DEPARTMENT OF MATERNAL, NEWBORN,
CHILD AND ADOLESCENT HEALTH (MCA)

Progress report 2014–15

World Health Organization

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Foreword
from the new Director, Maternal, Newborn, Child and Adolescent Health (MCA)

I feel greatly privileged to have joined the Department of Maternal, Newborn, Child and Adolescent Health in September 2015. With our colleagues in the regional and country offices, and with partners all over the globe, we address some of the world's most important health issues. We support countries to implement programmes for maternal health, newborn and preterm care, the quality of service delivery and how to ensure patient safety, integrated management of childhood illness, early child development, adolescent health, community engagement and new and emerging threats such as the zikavirus-linked surge in microcephaly and other neurological syndromes. We have a large research programme focusing on newborn sepsis, kangaroo mother care, infant feeding, child survival, early child development and adolescent health. We contribute to the global monitoring of these problems and the definition of indicators and guidelines for governments and professionals. Above all we use our convening power to ensure that these problems benefit from the world's best minds and from innovative solutions.

We enjoy magnificent support from our outstanding and committed partners, donors and foundations, without whom our work would not be possible, and we thank them for their generosity. The next two years will be pivotal in implementing the UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) as part of the switch to Sustainable Development Goals. There is much work to be done. The new strategy is about surviving, thriving and transforming. We shall need to be flexible and collaborative, to take risks, and to broaden our programmatic and research interests. This is a big challenge but we shall ensure that the team, working with our partners, can take it on.

Dr Anthony Costello
Director Maternal, Newborn, Child and Adolescent Health

Introduction

The 2014–15 biennium that celebrated the end of the Millennium Development Goals (MDGs) was a landmark period during which the Department of Maternal, Newborn, Child and Adolescent Health (MCA) targeted accelerated action in particular towards MDGs 4 and 5. Major achievements include the global expansion of the Every Newborn Action Plan and the Global Action Plan for Pneumonia and Diarrhoea, continuous progress on implementing integrated community case management and integrated management of childhood illness, a wide-ranging research agenda that strengthened the evidence base to guide global policy, multi-country work on quality of care and respect to women during childbirth, evidence briefs for policymakers, updated estimates of newborn and child mortality rates, work on HIV prevention and care, including preventing mother-to-child transmission and behaviour change, and technical support to global policy-making, to regions and to countries.

2014–2015 was a landmark period for maternal and newborn health.

We worked for the post-2015 agenda in line with the Sustainable Development Goals (SDG)s and their targets as defined by the international community. Building on prior successes and lessons learned, the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030)[1] was launched in September 2015. We were closely involved with the development of the new Global Strategy, with the Global Financing Facility, the RMNCH Trust Fund, the Partnership for Maternal, Newborn, and Child Health (PMNCH). As part of a coordinated effort to promote adolescent health, we published the first-ever report *State of the World's Adolescents* and prepared, as part of the global strategy, a Global Accelerated Action for Framework for the Health of Adolescents (AA-HA) Framework.

[1] http://globalstrategy.everywomaneverychild.org/

I. Advancing maternal, newborn, child and adolescent health

Strengthening the evidence base

Research on newborn health

The completed studies we supported on newborn health during the biennium include evaluating the effect of vitamin A supplementation on infant survival, the first phase of Better Outcomes of Labour Difficulty (BOLD), a maternal and newborn mortality and morbidity cohort study, and the research behind the new guidelines on managing possible serious bacterial infection (PSBI).

We completed six studies on newborn health and initiated four more to improve the survival of preterm babies.

- Three large randomized controlled trials were completed in Ghana, India and the United Republic of Tanzania to evaluate the effect of neonatal vitamin A supplementation on infant survival. A single dose of 50 000 i.u. vitamin A given within three days of birth was compared with placebo. Overall, neonatal vitamin A supplementation did not improve survival. There was a trend towards benefits in the study conducted in India and towards harm in the studies conducted in Ghana and the United Republic of Tanzania. MCA coordinated a pooled analysis of ten studies, current and prior, to better understand the variability in research findings. The results of the pooled analysis indicate that neonatal vitamin A supplementation may be beneficial in settings with high rates of maternal vitamin A deficiency and high mortality in the first half of infancy. In contrast, the intervention had no effect or may even be harmful in settings with lower rates of maternal deficiency and low infant mortality. Relevant WHO guidelines will be updated during 2016.
- The first phase was completed of the BOLD study, which we hope will result in improvements in monitoring of labour. About 10 000 women in labour in health facilities in Kenya and Nigeria were carefully monitored and the outcomes recorded; data are being analysed.
- A study on maternal and newborn mortality and morbidity cohorts (AMANHI) was completed, which prospectively followed nearly 300000 pregnancies in South Asia (Bangladesh, India and Pakistan) and in sub-Saharan Africa (Democratic Republic of the Congo, Ghana, Kenya,United Republic of Tanzania and Zambia). Results provide population-based rates of maternal, foetal and neonatal mortality, their timing and causes, the burden of maternal morbidity and its relationship with foetal and neonatal outcomes.
- Community-based clinical trials were completed that evaluated simplified antibiotic regimens to manage serious infections on an outpatient basis where referral was not possible. These trials, in Bangladesh, Democratic Republic of the Congo, India, Kenya, Nigeria and Pakistan enrolled over 10 000 young infants (see page 8 of this report).

Four new research studies have been initiated to investigate options for improving the survival of preterm babies.

- A randomized controlled trial will evaluate the efficacy of community-initiated kangaroo mother care (KMC) in improving newborn survival. If efficacious, this innovation could expand access to the benefits of kangaroo mother care for preterm babies born at home or sent home very early from health facilities.
- A multi-country randomized controlled trial in hospitals aims to evaluate early KMC in improving survival. If safe and efficacious, this study would open the way to initiating KMC much earlier than currently recommended.

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- An ongoing large community-randomized controlled trial will evaluate the effectiveness of emollients in improving newborn survival. The trial compares sunflower seed oil and improved massage practices to standard care practices.
- A multi-country randomized controlled trial in hospitals is being planned in Bangladesh, India, Kenya, Nigeria and Pakistan to assess the risks and benefits of antenatal corticosteroids when used under the conditions recommended in recent WHO guidelines. The study aims to resolve the controversy on the use of antenatal corticosteroids in resource-limited settings after the publication of a National Institute of Child Health and Human Development (NICHD)-supported implementation research study suggesting that scale-up of this intervention in low- and middle-income settings resulted in an increase in foetal and neonatal mortality and in maternal sepsis.

Research on child health

There was a rejuvenation of child health research in the Department in the biennium, with the initiation or preparation of several large, multicountry research projects on diarrhoea, pneumonia and child nutrition. MCA is also investigating interventions to prevent overweight and obesity, and to improve retention-in-care of HIV-infected women. In addition, we have published new information on breastfeeding including an important two-paper Lancet series.

Improved management of childhood pneumonia: Two projects were started, the first of which aims to improve guidance on the clinical diagnosis of pneumonia through a pooled analysis of data from over 35 previously completed studies. The second is a multi-country cluster-randomized trial to evaluate enhanced integrated community case management of pneumonia. The "enhancement" includes use of pulse oximetry by community health workers (CHWs), plus the use of amoxicillin to treat infants younger than 2 months who present with fast breathing as the only sign of illness. This trial will be conducted in Bangladesh, Ethiopia, India and Malawi.

Improved management of childhood diarrhoea: Two projects will soon be initiated. The first of these, to determine the optimal dose of zinc, will be done as a three-arm randomized- recommended dose with two lower doses. The second is a multi- country randomized trial to evaluate the efficacy of antibiotic use in a selected group of children less than 2 years of age who have severe diarrhoea and are at a high risk of death. This trial will be conducted in Bangladesh, India, Kenya, Malawi, Mali, Pakistan and the United Republic of Tanzania.

There was a rejuvenation of child health research in MCA in 2014–2015, with a focus on pneumonia, diarrhoea and nutrition.

Optimal linear growth: Funding has been secured for a study to achieve optimal linear growth in children through interventions spanning pre-conception up to the age of two years. Interventions will cover reproductive, maternal and infant health care, nutrition, environment (water, sanitation and air pollution), social support and child development. It is hypothesized that interventions are required in all these areas and over all the included periods to achieve a substantial impact on linear growth. In this three-arm randomized controlled trial, the first arm will receive all the interventions from pre-conception to the end of the two-year post-birth period. The second arm will start receiving the interventions only after pregnancy is identified, while the third arm (control group) will receive routine care.

Preventing child overweight and obesity: In collaboration with the Canadian Institutes of Health Research (CIHR), MCA is developing an initiative to examine interventions to prevent overweight and obesity among children and adolescents and to reduce the risk factors for non-communicable diseases in later life. The research will focus on interventions founded on the concept of the Developmental Origins of Health and Disease.

As part of the initiative, CIHR will establish bilateral funding agreements with the National Science Foundation of China, the Indian Department of Biotechnology and the South African Medical Research Council. Research teams in each country will be jointly led by local and Canadian scientists, and will be jointly funded by the national research agency and CIHR. Intervention cohorts will be established to examine interventions that will start pre-conception and continue through pregnancy; children will be followed up to seven or eight years of age. Other countries in Asia, Central America and the Western Pacific have indicated their interest to participate. Calls for letters of interest will be released in each country in early 2016 and a joint protocol development workshop is planned for later in the year.

Special supplement published in the *Journal of AIDS* on implementation research: MCA and the HIV/AIDS Department provide technical support to six implementation research studies, two each in Malawi, Nigeria and Zimbabwe. The projects examine interventions to improve retention-in-care of women and mothers living with HIV. These include approaches to health systems' management of women attending facilities, communication strategies to improve follow-up by CHWs and establishing mothers' support groups or peer-support by mother mentors. The studies are led by local research groups and we expect that results will be analysed by the end of 2016.

The study designs of the six projects were published in a special supplement of the *Journal of AIDS*.[2] The supplement also included a paper considering definitions and methods of assessing retention-in-care as part of research and routine monitoring programmes, another examining how to take context into account when interpreting research findings, and an outline of an implementation research programme being led in parallel by the National Institutes of Health.


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Lancet series on breastfeeding: MCA led the development of a two-paper series that highlights the impact of breastfeeding on maternal and child health and its relevance for high-income countries as well as for low-and middle-income countries. The first paper presents the global epidemiology of breastfeeding and summarized the evidence of the impact of breastfeeding on maternal and child health. Using the Lives Saved Tool (LiST), the number of infant and child deaths avoided if breastfeeding practices improved was estimated to be 820 000, higher than previously reported. The paper also highlights the impact of breastfeeding on long-term outcomes including improved school performance and reduced obesity.

The second paper provides a historical perspective covering the Innocenti Declaration, the Convention on the Rights of the Child and the establishment of the Baby-Friendly Hospital Initiative. It describes evidence on how to improve breastfeeding rates. The paper contains two new analyses of the size of the breastmilk substitutes market (US$ 45 billion in 2014 and a projected US$ 70 billion in 2019) and the economic consequences of not breastfeeding. The paper suggests actions to protect, promote and support breastfeeding at policy, health system and community levels.

Systematic reviews examine the impact of breastfeeding on maternal and child health outcomes including mortality, child development, allergy and the risk of non-communicable diseases such as obesity or cancer. These reviews were published as a WHO-coordinated special supplement in *Acta Paediatrica*.[3]

New research findings on breastfeeding: MCA coordinated the largest analysis to date of the impact of early initiation of breastfeeding on newborn and infant survival. Data from about 100 000 mother-infant pairs confirmed that early initiation of breastfeeding is an important child survival intervention. In addition to increasing exclusive breastfeeding, early initiation works through other mechanisms, and the survival benefits continue up to six months of age. Results will be published in *Lancet Global Health*.

Improving the quality of paediatric care: results from a four-country initiative[4]

From 2012 to 2015, MCA supported an initiative to reduce child mortality by improving the quality of paediatric care in hospitals. Implemented in Angola, Ethiopia, Kyrgyzstan and Tajikistan, the initiative aimed to: 1) improve the quality of paediatric care in 40

[2] http://journals.lww.com/jaids/toc/2014/11011
[3] http://onlinelibrary.wiley.com/doi/10.1111/apa.2015.104.issue-S467/issuetoc
[4] http://www.who.int/maternal_child_adolescent/documents/paediatric-hospital-care-quality/en/

selected first-level or district referral hospitals, 2) expand implementation to a national level by building capacity and by adopting up-to-date national norms and standards in paediatric care based on the *WHO Pocket book for hospital care for children*, 3) update key WHO child health guidelines and tools based on experience gained and 4) introduce the concept of paediatric quality of care into basic health training.

The effort was guided by the WHO framework and comprehensive implementation model for improving quality of care. After baseline assessments, each participating country developed or updated national paediatric treatment guidelines and standards of care, and all participating hospitals introduced emergency triage and treatment. Nearly 1500 health workers were trained, mentored and supervised, and given key equipment.

Reassessments in 2014 and 2015 showed consistent improvement in the quality of care and a declining trend in the number of child deaths in hospital. Practices improved for managing cases of severe diarrhoea, pneumonia, febrile conditions and severe acute malnutrition, and for caring for newborns. Overall, the hospitals are now better organized and provide better care for children. The frequency of unnecessary hospitalizations and unjustified and painful paediatric procedures was significantly reduced in both Kyrgyzstan and Tajikistan. The more rational use of medicines, plus reductions in polypharmacy, unnecessary infusions and injections saved significant hospital resources. The initiative catalysed the introduction of the concept of quality improvement (QI) and increased national and partner investments in QI processes. Countries have now developed long-term plans and budgets for scaling up.

Integrated community case management of childhood illness (iCCM): lessons from Burkina Faso and Malawi

MCA coordinated a multi-partner effort aiming to reduce child mortality by 25% in selected districts in Burkina Faso and Malawi. Based on impact modelling using LiST, the intervention found to have the greatest potential impact in both countries was iCCM, and plans were developed accordingly. After three years of implementation, an independent evaluation indicated that under-five mortality had declined in the targeted districts of Burkina Faso by 6% relative to the comparison districts. In Malawi, the measured decline over approximately the same period was 30% nationwide.

Nonetheless, the evaluation could not find an association between the scale-up of iCCM and the reduction of child mortality in either country. In Burkina Faso, there were significant constraints with regards to access, quality and utilization of community child health services. In Malawi, despite the rapid scale-up of iCCM in hard-to-reach areas nationwide, changes in coverage of care-seeking for childhood illness at a population level could not be documented, the overall density of iCCM-trained community health workers remained low, and utilization at the aggregate national level was estimated to be less than one visit per child per year. The results of the evaluation are being published in the *American Journal of Tropical Medicine*, together with a commentary analysing the factors that might have contributed to these results. The overall conclusion was to ensure that implementation of iCCM is well embedded in a functional health system, that supply of services is matched with efforts to raise awareness and create demand, and that real-time monitoring with use of data is a critical component of iCCM implementation and scale-up.

Promoting early child development

Global estimates indicate that more than one third of all children worldwide are exposed to risks to their full development. Stunted growth, for example, affects more

than 156 million children in the first years of life. Many more grow up in poverty, are deprived of love because of parental stress or mental illness, or suffer maltreatment and neglect in the home. Early adverse experiences greatly increase the likelihood of poor health across the entire life course, including the risk of obesity, cardiovascular disease and diabetes. Adversities in early childhood also affect social outcomes such as low educational attainment, economic dependency, increased violence, crime, substance misuse and depression.

With MCA as the secretariat, a steering committee of global experts is synthesizing state-of-the-art evidence and preparing a new series of peer-reviewed articles on early child development (ECD) for release in 2016. This work is intended to stimulate planning and scale-up of ECD interventions in countries. WHO, UNICEF and other partners are building capacity for implementing Care for Child Development to lay the groundwork for this. Promotion of play and communication between a caregiver and a child, for example, can be integrated into a range of services, including well and sick child visits. The Department provided technical support for an inter-country workshop in Kenya, involving teams from eight African countries. A select group of participants was prepared as master trainers available to facilitate workshops for country teams. Similar courses are planned for other countries in sub-Sahara Africa, in the Eastern Mediterranean Region and in Asia.

Defining research priorities on adolescent health

During 2015, the methodology of the Child Health and Nutrition Research Initiative (CHNRI) was used to establish global research priorities in adolescent health. The exercise built on earlier work that defined research priorities for adolescent sexual and reproductive health and HIV, and added eight areas: communicable diseases, health systems, injuries and violence, management of non-communicable diseases, mental health, nutrition, physical activity, and substance use. Experts considered three specific research ideas in more detail. We plan to take forward an evaluation of the effectiveness of a package of adolescent health service interventions in low- and middle-income countries, trials of the effectiveness of brief psychological interventions for common mental health disorders in adolescents (with the Department of Mental Health and Substance Abuse), and the effectiveness of interventions to improve adolescent parenting in low-income countries.

Updating guidelines and recommendations

Improving outcomes of preterm birth

Every year, nearly 15 million babies are born before 37 completed weeks of pregnancy. Complications of preterm birth are the leading cause of death among children under 5 years of age, responsible for nearly one million deaths in 2013. Without appropriate treatment, those infants who survive complications of preterm birth are at increased risk of lifelong disability and poor quality of life.

New guidance to improve outcomes of preterm birth recommends interventions that can be provided to the mother when preterm birth is imminent and to the infant after birth. Interventions provided to the mother include steroid injections before birth, antibiotics when her water breaks and magnesium sulfate to prevent future neurological impairment of the child. Interventions for the baby include KMC and the use of oxygen and continuous positive airway pressure to provide respiratory support. The guidelines also specify the conditions under which interventions should be implemented to ensure that they are safe. For example, recent research shows that steroids to protect preterm babies can only be safely given where facilities can also provide round-the-clock special care.

Managing possible serious bacterial infection (PSBI) in neonates and young infants when referral is not feasible

Infections, including sepsis and meningitis, are responsible for more than 400 000 of the world's annual 2.7 million neonatal deaths; up to 160 000 more neonatal deaths are attributed to pneumonia. Nearly all deaths of neonates and young infants are in low- and middle-income countries.

WHO recommends that neonates and young infants (0 to 59 days, henceforth referred to as "young infants") with infection be referred to hospital for treatment with a 7- to 10-day course of benzylpenicillin or ampicillin plus gentamicin. This remains the standard of care. However, in many resource-limited settings hospitalization is not accessible, acceptable or affordable to families, and sick young infants do not get the swift and urgent treatment that would save their life.

Prompt treatment of neonates and young infants having signs of possible serious bacterial infection is essential to reducing mortality and disability.

To find a solution, WHO and partners supported community-based clinical trials in Bangladesh, Democratic Republic of the Congo, India, Kenya, Nigeria and Pakistan. These trials enrolled over 10 000 young infants and evaluated simplified antibiotic regimens to manage serious infections on an outpatient basis where referral was not possible. Results showed that it is possible for CHWs to accurately identify sick young infants with possible serious bacterial infection. More importantly, a substantial proportion of these sick young infants were successfully treated by physicians or nurses in outpatient situations using the simplified antibiotic regimens (*Lancet Glob Heal*. 2015; 3: e279–87 and *Lancet*. 2015; 385: 1767–76).

We have now issued a new WHO/MCA guideline, *Managing possible serious bacterial infection in young infants when referral is not feasible*.[5] The new guidance has been integrated into the updated version of Integrated Management of Childhood Illness (IMCI) being implemented in resource-constrained settings so we can demonstrate feasibility and gain experience for scale-up. Policy dialogue and orientation meetings held with ministries of health and partners at national and sub-national levels resulted in policy adoption and the establishment of six public-sector early implementation sites; an additional three will be set up in 2016.

The new guideline is intended for use in resource-limited settings when families do not accept or cannot access referral care.

Updating IMPAC Guidelines

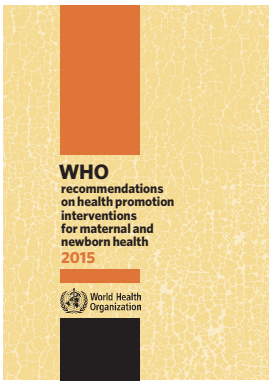
A review of new evidence led to a number of revisions in the clinical practice guides of *Integrated Management of Pregnancy and Childbirth* (IMPAC), *Pregnancy, Childbirth, Postpartum and Newborn Care* (PCPNC) and selected chapters of *Managing Complications in Pregnancy and Childbirth*.

Updating recommendations on HIV and infant feeding

WHO previously made a significant shift in recommendations for infant feeding by HIV-infected mothers, from an individualized approach of counselling HIV-infected women on feeding options to a public health approach of recommending one single feeding practice and antiretroviral (ARV) drug uptake. A technical consultation in 2014 considered new evidence and programmatic experience, leading to agreement on two recommendations and two best practice statements. The updated guideline is under external review.

[5] http://www.who.int/maternal_child_adolescent/documents/bacterial-infection-infants/en/

Health promotion interventions for maternal and newborn health



Working with individuals, families and communities to improve maternal and newborn health (MNH) implies incorporating the health promotion approach set out in the Ottawa and subsequent Charters into relevant strategies. In 2015 we updated the evidence and recommendations for selected interventions, including birth preparedness and complication readiness, male involvement in MNH, maternity waiting homes, and community participation and mobilization especially through women's groups.

The resulting guideline, *WHO recommendations on health promotion interventions for maternal and newborn health*,[6] summarizes the recommendations and the process used to develop them. The document targets health programme managers from governmental and non-governmental organizations as well as policy makers who are responsible for designing maternal, newborn and child health programmes, primarily in low-income settings. The recommendations will help countries decide whether a specific intervention should be implemented as part of a broader package for: (i) improving maternal and newborn health; (ii) improving the care provided within the household by women and families; (iii) increasing community support for maternal and newborn health; and (iv) increasing access to, and use of, skilled care during pregnancy, for childbirth and after birth.

Ensuring quality midwifery care for women, newborns and their families

The single most important barrier to quality midwifery care is gender inequality.

Evidence from a systematic mapping, presented at a consultation in December 2015, highlighted the socio-cultural, economic and professional barriers experienced by midwifery personnel in providing quality, respectful care for women, newborns and their families. The largest global survey of midwifery personnel to date (2470 respondents from 93 countries) described the critical barrier, as experienced by midwifery personnel, as gender inequality. This underlies a subsequent lack of visibility and opportunities to influence. A systematic review of interventions led to the identification of practical solutions, including improving teamwork to overcome institutionalized power structures and poor communication. The consultation also clarified the differences between midwifery (the care provided, as defined by the Lancet Midwifery Series 2014[7]), the midwife (International Confederation of Midwives (ICM) definition[8]) and the skilled birth attendant (SBA) (WHO-ICM-FIGO Statement 2004[9]). MCA managed the process in partnership with the ICM and the White Ribbon Alliance, with the participation of UNFPA, leading academics and WHO Collaborating Centres in Midwifery from all six regions. The recommendations of the consultation will inform the development of guidance on strengthening midwifery to improve quality of care and a new Global Midwifery Initiative to support implementation of the UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016–2030).

Differences have been clarified between midwifery (the care provided), the midwife and the skilled birth attendant.

MCA supported the development of midwifery policy by chairing both the steering committee for the UNFPA-WHO-ICM *State of the World's Midwifery* (SOWMy) Report,

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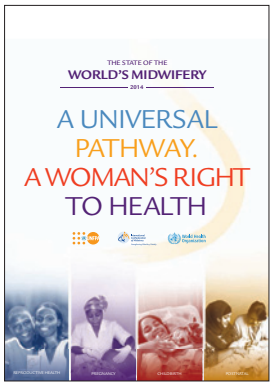
[6] http://www.who.int/maternal_child_adolescent/documents/health-promotion-interventions/en/
[7] http://www.thelancet.com/series/midwifery
[8] http://www.internationalmidwives.org/who-we-are/policy-and-practice/icm-international-definition-of-the-midwife
[9] http://www.internationalmidwives.org/who-we-are/policy-and-practice/icm-international-definition-of-the-midwife



launched at the ICM Triennial Congress in Prague, May 2014, and the Bangladesh SOWMy meeting in Dhaka. These experiences gave greater visibility to the vital role of midwifery in improving MNH. With support from all WHO regional offices, MCA also made significant contributions to the collection and analysis of national data from 73 countries.

In partnership with the authors of the Lancet Midwifery Series and stakeholders including UNFPA and ICM, MCA helped to develop global research priorities in the provision of both maternal and newborn health. We benefited from our strong links with the PMNCH to ensure wide participation in the scoring of the 30 research priorities identified. The Department also provided guidance on the methodology, analysed the data and supported writing a publication for release in early 2016. Evidence from the Lancet series has been incorporated into the draft standards on quality care in childbirth developed jointly between MCA and the Department of Reproductive Health and Research (RHR).

The increased visibility of WHO at regional and global midwifery conferences in 2014–2015 reflects the value of the formal collaborative agreement with the ICM, as well as strengthened partnership with UNFPA, JHPIEGO,[10] WHO Collaborating Centres and other stakeholders.

Two new tools to support midwifery care were prepared by MCA during the biennium:

- The first draft of the Essential childbirth care course, a tool for quality, respectful care in cases of normal childbirth;
- An algorithm, a flip chart and a cartoon strip for use by midwives during antenatal care to promote tobacco cessation in pregnancy with the aim of reducing stillbirths and increasing birth weight (in collaboration with the Tobacco Free Initiative).

We also worked with RHR in developing the post-natal family planning compendium, an on-line tool currently being field tested by midwifery personnel.

With UNFPA we supported an evaluation of the SBA strategy in Lao People's Democratic Republic, which led to revised national guidelines for midwifery education, a stronger monitoring plan and a shift in focus from SBAs to midwifery. A joint WHO-UNFPA review of the Guinea-Bissau midwifery programme resulted in recommendations to strengthen the Health Education College.

Revised recommendations for pneumonia treatment in health facilities

New recommendations for the treatment of chest indrawing pneumonia with oral antibiotics led to a revision in the way pneumonia severity is classified. The new classification includes only two categories: 1) "pneumonia" with fast breathing and/or chest indrawing, which requires home therapy with oral amoxicillin and 2) "severe pneumonia", with any general danger sign, which requires referral and injectable therapy. At the same time, dosages of oral amoxicillin for pneumonia treatment at health facilities were revised to reflect three age bands: 2 months up to 12 months (4–<10 kg); 12 months up to 3 years (10–<14 kg); 3 years up to 5 years (14–19 kg).

New recommendations for treating pneumonia will reduce the need for referral and lead to better treatment outcomes.

These recommendations will reduce the need for referral, and lead to better treatment outcomes. National child health programmes are encouraged to incorporate the new recommendations into their existing guidelines for care at health facilities. The recommendations concerning the use of amoxicillin should also be included in

[10] Global health services treatment and prevention

guidelines for integrated community case management, however dosages and age bands for treatment of fast breathing pneumonia by CHWs have not changed.

Three derivative documents, a *Quick Reference Guide, Policy Implications*, and *Evidence Summaries* consolidate the new recommendations and the evidence that supports them, and guide national child health programmes in revising and implementing their guidelines. These documents are available in print and electronic formats in English and French.[11]

Updating Emergency Triage, Assessment and Treatment (ETAT)

Rapid triage and appropriate emergency treatment are central to averting numerous deaths of children during their first 24 hours in hospital. Paediatric ETAT provides the basis for an adequate process. In light of new evidence, a WHO guideline development group identified three priority areas of care and specific recommendations needing updating: 1) detection of hypoxia and use of oxygen therapy, 2) fluid management of infants and children presenting with impaired circulation and 3) management of seizures. The revised recommendations are intended for use in low-resource settings where infants and children are likely to be managed by non-specialists, and will be used to update ETAT guidelines in 2016.

Developing IMCI recommendations to prevent overweight and obesity among children and adolescents

The global epidemic of child and adolescent obesity affects all regions, including countries where undernutrition remains common. To date, IMCI guidelines have not included reference to overweight or obesity. In response, MCA and the Department of Nutrition for Health and Development (NHD) identified four areas of care where recommendations should be developed to guide practices for children presenting to primary health care facilities:

- Assessing infants and children;
- Care of infants and children with acute or chronic undernutrition;
- Care of infants and children who are overweight or obese;
- Management of infants and children with a history of low birth weight.

Defining WHO Global standards for quality health care services for adolescents

Setting standards for quality health care services reduces variability and ensures a minimal required level of quality to protect the rights of adolescent clients. Yet, evidence from both high- and low-income countries shows that services for adolescents are highly fragmented, poorly coordinated and uneven in quality.

In 2014, MCA finalized *Global Standards for quality health care services for adolescents*. Development of the document followed a four-stage process: conducting a needs assessment, defining the global standards and their criteria, holding expert consultations and assessing the usability of the standards. WHO is working with the UNFPA East and Southern Africa Regional Office and the International Planned Parenthood Federation Africa Regional Office on assessing the quality of service provision to adolescents in 23 countries. This assessment will inform a plan for scaling up implementation of the global standards.

MCA has also developed tools to accompany use of the standards. An implementation guide outlines actions to be taken at national, district and local levels. Tools to measure quality and coverage enable countries to measure progress against standards and inform actions.

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[11] http://www.who.int/maternal_child_adolescent/documents/child-pneumonia-treatment/en

Quality measurement tools: Adolescent client exit interview tool, Health facility management interview tool, Observation tool and checklist for facility inventory, Client-provider interaction observation, Health-care provider interview tool, Support staff interview tool, Adult client exit interview tool.

Coverage measurement tools: Community member interview tool, Adolescent in the community interview tool.

The global standards were adapted for Latin American and Caribbean countries and for Benin. We presented the standards at regional and sub-regional meetings, as well as at national and international conferences.

Updating guidelines on improving treatment and care of adolescents living with HIV

To ensure that adolescent-related issues are adequately addressed in the updated *Consolidated Guidelines on the use of ARVs for treating and preventing HIV infection*, MCA and the HIV/AIDS Department convened experts to review the existing data. Background papers for the meeting included a systematic review of clinical outcomes and issues related to anti-retroviral therapy (ART) for adolescents, a systematic review of service delivery interventions to improve linkage, retention and adherence to ART among adolescents living with HIV, a situation analysis of adolescent HIV treatment and care in sub-Saharan Africa, a report of a community consultation with adolescents and young people living with HIV, and a mapping exercise that identifies and highlights gaps in ongoing research.

The meeting led to an assessment of the effectiveness of adolescent-friendly health services compared to standard care for adolescents living with HIV. Due to the limited evidence identified prior to the meeting, the approach was broadened to include the general adolescent population and young people up to 24 years. Results suggest strong support for incorporating WHO-defined adolescent-friendly approaches to service delivery in the new guidelines.

Supporting impact on the ground

Ending preventable maternal and newborn mortality

This was a ground-breaking period for maternal and newborn health. The World Health Assembly endorsed the Every Newborn Action Plan (ENAP)[12] and the goals and targets of strategies for Ending Preventable Maternal Mortality (EPMM).[13] These initiatives put forward global and country-specific targets for ending preventable maternal and newborn mortality by 2030 and articulated clear strategic objectives. They also provided a foundation for developing the UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016–2030).

Following a launch of the two initiatives in 2015, we worked with RHR to accelerate quality improvement in maternal, newborn and child health services. We built a broad-based coalition of governments, technical partners and funding agencies for effective, scalable and sustainable approaches to improving quality. The coalition intends to provide proof of concept that we can institutionalize quality of care in health systems and substantially reduce maternal and newborn mortality and stillbirths within one generation.

[12] http://apps.who.int/iris/bitstream/10665/127938/1/9789241507448_eng.pdf?ua=1
[13] http://www.everywomaneverychild.org/images/EPMM_final_report_2015.pdf

Implementing the Every Newborn Action Plan and Ending Preventable Maternal Mortality

MCA and partners help to implement, monitor and evaluate ENAP and EPMM in countries and presented a progress report to the World Health Assembly in 2015. By the end of that year, 41 countries had developed national newborn action plans or strengthened maternal and newborn components within existing plans. A further 11 countries were in the process of strengthening their plans. In the Western Pacific Region the First Embrace initiative is mobilizing action in eight countries to improve early essential newborn care.

We are developing a common platform for action around the goals and objectives of the initiatives, to ensure coordinated responses in countries. Indicators to assess progress in achieving the targets will be included in the monitoring framework that WHO is setting up for the health-related SDGs; progress will be reported regularly to the World Health Assembly.

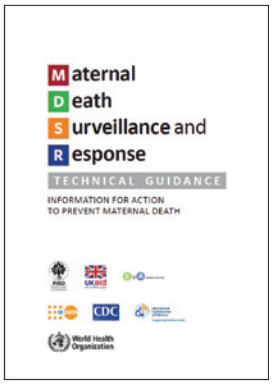
Joint resolution WHO–African Union Commission (AUC)

MCA/HQ worked with the African Region to develop a joint WHO–AUC resolution on Ending preventable maternal and child deaths in Africa. On the African continent only a handful of countries achieved MDG5. In addition, sub-Saharan Africa has the largest proportion (10%) of maternal deaths attributed to HIV. In line with the 2014 African Union Heads of State Summit Declaration on Maternal, Newborn and Child Health (MNCH) and the African Union MNCH Action Plan, the resolution highlights major issues and strategic considerations in achieving targets.

Improving maternal care in hospitals

Despite a significant increase in coverage of life-saving interventions, countries in Africa and South Asia still account for a large proportion of maternal and child deaths, and improving the quality of care (QoC) at hospital level has become increasingly crucial. In a series of workshops, more than 120 participants from 21 African countries learned to use the maternal health module of the *Integrated tool for assessing MNCH quality of care* in first-referral level hospitals and to strengthen implementation of MDSR. The workshops helped participants to become familiar with the concept of quality of care, including its specific definition, dimensions and framework.

Support was also provided to train national assessors and conduct QoC assessments in more than 60 hospitals in five countries (Burkina Faso, Cote d'Ivoire, Democratic Republic of the Congo, Malawi and Swaziland). This training included an overview of the QoC tool and how to administer the five sections: 1) general/administration, 2) maternal care, 3) neonatal care, 4) child care and 5) guides for key informant interviews with health workers, caregivers and postnatal mothers. A group of consultants has been identified and prepared to provide technical support for countries in need.



Supporting Maternal death surveillance and response (MDSR)

MDSR is a continuous cycle of identification, notification and review that informs actions to prevent future maternal deaths. We lead the global MDSR working group that supports countries in this process. In October 2015, a global workshop on MDSR was organized at the World Congress of Obstetrics and Gynaecology in Vancouver, Canada to review and

share experience among representatives of professional organizations, civil society organizations, academic institutions, UN and bilateral agencies and foundations.

A WHO-UNFPA global survey among Member States provides baseline information on MDSR implementation and will allow more accurate targeting of support and measurement of progress over time. Case studies describing the implementation process, challenges, success factors and innovations were published to serve as a learning platform for other countries and implementers. Findings of the survey as well as 59 country profiles are available at www.who.int/mdsr. The survey will be conducted at regular intervals.

Perinatal death review

Following on progress with MDSR implementation, many countries have requested guidance for review of perinatal deaths. Due in part to issues related to misclassification of stillbirths and neonatal deaths, this type of review required significant attention and support. The draft guidance tool was reviewed during a technical consultation in September 2015, and inputs were provided separately on a proposed new classification of perinatal deaths. The tool will be field-tested in 2016.

Community mobilization for MCH: Training package

In settings where maternal and neonatal mortality are high, many deaths and health problems could be prevented by simple interventions organized with the community. MCA and partners have developed a training course to guide implementation of the 2014 WHO recommendation on community mobilization through, for example, women's groups practicing the Participatory Learning and Action (PLA) process. This course, which also supports the WHO/UNICEF package *Caring for newborns and children in the community*, is divided into five modules:

1. An overview of the PLA group programme including the approach and cycle.
2. Guidance in PLA group programme design.
3. Facilitation skills, MNH knowledge and facilitation of meetings in the PLA group cycle.
4. Supervision skills, MNH knowledge and supervision of the PLA group approach.
5. Managing the PLA group approach.

H4+ Technical brief: Strengthening the capacity of community health workers to deliver care for sexual, reproductive, maternal, newborn, child and adolescent health (RMNCAH)

Government institutions, UN agencies and other global partners have been repositioning the role that CHWs can play in increasing access to essential quality health services for primary health care and to achieve universal health coverage. Given the growing momentum and interest in training and deploying CHWs, the UN health agencies (H4+) developed a technical brief on key elements for strengthening the capacity of this cadre. The brief covers health system and programmatic considerations, core competencies, and evidence-informed interventions along the RMNCAH continuum of care.

Certain elements need to be adapted by countries to reflect the structure, gaps and opportunities of their national primary health care system, the interaction between health and other sectors and the specific roles and competencies that CHWs have within that system. These elements will also guide United Nations partners to take a joint and harmonized approach to supporting countries in building capacity.

Adapting CHW training packages to integrate actions for HIV and TB

Country uptake of community-based child health interventions has been remarkable, particularly integrated community case management of diarrhoea, pneumonia and malaria and home visits for newborn care. At the same time, relatively few HIV- and TB-exposed infants are identified early and linked to care; others may be lost to follow-up along the continuum of care.

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WHO, UNICEF and partners capitalized on existing tools and services in a significant step towards improving coverage of HIV- and TB-related interventions for mothers and children. A series of interdisciplinary consultations helped to adapt *Caring for newborns and children in the community*. The adapted package recognizes the critical role that CHWs play in increasing access to HIV- and TB-related interventions. It has since been introduced in Malawi and Zambia.

Promoting child rights

In 2014–2015, we continued our efforts to address the human rights dimensions of newborn, child and adolescent health, in close collaboration with a range of partners. Following the earlier submission of the *WHO report on mortality among children under 5 years of age as a human rights concern* to the United Nations Human Rights Council, that body requested WHO to work with the Office of the UN High Commissioner for Human Rights (OHCHR) to prepare "concise technical guidance on the application of a human rights/based approach to the implementation of policies and programmes to reduce and eliminate preventable mortality and morbidity of children under 5 years of age".[14] MCA led the overall coordination of partners, and incorporated input from an external advisory group of human rights and child health experts, a public consultation and responses to a note verbale circulated to governments, national human rights institutions and civil society organizations. The document outlines the key elements of a human rights-based approach to reducing child mortality and morbidity, and provides tangible, concrete measures including in the areas of legislation, coordination, planning, budgeting, implementation and international cooperation. It is primarily directed towards health decision-makers and policy-makers, but is relevant to other sectors including finance and education, parliamentarians, the judiciary, health service providers and civil society organizations. The guidance was launched during a high-level event hosted by the governments of Botswana, Ireland, Mongolia and Uruguay.

[14] Technical Guidance on the application of a human rights-based approach to the implementation of policies and programmes to reduce and eliminate preventable mortality and morbidity of children under 5 years of age. A/HRC/27/31. Human Rights Council 27th Session; 2014.

WHO and OHCHR have since undertaken activities aimed at dissemination and early application of the recommendations. At the request of UNICEF and the UN Country Team, a field visit to the Dominican Republic was conducted to introduce the guidance. A national consultation on child health and child rights was also organized in the United Republic of Tanzania. In addition, user-friendly versions of the WHO report and technical guidance were prepared. With the PMNCH, we produced a Knowledge Summary to support application of the guidance. We also addressed the issue of human rights and child health, and the technical guidance, at the 2015 European Paediatrics Conference, through an inaugural statement and a workshop.

The WHO European Region made significant progress in applying child rights standards in efforts to improve quality of care for children in hospitals and in community settings. The guidance and the regional rights-based assessment tools are informing the development of human rights-based standards for the global quality of care framework for child health, and a checklist for assessing rights-based legal, regulatory and policy frameworks.

Increasing access to training and guidance on child health

We developed innovative methods, distance learning and an e-Pocket book to allow greater numbers of health workers to be trained in IMCI and to have access to practical guidance on hospital care.

IMCI distance learning. Standard IMCI training requires health workers to travel and spend two weeks in classroom and clinic, a barrier for many healthcare providers. In 2014, we published paper-based materials for IMCI distance learning[15] as an alternative. The two core learning components of this course are 1) face-to-face meetings where facilitators introduce new material, review self-study progress and facilitate clinical practice and 2) self-study periods carried out between the face-to-face meetings. This approach allows participants to learn at their own pace through reading, study, and clinical practice. They also work with mentors, arrange study groups with fellow participants in their area, and seek support within their facility.

The distance learning materials include nine self-study modules, a facilitator guide for the face-to-face meetings and an implementation guide to assist adaptation. The self-study modules are: general danger signs for the sick child, the sick young infant, cough or difficult breathing, diarrhoea, fever, malnutrition and anaemia, ear problems, HIV/AIDS and care of the well child.

WHO e-Pocketbook of hospital care for children. In an effort to increase access to the practical guidance on hospital care for children, we published an iOS and android platform application for smart phones and tablets. The WHO e-Pocketbook is the electronic version of the widely used *Pocket book of hospital care for children*. It provides up-to-date, evidence-based clinical guidelines for children requiring hospital care. The application includes guidance on the stages of management for every child: Triage and emergency treatment, History and examination, Laboratory investigations, Supportive care and monitoring, Discharge planning and Follow-up. The application was developed in collaboration with the Royal Children's Hospital Melbourne, the University of Melbourne and Murdoch Children's Research Institute, and can be accessed universally.[16]

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[15] http://www.who.int/maternal_child_adolescent/documents/9789241506823/en/

[16] iOS platform: http://appshopper.com/medical/who-e-pocketbook-of-hospital-care-for-children; Android platform: https://play.google.com/store/apps/details?id=au.org.rch.hospitalCareForChildren

Updating the IMCI chart booklet

The IMCI chart booklet[17] describes a series of steps for managing sick young infants and children, and provides information for performing each step. It is used by health professionals providing care to sick children, in particular at the primary care level where there is limited capacity for diagnostic testing.

Using our technical updates we revised the chart booklet for:

- assessment, classification and antibiotic treatment for pneumonia;
- assessment and classification of fever to include use of the rapid diagnostic test for malaria;
- assessment, classification and treatment of malnutrition and the assessment of anaemia in malaria high-risk areas;
- assessment for HIV infection in children to ensure early diagnosis and confirmation of HIV infection, as well as the use of ARV for prevention and treatment;
- feeding recommendations including in HIV infected/exposed children; Assessment and management of the sick young infant with HIV infection, infant feeding and care of HIV-exposed infants.

Multimedia materials to support implementation of iCCM

The Department is working with a diverse group of health professionals coordinated by staff in the Institute of Child Health, University College London to develop an Electronic Resources Package to support iCCM. The package is based on video materials illustrating assessment of clinical signs and case management procedures. Although the first version is tailored to the needs of Malawi, with minor modifications such as language and voice-over, it will eventually serve a global audience. The materials are grounded in formative research carried out with end users and have been formatted to allow for formal group teaching, continuing education and self-directed learning. They can be easily adapted for different devices and will be made available free of charge on learning.worldmedicaleducation.org in 2016.

NEW REPORT: Health for the world's adolescents. A second chance in the second decade

Health for the World's Adolescents is a dynamic, multi-media, online report that puts forward the arguments for giving special attention to adolescent health, distinct from child and adult health. We coordinated this effort, which involved inputs from 12 WHO departments and all WHO regional offices. Input was also received from technical experts, 735 primary care providers from 81 countries and 1143 adolescents aged 12–19 years from 104 countries. The report serves as the first repository for all WHO recommendations and key tools that relate to adolescent health. It also includes a new analysis of 2012 global and regional estimates of adolescent mortality and disability-adjusted life years (DALY), and compares them with data from the year 2000. It presents new health-related behaviours and trends, reviews how the adolescent age group figures in national health policies, and focuses attention to adolescents in national mental health policies. In addition to the online report, a summary was produced in print format in Arabic, Chinese, English, French, Russian and Spanish.[18]

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[17] http://apps.who.int/iris/bitstream/10665/104772/16/9789241506823_Chartbook_eng.pdf
[18] http://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/

By the end of 2015, the website had been viewed 76 252 times. A total of 57 230 persons have opened the site reading 301 211 pages. Approximately one third of the total views were revisits. The report has been viewed by individuals from over 208 countries, the top 10 of which are (in order) the USA, the United Kingdom, India, Canada, Australia, Philippines, France, Switzerland, the United Arab Emirates and Kenya.

Improving core competencies on adolescent health and development for health care providers in primary care settings

Health for the world's adolescents suggests that progress towards universal health coverage for adolescents will require renewed attention to the education of health care providers. To support this, we developed *Core competencies in adolescent health and development for primary care providers*.[19] This document argues for investing in an adolescent-competent workforce, and provides the latest evidence on how this can be done through basic and continuous professional education. We also supported institutions involved in the basic education of health care professionals from selected countries to assess the structure, content and quality of the component on adolescent health, and to develop recommendations for improvement. By fostering the capacity of health care providers in this way, the *Core competencies* document contributes to country implementation of the global standards for quality health care services for adolescents.

The document is available in English, French and Spanish and is accompanied by a policy brief.[20]

WHO and the UNFPA East and Southern Africa Regional Office are carrying out a review to assess the level of institutionalization of competency-based pre- and in-service training for health care providers in 23 countries. Data have been collected and recommendations are being developed. The assessments will inform plans for scaling up quality education in adolescent health and development.

Supporting countries and regions in strategy development for adolescent health

We supported countries (Burkina Faso, Egypt, Ethiopia, Ghana, India, Kenya, Lesotho, Myanmar, Nepal, Sri Lanka, United Republic of Tanzania and Uzbekistan,) and regions (Africa, The Americas, South-East Asia and the Eastern Mediterranean) in developing comprehensive strategies, plans and pre-service assessments, in promoting a life-course approach through preconception care interventions and in strengthening school health services.

Global Accelerated Action for the Health of Adolescents (AA-HA!) Framework

At the World Health Assembly in May 2015 Member States supported the Secretariat's proposal to prepare a draft *Global Accelerated Action for the of Health Adolescents (AA-HA!) Framework*. The framework will be considered at the 2017 Assembly to allow sufficient time for consultation with Member States, UN partners, young people and other stakeholders, and to ensure that it is fully aligned with, but does not duplicate the operational framework for the Global Strategy on Women's, Children's and Adolescents' Health (2016–2030). The framework will aim to assist countries and regions to make more progress on adolescent health in the coming two decades than in the past. It will provide Member States with a basis for developing and implementing

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[19] http://www.who.int/maternal_child_adolescent/documents/core_competencies/en/
[20] http://apps.who.int/iris/bitstream/10665/183151/1/WHO_FWC_MCA_15.05_eng.pdf?ua=1

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coherent national plans for improving the health of adolescents and for involving adolescents and youth in deciding priorities and actions.

Teaching short courses on "adolescent health in low- and middle-income countries"

A joint London School of Hygiene and Tropical Medicine (LSHTM)/WHO two-week face-to-face course on "adolescent health in low- and middle-income countries" has been run in London annually since 2000. This course led to a six-week Massive Open Online Course (MOOC) on maternal, adolescent, reproductive and child health, run by the LSHTM and Future Learn in September–October 2015, which reached more than 5000 participants. The MOOC will be repeated in February–March 2016. A modified version of the face-to-face course was also held in India by the Public Health Foundation and in Nigeria by Obafemi Awolowo University. Plans are under way for the course to be adapted and implemented in South Africa by the Africa Centre for Health and Population Studies.

II. Evaluating and monitoring progress on MNCAH

Harmonizing metrics for maternal and newborn health

The Department serves as co-chair of the Metrics Group of ENAP and provides inputs to Ending Preventable Maternal Mortality, both of which focus on the mother and foetus/infant, particularly around the time of birth. The WHO Executive Board endorsed the development of an integrated monitoring and evaluation framework for ending preventable maternal and newborn mortality, and MCA is committed to developing and ensuring a harmonized approach to measurement. In this light it periodically convenes experts to review current work, identify gaps in the measurement agenda and provide guidance on reporting progress in maternal and newborn health.[21]

Monitoring and evaluation framework and tools for GAPPD

The integrated *Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea* (GAPPD) outlines actions for eliminating preventable child deaths from these two illnesses and provides an innovative framework for integrating the planning, delivery and monitoring of health interventions through a multi-sectorial coordinated approach. A new monitoring and evaluation framework, to be tested in 2016, defines indicators and provides guidance on implementing the review process.

Estimating causes of child mortality

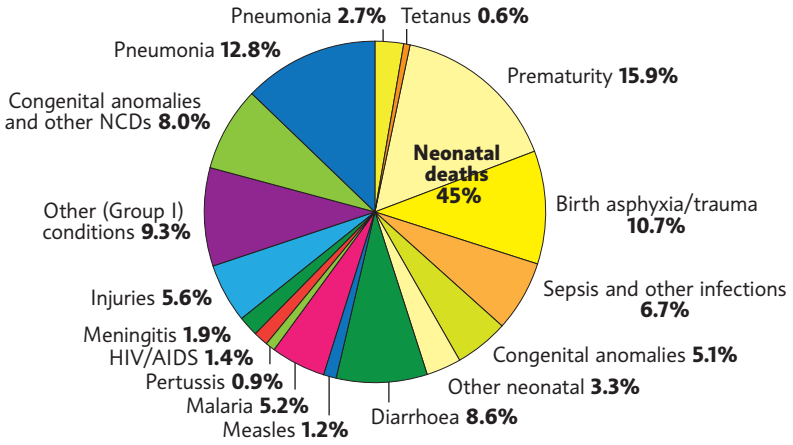
In the biennium, MCA continued to contribute to the work on the estimating country, regional and global causes of neonatal and under-five deaths. The main causes of death in these age groups remain the same: prematurity, pneumonia, birth asphyxia/trauma and diarrhoea. These conditions have shown little change in their relative contribution to the overall 5.9 million under-five deaths. Malaria, however, has had an important drop in the past two years, from 7.3% in 2013 to 5.2% in 2015.

Estimates of rotavirus mortality levels and trends among children under 5 years of age

Rotavirus vaccine is recommended for routine use in all countries. MCA, together with the Department of Immunization, Vaccines and Biologicals (IVB) and the US Centers for Disease Control and Prevention (CDC), has been providing estimates of rotavirus mortality for children under 5 years of age since 2004. Modelled estimates are designed to help countries decide whether nor not to adopt rotavirus vaccine, to guide donors in prioritizing investments in health interventions and to monitor vaccine impact. A time series with estimates from 2000–2013 was also calculated based on information obtained through a literature review on children hospitalized with diarrhoea and from the WHO Global Network for Rotavirus Surveillance. A 59%

[21] The full report of the 2014 consultation is available at http://www.who.int/maternal_child_adolescent/documents/newborn-health-indicators/en/

Major causes of death in neonates and children under 5 years of age, World, 2015



45% of global under-five deaths are associated with nutrition-related factors*

Sources: (1) WHO. Global Health Observatory (http://www.who.int/gho/child_health/en/index.html)
(2) *For undernutrition: Black et al. *Lancet*, 2013

decline was estimated in the global numbers of rotavirus deaths in children less than 5 years of age, from 528 000 in the year 2000 to 215 000 in 2013. Regional-level and country-level numbers were also estimated. While rotavirus vaccine had been introduced in more than 60 countries by the end of 2013, most were low-mortality countries and thus the impact on global estimates of rotavirus mortality has been limited.

Identifying causes of death among children 5–14 years of age

Recent decades have witnessed significant efforts to estimate levels and causes of death among infants and children less than 5 years of age. Attention to the health of young people 15–24 and of adolescents 10–19 years of age has also gained momentum, with a number of relevant studies and publications. However, little attention has been

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given to children between 5 and 14 years of age, and there is a dearth of information about the 1.4 million annual deaths that occur in this age range.

Valid information about cause-specific mortality is essential for national and international health policy. Building on work initiated by WHO in the early years of this millennium, MCA and the Centre for Global Health Research, Canada have mapped and reviewed the existing literature on causes of death among children in this age group in low and middle-income countries, investigated the geographic distribution and summarized the findings.

The European Region also identified this age group as a top priority. Compared to many other regions in the world, European countries have relatively well-functioning, high quality Civil Registration and Vital Statistics (CRVS) systems with acceptable levels of completeness and coverage. With the Regional Office for Europe we initiated a joint study to review and summarize the information available from CRVS and other sources, to assess the quality of those data, and to analyse country and regional cause-specific levels of mortality, distribution and trends since 1990.

Support for global and national scorecards for RMNCH

Global and national scorecards for RMNCH enable better monitoring of relevant indicators and help to enhance transparency, accountability and action. Global scorecards, available for the 75 high-mortality countries, include all 11 indicators recommended by the Commission of Information and Accountability (CoIA). We have supported this effort by developing and regularly updating global RMNCH scorecards and by participating in the development and follow-up of national initiatives.

We also contributed to the preparation of the African Leaders Malaria Alliance scorecard for Accountability and Action. RMNCH scorecards have been used in 26 countries in Africa with support from WHO staff from headquarters, the regional office and country offices. MCA provided direct support to Burkina Faso, Ghana, Madagascar, Senegal and Zimbabwe.

RMNCH programme review

We have built capacity in five countries (Benin, Botswana, Côte d'Ivoire, Morocco and Namibia) to conduct RMNCH programme performance reviews. The countries aim to improve access to and quality of services for sexual and reproductive health and MNCH, with particular emphasis on the national Road Map for Accelerating the Reduction of Maternal and Neonatal Mortality, IMCI, the Nutrition Strategic Plan and the Family Planning programme.

Adolescent health indicators

Indicators to monitor the health status of adolescents nationally and globally can assist countries to collect the most useful data to inform policy and programming. Consensus was reached among partners on a core list of indicators that align with those included in other WHO documents (for example, the *Global reference list* of 100 core health indicators). The final list consists of 20 core and seven additional indicators; three more have been suggested for inclusion but will require further development.

III. Moving from MDGS to SDGS

We played an important role in the development of the UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016–2030), in the definition of relevant targets and in building the business plan for the Global Financing Facility.

Global Strategy for Women's, Children's and Adolescents' Health (2016–2030)

The UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016–2030), launched in September 2015, is a roadmap for ending all preventable deaths and improving the overall health and well-being of women, children, and adolescents by 2030. With ambitious yet achievable targets, and fully aligned with the SDGs, the new Global Strategy moves beyond reductions in mortality to a vision of health through the life-course. It aims to ensure that women, children and adolescents thrive, and that the societies they live in are transformed. To support the development of the strategy, we provided evidence on health interventions and helped to develop an operational framework for putting the strategy into action.

We were also instrumental in publishing three papers in the September 2015 supplement to the *British Medical Journal*, Towards a new Global Strategy for Women's, Children's and Adolescents' Health.[22]

Global Financing Facility

The Global Financing Facility (GFF) was launched in July 2015 at the Financing for Development Conference in Ethiopia. In support of the Global Strategy, the GFF acts as a pathfinder in a new era of financing for development. It pioneers a model that shifts away from focusing solely on official development assistance to combining external support, domestic financing, and innovative sources including the private sector.

We provided technical support to four frontrunner countries (Democratic Republic of the Congo, Ethiopia, Kenya and the United Republic of Tanzania) to develop their investment cases. Work is under way to go to scale in other countries that contributed to 88% of all child and maternal deaths globally. We are also taking a lead in developing modalities for country platforms and quality assurance mechanisms to inform the development of GFF guidance notes.

In addition, we organized a workshop on how best to support countries to develop and finance sound investment plans for women's, children's, and adolescents' health. Forty-six participants representing countries and partners focussed on three interconnected issues: strengthening country level investment plans, streamlining planning tools and improving the development impact of technical assistance.

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[22] http://www.bmj.com/content/women%E2%80%99s-children%E2%80%99s-and-adolescents%E2%80%99-health-0

Countdown to 2015

The 2015 Countdown Report marks the end of the MDG era. The report is a celebration of achievements in women's and children's health as well as a call for further action and accountability. This report analyses decade-long trends in coverage, equity, systems, policies and financing of RMNCH for 74 countries. It shows the acceleration of positive trends in recent years as well as some failures. Over the lifetime of the Countdown, MCA provided information, analysis and tools and served as a platform for access to relevant decision-makers in countries.

Malawi: country case study

Because Malawi was one of the few countries in sub-Saharan Africa deemed likely to achieve MDG4, the Countdown to 2015 selected the Malawi National Statistical Office, with technical support from WHO, to lead an in-depth case study to explain the country's success. Using data from five district-representative household surveys the analytic and writing team estimated child and neonatal mortality and recalculated coverage indicators for the years 2000 to 2014. Key drivers of and barriers to change were identified through documentation of MNCH programmes and policies and by an analysis of health financing since 1990.

Results from the LiST analysis show that about 280 000 child lives were saved between 2000 and 2013, attributable to increases in treatment for diarrhoea, pneumonia and malaria (23%), use of insecticide-treated bednets (20%), and immunization (17%). The case study highlighted that the Government of Malawi was an early adopter of policies supportive of child survival. Findings were shared in a national Countdown meeting, bringing together health managers from national and district levels and leading to the launch of a national newborn action plan and a child survival strategy. The study was published in the 21 January 2016 issue of Lancet Global Health.

Working with the RMNCH Strategy and Coordination Team and the RMNCH Fund

The RMNCH Strategy and Coordination Team, of which we are a member, acts as the secretariat for the RMNCH Steering Committee. This committee brings together donors, technical agencies, governments and civil society to share information about progress on global initiatives and events, to discuss progress towards global goals and potential bottlenecks affecting implementation and scale-up, and to discuss ways to better respond to the needs of countries. The committee has been vital in developing the GFF and its related mechanisms.

The Strategy and Coordination Team also manages the RMNCH Fund, a multi-donor trust fund that makes catalytic investments to fill country gaps. These resources are used in part to support the RMNCH Country Engagement Process, which then creates opportunities to raise additional funding. By the end of 2015 this process resulted in channeling about US$ 200 million from the RMNCH Fund to 18 countries.[23] WHO alone channeled nearly US$ 39 million for activities such as translating global guidelines into national policies and plans, carrying out a strategic analysis of the RMNCAH situation, supporting MDSR, improving the quality of care, strengthening procurement and supply chain management systems and building capacity.

[23] Afghanistan, Benin, Burkina Faso, Cameroon, Democratic Republic of the Congo, Ethiopia, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Pakistan, Senegal, Sierra Leone, Uganda, the United Republic of Tanzania, Zambia.

VI. Acknowledgements

We would like to express our appreciation of the support provided to the Department during the period 2014–15. Special acknowledgement goes to the governments of:

Canada, China, France, Ireland, Italy, Luxembourg, Norway, the Russian Federation, Sweden, and the United States of America,

and to the following agencies and foundations:

African Leaders Malaria Alliance

Bill & Melinda Gates Foundation

Child Health Research Foundation

Intervida, Spain

Novartis Foundation for Sustainable Development

Save the Children Foundation

The Alliance for Health Policy and Systems Research

The Global Fund to fight AIDS, Tuberculosis and Malaria

The Partnership for Maternal, Newborn and Child Health

The World Bank

U.S. Centers for Disease Control and Prevention

United Nations Joint Programme on HIV/AIDS (UNAIDS)

United Nations Children's Fund (UNICEF)

United States Fund for UNICEF

United Nations Development Programme (UNDP)

United Nations Population Fund (UNFPA)

University of Bergen

University of British Columbia

In addition, MCA would like to thank those governments who contributed to WHO flexible funding.

Annex 1
MCA documents, tools and guidelines

2015

1. Guideline: Managing possible serious bacterial infection in young infants when referral is not feasible. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/181426/1/9789241509268_eng.pdf?ua=1).
2. Classification et traitement des cas de pneumonie chez l'enfant dans les établissements de santé selon l'OMS : version révisée. Résumé des données. Geneva: World Health Organization; 2014.
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Annex 2
Publications in peer-reviewed journals

PAPERS REPORTING FINDINGS OF RESEARCH STUDIES

2015

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RESEARCH PRIORITIZATION EXERCISES

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For more information please contact:

Department of Maternal, Newborn, Child and Adolescent Health (MCA)
World Health Organization
20 Avenue Appia
1211 Geneva 27
Switzerland

Tel: + 41 22 791 32 81
Fax: + 41 22 791 48 53
E-mail: mncah@who.int
Website: www.who.int/maternal_child_adolescent

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