Saving the Lives
of Mothers & Children
Rising to the Challenge

Iraq

I. Introduction

Iraq is located in the Middle East. The geography of Iraq is diverse and falls into four main zones or regions: the desert in the west and southwest; the rolling upland between the upper Tigris and Euphrates rivers; the highlands in the north and northeast; and the alluvial plain through which the Tigris and Euphrates flow. Iraq's official statistical reports give the total land area as 438 446 km^2. Iraq's population almost tripled between 1970 (10 million) and 2010 (almost 32 million). Currently, the Iraqi population presents a broad youthful-based composition, with 43% under the age of 15 and 16% under the age of 5 years[1]. Two thirds of the population (66%) live in urban areas[2].

Sociodemographic characteristics

The 31.6 million population is young: 43% are under the age of 15 years and 16% are under 5 years. Although the fertility rate has decreased in the past decades, Iraq remains among the high fertility countries with a total fertility rate (TFR) of 4.3, while the global average is 2.6.[1]

Total estimated under-5 population (000) [2010] [2]	5 188
Population growth rate[3] [2011]	3.5%
Estimated number of births (000) [2010][2]	1 170
Percentage of population that is urban[3] [2010]	66.0%
Birth registration coverage[4]	95.0%

[1] Country Cooperation Strategy for WHO and Iraq, 2012 – 2017. Draft update (2) 19 – 21 December 2011
[2]Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2010 Revision*, http://esa.un.org/unpd/wpp/index.htm (accessed on 2 October 2012)
[3]WHO Regional office for the Eastern Mediterranean, Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012, based on country reports
[4]WHO, *World Health Statistics 2012*

Iraq is ranked 132 out of 187 countries on the UNDP human development index, with 4% of the population living below the international poverty line of US$1.25 (in purchasing power parity terms) a day[3].

The country ranks fourth among the countries in the Eastern Mediterranean Region in terms of total fertility rate. It is also among the 10 countries in the Region with the highest child and maternal mortality rates. Despite the efforts of the authorities, Iraq is falling behind the Millennium Development Goals (MDGs) 4 and 5 which the international community fixed for 2015.

This document is meant to provide an analysis of the current status of maternal, newborn and child health in the country to highlight the reasons why the country is not on track to achieve MDGs 4 and 5 if current trends continue, and suggest possible solutions and the way forward to accelerate the progress towards MDGs 4 and 5.

II. Maternal and child health situation analysis

II-1 Health system

The Iraqi health system is in transition, away from a hospital-oriented, capital-intensive model, accompanied by inequitable access to primary health care. The Iraqi health sector faces considerable and complex challenges, such as improving access to quality health, shortages of essential medicines, and rehabilitation and deployment of health workforce. The Ministry of Health is the main provider of health care, both curative and preventive.

The Ministry of Health vision for health development and its guiding values and principles are highlighted in the National Strategic Plan Health 2013–2017. The Ministry of Health is the biggest financing agent of

[1] Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2010 Revision*, http://esa.un.org/unpd/wpp/index.htm (accessed on 2 October 2012)
[2] WHO Regional office for the Eastern Mediterranean, Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012, based on country reports
[3] Human development report, UNDP 2011.

health sector expenditure. It accounts for 73.1% (80.3% in 2010) while more than 37% of it is primarily spent on curative care. 9% of government expenditure is spent on health, with per capita health expenditure of US$ 215[4].

About half of the health centres are staffed with at least one medical doctor and the rest with trained health workers (medical assistants and nurses). The distribution of primary health care centres and health staff is inequitable and there is a severe shortage of nurses particularly in remote areas. 83% of the population has access to primary health care services[5]. There is wastage of resources as the establishment of health centres does not consider needs-based criteria.

The levels and distribution of available human resources for health are not adequate to respond to the changing population health needs and emergency situation. In 2006, 94 815 health workers were registered, at a density of 3.5 per 1000 population. The health information system has improved since 2004, mainly in the area of public health data collection. The high turnover of Ministry of Health staff at all levels has a negative impact on policy formulation, planning and implementation capacity of the Ministry. In terms of availability, per 10 000 population there are 7.8 physicians, 15 nurses and midwives and 13 hospital beds[5].

At health centres, most doctors work for three hours (9.00–12.00) during which time they can see between 30 and 100 patients, resulting in a consultation time of 2–5 minutes per patient. The gross shortage of consultation time reflects the level of responsiveness of the health care system. In general, access to primary care is inadequate, the level of perceived quality of care is low and the state of physical infrastructure and facilities require major repairs and re-equipping.

The main concern in service delivery is the perceived limited quality of publicly provided services. The Ministry of Health has a deficient plan for human resource development. In Iraq, 47% of the Ministry of Health health budget is allocated for human resources. The dual practice model (civil servants working in private sector) in Iraq is a major challenge and management issue.

II-2 Maternal, neonatal and child health (MNCH) policies and strategies

Health of women and children is the key to progress on all development goals; investing more in their health will help building peaceful, productive societies and reduces poverty. With this vision, the country has adopted a number of policies and strategies in favour of maternal and child health including:

- costed national implementation plan for MNCH
- International Code of Marketing Breast-Milk Substitutes
- low osmolarity oral rehydration salts (ORS) and zinc for management of diarrhoea
- maternity protection in accordance with Convention 183
- introduction of rotavirus vaccine
- notification of maternal deaths.

Despite of the adoption of these strategies and policies, some of them are only partially implemented, such as the International Code of Marketing Breast-Milk Substitutes and low osmolarity ORS and zinc for management of diarrhoea. A maternity protection policy has been adopted, granting maternity leave for pregnant women and lactating mothers since 1989. Women are also granted 12 months maternity leave, where the first 6 months are fully paid and the second 6 months with 50% payment.[6] The health policies in Iraq do not authorize prescription of antibiotics for children with pneumonia in the community, therefore the community treatment policy is not applicable to the country context. Other policies reported by the Countdown initiative have not been adopted by the country, namely the introduction of pneumococcal vaccine (planned for 2013)[7].

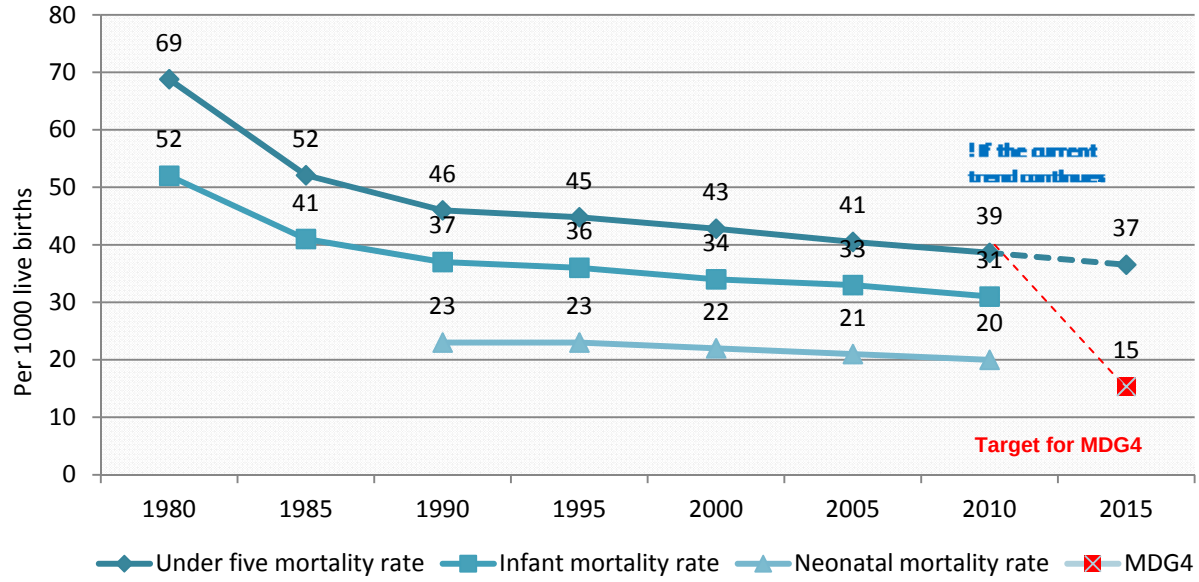
[4] National Health Accounts 2011
[5] WHO Regional office for the Eastern Mediterranean, *Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012*, based on country reports
[6] Ministry of Health policy document 1988
[7] Ministry of Health EPI policy 2011

II-3 MNCH current status

II-3.1 Maternal, newborn and child mortality

Iraq showed a decreasing trend in under-5 mortality rate (U5MR) from 1980, which then slowed substantially from 1990. The U5MR declined by only 17.6% and neonatal mortality by 13.1% between 1990 and 2011. 54% of under-5 deaths occurred during the neonatal period and the remaining 46% in the post-neonatal period. According to the MICS survey carried out in 2011 in Iraq, the under-5 mortality rate was 20% higher in rural areas and among those in the poorest households than in urban and richest households of the country and 30% higher for children of mothers with no education than those of mothers with secondary or higher education.

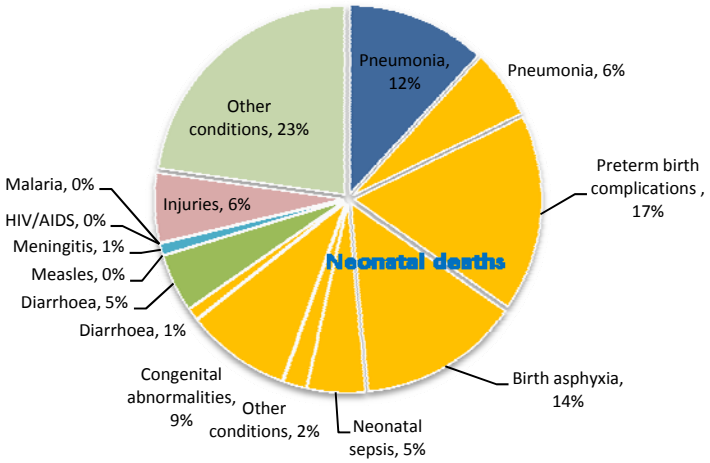
Trends in under-5 mortality between 1990 and 2011 and extrapolation to 2015



Source: United Nations Inter-agency group for child mortality estimation (IGME)- *Levels and Trends in Child Mortality, Report 2012* - WHO / UNICEF / World Bank/ UNDP and independent experts. These figures are computed by the United Nations agencies and are not necessarily the official statistics of the Member State, which may use alternative methods of estimation of mortality. All Member States have undergone an official country consultation on these estimations.

Ministry of Health data, based on the health information system, shows infant and child mortality rates slightly different from United Nations reports.

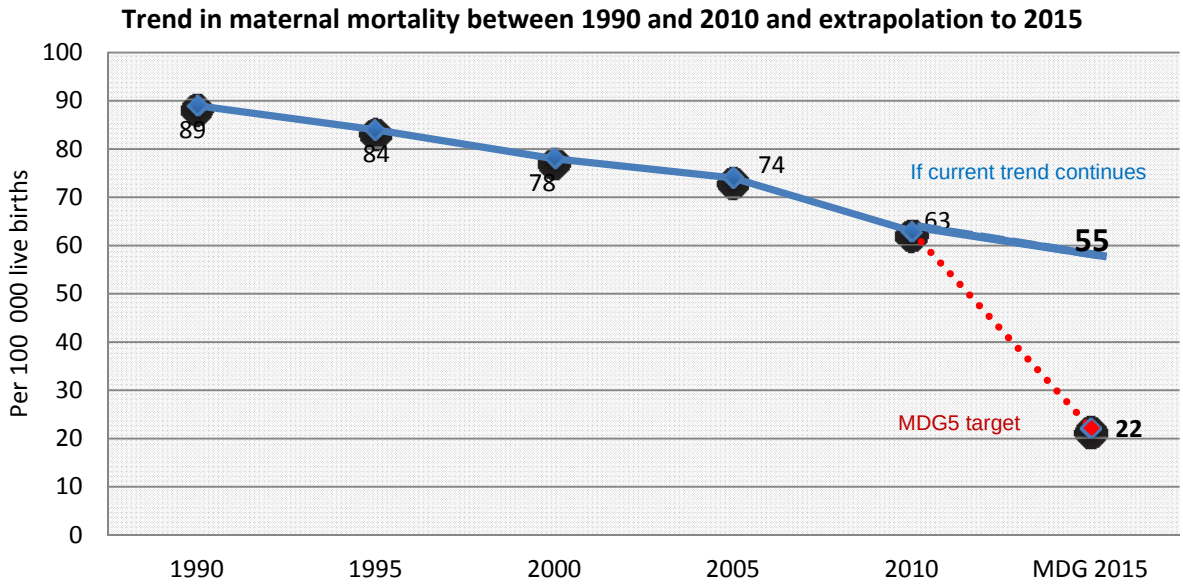
More than half (54%) of the deaths in children under 5 years in Iraq occurred in the neonatal period. Prematurity (17%) and birth asphyxia (14%) represented the leading cause of death in children under 5 years. Infectious diseases such as pneumonia (18%), diarrhoea (6%) and neonatal sepsis (5%) accounted for 29% of all deaths.



Causes of under-5 deaths

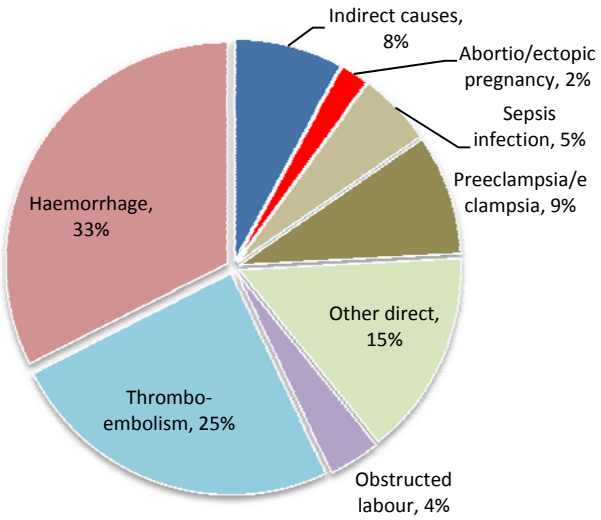
Source: WHO/CHERG 2012, 2010 data

The maternal mortality in Iraq has declined from 89 in 1990 to 63 in 2010, resulting in 29% reduction between the two decades. National strategy considers the reduction of maternal mortality by 75% in 2015 towards achieving MDG 5. Nevertheless, huge progress has to be made in order to achieve MDG5 in Iraq.



Source: WHO, UNICEF, UNFPA and World Bank estimates, Trends in maternal mortality: 1990 to 2010, published 2012.

According to a confidential enquiry into maternal deaths study 2009, the leading direct causes of pregnancy-related deaths in Iraq are haemorrhage (33%), thromboembolism (25%), pre-eclampsia/eclampsia (9%), maternal sepsis (5%) and obstructed labour (4%).



Causes of maternal death

Source, WHO 2010

II-3.2 Maternal, newborn and child morbidity

Malnutrition among under-5 children is one of the main health problems in Iraq and increases the risk of mortality. About one in five children under 5 years in Iraq is stunted (22%), 7% wasted and 8% underweight, according to the MICS 2011. More than a third of pregnant women suffer from anaemia which also represents a high risk for mortality.

Maternal:	
Anaemia in pregnant women (2010)[1]	37.5%
Newborn:	
Low birth weight in newborns[2]	15%
Child:	
Children under 5 with suspected pneumonia (2010)[3]	10%
Children under 5 with diarrhoea (2010)[3]	15%

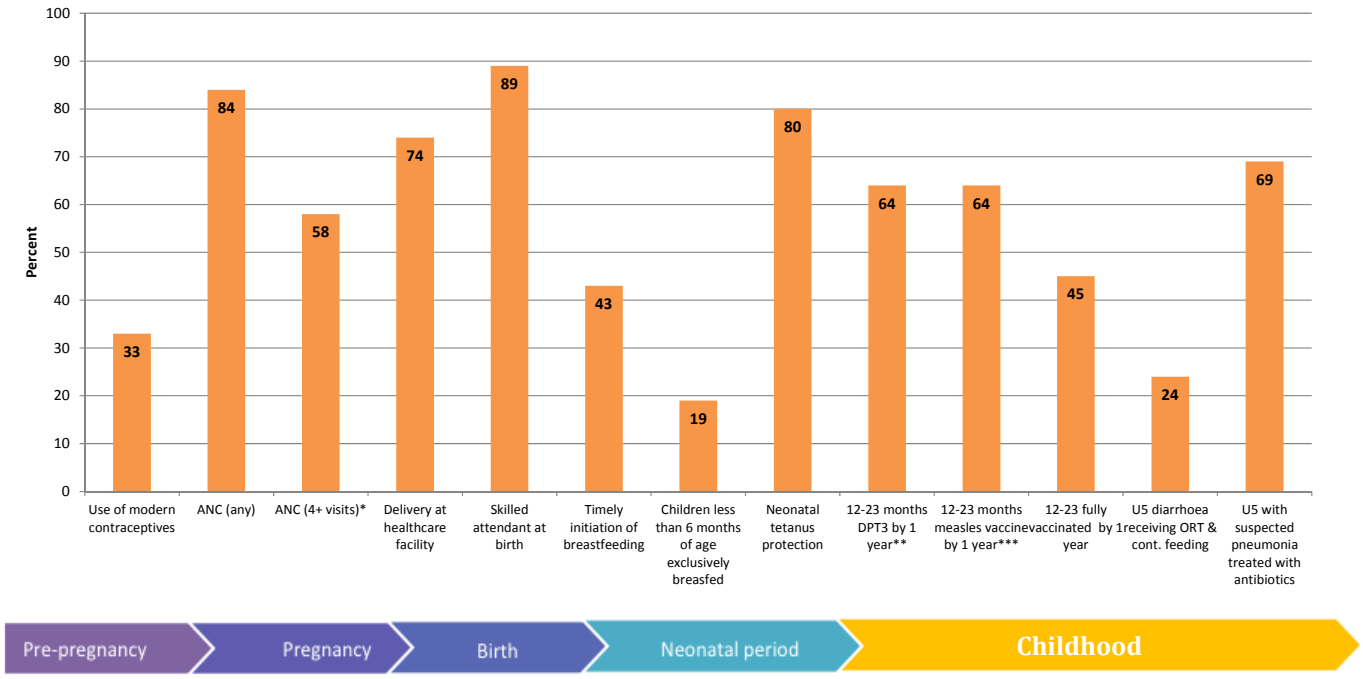
Nutritional status in children under 5[3]	
Stunting	22%
Wasting	7%
Underweight	8%
Overweight	11%

[1]WHO Regional Office for the Eastern Mediterranean: Regional Health Observatory. Website: www.http://rho/rhodata/ accessed on 27 January 2013

[2]WHO, *World Health Statistics 2012 (estimates for 2005 – 2010)*

[3] MICS Iraq 2011

II-3.3 Coverage indicators across the continuum of care



Source: MICS Iraq 2011

Information on neonatal protection from tetanus is taken from WHO, *World Heath Statistics, 2012*

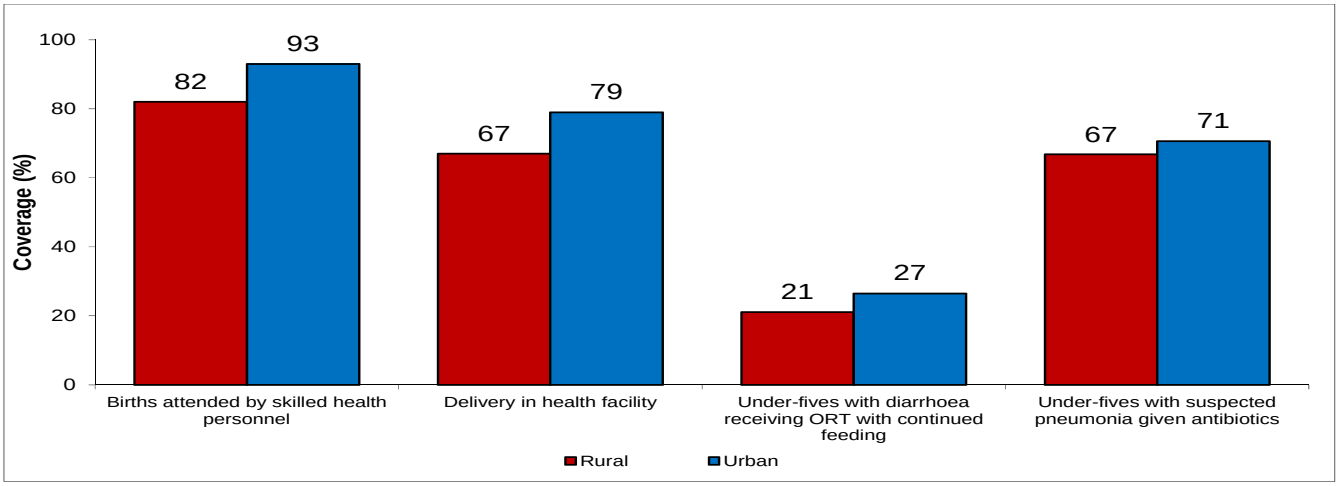
Antenatal care (4 visits) information is taken from I-WISH Survey 2011

Coverage of selected interventions for maternal and newborn care tends to be high, although there is lack of information in the MICS 2011 preliminary report on some interventions (e.g. antenatal care with at least 4 visits, early initiation of breastfeeding, home visits for postnatal care)[8]. Exclusive breastfeeding for 6 months and oral rehydration therapy (ORT) with continued feeding for children with diarrhoea have very low coverage (19% and 24%, respectively).

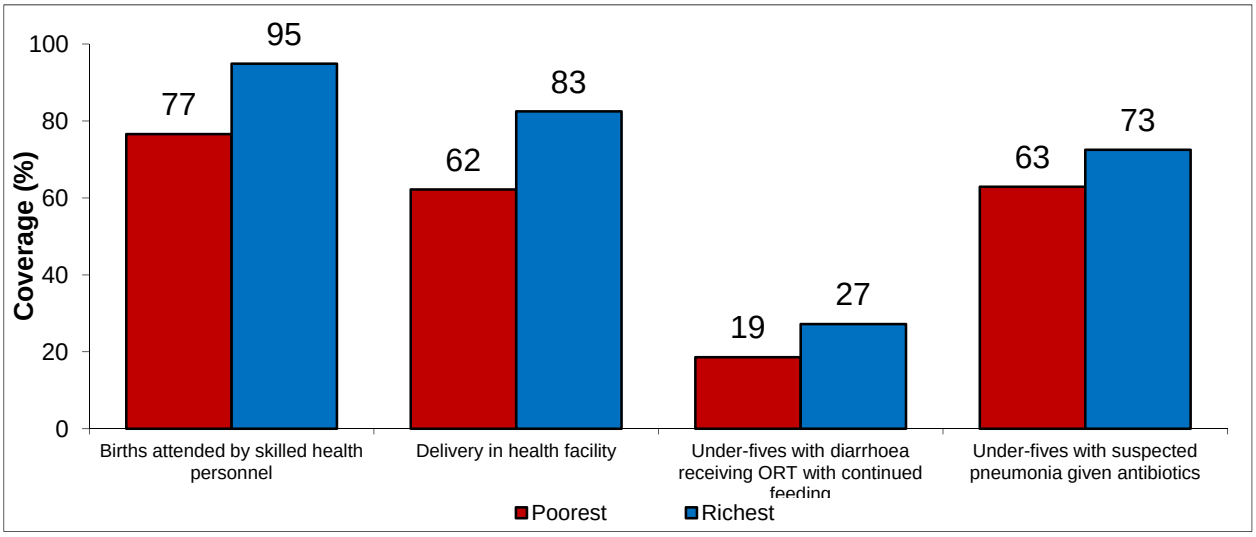
II-3.4 Inequities in coverage of indicators across the continuum of care

The coverage of almost all key maternal and child health interventions along the continuum of care in Iraq shows some inequities between children living in rural and urban areas of the country. For example, children with diarrhoea are 1.3 times more likely to receive ORT in urban than rural areas.

[8] MICS Iraq, 2006 and 2011



Disparities are also clear among the poorest and richest quintiles of population, for example children with diarrhoea are 1.5 times more likely to receive ORT if they live in richer than poorer households. Women are more likely to be attended during childbirth by skilled health personnel in richest than poorest households



II-4 Towards MDGs 4 and 5

Iraq has made efforts to respond to the existing MNCH situation in the country. These include:

- a high level of political commitment to maternal and child health;
- signatory to the MDGs;
- maternal and child health as the main components of the joint plans between the Ministry of Health and United Nations organizations (WHO, UNICEF and UNFPA) and other partners, such as USAID;
- adoption and implementation of a package of interventions targeting the main causes of child and maternal deaths based on the global cost-effective and evidence-based interventions, delivered in an integrated way. Research has shown that these interventions have the highest impact on mortality.

II-4.1 Child health

A set of interventions targeting the main causes of under-5 mortality in Iraq has been packaged and implemented under the umbrella of the Integrated Management of Childhood Illness Strategy (IMCI). This strategy addresses not only the main causes of under-5 mortality but also the key health promotive and preventive elements. The three components of the IMCI strategy aim at improving the quality of child health care services at primary health care level, the health system-related elements and child health-related family and community practices.

Package of child health key cost-effective interventions implemented at primary health care level

- Case management of neonatal sepsis, pneumonia, diarrhoea and jaundice
- Child case management:
  - pneumonia case management and prevention
  - diarrhoea case management and prevention
  - malaria case management and prevention
  - malnutrition case management
- Early initiation of breastfeeding
- Promotion of exclusive breastfeeding
- Promotion of sound complementary feeding
- Improving care seeking
- Increasing immunization coverage
- Vitamin A supplementation

IMCI implementation coverage has reached 33% of primary health care facilities. In 2012, the Ministry of Health made efforts to expand the implementation of IMCI coverage to involve other primary health care centres in 16 governorates in Iraq (815 comprehensive health facilities). In general, the implementation coverage of those interventions is still low, which has limited the access to these interventions and limited the reduction in under-5 mortality.

Iraq has focused on the immunization programme as a major intervention to address the causes of under-5 morbidity and mortality. Reported routine DTP3 coverage increased from 74% in 2004 to 89% in 2011. 23% of the districts had coverage <80%. However, WHO-UNICEF estimated DTP3 coverage to be 77% only. Iraq is currently preparing for validation of elimination of maternal and neonatal tetanus. Although routine vaccination coverage is not high enough in Iraq, with periodic implementation of measles follow-up supplementary immunization activities, measles incidence decreased significantly to <1/million in 2011. If this progress continues, Iraq will be able to validate measles elimination soon. Iraq successfully introduced Hib and rotavirus vaccines early in 2012. The introduction of the new life-saving vaccines will contribute to the reduction of under-5 mortality if high equitable routine vaccination coverage is sustained.

II-4.2 Maternal health

The package of interventions accorded to maternal and neonatal health includes the following interventions based on the WHO Integrated management of pregnancy and childbirth recommended interventions:

- family planning services
- antenatal and post-natal care
- skilled birth attendants
- essential emergency obstetric and neonatal care
- essential newborn care.

This package has been implemented at primary health care facilities, accompanied by community awareness-raising activities about life-saving practices.

II-4.3 Can Iraq reach the targets set by MDG4 and 5 by 2015?

With an estimated average annual rate of reduction (AARR) of 0.9% between 1990 and 2011, the under-5 mortality rate in Iraq would reach a level more than twice as high as the aimed target, if recent trends continue. After an increase in the mid-90s, the AARR has remained similar and in any case low across the five-year periods between 1995 and 2009. The AARR required to reach MDG 4 between 2011 and 2015 is 22.6%; this is a very challenging rate, and no country in the Region reached that level of reduction in the period 1990-2011.

Concerning maternal mortality, the annual average reduction rate was 1.7% between 1990 and 2010. If this current trend continues, Iraq will be most unlikely to achieve MDG5.

III. Feasibility analysis

- Despite the enormous challenges, the Government of Iraq has put considerable efforts during the past years into scaling up as well as improving the quality of health services related to mother and child targeting different components of primary health care.
- Although there is commitment to mothers' and children's health, the country was not able to achieve significant reduction in under-5 and maternal mortality.
- The current security situation is a challenge to increasing access to the services provided to mothers and children.
- Donors in the country have shown interest in the area of maternal and child health; however, they are not contributing to one national plan to accelerate progress towards MDG4 and 5.
- The current inequitable access to primary health care care - geographically, between rural and urban areas and economically - does not enable equitable service provision to the population most in need.
- In addition, community case management is currently not implemented as an approach to reach out to underserved populations. This approach also requires policy decisions before its adoption and implementation.
- Substantial investments are required to strengthen the existing health system and its elements related to maternal and child health, in particular ensuring the availability of essential medicines for mothers and children, further improving the health information system and using the information to inform planning and strengthening the supervisory system, which affect the quality and the scaling-up of service delivery.
- Inadequate distribution and number of qualified human resources, their limited availability at the health centres for a only few hours a day, the dual practice in both the public and private sector and the high turnover of trained staff are a challenge to implementation of good quality services to mothers and children and their use by the population.
- As more than half of the deaths in under-5 children in Iraq occur in the neonatal period and pneumonia and diarrhoea still represent the cause of about a quarter of under-5 deaths, attention should be given to increasing coverage of both preventive and treatment interventions to both the neonatal and postneonatal period of the child life.
- The estimated level of scaling up requires big amount of funds. The development of costed plans together with advocacy, strong collaboration and coordination among the different partners will help ensure synergistic and effective actions.
- Increasing the national vaccination coverage with the old and new vaccines and improving coverage in low-performing districts (those with DTP3 coverage less than 80%) requires additional effort through implementation of the Reaching Every District (RED) approach.
- The lack of community awareness in relation to maternal and child health practices is a major factor that affects the progress in improving maternal and child health indicators.

IV. Is it achievable?

With the current trends of reduction in mortality and human resources allocation, Iraq is most unlikely to achieve MDGs 4 and 5. However, if the country makes high-level commitment and concerted efforts to accelerate the implementation of the cost-effective evidence based packages of interventions along the continuum of care in full collaboration with partners allocating the required human and financial resources, the country will be able to accelerate progress in saving more lives of mothers and children.

V. Conclusions: key drivers

The country should aim at accelerating the pace of reduction of under-5 and maternal deaths by scaling up interventions in light of the coverage target set by MNCH programmes at the Ministry of Health. The accelerated pace of reduction of mortality will bring the country closer to the set MDGs targets and more lives of mothers and children will be saved.

This acceleration requires:

- Putting the high level of political commitment to child and maternal health into effect by allocation of required human and financial resources, developing one national plan to which all partners contribute and setting a strong monitoring system to follow up on the implementation and measure progress.
- Scaling up the IMCI strategy and maternal health-related strategy that encompass the key cost-effective interventions at both health facility and community levels, focusing on the population most in need in rural remote areas and addressing inequities.
- Improving the coordination between the public and private sector.
- Emphasizing the quality of capacity-building activities in order to produce adequate qualified workforce to meet the services needs of the population (by in-service training and pre-service education) and addressing workforce distribution.
- Strengthening the key health systems essential elements, in particular availability of medicines and commodities, health information system and supervision.
- Considering accessibility to and provision of high quality health services to children and mothers as a key answer to the challenged posed by the slow progress in reduction of maternal and child deaths.
- Promoting exclusive breastfeeding, including with enabling policies.
- Introducing the pneumococcal vaccine and strengthening routine immunization to achieve the target of 90% coverage at national level and 80% in each district through proper implementation of the reaching every district (RED) approach, especially in districts with vaccination coverage of <80%, and ensuring the integration of the EPI in all health care delivery points.
- Advocating to all stakeholders and partners in the country to ensure full and integrated coordination and resource mobilization to support the child and maternal health programmes in the country.
- Strengthening the monitoring and evaluation system.