated information to WHO headquarters for possible incorporation.

Moreover, CAH is directly engaged with Member States in the review of country-level data. In 2005, the Western Pacific Region, CAH/WHO, UNICEF, and UNFPA jointly agreed with the Ministry of Health, China, to review national strategies for maternal and child survival. CAH provided specific support on addressing epidemiological sub-national profiles with a focus on disparities in maternal and child mortality, updating the interventions in line with current epidemiological information, and recommending service delivery strategies and financing mechanisms. The review and analysis of national epidemiological data included national and subnational mortality levels and trends, main causes of death and their geographical distribution. These analyses have provided an important and improved basis for the selection of interventions to be delivered as part of the child survival strategy and policy in China (see Table 2.1).

Results from the field visits to Guizhou, Shaanxi and Shanxi provinces and national data on maternal and child health, nutrition and service delivery were reviewed as well as key data sources including the Maternal and Child Health National Surveillance of China (1996–2004), National Nutrition and Health Survey (1992–2002), National Health Services Survey (2003) and National Survey on Midwifery Practice and Obstetric Resources (2003). Prevailing interventions, strategies and policies were compared with international references. The two *Lancet* series for newborn and child survival served as a benchmark.

Assessment recommendations with implications for planning and programme implementation included the following: launch a national programme on maternal, neonatal and child mortality focused on high risk groups (based on the existing intersectoral national programme of maternal mortality reduction); group interventions based on epidemiological analyses by county level (rather than province level), according to maternal and child mortality rates, and numbers of deaths; select interventions on the basis of epidemiological profiles and effectiveness (with universal access to an essential package of care, complemented with additional interventions to deal with "transition" scenarios); strengthen the maternal and child health surveillance system.

TABLE 2.1

Preliminary analysis of interventions, China, 2005

Neonatal mortality reduction: interventions, efficacy and implementation

Intervention	Policy	Potential risk reduction[1]	Implementation
Folic acid supplementation	Yes	Incidence neural tube defects ? 72%	Pilot projects
Tetanus toxoid immunization	Yes	33%–58%	Pilot projects
Syphilis screening & treatment	Yes	Prevalence dependent	No
Pre-eclampsia prevention	Yes	Incidence prematurity ? 34%	Yes
Detection & treatment of symptomatic bacteriuria	No	Incidence LBW/prematurity ? 40%	No
Antibiotics for premature rupture of membranes	Yes	Incidence infections ? 32%	Yes
Corticosteroids for preterm labour	Yes	40%	County level and above
Management of breach	Yes	71%	Yes
Labour surveillance (including partograph)	Yes	40%	Pilot projects
Clean delivery practices	Yes	58%–78%	Yes
Resuscitation of newborn	Yes	6%–42%	Yes
Breastfeeding counselling	Yes	55%–87%	Yes
Prevention & management of hypothermia	Yes	18%–42%	Yes
Kangaroo mother care	No	Incidence infections 51%	No
Community-based pneumonia management	Yes	27%	Yes

Under-five mortality reduction: interventions, efficacy and implementation

Intervention	Policy	Potential mortality reduction	Implementation
Breastfeeding counselling	Yes	13%	Yes
Complementary feeding counselling	Yes	6%	Yes
Hygiene, water sanitation	Yes	3%	Yes
Hib immunization	Yes	4%	Partial
Vitamin A	No	2%	No
Nevirapine and replacement feeding	Yes	2%	Small scale
Measles immunization	Yes	1%	Yes
Antibiotics for pneumonia	Yes	6%	Yes
Oral rehydration therapy	Yes	15%	No
Antibiotics for dysentery	Yes	3%	Yes
Zinc adjuvant therapy	No	4%	No
Vitamin A therapy	Yes	<1%	Yes

missing interventions; partially implemented (effective) interventions; intervention being implemented; LBW, low birth weight

[1] To be adjusted to take account of the epidemiology of childhood illnesses in China.

Preliminary findings of the maternal and child health assessment and policy recommendations were presented at a high-level meeting in 2005.

Co-morbidity

Using data from a study in northern Ghana, the CHERG ad hoc working group on co-morbidity developed a measure of co-occurrence; tested different combinations of illnesses for the presence of co-morbidity; attempted to determine to what extent this co-morbidity might have been

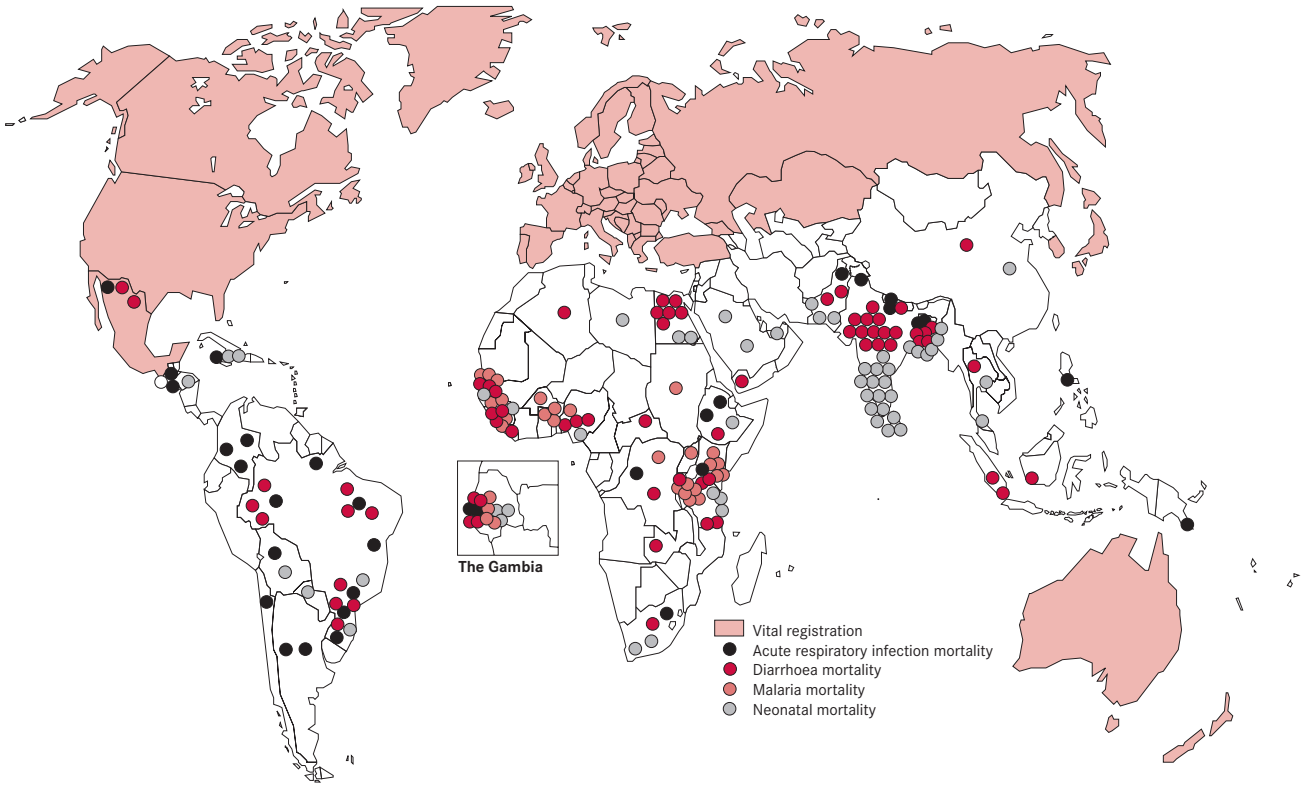
the result of the concentration of illness at particular times of the year, in particular age groups, or among the undernourished; and sought to establish whether there was any evidence of a synergistic interaction between diseases in terminal illness. The analysis suggested that co-morbidity does not have as great an impact as expected. However, the work was limited by the lack of suitable data sets to allow a thorough examination and analysis of co-morbidity. Given the scarcity of appropriate data sets, and after reviewing the work, CHERG agreed that all possible analysis on existing data has been performed. A paper showing the analysis and results was published in 2005. Collection of new data would be needed for a final conclusion on the impact of co-morbidity on mortality among children less than five years of age.

Gaps in policy-relevant information on burden of disease in children

Valid information about cause-specific child mortality and morbidity is an essential foundation for national and international health policy. Few of the developing countries, accounting for 98% of all under-five child deaths, have either vital registration systems complete enough to support accurate estimates of causes of child death or valid routine health service data on major causes of childhood disease. Moreover, vital registration information is of the lowest coverage and quality in the poorest countries with the highest child mortality. As an alternative source of information on cause-specific childhood disease burden, CHERG reviewed more than 17 000 studies of which only 308 were regarded as possible unbiased sources of

FIGURE 2.4

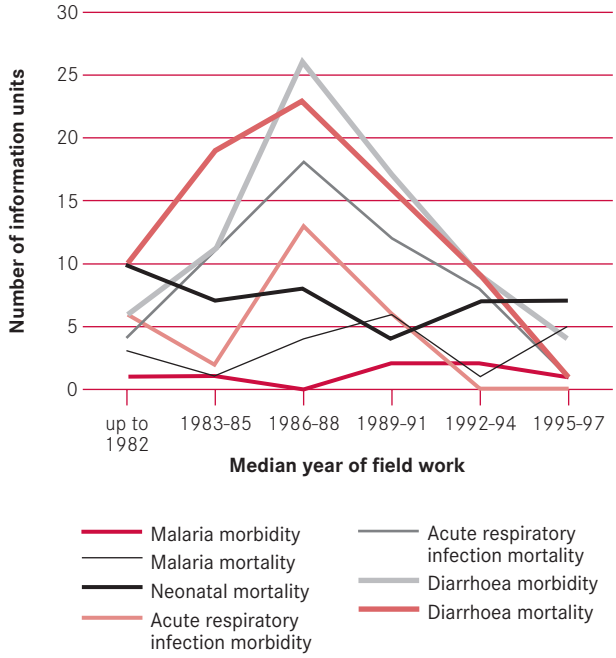
Geographical distribution of information from studies on cause-specific morbidity and mortality burden in children younger than 5 years of age published between 1980 and 2000



Source: Rudan et al. Gaps in policy-relevant information on burden of disease in children: a systematic review. *Lancet*, 2005, 365:2031–2040.

FIGURE 2.5

Distribution of information on cause-specific morbidity and mortality among children under 5 years of age, by mid-year of study



Source: Rudan et al. Gaps in policy-relevant information on burden of disease in children: a systematic review. *Lancet*, 2005, 365:2031–2040.

estimates. However, the information units were not evenly distributed. The geographical distribution of these studies revealed a pattern of smaller well-researched clusters surrounded by large areas with little available information (Figure 2.4). More importantly, no good quality data were identified from countries accounting for about one third of all child deaths globally.

This review of global data on the major causes of child disease burden also showed a marked reduction in the number of published studies on morbidity and mortality in the past 10 years (Figure 2.5). The strikingly decreasing trend over time, especially concerning pneumonia and diarrhoeal disease, suggests falling research investment in this field. Data are especially sparse from the world's least developed countries with the highest child mortality burden and with no other source of cause-specific morbidity or mortality information.

These findings document a worsening situation in the availability of good quality information with respect to child health epidemiology. They highlight the need for the development of guidelines for the conduct of burden of disease studies and the urgency of supporting field-based epidemiological data collection at national and sub-national levels to assist the development of policies and strategies for child health.

Distribution of etiological agents of diarrhoeal disease

Estimates of the distribution of etiological agents of diarrhoeal disease in the community and among outpatients and inpatients are under development by an ad hoc group from the Instituto de Investigación Nutricional (INN), Peru. During 2005, IVB and CHERG, with specific participation of CAH, the INN, MHI, and the United States Centers for Disease Control and Prevention, established collaboration for the joint development of country-specific estimates of the burden associated with rotavirus infection. An external review meeting on the burden of disease attributable to rotavirus was held in WHO in 2005 during which agreement was reached on the input data and estimation methods. Country-specific estimates are currently under review.

Child rights to health

In 2005, CAH provided technical support to the work on child rights to health, by initiating an analysis of existing child health indicators and suggesting that some of these indicators be disaggregated and adapted for the measurement of possible existing inequities. The analysis of these possible discrepancies (e.g. gender differences in care-seeking or mortality, disaggregation of mortality rates by geographical or income distribution) might reflect important issues related to child rights to health.

The WHO Regional Office for Africa organized a capacity-building

TABLE 2.2

Summary list of child survival indicators emanating from the UNICEF/WHO Meeting on Child Survival Survey-based Indicators, June 2004

Category	A list (high priority)	B list (secondary)
Mortality	Under-five mortality rate [MDG] Neonatal mortality rate	Infant mortality rate [MDG]
Infant feeding	Exclusive breastfeeding (< 4 and < 6 months) Continued breastfeeding (12–15 and 20–23 months) Timely complementary feeding rate (6–9 months)	 Frequency of feeding % of children 0–11 months who were properly fed
Vitamin A	Vitamin A supplementation (under-five)	
Malaria	Household availability of ITNs ITN use (under fives) [MDG] Anti-malarial treatment (under-five) [MDG]	 ITN use (pregnant women) IPT (pregnant women)
Water and sanitation	Use of improved drinking water sources [MDG] Use of adequate sanitary means of excreta disposal [MDG]	
Newborn care	Timely initiation of breastfeeding	
Diarrhoea	ORT (ORS or appropriate household solution) use [ORT (ORS or appropriate household solution) or increased fluids] and continued feeding received	
Immunization	Neonatal tetanus protection at birth Measles immunization coverage [MDG] DPT3 immunization coverage	 Hib coverage
ARI	Antibiotic treatment of pneumonia Care-seeking for pneumonia Use of solid fuels for cooking [MDG]	 Solid fuels for heating [MDG]
Malnutrition	Birth weight below 2500 grams Underweight prevalence [MDG]	Proportion of babies weighed at birth Stunting prevalence Wasting prevalence
Maternal health	Skilled attendant at delivery	Maternal Body Mass Index Birth spacing indicator
Other child health		Care-seeking knowledge of danger signs

MDG, Millennium Development Goal; ITN, insecticide-treated bednet; IPT, intermittent prophylactic treatment; ORT, oral rehydration therapy; ORS, oral rehydration salts; DPT3, diphtheria-pertussis-tetanus third dose; Hib, *haemophilus influenzae* type B; ARI, acute respiratory infection.

workshop on the United Nations Convention on the Rights of the Child and proposal development for resource mobilization. The workshop was attended by 20 regional, sub-regional and national WHO staff who work in the area of child and adolescent health.

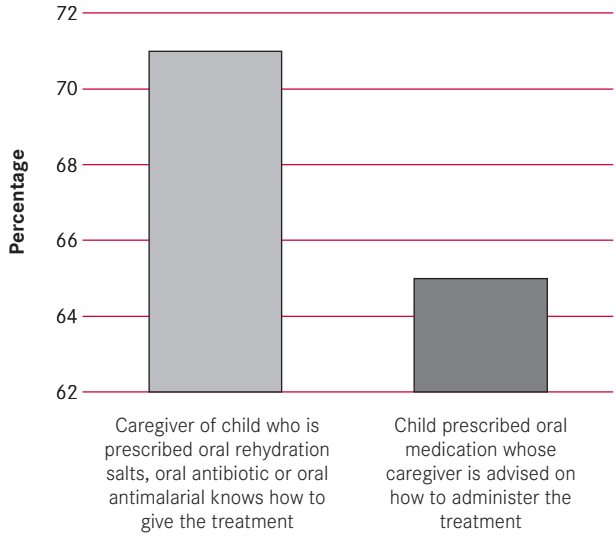
Monitoring and evaluating child health programmes

During the biennium, CAH 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 the development of measurement tools. The methodology for assessing the quality of care delivered to sick children in first-level health facilities was used to strengthen capacity for child health programming. Plans have been made for developing a rapid method to assess coverage of interventions and to develop short guidelines on programme review.

In previous bienniums, efforts focused on documenting, monitoring and evaluating the introduction and implementation of the IMCI strategy in countries. In 2004, the focus broadened to support efforts to monitor

FIGURE 2.6

Counselling by health workers and caregiver knowledge, IMCI health facility survey, Malawi, 2004



and evaluate interventions that are predicted to have the greatest impact on child survival, with a particular emphasis on measuring progress towards global goals and collecting more information from countries related to policies and programmes. In 2005, CAH collaborated with the WHO Communicable Diseases Cluster (CDS) in order to standardize its global monitoring effort and link its database with the WHO Global Health Atlas (www.who.int/globalatlas). A web-based global monitoring data collection system has been developed and will be tested early in 2006. The Department contributed to several international meetings that reviewed progress towards the Millennium Development Goals.

In 2004, UNICEF and WHO reached a consensus with key international stakeholders on a minimum set of child survival indicators to assess progress towards the Millennium Development Goals, as well as the goals set out in the World Fit for Children Declaration and Plan of Action. The meeting focused on coverage and impact indicators that can be measured through household surveys. The set of preventive and curative interventions outlined in the series on child survival published in the *Lancet* in 2003 formed the basis for discussions.

Based on the list of indicators (Table 2.2), the Department contributed to the revision of the household survey questionnaires of the UNICEF-supported Multiple Indicator Cluster Surveys (MICS) and the USAID-supported Demographic and Health Surveys (DHS). This work should help to maintain continuity with previous surveys, as well as harmonizing questionnaires in order to facilitate comparisons over time, and within and across countries.

The *Health facility survey manual: a tool to evaluate the quality of care delivered to sick children attending outpatient facilities*, published in 2003, was widely used by countries to strengthen child health programmes. New surveys were completed during this biennium in Malawi (Figures 2.6 and 2.7), Mozambique (Figure 2.8), as well as in Bolivia, Ethiopia, the Niger and Uzbekistan. More capacity in survey methodology was built in francophone Africa and this effort will expand in 2006 in several WHO regions.

FIGURE 2.7

Health systems support, IMCI health facility survey, Malawi, 2004

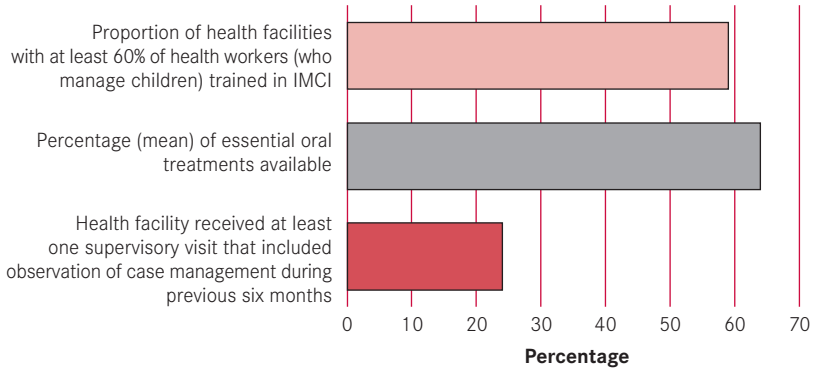
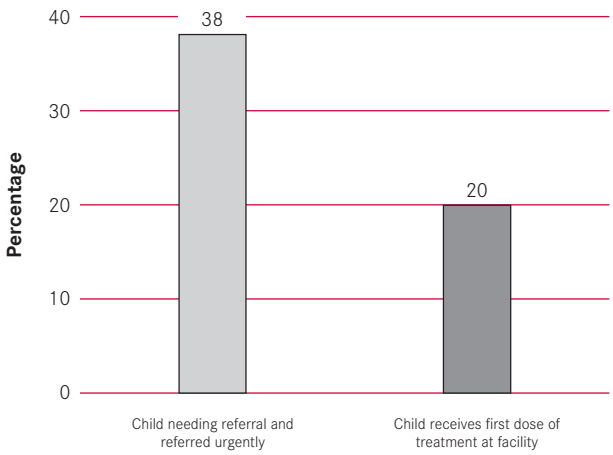


FIGURE 2.8

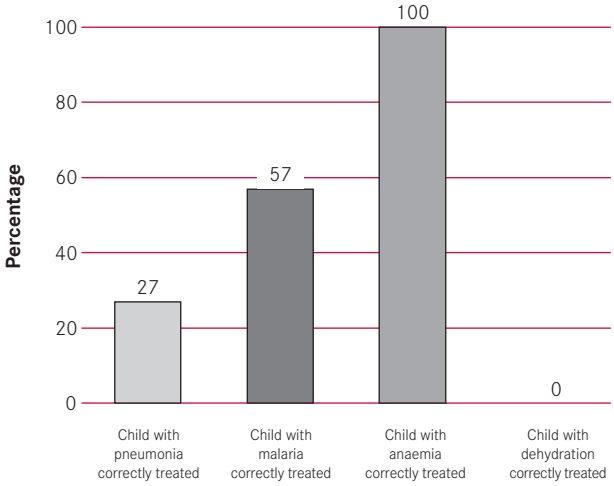
Results of IMCI health facility survey, Mozambique, 2005

Health worker assessment of sick children

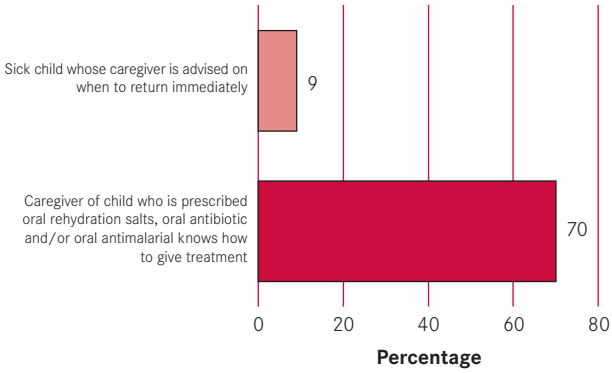
Better care provided in the facility



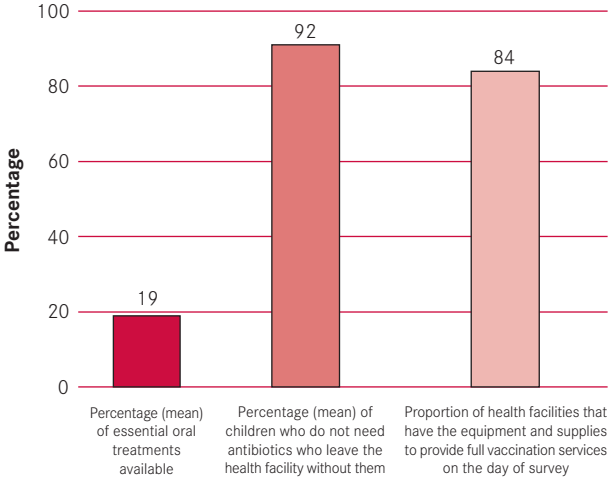
Correct treatment of pneumonia, malaria, anaemia and dehydration



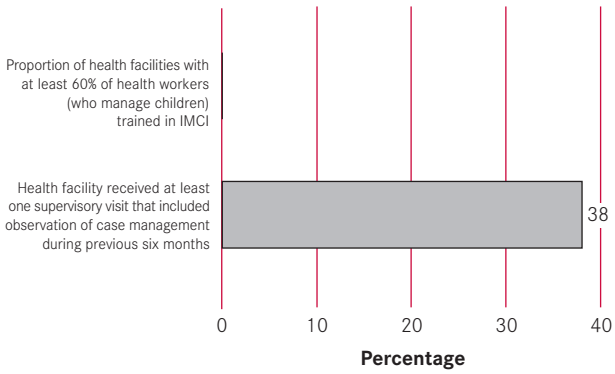
Counselling by health workers and caregiver knowledge



Health systems support: availability of drugs, equipment and vaccines



Health systems support: capacity building, trained personnel and supervision



Capacity building was provided by the Regional Office for Africa to the Democratic Republic of the Congo, Kenya, Senegal and Zimbabwe to start health facility surveys in the first quarter of 2006.

Multi-Country Evaluation of IMCI

The health impact of IMCI implementation has been evaluated to date in Brazil, Peru and the United Republic of Tanzania.

- In the United Republic of Tanzania, the introduction of IMCI was associated with a 13% drop in all-cause under-five mortality in the two districts in which IMCI case management training had been conducted and district-strengthening activities carried out, relative to the two comparison districts providing routine child health care. Children in the IMCI districts were also significantly less likely than those in the comparison districts to be stunted.
- No significant associations were found between clinical IMCI training coverage and indicators of outpatient service use, vaccine coverage, mortality or malnutrition in either Brazil or Peru. The lack of association persisted after adjustment for several contextual factors including socioeconomic and environmental indicators and the presence of other child health projects. Community health workers were also trained in IMCI, and training coverage was not associated with any of the process or impact indicators, except for a significant positive correlation with mean height for age. According to the impact evaluation model, IMCI implementation must be sufficiently strong to lead to an effect on health and nutrition. Policy and health system supports for IMCI implementation in Brazil and Peru were weak, and this, as well as the relatively low training coverage levels that were sustained over time, may explain why the expected impact was not documented. Nevertheless, in Peru even districts with high levels of training coverage failed to show an impact, perhaps because levels of mortality were already quite low, and because of inconsistencies between burden of disease and the IMCI interventions.

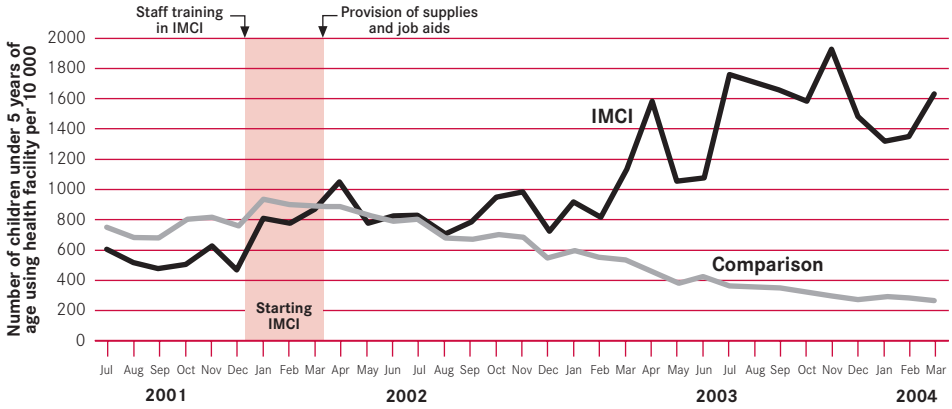
The other site in which IMCI is expected to achieve sufficient levels of implementation to support an impact evaluation is Bangladesh, where the follow-up surveys are scheduled for 2007. The community component of IMCI is being strongly implemented, and the use of government health facilities with IMCI has increased sharply (Figure 2.9).

Cost-effectiveness evaluations have been completed in the United Republic of Tanzania and are under way in Bangladesh and Brazil.

- In the United Republic of Tanzania, reductions in under-five mortality and improvements in nutrition were achieved at no additional cost to districts. IMCI resulted in slightly longer consultation times, but this time was drawn from periods when health workers were not otherwise occupied, which implies increased efficiency in providing health services at primary facilities in general and to under-fives in particular. An examination of the cost-effectiveness of IMCI in improving the quality of care received by under-five children and their caregivers at first-level facilities in the United Republic of Tanzania shows that for the same level of expenditure, facilities with

FIGURE 2.9

Health facility use by sick children per year: IMCI evaluation study, Bangladesh, 2001–2004



Source: Routine management information system and Government of Bangladesh management information system.

IMCI were six times more effective in correctly managing sick children than in comparison facilities, owing to the significantly higher quality of care provided in facilities with IMCI. IMCI was therefore found to be cost-effective in reducing child mortality and morbidity in the United Republic of Tanzania, by achieving a positive health impact at no additional cost.

- Also in the United Republic of Tanzania, a study was completed that analysed factors associated with the amount of out-of-pocket payments made by families for child health care, drawing on data collected in Multi-Country Evaluation household surveys carried out in 1999 and 2002. The results show that out-of-pocket payments were about 33 times higher when care was sought at government primary health facilities running a cost-sharing scheme than in those that were not part of the scheme. Caregivers who took their ill children to nongovernmental organization primary facilities paid even more, an average of 56 times more than those seeking care at government primary facilities not operating the cost-sharing scheme ($p<0.0001$). IMCI was associated with lower out-of-pocket payments among government primary facilities not operating the cost-sharing scheme (TSh 5 versus TSh 11; $p=0.07$). Out-of-pocket payments were higher in richer, rather than poorer, households, and in those who had travelled farthest to reach a facility. In conclusion, health care financing mechanisms matter in the determination of household economic burden of disease related to under-five illness. Appropriate health financing schemes for different socioeconomic groups and equitable accessibility to basic health care are key elements in preventing further impoverishment of the very poor through catastrophic payments, or income losses, and in improving indicators for inequities in health that still show unacceptable differences across population groups.

Key findings of the Multi-Country Evaluation were incorporated in the child survival series published in the *Lancet*. Further evidence of uptake of the findings by policy-makers included the incorporation of work on delivery strategies into the research agendas of both WHO and UNICEF

and the identification of intervention coverage as a theme for the initiative on "Tracking progress in child survival: countdown to 2015". In their addresses to the 2005 World Health Assembly, held in Geneva in May 2005, both the Executive Director of UNICEF and the Director-General of WHO, as well as Bill Gates, emphasized the importance of achieving high, sustained and equitable coverage with child survival interventions.

The latest evidence on IMCI has been summarized in a special issue of *Health Policy and Planning* published in December 2005.

Collecting and using strategic information related to adolescents

During the biennium, the Department supported the development and testing of a number of methods and tools designed to improve the collection and use of strategic information related to adolescents. The work focused on measuring the quality, coverage and cost of health services, on assessing key risk and protective factors that contribute to – or hinder – adolescent health and development, and the effects of participation on adolescents.

Assessing the quality of health services delivered to adolescents

Tools to measure the quality of health services delivered to adolescents were field-tested and applied in 2004 in Mongolia and the Russian Federation. The field-test results were summarized in two journal articles. Building on these experiences, CAH developed a bank of instruments for the measurement of 33 characteristics of adolescent-friendly health services, identified through an international consultative process. The instrument bank is intended for use in countries that have developed quality standards for health services for adolescents. Elements of the draft tool were tested with success in workshops in India and Kenya. The draft tool was also shared with Bangladesh and the United Republic of Tanzania. In the latter it provided the basis for the development of a monitoring and evaluation tool to accompany the national standards on adolescent reproductive health services.

A shortened quality assessment was prepared and pilot-tested in Uganda. The tool addresses 10 (of the 33) characteristics of quality. It was developed for use with a costing tool (see below) that addresses 6 of those 10 characteristics, but could be used independently. The findings from pilot-testing are being analysed.

Measuring the coverage of interventions

During 2005, in St Petersburg, Russian Federation, CAH worked with UNICEF to field test a simple tool for assessing the coverage of health services for young people. In the United Republic of Tanzania, CAH worked with the African Youth Alliance project, in two districts, Kinondoni and Temeke, to apply a range of tools to assess the coverage of information provision and life-skills building, as well as access to health services both in schools and in the community.

The experience in St Petersburg clearly showed that it was possible to identify the relative availability, accessibility and acceptability of health services from the perspectives of adolescents or young people. The data

from the United Republic of Tanzania are being analysed using the same analytic framework.

Estimating the cost of making health services adolescent-friendly

CAH developed and pilot-tested tools to assess the costs associated with health service provision to adolescents or young people, in two facilities each in Hanoi, Viet Nam, and Kampala, Uganda. The costing tools are designed primarily for health services relating to sexual and reproductive health and the prevention of HIV among young people. The generic version includes: information and counselling for sexual and reproductive health; provision of contraceptives; management of sexually transmitted infections; counselling and testing for HIV; and harm reduction interventions for injecting drug users. The interventions can be adapted to suit the priorities of programmes providing health services to young people in different country contexts.

The pilot sites in Uganda and Viet Nam were selected to provide different scenarios for costs: at one facility in each country, services were provided in an integrated manner to the general population, whereas at the second site services were provided mainly to young people.

Results from the field tests are being reviewed to design the templates for data analysis. The results from these two pilot studies will provide a range for the unit cost of health services provided to young people.

Examining key determinants of risky behaviour

Behaviours such as unsafe sex, violence, smoking, and alcohol and drug use frequently have a negative impact on the health and development of adolescents. In 2004, CAH contributed to work on determinants of adolescent behaviour.

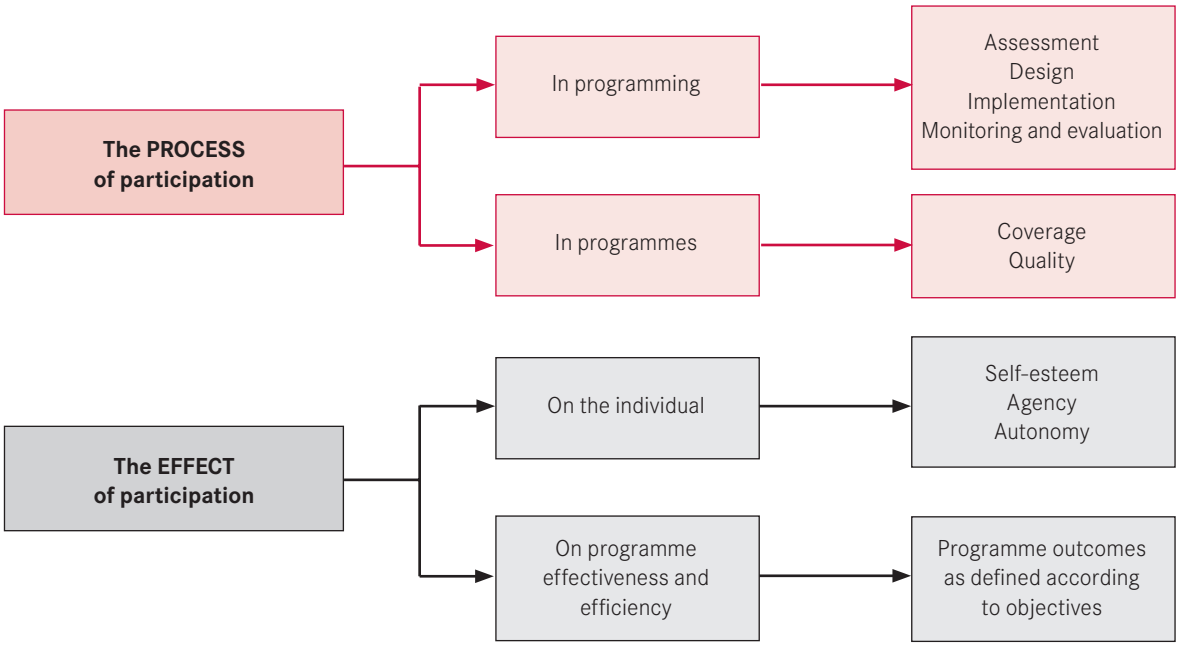
Connections to parents and other trusted adults, and regulation by parents of adolescent behaviour, are protective for young people because they reduce the likelihood of risky behaviour. In collaboration with UNICEF and the Governments of Costa Rica, Jamaica, Malawi, South Africa and Thailand, the Department developed and applied a quantitative survey method to assess the association of these protective factors with selected health and behavioural outcomes including depression, initiation of sexual activity, alcohol and substance use, theft and vandalism. The purpose of this assessment is to identify which items for connection and regulation are most protective to adolescents. The items identified through this exercise could be inserted in other surveys or used in stand-alone questionnaires. The assessment will also identify components that could be included in programmes to strengthen parenting.

Measuring the process and effects of adolescent participation

The participation of adolescents in interventions designed for their own benefit has long been accepted by the international community as critical to the success of these interventions. CAH supports efforts to better define and measure the process and benefits of adolescent participation, using the conceptual framework shown in Figure 2.10.

A number of reviews and studies were commissioned over the biennium, including studies on the effects of participation on programmes, and

FIGURE 2.10
Overview of a conceptual framework for measuring adolescent participation



the effects of participation on individuals. Country studies were conducted in Bangladesh, Burkina Faso, Jordan and Mongolia.

Preliminary findings demonstrated that participation has positive effects on adolescent health and development outcomes. These positive effects include:

- increased self-esteem and self-efficacy
- increased healthy behaviours related to exercise and nutrition
- decreased unplanned pregnancies
- decreased alcohol and marijuana use
- decreased depressive symptoms, emotional distress, suicidal behaviour and engagement in violent behaviour
- increased connection to peers, parents, teachers or school, and other adults in the community
- increased academic achievement and educational expectancy.

Positive effects of participation were also observed in relation to:

- adults in the community and in the wider environment – improved interactions between adolescents and parents, teachers and other important adults
- organizational and national structures and processes – increased recognition of adolescent needs and involvement of adolescents in designing programmes
- effectiveness of programmes – increased success in reaching adolescent target audiences, and in improving knowledge, attitudes, intention and practices.

Strategic information in the WHO Region of the Americas

The WHO Regional Office for the Americas strengthened efforts to monitor HIV status among young people, and policies and programmes aimed to prevent HIV. A region-wide review of specific attention to young people in national HIV/AIDS plans was undertaken as well as an in-depth assessment of the policy environment related to HIV among young people. In addition, current HIV/AIDS surveillance data in the region were examined for information related to the HIV/AIDS status of young people.

Strategic information in the WHO South-East Asia Region

CAH provided support through the WHO Regional Office for South-East Asia for the development of country profiles on adolescent health and development in Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka and Thailand. In collaboration with the HIV/AIDS unit within the Regional Office and UNAIDS, a start was made on drafting a document on best practices in relation to HIV and young people, focusing on: strategic information, such as surveillance and monitoring; services and supplies; and a supportive, evidence-based policy environment.

Strategic information in the WHO Eastern Mediterranean Region

WHO and the International Federation of Medical Students' Associations (IFMSA) cosponsored a workshop to discuss the findings of a survey on risk behaviour among medical students in selected countries of the Eastern Mediterranean Region. The workshop resulted in a joint WHO/IFMSA statement and an IFMSA action plan.

CHAPTER 3

Strengthening the implementation of national programmes

BOX 3.1

Core interventions to improve child survival

- **Nurturing newborns and their mothers:** skilled attendance during pregnancy, childbirth and the immediate postpartum period.
- **Infant feeding:** exclusive breastfeeding during the first six months of a child's life, with appropriate complementary feeding from six months and continued breastfeeding for two years or beyond, supplemented by vitamin A and other micronutrients as needed.
- **Vital vaccines:** increased coverage of measles and tetanus vaccines, as well as immunization against common vaccine-preventable diseases.
- **Combating diarrhoea:** case management of diarrhoea, including therapeutic zinc supplementation and antibiotics for dysentery.
- **Combating pneumonia and sepsis:** case management of childhood pneumonia and neonatal sepsis with antibiotics.
- **Combating malaria:** use of insecticide-treated bednets, intermittent preventive malaria treatment in pregnancy, and prompt treatment of malaria.
- **Prevention of HIV infection and care for people infected with HIV:** treatment, care, infant feeding counselling, and support for HIV-infected women and their infants.

The greatest challenge to promoting the health and development of children and adolescents is the challenge of transforming knowledge into action at country level. To facilitate that transformation, CAH worked through the country, regional and headquarters offices, in three main areas: developing methods and tools to strengthen the planning and management of child health programmes; creating a supportive policy environment for adolescent health; and incorporating a rights perspective into policies and programmes.

Planning and management of child health programmes

To strengthen the planning and management of child health programmes, efforts in 2004 and 2005 focused on developing and introducing methods and tools for priority setting, planning, financing and supervision.

Priority setting and planning

Several programme reviews, including the analytic review of the IMCI strategy, have noted with concern the absence of a programmatic approach to child survival and the scarcity of tools to strengthen the planning and management of programmes. In 2004 and 2005, CAH headquarters and regional offices worked on developing tools to assist programme managers to plan and manage effectively and efficiently the delivery of core child survival interventions (see Box 3.1) in health facilities and in communities. The work built upon the methods and tools already developed and tested in the regions – such as ones from the Eastern Mediterranean Region. In 2004, a workshop was held at the Regional Office for Africa to define the objectives and develop a writing plan for a series of modules for training child-health programme managers in planning and management. Draft modules have been reviewed by CAH regional advisers. A number of countries are developing national strategies for maternal, newborn and child health, and thus management guidelines will need to reflect generic skills needed for integrated programming. The management guidelines for child health will be completed during 2006.

To provide a framework for priority setting and planning within the context of the Millennium Development Goals, the Department continued the development of a paper entitled *Alive at five*, which is based on the series of child survival articles published in the *Lancet* in 2003 and describes the actions that WHO should take to contribute to the achievement of the Millennium Development Goal on child survival.

In the Region of the Americas, guidelines were developed to link community actions with health services. These guidelines cover the responsibilities of management-level health personnel in health centres and health posts.

Planning for human resources is also a priority. As part of a joint learning initiative funded by the Rockefeller Foundation, CAH prepared a case study of Ghana's experience in planning for, and deploying, human resources for programmes to address childhood malnutrition. The case study highlighted gaps between policies and strategies on human resources in programmes dealing with infant and young child feeding. CAH and the Regional Office for Africa collaborated with the Ghana Health Services on a poster that was presented at the London conference on "Tracking progress in child survival: countdown to 2015". The poster is intended to assist managers of child health programmes to identify what role they could play in narrowing these gaps.

In the Western Pacific Region, support was provided for national meetings for developing plans of action and orienting key stakeholders on the child survival strategy. Various meetings were conducted in the Lao People's Democratic Republic including a national workshop for developing a plan of action on maternal and child health. The workshop was attended by government officials and different partners, and supported by technical staff from the regional office working in maternal health and child health. In Papua New Guinea a seminar brought together staff from the National Department of Health, development partners such as the Japan International Cooperation Agency (JICA), paediatricians, UNICEF and WHO with the aim of discussing the current situation regarding child health in Papua New Guinea, and the implications for the country profile and five-year strategy.

Financing

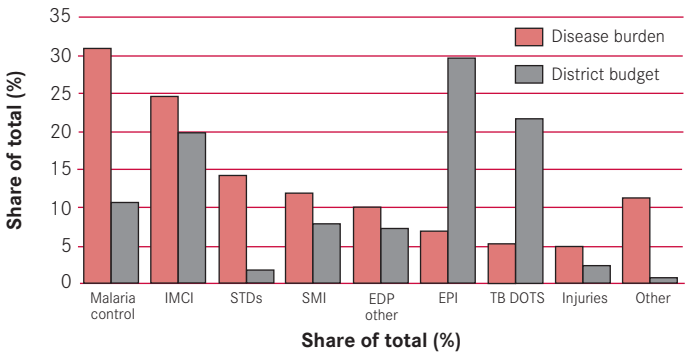
In relation to the financing function of health systems, CAH activities have concentrated on three areas of work in the 2004–2005 biennium: costing, resource tracking and resource allocation.

CAH made significant progress in relation to development of methods and tools to assess the costs for scaling up child health interventions. In collaboration with WHO/EIP a global price tag for reaching universal coverage with child health interventions in 75 countries was produced and published in *The world health report 2005*. The price tag specifies the incremental costs required on a yearly basis, and aims to serve as an investment guide for governments and their development partners.

The model used to assess global costs was modified to be used at country level. The objective of this tool is to assist national policy-makers and child health programme managers in the development of cost estimates for medium-term planning frameworks, in the context of child survival and Millennium Development Goal 4. The draft tool was pilot-tested in Uganda (November 2005) through simulation exercises and hands-on use by staff from the Ministry of Health. Based on the feedback and comments received, the draft tool will be revised in 2006, after two additional field

FIGURE 3.1

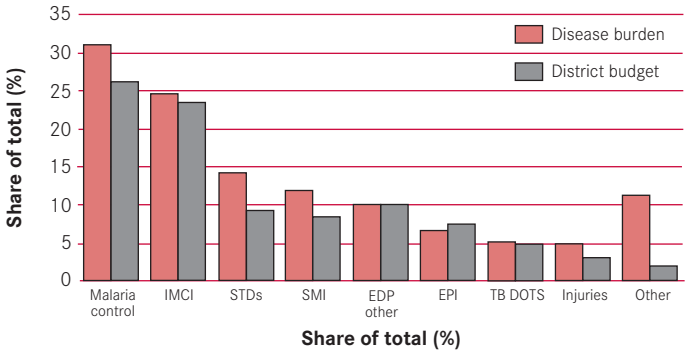
Disease burden and planned expenditure on interventions, Morogoro Rural District, the United Republic of Tanzania, 1996–1997, before use of tool for district health accounts



IMCI, Integrated Management of Childhood Illness; STDs, sexually transmitted diseases; SMI, safe motherhood initiative; EDP, essential drugs programme; EPI, expanded programme on Immunization; TB DOTS, directly observed treatment for tuberculosis

FIGURE 3.2

Disease burden and planned expenditure on interventions, Morogoro Rural District, the United Republic of Tanzania, 2000–2001, after use of tool for district health accounts



IMCI, Integrated Management of Childhood Illness; STDs, sexually transmitted diseases; SMI, safe motherhood initiative; EDP, essential drugs programme; EPI, expanded programme on Immunization; TB DOTS, directly observed treatment for tuberculosis

tests, for further application in countries.

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 measures specific financial information of 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, a framework is being developed and applied for child health sub-accounts analyses in Bangladesh and Sri Lanka. Preliminary results indicate that only around 10% of total health expenditure was spent on child health.

CAH headquarters and the Regional Office for Africa participated in a workshop in Ghana in 2004 to adapt a district health accounts tool previously used in the United Republic of Tanzania. Results (Figures 3.1 and 3.2) indicate that, before the use of the tool, health problems and spending were not aligned: investments in the delivery of some key child health interventions, such as malaria control and IMCI, lagged behind, whereas others, such as immunization, received a disproportionate amount relative to the burden they address. Planned expenditure in Ghana showed a similar pattern. After the use of the tool, health-care spending was more targeted. Ghana will use the tool as a basis for planning and resource allocation in rural districts, starting from the 2005 planning cycle.

Supervision

Reviews and evaluations of the IMCI strategy identified weak supervision as a key health-system constraint to the effective implementation of IMCI. In response, the Regional Office for Africa developed a computerized tool for integrated supervision designed for use at district level, and began testing the tool in Kenya, the United Republic of Tanzania and Zimbabwe. In the Eastern Mediterranean Region, methods and tools were developed and applied in Djibouti, Egypt, the Sudan, the Syrian Arab Republic and Tunisia to strengthen supervision at various levels of the health system (for example, facility, district and governorate).

Strengthening district health systems

The Regional Office for Africa is collaborating on the joint WHO/Norwegian Agency for International Development (NORAD) project to support eight countries – Eritrea, Ethiopia, Malawi, Mozambique, Uganda, the Unit-

ed Republic of Tanzania, Zambia and Zimbabwe – in strengthening their district health systems. Integration of programmes at district level is being enhanced through this project. Participating districts that initially were not implementing IMCI have included the IMCI strategy in their plans.

Creating a supportive policy environment for adolescent health

During the biennium, the Department's work on creating a supportive policy environment for adolescent health involved producing simplified fact sheets on adolescent health and building regional or subregional capacity.

Effectively communicating the facts about adolescent health

CAH led a project for the UNAIDS Inter-Agency Task Team on Young People to synthesize and present in a simplified form the core information that is needed by parents, service providers, and other duty bearers to provide to young people. This is accompanied by a document for policy-makers that will provide key evidence-based guidance for the development of the policy environment for young people's health and development. Both documents will be distributed for endorsement by UNAIDS co-sponsors and key partners in early 2006, prior to finalization.

Raising awareness

CAH participated with the Regional Office for the Western Pacific in the first Asia Pacific Adolescent Health Congress, held by the International Association for Adolescent Health, in 2004 in China. Representatives from WHO and the Adolescent Centre in Melbourne conducted a pre-congress workshop on adolescent health and development, and gave keynote addresses and other presentations at the Congress. CAH also participated in a workshop on effective advocacy for adolescent health.

Incorporating a rights perspective into policies and programmes

In 2004 and 2005, the Department continued to promote and explore the practical application of international human rights norms and standards to child and adolescent health law and policy formulation, as well as to the implementation of programmes.

Supporting the United Nations Committee on the Rights of the Child

The Department continued to provide technical input to the monitoring process of the United Nations Committee on the Rights of the Child by addressing and clarifying specific child and adolescent health issues in selected State Party reports under review.

As part of a wider United Nations effort to improve the United Nations human rights treaty monitoring system, the Department also participated in a series of discussions and technical briefings with the United Nations Office of the High Commissioner for Human Rights (UNHCHR) on improving the working methods of the United Nations Committee on the Rights of the Child, and provided technical assistance to the Committee and its secretariat in the revision of the periodic reporting guidelines for States Parties. CAH input further included support to the development of a core set of indicators for the basic health and welfare section of the guidelines, with a view to assisting governments in reporting more accu-

rately to the Committee on priority child and adolescent health issues.

In addition, CAH coordinated the drafting process of the Committee's General Comment No. 4 on adolescent health and development in the context of the United Nations Convention on the Rights of the Child, which aims at providing sound and comprehensive guidance to governments, agencies and nongovernmental organizations on rights-sensitive planning and programming for adolescent health and development.

In November 2005, the Department, together with colleagues from the Regional Office for the Americas, participated in a subregional workshop for 10 Latin American countries on follow-up to the Concluding Observations and Recommendations of the Committee, organized by the UNHCHR and Plan International, and co-facilitated the working group on child and adolescent health.

Building capacity for the application of the United Nations Convention on the Rights of the Child

CAH continued to incorporate human rights norms and standards into various aspects of its work, including into its guidance on adolescent-friendly health services, and on policy development for adolescent health. It also addressed the value and use of the CRC and other relevant human rights instruments in efforts to tackle inequities in child health, including through the development of an internal working paper on the subject.

Human rights orientation sessions were organized for CAH staff, in collaboration with the WHO Health and Human Rights unit, and the Department continued to further strengthen its own child rights training materials. The Regional Office for Africa oriented CAH, MPS and regional office staff to enable them to support countries in the reporting process.

In addition, the Department worked closely with other WHO departments to develop and introduce tools to build national capacity in rights-based programming, including a rights-based assessment tool for laws and policies in the context of adolescent sexual and reproductive health, and WHO manuals on the monitoring processes for the United Nations Convention on the Rights of the Child and the United Nations Convention on the Elimination of Discrimination against Women. CAH organized capacity-building workshops on child and adolescent rights in Indonesia and Maldives. The workshops included rights-based analyses of child and adolescent health programmes, and facilitated the development of rights-based guides for district-level planning of child health programmes and interventions.

In the Region of the Americas, CAH, its partners, and countries held a series of orientation sessions covering all aspects of the UN Convention on the Rights of the Child, and providing information about rights relevant to planning and programming for child and adolescent health and development. In addition, the regional office developed a framework for model legislation addressing the different needs of children and adolescents.

The Department also provided support to the International Breastfeeding Action Network and UNICEF to conduct sessions on rights-based approaches to the effective implementation of the International Code of Marketing of Breast-milk Substitutes, during a training course on the Code in the Western Pacific Region.

CHAPTER 4

Meeting the needs of infants and young children

Every minute 20 children under 5 years of age die, leading to more than 10.6 million deaths each year. The majority of these deaths are attributable to preventable and treatable causes. Malnutrition, pneumonia, diarrhoea, measles, malaria, neonatal conditions and HIV/AIDS are the most common killers of children. Among the children who do survive, millions suffer from undernutrition, repeated illness, and poor growth and cognitive development. In 2004 and 2005, CAH made significant progress in four main areas: improving newborn care and survival; strengthening appropriate feeding practices; preventing mother-to-child transmission of HIV; and refining, expanding, monitoring and evaluating the IMCI approach.

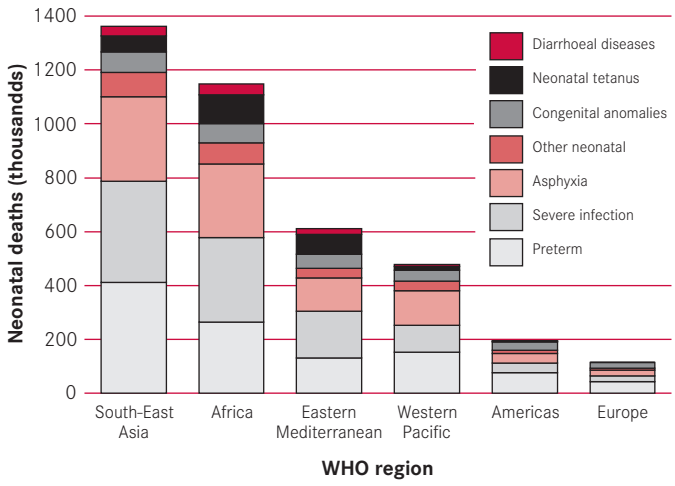
Newborn care and survival

Babies less than one month old are at greatest risk of death. Among all child deaths each year, nearly 40% are among newborns (0–28 days). The greatest threats to the survival of newborns (Figure 4.1) are a combination of perinatal conditions such as preterm birth and birth asphyxia and severe infection such as sepsis, pneumonia, meningitis and tetanus.

Research

Revised young infant IMCI guidelines including the first week of life. A multicentre trial, in collaboration with Saving Newborn Lives and Applied Research for Child Health, was undertaken in Bangladesh, Bolivia, Ghana, India, Pakistan and South Africa, to test the performance of existing IMCI guidelines for sick young infants in different regions of the world. Data analysis is under way. Preliminary results indicate that the existing guidelines perform well in identifying children in need of hospitalization but possibly can be simplified further.

FIGURE 4.1
Neonatal deaths by cause and WHO region in 2000-2003



As a parallel process, a revised **generic IMCI algorithm** expanded to include the first week of life was drafted based on adaptations made in several countries and consensus among experts at a technical consultation. The findings of the multicentre trial, to be available in early 2006, will be used by the Department to refine and finalize the draft algorithm. IMCI training materials will be revised accordingly.

Care-seeking practices for sick newborns. A study was supported in rural Rajasthan, India, to identify care-seeking patterns for sick newborns and the family perceptions and circumstances that explain these patterns. Preliminary results showed that although 70% of mothers reported at least one medical condition that would have required medical care, only 31% of sick newborns were taken to a health-care provider outside the home, and about 40% of those were taken to unqualified providers. In addition, health-care providers – both qualified and unqualified – did not feel competent to deal with the newborns and tended to refer them immediately, rather than provide care. The findings of this study indicate that interventions are needed to increase the knowledge of families on when and where to seek care outside the home, and to improve the skills of health-care providers in managing neonatal problems.

Care-seeking behaviour for sick young infants below two months of age, Gabon. A study was conducted in Gabon in 2005 with the support of WHO and the Regional Office for Africa to identify care-seeking behaviour of infants below two months of age, to be able to channel appropriate services to this age group and reduce the unacceptably high neonatal mortality rates. The results of the study showed that auto-medication was the most common practice for this age group followed by a visit to a pharmacy, and then to a dispensary. Based on these findings, the authors recommended the strengthening of the community component of IMCI and the development of an appropriate communication strategy to improve the care-seeking behaviour of mothers.

Community mobilization in Makwanpur, Nepal. Results from a large-cluster randomized trial conducted in Makwanpur, Nepal, and supported by the Department in collaboration with the Institute of Child Health, London, and the United Kingdom Department for International Development (DFID) were published in the *Lancet* in 2004. They showed a 30% reduction in neonatal mortality and a considerable fall in maternal mortality through the activities of women facilitators (who were not health workers) to support women's groups. The facilitators used an action learning cycle to identify local perinatal problems and formulate strategies to address them. The study confirms the importance of community engagement when working to reduce neonatal mortality in resource-poor settings. In such communities, women's groups can provide a powerful platform for dissemination of information and peer-to-peer education.

Community-based perinatal and newborn care in rural Pakistan. CAH continued its support to a study in rural Pakistan that is examining the effectiveness of engaging community health workers, first-level health facility workers and communities in the delivery of a set of interventions during the perinatal and neonatal period. The mid-term review, conducted in 2004, analysed the impact of the set of interventions in the first set of clusters. A reduction in neonatal mortality of approximately 20% was observed. Changes in breastfeeding behaviours and improved care-seeking practices were associated with mortality reduction in the intervention clusters. The Government of Pakistan will use the lessons learned from the study in planning a national strategy to improve neonatal health.

Evaluation of progress in reducing neonatal mortality in southern Brazil. Support has continued for an evaluation in Pelotas, Brazil, examining the evolution of neonatal health indicators over the past 20 years and their response to the delivery of public health interventions. The first paper resulting from the study was published in the *Lancet* in 2005. Despite improvements in maternal antenatal care attendance, education and nutrition, and a reduction in smoking during pregnancy, there was an increase in the prevalence of preterm births from 6.3% in 1983 to 16.2% in 2004. This increase was associated with a major increase in caesarean sections (from 28% of the deliveries in 1983 to 43% in 2004). This information is being used to guide country authorities in planning for improving the performance of the local health services.

Performance of a revised verbal autopsy tool and process for neonatal deaths. A proposal for a multi-centre study in Ghana, India and Pakistan which aims to evaluate the performance of a modified tool and process for verbal autopsy for neonatal deaths has been developed and funded. Data collection is expected to begin in the first half of 2006.

Routine care of neonates through home visits in Africa. Promotion of optimal newborn care practices including early initiation and exclusivity of breastfeeding, keeping the newborn warm, hygienic cord and skin care, and appropriate care-seeking for illness can substantially reduce neonatal mortality. Routine home visits for all newborns to promote optimal neonatal care practices are promoted in several countries in Asia. The feasibility and effectiveness of this approach is not clearly known in Africa. A workshop was held in 2005 in Maputo, Mozambique in which research teams from four countries – Ghana, Mali, Mozambique and Zambia – developed proposals to examine this issue.

Developing methods and tools

Newborn health policy and planning framework. The Department continued developing a framework, directed at high-level policy-makers, that aims to motivate, mobilize and assist the development of national strategies for improving newborn survival in countries with high rates of neonatal mortality. The framework was developed as a joint effort of WHO, Saving Newborn Lives and DFID. In 2004, the first part of the framework was finalized and field-tested in Viet Nam, where it was found to be useful in initiating the development of a national strategy and action plan to address newborn health. In 2005, the framework and its supporting tools were used to guide the development of consultant capacity for the inclusion of newborn health into child survival strategies (see below).

Guidelines for feeding low-birth-weight infants. Low birth weight (LBW) is one of the principal causes of death among newborns, with preterm birth directly accounting for approximately 28% of deaths. In addition, preterm birth and intrauterine growth restriction are important indirect causes of death. In 2004, the Department began developing guidelines for health professionals who care for LBW infants. The guidelines are targeted at health-care providers who manage LBW infants and at public health professionals who design and evaluate health-care programmes. These guidelines are based on a literature review, completed in 2004, that summarizes the evidence for the optimal feeding of the LBW infant in the

BOX 4.1

The *Lancet* newborn survival series: key messages

- Every year 4 million babies die in the first month of life – most in developing countries. The Millennium Development Goal for reducing child deaths cannot be met unless we do more to reduce neonatal deaths, especially in sub-Saharan Africa and South Asia.
- Almost 3 million of the 4 million babies who die each year might be saved with low-technology, low-cost interventions, which would also help save the lives of mothers and prevent stillbirths; yet these interventions currently do not reach those most in need.
- These interventions could be provided to 90% of women and babies in poor countries by spending only US$ 1 extra per inhabitant per year. About 70% of this spending would also benefit mothers and older children.
- Some low-income countries have halved neonatal mortality during the 1990s: it can be done. Current progress in skilled care needs to be accelerated. Meanwhile approaches at family and community levels can save many lives.
- Proposed actions:
  - at national level
    - set target for reduction of mortality
    - publish a plan of action linked to maternal and child health
    - finance the plan; implement the plan
    - monitor progress and publish results)
  - at international level
    - place neonatal deaths in the Millennium Development Goal framework with a target for 50% reduction by 2015
    - increase focus and funding to add neonatal care to existing programmes
    - strengthen maternal, neonatal and child health systems
    - promote accountability among governments, nongovernmental organizations, donors and international agencies.

first six months of life. The guidelines are being finalized based on the recommendations of a technical consultation held in 2005.

Incorporating newborn care into IMCI in the Region of the Americas and the Eastern Mediterranean Region. The Regional Office for the Americas produced a training manual on neonatal health for community agents. The training will be incorporated into the community component of IMCI. The Regional Office completed IMCI clinical guidelines, and a photograph album and facilitators' guide for the neonatal clinical component of IMCI (including rubella and congenital rubella syndrome) and tested the materials in the Dominican Republic. The Regional Office also developed manuals with sections on neonatal health for the teaching of IMCI in schools of medicine and nursing. In the Eastern Mediterranean Region, healthy-child modules were drafted in the Syrian Arab Republic and Tunisia, covering preventive aspects of newborn care.

Influencing policy

The *Lancet* series on newborn survival. CAH served as the secretariat for work on a series of articles on newborn survival, which were published in the *Lancet* in 2005. The series aimed to raise the priority of neonatal survival within the context of maternal and child survival (see Box 4.1). The articles brought together: epidemiology and mortality trends in relation to the Millennium Development Goal on child survival; the evidence for interventions to reduce newborn deaths (and in many cases also maternal deaths); the constraints, estimated impact, and cost of scaling up coverage with these interventions; and policy recommendations to guide decision-making and promote action.

Building capacity to assist countries in including newborn health in their child survival strategies. A workshop was held in New Delhi in 2005 with the objective of building capacity to assist countries in including newborn health in their child survival strategies. Participants from WHO headquarters, including CAH and MPS, and from five WHO regional offices attended the workshop. State-of-the-art information on newborn health epidemiology and interventions was presented. Opportunities to include newborn health interventions in maternal and child health programmes were discussed. The participants summarized the situation in one of three example countries and used the same example to prioritize and select interventions, and to plan for moving from priorities to action.

Implementing, monitoring and evaluating

Promoting newborn health and survival in the African Region. A meeting of the Healthy Newborn Partnership was held in Ethiopia in 2004 to review the current status and interventions related to newborn health and survival, and to identify ways of improving newborn health and survival, particularly in Africa. Child-health staff from both WHO headquarters and the Regional Office for Africa participated in this meeting.

Special session on newborn health organized with the Third Reproductive Health Task Force meeting for the African Region and the Regional Child Survival consultation, organized by the WHO Regional Office for Africa, held in Addis Ababa, 2005. The purpose of this special session on newborn health was to highlight the burden of neonatal mortality globally and in the region, and discuss actions for improving newborn survival. Participants reviewed the epidemiology and causes of mortality in the newborn period, evidence for effective interventions, and their delivery strategies. They also examined opportunities for integrating newborn care in programmes including maternal health, IMCI, nutrition, HIV/AIDS, malaria and immunization. The continuum of care between maternal, newborn and child health services was highlighted as an important objective to address newborn health.

Newborn health activities in the Region of the Americas. The Regional Office for the Americas provided technical support to countries to train facilitators in the neonatal clinical component of IMCI in Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay and Peru. With assistance from WHO, national authorities adapted the neonatal IMCI manuals and replicated training workshops at regional and provincial levels, for health-care providers at primary and secondary levels. Training workshops in the neonatal component of IMCI for community health agents and nursing aides were conducted in the Dominican Republic and Paraguay. Training workshops in neonatal resuscitation for primary care providers were conducted in Ecuador, Guatemala, Honduras, Panama and Paraguay. Countries developed advocacy and training activities on neonatal health in the context of IMCI. These activities were carried out in national congresses and seminars organized jointly with national associations of paediatrics and neonatology in the Dominican Republic, Guatemala, Honduras and Panama.

Evaluation of neonatal mortality in Pelotas, Brazil. Support continued for a study in Pelotas, Brazil, that examines the evolution of newborn health indicators over the past 20 years and their response to the delivery of public health interventions. The evaluation highlights the need to control the excessive medicalization of newborn care associated with unregulated private sector practices – including labour induction, caesarean sections and inaccurate ultrasound scans.

Newborn health activities in the Eastern Mediterranean Region. In the Eastern Mediterranean Region, case management of the newborn at the primary health-care level was integrated into the IMCI clinical guidelines in five countries – Egypt, Oman, Pakistan, the Syrian Arab Republic and Tunisia – with the Regional Office providing support to the training of primary health-care providers in these guidelines.

Newborn health activities in the European Region. In the European Region, training courses on essential obstetric care, essential newborn care and breastfeeding support, and follow-up after training were conducted in Albania, Kazakhstan, Kyrgyzstan, the Republic of Moldova and Tajikistan. Support was provided for a review of initial implementation of the Making Pregnancy Safer Strategy in the Republic of Moldova.

Newborn health activities in the South-East Asia Region. The Regional Office for South-East Asia finalized and published a regional strategy for promoting neonatal health, *Strategic directions to improve newborn health in the South-East Asia Region*. National authorities in several countries used the regional strategy to initiate activities. For example, Nepal finalized a strategy for neonatal health, and Bangladesh initiated the process of strategy development. Maldives will include newborn health as a priority area in the next cycle of the Health Master Plan, from 2006 to 2015.

Newborn health activities in the Western Pacific Region. In the Western Pacific Region, Viet Nam initiated a systematic process to improve newborn care through collaboration between government departments for child health and reproductive health. Activities in Viet Nam included the creation of a national steering committee for newborn care, a workshop to develop a national newborn care policy and planning framework, the development and peer review of eight technical papers on neonatal health in Viet Nam, and pilot-testing of an essential newborn care training course.

Appropriate feeding practices

The Global Strategy for Infant and Young Child Feeding is a key component of WHO's strategic framework for acceleration of child survival interventions in countries. The Department is providing support to countries, through regional offices, to strengthen actions for infant and young child feeding, using the Global Strategy as a guide. At the same time, the Department is moving forward with research and development to narrow knowledge gaps and increase evidence for effective delivery.

Research

Long-term protective effects of breastfeeding. Interest in the potential protective effects of infant feeding practices on the prevalence of selected risk factors for cardiovascular disease in later life inspired the Department to conduct a meta-analysis to examine this issue. The result showed that breastfeeding during infancy was associated with lower systolic blood pressure and lower risk of obesity in childhood and adolescence. Breastfeeding during infancy was also found to be associated with lower total serum cholesterol levels and a lower risk of adult-onset diabetes mellitus. Investigators from the University of Pelotas, Brazil, are independently conducting a similar meta-analysis. The combined results will be submitted for publication in 2006.

Evaluating a training course on complementary feeding counselling. In 2004, WHO supported an evaluation of its three-day complementary feeding counselling course in Ismalia, Egypt, in order to quantify the impact of the intervention and examine potential ways to enhance its effectiveness. Outcome measures include caregiver knowledge, feeding practices,

and growth of children. Results are expected by the second half of 2006. Preliminary findings show significant improvements in trained health workers' counselling performance in communicating with the mother, assessing feeding and providing recommendations.

Effects of zinc and iron supplementation on mortality among children under five years of age. A study was designed to evaluate the impact of zinc and iron supplementation on childhood mortality in Zanzibar, the United Republic of Tanzania. The study comprised four groups: zinc alone; iron plus folic acid; zinc plus iron plus folic acid; and placebo. In response to evidence suggesting higher rates of hospitalization and mortality in the two groups receiving iron, the Data Safety Monitoring Board stopped the iron supplementation component of the study in 2004. Overall there was a 12% higher risk of serious adverse events (death or severe morbidity leading to hospitalization) in the treatment arms receiving iron plus folic acid (IFA) supplementation when compared to the arm receiving placebo, and an 11% higher risk of hospitalization; the IFA arms also had 15% more deaths. The combined IFA arms had a 16% higher risk of adverse events attributable to clinical malaria and 18% higher risk of hospitalization with malaria. In conclusion, routine IFA supplementation of preschool children in a population with high rates of malaria may increase the risk of severe illness and death. The results of a preliminary analysis of the data collected in the two groups taking iron supplements were presented and discussed at a technical meeting organized by the Department in 2004. The final analysis was presented at international meetings in Thailand and Peru. The results have been accepted for publication in the *Lancet*.

Impact of zinc supplementation in low-birth-weight infants. In collaboration with the Pollin Foundation, the Department is supporting a study in India to determine the impact of zinc supplementation on hospitalization and zinc status in low-birth-weight infants. After one year of enrolment, more than 1000 low-birth-weight infants (half of the total sample size of this study) were recruited and are being followed. Final results of this study are expected in 2007.

Developing methods and tools

Infant and young child feeding: inventory of tools and materials. In collaboration with partners, CAH developed an inventory of tools and materials on infant and young child feeding which have been developed and used by various agencies and can be used to facilitate policy development, planning, advocacy, capacity building, and monitoring and evaluation of interventions. This inventory is being distributed on a CD-ROM entitled *Infant and young child feeding – tools and materials*.

Planning for infant and young child feeding activities. The Department drafted a planning guide to facilitate the implementation of the Global Strategy for Infant and Young Child Feeding. The guide is designed to help national coordinators and working groups to translate the aim and objectives of the Global Strategy into practical national policy, strategy and action plans. It was field-tested in several countries in early 2005 before finalization and is now available as a joint WHO/UNICEF working document. The Regional Office for the Americas finalized a manual on the promotion of child feeding, which provides guidance for the assessment,

design, implementation, monitoring and evaluation of interventions to improve infant and young child feeding.

Planning for community-based interventions to improve complementary feeding. The Department is nearing completion of a planning guide based on successful experience in Haryana, India, of promoting community-based interventions to improve exclusive breastfeeding and appropriate complementary feeding.

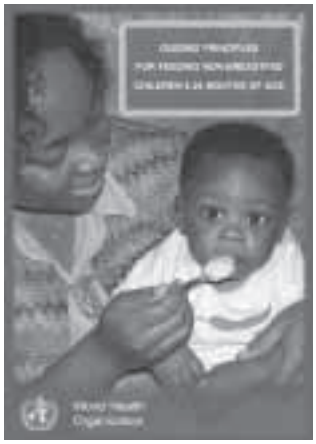


PHOTO: A. BLAVO

Optimizing diet recommendations during the complementary feeding period. Often there are no easy answers to very practical questions such as:

- Is it possible to provide all the nutrients needed by a young child using locally available food?
- Are micronutrient supplements or fortified foods needed in order to provide a balanced diet at low cost?

These questions can be correctly answered with a mathematical method called linear programming, using a computer to perform multiple calculations. For this reason, the Department commissioned the development of computer software that simplifies the local adaptation of guidelines for complementary feeding, bringing the solution within the reach of local nutritionists. A document describing in detail how to collect data needed for this analysis and how to interpret the results has been written and was field-tested in Mozambique and Tajikistan.

Training course on infant feeding in emergencies. The second module of a training course on infant feeding in emergencies was developed through interagency collaboration involving the Emergency Nutrition Network, International Baby Food Action Network, Terre des Hommes, UNICEF, UNHCR, World Food Programme and WHO. The module is targeted at field workers in complex emergencies. It includes a core manual with practical recommendations on how to provide skilled help with breastfeeding, additional material on the management of special situations such as relactation, and a set of overhead figures for training. The materials are available on the web site of the Emergency Nutrition Network (www.ennonline.net).

Model chapter on infant and young child feeding for medical textbooks. The Department is consolidating essential knowledge that all medical professionals dealing with mothers and infants should master in a brief document that could be self-standing or inserted in textbooks of medical and paramedical professionals. The chapter is a complement to the IMCI model chapter and will be promoted in the context of CAH's efforts to strengthen preservice training on child health in medical schools and training institutions of allied professionals. The final version will become available in 2006.

Integrated training course on infant and young child feeding. CAH collaborated with the WHO Department of Nutrition for Health and Development (NHD) and the Africa Centre for Population Studies and Reproductive Health to develop a five-day integrated course on infant and young child feeding (see section on training). During 2004 and 2005, the course was successfully applied in Ghana, Jamaica and South Africa, to train health professionals and community health workers, including in the skills need-

ed to help mothers who are HIV-positive decide about a mode of infant feeding and to support them in their choice. The near-final course was introduced in the Western Pacific Region in 2005 (see below). The materials are being finalized for publication in the first half of 2006.

Implementing, monitoring and evaluating

Implementing the Global Strategy for Infant and Young Child Feeding. The Regional Office for Africa, in collaboration with CAH, UNICEF and other partners, conducted a workshop for francophone countries (Burkina Faso, Côte d'Ivoire, Mali and Senegal) in 2004 and lusophone countries (Angola, Cape Verde, Guinea-Bissau, Mozambique, and Sao Tome and Principe) in 2005 to support developing action plans to implement the Global Strategy for Infant and Young Child Feeding. During the biennium, 11 African countries developed national action plans on the Global Strategy, making a total of 23. In addition, Ghana, Kenya, the United Republic of Tanzania and Zimbabwe were supported to organize stakeholders' planning meetings on infant and young child feeding, and to put in place task forces to coordinate the implementation of their action plans. The Code of Marketing of Breast-milk Substitutes was enacted into a national law in Botswana and Cape Verde; Malawi, Mozambique and South Africa are in the process of enactment. Documentation of experience in implementing IMCI including infant and young child feeding has been completed in five countries.

In the Region of the Americas, Bolivia and Guyana were supported by WHO to bring together ministry of health personnel and stakeholders in the areas of nutrition, IMCI and HIV, to discuss ways to strengthen interprogramme collaboration and to develop a workplan for implementing the Global Strategy. As a result, a booklet was printed in Bolivia on what to do to have healthy, strong and intelligent babies. Intercountry planning workshops were also organized in Guatemala (for Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama), Argentina (for Paraguay, Uruguay and all Argentine provinces) and Martinique (for representatives from 22 Caribbean countries). Follow-up visits to assess implementation of the country plans were made to Honduras, Nicaragua and Panama; substantial progress had been made, including the adoption of a national Code of Marketing of Breast-milk Substitutes in Honduras. In Panama, work is progressing on fortifying with iron a commercially available food that PAHO-sponsored research shows is widely consumed by infants and young children.

In the South-East Asia Region, Bangladesh, Maldives, Myanmar and Nepal have developed national strategies on infant and young child feeding. India has finalized national guidelines, and Indonesia initiated drafting of a national strategy.

In the Western Pacific Region activities in the area of infant and young child feeding were strengthened through active coordination with the Nutrition Unit at the Regional Office for the Western Pacific as well as with NHD and CAH. China finalized its national plan of action on infant and young child feeding, with integration of HIV and infant feeding. Provincial plans of action were outlined for four provinces. Plans of action based on the Global Strategy were developed for Samoa and Tonga. Cambodia and the Philippines continued training of health workers on breastfeeding

BOX 4.2

The Global Strategy for Infant and Young Child Feeding: the experience of the Philippines

To achieve a healthy and bright future for Filipino children, there is need for a comprehensive systematic approach. A technical working group from the Department of Health of the Philippines put together the following – based on the conclusions and recommendations of a partnership meeting:

- six mother-baby friendly settings, focusing on health facilities, workplaces, schools, public places, communities and homes, and industry;
- four strategies for reaching these places: developing policies and standards; improving systems for effective infant and young child feeding; mobilizing stakeholders for infant and young child feeding; and involving families and communities to promote and adopt infant and young child feeding.

Major activities include: sustaining the Mother-Baby Friendly Hospital Initiative; strictly enforcing the Code of Marketing of Breast-milk Substitutes, and the Rooming-in and Breastfeeding Act; enacting strong protection enabling working mothers to continue breastfeeding; correcting misconceptions, unhelpful cultural practices and myths about breastfeeding; integrating infant and young child feeding practices into various school curricula; establishing systematic community-based support groups; enacting other legal support for infant and young child feeding; and sustaining political commitments from national to community levels.

The National Plan of Action on Infant and Young Child Feeding considers: programme management; institutional support for maintaining 1426 currently certified Mother-Baby Friendly hospitals while expanding the initiative to additional hospitals; having relevant government agencies become mother-baby friendly; integrating information, education and communication on infant and young child feeding into regular maternal and child health services at all health facilities; improving skills of health staff; providing community-level support systems, services and monitoring; and ensuring sustainability of interventions to improve, protect and promote infant and young child feeding.

counselling and complementary feeding counselling following their plans of action. Mongolia, Papua New Guinea and Viet Nam started the process of developing their plans. The Philippines is implementing the Global Strategy on Infant and Young Child Feeding, integrating it into maternal and child health activities. The experience is summarized in Box 4.2.

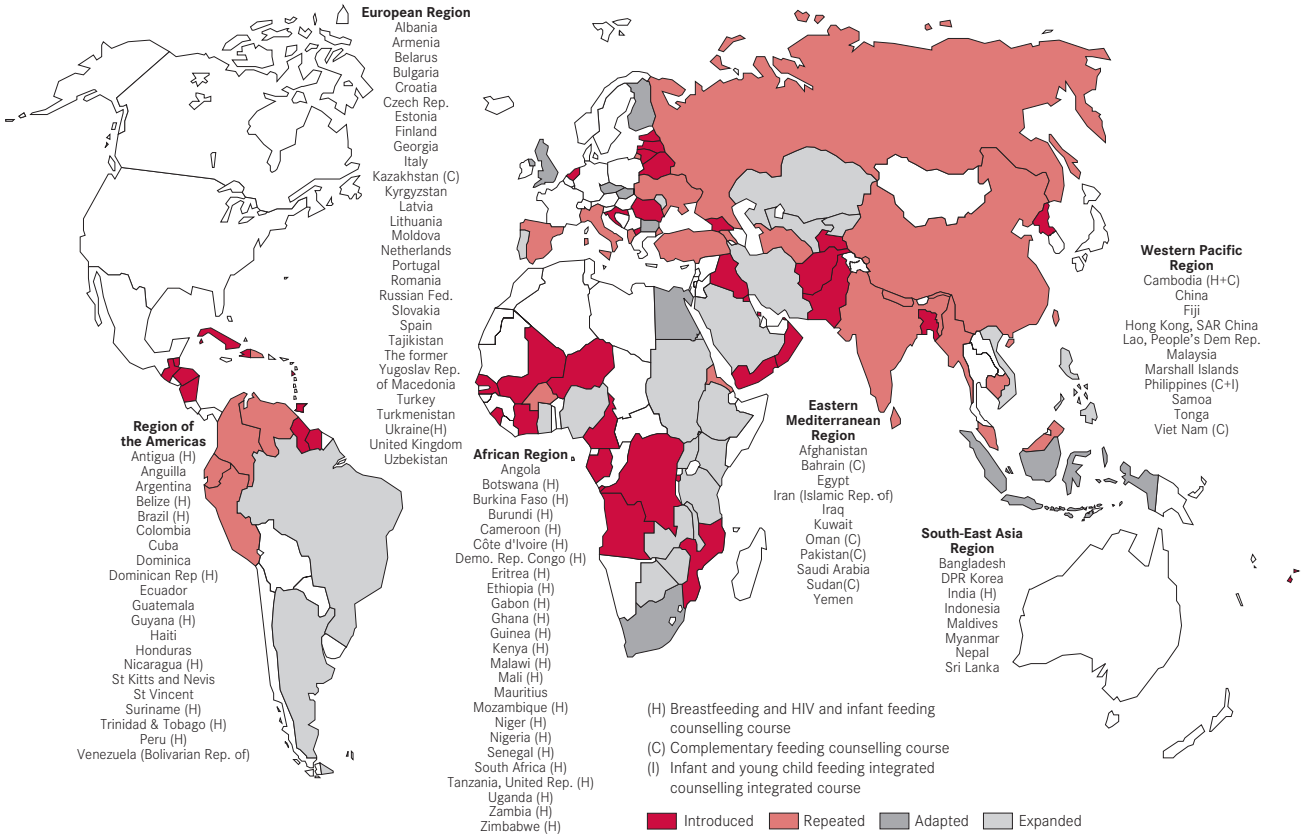
Training in counselling for infant and young child feeding. Figure 4.2 shows the areas that have trained health workers using existing counselling courses. A pool of regional training facilitators was created for the Arabic version of the counselling for child feeding course that was developed by the Regional Office for the Eastern Mediterranean. The materials were then tested in two regional courses to train IMCI managers and facilitators from eight Arab countries.

In the Western Pacific Region, experienced trainers from Cambodia, China, the Lao People's Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam were trained in the new infant and young child feeding counselling course. This integrated course brings together breastfeeding, HIV and infant feeding, and complementary feeding counselling. Representatives and observers from UNICEF, the South-East Asia Region (Bangladesh and India) and the African Region (Ghana, Kenya and the United Republic of Tanzania) also participated. The Philippines started using a version of the course adapted for health workers and community-level workers in selected villages. China and Viet Nam began translating the materials, and plan to start replicating the course nationwide in 2006. In Viet Nam, breastfeeding information was integrated into preservice education, and discussions began on integrating complementary feeding.

The WHO Regional Office for Europe together with the UNICEF office in Kazakhstan developed a training course for home-visiting nurses based on key family practices with a focus on breastfeeding, complementary feeding and care for development. Field tests of the course were carried out in Almaty and Semipalatinsk in Kazakhstan in 2004.

FIGURE 4.2

Infant feeding counselling training, status as of December 2005



1990–2005: celebrating the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding. CAH collaborated closely with UNICEF and other partners in the preparations leading up to the celebration of the 15th anniversary of the Innocenti Declaration in Florence, Italy, including the development of key messages (see Box 4.3), a declaration, and a publication on past achievements, present challenges and priority actions for infant and young child feeding.

Indicators for assessing feeding practices. The Department, in collaboration with UNICEF, organized a meeting on indicators to assess progress towards achieving the Millennium Development Goal for child survival. Participants recommended the inclusion of a new indicator on exclusive breastfeeding below six months of age, and research to evaluate the performance of indicators on frequency of feeding in addition to the complementary feeding rate. The new indicators will be included in the revised protocol of the Multiple Indicator Cluster Surveys that UNICEF conducts.

Indicators for assessing complementary feeding. The Department initiated research to identify complementary feeding indicators, in collaboration with the International Food Policy Research Institute and the University of California at Davis, with financial support from the USAID Food and Nutrition Technical Assistance project. It is expected that recommendations will be released early in 2006 for a small number of universal indicators to assess complementary feeding.

Reassessing the feasibility of community-based management of severe malnutrition. WHO guidelines recommended that all children with severe

BOX 4.3

Key messages on the protection, promotion and support of breastfeeding

Achievements

- Reversing declining rates of exclusive breastfeeding
- Formation of national breastfeeding coordinators and committees
- Baby-friendly Hospital Initiative
- Continued relevance of the International Code of Marketing of Breast-milk Substitutes
- Maternity protection conventions and legislation

Challenges

- HIV and infant feeding: ensuring informed choice and support for safer feeding
- Infant feeding in emergencies: protecting the most vulnerable
- Women's empowerment: providing political, social and family support
- Healthy mothers and healthy babies: eliminating environmental contaminants

Future imperatives

- Increase resources for infant and young child feeding
- Implement the Global Strategy for Infant and Young Child Feeding
- Apply existing knowledge and experience

malnutrition should be referred to hospital for several weeks of treatment and nutritional rehabilitation. The situation changed, however, with the recent development of ready-to-use therapeutic foods (RUTF), which can be safely given in the community and are effective in promoting rapid weight gain. In 2005 CAH, in collaboration with NHD, UNICEF and the Standing Committee on Nutrition convened a meeting of experts to review the evidence on the efficacy and effectiveness of community-based management of severe malnutrition with and without the use of RUTF. The overall conclusion of the consultation was that it is possible to manage a large proportion of severely malnourished children at home using RUTF, or where available, simple combinations of family foods together with a supplement of minerals and vitamins. If properly combined with facility-based approaches, and implemented on a large scale, this approach could prevent hundreds of thousands of child deaths each year.

Prevention of mother-to-child transmission of HIV

It is estimated that 5%–20% of infants born to HIV-infected women acquire infection through breastfeeding, in the absence of specific interventions to reduce the risk of transmission. United Nations recommendations for HIV-infected mothers state that when replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding is recommended. Otherwise, exclusive breastfeeding is recommended during the first months of life, but breastfeeding should be discontinued as soon as the above-mentioned conditions are in place. In order to turn these recommendations into practical guidance at country level, in 2004 and 2005 CAH examined the findings of research into infant feeding counselling, developed tools for capacity building and for use in counselling HIV-positive mothers, and continued to disseminate and monitor the use of the guidance and tools produced.

Research

Assessing the quality of feeding counselling to prevent mother-to-child transmission of HIV in South Africa and Brazil. CAH supported a cross-sectional, descriptive study in South Africa that aimed to assess the quality of counselling provided to mothers through the programme to prevent mother-to-child transmission of HIV. The results showed that the general quality of communication skills was very good, but essential information was not being communicated. Mothers at the site where there was the most training and supervised support performed best. Far more attention needs to be paid to the quality of counselling provided to mothers.

A similar study in Brazil aimed to assess the quality of infant feeding counselling offered to HIV-positive mothers, and to describe the knowledge of these women about infant feeding options. The general communication and counselling skills of health professionals were found to be good. However, counselling on risks of HIV transmission with breastfeeding, and in support of replacement feeding, was clearly insufficient. Feedback

has been provided to the local health authorities, and additional attention is being given to addressing this gap in the development and revision of training materials and job aids.

Developing appropriate infant feeding recommendations for HIV-infected women. The aim of this formative research study, conducted in Ile-Ife, South-West Nigeria, was to explore locally available and culturally acceptable infant feeding practices for HIV-infected mothers. The findings indicate that the stigma associated with not breastfeeding, combined with the acceptability, feasibility, low affordability, sustainability and safety of replacement feeding, should be important considerations for health workers providing counselling in this setting. The results will contribute to the development of local recommendations to promote appropriate infant feeding practices.

Factors influencing the infant feeding practices of HIV-positive mothers. A qualitative research study was conducted in two phases at three sites in South Africa that were among the original pilot sites for interventions for prevention of mother-to-child transmission of HIV. In the first phase, which focused on identifying the challenges associated with following safer infant feeding practices, in-depth interviews were held with 40 HIV-positive mothers. The results highlighted that for these mothers, who were predominantly young, single and unemployed, fear of disclosure of HIV status and stigma has weakened their ability to resist entrenched family and community norms that encourage early introduction of fluids and foods, and that question non-breastfeeding. Limited postpartum support led to social isolation and mothers doubting their ability to care for their children. A second phase aimed to identify factors that helped HIV-positive mothers to maintain exclusivity in their infant feeding practices. Among women who maintained exclusive breastfeeding, a key factor was their ability to resist pressure from family to introduce other fluids, recalling key counselling messages on mixed feeding that they had received. Among women who were successful in formula milk feeding, disclosure of their HIV status to a partner or family member reduced fears of stigmatization; furthermore, having resources such as electricity, a kettle, a flask and the ability to purchase formula milk when clinic supplies were unavailable were important facilitating factors.

Developing methods and tools

Guidelines for feeding non-breastfed children. In some special circumstances infants might not breastfeed in the early months of life, or will stop breastfeeding before the recommended duration of two years or beyond. The infants of mothers who are HIV-positive call for particular attention. In March 2004, the Department convened an informal meeting to identify guiding principles for feeding the non-breastfed child after 6 months of age; a new guide, expanding on existing guidelines for replacement feeding from birth up to 6 months for infants of HIV-positive mothers, and complementing the *Guiding principles for complementary feeding of the breastfed child* (Regional Office for the Americas), was published in 2005.

Counselling tools on HIV and infant feeding. In collaboration with the Academy for Educational Development, the Department led the development of a package of counselling tools on HIV and infant feeding. The core tools,

which became available in 2005, aim to assist health workers in counselling mothers who are HIV-positive. The package consists of a flow diagram that guides the counselling process, a flipchart, take-home flyers, and a reference guide. Orientation materials for health-care managers are being finalized. A protocol to evaluate the use of the counselling tools has been developed, and the research should be carried out in 2006.

Regional adaptations of the training courses on infant feeding. The Regional Office for the Eastern Mediterranean developed material in Arabic on counselling for breastfeeding, complementary feeding, and HIV and infant feeding designed for use as both training tools and as references after training. The training methodology follows an interactive learning process similar to that of the IMCI course. The draft materials were field-tested twice in Egypt and the final package was introduced to representatives from 10 Arab countries during an inter-country meeting organized in Egypt in December 2005. Similarly, the WHO Regional Office for Europe developed a three-day, regional adaptation of the breastfeeding counselling and HIV and infant feeding counselling courses for health workers caring for HIV-positive mothers and their infants.

Implementing, monitoring and evaluating

Regional offices of WHO and other agencies have used HIV and infant feeding documents to adapt training courses, and as background materials for participants in regional and national meetings, in follow-up with countries, as resource material, and for the development of guidelines on HIV treatment and care.

HIV and infant feeding: from research to practice. CAH and NHD convened an informal meeting in Geneva in 2004 to share findings from recent operations research on HIV and infant feeding, and to review the implications of research findings for the existing training courses on infant feeding counselling. The participants, who included researchers and implementers from several countries as well as staff from UNICEF and WHO, made recommendations for improving infant feeding support to HIV-positive women.

Seminar on HIV and infant feeding for coordinators of the Baby-friendly Hospital Initiative. A seminar in Barcelona, Spain, for coordinators of the Baby-friendly Hospital Initiative from industrialized countries provided an opportunity to introduce *HIV and infant feeding: framework for priority action* and familiarize participants with related guidance and available tools.

HIV and infant feeding activities in the African Region. To evaluate the extent to which the HIV/AIDS pandemic has affected the Baby-friendly Hospital Initiative in Africa, the Regional Office for Africa, in collaboration with NHD, commissioned a background paper that analysed the current situation regarding the Initiative in five countries. The regional office, in collaboration with CAH, UNICEF and the International Baby-Food Action Network (IBFAN), also conducted a workshop in Ethiopia for participants from nine countries (Ethiopia, Kenya, Lesotho, Liberia, Mozambique, Namibia, Nigeria, Rwanda and Swaziland). The purpose was to familiarize participants with *HIV and infant feeding: framework for priority action* and related tools, agree on priority actions for updating national plans of action

on infant feeding in the context of HIV, and make recommendations for the way forward. A similar meeting was held for francophone countries in Benin with participants from Benin, Burkina Faso, Burundi, Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Madagascar, Mali, the Niger, Senegal and Togo. Currently 20 countries in the Region have action plans to implement the framework for priority action, while five (Eritrea, Kenya, Mozambique, Namibia and Nigeria) have revised and disseminated their policies and guidelines on HIV and infant feeding. Combined courses for training of trainers at national level on breastfeeding counselling and HIV and infant feeding counselling were conducted in Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo, Eritrea, Gabon, Guinea, Malawi, Mali, the Niger and Senegal. Countries such as Ghana, Nigeria, Uganda, the United Republic of Tanzania and Zimbabwe have expanded these trainings to provincial and district levels. By the end of 2005, over 250 national trainers and over 5000 health workers were trained in counselling on breastfeeding and on HIV and infant feeding. In addition, Burkina Faso, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Nigeria, Zambia and Zimbabwe conducted follow-up after training and built capacity at provincial and district levels, with support from the regional office. The Regional Office for Africa, in collaboration with CAH, supported the adaptation of the WHO/UNICEF/United States Agency for International Development (USAID) HIV and infant feeding counselling tools in Uganda.

HIV and infant feeding activities in the Region of the Americas. The WHO/UNICEF course on HIV and infant feeding was introduced in Peru and Nicaragua.

HIV and infant feeding activities in the European Region. The *Strategic framework on the prevention of HIV infections in infants*, developed by the UNAIDS cosponsors under the leadership of the WHO Regional Office for Europe, was finalized and printed in both English and Russian in 2004. The Regional Office for Europe supported the development of national protocols and treatment guidelines for preventing HIV in infants in several countries. A review of activities to prevent mother-to-child transmission of HIV was conducted in four selected regions of the Russian Federation, resulting in a description of major challenges, needs assessment and recommendations for future directions for the programme. Key documents on the prevention of mother-to-child transmission have been translated into Russian and disseminated in the region.

HIV and infant feeding activities in the South-East Asia Region. The Regional Office for South-East Asia organized an intercountry combined training course in India on breastfeeding counselling and HIV and infant feeding counselling. Participants came from India, Indonesia, Myanmar, Nepal, Papua New Guinea, Thailand and Viet Nam – representing two WHO regions. In a workshop at the end of the course, CAH introduced participants to the HIV and infant feeding framework for priority action, and the countries then proposed activities that they could carry out to start implementation.

Accelerating prevention of mother-to-child transmission. In an effort to accelerate the implementation of interventions to prevent mother-to-child transmission, including through breastfeeding, CAH staff have par-

ticipated in joint missions organized by the expanded Inter-Agency Task Team on prevention of HIV infection in infants to Cameroon and Côte d'Ivoire. CAH also participated in the recent high-level global partners meeting, where a call to action for an HIV-free and AIDS-free generation was issued, calling for greater progress in prevention of mother-to-child transmission.

IMCI in the home

Successful promotion of healthy growth and development in childhood depends not only on the availability of a functional health system but also on the care that families and communities provide to children and how effectively they utilize the available health resources. Improving family and community practices is one of the areas identified by the Department as needing increased emphasis.

Research

Evidence for key family and community practices. An extensive review of the evidence for 12 key family and community practices was published. The review summarizes the potential impact of the interventions on child health, growth and development; identifies gaps in knowledge; and makes recommendations for future work. A two-day informal consultation held to discuss the implications of the review on future work recommended focusing on specific gaps in evidence, including how to promote newborn care practices and care-seeking for newborns and children, and documenting and evaluating scaling up the promotion of key family practices.

Care seeking and gender. Secondary analysis of data collected in a randomized controlled trial aimed to assess gender bias within hospitalization rates and to ascertain whether differential care-seeking practices contributed significantly to excess female mortality in New Delhi in India. The results showed that gender bias was highest among highly educated mothers, and decreased steadily with the level of education of mothers. Female children of mothers with no formal education were significantly more likely to be hospitalized in case of need than female children of mothers with several years of formal education, even after adjusting for confounding factors. The results of this study have been published in the *Journal of Social Science and Medicine*.

With the support of the WHO Regional Office for Africa, operational research was completed in Mali to identify and analyse the causes of underuse of community health services and make recommendations to improve use. The reasons identified included geographic and economic inaccessibility; limited opening hours; lack of essential medicines; low quality; and improper reception of patients by the health workers. The recommendations included improving the quality of care rendered, including availability of drugs; courteous reception of patients by health workers; and raising community awareness through social mobilization.

Adherence to recommendations for follow-up. Family responses to the IMCI recommendations for bringing back a sick child to a health facility for follow-up assessment were examined in a study in Brazil. Of 229 sick children who were seen in six family health-care facilities in Brazil, 153 were recommended to return in 2 or 5 days for follow-up. Children who did not

return were visited and assessed at home. The main reasons given for not returning for follow-up were: the child had improved (35%) and other family priorities (47%). Home visits showed that, although most children had improved, some had a new health problem and one child was sick enough to be referred. Prescription of antibiotics was associated with increased probability of returning for a follow-up visit. The study shows limited adherence to follow-up recommendations. Although the majority of the problems detected at the consultation had been resolved, counselling the family on the recognition of danger signs that should prompt return to a health facility should be reinforced. A paper presenting the study findings was published in *Acta Paediatrica* in 2005.

Care for development. The efficacy and safety of adding the promotion of care practices involving play and communication with young children aiming to promote their development to consultations for the management of childhood illness were explored in a study conducted at Ankara University, Turkey. Children aged 24 months or less, with minor or no illnesses, were recruited for the study. One month after recruitment, significantly more home-made toys were observed, more caregivers reported reading to their children, and more families had optimal home environment scores in the intervention than in the control group. Compliance with treatment and outcome of illness was similar between the two groups. The study indicates that the promotion of care for development during the consultation for child illness is an effective method of supporting caregivers' efforts to provide a more stimulating environment for their children, while it does not have a negative effect on the management of illness.

A model of an energy efficient stove which reduces exposure to smoke is demonstrated at the Karachi workshop, September, 2005
(PHOTO: M. WEBER)

Indoor air pollution. CAH, together with partners, has been supporting a large intervention trial to reduce indoor air pollution in the highlands of Guatemala. Households were given a local stove which substantially reduces indoor smoke, and the effects on child health were measured. Data are being analysed and will become available in early 2006. As more information on the health effects of air pollution is needed from different geographical regions, a seminar on the effects of air pollution on health linked with a situation analysis in Pakistan was held in 2005 in Karachi, followed by a workshop to develop proposals to document the effects of air pollution reduction on health. Five letters of intent have been developed, and funding will be sought for these projects.

A symposium was held at the International Society of Environmental Epidemiology in Johannesburg in September 2005 to summarize the contribution of indoor air pollution to low birth weight. Findings from four research studies were presented, and the meeting report has been expanded to include a systematic review of the literature. This will be published as a WHO document, and a review paper in a journal is planned.

Strengthening systems to support children's healthy development in communities affected by HIV/AIDS. In order to lead a comprehensive primary care approach to children living in communities affected by HIV/AIDS, the Department reviewed the situation of current efforts in countries and formulated recommendations based on evidence. There is wide-

spread consensus that strengthening systems to support children living in communities affected by HIV/AIDS is the best option for achieving population-level improvements in children's health, their psychosocial well-being and their educational development. The health sector is well placed in developing countries to lead multisectoral responses that facilitate the holistic care and protection of children. The review makes recommendations for health, school and community systems to be strengthened to prevent and treat illness, support vulnerable children and promote their growth and development. To take this forward will require the development of integrated models; tools for assessment, implementation and evaluation; training programmes; and pilot projects. The review will be published in early 2006.

Maternal mental health, child care, growth and development. A draft document containing a synthesis of the current state of scientific and empirical knowledge on maternal mental health and its impact on child health and development was produced for publication as part of a series of papers supporting *The world health report 2005*. Women are between two and three times more likely to experience depression and anxiety than men and are especially vulnerable when caring for newborns and very young children. Findings of a recent group of studies have indicated that postpartum depression occurs between two and three times more frequently in the poorest women who are most vulnerable. Risk factors for depression include: lack of reproductive choice and unwanted pregnancy; poor relationship with a partner; insufficient practical or emotional support from partner or family; domestic violence, poverty and social adversity, including crowded living conditions and lack of employment; persistent poor physical health; and adverse life events, such as bereavement.

Caregiving capacity is substantially reduced in women whose postpartum mental health is poor. They cease breastfeeding earlier and respond less sensitively and contingently to their infants. Independent of other risk factors, the infants of mothers who are depressed, especially those experiencing social disadvantage, are more than twice as likely to be underweight and three times more likely to be short for age at six months, have significantly lower birth weight, higher rates of diarrhoeal diseases, poorer short-term and long-term cognitive development, and higher long-term rates of antisocial behaviour, hyperactivity and attention deficits. Women who are depressed are less able to comprehend and use health education, yet prevention and promotion programmes to improve child health depend on mothers. Initiatives to improve child health must also attend to improving maternal mental health. The review will be published in 2006 by EIP.

Proposal development workshop. To address research priorities on community interventions, CAH held a workshop in Mozambique to develop study proposals. Eight research teams were selected from about 40 who responded to a prior request for pre-proposals. Proposals were developed to address:

- effectiveness of routine home visits for all neonates during the first week of life in improving newborn care practices, and by so doing, neonatal survival (Ghana, Mali, Mozambique, Zambia);

- effectiveness of community-based interventions to improve care-seeking for childhood illness (the Democratic Republic of the Congo, India, Mexico);
- documentation of scaling up community IMCI and evaluation of its effectiveness in improving key family and community practices, and child survival (Bangladesh).

The workshop was a critical step towards accelerating implementation of the research and building the capacity of relevant research teams. Resulting projects are expected to begin implementation in early 2006.

The Regional Office for Africa conducted a capacity development workshop on proposal development for regional, intercountry and national staff. During this workshop 13 proposals were developed for resource mobilization, and proposals were later sent to agencies for funding.

Influencing policy

Joint statement on the management of pneumonia in community settings. Based on a review of programme experience, WHO and UNICEF published a joint statement on the management of pneumonia in community settings. This statement recommends that, in order to increase coverage and reduce mortality, community-level treatment should be carried out by well-trained and supervised community health workers.

Advocacy DVD on care for development. An advocacy DVD on the IMCI care for development intervention was developed for the attention of policy-makers, health workers and the public. With the help of live footage from training sessions in a variety of countries representing different regions of the world, the video makes the case for investing in child development. It demonstrates how a simple intervention delivered by health workers and easily applied by caregivers in the home can be instrumental in improving the development of all children but especially those who are poorly nourished and frequently ill. The DVD shows how health workers are trained in care for development, and how they help to strengthen community efforts in support of caregivers. The DVD along with an accompanying brochure will be distributed to regional offices and early childhood development networks during 2006.

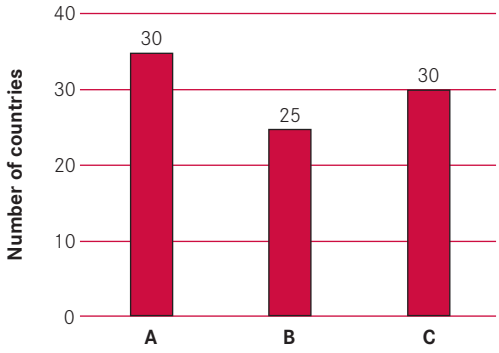
Developing methods and tools

Planning: briefing package on community-based activities. The briefing package developed by the Regional Office for Africa in collaboration with CAH and partners was published. This package proposes a process for bringing principal partners together for planning and implementation at national, intermediary, district and community levels. This process will: enable development of coherent strategic and operational plans at various levels; facilitate the sharing of experiences, resources and expertise among projects and geographical areas; and help ensure consistency among actors. The process, extensively used in Africa, will be expanded to other regions in early 2006.

Planning: continuum from mother to child. CAH collaborated with the Regional Office for Europe and MPS to develop a framework for a workshop on improving family and community practices, combining practic-

FIGURE 4.3

Implementation of community IMCI, Africa, 2005 (activities started in 1999)



A. Countries with at least two consultants trained in the community-IMCI package.

B. Countries in which IMCI orientation and planning meetings have been conducted.

C. Countries with at least three districts implementing IMCI.

es related to both maternal and child health. A resulting workshop, conducted in the Republic of Moldova in September 2004, provided the basis for developing a regional framework.

Programme management: community management of illness. CAH and the Regional Office for Africa participated in a steering group for the Child Survival Collaborations and Resources Group (CORE) consortium to develop guidance on establishing or maintaining community health worker programmes for the management of childhood illness. This material will complement generic, integrated treatment and promotional guidelines under development by CAH.

Guidelines and training materials: care of the child in the home and community in the African Region. The Regional Office for Africa developed a draft guide for home care of the sick child to be used as an aide-memoire by heath workers. In collaboration between WHO headquarters and the Regional Office for Africa, work was initiated on materials for training community health workers. These materials will be organized according to five main categories (care-giving skills, newborn care practices, infant and young child feeding practices, prevention of illness and family response to illness), of which the first will be the basis for the entire set. These will be complemented by community-level integrated management of the three main childhood illnesses (pneumonia, diarrhoea, malaria). Guidelines will be based on experience and existing materials.

The Regional Office for Africa, in collaboration with UNICEF and Basic Support for Institutionalizing Child Survival (BASICS) II, also adapted a framework for supporting countries in documenting and sharing experience of implementing community IMCI. The framework was adapted for use in seven countries: Ghana, Madagascar, Malawi, the Niger, Senegal, the United Republic of Tanzania and Zambia.

As part of the United Nations Foundation-supported Project of Empowering Communities, the Federal Ministry of Health of Nigeria organized, in collaboration with the Regional Office and UNICEF, the field testing of materials to be used for community IMCI capacity building, supervision and monitoring at ward level. The aim of the field testing was to ensure that adapted materials for training supervisors and community resource persons are available, and capacities are developed locally to ensure replication. Generally, the results of the field testing were very positive: the level of knowledge increased from 40% to 66%; and the content was easy to read and understand by the majority of participants. During the practical exercise, high performance was observed for the counselling task, except for summarizing the key messages at the end of the interaction. Areas for improvement have been identified in the counselling guide and the need to reflect those corrections in the trainers' manual was accepted.

Implementing, monitoring and evaluating

Building capacity in community IMCI in the African Region. More than 30 countries in the African Region now each have at least two consultants

trained in the use of the community IMCI briefing package, and the effort to build a regional and national pool of consultants is continuing (see Figure 4.3). During the biennium 180 consultants were trained in the African Region in the use of the briefing package. The briefing package was used for planning of community IMCI at national level in 11 countries: Botswana, Burkina Faso, Burundi, Cameroon, Central Africa Republic, Ghana, Kenya, Lesotho, Madagascar, Nigeria and Rwanda, and to develop district micro-planning in Burkina Faso, Burundi, Guinea and the Niger. The experience indicates that the material is easy to use by countries. However, a detailed data collection tool for situation analysis at district level should be incorporated in the package. Burundi has been supported to develop district community IMCI plans, bringing to 19 the number of countries with district plans.

Expanding the reach of community interventions in the Region of the Americas. In the Region of the Americas, a five-year collaborative project with the American Red Cross and the United Nations Foundation continued and expanded. The project provides leadership and support for the family and community practices component of IMCI. Additional guides on key family practices were developed to support community and family leaders in project activities. In addition, social communication guidelines to promote behaviour change were developed and field-tested in project sites.

TABLE 4.1

Country accomplishments and next steps to expand IMCI, Regional Office for the Americas, 2004–2005

Bolivia: A national IMCI coalition was established in 2004. The coalition is expanding the community IMCI methodology to 150 new communities.
Colombia: A national coalition between Ministry of Health and Colombian Red Cross is supporting the expansion of community IMCI to 10 country departments with a total population of 20 million habitants. Colombia has institutionalized IMCI by requiring that all municipalities secure funds for implementing IMCI activities.
Dominican Republic: A national IMCI coalition is introducing key family practices in 156 child health centres in the country.
Ecuador: The Ecuadorian Red Cross is expanding the community IMCI methodology to new communities. The Ecuadorian Ministry of Health has incorporated the local assessment and planning methodology recommended by the Regional Community IMCI Partnership into a national coverage extension programme reaching the 50 poorest districts in the country.
El Salvador: A national IMCI coalition is expanding the community IMCI methodology to local chapters and strengthening a national technical working group with Red Cross allies (Canadian Red Cross and Italian Red Cross) to include the IMCI strategy in the projects currently being financed by these partners.
Honduras: The Honduran Red Cross has introduced IMCI methodology into national health programmes. Local municipalities are organizing themselves under the Regional Environmental Council and forming a national association of municipalities to expand the community IMCI methodology in the government sector.
Nicaragua: The Movimiento Comunal Nicaraguense, a community-based organization, which is a member of the national IMCI coalition, has 1500 volunteers, 1200 health promoters, and 900 educators, and has decided to adopt the community IMCI methodology and expand activities to 130 poor municipalities.
Peru: Efforts are being made to reactivate a national IMCI coalition to scale-up community IMCI activities. New proposals have been developed for three additional communities.
Venezuela: The national IMCI coalition between the Ministry of Health and Venezuelan Red Cross is strengthening the expansion of the community IMCI methodology through national initiatives involving 13 000 health workers and 10 000 community centres.

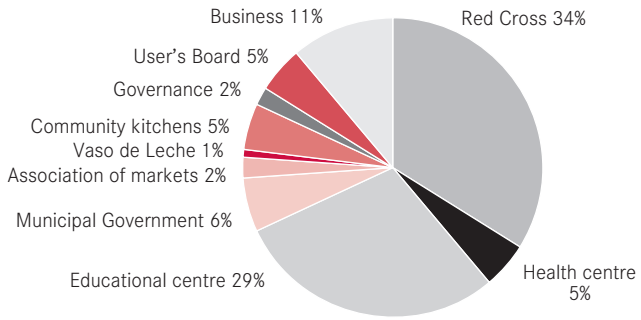
Community IMCI Health Fair, Managua, Nicaragua, 2004
(PHOTO: G. CAMACHO)

A baseline survey tool to measure behaviour change was completed and field-tested in three countries, and local monitoring of project activities continued using specially developed tools. Table 4.1 summarizes country accomplishments and next steps to expand the IMCI strategy, through the American Red Cross, United Nations Foundation and WHO partnership.

The community IMCI social actor and intervention strategy in Peru lays the groundwork for the long-term creation of a culture of shared responsibility between families, the community, and the health services. It also buttresses the community's social capital and helps to empower the actors most directly involved. The mobilization of community resources was studied in the district of Chao to estimate the economic equivalent of the unconventional resources contributed by the community and the social networks.

Figure 4.4 shows the extensive capacity of the IMCI partnership for mobilizing resources. For the activities analysed, for every financial resource unit directly contributed by the project, 8.8 additional units of resources were mobilized. Figure 4.4 also shows that, apart from the Red Cross, which mobilizes a large group of volunteers, the other significant actor is the education sector. Nearly 30% of the total resources mobilized corresponded to educational units, basically the support of teachers. Also of note are the Municipal Government and the community kitchens.

FIGURE 4.4
Contribution of actors to total resources, Chao District, Peru, 2005



Supporting community interventions and care for development in the European Region. New efforts to strengthen caregivers' behaviours and community interventions in child health were made at meetings on follow-up of community interventions in child health, in Kazakhstan and Uzbekistan. Actions to strengthen IMCI community interventions by addressing environmental issues including child injuries and trauma, hygiene and sanitation, and indoor tobacco smoke were also elaborated. In Armenia and Kyrgyzstan, experience of pilot projects with active community involvement, participatory and multisectoral approaches led to recommended actions in workshops on improving family and community practices in child health. The outcome of the workshops was the framework for prioritizing, planning and coordinating community interventions at national level.

The Regional Office for Europe, in collaboration with CAH and MPS, developed and pre-tested a framework on improving family and community practices in maternal and child health in the Republic of Moldova. Based on the situation analysis of current practices in maternal and child health, participants at a workshop selected priority family practices, identified constraints for implementation, and developed the next steps for promoting those practices in a more integrated and coordinated framework. Further support was provided for the consultancy mission to develop a family and community component of the National Mother and Child Health Plan in the Republic of Moldova.

Identifying gaps in the implementation of community IMCI. The Regional Office for Africa supported a situation analysis on community IMCI in

Ghana, Mozambique, Nigeria and the United Republic of Tanzania. The assessments identified gaps in implementing community IMCI at national level, including: attrition of membership in the coordination group; infrequent meetings; lack of terms of reference for members; and undefined roles of partners. These gaps resulted in a lack of coordinating structures at regional, district and community levels. The assessment also identified low prevalence of key practices, such as initiating breastfeeding within one hour of delivery and sleeping under treated bednets. There is a need to develop a community IMCI strategy in collaboration with partners and major stakeholders; this corresponds to the process described in the briefing package on community-based activities.

Review of the management of child illnesses by community health workers. In collaboration with UNICEF and the Johns Hopkins School of Public Health, CAH finalized a review of programmes that promote the management of child illnesses by community health workers.

IMCI in first-level facilities

In 2004–2005, CAH continued its sizeable programme of clinical research on interventions, both in health facilities and in the community, designed to prevent and manage common serious childhood conditions. Based on the results of research, the Department worked to develop and update clinical guidelines, including those for the management of acute diarrhoea, shigellosis, HIV/AIDS, wheezing and bacterial meningitis. In addition, progress was made in developing alternative approaches to improving the skills of health workers, and to address the health needs of children in complex emergencies.

Research

Reduced-osmolarity oral rehydration salts. An evaluation conducted in Bangladesh demonstrated the safety of a new reduced-osmolarity formulation of oral rehydration salts (ORS). The findings of the study were presented at the World Congress of Paediatric Gastroenterology, held in Paris in 2004. This study showed that no adult diarrhoea patients experienced symptoms (seizure or altered consciousness) associated with hyponatraemia. In addition, the occurrence of seizure or altered consciousness associated with hyponatraemia in children treated with the new ORS formulation is rare, and the incidence rate of symptomatic hyponatraemia associated with the use of the new ORS is less than the rate observed with the old ORS formulation. This finding should be reassuring for clinicians, policy-makers and the producers of ORS. The Department initiated a similar study in Calcutta, India. Preliminary results 4 months after initiation of data collection showed that out of more than 6000 hospitalized patients, only 4 presented with biochemical hyponatraemia associated with drowsiness. All patients recovered uneventfully, without specific treatment. Final results of this study should be available in mid-2006.

Acceptability and feasibility of zinc supplementation. A multi-centre study to evaluate the acceptability of zinc supplementation in the management of acute diarrhoea was conducted in five countries in collaboration with the International Clinical Epidemiology Network (INCLEN) and Johns Hopkins University, Baltimore. The results showed that adherence to rec-

ommendations for zinc supplementation was good, and that the ORS use rate was not negatively affected by zinc supplementation. In addition, zinc supplementation was associated with a significant decrease in use of antibiotics and antidiarrhoeals in all study sites. The results of this study have been accepted for publication in the *Journal of Pediatric Gastroenterology and Nutrition*. The formative research methods used to develop specific messages for each country to promote zinc in the management of acute diarrhoea have been published on the web. Studies to assess both the feasibility of and constraints to incorporating zinc into the routine treatment of diarrhoea at the local level were initiated in three countries – India, Mali and Pakistan. The results of the studies conducted in India and Mali have shown large increases in ORS use rates when zinc supplementation is added to the standard management of diarrhoea. These results have been published and have led in India to the revision of the national policy on diarrhoea management to include zinc supplementation. The three countries have now initiated the full-scale intervention, and results should be available in 2006.

Zinc supplementation in HIV-positive children. Because the safety of zinc supplementation in HIV-positive children was uncertain, the Department collaborated with Johns Hopkins University in supporting a study in South Africa to assess the role of zinc in HIV-1 replication. The results of this safety study, published in the *Lancet*, show that zinc supplementation of HIV-1-infected children does not result in an increase in plasma HIV-1 viral load and could reduce morbidity caused by diarrhoea. Therefore, programmes to enhance zinc intake in deficient populations with a high prevalence of HIV-1 infection can be implemented without concern for adverse effects on HIV-1 replication. In view of the reductions in diarrhoea and pneumonia morbidity, zinc supplementation should be used as adjunct therapy for children with HIV-1 infection.

Zinc supplementation in very young infants. There has been only one study that specifically assessed the efficacy of zinc supplementation in infants 1–6 months of age, and it found no differences in duration or severity of acute watery diarrhoea episodes between children supplemented with zinc or placebo. Therefore, the Department collaborated with Johns Hopkins University to conduct a multi-centre study (Ethiopia, India and Pakistan) to further assess the impact of zinc supplementation in infants below six months of age with diarrhoea. The results of this study showed no differences in reported stool frequency or the proportion of episodes lasting longer than seven days between the two treatment groups, and confirm the results of the previous study in showing that young infants do not appear to benefit from zinc supplementation for the treatment of diarrhoea.

Validation of the HIV component of the IMCI guidelines. Two studies for the validation of the HIV component of the IMCI guidelines were completed in Ethiopia and Uganda. In 2004, at a consultative meeting hosted by the Regional Office for Africa, WHO staff and researchers agreed upon diagnostic signs and symptoms and the overall algorithm to be included in the guidelines, as well as the information to be included in the national adaptation guide. They also identified steps for taking this adaptation to countries, and potential linkages with related initiatives on child health. The HIV component of IMCI was subsequently finalized and draft adapta-

tion materials prepared. To date 11 countries in Africa have adapted IMCI materials to include the HIV component. Efforts are under way to study the burden of HIV-related disease at primary care facilities, and the feasibility of using the guidelines in that setting.

Treatment of very severe pneumonia. A multi-centre randomized clinical trial to compare the efficacy of chloramphenicol with gentamicin plus ampicillin in the treatment of very severe pneumonia was conducted in eight centres in seven countries. A total of 958 children aged 2 to 59 months with very severe pneumonia were enrolled in the study. By day 6, treatment had failed for 122 (12.7%) children. Treatment failure was higher in the chloramphenicol group, and the cumulative failure at day 10 and day 30 remained high in this group. By day 30, more deaths had occurred in the chloramphenicol group than the gentamicin plus ampicillin group. These results support the recommendation for the use of gentamicin plus ampicillin for the management of very severe pneumonia.

Injectable versus oral antibiotic therapy for severe pneumonia. In a controlled hospital environment, injectable antibiotic therapy for severe pneumonia in children is as efficacious as oral antibiotic therapy. In the light of the recommendations of an expert consultation on management of acute respiratory infections, CAH is collaborating with Boston University, Johns Hopkins University and the International Clinical Epidemiology Network to examine whether severe pneumonia can be safely treated at the community level. Two multi-centre studies, one in Pakistan and another in Bangladesh, Brazil, Bolivia, Egypt, Ghana and Viet Nam, are being supported to address this research question. All children enrolled in the two studies are being followed up actively in their homes to document outcomes and adverse events.

Increasing the specificity of treatment guidelines for wheezing. A multi-country study to increase the specificity of treatment guidelines for children with wheezing has approached completion, with data analysis having been conducted for three out of five sites (Egypt, Pakistan and Thailand). Data collection in one of the sites (Ghana) was suspended because of low enrolment, but is continuing in Colombia and should be completed in 2006. Data from Pakistan have been published. Articles on the work in Egypt and Thailand will be published in early 2006 and a combined analysis is under way.

Improving the management of wheeze in children. A study is comparing a commercial spacer device with a home-made spacer device to be used with a metered dose inhaler in children presenting with wheezing. Data collection in South Africa is continuing.

Efficacy of short-course treatment in the management of bacterial meningitis. A multi-centre, randomized clinical trial is under way to investigate the clinical efficacy and safety of short-course treatment with injectable ceftriaxone in the management of patients with bacterial meningitis. The trial, which compares a five-day course with a ten-day course, is continuing in Bangladesh, Egypt, Malawi, Pakistan, South Africa and Viet Nam. Data collection has been slower than anticipated; results should be available in early 2007.

Developing methods and tools

Guidelines for the management of shigellosis. New guidelines for the management of shigellosis were drafted at a workshop held in Dhaka, Bangladesh. After undergoing final review, the guidelines were published in early 2005. One main change is the recommendation to replace nalidixic acid with ciprofloxacin as the first-line antibiotic in the management of bloody diarrhoea. In addition, zinc supplementation is now recommended as an adjunct to antimicrobial therapy in the management of shigellosis.

Guidelines for the use of zinc in national programmes for the control of diarrhoeal diseases. In response to recent research results, CAH developed a series of documents to facilitate the introduction of zinc for the treatment of diarrhoea into existing country programmes. *Diarrhoea treatment guidelines, including new recommendations for the use of ORS and zinc supplementation: for clinic-based health-care workers* was developed and finalized in collaboration with the USAID Micronutrient Programme (MOST). The WHO document, *Treatment of diarrhoea – A manual for physicians and other senior health workers*, was entirely revised. In collaboration with USAID, the Department is finalizing a document entitled *Introduction of zinc supplementation in diarrhoeal disease control programmes: guidelines for policy-makers and programme managers*, which will be published in 2006. The Department is working with the United States Pharmacopoeia to develop a tool to allow countries to assess the quality of zinc products locally available and determine if they can be recommended for use in the management of diarrhoea. This tool should be available in early 2006. Finally, to facilitate and accelerate the adoption of the new ORS solution, *Oral rehydration salts – Planning, establishment and operation of production facilities* was revised in collaboration with UNICEF and the International Pharmacopoeia. This revised document will be circulated by WHO and UNICEF to every ORS manufacturer.

Revised guidelines for the management of tuberculosis. The Department contributed to the development of the second edition of *TB/HIV a clinical manual*. This edition includes the management of children, and provides guidance for both programme managers and clinicians.

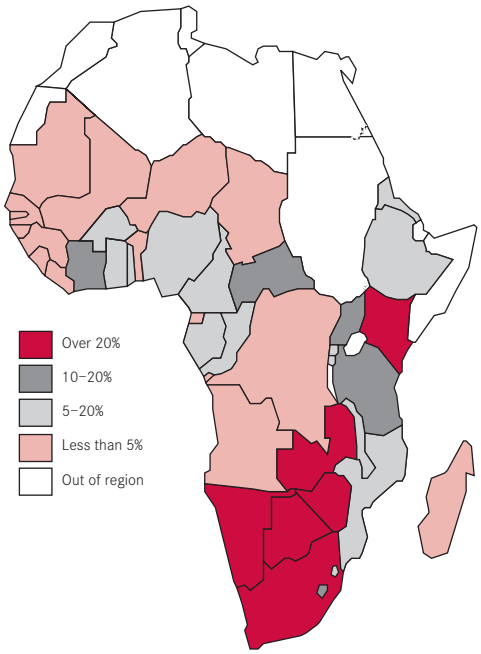
Guidelines on chronic suppurative otitis media. The Department contributed to the development of *Chronic suppurative otitis media: burden of illness and management options*.

Guidelines on management of children with pneumonia and HIV infection. The Department contributed to the development of these guidelines which include the clinical management of various categories of WHO-defined pneumonia at the health facility in children who are either exposed to or have HIV infection.

Guidelines for integrating paediatric HIV/AIDS care into IMCI. Countries with high burdens of HIV (see Figure 4.5) are making significant gains in increasing access to antiretroviral treatment for adults. Attention to ensuring that children are included in antiretroviral therapy scale-up efforts has to date not resulted in adequate numbers of children receiving treatment. Three sets of guidelines have been developed by the Department, in collaboration with partners within and outside of WHO, to improve paediatric HIV/AIDS care and treatment:

- *Guidelines for paediatric dosing of antiretrovirals*. CAH in collaboration with the HIV department has developed simplified dosing guidelines based on weight ranges. These regimens have been validated using pharmacokinetic methods.
- *Guidelines for HIV testing*. Simplified guidelines have been produced for health workers.
- *IMCI complementary training course*. CAH in collaboration with the HIV department and the Regional Office for Africa drafted the IMCI complementary training course, a corresponding chart booklet and a facilitators' guide. The material was field-tested in Ethiopia in 2005. In collaboration with the HIV department, training materials have also been developed on psychosocial support of HIV-infected and HIV-affected children as well as on paediatric HIV clinical care for first-level and second-level health workers within the Integrated Management of Adolescent and Adult Illness (IMAI) approach. The IMCI complementary course consists of clinical recognition using the IMCI-HIV algorithm, testing and counselling for HIV, diagnosing and managing common illnesses, including opportunistic infections, as well as basic management of antiretroviral therapy.

FIGURE 4.5
Contribution of HIV to child mortality in Africa



Source: Walker N, Schwärtlander B, Bryce J. Meeting international goals in child survival and HIV/AIDS. *Lancet*, 2002, 360:284–289.

Updating and expanding the IMCI clinical guidelines. Drawing upon the findings of research studies and lessons learnt from experience in implementing the IMCI clinical guidelines in countries, the Department prepared a technical update on IMCI. This update recommends modifications to the generic IMCI guidelines and provides the evidence base for each modification. Ongoing research on conditions such as sore throat, severe pneumonia and wheeze will form the basis for the development of additional technical updates. Reviews were finalized on selected conditions of clinical significance which have not yet been included in the generic IMCI guidelines. These include dengue, chronic suppurative otitis media, skin conditions and urinary tract infections.

Alternative approaches to IMCI training. The Department continued to work with partner organizations to develop alternative approaches to the standard IMCI clinical training course, such as distance learning, on-the-job training and mentoring. In 2005, an interactive computer-based learning tool, developed by the Quality Assurance Project with technical guidance from CAH, was launched. A field-test of the tool was conducted in Kenya. In addition, the Department provided technical input to a project being undertaken by the Novartis Foundation for Sustainable Development (NFSD) to develop an IMCI computerized adaptation and training tool (ICATT). A beta-test of the first component of the software, an IMCI chart booklet builder and viewer, was conducted in Zambia in 2005. Work continued to develop software for the training manager and model training course components of the programme. The computerized tool should be completed and launched in 2006. A six-day IMCI course for first-level health workers in the African Region was pre-tested and finalized in

Nigeria. Research to assess the appropriateness of the IMCI abridged course to train first level health workers was initiated in 2005 with results expected by mid-2006.

Another alternative IMCI course (Auto-Apprentissage Assisté-AAA) was evaluated with the support of the Regional Office for Africa in Madagascar in 2004, to assess knowledge and skills of health-care providers trained in AAA in the management of sick children less than 5 years of age. The evaluation showed that this method can be used with modifications, including: increasing the number of days from 5 to 6; developing a facilitators' guideline for the course; strengthening the counselling section of the course; ensuring that follow-up after training is conducted after each training; and maintaining a participant-to-facilitator ratio of 4:1.

Effective teaching: a guide for educating health-care providers. This learning package, developed in collaboration with JHPIEGO, an affiliate of Johns Hopkins University, was completed in 2005. The package aims to help educators of health-care providers become more effective teachers. It is designed for teachers and tutors of students, including senior students, clinical instructors and clinical staff who assist with teaching at clinical practice sites. It includes a reference manual, learners' guide and facilitators' guide, combining reading and exercises with coached practice with colleagues and feedback from a trained facilitator. It covers all of the important steps in educating health-care providers, from planning for teaching, to assessing the competence of students.

Updating the textbook on primary child care. Work continued to complete the second edition of Primary child care: a manual for health workers. A contract was signed with Macmillan Press Ltd. to complete the editing, design, printing and distribution of the manual, which should be published in 2007.

Influencing policy

Including zinc in the WHO model list of essential medicines. To facilitate the new policy recommendation for the treatment of diarrhoea with zinc, CAH – with support from UNICEF and USAID – submitted an application for the inclusion of zinc in the WHO model list of essential medicines. This application was reviewed and approved at the March 2005 meeting of the WHO Committee on Essential Medicines. Therefore, zinc is now included in the WHO Model List of Essential Medicines as an adjunct therapy to ORS for the management of diarrhoea.

Zinc specifications and transfer of technology. The Department collaborated with Nutriset/Rodael (a manufacturer of zinc dispersible tablets), the United States Pharmacopoeia and UNICEF to develop specifications for the production of zinc tablets and zinc syrups. These specifications were published in early 2005 in the United States Pharmacopoeia. The Department also supported activities, in collaboration with USAID, to facilitate the transfer of technology for the production of zinc tablets to a number of countries, including Bangladesh, India and Pakistan. An agreement for the transfer of technology for the production of zinc dispersible tablets was signed between Nutriset/Rodael and the Centre for Health and Population Research (International Centre for Diarrhoeal Disease Research, Bangladesh). In India, discussions are still under way between a local

manufacturer and Nutriset/Rodael for a similar transfer of technology. In addition, pharmaceutical companies were contacted in various countries to investigate their interest and willingness to develop zinc products that would be acceptable for use in the management of diarrhoea. A number of companies in various countries are now developing zinc syrups and zinc dispersible tablets for this purpose.

Joint statement on the clinical management of diarrhoea. In 2004, WHO and UNICEF published a joint statement on the clinical management of diarrhoea, incorporating new recommendations on the use of low-osmolarity ORS, and zinc supplementation.

Zinc Task Force. Following the publication of the joint statement, the Department together with UNICEF, USAID and Johns Hopkins University created a Zinc Task Force (ZTF), supported by a grant from the Bill and Melinda Gates Foundation, to promote the use of zinc with ORS/oral rehydration therapy for the treatment of diarrhoeal disease, and to support activities promoting zinc as a treatment and prevention modality in diarrhoea and other diseases, as appropriate.

Implementing, monitoring and evaluating

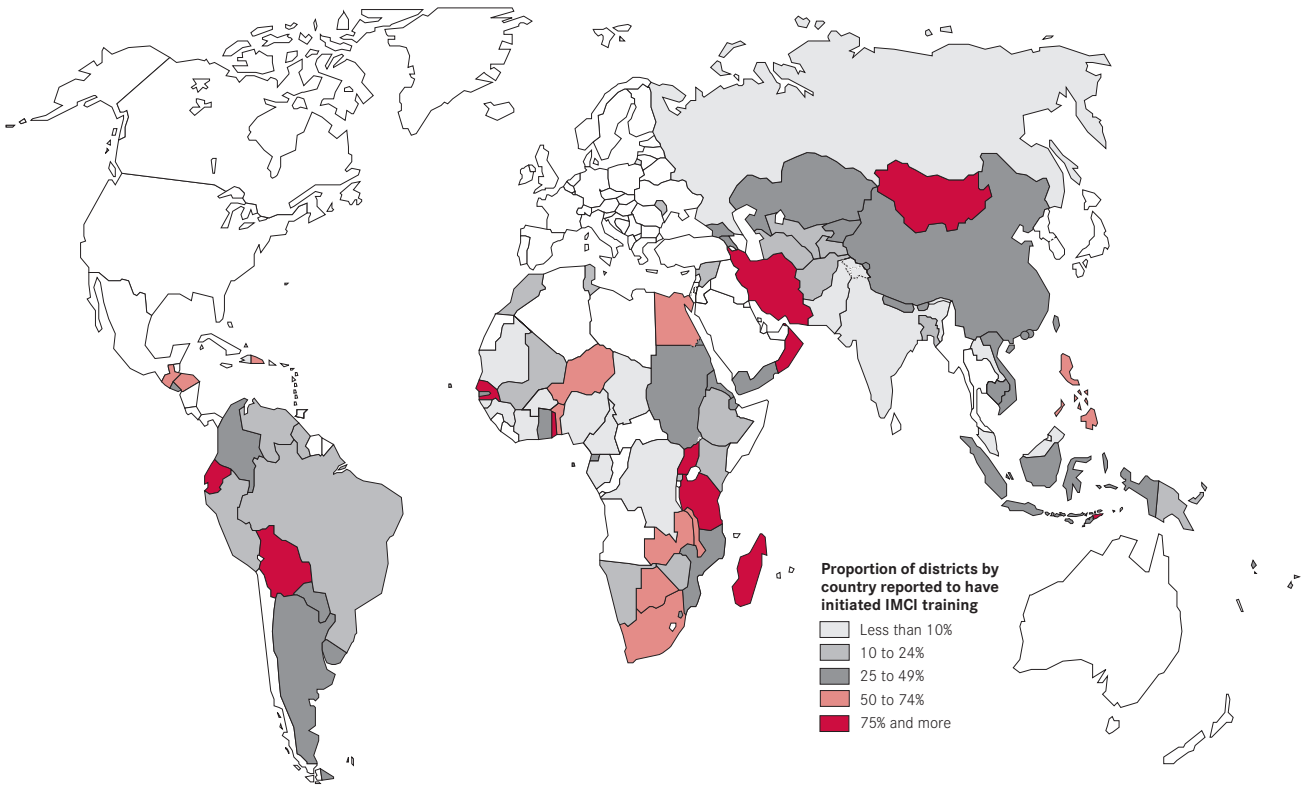
Improving the availability of reduced-osmolarity ORS and zinc supplements. In 2004, the reduced-osmolarity ORS formulation was officially launched in India. The new ORS formulation is now the only one provided in government health facilities and the only one manufactured throughout India. CAH, in collaboration with UNICEF, is promoting the use of the revised formulation, which is being adopted by a growing number of countries.

Globally, the coverage of IMCI training has expanded to more countries and more districts (Figure 4.6).

In the Western Pacific Region, the Child and Adolescent Health and Development Unit (CHD) continued supporting the ongoing implementation of evidence-based strategies forming the basis for child survival activities. Mongolia continued its work on strengthening of IMCI including capacity building, strengthening of health systems and promoting adequate family and community practices. In Papua New Guinea the work on expansion of IMCI continued steadily. Fiji expanded the national IMCI algorithm to include common skin conditions, especially scabies, bacterial skin infections and fungal infections. CHD supported activities in *pre-service education* for Member States to intensify actions for improving the survival of children in the region. Papua New Guinea convened a workshop on IMCI pre-service curriculum development. Various activities were conducted for the integration of IMCI in pre-service education for medical and nursing schools in the Lao People's Democratic Republic. In Viet Nam, an evaluation of the integration of IMCI in pre-service education started. Cambodia continued the work on integration of IMCI in teaching activities. The process of integration of IMCI in medical schools continued in China and the Philippines, including training of faculty members, orientation of school authorities and development of plans for integration, including monitoring.

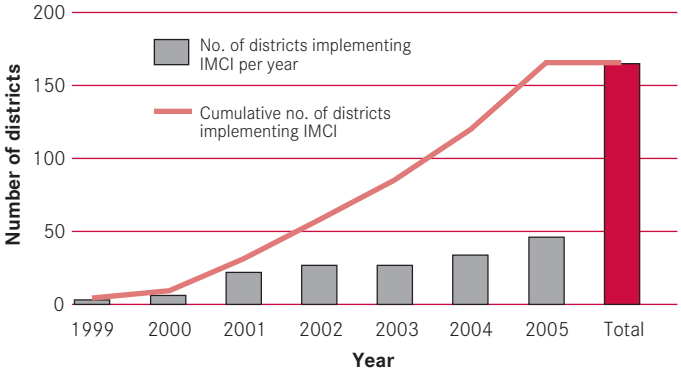
In the Eastern Mediterranean Region, the number of districts within coun-

FIGURE 4.6
Estimated coverage of IMCI training, December 2005



Source: Based on coverage data provided to WHO by 88 countries.

FIGURE 4.7
Number of districts implementing IMCI, Egypt, December 2005



Districts with all health facilities implementing IMCI as at end of December 2005: 165 (64.7%) out of 255 districts. Source: General Administration of Childhood Illness Programmes, Ministry of Health and Population, Egypt.

tries implementing IMCI has grown, as illustrated by progress in Egypt (Figure 4.7).

Improving quality of paediatric care in hospitals

Hospital care for severely ill children is complementary to care in the home and in first-level facilities. Good quality hospital care for children is required to increase the impact of appropriate primary-care interventions on child survival and contributes to achieving Millennium Development Goal 4, but there is evidence that hospital care is often deficient. The Department has developed a framework and materials for the improvement of hospital care and has supported selected countries in applying the improvement process.

Developing methods and tools

Hospital care for children. The *Pocket book of hospital care for children* was published after review and input from external reviewers and other departments, and is being disseminated widely. It contains guidelines for the management of common conditions in children in settings with limited resources, and expands previous guidelines published by CAH by adding chapters on care of the newborn, surgical conditions of children, and the

management of children with HIV, including treatment with antiretrovirals. The pocket book will be used as the main resource material for hospital improvement activities. It is currently being translated into several languages, and agencies that distribute low-cost material to developing countries have expressed interest.

To introduce health professionals to the standard treatment guidelines, a training CD has been produced which contains case studies of children with common severe illnesses such as pneumonia or neonatal sepsis. These cases guide the participants in a problem-solving way through the contents of the pocket book, which they use to identify the recommendations for the treatment of the cases presented.

Evidence base for treatment guidelines. In collaboration with the Universities of Edinburgh, Karachi, Melbourne, Nairobi and Trieste, a process was set up to review individual treatment recommendations in a transparent way, and to summarize the findings in brief papers which can be reproduced by individuals. These summaries will be published on the WHO web site and in scientific journals. This task will eventually lead to several hundred individual reviews, which will need to be regularly updated.

Emergency triage assessment and treatment (ETAT). This four-day training course has now been finalized, and the Department is exploring how an experienced trainers' group can be established and a data base of accreditation maintained, as is the case with paediatric life support in developed countries.

Hospital assessment tool. A hospital assessment tool has been used in several countries over the past years, and has been revised several times based on this experience. The assessment tool is being published, so countries that would like to carry out assessments can download it and adapt it to their circumstances. To help interested countries in getting started, CAH has summarized the process in a *Framework for hospital improvement* which suggests which steps to undertake. One important component is the adoption of standards of hospital care, to guide the process (see Box 4.4).

BOX 4.4

Key components of the quality of hospital care for children

Making it right for children in hospital:

- managing common illnesses well
- right equipment for children
- right medicines for children
- right food for children
- children are with their families
- clean, safe with amenities for families
- helping children get better day by day
- helping families use the hospital.

During the improvement processes, it became apparent that participants needed a simple manual to provide guidance and references on the quality improvement processes and tools, such as root cause analysis and prioritization. CAH has reviewed existing materials and abstracted the most important elements in a small volume which can be translated and used in countries. This is available in draft format for field-testing in countries.

Activities in countries

During the biennium, assessments of quality of care were carried out in the Democratic Republic of the Congo, Eritrea, Ghana, Kenya, Malawi, the Niger, Senegal, the United Republic of Tanzania, Zambia, and Zimbabwe. The main findings of the assessments were: poor emergency triage and treatment at outpatient departments; lack of facilities for sick young infants, including the newborn brought from home; and lack of emergency

drugs. To respond to this situation, ETAT courses were conducted in Eritrea, Kenya, Malawi and the Niger in 2005.

CAH continued to promote hospital improvement in Cambodia, Indonesia, Solomon Islands and Timor Leste, with support from AusAID. One key activity was an ETAT training course in Cambodia, which included the training of experienced trainers who continue to expand the process. Health professionals for the hospitals involved participated in a meeting of a collaborative improvement group, and exchanged their experiences in continuing the improvement process initiated in 2003.

Indonesia started reviewing and improving the existing standards for hospital and health centre care for children using the quality assurance approach. National guidelines published by the Ministry of Health concerning children are being identified, in view of developing unified standards for child care in small hospitals. In the Solomon Islands, work on improving hospital care for children started in 2004 with expansion of training during 2005 using tools developed by CAH. As a result of this capacity-building effort, a national child health plan and a mortality reporting system were developed and will be implemented starting in 2006.

The WHO/UNICEF IMCI strategy has been introduced in an ever-increasing number of countries in the WHO European Region as a tool for basic paediatric care in first-level health facilities. Evidence from the hospital care assessment in three countries in the European Region suggests, however, that health care at referral level is inadequate and needs improvement. WHO has developed global guidelines for care at the first-referral level in developing countries (*Management of the child with a serious infection or severe malnutrition*) which complement the IMCI guidelines at primary care level and have been adapted by several countries of the region.

The Regional Office for Europe, in collaboration with CAH and the Project Healthy Family/USAID, carried out a capacity-building workshop on improving quality of paediatric care in first-level hospitals in Uzbekistan in 2005. The workshop format on improving hospital care for children and WHO training materials have been adapted to the regional context and tested. Twenty-four regional and national trainers and consultants from five countries (Armenia, Kazakhstan, the Republic of Moldova, the Russian Federation and Uzbekistan) were trained. Common constraints to improved paediatric referral care were discussed, and strategies to deliver effective and adequate care for sick children in first-level hospitals formulated.

IMCI pre-service education was established during the biennium in more than 60 training institutions in Botswana, the Democratic Republic of the Congo, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mozambique, Namibia, the Niger, Nigeria, South Africa, the United Republic of Tanzania, Uganda and Zambia. In 2005 an evaluation was undertaken in Namibia, the Niger and Nigeria. The results showed that schools have adapted the in-service materials for use in pre-service education, IMCI has been incorporated into the teaching agenda in a variety of ways, and methods for assessing students have been established. Key learning objectives have been formulated by the schools, and the teachers and students have accepted the IMCI approach.

Child health in complex emergencies

CAH continued to collaborate with the WHO Department of Health Action in Crises (HAC) and other relevant departments in providing technical support on child health in complex emergencies.

Post-tsunami disaster. CAH posted relevant background documents, reference materials and guidelines on the HAC web site, at the same time linking it to a tsunami page on its own web site. The CAH web site contains guidelines for diseases that are likely to occur following a tsunami, as well as guidelines on integrated management of common illnesses.

CAH updated guidelines for post-tsunami use. Before the tsunami, the WHO Regional Office for South-East Asia had initiated a draft guideline for management of common conditions of sick children during natural disasters, based on the IMCI guidelines. The guideline is under revision.

CAH has also produced single-page materials on:

- management of acute respiratory infections;
- acute diarrhoeal illnesses, dysentery, and typhoid (in collaboration with CDS);
- infant and young child feeding (in collaboration with NHD).

Jointly with HAC and the Communicable Disease Working Group on Emergencies, CAH has now commissioned work to develop training materials targeting health workers. The training focuses on common childhood illnesses as well as neonatal health, trauma, burns, emergency resuscitation (including the flow chart from ETAT), the IMCI HIV algorithm, prevention of mother-to-child transmission of HIV, universal precautions for HIV, as well as preventive care (e.g. immunization, promotion of breastfeeding).

CHAPTER 5

Meeting the needs of adolescents

Adolescents between the ages of 10 and 19 years are generally thought to be healthy. Nevertheless, every five minutes 16 adolescents die, primarily as a result of accidents, suicide, violence, pregnancy-related complications, and communicable diseases. Young people face the challenge of adopting healthy behaviours as they move towards adulthood, given that approximately 7 out of 10 premature deaths among adults are associated with behaviours initiated during adolescence.

CAH work in the area of adolescent health and development is guided by universally agreed international goals, and particularly the Millennium Development Goals for reducing the spread of HIV/AIDS and for maternal mortality reduction, as well as the international goals set by the United Nations General Assembly Special Session on children for improving policies and programmes for adolescents, including their access to information, skills and health services. Progress was made in 2004–2005 in improving the health sector response to the needs of adolescents, particularly in the area of reducing the spread of HIV infection among young people. In addition, CAH made significant contributions to developing and supporting the response by other sectors to address the specific needs of adolescents.

Improving the health sector response

Establishing the evidence base and developing methods and tools

The Department progressed in establishing the evidence base and in developing methods and tools to strengthen the response of the health sector to the needs of adolescents. In addition, the Department supported the application of these tools in countries and in building capacity in their use.

Review papers on tailoring clinical management practices to the needs of adolescents. A paper on nutrition in adolescents was finalized and posted on the CAH web site. A review paper on chronic conditions in adolescents was finalized and is to be posted on the CAH web site as well. Three papers based on this review have been published in peer-reviewed journals. A paper on HIV/AIDS in adolescents is to be finalized in 2006.

Orientation Programme on adolescent health for health-care providers. Building on previously-developed modules of an orientation programme on adolescent health aimed at helping doctors, nurses and other health workers respond to their adolescent patients effectively and with sensitivity, work continued on the following modules:

- *HIV and young people*. The first draft of the facilitators' guide for the module that was developed in 2003, was applied in participatory development workshops in the United Kingdom and the United Republic of Tanzania in 2004, and in Albania, Bangladesh, Germany, Kenya, Ukraine and Viet Nam in 2005. In addition two internal field tests were conducted. A final draft of the guide, which is consistent with tools emanating from the HIV/AIDS Department, is being finalized.
- *Young people and substance use*. A module on this topic, previously developed with the involvement of colleagues in WHO's Department of Mental Health and Substance Dependence, was field-tested in four of the workshops referred to above and is being finalized.
- *Young people and injecting drug use*. This module was also field-tested with the *HIV and young people* module.
- *Adolescent development* and *Mental health in adolescents*. These two modules are expected to be completed in the first half of 2006.

Orientation Programme adaptation guide. In 2004, CAH facilitated a workshop to adapt the generic Orientation Programme on adolescent health for use in the United Republic of Tanzania. Based on this experience, an adaptation guide was drafted and then applied in Bangladesh in 2005. In the European region, UNFPA supported the application of the Orientation Programme in several countries in central and eastern Europe, following which the agency organized a workshop to review national experiences in application and adaptation in Albania. A key conclusion of the workshop was that national adaptation of the generic tool is an effective way to proceed and that no regional adaptation would be developed. Feedback received from the workshops in Albania and Bangladesh has been incorporated to strengthen the adaptation guide. The generic Orientation Programme has been translated into French and was used in 2005 during the first intercountry capacity-building workshop for west African francophone and lusophone countries. It will be printed in early 2006.

Methods and tools to evaluate the Orientation Programme. A set of tools to evaluate the effectiveness of the Orientation Programme in achieving its objectives was drafted in 2004. These tools were field-tested in Kenya and in the United Republic of Tanzania. A revised version was applied in India. Based on the experiences gained a further revision was done which will be finalized in the first half of 2006.

Job aid on adolescent health. CAH made progress in developing a concise job aid that complements other WHO tools, notably the Integrated Management of Adolescent and Adult Illness (IMAI), in both content and format. The job aid addresses issues that health workers providing clinical services to adolescents have identified, and – like the Orientation Programme – has been developed with their active involvement. It will be ready for testing in countries in the first quarter of 2006.

Adolescents and HIV: one-day training course to accompany Integrated Management of Adolescent and Adult Illness. CAH is working with the HIV/

AIDS Department to develop an "Adolescents and HIV" training course as an optional one-day addition to accompany the IMAI basic antiretroviral training, to enable participants to consider the specific needs of adolescents.

Making health services adolescent friendly. Over the course of the 2004–2005 biennium, a draft tool to guide programme and health facility managers in improving the quality, including the friendliness, of health services was applied in workshops to develop national standards for adolescent-friendly health services in Bangladesh and India. It was also used as the basis of workshops held to build the capacity of programme managers in improving the quality and expanding the coverage of health services for adolescents (India – twice, Nigeria, Senegal, the United Kingdom and Zimbabwe). Part 1 of the tool (*Developing national standards for adolescent-friendly health services*) was finalized in 2005. Part 2 (*Applying and achieving national standards*) will be developed in 2006–2007, in partnership with individuals who were closely associated with the National Adolescent Friendly Clinic Initiative in South Africa.

Research and evaluation on adolescent-friendly health services. As part of a comprehensive review of the evidence for policies and programmes to achieve the global goals on HIV and young people, an exhaustive review was conducted of the effectiveness of adolescent-friendly health services initiatives in improving service utilization. The review helped improve knowledge and understanding and at the same time pointed to gaps in these areas. CAH initiated work to identify research questions of programmatic interest and ways and means of answering them. Preparation began for a meeting to develop research protocols to be organized in the first half of 2006.

To draw lessons from the many initiatives that are under way in the field, CAH carried out activities in three regions:

- CAH worked with the WHO country office in India to support an evaluation of initiatives to make hospitals adolescent-friendly in three major Indian cities – New Delhi, Kolkotta and Chandigarh.
- CAH worked with the Regional Office for Europe and the WHO country office in Latvia to document how a major research project on making sexually transmitted infection services adolescent-friendly fed into the national policy discussion on youth-friendly provision of a broader package of services.
- CAH also set the stage for careful documentation of the implementation of the National Adolescent Friendly Clinic Initiative in South Africa.

School health services. CAH contributed to the development of *School health services* which will be part of WHO's information series on school health.

Community-based intervention in adolescent health and development. CAH assisted the Regional Office for Africa to review the Alliance of Parents, Adolescents and Community (APADOC), an approach developed by the regional office to inform and educate adolescents and to increase demand and use of services by adolescents, and initiated in ten countries

since 2003. The results of the review and the recommendations of the reviewers will be used in 2006 to improve the approach using HIV/AIDS and maternal mortality reduction as points of entry for other adolescent health and development issues.

Supporting the application of tools to strengthen the health sector

CAH contributed to a regional meeting on adolescent-friendly health services organized by the Regional Office for South-East Asia in Indonesia in 2004. The objective was to build the capacity of health planners and programme managers to improve the quality and expand the coverage of health service provision to adolescents. CAH's draft tool *AFHS: making it happen* provided the basis for the meeting which brought together participants from eight countries in the region.


WHO/Pierre VIROT

CAH contributed to another intercountry meeting organized by the Regional Office for South-East Asia in Thailand. The objective was to build regional capacity in applying the orientation programme on adolescent health for health-care providers. The workshop brought together public health professionals from nine countries in the region.

CAH assisted UNFPA and UNICEF at a regional workshop for central and eastern Europe, held in Albania in 2005, to review experiences in national application and adaptation of the Orientation Programme.

CAH contributed to three intercountry capacity-building activities on adolescent health and development, in Nigeria, Senegal and Zimbabwe.

Activities at country level

Bangladesh: CAH worked with the Regional Office for South-East Asia and the WHO country office in Bangladesh to prepare for and conduct a workshop to develop national standards on youth-friendly health services in Dhaka. CAH will assist in the development of implementation plans, based on the standards. CAH and the Regional Office jointly facilitated an Orientation Programme workshop and a workshop on country adaptation in Dhaka in 2005. A national adaptation is currently being developed.

Lesotho: the Regional Office for Africa assisted Lesotho to organize a national Orientation Programme workshop in Maseru in 2005.

Kenya: CAH worked with the Regional Office for Africa, the WHO country office in Kenya and GTZ Kenya to facilitate an Orientation Programme workshop in Kisumu in 2005.

India: With the Regional Office for South-East Asia and the WHO country office in India, CAH co-facilitated a national consultation on standards and operational guidelines on adolescent-friendly health services, in New Delhi in 2005. Following the workshop, CAH contributed to the development of an implementation guide. CAH also co-facilitated an Orientation Programme workshop that brought together participants from the Indian Academy of Paediatrics, the Federation of Gynaecologists and Obstetricians of India, and the Indian Medical Association, in 2005.

The United Republic of Tanzania: CAH worked with the Regional Office for Africa and with the WHO country office in the United Republic of Tanzania to co-facilitate a national Orientation Programme workshop. CAH

BOX 5.1

Case study on Viet Nam

The largest and most comprehensive survey of young people ever undertaken in Viet Nam, the Survey Assessment of Vietnamese Youth (SAVY), represents an important partnership between the Ministry of Health, the General Statistics Office, WHO, UNICEF and young people. The WHO country office was instrumental in the development, implementation and dissemination of SAVY. Additionally, the Regional Office supported a review of literature and projects on sexual and reproductive health of adolescents and youth in Viet Nam. Findings from these efforts are now guiding the development of the National Youth Health Master Plan.

The WHO country office provided technical and financial support for the development of national guidelines for youth-friendly services, which will facilitate the scaling up of adolescent and youth-friendly health service delivery through clinics, friendly corners in schools and community sites and pharmacies. These pilot youth-friendly sites are being tested in eight provinces across the country. While the youth-friendly services are largely focused on reproductive health, Viet Nam has expanded the concept to include HIV, sexually transmitted infection, mental health and substance use.

also conducted a workshop to guide the adaptation of the generic Orientation Programme for the country. CAH contributed to the development of national standards on adolescent reproductive health services. Following the formal approval of the standards, CAH helped develop a plan to implement and monitor the standards in a phased manner.

Ukraine: CAH worked with the Ukraine country office to run an Orientation Programme workshop, with the aim of field-testing the injecting drug use module, and to conduct a national meeting of various stakeholders in order to identify priorities for strengthening the health sector response to the prevention and care of HIV among young people.

A significant achievement in Viet Nam was the completion of the Survey Assessment of Vietnamese Youth (SAVY), summarized in Box 5.1. CAH also worked with the WHO country office in Viet Nam to run an Orientation Programme workshop, during which the module on injecting drugs use was field-tested, and to conduct a national workshop on youth-friendly health services, with a particular focus on the development of standards.

Developing and supporting the response of other sectors

Influencing the health of adolescent boys

With the Regional Office for the Americas, CAH contributed to the development of a curriculum designed to incorporate health education into the work of football coaches. The curriculum deals with violence, substance abuse, and reproductive and mental health. It aims to influence positively the health of pre-adolescent boys aged from 8 to 14 years. The Department also developed tools to evaluate the impact of the curriculum. In 2004–2005 football coaches and their teams in Argentina, the Bolivarian Republic of Venezuela, Brazil, Chile, Mexico and Paraguay implemented the curriculum after training. Some 150 coaches and 1500 pre-adolescent boys participated in the initiative. The intervention was evaluated in Argentina using, among other methods, an adaptation of the Gender Equitable Men (GEM) scale to measure the impact of the curriculum on gender attitudes and norms. Initial results show that there has been a positive change in specific attitudes, and also that several coaches attribute these changes to the initiative. Final results are expected in early 2006.

Learning from integrated, multisectoral projects for adolescent girls

In 2002, the Department began supporting a United Nations Foundation project in selected countries that aims to improve the health and development outcomes of adolescent girls (and boys in some countries) through the development and implementation of multisectoral activities and programmes. In addition to assessing the global aspects of the project, CAH

supported monitoring and evaluation activities in five countries – Burkina Faso, Jordan, Mongolia, the Russian Federation and Senegal. In Burkina Faso, an evaluation identified positive effects among married adolescent women who were trained and used as peer educators, and their spouses.

Evaluating the effects of programmes targeted at adolescent boys

In 2004, the Department supported the Government of Brazil and the Horizons project to evaluate the impact of an intervention package to prevent the behaviours that lead to the transmission of HIV and other sexually transmitted infections in adolescent boys. The interventions included a series of interactive group education sessions led by older peers, behaviour change communication, and social marketing of condoms. The results of the evaluation showed that, among the intervention group of over 500 young men aged between 15 and 20 years, attitudes towards young women became significantly more equitable, the number of sexual partners decreased, condom use improved, and there was a decrease in reported symptoms of sexually transmitted infections.

Improving the access of adolescent males to health services

A two-year action-research project to improve access to health services by adolescent males took place in various health facilities in Rio de Janeiro, Brazil. Following formative evaluation with the young men, health facility staff were trained and each site was provided with seed funding to improve the access of adolescent boys to the services they needed. Actions implemented included the deployment of male staff in the provision of health services, and of young men to assist with reception duties. The activity was rated successful by the health facility staff involved. Young people who used the facilities were positive about the quality of services that they received. However, the study was unable to show increased service use by boys or young men. This may have been in part a result of difficulties with the municipal health information system. One site that had a well-functioning information system showed a slight increase in service use; this was associated with overall improvements in the site.

Programmes to support parents

A review of research from 57 countries, exploring 3 health risks of adolescents – early onset of sexual intercourse, substance abuse, and depression – showed that a positive relationship with parents was consistently found to be protective. However, little is known about the effects of interventions that involve working with parents and adult caregivers, particularly in developing countries. CAH, in collaboration with Johns Hopkins University, initiated a literature review and search with a particular emphasis on developing country studies and studies that were conducted cross-culturally or cross-nationally. More than 70 studies were identified on the topic of parenting. Very few articles originated from developing countries or were conducted by researchers from developing countries. Information on 34 projects is available.

Strengthening the monitoring of programmes

The Mapping Adolescent Programming and Measurement (MAPM) method was developed by CAH and UNICEF to strengthen the capacity of pro-

gramme managers to be accountable for adolescent programmes. In 2004, the method was applied to assist managers of programmes concerning HIV and young people to select objectives in terms of specific health and behavioural outcomes for adolescents, and to link these outcomes to underlying determinants, interventions and their related indicators. MAPM was used to orient new programme officers in the UNICEF central and eastern European region, on concepts and interventions relating to HIV and young people, to strengthen sectoral planning for education based on life skills and for adolescent-friendly health services, and to develop United Nations Development Assistance Framework (UNDAF) programmes at country level on HIV and young people. A manual was drafted to support the MAPM process, and field-tested in Kyrgyzstan and Tajikistan.

In 2005, the MAPM method was adapted for use by CAH to orient WHO staff in two additional regions, the African Region and the South-East Asia Region. These experiences now provide a model for similar regional workshops to be undertaken in the future and provide the basis for national level adaptation of the approach at country level. The MAPM method was also used to orient UNICEF regional staff in two regions on determinants and indicators for life skills development programmes. At workshops for UNICEF staff from the South Asia region, held in Bangladesh, and for staff from the central and eastern European offices of UNICEF, UNFPA and the WHO Regional Office for Europe, held in St Petersburg, participants used the MAPM logic for defining indicators for the life skills developed by young people that reduced their risky behaviours.

Working towards global goals on HIV infection among young people

Young people are at the centre of the HIV/AIDS pandemic in terms of transmission, impact, vulnerability and potential for change. During 2004 and 2005, CAH developed and refined technical support materials, and began to support their application in countries.

Research

CAH, in collaboration with partners, organized a global consultation to review the evidence for interventions to achieve the global goals on HIV/AIDS and young people. Cosponsors of the consultation included UNAIDS, UNFPA, UNICEF, the London School of Hygiene and Tropical Medicine, and the Liverpool School of Tropical Medicine. Key messages emanating from the consultation were disseminated through an information brief and were presented at global meetings.

Developing methods and tools

In 2004, CAH finalized an advocacy document on reviewing the evidence base for the contribution of health services to achieving the global goals on HIV and young people.

In 2004, CAH contributed to the development of the *Guide to indicators for monitoring and evaluating national HIV/AIDS prevention programmes for young people*. This guide is part of a series of UNAIDS-sponsored monitoring and evaluation documents aimed at national-level programme managers. The guide focuses on broad prevention efforts for young people

aged 10–24 years, and is relevant for concentrated as well as generalized HIV/AIDS epidemics.

WHO continues to develop, promote and support its strategic approach to strengthening the health sector response to the prevention and care of HIV/AIDS among young people. In addition to strategic information, services, and supportive evidence-based policies, it has become clear that there is a need for the health sector to mobilize and support actions in other sectors. Thus a fourth "S", strengthening other sectors, has been added to the existing three that define WHO's strategic approach to HIV and young people. This will emphasize opportunities to strengthen the linkages with the activities of other programmes in WHO, such as work on health promotion in schools.

Support to regional offices

During 2005 CAH worked with the Regional Office for Africa and the Regional Office for South-East Asia to plan and facilitate regional or sub-regional capacity development workshops for WHO country office staff and staff of ministries of health with responsibilities both for adolescent health and development and for HIV/AIDS. These workshops, which also involved other UNAIDS cosponsors, combined strategic information, services, supportive evidence-based policies, and strengthening other sectors (SSSS) with MAPM, and thereby developed a framework for the health sector response to HIV among young people. The workshops also provided participants with opportunities to learn about the available tools to support accelerated programming in relation to the health sector response to HIV/AIDS among young people, and to use the tools and explore ways in which they could strengthen national responses. CAH also provided support to the Regional Office for the Americas for a regional interagency state of the art meeting on programming for HIV and young people.

Support for country-level action

At country level, CAH continued to provide support to the HIV and young people focus countries during 2005, and began to see significant progress. In Honduras and Nicaragua the *Guide to indicators for monitoring and evaluating national HIV/AIDS prevention programmes for young people* was used as the basis for reviewing and developing core indicators for inclusion in the one-country HIV/AIDS monitoring and evaluation plans. In Bangladesh, India, the United Republic of Tanzania, Ukraine and Viet Nam there has been a significant focus on health services, including the development of national standards and training materials for service providers, and services for the general population of young people and for groups of young people most at risk of HIV (e.g. injecting drug users).

CHAPTER 6

Collaboration and partnerships

CAH operates in close collaboration with relevant WHO departments and with partner agencies at international, regional and national levels with the aim of accelerating progress towards global goals in a coordinated way. This collaboration often involves the establishment and operation of theme-based working groups or task forces, such as the Maternal, Newborn and Child Survival Partnership, in order to advance efficiently the work in specific areas of common interest.

Collaborating with other WHO departments

CAH acted in conjunction with a number of relevant WHO departments, working groups and initiatives. The following are selected examples of interdepartmental collaboration during the biennium, and further details are given in the preceding chapters.

Infant and young child feeding

CAH collaborated with the Departments of HIV/AIDS and Reproductive Health and Research on prevention of mother-to-child transmission through breastfeeding, and with the Department of Nutrition for Health and Development on training materials.

Paediatric HIV/AIDS

CAH worked closely with the Department of HIV/AIDS regarding care and treatment for children exposed to or infected with HIV.

HIV and young people

At both headquarters and regional levels, CAH worked closely with the Department of HIV/AIDS to develop tools and activities for the prevention of HIV/AIDS among young people, and with the Department of Reproductive Health and Research to identify ways to link work on HIV with achieving the Millennium Development Goal for reduction of maternal mortality, with a particular focus on young people.

WHO Country Focus Initiative

The WHO Country Focus Initiative provides a basis for WHO at all levels to intensify its response to the needs of countries and their populations. These strategies are instruments agreed by national authorities and WHO to focus on countries' priorities. Country cooperation strategies are medium-term (three to five years) and set out WHO's contribution, both to national frameworks including poverty reduction and health-sector strat-

egies, and to international efforts, such as United Nations common country assessment and the United Nations Development Assistance Framework. CAH contributes to the work of the Country Focus Initiative nationally and globally.

Extending the reach of CAH activities through partnerships

Promoting and ensuring the health and development of children and adolescents requires strong links with partners across different sectors to produce systematic and coordinated action. CAH partners traditionally include United Nations and bilateral agencies, nongovernmental and private voluntary organizations, foundations, lending agencies and government authorities. Below are just a few examples of collaboration with partners in 2004 and 2005.

Stimulating concerted action for maternal, newborn and child survival

WHO and other concerned partners formed the global Child Survival Partnership (CSP) in 2004, with the aim of accelerating coverage of effective interventions in countries with a high burden of child deaths. Recognizing the importance of the continuum of care for scaling-up maternal, newborn and child health services, CSP merged in 2005 with the Partnership on Safe Motherhood and Newborn Health and the Healthy Newborn Partnership to form the new global Partnership on Maternal, Newborn and Child Health, with a secretariat hosted in WHO headquarters.

The Partnership aims to intensify and harmonize national, regional and global action to improve maternal, newborn and child health. The Partnership is made up of a broad constituency of more than 80 members representing partner countries, United Nations and multilateral agencies, nongovernmental organizations, health professional associations, bilateral donors and foundations, and academic and research institutions.

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.

More information about the Partnership and its activities can be obtained at www.pmnch.org.

Country-level child survival partnership activities were initiated in Cambodia, Ethiopia and India, with visits of senior staff from the partner agencies to participate in national advocacy and planning meetings for child health. In Cambodia, a national working group used the results of the national situation assessment as a basis for dialogue about roles and

responsibilities of nongovernmental organizations, and multilateral and bilateral development agencies. A national workshop on child survival was conducted in 2004, during which the Choosing Interventions that are Cost-Effective (CHOICE) methodology was used as a step-wise priority-setting process for identifying the best mix of interventions, along with the budgetary and human resources required, for child survival activities in the country. The activity was carried out in collaboration with Erasmus University in Rotterdam, the Commission on Macroeconomics and Health, and the Millennium Project. A national meeting was held in 2005 to ensure that child health was inserted into the national development plan. A conference on child survival was held in India in 2004 to accelerate progress in maternal and child health interventions planned for the second cycle of the reproductive and child health project starting in mid-2005. The conference also sought to enhance the delivery of essential child health interventions by strengthening collaboration and coordination between the health sector and integrated child development services.

With the Partnership on Maternal, Newborn and Child Health, the Department was instrumental in convening the conference on "Tracking progress in child survival: countdown to 2015". The conference, hosted by the London School of Hygiene and Tropical Medicine, was the first in a series of two-yearly rolling reviews called for by the Bellagio Child Survival Study Group in their *Lancet* series of 2003.

The meeting's participants included policy-makers and programme managers concerned with child health; scientists active in child survival research; nongovernmental organizations and representatives of civil society groups; representatives of bilateral and multilateral agencies; media and private sector groups; and foundations. Information on the objectives and outcomes of the Conference can be found at

www.childsurvivalcountdown.com.

Task Force for maternal, newborn and child survival in the WHO African Region

Following the recommendation of the Regional Reproductive Health Task Force to address newborn health and child survival, the Regional Director for Africa established a task force for maternal, newborn and child survival in 2005 (see Box 6.1 for the terms of reference of the task force).

Advancing the work on HIV and young people

Within the United Nations system, UNAIDS is a key partner for work in the area of HIV and young people. In 2004, the Department invested particular effort in the UNAIDS Interagency Task Team on HIV and young people. In addition, CAH involved UNAIDS cosponsors in a review and consultation that examined interventions for policies and programmes to address the international goals on HIV and young people. The review provided the substantive basis for an advocacy document on interventions in the health sector for the prevention of HIV/AIDS among young people, and a guide to monitor and evaluate national programmes for the prevention of HIV among young people. Further, CAH collaborated with UNICEF in the production of strategic information on HIV and young people, with UNFPA to strengthen young people's access to health services and supplies, and with the International Planned Parenthood Federation and the German

Gesellschaft für Technische Zusammenarbeit (GTZ), to build capacity in programming for HIV and young people. Building on the recommendation made during a high-level WHO and UNFPA meeting in 2004, an agreement for CAH to provide technical support for strengthening regional capacity in South and South-West Asia in the area of HIV and young people was signed between CAH and UNFPA in 2005.

Strengthened collaboration has continued during 2005 with UNAIDS and cosponsors, and CAH contributed to the development and focus of interagency task teams focusing on young people, in the Regional Offices for Africa, for the Americas, and for South-East Asia. In addition, collaboration has been strengthened with the International Planned Parenthood Federation, the International Federation of Red Cross and Red Crescent Societies, and Family Health International/YouthNet through participation in global consultations.

Strengthening collaboration and communication between WHO and GTZ

In April 2004, CAH conducted a workshop with the Department of Reproductive Health and Research and GTZ. The workshop concluded with the identification of important areas for future collaboration at country level. One outcome was the CAH presentation of a keynote address on "Providing adolescents with the information and health services they need", at a meeting organized jointly by GTZ, the German Foundation for World Population, the German Federal Ministry for Economic Cooperation, KfW Entwicklungsbank, Schering Family Planning International, and the International Planned Parenthood Federation in 2005. Similar collaboration exists in the WHO Region of the Americas.

Strengthening collaboration between WHO and UNICEF regional offices

The Regional Directors of the WHO Regional Office for Africa, the UNICEF Eastern and Southern Africa Regional Office and the UNICEF West and Central Africa Regional Office signed a communiqué in 2005 to jointly accelerate child survival interventions including breastfeeding and complementary feeding, insecticide-treated bednet promotion, prompt treatment of common childhood illnesses at all levels, and vitamin A supplementation. Following this communiqué, a child survival background document was developed jointly and presented at the African Union Head of States summit in 2005.

BOX 6.1

Terms of reference of the maternal, newborn and child health African Region task force

1. Assess the effectiveness of regional and national reproductive health and child survival programmes in bringing about desired changes based on trends analysis of major factors that affect the reproductive health status of individuals, families and communities in Africa, including the fight against poverty.
2. Collaborate with the WHO Regional Office for Africa and country offices as well as ministries of health, partners, nongovernmental organizations and other related sectors to develop strategic plans for consolidating gains ensuing from best practices in reproductive health and safe motherhood, and IMCI, in particular to identify gaps and maximize relevant opportunities, and provide orientations accordingly.
3. Facilitate regional and national capacity building and strengthening for advocacy for institutional development and adoption of the most appropriate policies and programmes at various levels, with due cognizance of the multidisciplinary and all-embracing nature of maternal, newborn and child health issues.
4. Identify, mobilize and allocate commensurate technical, financial, and material resources to make changes in the area of maternal, newborn and child health as a human rights issue, focusing especially on safe motherhood and child survival interventions, and maximizing and coordinating inputs from interested partners based on their comparative advantages.
5. Propose such other actions or research, especially operations research, that would facilitate the achievement of the overall objective of improving reproductive and child health in Africa.
6. Facilitate the assessment and strengthening of appropriate capacities at all levels to develop and implement country policies and programmes in the area of maternal, newborn and child health and women's health.

Supporting action for improved infant and young child feeding

In the area of infant and young child feeding, both WHO headquarters and regional offices collaborated with a number of external partners, including UNICEF, the Academy for Educational Development, Basic Support for Institutionalizing Child Survival (BASICS) II, Child Survival Collaborations and Resources Group (CORE), International Baby Food Action Network, International Labour Office, LINKAGES Project, La Leche League International, Manoff Group, UNFPA, World Alliance for Breastfeeding Action, Wellstart International, and the World Bank.

Building synergies between malaria control and IMCI

The Fifth Joint IMCI/Malaria Task Force took place in Mozambique under the theme of "The role of malaria control and IMCI in health systems strengthening for improved health service delivery". More than 100 people from 13 countries, including partners and United Nations agencies, participated in the meeting. The meeting provided a forum for a critical review of the status of implementation of the malaria control programme and IMCI strategy in the context of health sector reforms and decentralization. Recommendations to countries and partners were formulated with the aim of accelerating the scaling up of interventions. It was recognized that such meetings constitute an important opportunity to review progress, identify bottlenecks in implementation, and define priorities for the coming years.

Building synergies between IMCI and vaccine-preventable diseases in the African Region

In 2005, a framework and guidelines for integrating additional child survival interventions with immunization activities were developed by the Regional Office for Africa in collaboration with partners. A workshop recommended harmonizing approaches and tools for an integrated monitoring and evaluation system.

Collaborating with selected international nongovernmental organizations to build capacity in adolescent health and development

CAH continued to work in partnership with selected international nongovernmental organizations such as Save the Children-UK and national ones such as Mamta, India. CAH conducted a session on "Making health services adolescent-friendly" as part of the annual meeting of Save the Children-UK in 2004. CAH also conducted a session on applying good science and good management practice in improving the quality and expanding the coverage of health service provision to adolescents, as part of an international training programme on young people's reproductive and sexual health and rights that was conducted in India by Mamta in conjunction with RFSU (the Swedish affiliate of the International Planned Parenthood Federation) with funding from the Swedish International Development Agency.

Stimulating regional partnerships for adolescent health and development

In the Region of the Americas, an interagency network for the prevention of teenage pregnancy, sexually transmitted infections and HIV/AIDS was created, with UNICEF, UNFPA, YouthNet, JICA and the WHO Regional

Office as partners. In the area of healthy environments, CAH reached an agreement with the Cruyff Foundation to promote the healthy development of pre-adolescents through the testing of a curriculum to support soccer coaches in promoting adolescent health. In the South-East Asia Region, the Regional Director approved the creation of a regional technical advisory group on adolescent health and development. The main terms of reference for the group include advising the Regional Director on priority areas of work and providing technical advice.

ANNEX A

Papers published in 2004–2005 arising from research supported by CAH

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ANNEX B

New documents and publications arising out of the work of CAH in 2004–2005

A guide for educating healthcare providers. Geneva, World Health Organization and JHPIEGO, 2005.

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ANNEX C

Delhi Declaration on maternal, newborn and child health

9 April 2005

We, the Ministers and delegations from Bangladesh, Bolivia, Cambodia, Ethiopia, India, Mali, Mozambique, Nepal, Pakistan, Tanzania and Uganda, as well as the representatives of other governments, the United Nations, the World Bank, foundations, national and international NGOs, professional bodies, academia, and civil society from all continents, assembled in New Delhi, India, to participate in "*Lives in the Balance: The Partnership Meeting on Maternal, Newborn and Child Health*" from 7–9 April 2005, recognize that:

Lives in the Balance

- The lives of millions of women and children are in the balance today. Each year, pregnancy and childbirth claim the lives of more than a half-million women, while more than 10 million children, including 4 million newborns, die each year. In addition, more than 3 million babies are stillborn. This tragedy must end.
- As many as 99% of the maternal, newborn and child deaths occur in developing countries. The highest burden is faced by lesser-developed countries of Africa and Asia, particularly within poor families.
- Cost-effective, evidence-based interventions, if taken to scale worldwide, can prevent close to three-fourths of maternal deaths, and more than two-thirds of child deaths. Thus, we have almost within reach the means to save nearly 7 million lives each year.

With a Global Commitment to the 2015 Vision, an Opportunity Beckons

- The Millennium Development Goals (MDGs) signify the world's commitment to achieving timebound and quantifiable improvements in development and poverty reduction by 2015, including MDGs 4 and 5 defining global targets in maternal and child health.
- With health clearly recognized as essential to poverty reduction, the global health community has a rare opportunity to surmount obstacles political, financial, technical and programmatic that have hampered progress to date.
- Despite avowed consensus, however, the current rate of progress is not sufficient to attain the child survival and maternal health MDGs in many countries. Only through co-ordinated and concerted action and unprecedented resource mobilization at the national and international levels can we hope to meet our commitments by 2015. This will also require strong collaboration with other sectors, including education, nutrition, water and sanitation among others.

The Way Forward

This high-level meeting on maternal, newborn and child health (MNCH) asserts that the way forward is to:

- Take an integrated approach to reproductive, maternal, newborn and child health, ensuring a continuum of care from pregnancy through childhood, recognizing that maternal, newborn and child health are inseparable and interdependent, and that the achievement of their MDGs must be based on a strong commitment to the rights of women, children and adolescents;
- Recognize that there is no single model of care to prevent maternal, newborn and child morbidity and mortality, and therefore countries are required to design and implement programmes that are tailored to the needs and realities of the national and sub-national settings, employing a rational mix of quality family/community, outreach and clinical services, in public and private sectors, to scale-up known cost-effective interventions;
- Affirm that universal access to sexual and reproductive health is essential to meeting MDG 5 and will make significant contributions toward MDG 4;
- Build systems for the collection and use of high-quality data, disaggregated by equity parameters to inform policy and programmes;
- Invest in strengthening health systems, from community to the referral levels, to ensure sustained and long-term improvements in reproductive, maternal, newborn and child health;
- Incorporate specific strategies to address inequities in reproductive, maternal, newborn and child health programmes to ensure that interventions reach and benefit the poor, the marginalized and the underserved; and

A Call to Action

Recognizing that the responsibility of saving maternal, newborn and child lives and promoting their health lies not only with the countries, but also with the international community working together as committed partners,

We, the aforementioned stakeholders,

Appeal for the highest national and international political commitment to maternal, newborn and child health;

Request governments, private sector, civil society and international partners to leverage and commit the required resources (currently estimated in the *World Health Report 2005* as an additional US$9 billion on the average per year) to achieve MDGs 4 and 5; and

Recommend the adoption of a target for MDG 5 relating to universal access to sexual and reproductive health with appropriate indicators, as well as recommend the addition of the neonatal mortality indicator to MDG 4.

We issue the following call to action:

Countries should orient their national and sub-national development plans and budgets to fully achieve the maternal and child health MDGs by 2015.

For that, they need to:

- Develop urgently, integrated national plans with national targets for coverage, outcomes and resource allocations, with active participation of all stakeholders;
- By the middle of 2006 at the latest, develop plans of action to achieve such coverage, meet shortages of skilled health personnel and commodities, and devise mechanisms to involve all partners;
- Mobilize resources to finance the plans of action, in traditional and innovative ways, and identify needs for external support, where necessary;
- By the end of 2006 at the latest, launch the plan of action and accelerate the delivery of high-impact strategic interventions; and
- By 2007 at the latest, have in place a system to monitor and report coverage, resources and outcomes directed toward achieving mortality reduction and promotion of health.

The partnership of multilateral organizations, bilateral partners, international foundations, and NGOs working with countries should:

- Agree to support fully, at all levels of their organizations, the implementation of these comprehensive national plans;
- From this day onward, find and commit additional resources required to close the projected resource gap in support of country programmes aimed at achieving MDGs 4 and 5;
- Provide the necessary support to countries to deliver interventions at all levels for high and equitable coverage, for reproductive, maternal, newborn and child health programming, and for health-system strengthening;
- Develop and implement strategies to address the critical shortages in skilled health-care providers, thus accelerating progress in reproductive, maternal, newborn and child health programmes in many developing countries;
- Develop, support and maintain an agreed system to promote greater accountability of, and coordination among, partners at global and national levels to provide the fullest impetus to global action for attaining MDGs 4 and 5; and
- Designate an annual "World Maternal, Newborn and Child Health Day" to encourage greater global visibility of this agenda and to provide an opportunity for countries and the international community to re-assert their commitment to this cause.

Now is the time to translate statements of intent into action
Now is the time to save 7 million lives in the balance