Highlights

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MESSAGE FROM THE DIRECTOR

PRESENTING HIGHLIGHTS OF THE WORK OF WHO'S DEPARTMENT OF CHILD AND ADOLESCENT HEALTH AND DEVELOPMENT (CAH) IS A CHALLENGE BECAUSE OF THE BREADTH AND RICHNESS OF ACTIVITIES UNDERTAKEN DURING 2008 AT HEADQUARTERS, REGIONAL AND COUNTRY LEVELS. I HOPE, HOWEVER, THAT THE SELECTION PRESENTED IN THIS REPORT PROVIDES AN OVERVIEW OF THE KEY AREAS OF CAH'S WORK AND PERHAPS ENCOURAGE YOU TO GET MORE INFORMATION FROM OUR WEBSITE OR THROUGH CONTACTING US DIRECTLY.

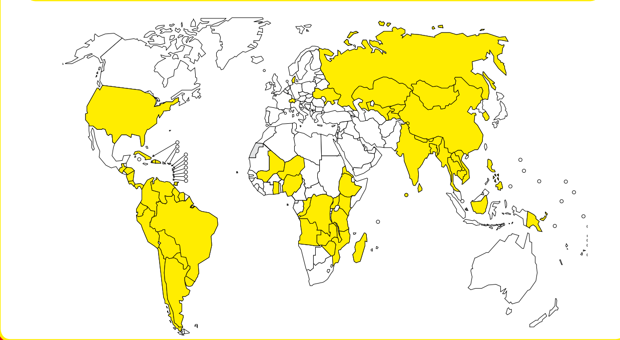
2008 provided many good developments for child and adolescent health and development. The 2008 report of the 'Countdown to 2015: tracking progress in maternal, newborn and child survival' showed that coverage of key interventions is increasing, and some countries have made tremendous strides towards achieving the fourth Millennium Development Goal (MDG 4). However, less progress has been made on MDG 5, with some 500,000 women still dying every year, many in their youth or adolescence. The Countdown conference in Cape Town, South Africa, in April 2008 brought together parliamentarians from more than 60 developing countries, facilitating dialogue on how to rapidly improve progress. Overall donor funding for maternal, newborn and child health has increased in recent years, but this positive trend may be under threat. In 2008, the world entered an unprecedented financial crisis, and we know from previous experience that women and children are among the first to be affected these circumstances. We must seize every opportunity to protect these most vulnerable groups and pre-empt the adverse effects on their health.

CAH conducts and supports research to build the evidence for policies, norms and standards for child and adolescent health. Key achievements in this area in 2008 include papers published on the results of research on the home-based management of pneumonia and the effectiveness of community-based neonatal care, which have informed the development of new guidelines.

Gathering strategic information and using data for better planning and implementation is critical to the work of CAH. In this year's highlights, we have produced a statistical annex covering key indicators for child health in a selection of countries with high under-five mortality rates, as well as adolescent health profiles for five countries. 2008 also marked the finalization of the Multi-Country-Evaluation of the Integrated Management of Childhood Illness (IMCI), and the lessons learned from this evaluation are being applied for the expansion of key child survival interventions.

Implementation of WHO's Medium Term Strategic Plan started in 2008. For Strategic Objective 4, to reduce morbidity and mortality and improve health during key stages of life, CAH collaborated closely with the departments of Making Pregnancy Safer and Reproductive Health and Research, and contributed to seven other Strategic Objectives, reflecting the broad and cross-cutting nature of the work in Child and Adolescent Health. Our work at regional and country levels has been further strengthened, and in 2008 CAH had a record number of staff based at country level. In addition, there are now regional advisers on both child and adolescent health in every region.

CAH STAFF AROUND THE WORLD



In 2008, we continued working in partnerships within WHO, with other UN agencies such as UNICEF, UNFPA, and the World Bank, and with key bilaterals, foundations, NGOs, and professional organizations. CAH is also an active member of the Partnership for Maternal, Newborn and Child Health, leading the working group on effective interventions.

There are many challenges ahead, but as these highlights show, we have a sound foundation of research, development, strategic information and experience in implementation upon which to build. Child and adolescent health are at the core of the renewal of Primary Health Care proposed by WHO in 2008, and the pressure for universal coverage and access to services that are people-centred must be sustained. Please join us in these efforts.

Dr Elizabeth Mason
Director, CAH

Introduction

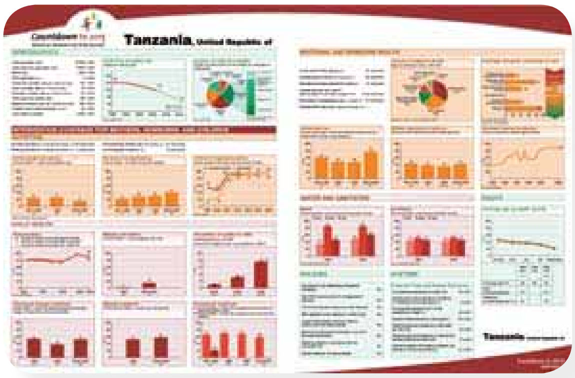
The main goal of the Department in the area of newborn and child health is to contribute to efforts to achieve MDG4. It does so by addressing, through research and development of tools, the major causes of child morbidity and mortality, and the promotion of optimal child health and development. The team works to quantify the burden of disease in childhood; generate evidence of effective interventions and delivery strategies to address the burden of childhood illness; develop guidelines and tools for implementation; facilitate early application of new tools and contribute to programme development; and to compile lessons learned from implementation and identify new research priorities.

During 2008, in the area of newborn and child health, the Department supported more than 20 research projects and 8 systematic reviews. We worked on the development of 17 new tools for the support of interventions – from policy statements and clinical guidelines to training courses for community health workers. Over 64 scientific papers were published in peer-reviewed journals resulting from research that we supported. More than 300 institutions and experts collaborated with us in these achievements.

New global and regional cause-specific mortality estimates for newborns and children

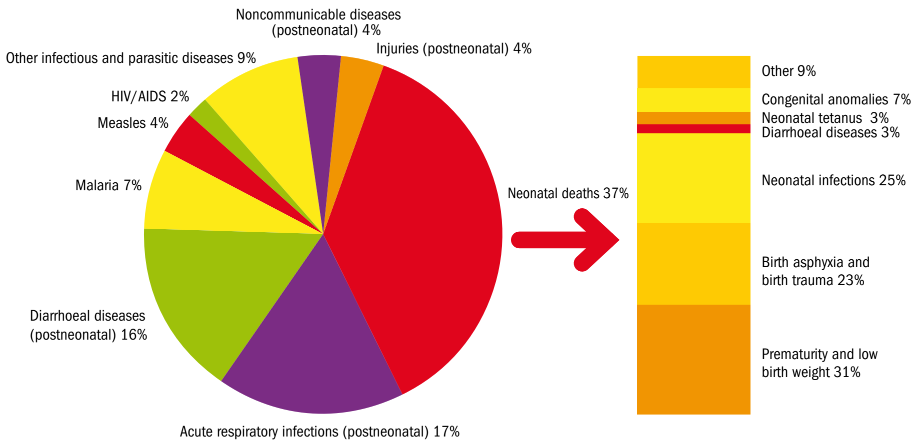
During 2008, we updated estimates of the distribution of under-five and neonatal cause-specific mortality at global and regional levels using the latest available data. This unique piece of work was carried out in collaboration with the Child Health Epidemiology Reference Group (CHERG) which is led by CAH, WHO's Department of Health Statistics and Informatics, and UNICEF's Division of Policy and Planning. The resulting global and regional pie-charts are available on the CAH web site: http://www.who.int/child_adolescent_health/data/en/

Working in partnership - the Countdown to 2015



The mission of the 'Countdown to 2015' is to track progress made towards the achievement of MDGs 4 and 5 and promote evidence-based information for better health investments and decisions by policy-makers regarding health needs at the country level. Leading global health experts, policy-makers and parliamentarians convened in Cape Town 17-19 April 2008 for the launch of the 2008 Countdown report *Tracking Progress in Maternal, Newborn & Child Survival,* and to address the urgent need to reduce deaths if internationally-agreed targets are to be met. The report showed that few of the 68 developing countries that account for 97% of maternal and child deaths worldwide are making adequate progress with providing the critical health care needed to save the lives of women, infants and children.

MAJOR CAUSES OF DEATH IN NEONATES AND CHILDREN UNDER-FIVE IN THE WORLD



35% OF UNDER-FIVE DEATHS ARE ASSOCIATED WITH UNDERNUTRITION

Sources:
For estimates of causes of neonatal and under-five deaths: World Health Organization. The global burden of disease: 2004 update.
For estimates of undernutrition: Black R et al. Maternal and child undernutrition: global and regional exposures and health consequences. Lancet 2008; 371:243-60.
Sources: (1) WHO. The Global Burden of Disease: 2004 update (2008); (2) For undernutrition: Black et al. Lancet, 2008

CAH contributed to the Countdown in 2008 and coordinated the working group on the assessment of health systems and policy environments needed to achieve positive outcomes for maternal, newborn and child health. Results on 13 policy indicators were published in The Lancet medical journal, showing gaps in policy adoption as well as weaknesses in other health system building blocks. In addition, as part of the monitoring work of the Countdown, CAH worked with the Departments of Health Systems Financing, Making Pregnancy Safer and Reproductive Health and Research to provide a methodology and track domestic expenditures for maternal, newborn and child health.
For more information on the Countdown to 2015, see: http://www.who.int/child_adolescent_health/news/archive/2008/17_04/en/index.html

Cutting neonatal mortality through community care

WHO/JL Ray

A large cluster-randomized trial supported by CAH was undertaken in Hala, Pakistan, to evaluate the effectiveness of an intervention to provide perinatal and postnatal care in the community through the public sector. The intervention included training Lady Health Workers (LHWs) and Dais (traditional birth attendants), as well as supporting the creation of community health committees and quarterly women's group meetings facilitated by LHWs.
Health facility strengthening to improve the management of newborn health problems was done in both intervention and control clusters.
Results of the study were overwhelmingly positive. They indicated significant improvements in care seeking from government facilities – both for delivery and other types of care. Breastfeeding initiation, delayed bathing, and good umbilical cord care all showed significant improvements in the intervention group as compared with the control group.
Overall, the intervention reduced neonatal mortality by around 15 per cent and still-births by 20 per cent.
Based on these striking findings, the government of Pakistan is now working on the expansion of the intervention beyond the study area.

Regional highlight - Americas

PAHO Governing Body adopts Regional Strategy and Plan of Action for Neonatal Health

In September 2008, one of the Pan American Health Organization's key governing bodies, the Directing Council, adopted a new Regional Strategy and Plan of Action for Neonatal Health, noting that its approach is in line both with the needs of the Region and with the MDGs. The plan encompasses four interdependent strategic areas:

(1) The creation of an enabling environment for neonatal health promotion;
(2) Health systems' strengthening and improved access to maternal, newborn, and child health care services;
(3) Promotion of community interventions; and
(4) Creation or strengthening of surveillance systems, monitoring, and evaluation.

The Council emphasized the need for an intersectoral approach and for a renewed commitment to neonatal and maternal health, and welcomed the emphasis on the need for monitoring and evaluation. Delegates noted that, to date, the success rate in reducing neonatal mortality has varied sharply from country to country, and highlighted the need for specific strategies to bring about further reductions in countries where the rate is already relatively low. The need for sensitivity to indigenous culture and practices was also stressed. Based on the new Regional Strategy, four countries have already developed their national plans.

WHO/Pierre Virot

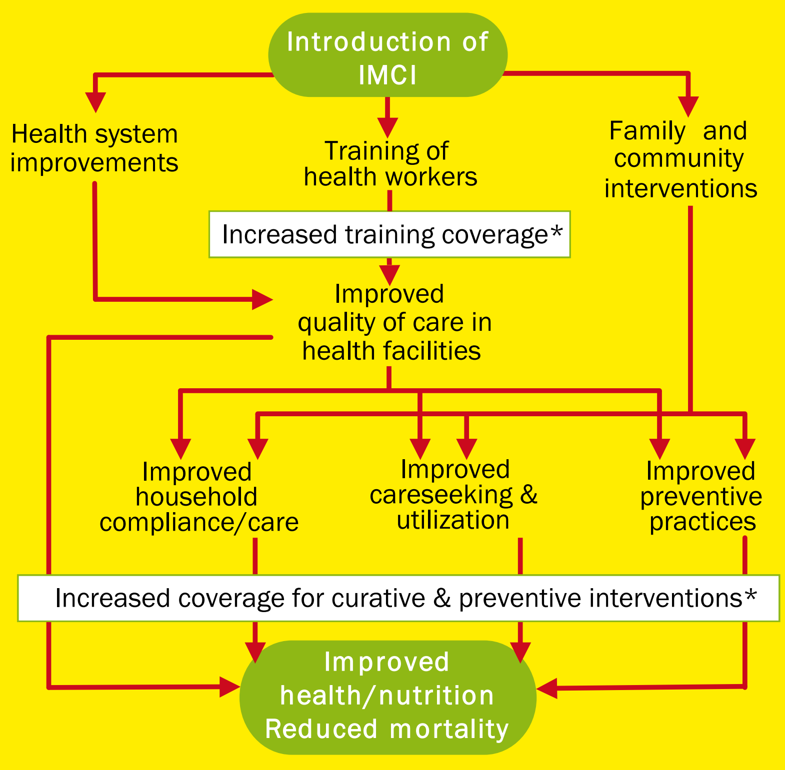
Special report on MCE

The Integrated Management of Childhood Illness (IMCI) was launched in 1997 as a strategy for reducing mortality among children under five years of age. The IMCI strategy includes three components - improving: health worker skills, the health system, and family and community practices.

CAH launched the Multi-Country Evaluation (MCE) of IMCI in 1999. The MCE included three study types:

1. *Assessments of IMCI implementation in 12 countries*. Findings provided information on the validity of implementation activities across the three IMCI components.
2. *In-depth studies in five sites*. Sites were selected on the basis of the 12 country studies. The MCE was completed by December 2008 in Brazil, Bangladesh, Peru, Uganda and Tanzania.
3. *Cross site analyses*. The use of standard indicators permitted comparisons across the five in-depth study sites.

The MCE evaluated IMCI according to a step-wise impact model:



*added later as a result of MCE-IMCI findings.

The MCE was testing whether IMCI implementation could:

1. improve quality of care at first level government facilities;
2. contribute to strengthening health systems support;
3. increase utilization and intervention coverage (in response to improved quality of care);
4. reduce under five mortality;
5. be cost effective.

Selected MCE findings are presented below. The variability in the recommendations reflect the diversity of the study methods and implementation efforts in various sites.

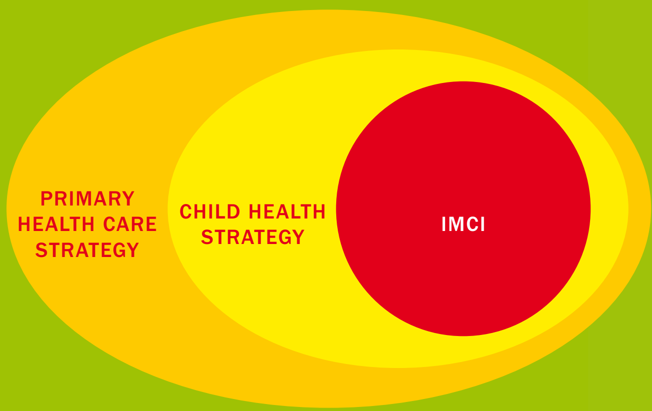
1. IMCI case management training improves health worker performance and the quality of care for children under five at first level facilities. Thus, IMCI is recommended as the gold standard for case management of under fives in first level facilities.
2. While the availability of essential medicines improved in some study settings, for example Bangladesh, IMCI case management training by itself does not strengthen health systems. Health system strengthening requires specific inputs. Therefore, the routine implementation of child survival interventions needs to be complemented by specific activities that strengthen health systems support.

3. The effect of IMCI on utilization and intervention coverage is context specific. In Bangladesh, initial facility utilization was low. IMCI implementation at community and facility levels led to more sick children attending first level facilities. At a population level, IMCI was associated with increased coverage levels of care seeking for pneumonia and ORT for diarrhoea management. Early initiation and exclusive breastfeeding rates were higher in IMCI areas. In Uganda, small increases in exclusive breastfeeding and ITN coverage were noted after IMCI implementation.
4. Limited data from Tanzania and Bangladesh suggest that IMCI case management training coupled with adequate health system inputs may reduce under-five mortality. However, under-five mortality reduction cannot be solely attributed to IMCI. The observed declines are difficult to separate from ongoing rapid reduction in mortality due to broader improvements in socio-economic and health system circumstances.
5. IMCI case management training leads to better quality of care at costs that are similar to investments in routine child health services. Therefore, IMCI is worth the investment.

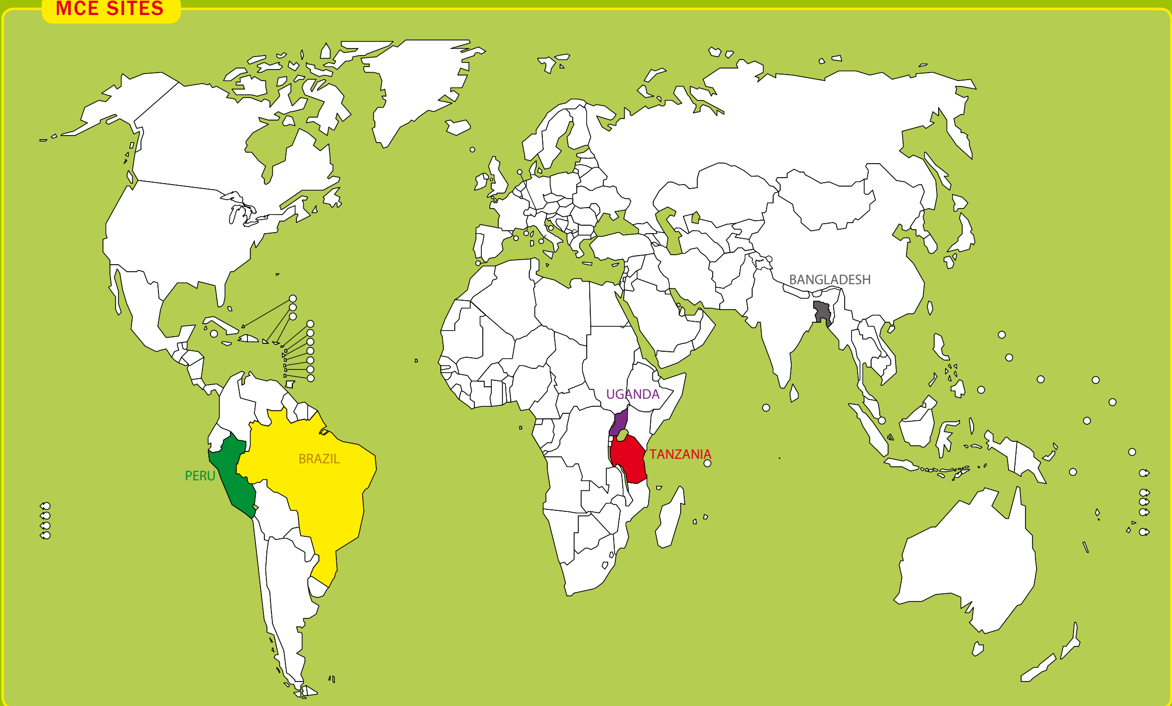
The MCE has been cited as “an unusually thorough effort to assess how well a prominent global health initiative works in the field”. Its high quality publications helped to formulate lessons learned, disseminate key research messages and reach audiences engaged in evidence-informed implementation.

The MCE results have implications for IMCI itself as well as for the development of broader child health strategies:

- IMCI needs to be placed as a core component of any national child health strategy.
- In a national child health strategy, IMCI needs to be adapted, based on the local situation, to address the largest mortality burden in under fives and care seeking practices. Thus, the national child health strategy will give due attention to the sick newborn and older child, as well as to healthy under fives in a Primary Health Care context. A set of standard child survival indicators, ranging from input to health status indicators, will help assess progress in achieving the goals set forth in the child health strategy.



MCE SITES



Prioritizing research for greatest impact on child survival

WHO/M Ehling

In 2008, the Department led an exercise to prioritize issues for research on the major causes of child mortality. Groups of experts were asked to systematically list research questions on the major childhood diseases -- pneumonia, diarrhoea, low-birth-weight, birth asphyxia, neonatal sepsis, malnutrition, HIV and AIDS, and malaria -- in four key domains:

(i) epidemiological research;
(ii) health systems and policy research;
(iii) research targeted at improving the existing interventions; and
(iv) research to develop new interventions.

For each of these topics the final list of proposed research questions was further assessed according to the likelihood of their:

(i) answerability in an ethical way;
(ii) potential contribution to effectiveness;
(iii) deliverability, affordability and sustainability;
(iv) maximum potential for death burden reduction; and
(v) predicted effect on equity in the population.

For each research question, the scores of individual criteria were weighted according to the values provided by a wide group of stakeholders from the global research priority-setting network.

This exercise has already been completed for a number of topics, including diarrhoea, neonatal sepsis, birth asphyxia, and low-birth-weight. For diarrhoea, 154 research questions were identified and scored on a scale 0-100. The top 10% of research questions were dominated by health systems and policy research questions, as well as epidemiological questions. These research questions must be considered of greatest priority in order to achieve MDG4.

Zinc and ORS - even more effective in practice than in trials

In 2008 CAH continued supporting countries to implement the new WHO/UNICEF treatment strategy for acute diarrhoea – reduced-osmolarity oral rehydration salts (ORS) combined with zinc supplements. We supported large studies in India, Mali and Pakistan to assess the possible constraints to countries' large-scale implementation of the guidelines. The mother of a child treated for diarrhoea by a community health worker in the Bougouni region of Mali was impressed with his remarkably quick recovery, and said "he has gained strength and energy unlike ever before". Other women in the village noticed that their children became active and started playing immediately after beginning treatment.

The results of the studies were very encouraging. They showed that the addition of zinc to case management actually encourages greater uptake of ORS and reduces inappropriate drug use. In addition, the rate of hospitalization for diarrhoea was significantly reduced in the countries that measured this outcome.

A consultation to review the results of the studies, which also aimed to identify the best possible delivery channels for zinc supplements, was held in New Delhi, India, in January 2008. The meeting identified key lessons on product acceptability and use (ORS and zinc), training of health workers, behaviour change promotion and illness recognition.

The key challenge now is to ensure the recommendations are applied by health care providers on the frontline so that they reach every child with diarrhoea. The traditional approach -- using only public and private health facilities -- does not suffice, as it does not reach every child with diarrhoea in a timely manner. New delivery strategies have to be identified along with strengthening health systems. Two proposals for research have been developed to test innovative delivery approaches. In Tanzania and Ethiopia, the new ORS and zinc tablets will be made available through small local drug shops and also through village retail shops as "Diarrhoea Treatment Kits". It is hypothesized that these new approaches will quickly and sustainably increase ORS use rate, while decreasing purchase and use of unnecessary antibiotics.

Treating severe pneumonia at home

WHO/Jean-Marc Giboux

Pneumonia is the largest single killer of children under five years old around the world. Four children die from pneumonia every minute.

In 2008 results of a major study supported by CAH were published in the Lancet medical journal, showing that treating children with severe pneumonia at home is just as effective as treating them in hospitals.

The trial, conducted in Pakistan, involved more than 2,000 children with severe pneumonia who got either injectable antibiotics in hospital or oral antibiotics at home. This study confirmed the findings of three other trials at sites in Africa, Asia, Europe and Latin America, which showed that oral antibiotics were just as effective as injectable antibiotics in treating hospitalized children with severe pneumonia. The trial was the first to compare the outcomes of hospital treatment of severe pneumonia with home-based treatment, and the results demonstrated clearly the safety and efficacy of treatment with oral antibiotics outside of a hospital setting.

The current guidelines advise health workers to provide oral antibiotics for cases of non-severe pneumonia and to refer severe and very severe cases to hospitals for treatment with antibiotics by injection.

The findings of the Pakistan study are expected to significantly change the way pneumonia is managed in developing countries, with the potential to save a significant number of lives every year.

On the basis of the findings, a consultative meeting experts of experts recommended that in low HIV settings severe pneumonia be treated with oral antibiotics at home after assessment at the health facility. WHO guidelines are being revised accordingly.

Making breastfeeding safer for HIV-exposed infants

In November 2008, CAH and the Department of HIV/AIDS convened a meeting of experts to review the evidence on new antiretroviral (ARV) drug interventions to prevent mother-to-child transmission of HIV (PMTCT). The meeting focused on ARV strategies to make breastfeeding safer and so enable HIV-exposed infants to receive the benefits of breastfeeding and optimize HIV-free survival.

The current PMTCT guidelines (published in 2006) recommend the use of ARV therapy for eligible pregnant women who need them for their own health, and for the remaining women the use of more efficacious prophylactic regimens to prevent vertical transmission.

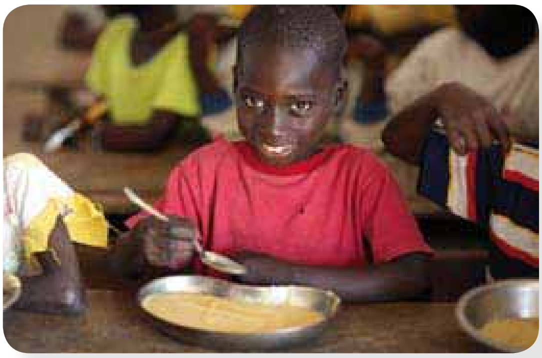
Participants in the November 2008 consultation highlighted the many gaps in present services, which if filled, could already reduce HIV transmission rates. In addition, several promising reports were presented of interventions that will promote the health and survival of HIV-infected lactating mothers and their infants.

Additional data will become available in 2009 that will permit a complete assessment of the balance and risks of these interventions, and lead to a full review of WHO's PMTCT guidelines.

For the conclusions of the consultation, see: http://www.who.int/child_adolescent_health/documents/media/pmtct_consultation_2008.pdf

WHO/Jean-Marc Giboux

Managing moderate malnutrition


IRIN/Manoocher Deghati

An estimated 200 million children in poor countries are moderately malnourished[1] that can present as a low weight-for-height (wasting) or a low height-for-age (stunting), or a combination of both. It is a key factor in child development -- stunted children usually complete fewer years of schooling and thus earn less income as adults. If moderately malnourished children do not receive adequate support, they may progress towards severe acute malnutrition or severe stunting, which are life-threatening conditions.
In contrast to severe malnutrition, programmes for the management of moderate malnutrition in children have remained virtually unchanged for the past 30 years. To answer the urgent need to improve their efficacy and effectiveness, CAH organized a consultation in collaboration with the Department of Nutrition for Health and Development, UNICEF and the World Food Programme, which brought together some 70 experts.

Key conclusions and suggestions of meeting participants

- Moderately wasted children need at least an additional 25 kcal/kg/day, as compared with the energy requirements of a well-nourished child, in order to recover;
- Stunted children may be lacking some specific nutrients needed for bone growth, including available phosphorus, zinc, sulfur and magnesium;
- Animal-source foods (such as milk, eggs and meat) are superior to unprocessed plant foods (vegetables and grains) to promote growth;
- More attention should be given to the essential fatty acid content of the diets given to malnourished children;
- WHO should set up a technical group to define specifications of diets or food supplements suitable for the recovery of moderately wasted children.

1 It is estimated that about 36 million children aged 6-59 months are suffering from moderate wasting, and approximately 178 million are estimated to be stunted.

The reformulation of foods currently used in food aid programmes is expected as an immediate follow-up to this meeting. For more information, see: http://www.who.int/child_adolescent_health/news/events/2008/30_08/en/index.html

Meeting child health needs in emergencies

A new manual on child health care in humanitarian emergencies was finalized and published in 2008. Whereas existing guidelines, such as IMCI, assume a functioning health system that facilitates the referral of children, this manual aims to provide comprehensive guidance on child care in acute and post acute emergencies, including natural disasters and conflicts, where there may not be access to a referral hospital.
The manual includes guidance for health workers on the initial management of severe conditions, and covers topics as diverse as injuries, burns, neonatal illness, and psychosocial support, as well as common preventive interventions such as immunization.
Each chapter summarizes the main ways of diagnosis, treatment and prevention using flow charts. The flow charts are arranged in such a way that they can be enlarged for use as job aids/wall charts, or for modular training on the management of each condition.
The Manual has already been put to use. Following the earthquake in Sichuan province, China, in May 2008, WHO immediately provided the draft version of this manual. This allowed the Chinese Ministry of Health to rapidly translate the manual and distribute 10,000 copies to the earthquake-affected provinces, where it was used to manage child health as an integral part of the disaster response.
The manual is a collaborative piece of work of three technical areas within WHO: Child and Adolescent Health and Development (CAH), Health Action in Crises (HAC), and Disease Control in Humanitarian Emergencies (DCE).


IRIN/Edward Parsons

New computer-based IMCI training tool goes live

WHO

In response to country requests for alternative training approaches for the Integrated Management of Childhood Illness (IMCI) CAH, supported by the Novartis Foundation for Sustainable Development, in May 2008 launched the first generic version of ICATT -- the IMCI Adaptation and Training Tool contained on a DVD and supported by a website (http://www.icatt-training.org).
ICATT is “open” software in which it is possible to create IMCI chart booklets and training materials tailored to local circumstances. Videos, pictures, sound files and documents can be integrated into the computerized training course.
Participants may go through the course on individual computers; or be guided by a facilitator using one computer and a projector. Both ways of running the course have proved successful in training participants in the theoretical elements of IMCI. The courses are complemented by clinical training.
The first countries to have used ICATT are Peru and the United Republic of Tanzania. In addition, an ICATT Orientation Workshop gathered participants from 12 countries in the Western Pacific Region (Australia, Cambodia, China, Fiji, Lao People’s Democratic Republic, Malaysia, Mongolia, Papua New Guinea, the Philippines, Republic of Korea, Solomon Islands, and Viet Nam). Plans are under way to build capacity for ICATT in all other WHO regions in 2009, and it is already being translated into several languages, from Spanish to Swahili.

Regional highlight - Eastern Mediterranean

Guide to planning for implementation of IMCI at district level

As a major contribution to capacity building, in 2008 the Eastern Mediterranean Regional Office developed a *Guide to Planning for Implementation of IMCI at District Level*. The Guide offers a standardized process, and describes in detail the steps to be taken -- from the preparatory phase of data collection, situation analysis, and capacity building at district level, to the district planning workshop and monitoring the implementation of plans of action developed, including a list of key indicators.
It covers all three components of IMCI, namely: human resource development, health system strengthening, and improving child care community practices. It also emphasizes the importance of planning for monitoring and documentation.
The document serves as a useful guide to planning for primary child health care related activities, and even for other programme areas at district level. A library of tools that have been widely used and tested in some countries of the Region, is provided along with the Guide.
A companion CD comes with the printed publication, containing the orientation package, tools for data collection and templates used during the district planning workshop, as a resource for country adaptation. The Guide was introduced to national coordinators from six countries in the Region (Egypt, Jordan, Morocco, Sudan, Tunisia and Yemen) in a planning workshop held in Egypt in February 2008.

WHO/Suzanne Farhoud

Caring for newborns and children close to home - new materials for training community health workers


UNICEF/G. Pirozzi

To increase access and ensure that every child is reached with the interventions they need to survive, grow and develop, care must be made available closer to home. With this in mind, CAH has been developing a package of state-of-the-art guidelines and materials to enable community health workers (CHWs) to deliver newborn and child care services. The package is composed of three sets of materials for training and support.

These materials can be used separately or sequentially:

1. Caring for the newborn at home,
2. Caring for the sick child in the community, and
3. Caring for the older child at home.

The 'Caring for the sick child in the community' materials are further divided to allow two options, depending on the policy environment of each country: identification and treatment of common life-threatening illnesses (pneumonia, diarrhoea, fever), or identification of illness, with treatment in the home of diarrhoea, and referral for pneumonia, fever and danger signs.

In 2008, CAH field tested *Caring for the sick child in the community'* in the Philippines and Malawi. On the basis of the results of the field tests, they are currently being revised and will be published jointly with UNICEF in 2009. *Caring for the newborn at home* was developed in 2008 and will be field tested and published jointly with UNICEF in 2009.

Regional highlight - Africa

Ethiopia commits to improving the quality of paediatric care in hospitals

From January to July 2008, WHO supported the Federal Ministry of Health of Ethiopia to conduct an assessment of the quality of care for children in eight referral hospitals using WHO's Generic Assessment Tool of Hospital Care for Children. In December, the Ministry held a consultative meeting to disseminate the results of the hospital assessment and discuss and agree on the next steps.

The consultation concluded that there is a big gap and need for improvement in the quality of paediatric referral care which requires systematic improvement. These efforts are to be coordinated as part of the Ethiopia Hospital Management Initiative (EHMI) to advance patient care and outcomes, which is being implemented in 75 hospitals across the country.

The consultation came at the right moment, as the Ministry was in the process of revising the EHMI to further elaborate on the standards and tools. On the basis of the consultation findings, the Ministry decided to incorporate within the EHMI, the CAH-developed Emergency Triage Assessment and Treatment course (ETAT) and adapt the WHO Pocket Book of Hospital Care for Children. This will also involve using job aids and standard paediatric protocols, and improving health worker skills through training, clinical mentoring and regular supportive supervision.

As part of the commitment made by the Ministry, paediatric quality of care improvement will be spearheaded by the Health Services Department with active technical support from the Family Health Department, WHO, UNICEF, USAID, the Ethiopian Paediatric Society and Universities.


WHO/Wilson Were

Regional highlight - South-East Asia

Helping countries use existing data to review child health programmes - case study: Nepal


WHO/Martin Weber

CAH has developed a simple but systematic methodology to help countries make use of existing data to review their newborn and child health programmes. In developing this tool, special attention has been paid to ensuring that issues related to the rights of children to health were appropriately addressed.

In 2008, the guidelines for *Using Existing Data to Review Newborn and Child health Programmes* were used in Guyana, Cambodia, and Nepal. The same year, China adapted the methodology to conduct an IMCI review.

WHO provided direct assistance to Nepal for conducting their Child Health Programme Review. In order to take the opportunity to strengthen capacity in the Region to conduct similar reviews, representatives of Bhutan, Indonesia and Sri Lanka also participated. It is expected that these countries will undertake their own reviews in 2009.

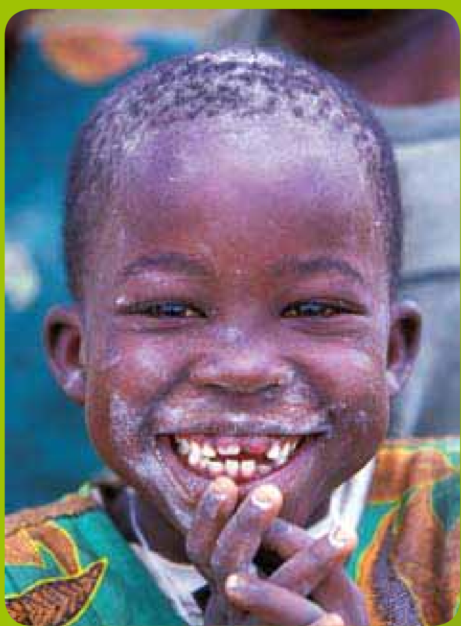
Programme management course introduced in countries

The past decade has seen a significant change in the approach to child health and survival, from vertically-oriented programmes to those that seek to be more comprehensive. This has had implications for the planning and management of programmes. For effective implementation, programme management now needs to address the range of work, including control of diarrhoea and acute respiratory infections, immunization, nutrition and newborn health.

In response to demand from countries, together with the African Regional Office, we have developed guidelines and training materials to improve the management of integrated programmes for child health. The purpose of these materials is to assist child health programme managers at national and sub-national levels to develop operational plans for child survival, growth and development. The materials take into account the rapidly changing environment in which managers work, and the challenges and opportunities associated with decentralization, multiple partnerships and new funding sources.

In 2008, the guidelines were introduced to IMCI, child health, MPS, reproductive health and EPI programme managers from 11 African countries in an intercountry workshop.

The first national level training course on Managing Programmes to Improve Child Health was conducted in Phnom Penh in October 2008, organized by WHO Cambodia, the Western Pacific Regional Office and CAH/HQ. Participants included Provincial Deputy Directors, programme managers (including National Immunization Programme, Nutrition Programme, Reproductive Health, Malaria, Dengue, ARI/CDD, and IMCI), as well as staff from bilateral and multilateral organizations (BASICS, CARE, Reproductive and Child Health Alliance, UNICEF and University Research Centre).


IRIN/Manoocher Deghati

Supporting the development of national strategies and plans for child health

The development of national strategies and plans is an important step in ensuring a coherent and systematic approach to addressing child survival and health. By the end of 2008, all of WHO's regions had or were in the process of developing regional strategies or policies that serve as frameworks for developing national newborn and/or child health strategies and plans.

Support has been provided for 13 countries in the African Region to develop policies, strategies and plans for child survival. A total of 21 countries in the region now have comprehensive child survival scale-up strategies.

In the Americas, a Regional Strategy and Plan of Action was approved for Neonatal Health within the continuum of maternal, newborn and child development and care. At national levels, plans are already under way in the Dominican Republic, Honduras, Nicaragua and Paraguay.

A Child Health Policy Initiative was launched in the Eastern Mediterranean Region. Of the four countries that originally joined the initiative, one country (Tunisia) has finalized their policy and the other countries are at different stages of development.

In the European Region, 12 countries were directly supported by WHO in developing national child and adolescent health strategies, and nine countries had an advance draft or a child and adolescent health strategy approved by 2008.

The South-East Asian Regional office has initiated the development of a Regional Strategy for Child Health and Development which is intended to assist member states in re-prioritizing actions and initiatives to achieve MDG 4.

In the Western Pacific Region, child health programmes continue to be guided by the WHO/UNICEF Regional Child Survival Strategy that was launched in 2006. Some countries have already completed national strategic plans (Cambodia and the Philippines); while several others are at various stages of development (Lao People's Democratic Republic, Papua New Guinea and Viet Nam).

WHO/Nick Otto

Helping countries understand the investments needed to save child lives

IRIN/Manoocher Deghati

To help advocate for increased resource flows to child survival programmes, in collaboration with the Department of Health Systems Financing (HSF), CAH has estimated a 'global price tag' for scaling up child health interventions in 75 developing countries. In collaboration with Regional and Country Offices, we are now supporting a country validation of the 'global price tag'.

While global numbers are useful for advocacy, at national level there is a need for country-specific, needs-based cost estimates tailored to the local context. For this purpose, CAH has developed a Child Heath Cost Estimation Tool. During 2008, cost estimates were generated in Cambodia and Mozambique.

National Health Accounts is a methodology that tracks all health spending and investments in a country. Child health sub-accounts gather and analyse this information specifically for child health. Child health sub-accounts are an effective strategy for monitoring and evaluating the financing of child health programmes, and they can help inform key policies such as resource allocation and equity promotion.

In 2008, in collaboration with HSF and the Partners for Health Reformplus (the predecessor project to HS 20/20), CAH contributed to the development of child health sub-account tools. So far, four countries have concluded child health sub-accounts: Bangladesh, Ethiopia, Malawi, and Sri Lanka.

To help overcome the gaps in funding, CAH and the Department of Making Pregnancy Safer have collaborated with the Asian Development Bank, UNFPA, UNICEF and the World Bank to develop an Investment Case for Maternal, Neonatal and Child Health in Asia and the Pacific. Despite this region's rapid economic growth, many outcomes for maternal, newborn and child health are lagging badly. Fifteen countries in Asia and the Pacific are not making sufficient progress to achieve MDG 4, and the rate of maternal mortality reduction is regressing in more than half of the countries. The investment case identifies the likely "best buys" for high maternal, neonatal and child mortality countries in Asia and the Pacific given existing technology, knowledge, costs, capacities and needs. The starting point is a robust package of essential services covering the continuum of care from the woman of reproductive age, to the pregnant mother to the child. These interventions must be promoted and delivered at various levels of the health care system, whether at home or in communities, through outreach or at referral facilities.

Regional highlight - Europe

Monitoring and evaluating progress on child and adolescent health across Europe

UNICEF

The implementation of the European Regional Strategy for Child and Adolescent Health and Development has been monitored in every member state through two questionnaire-based surveys -- a baseline in 2006 and a follow-up in 2008.

Some of the main findings include:

- The proportion of countries addressing a greater range of ages within their Strategy, reflecting a life-course approach, has increased from 25% to 35%; most of this change concerns the 5-9 year old group;
- Greater attention is being paid to equity among population groups;
- Three-quarters of countries surveyed have an active intersectoral task force; and
- The proportion of countries involving young people in strategy development increased from 30% to 45%.

As part of the monitoring and evaluation, the surveys were complemented by a set of country-specific case studies. The case studies reinforced the survey findings, and provided additional valuable lessons, including the effect of financial constraints; the positive association between WHO technical support and progress in strategy development; the need for increased collaboration with the NGO sector; and the need to accelerate conversion of political will into action.

Regional highlight - Western Pacific

Monitoring progress on child survival in the Western Pacific

In order to intensify child survival actions in countries and areas of greatest need, and in line with the Western Pacific Regional Child Survival Strategy, the foremost priority is reaching universal coverage with an Essential Package of child survival interventions. Regular monitoring in order to track progress with the Strategy's implementation is vital for defining existing gaps and resource needs, informing policy and planning processes, and guiding advocacy and resource mobilization efforts.

For this purpose, a Regional WHO/UNICEF Child Survival Monitoring Framework has been endorsed by multiple stakeholders. It comprises ten agreed-upon core child survival indicators to assess progress in intervention coverage. To date, four countries (Cambodia, Mongolia, the Philippines, and Viet Nam) have updated data on the ten core indicators. In addition, eight output indicators, assessing quality of care, and nine input indicators assessing progress in policy setting and planning, have been agreed. Many of these indicators have been adopted for use in other Regions and are reflected in the Statistical Annex of this report.

In 2008, short programme reviews were conducted in China and Cambodia to assess IMCI implementation in particular and the child health programme in general including the coverage of key interventions across life stages. A planning workshop was also held in 2008 in Papua New Guinea for a household survey on maternal, newborn and chid health.

WHO-WPRO

Introduction

A key component of CAH's mission is advocating for a comprehensive, multisectoral approach to improving adolescent health and development based on sound evidence, and clearly delineating and supporting the contribution of the health sector. In doing so, we are contributing to the achievement of a number of international development goals, including those set forth by the United Nations General Assembly Special Sessions on Children and HIV/AIDS and the MDGs.

In a growing number of countries, national HIV and reproductive health programmes have recognized the importance of addressing adolescents and we are supporting them to do this effectively. We are also working with countries to address other issues of concern to adolescents such as nutrition, mental health, substance use and injuries/violence. In using these areas as programmatic entry points, CAH is working to strengthen the response of the health sector through what we refer to as the '4-S' framework:

- *Strategic information*: collecting and analysing the data needed for advocacy, policies and programmes;
- *Supportive policies*: advocating for and supporting the development of policies that protect and improve the health and human rights of adolescents;
- *Service provision*: developing a systematic approach to making health services responsive to the needs of adolescents, guided by national standards; and
- *Strengthening other sectors*: improving collaboration, support and linkages between the health sector and other sectors, notably schools and the media.

We worked in the following areas in 2008 to support the application of this '4-S' framework in countries:

- Generating evidence for programmatic action;
- Developing methods and tools for programmatic action;
- Building capacity for programmatic action;
- Supporting programmatic action in countries; and
- Raising the visibility of adolescent health and CAH's contribution to it, building consensus and strengthening coordination and collaboration.

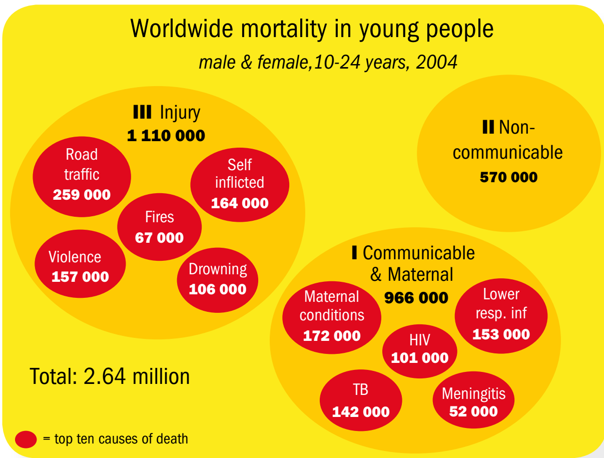
First review of mortality in young people

Traditionally, mortality is the key indicator driving public health action. Young people have low mortality rates compared to adults and children, but each death is both a personal and societal tragedy. In partnership with the Department of Information, Evidence and Research, CAH undertook a worldwide review of mortality among young people aged 10-24 years through analysis of data from the 2004 Global Burden of Disease database.

This review showed that 2.6 million deaths were estimated to have occurred among 10-24 year olds in 2004. Ninety-seven per cent of these deaths occurred in middle- and low-income countries, and almost two thirds of all deaths occurred in Africa and South-East Asia.

The figure above indicates the ten leading causes of death, grouped into three overall categories: communicable diseases and maternal causes, non-communicable diseases and injuries. There was an overall three-fold rise in male death rates across all regions from early adolescence to young adulthood (10-24 years of age), largely due to a rise in deaths due to injuries. Death rates among young females in Africa and South-East Asia were higher than those for males, in large part due to the high rates of deaths from maternal mortality, HIV and tuberculosis (TB).

In addition to this review, an analysis of the key health risk behaviours of adolescents is also under way. Together, these will provide a more comprehensive picture of the health and well-being of adolescents worldwide.



Generating adolescent demand and community support for health services

UNAIDS/Pierre Virot

In 2008, we carried out a global review of evidence to identify a few strategic, do-able, evidence-based interventions that create demand for sexual and reproductive health services by adolescents, and stimulate community acceptance and support for their provision.

Evidence was reviewed from 30 studies on interventions for generating demand through the provision of information, education and communication using several different channels: information on the value of health services and on efforts underway to make them adolescent-friendly; the use of referral systems; and the provision of funds/vouchers/subsidies to cover financial costs of services.

Similarly, assessments of the effectiveness of interventions for garnering community acceptance and support included interventions such as providing information to influential community members about the need for health services for adolescents through a variety of channels, including one-to-one discussions, cultural/social or school events, mass media, and activities to foster community engagement and participation in improving access to health services by adolescents.

The available evidence clearly highlights the importance of engaging parents, adolescents and communities as part of comprehensive strategies for improving health service use by adolescents. Adolescents are most likely to use health services in those communities approve the provision of services to them. The review also highlighted the need for stronger programme design and for the evaluation of projects that work with families and communities on influencing reproductive health behaviour and service use.

Inter-agency group publishes new package of Guidance Briefs on HIV and young people

A series of seven Guidance Briefs was developed in 2008 by the Inter-Agency Task Team (IATT) on HIV and Young People, of which WHO is an active member.

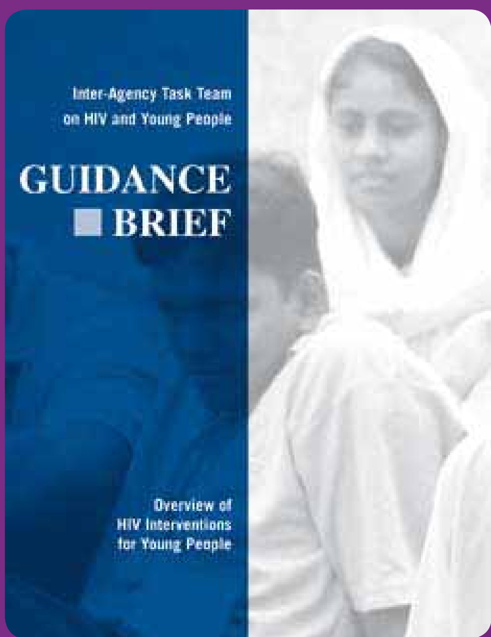
The series comprises a brief that provides a global overview, five other briefs on HIV interventions among young people provided through different settings/sectors – community, education, health, humanitarian emergencies and the workplace – and a final brief on most-at-risk young people.

Each brief includes a number of suggested actions to be taken – depending on the specifics of the epidemic and differing contexts in countries. The briefs do not say "how to" implement the interventions outlined, but key resources are listed to provide further guidance.

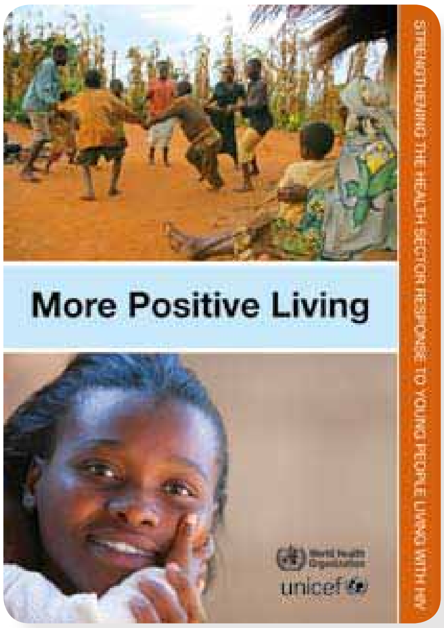
The series, which is based on the latest global evidence, is intended to help United Nations Country Teams and UN Theme Groups on AIDS to provide guidance to their staff members as well as governments, development agencies, civil society and other implementing partners.

Though we were involved in the preparation of all briefs, according to WHO's mandate and the UNAIDS division of labour, we took particular responsibility for the brief on HIV interventions for young people in the health sector. All of the briefs were reviewed by UN staff in eight countries representing various contexts and HIV epidemics.

English-language versions of the Briefs have been disseminated to regions and countries, and the series is currently being translated into all official UN languages.



'More Positive Living' a new advocacy tool to strengthen health services for young people living with HIV



In 2007 there were an estimated 5.4 million young people 15-24 years old living with HIV, and an unknown number of 10-14 year olds who has survived into adolescents after perinatal HIV infection. As access to treatment improves, more and more perinatally infected children will survive into the second decade. At the same time, unless there is significant scale-up of effective prevention programmes, young people will continue to become infected.

In August 2008, CAH published an advocacy document entitled "More Positive Living: strengthening the health sector response to young people living with HIV", and distributed it widely at the International AIDS Conference in Mexico.

Based on the outcome of a joint WHO/UNICEF global consultation that involved service providers and young people living with HIV from 18 countries, the publication highlights the challenges facing the millions of young people living with HIV.

It makes a number of specific recommendations for actions to be undertaken by the health sector, including the need to train service providers, to respond to the sexual and reproductive health needs of young people living with HIV, and to involve them in the provision of services.

Psychosocial support for young people with HIV

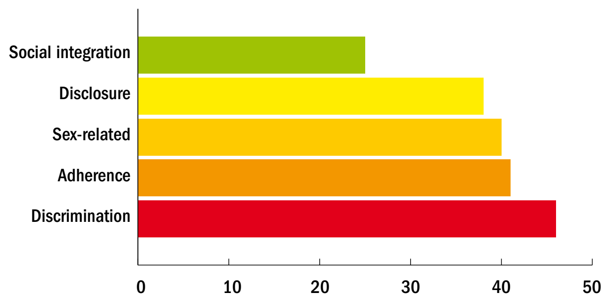
To address the lack of psychosocial support for young people living with HIV/AIDS, which has been identified as a priority challenge for the health sector, in 2008 CAH carried out a review of the interventions being implemented around the world to provide psychosocial support for this group.

A questionnaire was sent to 86 organizations, of whom 80% responded. Respondents indicated that the greatest challenges facing young people living with HIV for which psychosocial support is needed are stigma and discrimination (46%), adherence to medication (41%), issues relating to sex (40%), and disclosing HIV status (38%). It was clear from the responses that for psychosocial support interventions to be effective they must be youth-led, youth-friendly and involve youth at all levels of planning, implementation and evaluation (40%). Others highlighted that service providers must be empathetic, non-judgmental and culturally competent (28%). Lastly, a multidisciplinary approach that includes professionals from primary care, mental health, social work, legal advocacy and peer groups is important (22%) for effectiveness.

The major obstacles that organizations face in providing psychosocial support for young people living with HIV are lack of funding (37%), insufficient trained staff (24%), poor family and social support (19.4%), difficulties with motivating the young people to access services (24%) and the absence of programme support tools and guidance (12%). Broad consistency in the responses was found across organizations in different geographical regions.

The findings from the review were presented at the 2008 International Aids Conference in Mexico, and are being submitted to a peer reviewed journal for publication.

WHAT ARE THE PROBLEMS FACING YOUNG PEOPLE LIVING WITH HIV FOR WHICH THEY REQUIRE PSYCHOSOCIAL SUPPORT?



Using HPV prevention as an entry point to reach adolescent girls

IRIN/Brennan Jones

Human papillomavirus (HPV) infection causes nearly all cases of cervical cancer, which is responsible for over 280,000 deaths worldwide each year. Recently, vaccines have been developed to prevent some types of HPV that cause cervical cancer, and an increasing number of countries are choosing to procure and deliver HPV vaccine to adolescents aged 10 to 14 years.

Given that adolescents tend to have insufficient contact with health services, the growing interest in countries delivering the HPV vaccine presents an excellent opportunity for using the contact with adolescents to deliver other public health interventions that would benefit them.

With this in mind, in 2008 we carried out a literature review to identify interventions that would be appropriate to deliver to adolescents in brief health service encounters, alongside the HPV vaccine. The output of the review is termed *Plus⁺ Package of Adolescent Interventions*. It consists of a menu of core and optional evidence-based interventions organized by: screening, provision of information, services, and commodity delivery. The package has been developed for use in a range of countries, and will be field-tested alongside HPV vaccination programmes in collaboration with the Regional Office for the Americas and the Department of Reproductive Health and Research in 2009.

Male circumcision: a powerful HIV prevention tool and an opportunity to reach adolescent boys

In 2008, CAH partnered with UNICEF to organize and facilitate a regional consultation in Africa on young people and male circumcision. The meeting brought together 60 participants representing ten countries (Botswana, Kenya, Lesotho, Malawi, Namibia, South Africa, Swaziland, the United Republic of Tanzania, Uganda, and Zambia), including representatives from Ministries of Health and Youth, NGOs, young people, and staff from UNAIDS cosponsors UNICEF, UNFPA and WHO. Regional organizations such as the African Youth and Adolescent Network on Population and Development as well as regional representatives of global youth organizations such as the Global Youth Coalition on AIDS also participated.

The overall aims of the consultation were to inform and update young people about male circumcision; provide them with a space for discussion, to raise questions and express their concerns; provide opportunities to share experiences between countries in the subregion; and identify ways to strengthen the focus on and involvement of young people in male circumcision roll out.

This was the first meeting to explicitly involve young people on the issue of male circumcision. Three specific follow-up activities were agreed:

- the development of a Question & Answer document addressing the most common issues around male circumcision, in order to provide information to young people on the intervention as well as helping young people involved in advocacy for it to be more confident about the key messages;
- the development of training materials for service providers on working with young people and building links with youth organizations, schools and other partners to serve adolescents' health needs in a youth-friendly way; and
- an advocacy document, based on the outcome of the consultation, for policy makers and programmers, in order to mobilize resources for roll out of male circumcision by adolescents, for adolescents.

Rogiro @ flickr

Making progress in our 'focus countries'

To demonstrate the feasibility and value of the '4-S' approach for strengthening the way in which the ministry of health - and specifically the national HIV/AIDS and/or the national reproductive health programmes - address adolescents and young people, we have worked to apply it in a limited number of countries, designated as 'focus countries'. In addition to reality testing, the focus countries also serve the valuable purpose of being demonstration sites for other countries.

The current list of 'focus countries'
Region of the Americas: Guyana, Honduras, and Nicaragua.
African Region: Burkina Faso, Democratic Republic of the Congo, Ghana, Malawi and the United Republic of Tanzania.
European Region: the Republic of Moldova, Tajikistan and Ukraine.
South-East Asia Region: Bangladesh, India and Sri Lanka.
Western Pacific Region: Mongolia and Viet Nam.

We have set out clear objectives at the level of the WHO country office, Ministry of Health, district health management team, and the community in each 'focus country'. Building on the work done in 2006-07, in 2008 we worked to support the implementation of the step-by-step approach to scaling-up the provision of health services to adolescents, as shown in the box below:

Recognizing that good progress had been made in moving through steps 1-5 in 2006-2007, the main thrust of our work in 2008 was to stimulate and support implementation and monitoring at the district level.

Implementation: To support countries as they move from setting national quality standards as aspirational goals, to implementing concrete actions at the national, district and health facility levels to meet those quality standards, we worked with WHO country office staff and Ministries of Health to develop the following set of tools, flowing from the national quality standards:

- Guidance for national programme managers on actions to set the stage for the district-level introduction and implementation of quality standards;
- Guidance for district health management teams on actions to achieve the quality standards;
- Guidance for health facility managers on actions to achieve the quality standards.

Monitoring: Using measurement to shape and guide programming, we worked to build capacity in the assessment of quality and coverage of health service provision to adolescents at an intercountry workshop in Kyiv, Ukraine, in May 2008. In addition, we provided technical support to several countries to develop strategies and tools to monitor the achievement of national quality standards (health facility manager interviews, health facility staff interviews, adolescent client interviews, observation and record reviews). As a result of these efforts, concrete steps to monitor health service provision were undertaken in ten of the 16 focus countries in 2008.
In addition to providing support for data collection and analysis, we provided support for the dissemination of the findings and for them to be used to shape programming efforts.

Focus countries	Steps completed by 2008 in the systematic approach to improving access to health services for adolescents						
	1. Situation analysis of health service provision	**2.** Develop national quality standards for health service provision, specifying health system and health worker performance, as well as actions to build community support and increase adolescent demand	**3.** Develop (or adapt) capacity building and monitoring tools	**4.** Build a pool of resource persons to use the tools	**5.** Support the integration of approved quality standards into existing work plans and budgets	**6.** Support the implementation of activities to achieve the quality standards and expand coverage through actions at the national, district and health facility levels	**7.** Support the monitoring of the implementation of activities at national and district levels, and quality and coverage at local levels
Bangladesh							
Burkina Faso							
Democratic Republic of the Congo							
Ghana							
Guyana							
Honduras							
India							
Malawi							
Mongolia							
Nicaragua							
Republic of Moldova							
Sri Lanka							
Tajikistan							
Ukraine							
United Republic of Tanzania							
Viet Nam							

Documenting case studies of **outstanding initiatives** in scaling up health service provision to adolescents

CAH has worked with front-line organizations in Estonia, Mozambique and South Africa to prepare analytic case studies of three outstanding initiatives that have scaled up the provision of health services to adolescents.
CAH's objectives in supporting this documentation effort were:

- To provide governmental and non-governmental organizations in developing countries involved in scaling-up the provision of health services to adolescents with examples of how this has been done successfully in other developing country settings.
- To provide staff in international organizations providing technical and financial support to developing countries in scaling up the provision of health services to adolescents with analytic case studies showing how this was done and what was achieved in three different developing country settings.

The South African case study is of the *Evolution of the National Adolescent Friendly Clinic Initiative* which was an integral part of the high profile loveLife programme. The Mozambican case study was of the progress made by the multisectoral Geraçao Biz programme, a key component of which was youth-friendly health services, in moving from inception to large scale. The Estonian case study was that of the nationwide spread of the *Amor* youth clinic network, led by the Sexual Health Association in that country.
The key message emanating from each case study is that the scaling up the provision of health services to adolescents in developing country settings in a sustainable way is clearly doable, but it requires deliberate and concerted effort.

Regional Highlight - Africa

Building capacity in adolescent health and development in the African Region

There are growing requests from countries in the African Region for technical support to strengthen their health sector interventions for adolescent health and development. In 2008, the African Regional Office and headquarters jointly organized the first capacity building workshop for consultants and resource persons, held in Ghana. Participants included seven staff from WHO Country Offices in the Region, one inter-country team CAH adviser, two representatives of Ministries of Health, and six Ghanaian professionals working in the field of adolescent health.
The aim of the workshop was to develop a common understanding of the programming frameworks currently being used by CAH and promoted in the Africa Region; to build skills in the use of WHO tools and approaches for supporting the health sector response to adolescent health; and to strengthen the participants' capacity to assist with the facilitation of key workshops used in the systematic approach to strengthening the responsiveness of health services to meeting the needs of adolescents. In addition, participants were provided with an orientation on some more general aspects of conducting consultancies for WHO's African Regional Office, including administrative considerations, writing reports and debriefing.
The final evaluation of the workshop indicated that participants had gained competencies to support other countries. WHO's African Regional Office has already begun to use some of the resource persons who participated in the course, and those participants selected from WHO Country Offices are additionally contributing to adolescent health activities in their own countries.

WHO

Regional highlight - Americas

Regional Strategy for Improving Adolescent and Youth Health

UNAIDS/Pierre Virot

In October 2008, after months of preparatory work and consultation with countries, experts, young people and international stakeholders, the health authorities of the Americas voted, during PAHO's 48th Directing Council, in favour of a resolution to endorse the Regional Strategy for Improving Adolescent and Youth Health. This ten year strategy sets out to strengthen the health system's response to current and emerging needs in adolescent and youth health in the region with specific consideration for prevailing inequalities in the health status of various populations.

The Strategy proposes seven lines of action to address the primary causes of mortality and morbidity:

1. Strategic information and innovation;
2. Enabling environments and evidence-based policies;
3. Integrated and comprehensive health systems and services;
4. Human resource capacity building;
5. Family, community, and school-based interventions;
6. Strategic alliances and collaboration with other sectors; and
7. Social communication and media involvement.

The Region has the largest cohort of young people in its history - representing one quarter of the total population. Many countries in the Region are experiencing a demographic "window of opportunity" in which there is a larger proportion of working-age persons relative to the dependent population. Investment in adolescent and youth health and development was considered by the Council as critical to the future of health and social infrastructure and to the prevention of health problems in adulthood. The importance of attention to both the mental and physical health needs of adolescents and youths was underscored.
The Strategy builds on a Resolution on Adolescent Health in 1997 and an evaluation of the implementation of the action taken in countries. This new Strategy will be implemented through a Plan of Action now under development.

Regional highlight - Europe

Making health services youth friendly - moving from theory to action in Moldova

In 2008, WHO's European Regional Office provided intensified support to the government of the Republic of Moldova in building the capacity of the health sector to respond more effectively to the needs of young people. This was an important prerequisite to ensure leadership for and smooth implementation of national policies and programmes on adolescent health and development. National capacity was built, including that of government representatives and the national professional officer, for strengthening health systems, measuring the quality of youth friendly health services, planning and building partnerships for implementing cross-sectoral programmes for young people, and gender analysis for planning, implementation and evaluation of family and community programmes.

In terms of programmatic support, WHO supported Ministries of Health:

- to apply a human rights- based approach to reviewing laws and policies on reproductive health (with a particular focus on young people);
- to review the basis for the provision of health services in schools within existing national strategies and targets and;
- to strengthen school health services by applying evidence-based practices drawing upon international experiences; and to apply the WHO's systematic approach to improving the quality and scaling up the provision of health services to young people.

The Republic of Moldova's National Standards for Youth-Friendly Health Services

Standard 1
Young people know when and where to ask for health services.

Standard 2
Young people have easy access to the health services they need, they also find them acceptable.

Standard 3
Health service providers maintain the confidentiality and respect the privacy of young people.

Standard 4
Health service providers mobilize the community to promote youth friendly health services.

Standard 5
Health service providers provide health services effectively, in line with the basic or extended package.

Standard 6
All young people have equal access to health services.

Regional highlight - South-East Asia

Strengthening strategic information

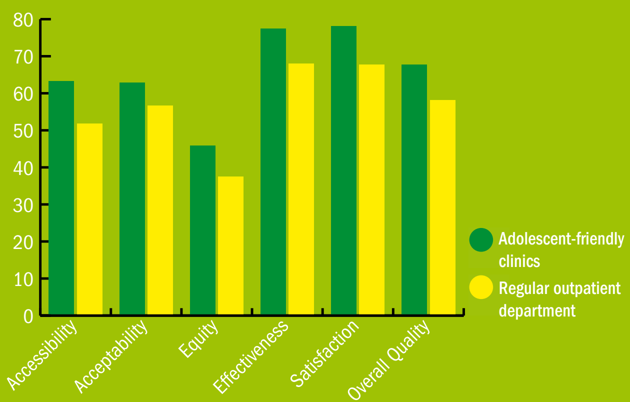
In 2008, WHO's South-East Asian Regional Office commissioned analyses of Demographic and Health Surveys and other national surveys, in a concerted effort to improve the use of strategic information to inform policies and programmes. Advocates and programme planners in Bangladesh, India, Indonesia, Nepal and Sri Lanka now have age- and sex-disaggregated data on sexual and reproductive health and HIV/AIDS.

Efforts to improve health service delivery in the region are also benefiting from a focus on strategic information: assessments of the quality and coverage of Adolescent Friendly Health Services (AFHS) has also been initiated in selected countries. In recent years, technical assistance has been provided to develop national standards on AFHS in Bhutan, India, Sri Lanka and Thailand. Protocols developed by CAH to measure the implementation of the standards through the assessment of quality were applied in these countries in 2008.

Protocols developed by CAH to measure the coverage of health service delivery to adolescents were used in the same sites as the quality was assessed in India and Sri Lanka.

India has also undertaken assessments of the quality and cost of services for adolescents in hospital-based "adolescent-friendly" clinics (AFCs) in Chandigarh, New Delhi and Kolkata. The aim was to assess whether the introduction of the clinics had led to improvements in the quality of health services available to adolescents in those areas in comparison with out-patient clinics in the same hospital sites. At the same time, an assessment of the cost of these services was undertaken. Overall, as shown in the figure below, the assessment indicated that the performance of AFCs was better than that of the control sites. Data from the client exit tools also indicated higher scores for AFCs on all dimensions of quality. The results of this assessment show the added value of the youth-friendly approach.

QUALITY COMPARISON



Regional highlight - Western Pacific

Building consensus and strengthening collaboration amongst stakeholders in the Western Pacific Region

Experts from seven countries in the Western Pacific Region (Cambodia, China, Lao PDR, Mongolia, Philippines, Papua New Guinea, and Viet Nam) along with the country office staff of WHO, UNICEF and UNFPA, NGOs, and selected research institutions, participated in a meeting on improving adolescent health in the region, held in 2008. Its objectives were to share experiences, orient participants to the '4Ss' framework for strengthening the health sector response to adolescents' needs. The discussions resulted in the following cogent conclusions and recommendations:

- Disaggregated strategic information is needed to inform efforts to improve adolescent health in the region. Current data is inadequate across the region, in particular in providing information about vulnerable youth and most at-risk youth;
- Evidence-based policy underpins the ability of the health sector to support many adolescent health interventions. The health sector can proactively engage in policy discussions in other sectors including education, employment, environment, justice and transport to improve aspects particular to adolescent health.
- The provision of quality services for young people is a key for their health, but there have been difficulties faced in countries to scaling up pilot- or project-based initiatives;
- Many of the important health problems of adolescence cannot be dealt with effectively by health sector alone. The health of adolescents requires action led by others notably: education, protection, justice, media, labour, entertainment and leisure. Health sector must develop partnerships with them and provide needed support to their actions.

The meeting also provided an opportunity to identify resources, build country level teams, lay foundations for future collaboration between UN agencies at the country level, and strengthen country level planning for the next year. The opportunity was utilized to develop understanding for a strengthened and coordinated joint response from WHO and UNICEF at the regional and country level for the future.

What's in the statistical annex? Data from 33 countries with high rates of child mortality

KEY POINTS

- During the past five years, fewer than half of the countries on which data are presented in the annex have achieved declines in mortality that would put them on track to achieve MDG4.
- At least one out of every five children is underweight in more than half of these countries.
- Coverage of treatment for pneumonia and diarrhoea needs to be more than doubled to reach MDG4.
- Less than one third of the countries have adopted a community health worker policy that could help increase access to treatment for pneumonia.
- Infant feeding counselling and the integrated management of newborn and childhood illness are the interventions with lowest coverage.
- Fewer than half of all districts have initiated IMCI training, leaving many without the opportunity to improve the quality of health care for children.

Reaching children with the right interventions, in the right place, at the right time is key to reducing mortality. Gathering and analysing data is the only way to know where gaps exist, and the best ways to fill them. The Statistical Annex of this report includes data for 33 countries with high rates of child mortality, accounting for approximately three quarters of the global burden.

A decline of 4% per year in the under-five mortality rate is the minimum necessary to achieve MDG4. Between 2002 and 2006, fewer than half (15) of the 33 countries achieved such an annual rate of decline.

High coverage levels (63%) have been achieved for some preventive interventions such as measles vaccination, which shows what is possible, given sufficient resources. By contrast, adoption of other preventive interventions such as early initiation of breastfeeding and exclusive breastfeeding, is generally low (38%). There is strong evidence that these essential feeding interventions can help mitigate the widespread problem of under-nutrition and prevent many unnecessary child deaths.

Pneumonia and diarrhoea together account for more than one third of all under-five deaths globally. There is strong evidence to show that adequate care seeking followed by treatment with antibiotics (and oxygen) reduces pneumonia deaths, and oral rehydration therapy (ORT) and zinc prevent diarrhoea mortality. Current levels of coverage for effective curative interventions need to be more than doubled (from a median of 47%) to reach the levels necessary to achieve MDG4.

To save child lives, programmes need to aim for both high coverage and quality of care. While there is a great deal of data available on coverage, tools such as health facility surveys that measure the quality of care, are not being used sufficiently to guide programme decisions and (re)training priorities.

The Integrated Management of Childhood Illness (IMCI) is known to significantly improve health worker performance. However, fewer than half of all districts in the 33 high burden countries have initiated health worker training in IMCI, leaving most without quality improvement opportunities.

Authorizing community health workers to prescribe antibiotics is an effective strategy for increasing access to pneumonia care. Despite this, fewer than one third of high burden countries have adopted formal community health worker policies that could help overcome the barriers to access and increase intervention coverage for pneumonia case management.

More than three quarters of the countries reported having a national child health strategy and/or action plan, though no supporting documentation was made available to substantiate this. Three quarters of countries also reported having adopted a national policy for infant and young child feeding and the Global Strategy's nine operational targets.

Despite the reported existence of costed national child health strategies, policies and action plans, coverage of essential feeding and curative interventions is low. It is critical that national policies and plans cover the appropriate mix of child survival interventions and delivery strategies according to a country's epidemiological profile and health system. It is equally vital that the adopted policies are translated into action.

Definition of indicators

Input indicators

1. Costed national strategy and/or plan of action for newborn and child health
Definitions: At a minimum, a **national strategy** lists the newborn and child health interventions and the level at which they will be delivered. A **plan of action** outlines program activities and tasks that will be carried out in the next year or for the duration of the governments' planning period. A national strategy is considered costed when intervention and program costs are estimated, based on population needs. A plan of action is considered costed when all proposed program activities and tasks in the plan of action are costed.
Yes: Existence of a strategy and/or plan of action which is costed
Partial: Existence of a strategy and/or plan of action, but not costed
No: No plan of action or strategy
- : Information not available
2. Zinc for diarrhoea treatment
Yes: Zinc for the management of diarrhoea is available in the country
Partial: Official Ministry of Health policies or guideles for the use of Zinc for the management of diarrhoea exist but no Zinc for the management of diarrhoea is available in the country
No: Zinc for the management of diarrhoea is not available in the country and no Official Ministry of Health policies or guidelines for the use of Zinc for the management of diarrhoea exist
- : Information not available
3. Antibiotics for the treatment of pneumonia at community level
Yes: Official Ministry of Health policies or guidelines exist for the use of antibiotics for pneumonia treatment at community level
Partial: There are no official Ministry of Health policies or guideles for the use of antibiotics for pneumonia treatment at community level but implementations happens in programmes or projects
No: Ministry of Health does not allow the use of antibiotics for pneumonia treatment at community level and no implementation takes place
- : Information not available
4. Year of last revision of IMCI guidelines
Year of last revision
5. International Code of Marketing of Breast-milk Substitutes
Yes: All provisions of the International Code adopted in legislation
Partial: Voluntary agreements or some provisions of the international Code adopted in legislation
No: No legislation and no voluntary agreements adopted in relation to the International Code
6. National policy for Infant and Young Child Feeding
Yes: Existence of a national policy for Infant and Young Child Feeding which includes the nine operational targets of the Global Strategy for IYCF.
Partial: A national policy exists which includes at least one operational target
No: No policy on IYCF exists
Note: The list of the nine operational targets of the Global Strategy for Infant and Young Child Feeding (IYCF) is available at http://innocenti15.net/declaration.pdf.pdf

Output indicators

1. Proportion of districts having initiated IMCI training of first-level health workers
2. Estimates of first-level facilities with one or more health workers who care for children trained in IMCI
3. Estimates of availability of oxygen in pediatric wards of district and national hospitals
4. Proportion of mothers who know two danger signs for seeking care for children under five years of age

Outcome indicators

(definition according to DHS StatCompiler and MICS)

1. Breastfeeding within one hour of birth
Definitions: Percentage of children born in the five years preceding the survey who were ever breastfed, and who started breastfeeding within one hour of birth.
2. Exclusive breastfeeding among infants under six months of age
Definitions: Percent distribution of living children exclusively breastfed at age 6 months.
Note: Breastfeeding status refers to 24 hours preceding the survey.
3. Care seeking for pneumonia
Definitions: Percentage of children under five years who were ill with a cough accompained with rapid breathing and the percentage who were ill with fever during the two weeks preceding the survey, and the percentage of ill children for whom treatment was sought from a health provider.
4. Children with diarrhoea receiving Oral Rehydration Therapy
Definitions: Percentage of children under five with diarrhea in the two weeks preceding the survey who received oral rehydration therapy (ORT).
Note: ORT = Either ORS (oral rehydration solution) or RHS (recommended home solution)
5. Children under twelve months of age vaccinated against measles
Percentage of children 12-23 months vaccinated with measles vaccines by 12 months of age, by whether the information was from a vaccination card or from the mother.
Note: The percentages vaccinated by 12 months of age are calculated under the assumption that the proportions of vaccinations given during the first year of life are the same for information based on the mother's report and information coming from a written record of vaccination.
6. Use of insecticide treated nets (where policy recommends ITN use for pregnant women and children under 5 years)
Percentage of children under five years of age who slept under an insecticide-treated net (ITN) the night before the survey.
Note: An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pretreated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide within the past 12 months.

Health status indicators

1. Under five mortality rate per 1000 live births in 2006
2. Under five mortality rate - Annual Average Rate of Reduction in the 2002-2006 period
3. Estimated number of pneumonia episodes per year in 2004
4. Percentage of children under five underweight (-2 SD)
Definitions: Percentage of children under five years who are classified as undernourished according to three anthropometric indices of nutritional status: weight-for-height.
Note: Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population. The percentage below -2 SD includes children who are below -3 SD.

Country	Input indicators						Output indicators		
	Costed national strategy / plan of action for newborn and child health *	Zinc for diarrhoea treatment **	Antibiotics for pneumonia treatment at community level *	Year of last revision of IMCI guidelines *	International Code of Marketing of Breast-milk Substitutes ***	National policy for Infant and Young Child Feeding *	Proportion of districts having initiated IMCI training of first-level HWs *	Estimates of first-level facilities with 1 or more HWs who care for children trained in IMCI *	Estimates of availability of O2 in pediatric wards of district and national hospitals *
Angola	Partial	Yes	No	2005	No	Partial	20%	-	-
Bangladesh	Partial	Yes	Yes	-	Partial	Yes	37%	-	-
Bolivia	Partial	Yes	No	2006	Partial	Yes	85%	-	1/3><2/3
Brazil	Yes	No	No	-	Yes	Yes	20%	-	-
Burkina Faso	Partial	Yes	No	2007	Yes	Yes	90%	-	>2/3
Cambodia	Yes	Yes	No	2006	Partial	Yes	38%	<1/3	-
China	No	No	No	-	Partial	Yes	32%	-	-
Côte d'Ivoire	Yes	Yes	No	2007	Partial	Yes	15%	<1/3	-
Democratic Republic of the Congo	Yes	Yes	Yes	2007	Yes	Yes	36%	<1/3	<1/3
Egypt	Yes	Yes	No	2006	Partial	Yes	92%	>2/3	-
Ethiopia	Yes	Yes	No	2006	Partial	Yes	21%	-	-
Haiti	No	Yes	No	-	Partial	No	7%	-	-
India	Partial	Yes	Yes	-	Yes	Yes	26%	-	-
Indonesia	No	Yes	No	-	Partial	Partial	30%	-	-
Kenya	No	Yes	No	2007	Partial	Yes	75%	<1/3	1/3><2/3
Laos People's Democratic Republic	No	Yes	No	-	Partial	-	30%	-	-
Malawi	Partial	No	Yes	2007	Yes	Yes	90%	1/3><2/3	-
Mali	Yes	Yes	No	-	Partial	Yes	39%	<1/3	<1/3
Mozambique	Yes	No	No	2006	Yes	Partial	90%	>2/3	-
Myanmar	Partial	Yes	Yes	2008	No	Yes	34%	-	-
Nepal	Partial	Yes	Yes	2007	Yes	Yes	85%	>2/3	-
Niger	Yes	Yes	Yes	2007	Partial	Yes	93%	<1/3	>2/3
Nigeria	Yes	Yes	Yes	2007	Yes	Yes	17%	-	-
Pakistan	Yes	Yes	Yes	2008	Partial	Yes	26%	<1/3	-
Papua New Guinea	No	Partial	Partial	-	Partial	Yes	11%	-	>2/3
Philippines	Partial	Yes	No	2007	Yes	Yes	72%	-	-
Sudan	Yes	No	No	2005	Partial	-	56%	1/3><2/3	-
Tajikistan	Partial	Yes	No	2008	No	Yes	18%	-	<1/3
Turkey			-	-	-	-	1%	-	-
Uganda	Yes	Yes	No	2007	Yes	Yes	98%	1/3><2/3	-
United Republic of Tanzania	Partial	Yes	No	2007	Yes	Yes	90%	-	-
Uzbekistan	Partial	Yes	No	2008	No	Partial	20%	-	<1/3
Yemen	Yes	Yes	Partial	2008	Yes	-	40%	1/3><2/3	-

- = data not available.
* = data source: Reported by WHO Country and Regional Offices. Status as of 31st of December 2008.
** = data source: For Zinc availability UNICEF Supply Division Copenhagen. Otherwise as reported by WHO Country and Regional Offices. Status as of 31st of December 2008.
*** = data source: WHO/UNICEF monitoring of the Code.

Country	Health Status Indicators			Outcome Indicators							
	U5MR per 1000 live births (2006) *	U5MR Annual Average Rate of Reduction (2002-2006) **	Estimated number of pneumonia episodes/yr (2004) ***	Percentage of children <5 underweight (-2 SD)	BF within 1hr of birth	Exclusive BF among infants < 6 months	Care seeking for pneumonia	Children with diarrhoea receiving ORT	Children < 12 months vaccinated against measles	ITN use	Source/ Year
Angola	260	0.0%	1,000,000	-	-	-	-	-	-	-	-
Bangladesh	69	4.8%	6,400,000	47.5	35.6	37.4	30.1	70.1	87.5	-	MICS 2006
Bolivia	61	5.3%	100,000	7.4	60.7	53.6	51.5	38.2	7.3	-	DHS 2003
Brazil	20	6.8%	1,800,000	1.7	43.0	39.8	49.7	51.3	-	-	PNDS/DHS 2006
Burkina Faso	204	-0.8%	990,000	37.6	33.3	18.9	35.9	26.5	43.2	1.9	DHS 2003
Cambodia	82	4.0%	750,000	35.6	26.6	60.0	45.4	35.8	70.2	4.2	DHS 2005
China	24	7.2%	21,000,000	-	-	-	-	-	-	-	-
Côte d'Ivoire	127	1.3%	870,000	20.0	24.9	4.3	35.1	32.6	72.3	3.0	MICS 2006
Democratic Republic of the Congo	205	0.0%	3,850,000	30.1	49.7	36.1	41.9	44.9	54.9	5.8	DHS 2007
Egypt	35	6.3%	980,000	6.1	31.4	38.3	63.4	35.7	94.3	-	DHS 2005
Ethiopia	123	3.3%	3,950,000	38.5	45.9	49.0	18.7	27.5	28.5	1.5	DHS 2005
Haiti	80	5.2%	420,000	21.9	32.0	40.7	31.5	43.8	45.3	-	DHS 2005/2006
India	76	2.6%	43,000,000	47.8	17.5	46.4	67.3	26.0	48.4	-	DHS 2005/2006
Indonesia	34	5.7%	6,000,000	-	38.7	39.4	61.3	48.4	63.2	-	DHS 2002/2003
Kenya	121	-0.6%	1,600,000	19.8	52.3	12.7	49.1	29.2	62.8	6.0	DHS 2003
Laos People's Democratic Republic	75	5.0%	375,000	37.1	29.8	26.4	32.3	50.5	33.0	40.5	MICS 2006
Malawi	120	4.3%	630,000	20.5	58.3	56.7	51.8	55.3	75.9	24.7	MICS 2006
Mali	217	0.5%	840,000	32.0	45.9	37.8	38.1	24.3	59.1	-	DHS 2006
Mozambique	138	4.2%	1,100,000	23.8	64.7	30.0	55.4	54.1	63.0	-	DHS 2003
Myanmar	104	0.9%	1,800,000	31.8	-	14.5	65.5	94.7	78.0	11.9	MICS and HMIS 2003; CEU & EPI 2007; DoH MDG Report 2006
Nepal	61	6.3%	1,000,000	38.6	35.4	53.0	42.9	40.7	80.0	-	DHS 2006
Niger	253	1.1%	1,000,000	44.2	48.3	13.6	47.2	26.2	38.3	7.4	DHS 2006
Nigeria	191	1.3%	6,000,000	28.7	31.9	17.2	32.8	29.4	31.4	1.2	DHS 2003
Pakistan	97	1.8%	9,800,000	-	18.0	-	80.5	47.2	50.2	-	DHS 2006/2007
Papua New Guinea	73	1.5%	200,000	-	-	-	-	-	-	-	-
Philippines	32	3.7%	2,700,000	-	54.0	33.5	54.8	57.6	69.7	-	DHS 2003
Sudan	89	1.4%	2,000,000	-	-	-	-	-	-	-	-
Tajikistan	68	5.2%	-	17.4	60.9	25.4	63.9	58.4	91.1	1.3	MICS 2005
Turkey	26	8.8%	-	3.9	53.9	20.8	41.0	-	71.2	-	DHS 2003
Uganda	134	1.3%	1,200,000	20.2	25.4	59.9	73.5	43.4	52.3	9.7	DHS 2006
United Republic of Tanzania	118	3.0%	1,900,000	21.6	59.3	41.3	59.4	62.2	70.2	16.0	DHS 2004
Uzbekistan	44	6.0%	-	5.1	67.1	26.4	67.7	78.8	96.0	-	MICS 2006
Yemen	100	1.6%	1,400,000	-	29.6	-	-	86.7	59.2	-	MICS 2006

- = data not available.
* = data source: Consolidated UN estimates (Interagency Working Group).
** = data source: WHO calculations based on consolidated UN estimates.
*** = data source: WHO estimates based on Rudan I et al.
The data sources and reference year for the indicators Percentage children <5 underweight, BF within 1 hr of birth, Exclusive BF among infants < 6 months, Care seeking for pneumonia, Children with diarrhoea receiving ORT, Children <12 months vaccinated against measles, ITN use are listed in the last column.

Rationale

The profiles include selected indicators which relate to WHO's work on adolescent health in the Medium-Term Strategic Plan (MTSP), and international goals (MDGs and UNGASS) and frameworks (ICPD) related to young people.

For 2008, one focus country profile is presented from the African Region, the Region of the Americas, the European Region, the South-East Asian Region, and the Western Pacific Region.

Sources

United Republic of Tanzania:

1: World Population Prospects, 2004;
2: Demographic and Health Survey (2004);
3: Global School Health Survey, 2006;
4: Tanzania HIV survey, 2003-04;
5: Report On Assessment Of Availability And Accessibility Of Adolescent Sexual And Reproductive Health Services In Mainland Tanzania, MOHSW, 2008
Notes a: Coverage "the proportion of adolescents who say they would be able to seek help from health facilities and the proportion of those who do in fact seek help"

Honduras:

1: Census, Government of Honduras, 2005;
2: Demographic and Health Survey;
3: Coverage study, Metropolitan area of Tegucigalpa, 2008;
4: Opportunities in Crisis, Unicef, WHO, 2002;
5: Global School Health Survey, 2006;
6: Service Availability Mapping, WHO, MOH,
Notes a: "have received a package of 4 interventions: health promotion by peers, condoms, HTC, STI management"; b: "commercial sex-workers"; c: "men who have sex with men"; d: "birth in health facility"

Republic of Moldova:

1: Opportunities in Crisis, Unicef, WHO, 2002;
2: Demographic and Health Survey (2005)
3: PRB mid-2007

India:

1: World Population Prospects, 2004;
2: NFHS-3, 2005/6;
3: NFHS-2, 1998/9;
4: WHO Mortality Database;
5: Global School Health Survey, 2007

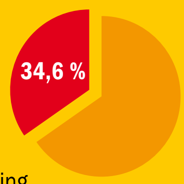
Viet Nam:

1: PRB mid-2007;
2: Demographic and Health Survey (2002-06);
3: Survey and Assessment of Vietnamese Youth (SAVY), 2003;
4: Opportunities in Crisis, Unicef, WHO, 2002

African Region: United Republic of Tanzania

Total Population[1] **38,700,000**
Population of 10-24 year olds[1] **13,400,000**

10-24 year olds



Summary of CAH Activities

Between 2002 and 2007, WHO provided the Ministry of Health with support in developing a national adolescent health strategy; in developing National Standards for Adolescent Friendly Reproductive Health Services and in doing the ground work for applying them through support for the adaptation of generic tools, building a pool of facilitators and the development of tools to support district level implementation and monitoring and the development of a district-level planning process. The MoH disseminated the national quality standards and encouraged regional medical officers to apply them in their respective districts. The MoH generated resources from partners to support the application of the national quality standards to medical officers, policy- and decision-makers at district and regional levels. As a part of this process, it carried out a nation-wide evaluation of the youth friendly reproductive health initiative (YFRHI), with funding from UNFPA and with technical inputs from WHO and other partners. In addition, in partnership with the MoH, WHO engaged a local organization with public health expertise to support district health management teams with implementation and monitoring. WHO also supported the MoH in preparing a paper on the evolution of the YFRHI from 2003-2008.

Impact Indicators	Age	♀	♂	♀♂
HIV prevalence[5]	15-19	2.1%	2.1%	2.1%
HIV prevalence[5]	20-24	6.0%	4.2%	5.2%
Maternal mortality ratio per 100,000 live births	15-19			
Age Specific Fertility rate[3]	15-19	132		
Age Specific Fertility rate[3]	20-24	274		
Suicide rate	13-15			
Proportion with serious injury in past year[4]	13-15	35.9%	43.2%	39.9%

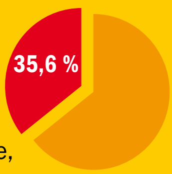
Outcome Indicators	Age	♀	♂	♀♂
Condom use at last high risk sex[3]	15-19	40%	39%	
Condom use at last high risk sex[3]	20-24	37%	51%	
Percentage who received an HIV test and know their results[5]	15-24	5.3	5.9%	
Contraceptive prevalence (modern methods - unmarried)[3]	15-19	30%		
Contraceptive prevalence (modern methods - married)[3]	15-19	6.9%		
Antenatal care visits for ≥4 visits	<20			
Tobacco use in past 30 days[4]	13-15	4.1%	12.2%	8.5%
Parental regulation of adolescent behaviour[4]	13-15	49.8%	55.1%	52.4%

Output Indicators	Age	♀♂
Proportion of health providers trained in AFHS/ASRH[6]		37.2%
Percentage of young people using health services	15-24	

Region of the Americas: Honduras

Total Population[1] **7,197,300**
Population of 10-24 year olds[1] **2,563,000**

10-24 year olds



Summary of CAH Activities

Over the past 5 years WHO has invested in strengthening health services for young people, with a focus on pregnancy and HIV prevention through a health systems and primary health care approach. At the policy level, collaboration between the MoH and the UN agencies (UNFPA, UNICEF and WHO) within the Honduras health sector reform process has strengthened attention to adolescents' needs. In addition, through the CRC reporting process, a rights-based framework was used to review the country's response.
Building health care provider capacity has been central to strengthening health service provision.

Impact Indicators	Age	♀	♂	♀♂
HIV prevalence[4]	15-24	1.2-1.8	.96-1.4	
Maternal mortality ratio per 100,000 live births	15-19			
Age Specific Fertility rate[3] per 1000	15-19	102		
Age Specific Fertility rate per 1000	20-24			
Suicide rate	13-15			
Proportion with serious injury in past year	13-15			
BMI: at risk of obesity or obese	13-15			

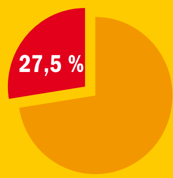
Outcome Indicators	Age	♀	♂	♀♂
Condom use at last high risk sex[2]	15-19	14%	86%	37%
Percentage who received an HIV test and know their results	15-24	19%[3]		37%[2]
Percentage of most-at-risk populations reached with HIV prevention programmes[3,a]		**CSW**[b] 73%	**MSM**[c] 69%	
Contraceptive prevalence (modern methods)				
Antenatal care visits for ≥4 visits[3]	<20	92%		
Access to skilled birth attendant (♀ age at delivery)[3,d]		73.6%		
Tobacco use in past 30 days	13-15			
Parental regulation of adolescent behaviour	13-15			

Output Indicators	Age	♀♂
Percentage of health facilities with ≥1 health care provider trained in AFHS/ASRH[6]		29%
Percentage of young people using health services[3]	15-24	15.5%

European Region: Republic of Moldova

Total Population[1] **4,000,000**
Population of 10-24 year olds[1] **1,100,000**

10-24 year olds



Summary of CAH Activities

In program implementation, WHO EURO supported MoH Moldova to apply the WHO systematic approach to quality improvement, including situation analysis, the development of a national strategy for the development of youth friendly health centres (2008-2012), standards and tools development, and planning of a baseline survey on quality assessment in 12 youth centres. Furthermore, support was provided for the review of laws and policies in the area of RH and for the provision of health services in schools within existing national strategies and targets in order to strengthen school health services.

Impact Indicators	Age	♀	♂	♀♂
HIV prevalence[1]	15-24	.09-.18	.3-.62	
Maternal mortality ratio per 100,000 live births	15-19			
Age Specific Fertility rate[2]	15-19	34		
Age Specific Fertility rate[2]	20-24	132		
Suicide rate	13-15			
Proportion with serious injury in past year	13-15			
BMI: at risk of obesity or obese	13-15			

Outcome Indicators	Age	♀	♂	♀♂
Condom use at last high risk sex[2]	15-24	31%	85%	
Percentage who received an HIV test and know their results[2]	20-24	22%	13%	
Contraceptive prevalence (modern methods)[2]	15-19	7.5%		
Contraceptive prevalence (modern methods)[2]	20-24	29.8%		
Antenatal care visits for ≥4 visits	<20			
Access to skilled birth attendant (♀ age at delivery)	20-34			

Output Indicators	Age	♀♂
Percentage of health facilities with ≥1 health care provider trained in AFHS/ASRH		
Percentage of young people using health services	15-24	

South-East Asian Region: India

Total Population[1] **1,103,000,000**
Population of 10-24 year olds[1] **327,204,000**

10-24 year olds

Summary of CAH Activities

In 2004 and 2005, WHO worked with UNFPA to support the Ministry of Health and Family Welfare in developing a national Adolescent Sexual and Reproductive Health strategy as an integral part of the phase II of the national Reproductive and Child Health project. In follow up to this, WHO supported the Ministry in developing national standards and guidelines for health service provision to adolescents, and in doing the ground work for applying them through support for the adaptation of generic tools, building a pool of facilitators and the development of tools to support district level implementation and monitoring of the quality, coverage and cost of health services. WHO was also involved in testing the feasibility of this approach through pilot studies in several states of the country. WHO supported the Ministry in analysing the findings of quality and cost studies conducted in 2006-07. WHO worked with the Ministry of Health in preparing a paper on the evolution of the initiative from 2005-2008.

Impact Indicators	Age	♀	♂	♀♂
HIV prevalence[2]	15-24	0.24%	0.2%	
Maternal mortality ratio per 100,000 live births[3]	15-19			
Age Specific Fertility rate[3]	15-19	90		
Age Specific Fertility rate[3]	20-24	209		
Suicide rate	13-15			
Proportion with serious injury in past year[4]	13-15	35.9%	43.2%	39.9%
BMI: at risk of obesity or obese	13-15	7.6%	8.3%	8.0%

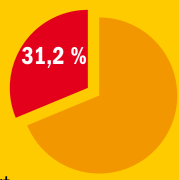
Outcome Indicators	Age	♀		♂	♀♂
Condom use at last high risk sex[2]	15-19	20%		31.3%	
Condom use at last high risk sex[2]	20-24	22.5%		40.7%	
Percentage who received an HIV test and know their results[2]	15-24	5.3%		2.7 %	
Contraceptive prevalence (modern methods)[2]	15-19	married 6.9%	married 9%		
Contraceptive prevalence (modern methods)[2]	20-24	26.1%	11.5%		
Antenatal care visits for ≥4 visits	<20				
Access to skilled birth attendant (♀ age at delivery)[2]	20-34	doctor 35.8%	other health prof 13.1%		
Access to skilled birth attendant (♀ age at delivery)[2]	20-34	47.5%	11.7%		
Tobacco use in past 30 days[5]	13-15	2.9%		6.2%	4.9%
Parental regulation of adolescent behaviour[5]	13-15	26.3%		29.1%	27.9%

Output Indicators	Age	♀♂
Percentage of health facilities with ≥1 health care provider trained in AFHS/ASRH		
Percentage of young people using health services[3]	15-24	

Western Pacific Region: Viet Nam

Total Population[1] **85,100,000**
Population of 10-24 year olds[1] **26,600,000**

10-24 year olds



Summary of CAH Activities

In 2000, WPRO recruited staff to support Viet Nam in the areas of adolescent health and health promotion. Early efforts focused on mobilizing interest, funds and technical support for the collection of strategic information on adolescents. These actions resulted in a nationally-representative survey of Vietnamese youth (SAVY) which was published in 2004 with a complementary series of policy briefs on specific health topics. SAVY findings informed the development of the 2005 National Master Plan on Adolescent and Youth Health. The improvement of health service delivery to adolescents is one core area of the Master Plan, and implementation of SAVY 2 currently underway provides opportunities for monitoring trends.
Approaches to improve health service delivery pilots began in 2003. Pilots were initiated by many partners, with the MoH, in a number of districts and types of health service facilities. In 2005, a national workshop was convened to review the experiences from the pilots as the basis for the development of national guidelines for AFHS (published in 2007).

Impact Indicators	Age	♀	♂	♀♂
HIV prevalence[4]	15-24	.13-.20	.25-.38	0.3%
Maternal mortality ratio per 100,000 live births	15-19			
Age-specific fertility rate[2]	15-19	20		
Age-specific fertility rate	20-24			
Suicide rate[3]	13-15			2.8%
Proportion with serious injury in past year	13-15			
BMI: at risk of obesity (85th percentile) or obese (95th percentile)	13-15			

Outcome Indicators	Age	♀	♂	♀♂
Current contraceptive use[3] (sexually active Married)	14-25			59.4%
Current contraceptive use[3] (sexually active unmarried)	14-25			42.8%
Percentage who received an HIV test and know their results[2]	15-19	3%	0%	
Percentage who received an HIV test and know their results[2]	20-24	3%	4%	
Antenatal care (1 visit)[3]	<20	83%		
Access to skilled birth attendant (urban)[2]		94%		
Access to skilled birth attendant (rural)[2]		80.7%		
Tobacco use in past 30 days[3]	14-17			10%
Parental regulation of adolescent behaviour	13-15			

Output Indicators	Age	♀♂
Percentage of health facilities with ≥1 health care provider trained in AFHS/ASRH		
Percentage of young people using health services[3]	15-24	

CAH publications, 2008

A systematic review of the effectiveness of shortening Integrated Management of Childhood Illness guidelines training: Final report.
http://www.who.int/child_adolescent_health/documents/9789241597210/en/index.html

Bulletin of the World Health Organization: Special theme issue on the prevention and control of childhood pneumonia, Volume 86, Number 5, May 2008.
http://www.who.int/bulletin/volumes/86/5/en/index.html

CAH Progress Report Highlights 2006-2007.
http://www.who.int/child_adolescent_health/documents/9789241596497/en/index.html

Countdown to 2015: Tracking progress in maternal, newborn & child survival: The 2008 Report.
http://www.who.int/child_adolescent_health/documents/9789280642841/en/index.html

Global Action Plan for the Prevention and Control of Pneumonia (GAPP): Report of an informal consultation. Gex, France. 5-7 March 2007.
http://www.who.int/child_adolescent_health/documents/9789241596336/en/index.html

Global Guidance Briefs: HIV interventions for young people by the Inter-Agency Task Team (IATT) on HIV and young people.
http://www.who.int/child_adolescent_health/documents/iatt_hivandyoungpeople/en/index.html

HIV and Infant Feeding Counselling Tools: Orientation Guide for Trainers.
http://www.who.int/child_adolescent_health/documents/9241592494/en/index.html

HIV and Infant Feeding: Tools and Materials (CD-Rom).

HIV Transmission through Breastfeeding: A review of available evidence: 2007 update.
http://www.who.int/child_adolescent_health/documents/9789241596596/en/index.html

IMCI Chart Booklet (update 2008).
http://www.who.int/child_adolescent_health/documents/IMCI_chartbooklet/en/index.html

IMCI Complementary Course on HIV/AIDS (update 2008).
http://www.who.int/child_adolescent_health/documents/9241594373/en/index.html

IMCI HIV/AIDS chart booklet (update 2008).
http://www.who.int/child_adolescent_health/documents/IMCI_chartbooklet/en/index.html

Indicators for assessing infant and young child feeding practices: Conclusions of a consensus meeting held 6-8 November 2007 in Washington D.C., USA.
http://www.who.int/child_adolescent_health/documents/9789241596664/en/index.html

Manual for the health care of children in humanitarian emergencies.
http://www.who.int/child_adolescent_health/documents/9789241596879/en/index.html

More Positive Living: Strengthening the health sector response to young people living with HIV.
http://www.who.int/child_adolescent_health/documents/9789241597098/en/index.html

Report of a technical consultation on IMCI training approaches and pre service IMCI: Geneva, Switzerland, 19-23 November, 2007.
http://www.who.int/child_adolescent_health/documents/9789241597159/en/index.html

The International Code of Marketing of Breast-milk Substitutes: Frequently Asked Questions (updated version 2008).
http://www.who.int/child_adolescent_health/documents/9241594292/en/index.html

Using Research for Improved Delivery of Newborn Health Interventions. Journal of Perinatology, Volume 28, Supplement 2, December 2008.
http://www.nature.com/jp/journal/v28/n2s/index.html

New translations of CAH documents, 2008

Adolescent-friendly health services: An agenda for change.
French: *Services de santé adaptés aux adolescents: Un programme pour le changement*
http://www.who.int/child_adolescent_health/documents/fch_cah_02_14/en/index.html

Guidelines for the control of shigellosis, including epidemics due to Shigella dysenteriae type 1.
French: *Directives pour la lutte contre la shigellose, y compris lors d'épidémies dues à Shigella dysenteriae type 1*
http://www.who.int/child_adolescent_health/documents/9241592330/en/index.html

HIV and infant feeding Counselling Tools: Orientation Guide for Trainers.
French: *L'Alimentation infantile et le VIH : Outils pour le conseil : Guide de Formation*
Spanish: *Herramientas de consejería en VIH y alimentación infantil: Guía de Capacitación*
http://www.who.int/child_adolescent_health/documents/9241592494/en/index.html

HIV and infant feeding Counselling Tools: Reference Guide.
French: *Alimentation infantile et VIH : Outils pour le conseil : Guide de Référence*
Spanish: *Herramientas de consejería en VIH Y alimentación infantil: Guía de Referencia*
http://www.who.int/child_adolescent_health/documents/9241592494/en/index.html

HIV and infant feeding: New evidence and programmatic experience. Report of a technical consultation held on behalf of the Inter-Agency Task Team (IATT) on Prevention of HIV infections in pregnant women, Mothers and their Infants.
French: *Le VIH et l'alimentation du nourrisson : Données nouvelles et expérience programmatique*
Spanish: *VIH y alimentación infantil: Nuevas pruebas científicas y experiencias programáticas*
http://www.who.int/child_adolescent_health/documents/9789241595971/en/index.html

HIV and infant feeding: Update based on the Technical Consultation held on behalf of the Inter-Agency Task Team (IATT) on Prevention of HIV Infection in Pregnant Women, Mothers and their Infants.
French: *Le HIV et l'alimentation du nourrisson : Mise à jour sur la base d'une consultation technique*
Spanish: *VIH y alimentación infantil: Actualización basada en la Reunión Consultiva Técnica*
http://www.who.int/child_adolescent_health/documents/9789241595964/en/index.html

Infant and young child feeding counselling: An Integrated Course. Director's Guide, Trainer's Guide, Participant's Manual and Guidelines for Follow-up after Training.
Spanish: *Consejería para la alimentación del lactante y del niño pequeño: Curso Integrado. Guía del Director, Guía del Facilitador, Manual del Participante, Lineamientos para el Seguimiento Después de la Capacitación*
http://www.who.int/child_adolescent_health/documents/9789241594745/en/index.html

Helping parents in developing countries improve adolescents' health.
French: *Aider les parents à améliorer la santé de l'adolescent dans les pays en développement*
http://www.who.int/child_adolescent_health/documents/9789241595841/en/index.html

IMCI complementary course on HIV/AIDS (updated version, 2008).
French: *Prise en Charge Intégrée des Maladies de l'Enfant : Cours complémentaire sur le VIH/SIDA*
http://www.who.int/child_adolescent_health/documents/9241594373/en/index.html

Married adolescents: No place of safety.
French: *Les adolescentes mariées : toujours soumises au risque*
http://www.who.int/child_adolescent_health/documents/9241593776/en/index.html

Pregnant adolescents: Delivering on global promises of hope.
French: *Adolescentes enceintes : apporter une promesse d'espoir dans le monde entier*
http://www.who.int/child_adolescent_health/documents/9241593784/en/index.html

Production of zinc tablets and zinc oral solutions: Guidelines for programme managers and pharmaceutical manufacturers.
French: *Fabrication de comprimés et de solutions orales à base de zinc : Directives à l'intention des responsables de programmes et de l'industrie pharmaceutique*
http://www.who.int/child_adolescent_health/documents/9241594942/en/index.html

Protecting young people from HIV and AIDS: The role of health services.
French: *Protéger les jeunes du HIV et le SIDA : le rôle des services de santé*
http://www.who.int/child_adolescent_health/documents/9241592478/en/index.html

New papers published in 2008 arising from research supported by CAH

Alam MA, Ali NA, Sultana N, Mullany LC, Teela KC, Zaman Khan NUZ, Baqui AH, El Arifeen S, Mannan I, Darmstadt GL, Winch PJ. Newborn umbilical cord and skin care in Sylhet District, Bangladesh: implications for the promotion of umbilical cord cleansing with topical chlorhexidine. *J Perinatol* (suppl) December 2008; S61-S68.

Allen L, Black RE, Brandes N, Brittenham G, Chazot G, Chunming C, Crawley J, de Benoist B, Dalmiya N, Darnton-Hill I, Dewey K, El-Arifeen S, **Fontaine O**, Geissler C, Haberle H, Harvey P, Hasler J, Hershko C, Hurrell R, Juma MA, Lönnerdal B, Lozoff B, Lynch S, Martines Salgado H, McLean E, Metz J, Oppenheimer S, Premji Z, Prentice A, Ramsan M, Ratledge C, Stoltzfus R, Tielsch J, Winachagoon P; Secrétariat de l'Organisation Mondiale de la Santé, au nom des participants à la consultation. Conclusions et recommandations d'une réunion d'experts OMS sur la supplémentation en fer pour les nourrissons et les jeunes enfants en zone d'endémie palustre. *Med Trop* (Mars). 2008 Apr;68(2):182-8.

Amaral JFJ, Victora CG, Madeiro Leite AJ, Ledo Alves da Cunha AJ. Implementation of the Integrated Management of Childhood Illnesses strategy in Northeastern Brazil. *Rev. Saúde Pública*, Aug. 2008, vol.42, no.4, p.598-606.

Amaral JFJ, Victora CG. The effect of training in Integrated Management of Childhood Illness (IMCI) on the performance and healthcare quality of pediatric healthcare workers: a systematic review. *Rev. Bras. Saude Mater. Infant.*, Jan./Mar. 2008, vol.8, no.2, p.151-162.

Amorim DG, Adam T, Amaral JFJ, Gouws E, Bryce J, Victora CG. Integrated Management of Childhood Illness: efficiency of primary health in Northeast Brazil. *Rev. Saúde Pública*, Apr. 2008, vol.42, no.2, p.183-190. ISSN 0034-8910.

Asghar R, Banajeh S, Egas J, Hibberd P, Iqbal I, Katep-Bwalya M, Kundi Z, Law P, MacLeod W, Maulen-Radovan I, Mino G, Saha S, Sempertegui F, Simon J, Santosham M, Singhi S, Thea DM, **Qazi S**. Severe Pneumonia Evaluation Antimicrobial Research Study Group. Chloramphenicol versus ampicillin plus gentamicin for community acquired very severe pneumonia among children aged 2-59 months in low resource settings: multicentre randomised controlled trial (SPEAR study). *BMJ*. 2008 (Jan 12); 336(7635):80-4. Epub 2008 Jan 8.

Awasthi S, Srivastava NM, Pant S. Symptom-specific care-seeking behavior for sick neonates among urban poor in S69 Lucknow, Northern India. *J Perinatol* (suppl) December 2008, S69-S75.

Bahl R. Issues in nutrient supplementation of breast-milk fed low birth weight infants. *Indian J Med Res*. 2008 Aug;128(2):104-6.

Bahl R, **Martines JC**, Kirkwood BR, Pelto P. Introduction: Using research for improved delivery of S1 newborn health interventions. *J Perinatol* (suppl) December 2008; S1.

Bhandari N, Mazumder S, Taneja S, Dube B, Agarwal RC, Mahalanabis D, **Fontaine O**, Black RE, Bhan MK. Effectiveness of Zinc Supplementation Plus Oral Rehydration Salts Compared With Oral Rehydration Salts Alone as a Treatment for Acute Diarrhea in a Primary Care Setting: A Cluster Randomized Trial. *Pediatrics* 2008; 121 (5).

Bhutta ZA, Memon ZA, Soofi S, Salat MS, Cousens S, **Martines J**. Implementing community-based perinatal care: results from a pilot study in rural Pakistan. *Bull World Health Organ*. 2008 Jun;86(6):452-9.

Boschi-Pinto C, Tomascovic L, Shibuya K. Estimating the child mortality due to diarrhoea in developing countries. *Bull World Health Organ* 2008; 86:710-7.

Brittenham GM. Iron metabolism in children: Confounding factors. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S510-S514.

Campbell H, Duke T, **Weber M**, English M, **Carai S**, Tamburlini G; Pediatric Hospital Improvement Group. Global initiatives for improving hospital care for children: state of the art and future prospects. *Pediatrics* 2008 Apr;121(4):e984-92.

Cardoso MRA, Nascimento-Carvalho CM, Ferrero F, Berezin EN, Ruvinsky R, Camargos PAM, Sant'Anna CC, Brandileone MCC, de Fatima P, March M, Feris-Iglesias J, Maggi RS, **Benguigui Y**, and the CARIBE Group. Penicillin-resistant pneumococcus and risk of treatment failure in pneumonia. *Arch. Dis. Child.* 2008;93;221-225.

Countdown Coverage Writing Group, on behalf of the Countdown to 2015 Core Group. Countdown to 2015 for maternal, newborn, and child survival: the 2008 report on tracking coverage of interventions. *Lancet* 2008; 371: 1247–58.

Countdown Working Group on Health Policy and Health Systems. Assessment of the health system and policy environment as a critical complement to tracking intervention coverage for maternal, newborn, and child health. *Lancet* 2008; 371: 1284–93.

Darmstadt GL, Kumar V, Yadav R, Shearer JC, Baqui AH, Awasthi S, Singh JV, Mehrotra H, Srivastava K, Gupta A, Sharma A, Winch PJ, Santosham M, and the Saksham Study Group. Community perceptions of birth weight in rural Uttar Pradesh, India: implications for care of low-birth-weight infants. *J Perinatol* (suppl) December 2008; S53-S60.

Dewey KG. Increasing iron intake of children through complementary foods. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S595-S609.

Dherani M, Pope M, Mascarenhas M, Smith KR, **Weber M**, Bruce N. Indoor air pollution from unprocessed solid fuel use and pneumonia risk in children aged under five years: a systematic review and meta-analysis. *Bull.World Health Organ* 2008;86(5):390-8.

Enarson P, La Vincente S, Gie R, Maganga E, Chokani C. Implementation of an oxygen concentrator system in district hospital paediatric wards throughout Malawi. *Bull. World Health Organ* 2008;86:344-8.

Fontaine O. Neue Empfehlungen der WHO zur klinischen Betreuung von Durchfällen Eine neue Salzlösung zur oralen Rehydratation und zusätzliches Zink.*Paediatrica* 2008; 19(5): 28-29.

Graham SM, English M, Hazir T, Enarson P, Duke T. Challenges to improving case management of childhood pneumonia at health facilities in resource-limited settings. *Bull. World Health Organ* 2008;86(5):349-55.

Greenwood B. A global action plan for the prevention and control of pneumonia. *Bull. World Health Organ* 2008;86(5):322-A.

Hazir T, Fox LM, Nisar YB, Fox MP, Ashraf YP, MacLeod WB, Ramzan A, Maqbool S, Masood T, Hussain W, Murtaza A, Khawar N, Tariq P, Asghar R, Simon JL, Thea DM, **Qazi SA**; New Outpatient Short-Course Home Oral Therapy for Severe Pneumonia Study Group. Ambulatory short-course high-dose oral amoxicillin for treatment of severe pneumonia in children: a randomised equivalency trial. *Lancet*. 2008 (Jan 5); 371(9606):49-56.

Heikens GT, Bunn J, Amadi B, Manary M, Chhagan M, Berkley JA, **Rollins N**, Kelly P, Adamczick C, Maitland K, Tomkins A, for the Blantyre Working Group. Case management of HIV-infected severely malnourished children: challenges in the area of highest prevalence. *Lancet* 2008; 371: 1305–07.

Hershko C. Mechanism of iron toxicity. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S500-S509.

Hill Z, Manu A, Tawiah-Agyemang C, Gyan T, Turner K, Weobong B, Ten Asbroek AHA, Kirkwood BR. How did formative research inform the development of a home-based neonatal care intervention in rural Ghana? *J Perinatol* (suppl) December 2008; S38-S45.

Hurrell RF. Iron fortification: Its efficacy and safety in relation to infections. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S585-S594.

Iyengar SD, Iyengar K, **Martines JC**, Dashora K, Deora KK. Childbirth practices in rural Rajasthan, India: implications for neonatal health and survival *J Perinatol* (suppl) December 2008; S23-S30.

Jeena PM. Can the burden of pneumonia among HIV-infected children be reduced? *Bull. World Health Organ* 2008;86(5):5.

Lazzerini M, Ronfani L. Oral zinc for treating diarrhoea in children (Review). *The Cochrane Library* 2008, Issue 3.

Lochindarat S, **Qazi SA**, Bunnag T, Nisar YB, Jatanachai P. Are we adequately managing children with wheeze using the standard case management guidelines? *J Med Assoc Thai* 2008; 91 (Suppl 3): S60-8.

Lönnerdal B, Kelleher SL. Iron metabolism in infants and children. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S491-S499.

Lozoff B. Iron deficiency and child development. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S560-S571.

Lynch S, Stoltzfus RJ, Rawat R. Critical review of strategies to prevent and control iron deficiency in children. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S610-S620.

Madhi SA, Levine OS, Hajjeh R, Mansoor OD, Cherian T. Vaccines to prevent pneumonia and improve child survival. *Bull. World Health Organ* 2008;86(5):365-72.

Marsh DR, Gilroy KE, Van de Weerdt R, Wansi E, **Qazi S**. Community case management of pneumonia: at a tipping point? *Bull World Health Organ.* 2008 May;86(5):381-9.

Masanja H, de Savigny D, Smithson P, Schellenberg J, John T, Mbuya C, Upunda G, Boerma T, Victora C, Smith T, Mshinda H. Child survival gains in Tanzania: analysis of data from demographic and health surveys. *Lancet* 2008; 371: 1276–83.

Metz J. Folic acid metabolism and malaria. *Food and Nutrition Bulletin,* 2007;28, no. 4 (supplement):S540-S549.

Mohan P, Iyengar SD, Agarwal K, **Martines JC**, Sen K. Care-seeking practices in rural Rajasthan: barriers and facilitating factors. *J Perinatol* (suppl) December 2008; S31-S37.

Morrison J, Osrin D, Shrestha B, Tumbahangphe KM, Tamang S, Shrestha D, Thapa S, Mesko N, Manandhar DS, Costello A. How did formative research inform the development of a women's group intervention in rural Nepal? *J Perinatol* (suppl) December 2008; S14-S22.

Mulholland EK, Smith L, Carneiro I, Becherc H, Lehmann D. Equity and child-survival strategies. *Bull. World Health Organ* 2008;86(5):399-407.

Oppenheimer S. Comments on background papers related to iron, folic acid, malaria and other infections. *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S550-S559.

Nelson EA, Bresee JS, Parashar UD, Widdowson MA, Glass RI. Asian Rotavirus Surveillance Network. Rotavirus epidemiology: the Asian Rotavirus Surveillance *Network. Vaccine.* 2008 Jun 19;26(26):3192-6.

Neonatal Mortality Formative Research Working Group. Developing community-based intervention strategies to save newborn lives: lessons learned from formative research in five countries. *J Perinatol* (suppl) December 2008; S2-S8.

Patel A, Mamtani M, Hibberd P, Tuan A, Jeena P, Chisaka N, Hassan M, Maulen-Radovan I, Thea DM, **Qazi S** and Kulkarni H. Value of chest radiography in predicting treatment response in children aged 3–59 months with severe pneumonia. *Int J Tuberc Lung Dis* 2008;12:1320–1326.

Prentice AM, Ghattas H, Doherty C, Coxlron SE. Iron metabolism and malaria. *Food and Nutrition Bulletin,* 2007;28, no. 4 (supplement):S524-S539.

Qazi S, **Weber M**, Cherian T. Progress on developing a Global Action Plan for Pneumonia prevention and control. *Pediatric Health* 2008;2:581-581.

Ratledge C. Iron metabolism and infection. *Food and Nutrition Bulletin,*2007; 28, no. 4 (supplement): S515-S523.

Rimoin AW, Fischer Walker CL, Chitale RA, Hamza HS, Vince A, Gardovska D, da Cunha AL, **Qazi S**, Steinhoff MC. Variation in Clinical Presentation of Childhood Group A Streptococcal Pharyngitis in Four Countries. *J Trop Pediatr.* 2008 Mar 29.

Roca-Feltrer A, Carneiro I, Armstrong Schellenberg JRM. Estimates of the burden of malaria morbidity in Africa in children under the age of 5 years. *Tropical Medicine and International Health* 2008; 13:771-83

Roth DE, Caulfield LE, Ezzati M, Black RE. Acute lower respiratory infections in childhood: opportunities for reducing the global burden through nutritional interventions. *Bull.World Health Organ* 2008;86(5):356-64.

Rudan I, **Boschi-Pinto C**, Biloglav Z, Mulholland K, Campbell H. Epidemiology and etiology of childhood pneumonia. *Bull. World Health Organ* 2008;86(5):408-16.

Saha SK, Darmstadt GL, Baqui AH, Islam N, **Qazi S**, Islam M, El Arifeen S, Santosham M, Black RE, Crook DW. Direct detection of the multidrug resistance genome of Haemophilus influenzae in cerebrospinal fluid of children: implications for treatment of meningitis. *Pediatr Infect Dis J.* 2008 (Jan27); 1:49-53.

Salama P, Lawn J, Bryce J, Bustreo F, Fauveau V, Starrs A, **Mason E**. Making the Countdown count. *Lancet* 2008; 371: 1219–21.

Sazawal S, Dhingra P, Dhingra U, Sarkar A, Verma P, Meno VP, Iyenger V, **Fontaine O**, Black RE. Prevention of iron and zinc deficiency - Evaluation of compliance of home-based fportification approach hmong children aged 6-24 months. *Sight and Life* 2008; 3:37-39.

Scott JA. The global epidemiology of childhood pneumonia 20 years on. *Bull. World Health Organ* 2008;86:494-5.

Stoltzfus RJ, Heidkamp R, Kenkel D, Habicht JP. Iron supplementation of young children: Learning from the new evidence. *Food and Nutrition Bulletin,* 2007*;* 28, no. 4 (supplement):S572-S584.

Syed U, Khadka N, Khan A, Wall S. Care-seeking practices in South Asia: using formative research to design program interventions to save newborn lives. *J Perinatol* (suppl) December 2008; S9-S13.

Tawiah-Agyemang C, Kirkwood BR, Edmond K, Bazzano A, Hill Z. Early initiation of breast-feeding in Ghana: barriers and facilitators. *J Perinatol* (suppl) December 2008; S46-S52.

Thea D, **Qazi S**. Neonatal mortality--4 million reasons for progress. *Lancet.* 2008 Jun 7;371(9628):1893-5.

World Health Organization Secretariat on behalf of the participants to the Consultation. Conclusions and recommendations of the WHO Consultation on prevention and control of iron deficiency in infants and young children in malaria endemic areas (Lyon, France, 12–14 June 2006). *Food and Nutrition Bulletin,*2007;28, no. 4 (supplement):S621-S627.

Yeboah-Antwi K, Addo-Yobo E, Adu-Sarkodie Y, Carlin JB, Plange-Rhule G, Osei Akoto A, **Weber MW**, Hamer DH. Clinico-epidemiological profile and predictors of severe illness in young infants (0-59 days) in Ghana. *Ann Trop Paediatr.* 2008 Mar;28(1):35-43.

Young Infants Clinical Signs Study Group. Clinical signs that predict severe illness in children under age 2 months: a multicentre study. *Lancet*. 2008 Jan 12;371(9607):135-42.

Zaman S, Ashraf RN, **Martines J**. Training in complementary feeding counselling of healthcare workers and its influence on maternal behaviours and child growth: a cluster-randomized controlled trial in Lahore, Pakistan. *J Health Popul Nutr.* 2008 Jun;26(2):210-22.

CAH PROGRESS REPORT HIGHLIGHTS 2008

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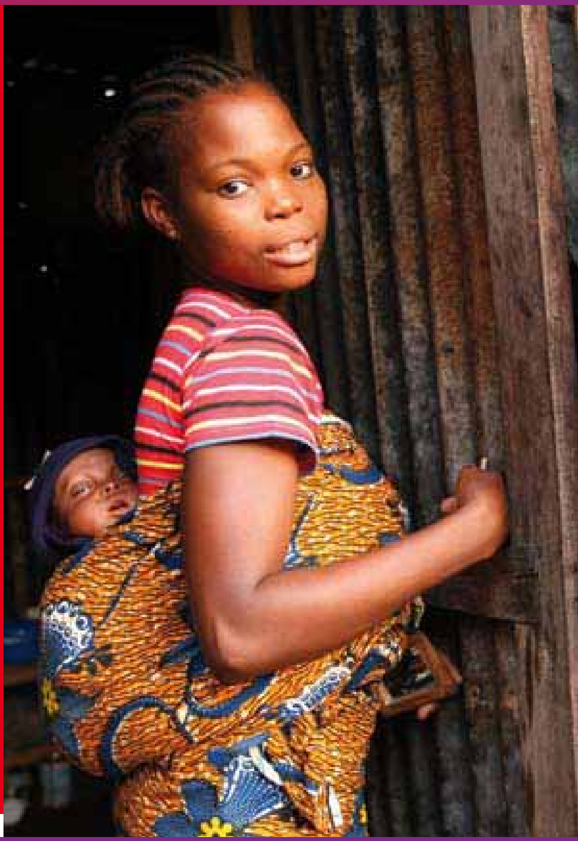

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