“The year 2009 was marked by unprecedented political commitment to achieving Millennium Development Goals four and five (MDGs 4&5) for child and maternal health. A Consensus Statement on Maternal, Newborn and Child Health was adopted by numerous governments, non-governmental organizations (NGOs), and international health agencies, through the WHO-hosted Partnership for Maternal, Newborn & Child Health. The Consensus sets out key actions to save the lives of more than ten million women, newborns and children between now and 2015. In September 2009, the High-level Taskforce on Innovative Financing for Health Systems announced a series of new financing measures worth billions of dollars to save the lives of mothers and children in developing countries. Against the backdrop of strong political will and the promise of additional financial resources, it is crucial that global initiatives are followed-up by concrete action in countries. This includes support for the development and implementation of national strategies and plans for maternal, newborn and child health, as well as capacity building for delivering key interventions at scale. Within the “UN family” WHO is working with UNICEF, UNFPA and the World Bank (known together as the “H4”) on harmonizing approaches and joint support to countries for accelerated implementation of the maternal and newborn continuum of care.

Within the Family and Community Health Cluster, the Department of Child and Adolescent Health and Development (CAH) has made major contributions towards improving the health and survival of newborns, children and adolescents, and I am pleased to see some highlights of the work reflected in this report for 2009.”

Daisy Mafubelu, Assistant Director-General, Family and Community Health, WHO.

“Tracking progress towards MDGs 4&5 remains a priority. In 2009, CAH initiated, in cooperation with the Department for Making Pregnancy Safer, the systematic collection of information on health policy and systems indicators for maternal, newborn, child and adolescent health in all WHO regions and countries. The information will be made available for country planning as well as for updating country profiles as part of the “Countdown to 2015” multi-partner initiative tracking progress towards achieving MDGs 4&5. Until now, there has been very little information available on the causes of death among young people globally and by region. A first study, which was supported by WHO and published in The Lancet medical journal in September 2009, found that 2.6 million young people are dying each year, with 97% of the deaths taking place in low- and middle-income countries. The study is intended to inform the development of policies and programmes to ensure that they improve the lives, and prevent the deaths, of young people.

To strengthen the evidence base for policies and programmes, reviews on traditional male circumcision among young people and mental health in adolescents were completed, and steady progress was made in reviewing effective approaches to prevent adolescent pregnancy and negative outcomes during pregnancy in adolescents.

A number of new tools to support programmatic action for adolescent health were developed and capacity to apply them in countries was built. One example highlighted in the report is that of the “Quality Assessment Guidebook - A guide to assess health services for adolescent clients”. Working in collaboration with units within and outside WHO, documents outlining the scope of the health problems facing adolescent girls and tools to promote and protect their health were developed.

Sustained support was provided to CAH’s “focus countries” for adolescent health and development. In 2009, particular emphasis was on supporting countries to move from strategy development and planning, implementation and monitoring of activities to reach adolescents with good quality health services.

I hope that these highlights will stimulate further ideas, action, and collaboration towards our common goals in 2010 and beyond.”

Liz Mason, Director, Department of Child and Adolescent Health and Development.

.PROGRESS REPORT, WHICH INCLUDES HIGHLIGHTS OF OUR WORK AT HEADQUARTERS, IN REGIONS AND COUNTRIES IN 2009. IT COVERS A WIDE RANGE OF ACTIVITIES FROM RESEARCH TO IMPLEMENTATION, FROM DEVELOPMENT OF GLOBAL GUIDELINES TO THEIR APPLICATION IN COMMUNITIES AND MONITORING THEIR EFFECTIVENESS.

Pneumonia and diarrhoea persist as the top causes of mortality among young children. Despite strong evidence for the use of simple, effective interventions, their coverage remains low and too few resources are dedicated to tackling these killers. In response, two new, joint WHO/UNICEF action plans were launched in 2009. In October, a seven-point plan was laid out in a report entitled “Diarrhoea: Why children are still dying and what can be done”. It includes a treatment package to reduce childhood diarrhoea deaths and a prevention strategy to ensure long-term results. In November, a “Global Action Plan for Prevention and Control of Pneumonia” was launched with a view to saving up to 5.3 million children by 2015. Both diseases should be addressed in a broader Primary Health Care approach through the implementation of the Integrated Management of Childhood Illness (IMCI). Every year, around 3.7 million babies die during their first four weeks of life. Home visits during the days following birth, where key, effective interventions are delivered can prevent 30–60% of deaths in high mortality settings. To this effect, a WHO/UNICEF Joint Statement was presented in July 2009 on “Home Visits for the Newborn Child: a Strategy to Improve Survival”.

Updating and maintaining the evidence base for norms, standards and guidelines for child and adolescent health is key to the work of the Department. In 2009, CAH reviewed research priorities with partners, and in order to further build the evidence base for improved implementation and scaling up maternal, newborn and child health interventions, collaborated with the Department for Reproductive Health and Research to create a Consortium for research in this area.

Community case management is one of the best strategies to increase coverage and access to care within 24 hours of the onset of symptoms. In 2009, CAH worked with UNICEF to finalize guidelines and training materials to support community health workers in helping families to better care for their children.

“I AM PLEASED TO PRESENT THE LATEST CAH PROGRESS REPORT, WHICH INCLUDES HIGHLIGHTS OF OUR WORK AT HEADQUARTERS, IN REGIONS AND COUNTRIES IN 2009. IT COVERS A WIDE RANGE OF ACTIVITIES FROM RESEARCH TO IMPLEMENTATION, FROM DEVELOPMENT OF GLOBAL GUIDELINES TO THEIR APPLICATION IN COMMUNITIES AND MONITORING THEIR EFFECTIVENESS.”
BRINGING CARE CLOSER TO HOME

Introduction: newborns and children

CAH's main goal in the area of newborn and child health is to contribute to efforts to achieve MDG4. It does so by addressing, through research and the development and introduction of tools, the major causes of child morbidity and mortality, and the promotion of optimal child health and development. We work to quantify the burden of disease in childhood; generate evidence on effective interventions and delivery strategies; develop guidelines and tools for implementation; facilitate early application of new tools and contribute to programme development; and compile lessons learned from implementation and inform better programming.

During 2009, in the area of newborn and child health, the Department supported more than 20 research projects and ten systematic reviews. Close to 40 scientific papers were published in peer-reviewed journals resulting from research that we supported. We developed ten new tools to support the interventions – from policy statements and clinical guidelines for implementation in first- and referral-level facilities, to a training course for community health workers. Capacity was developed for research through workshops engaging more than 30 investigators from developing countries, particularly from Sub-Saharan Africa. More than 300 institutions and experts collaborated with us in these achievements.

In 2009, the Department supported 11 countries to apply tools for managing programmes to improve newborn and child health, with a focus on increasing the coverage of effective interventions. During the year, special effort was made to build capacity to introduce and apply tools for increasing access to care in the community. Strategies for improving pre-service education and hospital care continued to be priority activities, and the Department supported six countries in building capacity for improving the quality of care through on-the-job training and intercountry courses. In addition, with CAH support, capacity was developed in five new countries for programme reviews and evaluation. Results from monitoring and evaluation have been used to guide programme implementation, advocacy and resource mobilization. Partnership with other organizations and funding agencies has supported progress in several regions.

Caring for newborns and children in the community

Ensuring that all children have access to health care requires extending the availability of services beyond facilities, and bringing them into communities and families. In 2009, CAH and UNICEF together finalized two parts of a three-part package of guidelines and training materials to help community health workers (CHW) support families to better care for their children. These two parts are 'Caring for the Newborn at Home', and 'Caring for the Sick Child in the Community'.

The materials for home-based newborn care were tested and applied in India, Kenya, Malawi, and the Philippines. After each experience they were revised to reflect the lessons learned. Despite the differences among the various sites, each experience showed that the materials are meeting a significant demand.

The materials for caring for the sick child were revised to include, among other issues, the possibility of using Rapid Diagnostic Tests for malaria. In 2009, the materials were used to train more than 1,000 Health Surveillance Assistants (HSAs) in Malawi. This is equivalent to 27% of HSAs living in hard-to-reach areas. An assessment of the quality of care in November 2009 showed that trained HSAs were able to correctly identify and manage a sick child, and that their performance was comparable to that of a health worker in a primary care facility.

Materials have been shared with major NGOs, including Save the Children US and World Vision, who are using them as a basis for community case management in countries. In 2010, the Department will continue to work with UNICEF to facilitate the introduction of the community health worker materials in countries where access to health services is low. CAH will also develop additional tools, including a training module on caring for the older child at home.
Village health workers in the Philippines learn - and teach - how to care for sick children

The City of Dasmariñas situated south of Manila is no different from other areas in the Philippines where pneumonia and diarrhoea are the leading causes of mortality in children under five years. Health services are often delivered by facility-based health workers with very limited involvement of the barangay (village) health workers (BHWs). BHWs mainly assist rural health midwives in weighing children, sweeping the floor of barangay health stations; and running errands. With the support of the mayor of Dasmariñas and the city health officer, 25 BHWs were trained in ‘Caring for the Sick Child in the Community’ in November 2009, with technical assistance from trainers with the Department of Health. WHO’s Western Pacific Regional Office provided guidance in the adaptation of the generic materials, which were field-tested by CAH in the Philippines.

The objective of the training was to develop the competencies of BHWs to become primary health providers, educators of mothers, and community organizers. After training, the BHWs were able to:

- Identify danger signs and make decisions on whether a child needs referral;
- Provide treatment such as oral rehydration salts (ORS) for diarrhoea;
- Check for signs of severe malnutrition using the mid-upper arm circumference (MUAC) strip;
- Give Vitamin A and zinc supplements;
- Check the immunization and de-worming status of children;
- Assist with referral of severe cases;
- Teach mothers how to give treatment at home;
- Counsel mothers about feeding and when to return to health services.

The BHWs were transformed into critical health providers who can make a difference in saving the lives of children.

“I’m very thankful that the BHW increased my knowledge and understanding of diarrhoea, its causes and treatment. Now I know that boiling water and proper food handling can prevent diarrhoea. Breastfeeding, proper preparation of ORS and zinc supplementation can prevent my child from becoming dehydrated.” (Translated testimony of a Filipino mother who benefited from the services of a trained BHW).

IMCI stimulates partnership with communities to improve child health in Uzbekistan

In addition to having four daughters and seven grandchildren of her own, as Chief of the Polyclinic in Denau district in eastern Uzbekistan, Karima Samanova has a great deal of experience in caring for young children. Yet, she was surprised to find that her ideas and opinions on maternal and newborn care were beginning to shift when she was introduced to IMCI. Her enthusiasm for the approach proved to be contagious. During 2009, she galvanized support for continuing professional education and outreach to raise health awareness within the community.

Certified health providers and trained community leaders in Uzbekistan have now shown strong interest in expanding the training programme to neighbouring districts at both the health facility and community levels.

Karima understands that health facilities cannot improve the health of mothers and infants alone. All new mothers are now being given a set of “counselling cards” including information on danger signs, home treatment, hygiene, breastfeeding, and advice on seeking treatment.

“Educated mothers are empowered by their skills to identify danger signs and seek treatment appropriately and in a timely manner.” Karima asserts that public awareness, cooperation and collaboration with the community have helped build a sense of trust and mutually supportive partnership. “We work together with the community because we have a shared goal – to raise healthy babies to become a new generation of healthy adults.”
Home visits to reduce newborn mortality

The first 28 days of a baby's life carry the highest risk of mortality. More than 3.5 million -- close to 40% of all child deaths, occur in this period around the world each year. Studies have shown that home-based newborn care interventions can prevent 30-60% of these deaths in high mortality settings. Based on this evidence, WHO and UNICEF issued a Joint Statement in July 2009 recommending home visits by a health worker in the baby's first week of life, as a complementary strategy to facility-based postnatal care to improve newborn survival.

To make this strategy operational, CAH has developed training materials to give community health workers the knowledge and skills to promote home-based care for newborns. These materials were introduced in eight countries during 2009, in collaboration with partners such as UNICEF, the United States Agency for International Development (USAID), and Save the Children. The impact of this strategy in improving newborn care practices and reducing mortality is being evaluated in CAH-supported large scale studies in India and Ghana.

Moreover, CAH gained support in 2009 for the conduct of two large, multi-country research projects to evaluate additional interventions which may further increase the impact on neonatal mortality in Asia and Africa -- the continents that account for two-thirds of all newborn deaths. The first project is evaluating simple treatment regimens for management of newborn infections which can be used at the first-level health facility or in the community in five countries. The second project is evaluating the effects of vitamin A supplementation in the first two days of life on infant mortality in three countries.

To download a copy of the Joint Statement on Home Visits for the Newborn Child in English, French, Spanish or Chinese, go to: www.who.int/child_adolescent_health/documents/who_fch_cah_09_02

New recommendations on infant feeding in the context of HIV

Since it was first recognized that HIV could be transmitted through breastfeeding, guiding an HIV-infected mother on how to feed her infant in the first two years of life has been a major dilemma, especially if she has poor access to clean water and sanitation.

During 2009, CAH and the HIV Department collaborated with a group of external experts to systematically review the latest evidence, including new findings on the effectiveness of antiretroviral drugs (ARVs) to prevent HIV transmission through breastfeeding, and their implications for child survival. As a result, revised principles and recommendations were formulated and published in November 2009. The new recommendations bring two significant changes:

• National health authorities are now recommended to decide on which infant feeding practice will be primarily promoted and supported by their Maternal, Newborn and Child health services, based on local context and access to ARVs.
• HIV-infected women who breastfeed and receive ARVs are now recommended to continue breastfeeding their infants until they reach 12 months of age and only then consider stopping breastfeeding.

On the same day that the new infant feeding recommendations were released, rapid advice was also issued on the use of antiretroviral drugs for treating pregnant women and preventing HIV infection in infants, and on antiretroviral therapy (ART) for HIV infection in adults and adolescents. These recommendations call for earlier initiation of ART for adults and adolescents, the delivery of more patient-friendly ARVs. They also call for the prolonged use of ARVs to reduce the risk of mother-to-child transmission, including while breastfeeding.

Full guidelines including programmatic considerations will be released in early 2010.

To download a copy of the 2009 principles and recommendations on infant feeding in the context of HIV, go to: www.who.int/child_adolescent_health/documents/9789241598873
Global Action Plan for the Prevention and Control of Pneumonia

A joint WHO/UNICEF Global Action Plan for the Prevention and Control of Pneumonia (GAPP) was launched at the first World Pneumonia Summit in New York in November 2009. The GAPP aims to draw attention to pneumonia – the number one killer of children under five in the world today – and the current situation of underinvestment in known and effective strategies for its prevention and control. The GAPP makes clear that failure to invest in and increase efforts to control pneumonia will jeopardize the achievement of MDG4.

The GAPP calls for scaling up the use of effective interventions, and provides guidance on how this can be done. It calls to action a broad coalition of global and national policy-makers, donors and civil society.

The vision of the GAPP is that every child is protected against pneumonia through a healthy environment, and has access to preventive and treatment measures. Specifically, it aims to:

- Prevent children becoming ill with pneumonia by vaccinating against its causes: measles, pertussis, pneumococcus, Haemophilus influenzae b (Hib), as well as preventing and treating HIV in children.
- Treat children who become ill with pneumonia through effective case management in communities, health centres and hospitals.

To download a copy of the Report, go to: www.who.int/child_adolescent_health/documents/9789241598415

Diarrhoea: why children are still dying and what can be done

While considerable progress has been made towards achieving MDG4, much more needs to be done, and success will depend largely on efforts to overcome diarrhoea. Though preventable and treatable, diarrhoea remains one of the leading killers of children under five years, accounting for an estimated 1.5 million deaths each year.

Children in the developing world are more likely to become ill with diarrhoea, because they live in environments where it spreads more easily, and lower levels of general health and nourishment make them more vulnerable. These same children are also far less likely to receive life-saving treatment, such as oral rehydration therapy, even though this treatment is simple and inexpensive. Today, only about 39% of children with diarrhoea in developing countries receive this treatment – a situation that has changed little in the past decade.

This situation is now poised to change. The joint WHO/UNICEF report “Diarrhoea: Why children are still dying and what can be done” released in October 2009 presents the latest data and lays out a seven-point plan that comprises a treatment package to reduce childhood diarrhoea deaths and a prevention strategy to ensure long-term results:

1. Fluid replacement with low-osmolality oral rehydration salts to prevent dehydration;
2. Zinc treatment;
3. Immunization against rotavirus and measles;
4. Promotion of early and exclusive breastfeeding and vitamin A supplementation;
5. Promotion of hand washing with soap;
6. Improved water supply quantity and quality, including treatment and safe storage of household water; and
7. Community-wide sanitation promotion.

To download a copy of the Report, go to: www.who.int/child_adolescent_health/documents/9789241598415
IMCI updated for malaria and HIV

The Integrated Management of Childhood Illness (IMCI) remains the cornerstone for child survival strategies and for improving the quality of care provided to sick children in health facilities in over 100 countries. CAH ensures that the IMCI algorithms used by health workers to diagnose and treat children are kept up-to-date, according to the latest available evidence.

In line with the change in malaria case management policy (parasite-based diagnosis before treatment in children under five in high transmission areas), the IMCI algorithm was updated in 2009 to include a malaria test before treatment of children with fever in high risk malaria areas.

The recommendations for the management of diarrhoea and pneumonia in HIV-infected infants and children were also updated in 2009.

Countries expand coverage of IMCI

A new course that brings together basic IMCI training with special modules on the management of HIV/AIDS in children was introduced in the Dominican Republic, Ecuador, Guyana, Honduras, and Nicaragua in 2009. Guyana held the first English-speaking Caribbean training course with representatives from five countries’ ministries of health as well as UNICEF. With an increasing number of children infected with the virus in the Americas, health workers urgently require up-to-date training and information on how to assess and manage HIV in children.

The objective of the course is to build upon and complement the existing country IMCI case management course, and to increase knowledge and skills to assess and classify young infants and children with HIV infection. It is also designed to identify the role of family and community in caring for the child with HIV/AIDS and to enhance health worker counselling skills. In the Americas, this work is being coordinated with the Pan-American Health Organization’s Prevention, Treatment & Care group within the HIV/STI Project. In 2010, additional country planning visits will be made to Bolivia and Paraguay, and facilitator training courses held.

Integrated IMCI/HIV complementary training course rolled out in the Americas
Improving care for sick infants in health facilities and families in Kyrgyzstan

Of all the deaths among infants under one year in Kyrgyzstan, 61% occur in the first week of life. Most babies are discharged from the maternity hospital on the third day after birth, and therefore require adequate newborn care at home. In addition, mothers need clinical care and counselling from Primary Health Care workers. WHO’s European Regional Office translated into Russian the generic, updated IMCI algorithm and the training module for infants (0-2 months), and provided technical assistance for its adaptation in Kyrgyzstan. In February 2009, with technical support from WHO, Kyrgyzstan conducted capacity-building training on the updated clinical guidelines. IMCI master-trainers from all regions of the country and teaching faculty took part in the training course and planning workshop that followed. The revised protocols were well accepted, and the training stimulated active discussion on the use of the guidelines, training activities, and operational implications for health care at both facilities and in the home. Participants in the national orientation meeting also defined steps to be taken at policy, resource generation and service delivery levels, and developed concrete recommendations. The updated IMCI algorithm was integrated as part of the national IMCI guidelines, and was recommended for inclusion in the programmes of undergraduate and postgraduate medical education and the national health workers’ attestation.

"I liked very much the updated guidelines on the management of jaundice in infants aged 0-2 months and on care for low-birth-weight babies. We will include the updated materials in the paediatric and neonatology training curricula for medical students and in the post-diploma course for family doctors."

A teacher from the Medical University Training course, Kyrgyzstan, 2009

Special training brings IMNCI-based care to hospitals in India

The Integrated Management of Neonatal and Childhood Illness (IMNCI) is well-established in India, with approximately 227,000 health workers trained across 297 districts. IMNCI in India currently provides coverage of services to sick newborns and children up to five years in out-patient facilities and through community outreach by auxiliary nurse midwives and health and nutrition workers, (anganwadi workers).

A key aim of IMNCI is to increase the referral of sick newborns and children for in-patient care. To ensure the provision of good quality services for sick newborns and children at all levels, in a ‘continuum of care’, a need was identified for training among medical officers and nurses in the standard management of sick newborns and children in emergency rooms and health facility wards. The training focuses on the major causes of neonatal and childhood mortality such as asphyxia, sepsis and low-birth-weight in neonates; and pneumonia, diarrhoea, malaria, meningitis and severe acute malnutrition in children.

WHO supported the Indian Ministry of Health and Family Welfare to develop the Facility-based IMNCI (F-IMNCI) training package.

The section on inpatient management was adapted from the CAH-developed ‘Pocket Book of Hospital Care for Children’ and guidelines for the ‘Management of the Child with a Serious Infection or Severe Malnutrition’. The F-IMNCI training is 11 days in duration, of which first six days are spent on standard IMNCI training for providing care in outpatient facilities and the remaining five days on providing care in the emergency room, using the CAH-developed ‘Emergency Triage, Assessment and Treatment’ course.

The package was launched nationally in 2009, and over the coming year the Ministry plans to provide training to medical officers and nurses posted in inpatient care facilities. WHO will provide support for a national ‘training of trainers’ as well as for developing plans for health facility readiness to implement F-IMNCI in 2010.
IMCI goes electronic in the Pacific

IMCI has been the strategy in place for improving child health in numerous Pacific Island countries for almost a decade, and is a particularly strong component of undergraduate training. However, keeping the materials continually updated, increasing training coverage and scaling-up implementation across the islands has been a challenge.

The past two years have seen a revolution in IMCI training in the Pacific, with the introduction of ICATT – the IMCI Computerized Adaptation and Training Tool. The Fiji School of Medicine (FSM) has successfully adapted to the ICATT format and is now using it for undergraduate IMCI training. With technical guidance from WHO's Regional Office for the Western Pacific, FSM has also designed a five day ICATT in-service training course for IMCI facilitators from the Federated States of Micronesia, Fiji, Kiribati, Papua New Guinea, Samoa, the Solomon Islands, Tonga and Vanuatu. In developing this course, the objectives were to use ICATT to update participants' knowledge of new case management guidelines; demonstrate skills transfer through a combination of computer-based technology and supervised clinical practice; and assess the feasibility of using ICATT for pre-service and in-service training. The training combines hands-on, individualized computer work spread over five days at the FSM computer laboratory, and clinical sessions from the second to the fourth day at the Colonial War Memorial Hospital and Valelevu and Makoi health centres.

The recent training session concluded with presentations of country plans for IMCI/ICATT implementation in the overall child survival context. Participants found ICATT to be very useful for pre-service and in-service training, and agreed that each country should update their national IMCI guidelines as a first step. The Solomon Islands and Vanuatu have already embarked upon revising their guidelines using the ICATT tool.

Testimony of Litia Ruban, Post-basic Public Health Coordinator, School of Nursing Fiji:
“ICATT definitely eased the teaching load of facilitators. Since all modules had been put into one software package, together with reference materials and audio-visual aids, the learner and the facilitator were able to save time. ICATT would be best for use in pre-service training and in post-basic public health training for nurses. I thank WHO and UNICEF for making ICATT available in Fiji.”

Tele-consultation and continuing medical education in the Eastern Mediterranean

2009 saw the launch of a joint initiative on 'Tele-consultation on Child Health' by WHO's Regional Office for the Eastern Mediterranean, the United Nations Development Programme (UNDP), the Faculty of Medicine of Alexandria University (AU), and Egypt's Ministry of Communication and Information Technology (MCIT) and Ministry of Health and Population (MoHP). The initiative aims to improve health worker performance in remote areas through e-health techniques, as part of continued medical education. It also aims to strengthen medical education at Alexandria University by enhancing students' knowledge and skills through e-learning, using e-resources from WHO's pre-service IMCI education initiative. The tele-consultation initiative will be run as a pilot project for one year, targeting health care providers in the Siwa district of the Matrouh governorate. Senior teaching staff representing different specialties within the Paediatric Department of the Alexandria Faculty of Medicine – a long-standing partner in WHO's pre-service IMCI education initiative in the Region – will be available for regular tele-consultations by videoconference on specific clinical cases. The IMCI guidelines will be the reference for treating children under five years. The initiative will also provide Siwa's health providers with access by video-conference to scientific meetings conducted by the AU Paediatric Department.

CAH staff in the Regional Office will provide technical support to the initiative, which will be financially managed by UNDP. The MCIT will provide technological and equipment support for tele-consultations and e-learning facilities, while the MoHP will implement and monitor the agreed plan. A Memorandum of Understanding on the joint initiative was signed at WHO's Regional Office in February 2009. It was officially launched in June, at a meeting chaired by WHO's Regional Director, Dr Hussein Gezairy, as well as the Egyptian Minister of Higher Education, the Chancellor of Alexandria University, and the Dean of AU's Faculty of Medicine.
Integrating IMCI and Stop TB for indigenous populations in Colombia

For the past two years, WHO’s Regional Office for the Americas has been working with the Government of Colombia to implement an approach combining the ‘Stop TB’ and IMCI strategies to reach indigenous peoples in the departments of Amazonas, Nariño, Cesar, La Guajira, Magdalena, Santa Marta District, Guaviare and Vichada. The ethnic groups involved are the Arhuacos, Kogui, Kankuamos and Wiwas from the Sierra Nevada de Santa Marta (Magdalena, Santa Marta District, Cesar and La Guajira), the Ticunas from the Amazonas, the Awá and Emberas from Nariño, the Sikuanis from Vichada and the Nukak Maku and Guayaberos from Guaviare.

Amongst the general population in Colombia, the estimated incidence of tuberculosis is 25 to 39 cases per 100,000 inhabitants. Among the Sierra Nevada de Santa Marta, 50% of children under 15 years of age have TB and a high percentage of children under five present with TB and chronic malnutrition. The expansion of the national IMCI strategy in these areas has led new social stakeholders to become involved in the health and education sectors, including local representatives of the Colombian Institute for Family Welfare (CIFW), the Police Force, the Mayor and Governor’s offices, indigenous authorities and several faith-based organizations.

IMCI pre-service education package developed in the Eastern Mediterranean

WHO’s Regional Office for the Eastern Mediterranean has developed an IMCI pre-service education package to support teaching institutions with the introduction, implementation and assessment of undergraduate programmes that include IMCI. Medical and allied health professional schools play a key role in preparing the future providers of child health care services, whether in the public or private sector. A growing number of medical schools in the Region – currently 45 in seven countries – are introducing IMCI in their undergraduate teaching programmes. CAH staff in the Region have been collaborating closely with these institutions, and in response to a recommendation from Member States, have developed a package which enables a standardized approach to each phase, from planning to evaluation. The package includes:


2. “IMCI pre-service education: Teaching Sessions” tool includes lesson plans to support the planning and conduct of IMCI-related teaching sessions. It describes student learning objectives, content and procedures for each session. The document was thoroughly reviewed by an expert group in 2008.

3. “IMCI pre-service education: Guide to Evaluation” is a comprehensive tool to assess whether “IMCI pre-service education” as a public health intervention improves students’ competencies in managing the main childhood health problems in outpatient settings. Extensively reviewed through expert consultations and tested in four medical schools, this Guide comes with a “User Guide to Data Entry and Analysis” and a CD which includes e-forms and programme files.

4. “IMCI pre-service education: Question Bank” is a resource library of multiple-choice questions and case scenarios suitable for evaluations of IMCI pre-service education and students’ formative and summative assessments. It was used to develop student knowledge tests for evaluations in two medical schools in 2009.

5. “IMCI pre-service education: e-lecture” provides standard technical content as a resource to support IMCI-related teaching.

6. “IMCI pre-service education: e-learning material for students” is intended to support students learning at their own pace through an electronic, interactive medium (under development). In 2009, CAH supported capacity building in the Region to conduct orientation and planning workshops and evaluations using the package of tools at universities in Mansoura (Egypt) and Gezira (Sudan).
More countries take action on hospital care for children

Many countries around the world are implementing processes to improve the quality of referral care by conducting hospital assessments, adapting standards of paediatric referral care using the 'Pocket Book of Hospital Care for Children', and building capacity at hospital level for 'Emergency Triage, Assessment and Treatment' (ETAT). By the end of 2009, 40 countries had introduced quality of referral care activities, 31 countries had conducted hospital assessments, 24 had introduced and adapted the 'Pocket Book' as a standard of paediatric care, 17 had conducted at least one national ETAT course, and 24 various other quality improvement processes. In the United Republic of Tanzania, the Ministry of Health was able to mobilize financial resources through The Global Fund to Fight AIDS, Tuberculosis and Malaria to support referral care quality improvement in over 160 district and provincial hospitals. The 'Pocket Book' remains one of the most popular WHO publications, with demand from both developing and developed countries. A total of 3,000 copies were disseminated through the Department and over 5,000 copies purchased through the bookshop in 2009. A new ‘Pocket Book’ CD-Rom was finalized and published to facilitate health worker training in countries.

To ensure that guidelines are kept up-to-date with the latest evidence, during 2009 CAH undertook an analysis of all recommendations in the ‘Pocket Book’ – first published in 2005 – and prioritized 64 for evidence review. By the end of the year, a total of 27 systematic reviews had been completed through collaboration with external experts, and the ‘Pocket Book’ is being updated accordingly.

To download a copy of the ‘Pocket Book’, go to: www.who.int/child_adolescent_health/documents/9241546700
To download a copy of the ‘ETAT’ materials, go to: www.who.int/child_adolescent_health/documents/9241546875

Improvements in hospital care for children in Indonesia

Around ten to 20% of sick children need to be referred from primary care facilities to hospitals because of severe illness. Thus, the quality of hospital care has a significant role in decreasing child morbidity and mortality. In early 2009, after finishing the adaptation of the ‘Pocket Book of Hospital Care for Children’ and the hospital assessment tool, the WHO country office in Indonesia, in collaboration with the Ministry of Health and the Indonesian Paediatric Society, conducted a hospital assessment in 18 hospitals and six Primary Health Care centres (Puskesmas) with beds in six provinces. The assessment showed that there was considerable scope for improvements, particularly in the case management of common childhood and neonatal conditions. Most of the hospitals had a weak triage system at the emergency unit, and almost none of the health facilities assessed had up-to-date standard operating procedures for common illnesses in children, such as pneumonia, fever, diarrhoea, malnutrition, HIV and newborn care. There were weak systems in place for both internal and external evaluation and monitoring of hospital care. Limited resources, both human and non-human, also emerged as an issue that needed to be addressed. The assessment results were disseminated in a national workshop in June 2009, with participation from all relevant stakeholders. The assessment process was then continued with follow-up visits to four provinces for more detailed discussion of the plans of action for quality improvement at each facility. A manuscript is being written to document the complete quality improvement process, and key messages will be presented at the national meeting of the Indonesian Paediatric Society in February 2010.

The WHO country office has also supported the printing of 25,000 copies of the Indonesian language version of the ‘Pocket Book’, which has been distributed to all districts and provinces, and is valued as a comprehensive guide, bringing all the relevant standards and guidelines for child care into a single, handy format. A training CD has also been translated and adapted and has proved to be a useful tool for teaching and quality improvement.
Operational research for hospital improvement in Bangladesh

IMCI is well-established at first-level health facilities, in families and communities in Bangladesh. To ensure that good quality of care is carried through to referral facilities, the IMCI section of Bangladesh’s Directorate General of Health Services, in collaboration with WHO and the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), initiated a process for improving hospital care for children under five.

The Hospital Improvement Initiative is being implemented in phases. Phase I comprises a baseline assessment of current practices and the adaptation of tools and guidelines. The selection of which interventions to prioritize, their implementation, documentation and evaluation will be carried out in Phase II. Results will inform a national initiative for improving the quality of inpatient care for children at hospitals across the country.

The first step in the improvement process was to explore the current situation of inpatient care at district and sub-district hospitals. A draft of the Bangladeshi adaptation of the WHO hospital assessment tool was finalized in 2009, following reviews by clinicians on case management and emergency care and by programme specialists on hospital management and infrastructure, and then field-tested. Hospital assessments were done in six districts. Twelve sub-districts (upazilas) – two from each of these six districts – were selected, and 31 paediatricians and programme personnel were selected as assessors. They undertook a three-day training course prior to carrying out the hospital assessments, which included classroom sessions and field practice at two upazila hospitals.

The assessment found that most hospitals lacked emergency preparedness and triage, had a low quality of care for inpatients and a lack of monitoring. The prevailing conditions had resulted in low utilization of services by children in the district and upazila hospitals, and poor compliance with referrals from first-level facilities. The findings from the assessment confirmed an urgent need for actions to improve the quality of inpatient care at the district and sub-district hospitals in Bangladesh, which will be addressed in Phase II.

Building capacity for child health programme management in Africa

In 2009, Ethiopia, Nigeria and Zambia conducted national training courses in “Managing Programmes to Improve Child Health”. The course aims to build capacity for planning, monitoring and reviewing the implementation of child health programmes. Knowledge and skills on resource mobilization, communication and interpersonal skills for the purposes of programme management are also built through the course.

During the training, participants used local data, including strategic and operational plans, monitoring reports, and Demographic and Health Survey reports for class exercises. Course evaluations indicated that the training materials were appropriate and relevant to the needs of programme managers at national and sub-national levels. Opportunities to practise skills for advocacy and resource mobilization were particularly appreciated. Suggestions were made to incorporate negotiation skills and opportunities for experience-sharing in future training courses.

To date, capacity has been built among 185 child health managers from 19 countries in the WHO African region (Botswana, Burkina Faso, Ethiopia, Ghana, Kenya, Lesotho, Liberia, Sierra Leone, Malawi, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Swaziland, Uganda, the United Republic of Tanzania, and Zambia). Training materials are being translated into French and should be available in March 2010. WHO plans to organize regional workshops in 2010, including for Francophone countries, to build capacity for implementation of this course at national and district levels.

To download a copy of the ‘Programme Management’ course materials, go to: www.who.int/child_adolescent_health/documents/9789241598729
Progress towards MDG4 in the Western Pacific

To support efforts to improve child survival in the Western Pacific, WHO and UNICEF hosted a joint workshop in October 2009 in Xi’an, China, to track progress in seven priority countries: Cambodia, China, Lao PDR, Mongolia, Papua New Guinea, the Philippines and Viet Nam. As progress in implementing the WHO/UNICEF Regional Child Survival Strategy was reviewed, delegates shared experiences and lessons learnt, and identified key actions for scaling up.

Findings presented at the workshop showed that all countries in the Region are making progress towards MDG4. While several countries are on track to achieve the targets, others are less likely to do so unless programme efforts are further intensified.

The coverage of key interventions for child survival has shown improvement in several areas. Immunization coverage has seen the largest increase (with measles immunization coverage ranging from Lao PDR: 33% to Viet Nam: 87%). Pneumonia and diarrhoea treatment coverage, skilled attendance during pregnancy and delivery, and infant and young child feeding have been slower to improve. In general, the use of antibiotics for suspected pneumonia remains low (Lao PDR: 52%; Viet Nam: 55%). The use of Oral Rehydration Therapy (ORT) to treat diarrhoea has generally remained low, and in Cambodia, Papua New Guinea and the Philippines, rates have declined or remained static. Coverage of skilled attendance at birth ranges from 20% in Lao PDR to 99% in Mongolia, where maternity waiting homes have pushed coverage to near universal access. Newborn deaths constitute an increasing proportion of under-five deaths in all countries in the Region (ranging from Papua New Guinea: 28% to China: 50%).

A number of programme strengths were identified, including the use of international norms and standards; improved drug and vaccine supply; better coordination between programmes; improved pre- and in-service training coverage; and the adoption and revision of key policies in areas such as essential newborn care, early initiation of and exclusive breastfeeding, and IMCI.

Based on workshop discussions, participants agreed to focus on improving intervention coverage and equity, including targeting high-risk populations, increased emphasis on newborn health, better quality and reach of health promotion activities, and support for community-based partnerships. Data collection mechanisms will also be strengthened to improve monitoring of countries’ progress over time.

WHO reviews the status of implementation of Africa's Regional Child Survival Strategy

A progress report on implementation of the WHO/UNICEF/World Bank Child Survival Strategy for the African Region was presented at the 59th Session of the WHO Regional Committee for Africa held in Kigali, Rwanda in September 2009.

The report showed that significant achievements have been made since the Strategy's adoption by African Ministers of Health in 2006, particularly in the areas of policy, strategy and plan development and capacity building. It showed that 22 countries in the Region (Botswana, Burkina Faso, Equatorial Guinea, Eritrea, Gambia, Ghana, Guinea Bissau, Lesotho, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, South Africa, Swaziland, Togo, Uganda, the United Republic of Tanzania and Zambia) are implementing IMCI in more than 75% of their districts. In 2009, WHO in collaboration with partners supported Integrated Child Health Weeks in 13 countries (Benin, Côte d’Ivoire, Ghana, Kenya, Madagascar, Malawi, Mali, Mozambique, Niger, Senegal, Sierra Leone, Togo, Zambia and Zimbabwe). During these weeks, essential interventions such as vaccination, vitamin A supplementation, de-worming medicine and insecticide treated nets were provided to augment routine services.

Despite the achievements, coverage of some effective interventions remains low. Various health system challenges hamper progress, including inadequate country-level funding, inadequate monitoring of intervention coverage and human resource limitations.

To accelerate progress in the Region, the report proposed that Member States improve coverage of key child survival interventions and mobilize and allocate resources to implement national scale-up strategies and plans.
National plans of action for newborn health in the Americas

During 2009, numerous countries in the Region of the Americas (Dominican Republic, Honduras, Paraguay, Peru and Nicaragua) developed national plans of action for reducing neonatal mortality. The Action Plans focus on evidence-based interventions, including newborn IMCI which is being promoted in universities, nursing schools and health units. They all stem from the WHO Regional Plan of Action for Newborn Health, adopted in October 2008, and comprised of four strategic areas:

1) creating an enabling environment to promote neonatal health;
2) strengthening health systems and improving access to care services for maternal, newborn and child health;
3) promoting community interventions; and
4) creating and strengthening surveillance systems, monitoring and evaluation.

Fany Leticia is 25 years old and lives in Masaya, Nicaragua. She gave birth to her first baby in October 2009. During her pregnancy, she was visited by a community health post worker who then sent her to the hospital in Masaya where a partograph was done. Her daughter was born healthy after 39 weeks of gestation and weighed 3.3 kg. In her first few minutes of life, she was laid on Fany’s chest “skin-to-skin”, and began early breastfeeding. After the birth, Fany said “I am very happy with my beautiful and healthy daughter, and grateful to God and to the health workers for helping my daughter and me to be healthy.”

CAH, in collaboration with UN partners, is assisting the Government of Malawi to scale-up interventions for maternal, newborn and child health, with the aim of achieving a 25% reduction in under-five mortality by 2012, from 2006 levels. Activities are being supported in ten districts, and highlights of the achievements in 2009 include:

- Content strengthened on maternal, newborn and child health (MNCH) in ten annual district health plans, through training and on-the-job support;
- Capacity built for integrated supervision of MNCH-related activities in first-level health facilities in six districts;
- National policies adopted on the use of zinc to treat diarrhoea, updated growth standards, and the use of artemisinin-based combination therapy (ACT) for the management of malaria by health surveillance assistants (HSAs);
- 600 HSAs equipped with the skills and supplies to manage sick children in their communities in hard-to-reach areas, covering 32% of village clinics in the ten districts;
- Quality of care assessed in ten district hospitals, training conducted on emergency triage and treatment, and referral care manual standardized;
- Health facility survey conducted and results disseminated;
- Quality of care conducted, showing that

HSAs are able to effectively assess and treat children sick with pneumonia, diarrhoea and malaria; and

- Community participation in health service delivery by HSAs and community mobilization activities on the new roles of traditional birth attendants in ten districts.

As a result of these activities, access to essential interventions is increasing. This should result in improved coverage and ultimately survival of infants and young children in Malawi. The programme can also serve as an example of scaling-up for other countries.
Estimating costs of country plans and tracking expenditures for child health

To accelerate progress towards MDGs 4&5, an increasing number of countries are developing strategic plans for scaling up the implementation of priority interventions for maternal, newborn, and child health. In doing this, many are requesting technical support from WHO to estimate the cost of implementing their plans. Important investments in recent years allowed CAH to make available in 2009 a user-friendly Child Health Costing Tool and to guide countries in deciding which costing tool best meets their needs. In addition, CAH has contributed, together with partners, to the development of a ‘Unified Health Model’ which aims to standardize costing methodologies, tools, and outputs across the UN system. Throughout the year, CAH provided technical support for costing to several countries, including Lao PDR, Mozambique, and the United Republic of Tanzania. Some countries used the Child Health Costing tool alone, and others used it in combination with other existing tools, depending on their particular needs. We also helped countries to harmonize outputs and make the best use of cost estimates generated by other, related programmes or units within ministries, such as costing of immunization plans.

In 2009, CAH also contributed to the development of the ‘Lives Saved Tool’ (LiST), which is designed to estimate the impact of a country’s strategic plan and to facilitate the prioritization of interventions and decision-making in a context of limited resources.

"Tool box" for programmatic evaluations in countries

Designed by WHO to help countries assess their progress in scaling-up interventions to reach MDGs 4&5, the instruments and methodology for the ‘Maternal, Newborn, and Child Health Household Survey’ were further improved in 2009 while being used in several countries, including Cambodia, Papua New Guinea, the United Republic of Tanzania, and Viet Nam. In addition, a complete user manual was developed and reviewed. The Household Survey collects information on key interventions related to antenatal care, delivery, newborn health, child health and adolescent sexual and reproductive health. In addition to measuring the coverage of interventions, it also provides information on how they are delivered and possible reasons for delivery failures. Its modular format allows countries to select only the modules relevant to their situation and priorities. The CAH Household Survey is fully compatible with larger instruments such as Demographic and Health Surveys (DHS) and UNICEF’s Multiple Indicator Cluster Survey (MICS). It was designed to be able to rapidly generate local results that can be immediately fed back into local planning and programming. In addition, and building on experience with the Health Facility Survey methodology, in 2009 CAH, in collaboration with The John Hopkins University, developed and field-tested a ‘Community Health Workers Assessment Tool’. Together, the rapid Household Survey and Community Health Workers’ Assessment Tool complete the evaluation ‘Tool Box’ for newborn and child health programme managers to use in countries. It already includes the ‘Health Facility Survey Manual’ -- a tool to evaluate the quality of care delivered to sick children attending outpatients’ facilities, and a tool for the ‘Assessment of the Quality of Care for Children in Hospitals’.

Also finalized in 2009 was a set of ‘Guidelines for Using Data to Review Newborn and Child Health Programmes’, designed to help countries make better use of their existing data for health programming.

To download a copy of the ‘Health Facility Survey Manual’, go to: www.who.int/child_adolescent_health/documents/9241545860
Building a global repository for policy and health systems indicators of maternal, newborn, child and adolescent health

For several years, CAH has been actively generating estimates of overall newborn and child mortality and cause-specific mortality, and updating them periodically. Results of this work have been made widely available through publications, the annual WHO World Health Statistics report, CAH’s epidemiological ‘Country Profiles’, and through the statistical annex of the CAH annual report.

In 2009, CAH, in collaboration with WHO’s Department for Making Pregnancy Safer (MPS), developed instruments and methodologies for collecting additional information on countries’ policy environments, health system inputs, financing of maternal and child health programmes, and health expenditure tracking. A multi-lingual and interactive data collection tool was sent to all WHO Regions and Countries. The information collected will fill a major gap in strategic information for planning, and fulfil the data needs of CAH, MPS and partners. Selected policy and health systems’ indicators collected using the new tool will feed into the WHO ‘Global Health Observatory’ and will also be used by the Partnership for Maternal, Newborn and Child Health in the ‘Countdown 2015’ report. The first data set will become available in 2010, and will be updated periodically thereafter.

What's in the statistical annex?

The statistical annex includes data on child health from 33 countries with high rates of under-five mortality. The data presented include selected input and output indicators, as well as outcome and health status indicators. It includes some analysis of the data presented, and graphs tracking progress country-by-country. Key points include:

• Around one third of the 33 countries identified by CAH for intensified support currently have costed national strategies or plans of action for newborn and child health, and a further third of the countries are in the process of developing plans.

• Fewer than one third of the countries have adopted community health worker policies that could help increase access to treatment for pneumonia.

• The greatest annual rate of reduction of child mortality in the countries identified by CAH for intensified support was achieved in the European Region, followed by the Region of the Americas, the South-East Asian Region, the Eastern Mediterranean and Western Pacific Regions, and lastly the African Region, where the least progress has been made. However, Malawi, Niger and the United Republic of Tanzania all show significant reductions.

• Coverage of key child survival interventions has improved. The greatest change achieved was in measles immunization, for which coverage has increased in 91% of the countries with available data. Care-seeking for pneumonia has increased in 76% of the countries with available data. However, progress with other important interventions has been slower, such as the use of oral rehydration therapy for the treatment of diarrhoea, with only 64% of countries showing an increase in coverage, and others showing no improvement or a decrease.

The adolescent health data in the statistical annex are presented as country profiles representing five of WHO’s Regions: Bangladesh (South-East Asia), Ghana (Africa), Guyana (Americas), Mongolia (Western Pacific) and Tajikistan (Europe). The country profiles include a short summary of key developments supported by CAH in adolescent health programming in the country, as well as selected output, outcome and health impact indicators. Some key analytical points include the following:

• Multi-country surveys – such as DHS, Global Student Health Surveys, and MICS – provide the majority of age-specific data.

• Data specific to the adolescent age-group remains lacking, especially for output indicators related to improvements in health service delivery. However, in all of the countries profiled, efforts to improve health service delivery to adolescents are noted.

• Important reproductive health indicators (i.e. maternal mortality rate, antenatal care, and skilled birth attendance) are not currently reported by age, specific to adolescents.

• In several of the countries profiled, there are indications of action to improve the policy environment and the availability of age- and sex-specific strategic information.
Introduction: adolescence

Adolescence – the second decade of life – is a period of great physical and psychological change. It also brings changes in social interactions and relationships. It is a time of opportunity, but also of risk. Adolescence is the window of opportunity to set the stage for a healthy and productive adulthood and to reduce the likelihood of health problems in the years to come. Yet it can entail risk, as a period when health problems that have serious immediate consequences can occur or when problem behaviours that have serious adverse effects on health in the future can be initiated.

There are sound public health, economic and human rights reasons for investing in the health and development of adolescents. Greater investment in adolescent health would help prevent the estimated 1.4 million deaths that occur each year among 10-19 year olds due to road traffic accidents, complications during pregnancy and child birth, suicide, violence, and HIV/AIDS. It would also improve the health and well-being of many millions of adolescents who experience health problems such as depression or anaemia; and promote the adoption of behaviours that help prevent health problems later in life, such as cardiovascular diseases and lung cancer resulting from physical inactivity and tobacco use initiated during adolescence. Finally, investing in adolescent health can prevent problems in the next generation, such as prematurity and low-birth-weight in infants born to very young mothers. There is growing recognition of the economic benefits of investing in the healthy development of adolescents, and the economic costs of not doing so. Almost all Member States are signatories to the UN Convention on the Rights of the Child, which clearly states that adolescents have the right to obtain the health information and services they need to survive, grow and develop to their full potential.

Consistent with WHO’s aims and mission, CAH contributes to the goal of improving adolescent health in two main ways: by recommending comprehensive, multisectoral and evidence-informed adolescent health approaches; and by delineating and supporting the critical contribution of the health sector, including the leadership role of the ministry of health. On this basis, CAH developed the ‘4-S framework’ for strengthening the health sector response to adolescent health, which comprises:

- Strategic information: collecting and analysing the data needed for advocacy, policies and programmes;
- Supportive, evidence-informed 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.

The ‘4-S framework’ uses two programmatic “entry points” for strengthening the health sector response to the needs of adolescents:

1. Preventing HIV infection, and providing care and support for those living with HIV/AIDS; and
2. Preventing too-early pregnancy and pregnancy-related mortality and morbidity.

These particular entry points were selected firstly because many adolescents experience sexual and reproductive health problems. Secondly, these priorities are the focus of many international development goals – notably, the MDGs and the UN General Assembly Special Sessions on Children and HIV/AIDS. Lastly, most countries have national programmes, strategies and budgets in place to address these priorities. Through these entry points, the ‘4-S framework’ can be used to address other public health issues affecting adolescents such as problems with nutrition, mental health, substance use and intentional or unintentional violence.

Over the past year, we have worked to strengthen adolescent epidemiology, with a particular focus on mortality, and we have developed indicators, methods and tools for gathering information on programmatic responses in countries. We generated evidence for programmatic action by carrying out systematic reviews, preparing analytic case studies, and supporting research studies. We have developed and tested tools to support programmatic action, and contributed to capacity building workshops in the African and European regions.

In 2009, we supported actions to strengthen the health sector’s response to adolescent health in 15 countries – five in Africa, two in the Americas, two in Europe, four in South-East Asia, and two in the Western Pacific. As a result of these ongoing inputs, countries are moving from strategy and plan development to implementing and monitoring activities to reach adolescents with the health services they need.
First global and regional estimates of mortality among young people

The first study of global and regional patterns of mortality in young people was supported by WHO and published in The Lancet medical journal in September 2009. The study found that 2.6 million young people aged 10-24 years die every year, with 97% of these deaths taking place in low- and middle-income countries. Road traffic accidents, complications during pregnancy and child birth, suicide, violence, HIV/AIDS and tuberculosis (TB) were found to be the leading causes of mortality in this age group. Most of these causes are preventable and treatable.

While young people account for 30% of the world’s population, there has previously been very little information available on their causes of death globally and by region. The study was intended to inform the development of policies and programmes targeted to improve the lives, and prevent the deaths, of young people.

WHO recommends the following interventions to promote safe behaviours, improve health and prevent deaths among young people:

• Road traffic accidents can be prevented through speed management, strictly enforcing drink-driving laws, increasing the wearing of good quality helmets, and increasing the use of seat-belts.
• Sexual and reproductive health can be improved by ensuring that young people receive sexuality education, have access to condoms and other contraceptives, safe abortion to the full extent of the law, antenatal and obstetric care, STI and HIV prevention, testing and counselling, and HIV/AIDS treatment and care.
• Violence and suicide can be prevented by ensuring that young people have access to life skills training, promoting positive parental involvement in the lives of young people, reducing the use of alcohol by young people, and reducing their access to lethal means (including firearms, knives, pesticides and sedatives).
• The immediate and long-term consequences of injuries and violence can be significantly reduced by improving access to effective community-level care and emergency medical care, and providing treatment and support for young people exposed to child abuse, youth violence, and sexual assault.

To download a copy of the article, go to: www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60741-8/fulltext (note: open access, but you must be a registered user of the Lancet web site).

Ensuring that measurement instruments are adolescent sensitive

Defining and developing consensus on appropriate health indicators is an important part of CAH’s monitoring work. In 2009, there was significant progress related to indicators of adolescent health. In collaboration with the WHO Regional Offices, nine indicators were defined that are intended to guide the work that we support in countries (see box below). These indicators represent inputs, outputs and outcomes (coverage), and have been incorporated into the ‘Questionnaire on Maternal, Newborn, Child and Adolescent Health Policy and Systems’ being tested in selected countries. Some of these indicators were selected to be included in a background paper entitled ‘Mainstreaming Adolescent Girls into Indicators of Health Systems Strengthening’ prepared by the Center for Global Development for the Global Health Initiative of the United States government. In addition, a matrix was prepared listing 120 indicators of adolescent health, classified with definitions by health domain and data source. This enabled easy access to and analysis of available data for several aspects of the Department’s work during the year. This included a review of reproductive health indicators relevant for adolescent girls, preparation of modules by health domain for inclusion in UNICEF’s Multiple Indicator Cluster Survey (MICS), and for selecting indicators and their corresponding data for developing exercises on the use of strategic information in programme development.

Indicators
1. The country has a national situation analysis on adolescent health
2. The health of adolescent features in national policies/strategies
3. The country has a functional national adolescent health programme
4. The country has national standards for the delivery of health services to young people
5. Provisions are made in laws or regulations allowing legal minors to consent to medical interventions
6. Availability of age and sex disaggregated data through national health management information system
7. Health services utilization by young people
8. Percentage of districts that are delivering health services to adolescents
Review on traditional male circumcision for HIV prevention

Male circumcision is now recommended as a key component of comprehensive HIV prevention strategies in countries where HIV prevalence is high and male circumcision rates are low. Traditional male circumcision is being performed in some communities in East and Southern Africa, usually on adolescents as a rite of passage into manhood. One of the challenges in these countries is to strengthen communication and collaboration between traditional circumcisers and ministries of health, and to ensure that traditional male circumcision is safe and that it contributes to HIV prevention.

In 2009, CAH in collaboration with the HIV Department, finalized a review on ‘Traditional Male Circumcision among Young People - a public health perspective in the context of HIV’. The review explores similarities and differences in traditional male circumcision in countries in East and Southern Africa, including techniques and adverse events. It provides examples of collaboration between the health sector and traditional circumcisers, and makes recommendations for strengthening the safety and effectiveness of traditional male circumcision for HIV prevention.

The review will be one of the key background documents for a consultation on traditional male circumcision to be held in 2010.

To download a copy of the review on traditional male circumcision among young people, go to: www.who.int/child_adolescent_health/documents/9789241598910

Review on mental health in adolescents

Like adults, adolescents can experience emotions, thoughts, and behaviours that are distressing, disruptive, and disabling. Because many of these problems are precursors to much more disabling disorders during later life, mental and behavioural problems in childhood and adolescence represent a very high cost to society in both human and financial terms. Estimates vary, but globally it seems that 15 to 20% of all children/adolescents have one or more mental or behavioural disorders, and some studies have shown prevalence even greater than 20%.

When young people have mental problems, they are at higher risk for abuse and neglect, suicide, substance use, school failure, violence and criminal activities, mental illness in adulthood, and health-jeopardizing impulsive behaviours. However, prevention strategies and prompt interventions can reduce morbidity and mortality, and allow children and adolescents to develop into responsible, contributing adults.

In order to guide countries on how to build health workers’ capacity for preventive and curative mental health care for adolescents and how to stimulate and support appropriate community action, CAH undertook a review in 2009. The aim of the review was to establish the extent to which evidence is available on the recognition, prevention and management of mental health problems in young people in low-income and lower-middle-income countries. It will serve as the evidence base upon which to build recommendations on the prevention and treatment of mental health problems in young people in resource-constrained settings.
Gathering new evidence for adolescent pregnancy prevention

In 2009, CAH initiated a systematic review on ‘Preventing too-early pregnancies and poor reproductive outcomes among adolescents in developing countries: A guide for policy makers’. The review will form the evidence base for the development of guidelines. CAH is conducting the review in collaboration with the Departments of Reproductive Health and Research (RHR) and Making Pregnancy Safer (MPS). The review is being done in response to requests from policy makers and reproductive health programme managers who work with adolescents in low- and middle-income countries. They are increasingly concerned about high rates of adolescent pregnancy and its outcomes, and want to know the most effective means to provide adolescents with the services and information they need. In response, WHO proposed a series of systematic reviews of the evidence on effective interventions to prevent early pregnancies, coerced sex, unsafe abortions (and related deaths), and deaths during pregnancy and after child birth among adolescents. As a contribution to MDGs 3, 4 and 5, the review is assessing the degree to which current programmes and policies are effective in reducing adolescent maternal deaths and illness and supportive of adolescent sexual and reproductive health and rights. The results of the final reviews are expected by mid 2010, and recommendations will be developed by WHO in collaboration with a panel of experts in health service delivery and policy making in adolescent sexual and reproductive health.

Review of laws and policies related to adolescent sexual and reproductive health in Bangladesh

An exploratory study on laws and policies related to core aspects of adolescents’ sexual and reproductive health – including age at marriage and childbearing, maternal mortality and morbidity, family planning, unsafe abortion, sexually transmitted infections (STIs) including HIV, sexual and gender-based violence – was carried out by WHO and the Government of Bangladesh in 2009. The study mainly used data collected from programme managers (health, law and parliamentary affairs, education, religion and youth), policy makers and legal experts. Qualitative data was collected in workshops and individual interviews. Unwanted pregnancy is high among adolescents in Bangladesh due to social barriers preventing contact with health workers for obtaining family planning methods, low visitation of field workers to married adolescents, and lack of decision-making power among married adolescents. Abortion is common among adolescents who become pregnant outside of marriage or after rape. Deaths from abortion are twice as common among 15-19-year-olds as they are in women aged 20-34 years. In Bangladesh, formal sexual and reproductive health education and health services for adolescents are limited, especially for unmarried people. While the vast majority of adolescents (93% of male, 78% of female) have heard of HIV, a significant proportion (15%) do not know how to prevent it. Study findings also show that only 25% of male and five percent of female adolescents are aware of STIs, other than HIV. Voluntary and confidential counselling and testing services are not widely available in Bangladesh.

The median age at marriage for women in Bangladesh is 16.4 years – 18 months below the legal minimum age – indicating that laws and policies alone do not guarantee implementation. Forced marriage, especially child marriage, represents a violation of human rights by excluding them from decision-making regarding the timing of marriage and child bearing. Married girls, under pressure to become pregnant, face the risk of complications. In addition, married girls have few social connections, restricted mobility, limited control over resources, and little power in their new household. Only 37% of adolescents can take decisions about their own health.

The overwhelming majority of the victims of acid violence are women, and many of them are below 18 years of age. The Government of Bangladesh is keen to resolve the health and education problems of adolescents and it has incorporated provisions on adolescents health, education, and nutrition in a National Plan of Action for Children 2005-2010, and in the Health and Population Sector Programme.
The Adolescent Job Aid: practical, new tool for health workers

Following field-testing in a number of countries such as India, in 2009, CAH finalized the ‘Adolescent Job Aid’ – a handy desk reference tool for health workers (trained and registered doctors, midwives, nurses and clinical officers) who provide services to children, adolescents and adults. It aims to help these health workers to respond to their adolescent patients more effectively and with greater sensitivity. It provides precise, step-by-step guidance on how to deal with adolescents when they present with a problem or concern about their health or development. The ‘Job Aid’ covers the most common adolescent-specific conditions that had not already been addressed in existing WHO guidelines, and provides guidance on conditions that are not adolescent-specific but occur commonly in adolescents, highlighting the special considerations in dealing with these conditions in adolescents.

It comprises three main parts:

Part 1: The clinical interaction between the adolescent and the health worker.

Part 2: Algorithms, communication tips and frequently asked questions on 25 presentations related to developmental conditions, pregnancy-related conditions, genital conditions including STI, HIV and other common presentations.

Part 3: Information for adolescents and their parents or other accompanying adults on important health and development issues.

The ‘Adolescent Job Aid’ is intended to be used along with the ‘Orientation Programme on Adolescent Health’, a tool developed by CAH which is being widely used in many countries.

Building on the Integrated Management of Adolescent and Adult Illness (IMAI): a package to orient health workers to the needs of young people living with HIV

For several years, CAH has been working to strengthen national responses to the needs of young people living with HIV – a group that is likely to increase in number as access to treatment improves and children infected perinatally survive into adolescence, and as more young people who acquire HIV during adolescence learn about their HIV status through counselling and testing. CAH has carried out a number of activities in this area, including reviewing experiences of providing psycho-social support to young people living with HIV.

During 2009, WHO collaborated with UNICEF to plan and facilitate a session on ‘Adolescents Living with HIV’ during the HIV/AIDS Implementers Meeting in Windhoek, Namibia, 10-14 June. In addition, 2009 saw the finalization of the Adolescent Module to be integrated with on-going training programmes for the Integrated Management of Adolescent and Adult Illness (IMAI). This is one of the corner stones of WHO’s support for countries to move towards providing universal access to HIV treatment, care, support and prevention. The Adolescent IMAI Module, which was field-tested in Uganda and Guyana, was presented for the first time to the East and Southern Africa IMAI network meeting in Harare, Zimbabwe, 23-27 November, where it was very positively received.

To download a copy of the Adolescent IMAI Module, go to: www.who.int/child_adolescent_health/documents/fch_cah_9789241598972
Hearing adolescent voices: Regional conference of indigenous youth in Cochabamba, Bolivia

The Region of the Americas is rich in cultural and ethnic diversity, with an estimated 45 million people representing more than 400 ethnic groups. One third of the population is aged between 10 and 24 years, and has particular health needs. Representatives of WHO’s Regional Office for the Americas and country office in Bolivia, the Spanish International Cooperation Agency (AECI), the Norwegian Embassy, youth leaders from Ecuador, Guatemala, Honduras, Nicaragua and Peru, and representatives of 60 different ethnic groups in Bolivia participated in the Regional Conference of Indigenous Youth in Cochabamba, Bolivia, in November 2009. The objectives of the meeting were to identify the health needs of indigenous youth, define changes to be made to the health systems to make them culturally acceptable, and design plans at national level to implement the recommended changes. The meeting also gave indigenous youth from around the region an opportunity to express their opinions and concerns to the officials present. Among the topics raised by the young people were:

- Difficulty accessing health services and misunderstandings between health care providers and indigenous people;
- Fear of losing their culture;
- Discrimination, injustice, exclusion and exploitation;
- Sexual and reproductive health; and
- Damage to the environment.

Hong Kong strengthens nursing pre-service curriculum to improve services for adolescents

Nurses and midwives are in a unique position to contribute to the health of adolescents. They are often the first contact that adolescents have with the health system and may, at times, be the sole service provider. However, the competencies necessary for nurses and midwives to effectively deliver adolescent health services – including communication and counseling skills – need to be built up in a systematic manner. Integrating adolescent health and development into the pre-service curriculum for nurses provides the framework and opportunities to do this. In 2009, the School of Nursing at Hong Kong Polytechnic University – a WHO collaborating centre – was supported to integrate adolescent health issues in the nursing pre-service curriculum. Curriculum review committee meetings were held, competencies to be strengthened were identified, and approaches were agreed upon – including online resources, problem-based learning, clinical training, and community visits. WHO supported this process orienting the material development team, led by an experienced faculty member, and gave inputs during the development of the training materials. To ensure wide accessibility of the material, a significant proportion has been made available on the internet. As a next step, the School of Nursing plans to train in-house nurses to provide services to adolescents and to develop a specific course for ‘school nurses’. Furthermore, it plans to sensitize and orient students and teachers from a consortium of 75 nursing schools in China and beyond on adolescent health.
Milestones for capacity building in adolescent health

In November 2009, CAH carried out a capacity building workshop in Maputo, Mozambique with participants from six Portuguese- and Spanish speaking countries in the African Region. Participants – who included adolescent health focal points ministries of health, as well representatives of partner agency UNFPA and NGOs -- were introduced to WHO's programming approaches on adolescent health. The experiences gained by host country Mozambique's national adolescent health services programme 'Geração Biz' – on which WHO recently published an analytical case study -- as well as examples from the neighbouring United Republic of Tanzania, served as a basis for important learning for the workshop participants, including through field visits to youth-friendly clinics.

The Maputo workshop marked a milestone in capacity building on adolescent health programme management in the African Region. With the translation of materials into Portuguese and completion of this workshop, all Member States' ministries of health have been oriented to WHO's '4-S framework'. This has led to a marked rise in country-level activities on adolescent health in the Region in 2009, in particular the development of strategic plans and standards for adolescent-friendly health services and health worker training.

Furthermore, with the delivery of another workshop in the Eastern Mediterranean Region in 2009, all of WHO's six regions have now benefitted from capacity building in adolescent health programming.

WHO's European Regional Office is supporting Member States in strengthening health systems' responsiveness to young people's needs. A regional meeting on Youth-Friendly Health Policies and Services held in Edinburgh, Scotland, in September 2009, brought together representatives of governments, UN agencies and partner organizations from 35 Member States. Countries presented case studies of their experiences in scaling-up health services for young people and reaching vulnerable populations. WHO presented the findings of a survey on the state of school health services in the Region. The meeting indicated that progress has been made in countries across the Region -- from host country Scotland to Ukraine and Tajikistan -- in institutionalizing youth-friendly health services, and in measuring the effects of this work.

Participants also outlined additional actions needed to ensure steady progress in all health system building blocks:

- **service delivery**, by making services available, accessible and appropriate;
- **resource generation**, by ensuring that a health workforce with the right skills and competencies is in place;
- **financing**, by ensuring commitment to allocating financial resources for both mainstream and specialized services; and
- **leadership**, by having policy-makers and decision-makers convinced that investing in young people’s health is the right thing to do, both from a human rights perspective and because it is money well spent.

A special issue of 'Entre Nous' -- the European Magazine for Sexual and Reproductive Health -- entitled "Young and Healthy?" was produced and distributed at the Edinburgh meeting. A full meeting report with recommendations and case studies from nine countries will be published in early 2010.

To download a copy of the "Young and Healthy?" theme issue of 'Entre Nous', go to: www.who.int/child_adolescent_health/documents/young_healthy
Moving the adolescent health agenda forward in a growing number of African countries

Significant progress has been made in the African Region since the adoption of its Adolescent Health Strategy in 2002 and Framework for Implementation in 2004. Based on the experience from South Africa, standards for adolescent- and youth-friendly health services (AYFHS) were introduced as key step in improving service provision. During the last six years, assistance to countries provided by WHO’s African Regional Office has focused on supporting the ‘4-S framework’s systematic approach to strengthening the health sector response to the needs of adolescents. Despite minimal dedicated human and financial resources for adolescent health, important achievements have been made. To date:  
- 29 countries have developed multisectoral strategic plans;  
- 13 countries have developed AYFHS standards;  
- Five countries (the Democratic Republic of the Congo, Ethiopia, Malawi, Togo and the United Republic of Tanzania) have developed all of the tools and training kits necessary for implementation;  
- Mozambique (100% of districts), South Africa (100% of districts), the United Republic of Tanzania (75% of districts) and Malawi (35% of districts) are implementing AYFHS standards at district level; and  
- The United Republic of Tanzania conducted an evaluation of its AYFHS implementation in 2009 and developed a new strategic plan focused on scaling-up AYFHS in all districts. Over the coming year, the Regional Office will support Member States which have not already done so to conduct situation analyses and initiate the development of strategic plans. Effort will also be focused on encouraging additional countries to begin implementing AYFHS standards at district level.
Supporting our "focus countries"

In 2009, CAH continued to provide active support to a number of "focus countries", the objectives of which were:

- To demonstrate the feasibility and value of applying the '4-S framework' for strengthening the way in which ministries of health -- and specifically, national HIV and/or reproductive health programmes -- address the specific needs of adolescents and young people;
- To demonstrate that CAH adds value to the work of key partners and stakeholders in improving adolescent health and development; and
- To serve as demonstration sites for other countries.

CAH has developed a systematic process to scale up the provision of health services and health-related commodities to adolescents; methods and tools have been developed for each significant step in the process. For "focus countries" CAH has laid out clear objectives for the local level (including health facilities and communities), the district health management level, the national level, and the WHO Country Office. In 2009, CAH's support to "focus countries" centred on helping them assess where there were in the process, and supporting them to continue moving forward.

The table below outlines key milestones.

<table>
<thead>
<tr>
<th>Support provided in 2009</th>
<th>Focus countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>National strategy formulation</td>
<td>Guyana</td>
</tr>
<tr>
<td>National strategy review and reformulation</td>
<td>The United Republic of Tanzania</td>
</tr>
<tr>
<td>Development of national quality standards for the provision of health services to adolescents</td>
<td>Ghana and Guyana</td>
</tr>
<tr>
<td>Development and testing of monitoring and implementation tools, in line with the national quality standards</td>
<td>Bangladesh, India, Moldova, Sri Lanka, the United Republic of Tanzania, and Tajikistan</td>
</tr>
<tr>
<td>Building a pool of facilitators</td>
<td>Guyana</td>
</tr>
<tr>
<td>Scaling-up implementation and monitoring at the district level</td>
<td>India and the United Republic of Tanzania</td>
</tr>
<tr>
<td>Documentation of country level work</td>
<td>India, Moldova, the United Republic of Tanzania, and Viet Nam</td>
</tr>
</tbody>
</table>

With ongoing support from CAH, countries are moving from strategising and planning to implementation and monitoring of activities to reach adolescents with the health services they need.

Commitment to adolescent-friendly health services in the Philippines

In the Philippines, a situation analysis revealed deficiencies in the coverage and quality of adolescent health services. Committed to filling the gaps, the Department of Health (DoH), has undertaken three strategic activities with support from WHO’s Western Pacific Regional Office.

First, a series of meetings were held to build wide consensus, and a multi-sectoral consultative workshop was held in August 2009 to develop a set of standards for the provision of quality adolescent health services. Second, the Philippine Adaptation of the Adolescent Job Aid was developed. This manual was designed to provide field health workers with step-by-step guidance to manage common adolescent health and development conditions. Third, capacity building for the provision of adolescent-friendly health services was initiated by carrying out a national-level ‘training of trainers’ in September 2009. The training brought together stakeholders from the government (national, regional, provincial and city/municipal) and NGOs.

The DoH has further embarked on a process to consolidate these initiatives. An implementation guide is being developed to help health care providers provide quality services in line with national standards. Two regional level trainings have been carried out and there are plans for municipal and provincial level trainings that involve NGOs and private practitioners. In addition, a “legal forum” to discuss the legality of providing reproductive health services to young people has been planned.
New tool to assess the quality of adolescent health services

In 2009, CAH published ‘The Quality Assessment Guidebook: A guide to assessing health services for adolescent clients’. It is part of a set of tools to strengthen programmatic action on adolescent health in countries. It is intended to enable programme managers to assess the quality of health service provision to adolescents, and to take appropriate action where the quality is found wanting. The Guidebook can be used in countries where there are agreed-upon national quality standards, as well as in ones where there are not.

The ‘Quality Assessment Guidebook’ contains a user guide, a set of eight instruments to assess the quality of health services, and a framework for analysing and reporting on the data collected. CAH systematically tested and applied the ‘Quality Assessment Guidebook’ in countries spanning three WHO Regions: Ethiopia (Africa), India and Indonesia (South-East Asia), and Moldova (Europe). The field tests gathered information from health facility managers, health care providers and adolescent clients. The results gathered in these countries will be used for baseline and periodic assessments during the implementation of the standards for adolescent-friendly health services at district and local levels.

To download a copy of the ‘Quality Assessment Guidebook’, go to: www.who.int/child_adolescent_health/documents/fch_cah_9789241598859

Adolescent-friendly health services make a difference in Haryana, India

Following an orientation by WHO, adolescent sexual and reproductive health services were launched in the Indian state of Haryana in 2008, with services being provided to around 200,000 adolescents in eight districts. The innovative approaches used, and the coverage and quality of adolescent-friendly health services were assessed in 2009. Services are provided through public health institutions, bolstered by community mobilization and demand-generation activities. Following a state-level “training of trainers”, courses were organized for medical officers, dental surgeons and counsellors using the ‘Orientation Programme’ developed by CAH and tailored by the Ministry of Health. Next to be trained were Lady Health Visitors, Accredited Social Health Activists (ASHAs) and Anganwadi workers. Following training, a number of health facilities (district hospitals, primary health care centres and sub-centres) were designated as “adolescent-friendly”.

To increase demand for services amongst adolescents and to address their day-to-day concerns, peer group educators (PGE) were trained. Efforts were made to involve the PGEs in activities in their villages relating to adolescent health, such as distribution of iron and folic acid tablets and the sale of sanitary napkins through social marketing. During the ten-month assessment period, more than 33,000 problems and concerns were handled by PGEs and ASHA workers in one district. The main concerns were: body image; food and eating habits; substance abuse and its consequences; problems relating to menstruation; STIs, HIV/AIDS and sexual health; friendship, love and marriage; and psychological and emotional problems.

Ten months after implementation of the programme, a household coverage survey was conducted, using tools developed by WHO, to establish a benchmark, assess the use of sexual and reproductive health services by adolescents, and evaluate the impact of the initiative. The survey was carried out in 30 village clusters in the intervention area and 30 village clusters in the control area. An assessment of the quality of services provided in the adolescent-friendly health centres was done by using protocols developed by WHO. The achievement of all the standards was higher in the AFHS facilities than it was in the control facilities.

Key findings of household survey
Making school health services more responsive to the needs of adolescents in the European Region

“The whole class goes together to a medical facility, and we receive a list of examinations/specialists to go to. We go into the doctor's office in groups of five, and he/she asks us, one-by-one: “any complaints? Do you have sexual relationships?” How on earth can I tell him/her, if I am a 13-year-old boy, that I do have sexual relationship if I have another four classmates listening? ...We have a medical office in the school, but there is nobody there most of the time...The way we see it, it should be organized, and there should be a health provider permanently in the school health office, so that we can come when we need to.”

B. and C., young people from a CIS country

The text in the box above reflects, unfortunately, how school health services are provided in many countries of the WHO European Region. In order to support countries in their efforts to make the most of school health services (SHS), WHO’s European Regional Office is gathering strategic information on health system aspects of SHS, and promoting evidence-based policy options for school health services development. A survey conducted in 2009 revealed major challenges -- as reported by respondents from 37 Member States -- are insufficient funding of SHS and insufficient capacity of school health personnel to deliver services in a manner that is appropriate to pupils' needs. The need to re-examine the role of SHS, given the changing nature of young peoples' health and development needs, was highlighted by many respondents. Eighty-eight per cent of respondents mentioned the need for more data on the effectiveness of SHS to advocate for pupils' needs with decision makers. In 2009-2010, the Regional Office supported the governments of Albania, Moldova and Ukraine to (re)define the role of school health services in line with changing needs. Countries made progress in reviewing the basis for the provision of health services in schools within existing national strategies, and identified health system actions and recommendations for the reorganization of SHS and referrals.

To download a copy of the results of a survey on school health services in the European Region 'Pairing Children with Health Services', go to: http://www.euro.who.int/document/e93576.pdf

© UNICEF/NYHQ2004-1019/Giacomo Pirozzi

Reorienting services to meet the special needs of adolescents in Bahia, Brazil

In 2009, the medical units in the Brazilian state of Bahia realized that although one quarter of adolescent girls who received care through the Brazilian Unified Health System were pregnant, there was not a differentiated approach focusing on meeting their particular needs. In order to improve service to this group, they decided to form a network of adolescent care that focuses on pregnancy, which has become increasingly prevalent in Brazil.

The network was formed in April 2009, and a plan was developed with support from WHO’s Regional Office for the Americas, the Country Office in Brazil, the Brazilian Ministry of Health and the Secretary of Health in Bahia. The plan consists of four fundamental elements:

1. A checklist to analyse services provided in maternity wards;
2. The proposal of a new flowchart for differentiated adolescent care;
3. Training, including sensitivity training, for all personnel; and
4. The implementation of a new model of care in three "pilot" maternity wards.

These steps were implemented in 2009, and will be scaled-up throughout the network in the manner that best suits each health care establishment.

Claudia Santos da Silva, 15, shared her story at the April meeting and thanked the WHO Country Office for the care she received while she was pregnant and after her baby was born prematurely.

©WHO/Regional office of the Americas
Action for the health of adolescent girls: events, reports, and new tools

There are 600 million adolescent girls living in developing countries today. The potential for accelerating development by ensuring their health and education was highlighted in a variety of fora and documents in 2009.

In March 2009, the UN Inter-Agency Task Force (IATF) on Adolescent Girls – of which WHO is a member – hosted a reception in New York on “Girl Power and Potential” during the fifty-third session of the Commission on the Status of Women. The reception highlighted the untapped potential of adolescent girls for breaking the cycle of poverty, and was used as an opportunity to cultivate partnerships for adolescent girl-focused initiatives. In November 2009, WHO’s Director-General, Dr Margaret Chan, called for urgent action to improve the health and lives of girls and women around the world, from birth to older age. The report entitled ‘Women and Health: today’s evidence tomorrow’s agenda’, used the latest available data to take stock of the health of girls and women, and draw attention to the consequences and costs of failing to address health issues at appropriate points in their lives. Taking a life-course approach, the section on adolescents noted that it is generally a time of good health and of opportunities for growth and development. However, injuries, road traffic accidents, and HIV/AIDS contribute significantly to deaths and disabilities in this age group. Maternal mortality is the leading cause of death and disability among 15 to 19 year-old young women in developing countries. A key message of the report was that despite considerable progress in the past decades, societies continue to fail to meet the health care needs of women at key moments of their lives, particularly in adolescence and older age.

To download a copy of the ‘Women and Health’ report, go to: www.who.int/gender/documents/9789241563857

A Certificate Course on ‘Empowerment and Health Promotion for Maternal and Newborn Health’ was developed in 2009 as a joint initiative of WHO, the Pan-American Health Organization, and Swiss NGO Enfants du Monde. The course was designed to support programme managers in maternal, newborn, child and adolescent health, in the implementation of health promotion interventions and approaches. It uses the strategic framework ‘Working with individuals, families and communities to improve maternal and newborn health’ developed by WHO’s Department for Making Pregnancy Safer.

The certificate course is offered by the Universidad de Antioquia (UdeA) in Medellin, Colombia. Currently enrolled in the course are 14 participants from Colombia and ten from El Salvador, representing ministries of health, health departments, municipalities and NGOs that are actively involved in the implementation of policies and programmes on maternal, child and adolescent health. The first group is expected to graduate in June 2010, and following an evaluation, a second group will commence the course before the end of the year.

Published in two volumes, ‘Volume I’ focuses on the rationale for sexuality education and the outcome of a rigorous review of the literature on the impact of sexuality education on sexual behaviour, drawing upon 87 studies from around the world. This evidence is built on previous CAH work (‘Preventing HIV/AIDS in young people. A systematic review of the evidence’). ‘Volume II’ describes a ‘basic minimum package’, it segments adolescents into four age ranges, and describes the characteristics of effective educational programmes for each. These characteristics were informed by a review of curricula from 12 countries, as well as other international models. The Guidance is currently being translated, and will be published in all six official UN languages (Arabic, Chinese, English, French, Russian and Spanish) as well as Portuguese.

To download a copy of the ‘Guidance’, go to: http://unesdoc.unesco.org/images/0018/001832/183281e.pdf

Only 40% of young people aged 15 to 24 years have accurate knowledge about HIV and its transmission routes. It follows, then, that this age group accounts for 40% of all new HIV infections today. Moreover, about 16 million girls aged 15 to 19 years have babies each year – approximately 11% of all births worldwide – and they account for an even greater proportion (23%) of the overall burden of disease due to pregnancy and childbirth. Education about sexuality is therefore crucial for health and is also a right. Young people themselves are clear in their demand for more – and better – sexuality education, services and resources.

In response to this challenge, in 2009, UNESCO in partnership with UNAIDS, UNFPA, UNICEF and WHO, developed the voluntary and non-mandatory ‘International Technical Guidance on Sexuality Education’. It seeks to assist education, health and other relevant authorities to develop and implement school-based sexuality education materials and programmes.

Published in two volumes, ‘Volume I’ focuses on the rationale for sexuality education and the outcome of a rigorous review of the literature on the impact of sexuality education on sexual behaviour, drawing upon 87 studies from around the world. This evidence is built on previous CAH work (‘Preventing HIV/AIDS in young people. A systematic review of the evidence’). ‘Volume II’ describes a ‘basic minimum package’, it segments adolescents into four age ranges, and describes the characteristics of effective educational programmes for each. These characteristics were informed by a review of curricula from 12 countries, as well as other international models. The Guidance is currently being translated, and will be published in all six official UN languages (Arabic, Chinese, English, French, Russian and Spanish) as well as Portuguese.

To download a copy of the ‘Guidance’, go to: http://unesdoc.unesco.org/images/0018/001832/183281e.pdf
THANK YOU

We thank the following donors whose designated contributions supported the work of CAH at Headquarters, in the Regions and Countries during 2009:

The Governments of:
- Australia
- Canada
- China
- Denmark
- France
- Japan
- Luxembourg
- Norway
- Republic of Korea (the)
- Spain
- Sweden
- United States of America (the)

Bill & Melinda Gates Foundation
Fondazione Cariverona
Joint United Nations Programme on HIV/AIDS (UNAIDS)
Novartis Foundation for Sustainable Development
United Nations Population Fund (UNFPA)

In addition, CAH would like to express its appreciation to those governments who contributed to the WHO Core Voluntary Fund.

CAH staff around the world in 2009

<table>
<thead>
<tr>
<th>Region</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
<td>34</td>
</tr>
<tr>
<td>African Region</td>
<td>35</td>
</tr>
<tr>
<td>Region of the Americas</td>
<td>52</td>
</tr>
<tr>
<td>Eastern Mediterranean Region</td>
<td>12</td>
</tr>
<tr>
<td>European Region</td>
<td>17</td>
</tr>
<tr>
<td>South-East Asian Region</td>
<td>19</td>
</tr>
<tr>
<td>Western Pacific Region</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>185</td>
</tr>
</tbody>
</table>
**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.
   **No:** No plan of action or strategy.

2. **Zinc for diarrhoea treatment**

   **Yes:** Zinc for the management of diarrhoea is available in the country.
   **Partial:** Official Ministry of Health policies or guidelines 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.

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 guidelines 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.

4. **Year of last revision of IMCI guidelines**

   Please state the year of last revision and provide supporting documents.

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.

**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**

**Quality of care indicators**

(definition as per Health Facility Survey)

1. **Proportion of first level health facilities that have all the essential drugs for IMCI available**

2. **Health facility received at least one supervisory visit that included observation of case management during the previous six months**

3. **Child received integrated assessment**

4. **Proportion of children with diarrhoea and dehydration whom received appropriate treatment**

5. **Proportion of children with suspected pneumonia whom received appropriate antibiotic**

6. **Geographic areas included in survey**

7. **Total number of health facilities visited**

8. **Total number of children enrolled in the survey**

**Outcome indicators**

(definition as per DHS and MICS)

1. **Breastfeeding within one hour of birth**

2. **Exclusive breastfeeding among infants under six months of age**

3. **Care seeking for pneumonia**

4. **Children with diarrhoea receiving Oral Rehydration Therapy**

5. **Children under twelve months of age vaccinated against measles**

6. **Use of insecticide treated nets**

**Health status indicators**

(definition as per DHS and MICS)

1. **Under five mortality rate per 1000 live births**


3. **Estimated number of pneumonia episodes per year**

4. **Percentage of children underweight**
## Annex 1: Statistics on Newborns and Children

### Input Indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>Costed national strategy / plan of action for newborn and child health</th>
<th>Zinc for diarrhoea treatment</th>
<th>Antibiotics for pneumonia treatment at community level</th>
<th>Year of last revision of IMCI guidelines</th>
<th>International Code of Marketing of Breastmilk Substitutes</th>
<th>National policy for Infant and Young Child Feeding</th>
<th>Proportion of districts having initiated IMCI training of first-level hws</th>
<th>Estimates of first-level facilities with 1 or more hws who care for children trained in IMCI</th>
<th>Estimates of availability of O2 in pediatric wards of district and national hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2005</td>
<td>No</td>
<td>Partial</td>
<td>21%</td>
<td>-</td>
<td>&lt;1/3</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>No</td>
<td>Partial</td>
<td>15%</td>
<td>&lt;1/3</td>
<td>-</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>Partial</td>
<td>Yes</td>
<td>35%</td>
<td>-</td>
<td>&lt;1/3</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>Partial</td>
<td>Yes</td>
<td>21%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2006</td>
<td>Partial</td>
<td>Yes</td>
<td>76%</td>
<td>&lt;1/3</td>
<td>1/3 - &lt;2/3</td>
</tr>
<tr>
<td>Kenya</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>Yes</td>
<td>Yes</td>
<td>90%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Malawi</td>
<td>Partial</td>
<td>No</td>
<td>No</td>
<td>-</td>
<td>Partial</td>
<td>Yes</td>
<td>39%</td>
<td>&lt;1/3</td>
<td>-</td>
</tr>
<tr>
<td>Mali</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>-</td>
<td>Partial</td>
<td>Yes</td>
<td>90%</td>
<td>&gt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Mozambique</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2006</td>
<td>Yes</td>
<td>Partial</td>
<td>93%</td>
<td>&lt;1/3</td>
<td>&gt;2/3</td>
</tr>
<tr>
<td>Niger</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2007</td>
<td>Partial</td>
<td>Yes</td>
<td>24%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2007</td>
<td>Yes</td>
<td>Yes</td>
<td>98%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>United Republic of Tanzania</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>Yes</td>
<td>Yes</td>
<td>90%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2006</td>
<td>Partial</td>
<td>Yes</td>
<td>85%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Brazil</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>20%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Haiti</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>-</td>
<td>Partial</td>
<td>No</td>
<td>7%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Egypt</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2006</td>
<td>Partial</td>
<td>Yes</td>
<td>92%</td>
<td>&gt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>2008</td>
<td>Partial</td>
<td>Yes</td>
<td>26%</td>
<td>&gt;1/3</td>
<td>-</td>
</tr>
<tr>
<td>Sudan</td>
<td>Partial</td>
<td>No</td>
<td>No</td>
<td>2005</td>
<td>Partial</td>
<td>-</td>
<td>56%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Yemen</td>
<td>Partial</td>
<td>Yes</td>
<td>Partial</td>
<td>2006</td>
<td>Yes</td>
<td>Partial</td>
<td>40%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2008</td>
<td>No</td>
<td>Yes</td>
<td>58%</td>
<td>&lt;1/3</td>
<td>-</td>
</tr>
<tr>
<td>Turkey</td>
<td>No</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td>Partial</td>
<td>No</td>
<td>7%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2008</td>
<td>No</td>
<td>Partial</td>
<td>78%</td>
<td>1/3 - &lt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>Partial</td>
<td>Yes</td>
<td>37%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>India</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>26%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indonesia</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>-</td>
<td>Partial</td>
<td>Yes</td>
<td>72%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>2008</td>
<td>No</td>
<td>Yes</td>
<td>34%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nepal</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>2007</td>
<td>Yes</td>
<td>Yes</td>
<td>85%</td>
<td>&gt;2/3</td>
<td>-</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2006</td>
<td>Partial</td>
<td>Yes</td>
<td>91%</td>
<td>&lt;1/3</td>
<td>1/3 - &lt;2/3</td>
</tr>
<tr>
<td>China</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2006</td>
<td>Partial</td>
<td>Yes</td>
<td>60%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Laos People’s Democratic Republic</td>
<td>Yes</td>
<td>Partial</td>
<td>No</td>
<td>-</td>
<td>Partial</td>
<td>-</td>
<td>73%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>No</td>
<td>Partial</td>
<td>Partial</td>
<td>-</td>
<td>Partial</td>
<td>Yes</td>
<td>11%</td>
<td>-</td>
<td>&gt;2/3</td>
</tr>
<tr>
<td>Philippines</td>
<td>Partial</td>
<td>Yes</td>
<td>No</td>
<td>2007</td>
<td>Yes</td>
<td>Yes</td>
<td>72%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- = data not available
** = data source: For Zinc availability UNICEF Supply Division Copenhagen. Otherwise as reported by WHO Country and Regional Offices by December 2008 or 2009.
*** = data source: WHO/UNICEF monitoring of the Code
**** = data source: Reported by WHO Country and Regional Offices by end of December 2008 and preliminary results of WHO MNCAH questionnaire 2009

- = data not available
### Health Status Indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>USMR per 1000 live births (2008)</th>
<th>USMR Annual Average Rate of Reduction (2004-2008)</th>
<th>Estimated number of pneumonia episodes, 1 year children under-five (2004)*</th>
<th>Percentage of children under-five underweight (-2 SD) (2008)**</th>
<th>BF within 1 hr of birth*</th>
<th>Exclusive BF among infants &lt; 6 months</th>
<th>Care seeking for pneumonia</th>
<th>Children under 12 months vaccinated against measles</th>
<th>ITN use</th>
<th>Source/ Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>220</td>
<td>0.9%</td>
<td>1 000 000</td>
<td>37.0 (1996)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>169</td>
<td>1.0%</td>
<td>900 000</td>
<td>54.4 (2006)</td>
<td>19.6</td>
<td>8.2</td>
<td>38.8</td>
<td>23.3</td>
<td>70.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>114</td>
<td>1.5%</td>
<td>870 000</td>
<td>16.7 (2006)</td>
<td>24.9</td>
<td>4.3</td>
<td>35.1</td>
<td>32.6</td>
<td>72.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>199</td>
<td>0.0%</td>
<td>3 850 000</td>
<td>28.2 (2007)</td>
<td>49.7</td>
<td>36.1</td>
<td>41.9</td>
<td>44.9</td>
<td>54.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>109</td>
<td>3.6%</td>
<td>3 950 000</td>
<td>34.6 (2005)</td>
<td>45.9</td>
<td>49.0</td>
<td>18.7</td>
<td>27.5</td>
<td>28.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Kenya</td>
<td>128</td>
<td>-1.1%</td>
<td>1 600 000</td>
<td>16.5 (2003)</td>
<td>52.3</td>
<td>12.7</td>
<td>49.1</td>
<td>29.2</td>
<td>62.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Malawi</td>
<td>100</td>
<td>4.5%</td>
<td>630 000</td>
<td>15.5 (2006)</td>
<td>58.3</td>
<td>56.7</td>
<td>51.8</td>
<td>55.3</td>
<td>75.9</td>
<td>24.7</td>
</tr>
<tr>
<td>Mali</td>
<td>194</td>
<td>1.4%</td>
<td>840 000</td>
<td>27.9 (2006)</td>
<td>45.9</td>
<td>37.8</td>
<td>38.1</td>
<td>24.3</td>
<td>59.1</td>
<td>-</td>
</tr>
<tr>
<td>Mozambique</td>
<td>136</td>
<td>3.6%</td>
<td>1 000 000</td>
<td>21.2 (2003)</td>
<td>64.7</td>
<td>30.0</td>
<td>55.4</td>
<td>54.1</td>
<td>63.0</td>
<td>-</td>
</tr>
<tr>
<td>Niger</td>
<td>167</td>
<td>3.3%</td>
<td>1 000 000</td>
<td>39.9 (2006)</td>
<td>46.3</td>
<td>13.6</td>
<td>47.2</td>
<td>28.2</td>
<td>38.3</td>
<td>7.4</td>
</tr>
<tr>
<td>Nigeria</td>
<td>186</td>
<td>1.2%</td>
<td>6 000 000</td>
<td>26.7 (2006)</td>
<td>38.4</td>
<td>13.1</td>
<td>45.4</td>
<td>31.2</td>
<td>33.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Uganda</td>
<td>135</td>
<td>4.6%</td>
<td>1 200 000</td>
<td>16.4 (2004)</td>
<td>25.4</td>
<td>59.9</td>
<td>73.5</td>
<td>43.4</td>
<td>52.3</td>
<td>7.2</td>
</tr>
<tr>
<td>United Republic of Tanzania</td>
<td>103</td>
<td>2.3%</td>
<td>1 900 000</td>
<td>16.7 (2004/2005)</td>
<td>59.3</td>
<td>41.3</td>
<td>59.4</td>
<td>62.2</td>
<td>70.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Bolivia</td>
<td>54</td>
<td>4.5%</td>
<td>100 000</td>
<td>4.3 (2008)</td>
<td>63.8</td>
<td>60.4</td>
<td>50.9</td>
<td>43.6</td>
<td>81.0**</td>
<td>-</td>
</tr>
<tr>
<td>Brazil</td>
<td>22</td>
<td>5.2%</td>
<td>1 800 000</td>
<td>2.2 (2006/2007)</td>
<td>43.0</td>
<td>39.8</td>
<td>49.7</td>
<td>51.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Haiti</td>
<td>72</td>
<td>4.1%</td>
<td>420 000</td>
<td>18.9 (2005/2006)</td>
<td>32.0</td>
<td>40.7</td>
<td>31.5</td>
<td>43.8</td>
<td>45.3</td>
<td>-</td>
</tr>
<tr>
<td>Egypt</td>
<td>23</td>
<td>7.5%</td>
<td>980 000</td>
<td>6.8 (2008)</td>
<td>55.9</td>
<td>53.2</td>
<td>73.0</td>
<td>30.4</td>
<td>96.6</td>
<td>-</td>
</tr>
<tr>
<td>Pakistan</td>
<td>89</td>
<td>2.1%</td>
<td>9 800 000</td>
<td>31.1 (2001)</td>
<td>18.0</td>
<td>-</td>
<td>80.5</td>
<td>47.2</td>
<td>50.2</td>
<td>-</td>
</tr>
<tr>
<td>Sudan</td>
<td>109</td>
<td>0.7%</td>
<td>2 000 000</td>
<td>31.7 (2006)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yemen</td>
<td>69</td>
<td>3.4%</td>
<td>1 400 000</td>
<td>43.1 (2003)</td>
<td>29.6</td>
<td>-</td>
<td>-</td>
<td>86.7</td>
<td>59.2</td>
<td>-</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>64</td>
<td>3.4%</td>
<td>-</td>
<td>14.9 (2005)</td>
<td>60.9</td>
<td>25.4</td>
<td>63.9</td>
<td>58.4</td>
<td>91.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Turkey</td>
<td>22</td>
<td>7.4%</td>
<td>-</td>
<td>35.0 (2003/2004)</td>
<td>53.9</td>
<td>20.8</td>
<td>41.0</td>
<td>71.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>38</td>
<td>3.7%</td>
<td>-</td>
<td>4.4 (2006)</td>
<td>67.1</td>
<td>26.4</td>
<td>67.7</td>
<td>78.8</td>
<td>96.0</td>
<td>-</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>54</td>
<td>5.6%</td>
<td>6 400 000</td>
<td>42.7 (2004)</td>
<td>34.9</td>
<td>42.9</td>
<td>37.1</td>
<td>81.2</td>
<td>72.2</td>
<td>-</td>
</tr>
<tr>
<td>India</td>
<td>69</td>
<td>2.9%</td>
<td>43 000 000</td>
<td>43.5 (2003/2006)</td>
<td>17.5</td>
<td>46.4</td>
<td>67.3</td>
<td>26.0</td>
<td>48.4</td>
<td>-</td>
</tr>
<tr>
<td>Indonesia</td>
<td>10</td>
<td>4.5%</td>
<td>6 000 000</td>
<td>16.6 (2007)</td>
<td>43.9</td>
<td>32.4</td>
<td>55.9</td>
<td>48.1</td>
<td>67.0</td>
<td>-</td>
</tr>
<tr>
<td>Myanmar</td>
<td>122</td>
<td>0.1%</td>
<td>1 800 000</td>
<td>29.6 (2003)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nepal</td>
<td>51</td>
<td>5.7%</td>
<td>1 000 000</td>
<td>38.8 (2006)</td>
<td>35.4</td>
<td>53.0</td>
<td>42.9</td>
<td>40.7</td>
<td>80.0</td>
<td>-</td>
</tr>
<tr>
<td>Cambodia</td>
<td>89</td>
<td>1.5%</td>
<td>750 000</td>
<td>28.8 (2008)</td>
<td>26.6</td>
<td>60.0</td>
<td>45.4</td>
<td>35.8</td>
<td>70.2</td>
<td>4.2</td>
</tr>
<tr>
<td>China</td>
<td>21</td>
<td>4.2%</td>
<td>21 000 000</td>
<td>6.8 (2002)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Laos People's Democratic Republic</td>
<td>61</td>
<td>5.3%</td>
<td>375 000</td>
<td>31.6 (2006)</td>
<td>29.8</td>
<td>26.4</td>
<td>32.3</td>
<td>50.5</td>
<td>33.0</td>
<td>40.5</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>69</td>
<td>1.5%</td>
<td>200 000</td>
<td>18.1 (2005)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Philippines</td>
<td>32</td>
<td>3.6%</td>
<td>2 700 000</td>
<td>20.7 (2003)</td>
<td>53.5</td>
<td>34.0</td>
<td>50.0</td>
<td>58.6</td>
<td>78.2</td>
<td>-</td>
</tr>
</tbody>
</table>

* = data not available
* Source: WHO Nutrition Database (http://www.who.int/nutgrowthdb/database/countries/en/index.html)
* Proportions refer to ALL births in five years preceding the survey (not to last born children)
* Children less than 18 months vaccinated against measles
South-East Asian Region: Bangladesh

Total Population: 164,425,000
Population 10-19: 33,975,000

Summary of CAH activities

The Bangladesh Health, Nutrition and Population Sector Programme (2003-11), identified adolescents as an important group whose health needs required attention. Some major activities have taken place which will inform the next sector plan. These efforts have been supported by WHO and other UN partners, including the development and endorsement of National Standards for Youth Friendly Health Services (YFHS) in 2005 followed by the adoption of an Adolescent Health Strategy in 2006. In the same year, the Ministry of Health prepared a Compendium of Institutions working on Adolescents Sexual and Reproductive Health (ASRH) and HIV/AIDS among young people, with the support of WHO. In 2007, Ministry of Health prepared a sub-set analysis of age-disaggregated data from DHS and other nationally representative surveys, with the support of WHO, which were then compiled and published as Fact Sheets. In 2009, Ministry of Health commissioned a study for assessing the Laws and Policies related to Adolescent’s Sexual and Reproductive and Health from a human rights perspective, which is currently being finalized.

Note on designation of year in all the country tables: The year represents the year in which the survey was carried out. For some indicators it refers to the midpoint of a 2, 3 or 5 year period prior to the survey date.

Sources Bangladesh:

4 Baseline HIV/AIDS Survey among Youth in Bangladesh, ICDDR,B; Centre for Health and Population Research; Associates for Community and Population Research; Population Council 2005

Impact Indicators | Age | Sex | Year
---|---|---|---
HIV prevalence | 15-24 | - | - | 2007
Maternal mortality ratio per 100,000 live births
Age Specific Fertility rate | 15-19 | 126 | 2007
Suicide rate
Proportion with serious injury in past year
Proportion who are obese

Outcome Indicators | Age | Sex | Year
---|---|---|---
Condom use at last higher-risk sex (including pre-marital & with CSWs) | 15-24 | 35% | 2005
Percentage who received an HIV test and know their results
Contraceptive prevalence (current use, modern methods-married) | 15-19 | 37.6% | 2007
Contraceptive prevalence (current use, modern methods-married) | 20-24 | 47.5% | 2007
Antenatal care coverage - at least 4 visits
Access to skilled birth attendant | 15-19 | 19.0% | 2006
Access to skilled birth attendant | 20-24 | 19.9% | 2006
Institutional Delivery | 15-19 | 15.1% | 2006
Institutional Delivery | 20-24 | 15 | 2004
Currently using any tobacco products | 15-19 | 22.7% | 2004
Currently using any tobacco products | 20-24 | 45.6% | 2004
Parental regulation of adolescent behaviour

Output Indicators | Age | Sex | Year
---|---|---|---
Percentage of health facilities with ≥1 health care provider trained in AFHS/ASRH
Percentage of young people using health services

- : rate close to zero
African Region: Ghana

Total Population*: 24,333,000
Population 10-19*: 5,420,000

Summary of CAH activities

In 1999 the National Youth Policy identified as a priority the improved access to and provision of health services for Youth. In 2000, the Adolescent Reproductive Health Policy expanded this to include services on population issues in addition to health. The National Adolescent Health programme was started in Ghana in May, 2001. At the same time, the African Youth Alliance Programme (AYA), funded by the Gates Foundation was launched to prevent unwanted pregnancies and HIV among young people and ended in 2005. The health services package to be provided was specified in The National Reproductive Health Service Policy and Standards of the Ghana Health Service in 2003 and adolescents were included as a special target group. The following year, in 2004, the Ghana AIDS Commission prepared The National HIV/AIDS and STI Policy where specific mention was made of the aim to ensure the expansion of and access to youth-friendly facilities. To facilitate this, Ministry of Health supported a national level workshop in 2007 with representation from 8/10 Regional Ministry of Health staff, to identify the health sector’s role in responding to the needs of adolescents. The following year in 2008, Ministry of Health developed and endorsed a Health Sector Strategy specifically for adolescents and youth. Finally in 2009, Ministry of Health developed and finalized in consultation with UN, academic and NGO partners, five National Standards for AFHS/YFHS with an operational guide that is being finalized. In the first decade of the 21st century, Ministry of Health and partners in Ghana have firmly established quality health services for adolescents and youth.

Sources Ghana:

6. Global School-based Student Health Survey Senior High Schools 2008 (2008)

Impact Indicators | Age | ♀ | ♂ | ♀ ♂ | Year
--- | --- | --- | --- | --- | ---
HIV prevalence | 15-24 | 1.3% | 0.4% | 2007
Maternal mortality ratio per 100,000 live births
Age Specific Fertility rate | 15-19 | 70 | | 2006
Suicide rate
Proportion with serious injury in past year | 13-15 | 80.4% | 81.2% | 81.0% | 2007
Proportion who are obese | 13-15 | 0.9% | 0.6% | 0.7% | 2007

Outcome Indicators | Age | ♀ | ♂ | ♀ ♂ | Year
--- | --- | --- | --- | --- | ---
Condom use at last higher-risk sex | 15-19 | 33.5% | 46.2% | 2003
20-24 | 32.0% | 54.7% | 2003
Percentage who received an HIV test and know their results | 15-19 | 1.0% | 1.1% | 2003
20-24 | 2.6% | 2.4% | 2003
Contraceptive prevalence (current use modern methods-married) | 15-19 | 7.6% | 10.1% | 2008
20-24 | 17.3% | 23.6% | 2008
Contraceptive prevalence (current use modern methods-unmarried) | 15-19 | 32.8% | 42.7% | 2008
20-24 | 27.2% | 48.6% | 2008
Antenatal care coverage - at least 4 visits
Access to doctor/births in three years preceding the survey (≥ age at delivery) | <20 | 7.1% | | 2005
Access to other health professional (births in three years preceding the survey (≥ age at delivery) | <20 | 48.9% | | 2005
Cigarette smoking in the past 30 days | Senior high school students | 0.9% | 1.9% | 1.5% | 2008
Tobacco use in past 30 days | Senior high school students | 4.3% | 5.7% | 5.1% | 2008
Lack of parental regulation of adolescent behaviour | 13-15 | 27.9% | 28.0% | 28.3% | 2007

Output Indicators | Age | ♀ | ♂ | ♀ ♂ | Year
--- | --- | --- | --- | --- | ---
Percentage of health facilities with 1 or more health care providers trained in AFHS/ASRH
Percentage of young people using health service
Region of the Americas: Guyana

**Summary of CAH activities**

Guyana is a priority country in the Americas region and a focus country since 2006. Since then, CAH supported Guyana at the policy level to develop a multisectoral adolescent pregnancy prevention strategy. The Adolescent Health Unit oversees the following programmes: Youth Friendly Health Services, School Health and HIV Voluntary Counselling and testing advocacy for young people. The country has a network of youth friendly services – 20 Youth Friendly Health Centres in five of the ten administrative Regions, and one of the 14 dormitory schools includes a Youth Friendly Service in February 2010, with plans to launch services the other 14 (in the hinterland regions) this year. In addition, there are mobile YFS in the other 5 Regions as part of the identified need to extend young people’s access to quality services throughout the country. From 2006 to 2008 CAH supported capacity building of district teams on monitoring indicators. In 2009 CAH supported the development of quality standards and carried out a training workshop for capacity building of health workers, using the WHO Orientation programme on Adolescent Health and Adolescent Health Job Aid. In addition the IMAI package was introduced on HIV prevention and care. The work on adolescent health in health facilities is linked to work in schools where health clubs are introduced and functioning as part of the health promoting schools initiative. In 2010, sexual and reproductive health promotion materials were developed that include areas such as mental health, STI and HIV/AIDS and puberty and have been implemented in schools.

**Sources Guyana:**

2. UNAIDS (2008)
Western Pacific Region: Mongolia

Total Population: 2,701,000
Population 10-19: 512,000

Summary of CAH activities

In 1997, the Government passed two resolutions adopting National programmes for Reproductive Health as well as Adolescent and Student Health for implementation up to 2000. In 2001 a National programme for development and protection of children 2002-2010 was approved by Government resolution 245. A main objective of this programme was to establish adolescent friendly health services within the public health agenda. In the same year, the UN agencies supported the Ministries of Health and Education to pilot a three-year project for improving the health of adolescent girls and boys. A comprehensive evaluation of the programme in 2004 highlighted the successes and many remaining barriers to accessing quality health services for adolescents. The experiences from these projects and programmes were incorporated into the Health Sector Strategic Master Plan 2006-2015, which outlined several specific strategies and defined an essential package of services to be delivered at different levels of the health system from community to tertiary. Between 2003 and 2009, the Ministries of Health and Education have also supported several nationally representative surveys for adolescents on Reproductive Health in 2003, on Tobacco use in 2003 and 2007, and on overall health behaviours in 2007. These have built on previous surveys and needs assessments also supported by the government. Overall there have been concerted efforts by the government to support data collection and analyses to feed into the development of responses.

Impact Indicators

<table>
<thead>
<tr>
<th>Impact Indicators</th>
<th>Age</th>
<th>Female</th>
<th>Male</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>15-24</td>
<td>-</td>
<td>0.1%</td>
<td>2007</td>
</tr>
<tr>
<td>Maternal mortality ratio per 100,000 live births</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age specific fertility rate</td>
<td>15-19</td>
<td>19</td>
<td></td>
<td>2006</td>
</tr>
<tr>
<td>Suicide rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion with serious injury in past year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion who are obese</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outcome Indicators

<table>
<thead>
<tr>
<th>Outcome Indicators</th>
<th>Age</th>
<th>Female</th>
<th>Male</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom use at last higher-risk sex</td>
<td>15-19</td>
<td>31.8%</td>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Percentage who received an HIV test and know their results</td>
<td>20-24</td>
<td>15.5%</td>
<td>61.1%</td>
<td>2008</td>
</tr>
<tr>
<td>Contraceptive prevalence (current use, modern methods - married)</td>
<td>15-19</td>
<td>10.7%</td>
<td>8.9%</td>
<td>2008</td>
</tr>
<tr>
<td>Antenatal care coverage - at least 4 visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to skilled birth attendant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarette use in past 30 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently using any tobacco products</td>
<td>13-15</td>
<td>16.0%</td>
<td>25.7%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Parental regulation of adolescent behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Output Indicators

<table>
<thead>
<tr>
<th>Output Indicators</th>
<th>Age</th>
<th>Female</th>
<th>Male</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of health facilities with greater than 1 health care provider trained in AFSH/ASRH</td>
<td></td>
<td></td>
<td></td>
<td>28%</td>
</tr>
<tr>
<td>Percentage of young people using health services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:

European Region: Tajikistan

Total Population: 7,075,000
Proportion 10-19: 1,694,000

Summary of CAH activities

Between 2004 and 2009, WHO (CAH headquarters, EURO, Country Office) and UNICEF (Regional and Country Offices) have worked together with Ministry of Health (MOH) to strengthen the response of the health sector to adolescent health. This included a country level workshop in 2004 to improve the programming and measurement of the HIV and young people related activities in the country’s United Nations Development Assistance framework, followed in 2006-7, by the piloting by MOH of youth friendly health services (YFHS) for young people most at risk (MARA) of HIV/AIDS in 3 cities (Dushanbe, Tursun-zade and Isfara). These YFHS efforts were supported as well by IPPF, PSI and Care International, with further financial support from the GFATM. In order to strengthen and monitor these efforts, MOH in 2008 worked with WHO and UNICEF to train its staff through two regional workshops for systematic programming as well as the assessment of the quality and coverage of health services provided. In 2008 as well, MOH supported by WHO, field tested and applied a tool for the national level assessment and analysis of adolescent sexual and reproductive health laws and policies. In the same year, MOH developed draft standards for YFHS in collaboration with WHO and UNICEF, which were subsequently finalized and will be approved as a Standard Statute – Medical Consultative Department for Young People (MDCYP) and implemented in 2010.

Sources Tajikistan:

3 Epidemiological Fact Sheet on HIV and AIDS, UNAIDS (2008)
3 Global School Health Survey (2006)
5 Population Based Survey, Ministry of Health Tajikistan (2007)
Papers arising from CAH supported studies published in 2009


Gulani A, Sachdev HP, Qazi SA. Efficacy of Short Course, <4 Days, of Antibiotics for Treatment of Acute Otitis Media in Children A Systematic Review of Randomized Controlled Trials. *Indian Pediatr.* 2009 Sep 3, pii: S0974-7590(08)0653-1. [Epub ahead of print].


Rollins N. Food supplements and HIV. *BMJ*. 2009 May 22;338:b932. doi: 10.1136/bmj.b932.


CAH documents published in 2009

A qualitative review of psychosocial support interventions for young people living with HIV
www.who.int/child_adolescent_health/documents/who_fch_cah_adh_09_05

Acceptable medical reasons for use of breast-milk substitutes
www.who.int/child_adolescent_health/documents/WHO_FCH_CAH_09.01

Amor youth clinic network in Estonia (Analytic case studies : initiatives to increase the use of health services by adolescents)

CAH Progress Report Highlights 2008
www.who.int/child_adolescent_health/documents/9789241597968

www.who.int/child_adolescent_health/documents/97892415987807

Diarrhoea: Why children are still dying and what can be done
www.who.int/child_adolescent_health/documents/9789241598415

Effectiveness of shortened course (< 3 days) of antibiotics for treatment of acute otitis media in children. A systematic review of randomized controlled efficacy trials
www.who.int/child_adolescent_health/documents/9789241598446

Evolution of the national adolescent-friendly clinic initiative in South Africa (Analytic case studies : initiatives to increase the use of health services by adolescents)

From inception to large scale: the Geração Biz Programme in Mozambique (Analytic case studies : initiatives to increase the use of health services by adolescents)

Generating demand and community support for sexual and reproductive health services for young people: a review of the literature and programmes
www.who.int/child_adolescent_health/documents/9789241598484

Global Action Plan for prevention and control of Pneumonia (GAPP)
www.who.int/child_adolescent_health/documents/fch_cah_nch_09_04

Identifying priorities for child health research to achieve Millennium Development Goal 4. Consultation Proceedings
www.who.int/child_adolescent_health/documents/9789241598651

IMAI one-day orientation on adolescents living with HIV: Participants manual. Facilitators guide
www.who.int/child_adolescent_health/documents/fch_cah_9789241598972

Infant and young child feeding. Model Chapter for textbooks for medical students and allied health professionals
www.who.int/child_adolescent_health/documents/9789241597494

Infant and young child feeding. Tools and materials
www.who.int/child_adolescent_health/documents/lyc_f brochure

Managing Programmes to Improve Child Health (Introduction, Planning Implementation, Managing Implementation. Workbook, and Facilitator Guide)
www.who.int/child_adolescent_health/documents/9789241598729

Promoting adolescent sexual and reproductive health through schools in low income countries: an information brief
www.who.int/child_adolescent_health/documents/who_fch_cah_adh_09_03

Quality Assessment Guidebook: A guide to assessing health services for adolescent clients
www.who.int/child_adolescent_health/documents/fch_cah_9789241598859
Rapid advice: Revised WHO principles and recommendations on infant feeding in the context of HIV
www.who.int/child_adolescent_health/documents/9789241598873

Strengthening action to improve feeding of infants and young children 6-23 months of age in nutrition and child health programmes: report of proceedings, Geneva, 6-9 October 2008
www.who.int/child_adolescent_health/documents/9789241597890

Traditional male circumcision among young people: A public health perspective in the context of HIV prevention
www.who.int/child_adolescent_health/documents/9789241598910

WHO/UNICEF Global Consultation. Strengthening the health sector response to care, support, treatment and prevention for young people living with HIV. 13-17 November 2006, Blantyre, Malawi
www.who.int/child_adolescent_health/documents/fch_cah_08_02

WHO/UNICEF Joint Statement: Home visits for the newborn child: a strategy to improve survival
www.who.int/child_adolescent_health/documents/who_fch_cah_09_02

www.who.int/child_adolescent_health/documents/9789241598163

New translations of CAH documents (2009)

Acceptable medical reasons for use of breast-milk substitutes
Portuguese: Razões médicas aceitáveis para uso de substitutos do leite materno
www.who.int/child_adolescent_health/documents/WHO_FCH_CAH_09.01

Indicators for assessing infant and young child feeding practices
French: Indicateurs pour évaluer les pratiques d’alimentation du nourrisson et du jeune enfant
Spanish: Indicadores para evaluar las practicas de alimentación del lactante y del niño pequeño
www.who.int/child_adolescent_health/documents/who_fch_cah_09_02

WHO/UNICEF Joint Statement: Home visits for the newborn child: a strategy to improve survival
French: Déclaration commune OMS/UNICEF: Les visites à domicile pour les soins aux nouveau-nés : une stratégie destinée à améliorer la survie de l’enfant
Spanish: Declaración conjunta OMS/UNICEF: Visitas domiciliarias al recién nacido: una estrategia para aumentar la supervivencia
www.who.int/child_adolescent_health/documents/who_fch_cah_09_02

French: Déclaration commune OMS/UNICEF: Normes de croissance OMS et identification de la malnutrition aiguë sévère chez l’enfant
www.who.int/child_adolescent_health/documents/9789241598163