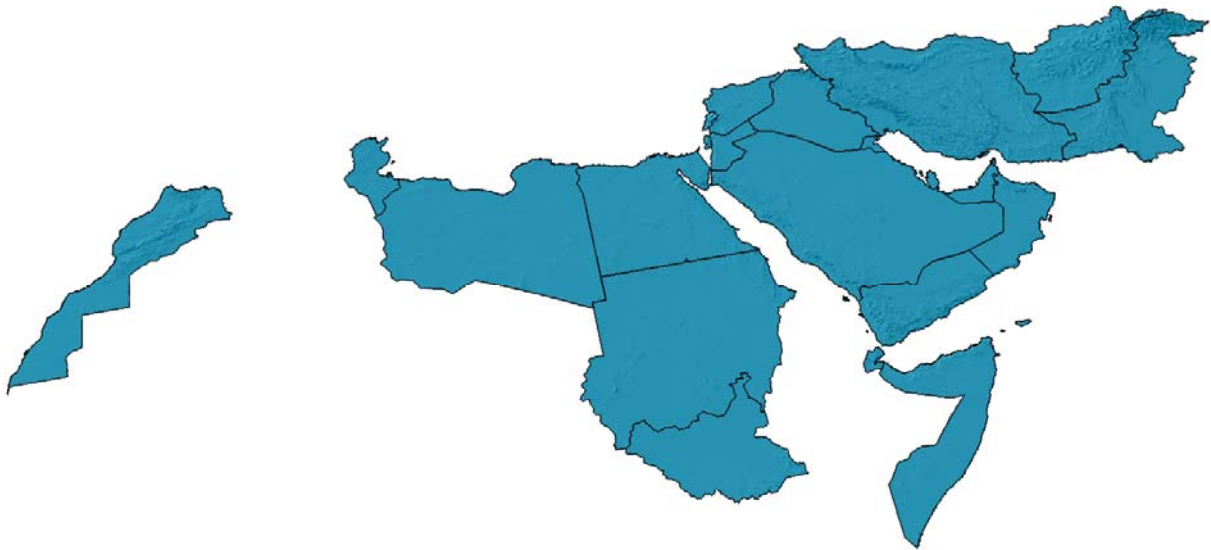




Saving the Lives of Mothers & Children

Rising to the Challenge

Eastern Mediterranean Region



I. Introduction

The WHO Eastern Mediterranean Region comprises 23 countries. It has a population of 597 million people¹. It is a widely diversified region in which countries show great variations in economic, social and health indicators. The natural and manmade disasters and conflicts that affect several countries constitute a major challenge for the Region.

Sociodemographic characteristics

The Eastern Mediterranean population is young: 12% are under-5 children¹ and 34% of the population are under the age of 15². The total fertility rate for the Region (TFR) is 3.2 and the adolescent fertility rate is 40 per 1000 girls aged 15–19 years²

Total estimated under-5 population (000) [2010] ¹	73 000
Population growth rate [2000–2010] ²	2.1%
Estimated number of births (000) ¹	16 000
Percentage of population that is rural ²	50%
Birth registration coverage ² (2010)	30% - 95%

¹Based on 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 22 January 2013)

²WHO, *World Health Statistics 2012*.

The ranking of the countries of the Region on the UNDP human development index² ranges from 30 (United Arab Emirates) to 172 (Afghanistan). Three countries are not included in the 2011 Human Development Report (Somalia, South Sudan and Sudan²). The percentage of population living below the international poverty line of US\$ 1.25 (in purchasing power parity terms PPP) a day² ranges, for the 8 countries in the Region for which data is available, from 1.5% (Islamic Republic of Iran) and 22.6% (Pakistan), while data is not available for 15 countries. The World Health Statistics, 2012 reports that 11% of the population in the Region lives on less than US\$ 1 (in purchasing power parity terms PPP) a day.

There are also disparities in terms of maternal and child mortality in the Region: according to the United Nations Interagency Group on Child Mortality Estimation (2012 report), the Region has 6 countries where under-5 mortality rates are among the lowest in the world, namely Bahrain, Lebanon, Oman, Qatar, Saudi Arabia and United Arab Emirates (the lowest) ranging between 7 and 10 per 1000 live births. Kuwait has low under-5 mortality close to those rates.

The maternal mortality ratio also shows wide variation among the countries in the Region. It ranges from 7 per 100 000 live births in Qatar to 2054 per 100 000 live births in South Sudan. One country in the Region has a maternal mortality ratio of less than 10 per 100 000 live births (Qatar). Three more countries (Bahrain, Kuwait, and United Arab Emirates) have maternal mortality ratio between 10 and 20 per 100 000 live births.

In 2002 10 countries were identified as MDG 4 and 5 priority countries in the Region; these have a population of 428 million (72% of the total population of the Region).

This document focuses on these 10 priority countries. Among them, there is variable progress towards MDGs 4 and 5: Egypt has achieved MDG4 and is on track to achieve MDG5 and Morocco is on track to achieve both MDGs, while the remaining countries are facing challenges in their progress towards these MDGs. This document is meant to describe the current maternal and child health status in those countries, draw lessons from successful country experiences in progressing towards MDG 4 and 5; describe obstacles and challenges; suggest possible approaches to sustain the achievements made and accelerate reduction rate of child and maternal deaths.

¹ Based on 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 21 January 2012).

² UNDP, *Human development report, 2011*.

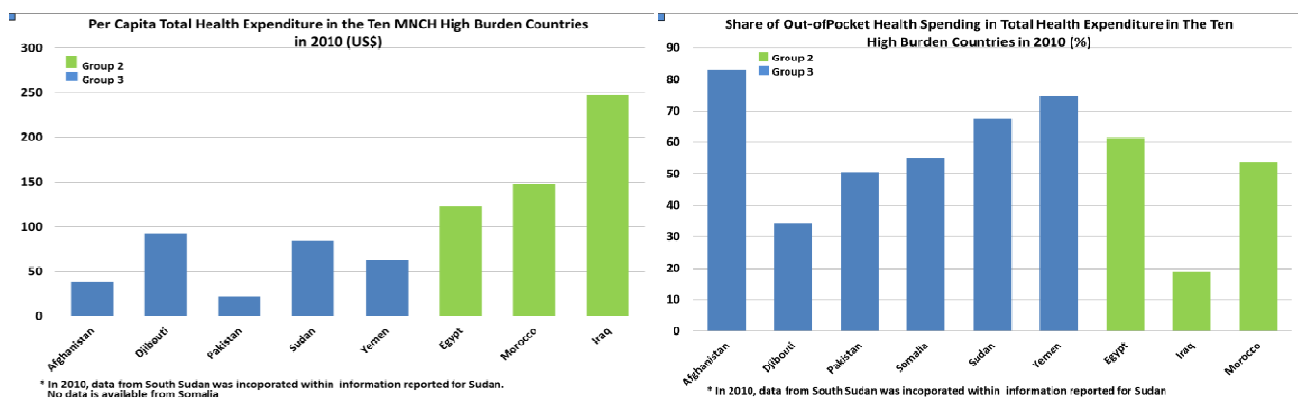
II. Maternal and child health situation analysis

II.1 Health system

Countries of the Region can be categorized into three groups based on population health outcomes, health system performance and level of health expenditure. Group 1 comprises countries where socioeconomic development has progressed considerably over the past decades (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates); Group 2 comprises largely middle-income countries (Egypt, Islamic Republic of Iran, Iraq, Jordan, Lebanon, Libya, Morocco, occupied Palestinian territory, Syrian Arab Republic and Tunisia); Group 3 comprises countries which face major constraints in improving population health outcomes as a result of lack of resources, political instability and complex development challenges (Afghanistan, Djibouti, Pakistan, Somalia, South Sudan, Sudan and Yemen). All countries in Group 3 and three countries of Group 2 (Egypt, Iraq and Morocco) are considered to be MDG 4 and 5 priority countries in the Region.

Financing. In 2010, per capita total health expenditure³ in the 10 MDG 4 and 5 priority countries ranged from US\$ 22 in Pakistan to US\$ 247 in Iraq, suggesting wide discrepancy in the level of resources spent on health. With the exception of Somalia and South Sudan, the other 8 countries have undertaken at least one round of National Health Accounts. None of these countries has produced a full-fledged maternal and child health (MCH) sub-accounts, hence the lack of information about total health spending on MCH-related services.

For Group 3 countries, the total health spending on average was less than US\$ 40 per capita in 2010, of which less than one-third came from general government sources, and the share of out-of-pocket payments was more than 50% (with the exception of Djibouti), which remains an important source of catastrophic health spending and impoverishment. Among the three Group 2 countries, per capita health spending ranged between US\$ 123 and US\$ 247 in 2010, indicating a reasonable level for the provision of an appropriate package of health services. Egypt faces the major challenge of a high share of out-of-pocket spending, which now accounts for over 60% of the total health expenditure.



Workforce. Accessibility to, and coverage of health care services are, to a great extent, dependent on the “front line” workforce: physicians, nurses, midwives and community health workers. With the exception of Egypt, all other MDG 4 and 5 priority countries are in a state of workforce crisis, meaning that the workforce⁴ density is less than the benchmark figure of 2.3 per 1000 population. In most Group 3 countries, the workforce density is less than 1 per 1000 population, which is a major constraint to the delivery of maternal and health (MCH) services. Some countries, such as Pakistan have managed to overcome this shortage by employing over a 100 000 female community health workers as the first point of contact with communities in rural and underserved areas. Annex 1 provides an overview of the key health workforce indicators in the 10 MDG 4 and 5 priority countries in the Region.

The capacity to produce adequate number of physicians, nurses and midwives continues to be a major challenge in Group 3 countries. There are insufficient schools of nursing and midwifery and the quality of training leaves a lot to be desired due to the shortage of trained teachers, outdated curricula, and overall lack of resources.

³ Global Health Expenditure Database <http://apps.who.int/nha/database/> accessed 01 June 2012.

⁴ The adopted definition of workforce includes uniquely: physicians, nurses and midwives.

Service provision and technologies. Geographical access to primary health care services in Group 3 countries ranges from 24% to 97%, due to lack or destruction of health infrastructure, physical inaccessibility and insecurity. Access to primary health care services in the three Group 2 countries is primarily the issue of affordability and not geography. MCH services are included in the envelope of primary care services of all MDG 4 and 5 priority countries and are part of an essential package offered by Afghanistan, Egypt and Iraq.

The role of the private sector in providing health care services is expanding. One possible reason could be that the quality of services provided by the private sectors is perceived to be better than public sector services. Effective regulation and sound information on the actual role and contribution of the private sector in providing comprehensive MCH services remains an unexplored area are lacking.

A major challenge to the delivery of MCH services is the non-functioning referral system and the lack or poor quality of emergency obstetric services at the first level referral hospitals.⁵ This is particularly the case in, but is not restricted to, the seven Group 3 countries.

Availability of essential medicines. Linked to the quality of services is the availability of essential medicines for the provision of MCH services at health facilities⁶. A WHO regional study on price and availability in selected MDG 4 and 5 priority countries revealed that the median availability of essential medicines in the primary health care facilities varied between 0% and 15% in the public sector and between 31% and 90% in the private sector.⁷ Many of these were concerned with the provision of MCH services.

Information system. In Group 3 countries, there are major challenges with civil registration and vital statistics. Only one-third of births are recorded and the proportion of death recorded is even lower. The system for cause-of-death reporting either does not exist or is limited. MCH information systems face much the same problems as health information systems in general. Resources such as personnel, finance, information and communication technology are scarce. Coordination is often inadequate, resulting in fragmented and weak data collection systems, both facility- and population-based, which ultimately result in low quality information products related to health risks, morbidity, mortality and intervention coverage. Group 2 countries generally have health information systems that are quasi-functional, major gaps continue to exist in their analysis and use and quality of data is often a major concern.

II-2 MCH policies and strategies

Health of women and children is the key to progress on all development goals; investing more in their health will help build peaceful, productive societies and reduce poverty. With this vision, the countries in the Region have adopted a number of policies and strategies in favour of maternal and child health including, among others, those policies reported by the Countdown initiative:

- user fee protection for women and children (for preventive care)
- International Code of Marketing of Breastmilk Substitutes.
- costed national implementation plan for MCH.
- low osmolarity oral rehydration salts (ORS) and zinc for management of diarrhoea
- notification of maternal deaths.
- maternity protection in accordance with Convention 183
- introduction of rotavirus vaccine
- introduction of pneumococcal vaccine
- community case management of pneumonia.

Not all the countries have adopted the full set of policies reported by the Countdown. Furthermore, in some countries those policies and strategies have not been fully implemented, in particular the International Code of Marketing of Breastmilk Substitutes and maternal protection in accordance with Convention 183. In other countries maternal protection has been emphasized through national policies (e.g. Iraq). It is worth mentioning that the policy of community case management of pneumonia has not been adopted by three countries (Egypt,

⁵ Siddiqi et al. The effectiveness of patient referral in Pakistan. *Health Policy and Planning*, 2001.

⁶ IMCI health facility surveys, Egypt (2003), Sudan (2003) and Morocco (2007)

⁷ Medicine prices, availability, affordability and price components: Summary reports for Morocco (2008), Pakistan 2009 and Yemen (2008).

Iraq and Morocco) as their legislation does not authorize the provision of any treatment by a community health worker, while in some countries (e.g. Afghanistan, Pakistan, Sudan, Yemen) community case management of childhood illnesses has been adopted and implemented as a national policy.

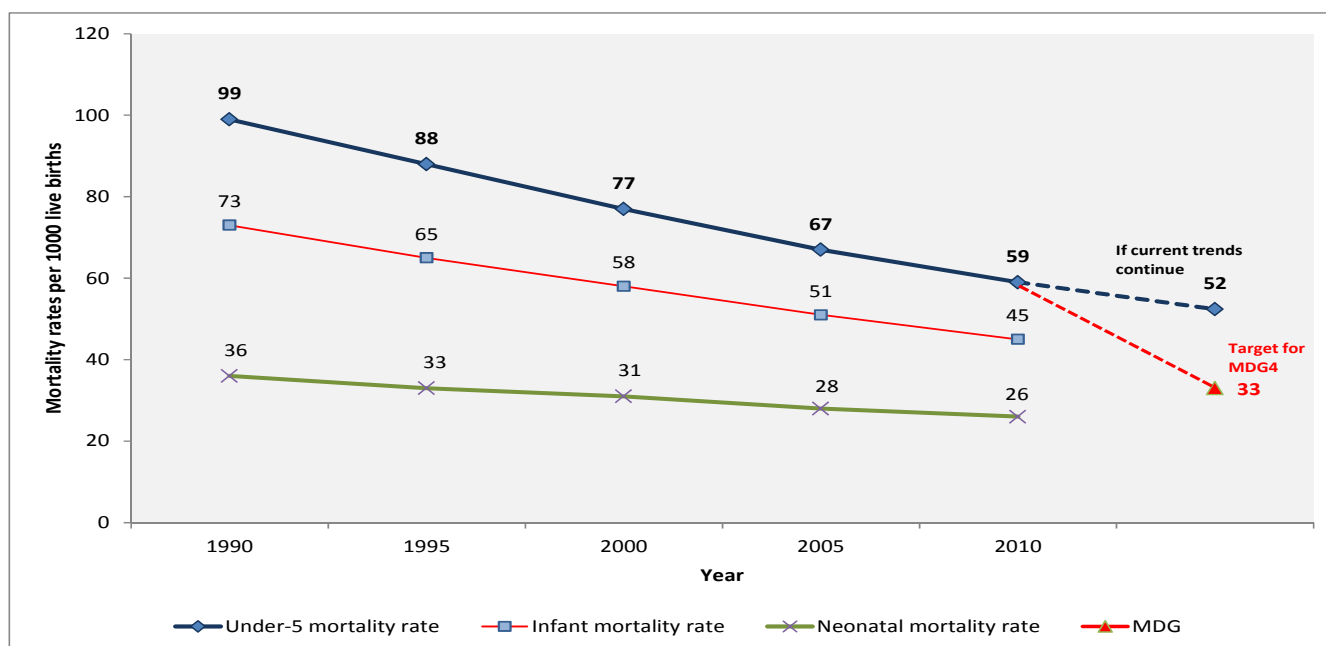
Many other strategies and policies have been adopted by the countries in favour of maternal and child health other than those reported by Countdown, such as reproductive health strategy (e.g. Morocco, Sudan and Yemen) child and adolescent health strategy (e.g. Afghanistan), and free-of-charge services for children and mothers (e.g. Sudan and Djibouti). Countries have introduced others measures also. For example, in Egypt maternal and child health has been explicitly addressed by the new Constitution 2012; child health is also addressed in the Child Law; and all under-5 children are covered by health insurance. In Morocco, plans have been developed to address inequities through a rural health plan.

The recommendations made by the Commission on Information and Accountability for Women’s and Children’s Health are being implemented, and the 10 MDG 4 and 5 priority countries of the Region are developing accountability roadmaps which have objectives to ensure that maternal and child health are well reflected, not only in specific programme policies and strategies but also in the national health policies and strategies.

II-3 MCH current status

II-3.1 Maternal, newborn and child mortality

While for the first time in the Eastern Mediterranean Region the annual number of under-5 deaths has fallen below 1 million, reduction of under-5 mortality remains an unfinished agenda, with 923 000 under-5 children still dying every year in the Region. The regional average reduction in under-5 mortality was 41% between 1990 and 2011. This falls short of meeting the target of 66% reduction of under-5 mortality by 2015 with only three years left. Neonatal mortality has decreased by a lower rate (31%) in the same period.



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

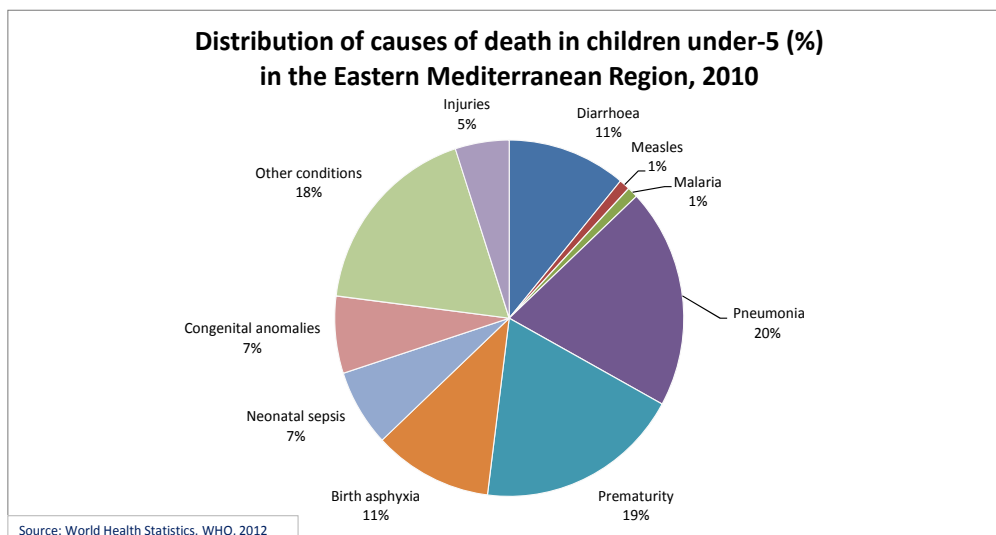
Source: Based on United Nations Inter-agency group for child mortality estimation (IGME)- *Levels and Trends in Child Mortality, Report 2012* - WHO / UNICEF / World Bank/ UNPD and independent experts. These figures are computed by the United Nations agencies and are not necessarily the official statistics 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.

The 10 MDG 4 and 5 priority countries in the Eastern Mediterranean Region have shown a wide variation in their progress towards MDG4. The reduction from the baseline under-5 mortality of 1990 to 2011 ranges from almost no reduction in Somalia to 75% in Egypt. The graphs in Annex II show the under-5 mortality trends in the 10 countries in the Region.

There are significant inequities and differentials in under-5 mortality in almost all the 10 countries related to the following (see Annex III):

- **residence:** under-5-mortality is generally higher among children in rural areas than the urban areas;
- **wealth:** under 5 mortality is higher among children in the poorest households than among those living in the richest households;
- **mothers' education:** under-5 mortality is generally higher among children of illiterate mothers or with lower levels for education than those with higher levels of education.

Under-5 children are still dying from preventable causes in the Region. Pneumonia is the major killer (20%), followed by prematurity (19%), birth asphyxia (11%) and diarrhoea (11%). These four causes of death alone are responsible for over 60% of all under-5 deaths.



Causes of under-5 deaths
Source: World Health Statistics, WHO, 2012

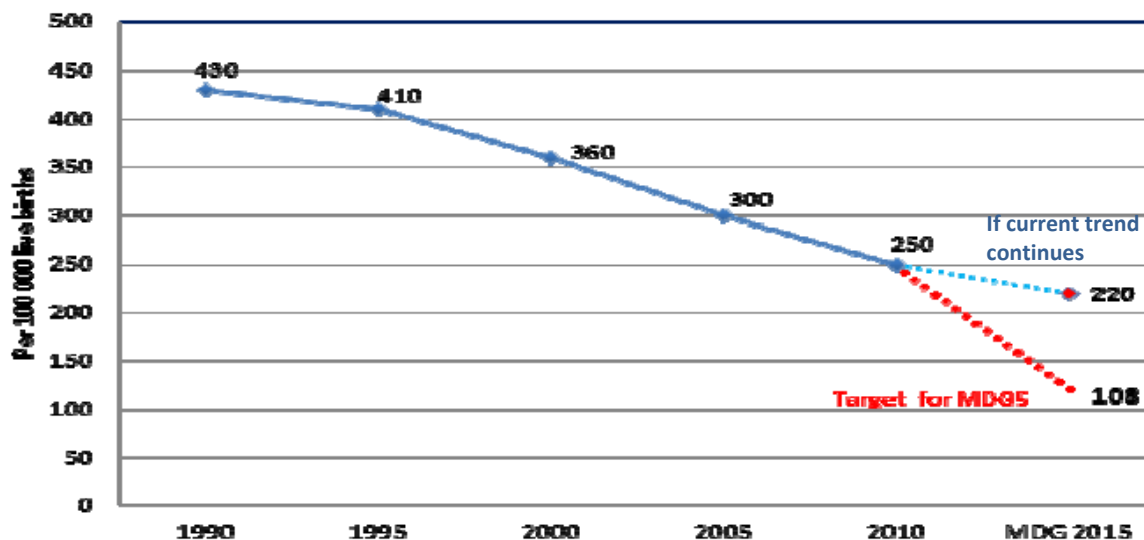
About 39 000 women of childbearing age die every year in the region due to pregnancy-related complications. The regional average reduction in maternal mortality is 42% between 1990 and 2010. This falls short of meeting the target of 75% reduction of maternal deaths by 2015 with only three years left.

The 10 MDG 4 and 5 priority countries in the Eastern Mediterranean Region contribute to over 90% of maternal deaths in the Region. They have shown a wide variation in their progress towards MDG5. The reduction from the baseline maternal mortality of 1990 to 2010 ranges from an increasing rate of maternal mortality in Somalia to 71% reduction in Egypt. The graphs in Annex IV show the maternal mortality trends in the 10 countries in the Region.

There are significant inequities and differentials in maternal mortality in almost all the 10 countries related to the following:

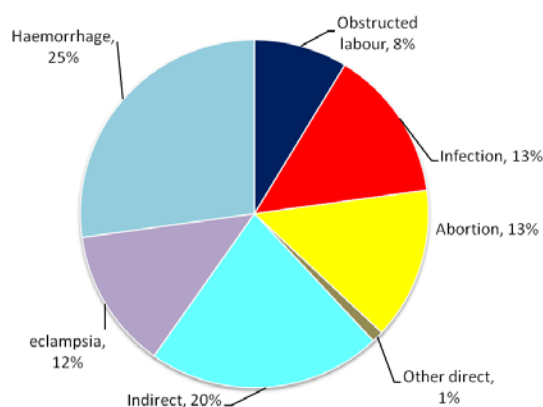
- **residence:** maternal mortality is generally higher in rural areas than the urban areas;
- **wealth:** maternal mortality is higher among poorest households than among those living in the richest households;
- **mothers' education:** maternal mortality is negatively correlated with the level of mothers' education.

Maternal mortality trend 1990–2010 in the Eastern Mediterranean Region and extrapolation to 2015.



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

Five causes are responsible for more than 70% of maternal deaths: Haemorrhage (25%), abortion (13%), infection (13%), eclampsia (12%) and obstructed labour (8%)



Causes of maternal death

Source: Khan et al. WHO analysis of causes of maternal death: a systematic review. *The Lancet* 2006

II-3.2 Maternal, newborn and child morbidity

Although the 10 MDG 4 and 5 priority countries in the Region have been showing a decreasing trend in under-5 mortality rates, recent population-based data and the WHO global data base on Child Growth and Nutrition show that the prevalence of anaemia in pregnant women and malnutrition in children under 5 years remains a major public health problem in some countries, and in some cases is worsening.

Country	Pregnant women		Under-5 children	
	Anaemia	Stunting	Wasting	Underweight
Afghanistan	61%	55%	18%	31%
Djibouti	56%	33%	26%	30%
Egypt	45%	29%	7%	6%
Iraq	38%	22%	7%	8%
Morocco	38%	15%	2%	3%
Pakistan	----	44%	15%	32%
Somalia	50%	42%	13%	33%
South Sudan	----	31%	23%	28%
Sudan	81%	35%	16%	32%
Yemen	58%	56%	16%	43%

The prevalence of pneumonia and diarrhoea in children under 5 years remains high in many countries. Fistula, reproductive tract infections and infertility are among the common morbidities among women of childbearing age. Furthermore, female genital mutilation (FGM), a harmful practice which adversely affects the outcome of pregnancy, is present in 5 out of the 10 priority countries in the Region.

II-3.3 Coverage indicators across the continuum of care

Based on the data of the most recent population-based surveys conducted in the 10 MDG 4 and 5 priority countries (ranging from 2006 to 2011), the median coverage of most of the key MCH interventions for the 10 MDG priority countries is lower than 40%. Only for five of those interventions is the coverage more than 50% (any antenatal care, skilled birth attendants, neonatal tetanus protection, DTP3 and measles vaccination)⁸. These indicators are measured at the community level and do not reflect the reported data from programme implementation.

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

According to the most recent population-based surveys in the 10 MDG 4 and 5 priority countries, there are wide disparities in the coverage of key MCH interventions by residence and wealth. In general the coverage is higher in urban than rural areas and in children and mothers living in the richest households than in those in the poorest households (Annexes Va and Vb). Further acceleration of reduction rates of mortality among children and mothers can be only achieved if these inequities are addressed.

II-4. Towards MDGs 4 and 5

Countries in the Region have made substantial efforts to respond to the existing MCH situation. These include:

- signatory to the MDGs;
- political commitments and pledges to maternal and child health, including commitments to the Global Strategy on Women's and Children's Health and related initiatives; some countries are also signatory to the pledge of the Child Survival Call for Action: A promise renewed for ending child preventable deaths; Afghanistan, Djibouti, Pakistan, South Sudan, Sudan and Yemen presented commitments to the United Nations Secretary General's Global Strategy for Women's and Children's Health ranging from increasing domestic spending to specific targets on coverage of key interventions on maternal and child health;
- in most countries, maternal and child health are the main components of the joint plans with United Nations organizations, mainly WHO, UNICEF and UNFPA;
- establishment of a strong management structure on child and maternal health in ministries of health with adequate human resources in some countries, which was key to moving forward the agenda of maternal and child health;
- 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 in 8 out of the 10 countries. Research has shown that these interventions have the highest impact on mortality. The coverage of these interventions varies substantially among countries;
- undertaking measures of sustainability by investing major efforts in introducing the public health guidelines into the teaching curricula of medical and paramedical schools (pre-service education) in five countries (Afghanistan, Egypt, Morocco, Pakistan and Sudan).

II-4.1 Child health

A set of interventions targeting the main causes of under-5 mortality in 8 of the 10 MDG 4 and 5 priority countries in the Region has been packaged and implemented under the umbrella of the Integrated Management of Child Health Strategy (IMCI). The three components of the IMCI strategy aim to improve 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.

⁸ Median value calculated by EMRO based on the most recent population-based surveys (MICS, DHS) in the 10 MDG priority countries (2006 – 2010)

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.

Morocco added a component on “neonatal resuscitation at primary health care level” to this package, Egypt is implementing a perinatal programme to reduce neonatal mortality in the disadvantaged population of Upper Egypt.

Since 1998 up to 2011, IMCI has been implemented in 14 030 primary health care facilities of the 8 countries, out of a total 25 808 primary health care facilities (54%), and 50 527 health care providers of different categories (physicians, medical assistants, nurses and health workers) have been trained to provide services included in the package of interventions according to IMCI standards. The pace of scaling up the implementation at primary health care facilities varies widely between the 8 countries, ranging between 31% in Pakistan and 93% in Egypt. A retrospective study conducted in Egypt showed that IMCI implementation doubled the pace of reduction of under-5 mortality.

Countries that have low access to primary health care facilities have adopted alternative approaches for implementation of the package of cost-effective interventions under IMCI in addition to implementation at health facilities, such as:

- lady health workers in Pakistan
- community health workers and integrated MCH mobile teams in Yemen
- community health workers in Sudan.

Health facility surveys⁹ conducted in the Region and the follow-up visits reports of ministries of health have shown that the IMCI implementation has a positive impact on the quality of health care services provided to under-5 children at primary health care level. In countries where the implementation is low, the lack of human and financial resources are among the major barriers to accelerating the pace of implementation, in addition to high turnover of trained staff, and weak health system elements, in particular availability of essential medicines, health information system and supervision.

The Region has witnessed improvement in routine vaccination coverage during the last 2 decades. Based on WHO and UNICEF estimates, the regional coverage with DTP3 increased from 63% in 1991 to 85% in 2011 and that of first dose of measles vaccine from 66% to 83% during the same period. However, 2 million children did not receive the basic vaccines given in the first year of childhood in 2011, 95% of them in the 10 priority countries. Hib vaccine is now in use in 19 countries, pneumococcal vaccine in 11 countries (in addition to starting the phased introduction in Pakistan) and rotavirus vaccine in 8 countries. The main challenge facing introduction of new vaccines is the unaffordability of the vaccines for middle-income countries.

II-4.2 Maternal health

A set of interventions aimed at improving maternal health before pregnancy and during pregnancy, childbirth and postpartum periods has been considered in the Region, with specific focus on countries with a high burden of maternal deaths. The main causes of maternal deaths have been addressed through building national capacity in evidence-based, cost-effective interventions such as:

- Integrated Management of Pregnancy and Child birth (IMPAC) for ensuring skilled health attendance during pregnancy, delivery and postpartum periods;

⁹ IMCI health facility surveys reports, Egypt (2002), Sudan (2003) and Morocco (2007). <http://www.emro.who.int/child-health/research-and-evaluation/surveys-and-follow-up.html#link3>

- provision of essential and emergency obstetric care for appropriate health care in normal and complicated childbirths;
- promoting the health of mothers and children through promoting birth-spacing;
- improving the quality care through providing counselling services and promoting the implementation of best practices;
- promoting health care-seeking behaviour through raising awareness on life-saving practices;
- strengthening programme monitoring and evaluation and information systems and surveillance;

As a result, in the 10 priority countries antenatal care coverage increased to 67% (one visit), while deliveries attended by skilled birth care reached 57%. Nonetheless, use of modern contraceptives is still around 19%, 4+ visits for antenatal care 22.7%, and deliveries taking place in health facilities 34%. Iron deficiency anaemia among pregnant women is also an issue, ranging from 61% in Afghanistan to 38% in Morocco despite national health policies in this respect. Cultural barriers and illiteracy are the main barriers to family planning, with only 1% of married women in Somalia, 3.5% in South Sudan and 7% in Sudan using modern contraceptives. Provision of emergency obstetric care is another urgent issue. Caesarian section is available to only 1% of women in labour in Yemen, 2.3% in South Sudan, 2.6% in Afghanistan and 4.5% in Sudan.

II-4.3 Can the Eastern Mediterranean Region achieve MDG 4 and 5?

A total of 6 countries in the Region have already reached a level of under-5 mortality beyond MDG4 (Egypt, Lebanon, Oman, Saudi Arabia, Tunisia and United Arab Emirates) and 5 more are on track (Islamic Republic of Iran, Libya, Morocco, Qatar and Syrian Arab Republic). It is worth mentioning that the highest decrease in under-5 mortality in the world (72%) between 1990 and 2010 has occurred in the north African area of the Eastern Mediterranean Region¹⁰. However, the pace of progress is slow in the remaining countries, especially in the 6 countries which contribute to 82% of total deaths in the Region, because of the combination of high under-5 mortality and large population. The current average annual reduction rate of under-5 mortality in the whole region is 2.5%, while the required reduction rate to achieve MDG4 by 2015 is 14.1%. With this requirement it is most unlikely that the Region as a whole will achieve MDG4.

The Islamic Republic of Iran is the only country in the Region that has achieved MDG5. Nine countries are on track (Afghanistan, Egypt, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Tunisia and Yemen,). However, the pace of progress is slow in the remaining countries, especially in the 6 countries (Djibouti, Iraq, Pakistan, Somalia, South Sudan and Sudan) which contribute to over 70% of total maternal deaths in the Region. The current average annual reduction rate of maternal mortality in the whole region is 2.6%, while the required reduction rate to achieve MDG5 by 2015 is 28.4%. With this requirement it is most unlikely that the Region as a whole will achieve MDG5.

III. Feasibility analysis

- The commitment accorded to maternal and child health has played a major role in supporting the maternal and child health agenda. However, this commitment has varied greatly over time and among the 10 priority countries and is not sustained in some situations due to other emerging priorities.
- Many countries in the Region suffer from conflict and political instability, situations which adversely affect maternal and child health status.
- Partners and donors have been supporting the cause of maternal and child health, substantially contributing to efforts to reduce under-5 and maternal mortality in many countries. However the level of donor support varies from country to country.
- The low government expenditure on health and the high share of out-of pocket payments remain a major challenge to the access to MCH services. In general, there is insufficient financial support to maternal and child health programmes to achieve the desired level of implementation.
- The quality of services provided by the private sector is likely to be perceived by the population to be better than those provided by the public sector. This may explain why the role of the private sector is

¹⁰ Based on data from UN 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 UN 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.

expanding. Furthermore, the services provided by the private sector are poorly regulated, costly and there is lack of information on their quality.

- The capacity to produce adequate numbers of health workforce, their distribution, and the high turnover of qualified staff continue to be a major challenge in countries with high child and maternal mortality.
- Some countries have strengthened the pre-service education of physicians and paramedics to address the overburden of in-service training. However, there is variable commitment among the different medical and paramedical teaching institutions to teaching the public health approaches to the recommended standards and in a sustainable way.
- The low access to primary health care services in the countries with high child and maternal mortality deprives under-5 children and mothers most in need from receiving essential quality services. Also, inadequate availability of essential medicines for MCH services at primary health care facilities, due to not only shortage in supply but also to irrational use, remains a major obstacle to providing quality care in most of the priority countries.
- The weakness of supportive supervision in almost all the 10 priority countries remains a chronic health system problem and has a negative impact on the quality of services offered to mothers and children.
- There are major challenges in the health information systems resulting in lack of or low quality of data, and their use to inform planning.
- Components of maternal and child health are implemented through different programmes with lack of harmonization and coordination in messaging and in technical guidance, leading to duplication of efforts and inconsistencies.
- There is low coverage with the package of cost-effective interventions in most of the priority countries. In addition, inequities exist between rural and urban areas, the rich and the poor in all the 10 countries (even those which have achieved a high level of coverage of interventions). This represents a critical obstacle to reaching the children and mothers who are most in need of these services.
- Despite the increasing contribution of neonatal deaths to total under-5 deaths in the Region, the resources and attention given to this are insufficient to address this problem effectively and are, in many cases, being shifted from investments in the post-neonatal period.
- Community-based interventions are very demanding to implement although they are a good alternative to increase access to primary health care.
- Malnutrition in children under 5 years and mothers remains a major public health problem in some countries, and in some countries is worsening; coverage with interventions to address this problem is low.
- The achievement of immunization coverage targets is affected by the current sociopolitical and security situation which has affected implementation of outreach activities and mobile teams.
- The financial resources to implement the planned immunization activities are inadequate, especially those related to implementation of measles and tetanus supplementary immunization activities (SIAs), introduction of new vaccines in middle income countries and co-financing in GAVI-eligible countries.

IV. 5 Is it achievable?

If the current trend of reduction in under-5 and maternal mortality continues, the Region as a whole is unlikely to achieve MDGs 4 and 5. However, with the concerted efforts of the governments, partners and donors, countries' firm commitment and willingness, effective policies and strategies, comprehensive costed and budgeted plans and scaled implementation, the Region will be able to accelerate the rate of reduction of under-5 and maternal deaths to come closer to the targets set by MDG 4 and 5.

V. Conclusions: key drivers

Key drivers to accelerate progress towards MDGs 4 and 5, with the active support of the international community include:

- Sustaining the high level commitment to maternal and child health as key indicators of countries' development.
- Mobilization of partners and donors to make the required investments and to work together to progress towards MDG 4 and 5 on one hand, and to sustain achievements and start planning to go beyond MDG 4 and 5 on the other hand.

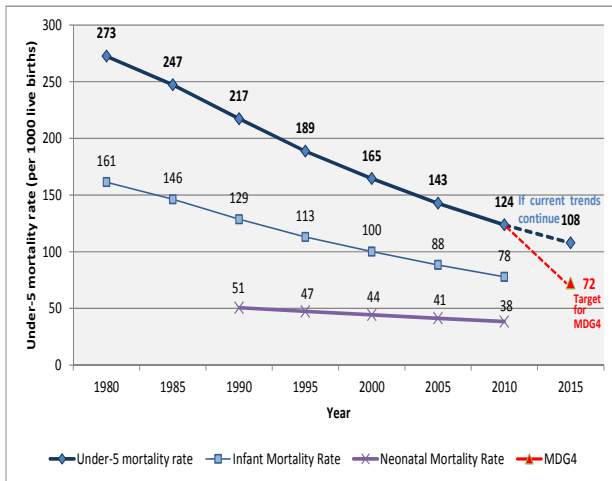
- Strengthening partnerships and coordination among concerned stakeholders and programmes to contribute to the development and implementation of one costed and budgeted national MCH plan.
- Promoting equitable distribution of qualified human resources in favour of the deprived areas (through policies, strategies and plans), and developing motivation schemes that encourage qualified health cadres to work in those areas, as well as developing and implementing strategies to enhance the production of a balanced, skilled and motivated health workforce.
- Strengthening the managerial capacities of maternal and child health programme managers in ministries of health to improve their planning, analytic and monitoring skills.
- Achieving universal health coverage, so as to reach all mothers and under-5 children, by adopting and implementing policies and strategies for health insurance to reduce out-of-pocket payments.
- Adopting and adhering to quality of care standards and strengthening the monitoring and supervisory system to improve this quality.
- Regulating and enhancing the contribution of the private sector to maternal and child health care.
- Investing more in scaling up the implementation of the alternative approaches (e.g. mobile teams, community case management) that aim to increase access to MCH primary health care services in countries where access is low, and scaling up the implementation of the package of MCH cost-effective interventions to reach the most disadvantaged and underserved population groups.
- Investing more in the reduction of neonatal deaths and malnutrition, together with sustaining investment and attention to the post-neonatal period within an integrated package. This is essential to avoid losing the progress made.
- Prioritizing the enhancement of the health information system as a key element to inform planning and make decisions, as well as putting in place and reinforcing the birth registration system, maternal death surveillance and response system.
- Strengthening routine immunization to achieve the target of 90% coverage at national level and 80% in each district in all countries as a key intervention to reduce under-5 deaths through allocation of government resources and partner support to increase immunization coverage, as well as introduction and scale up of new vaccines against pneumonia and diarrhoea as part of a comprehensive package of interventions to control these two diseases.
- Drawing on lessons learnt from the successful experiences of other countries and within each country to move at a faster pace towards the MDGs.

Annex I.
Workforce per 10 000 population in the 10 MDG 4 and 5 priority countries in the Eastern Mediterranean Region

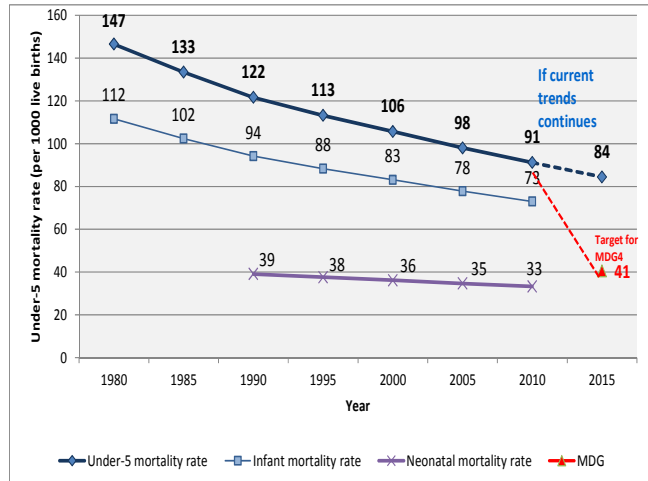
	Afghanistan	Djibouti	Egypt	Iraq	Morocco	Pakistan	Somalia	South Sudan	Sudan	Yemen
Physicians	2.1	2.3	28.3	6.9	6.2	8.1	0.4	NA	2.8	3.0
Nursing and midwifery	5.0	8.0	35.2	13.8	8.9	5.6	1.1	NA	8.4	NA
Dentists	0.3	1.2	4.2	1.5	0,8	0.6	NA	NA	0.2	1.0
Pharmacists	0.3	3.2	16.7	1.7	2.7	NA	0.1	NA	0.1	NA
Community health workers	NA	NA	NA	NA	NA	0.6	NA	NA	NA	NA
Psychiatrists	<0.05	NA	0.1	<0.05	0.1	<0.05	<0.05	NA	<0.05	NA

Annex II

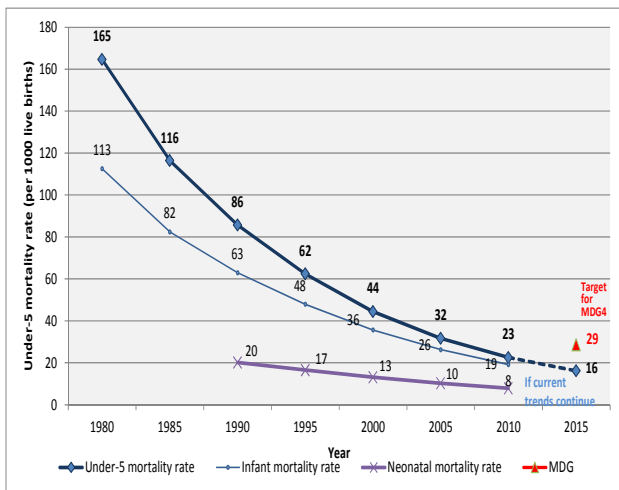
Trends of under-5 mortality in the 10 MDG 4 and 5 priority countries in the Eastern Mediterranean Region



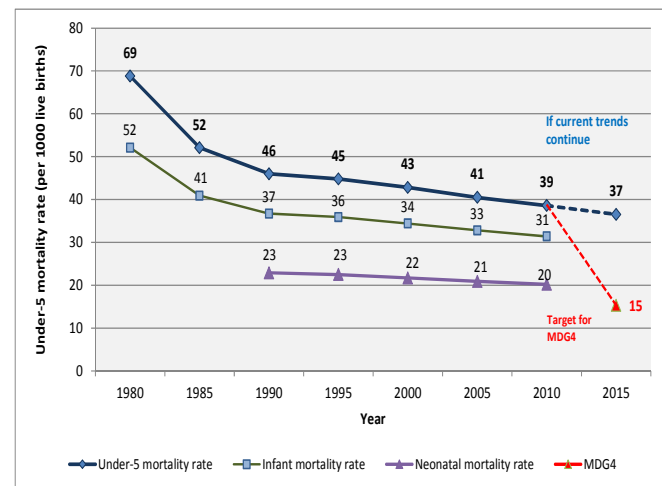
Afghanistan



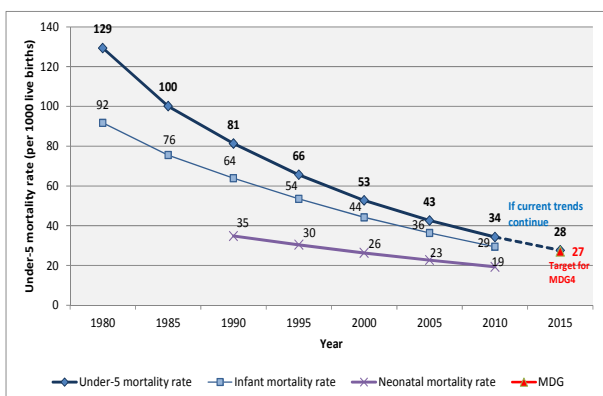
Djibouti



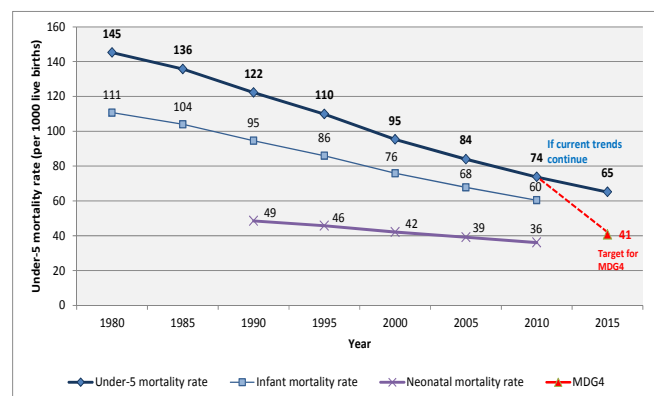
Egypt



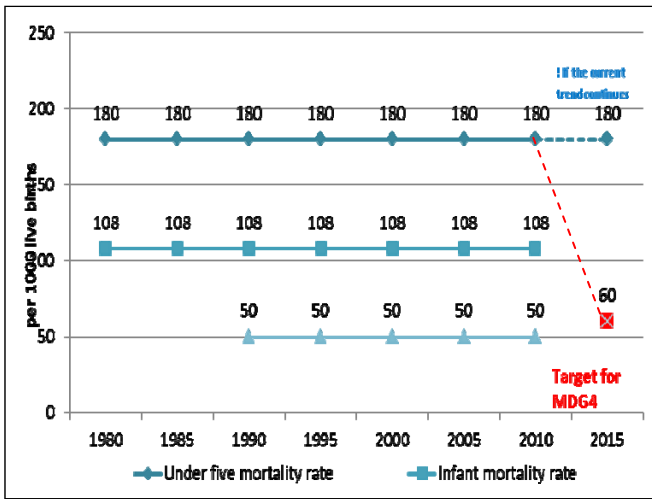
Iraq



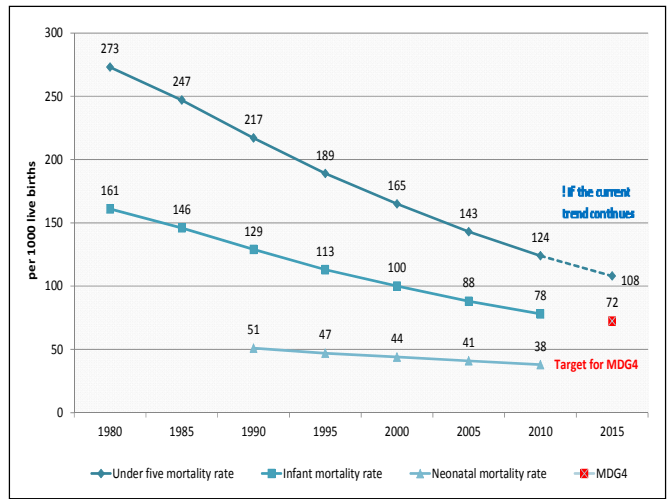
Morocco



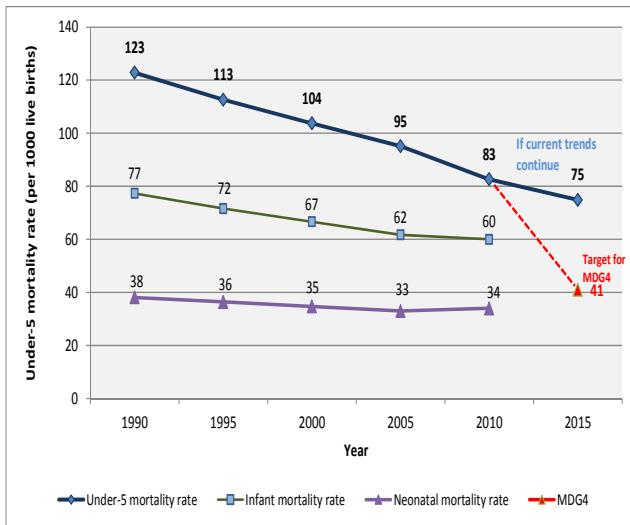
Pakistan



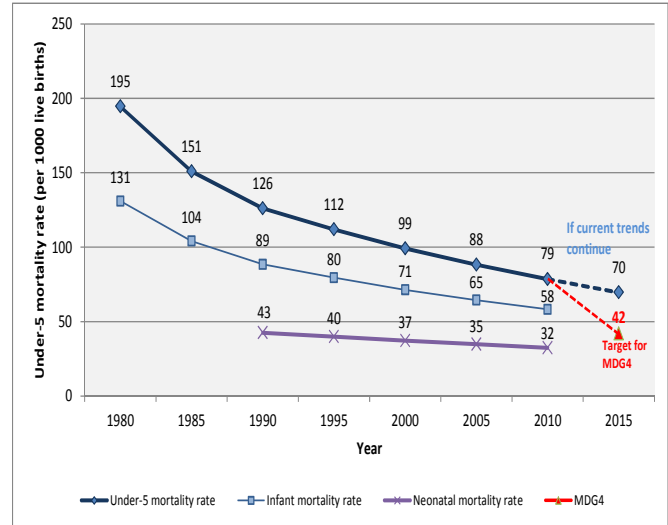
Somalia



South Sudan



Sudan



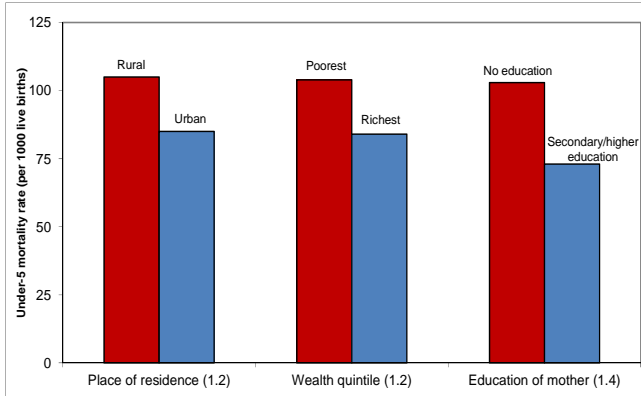
Yemen

Source: Based on 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.

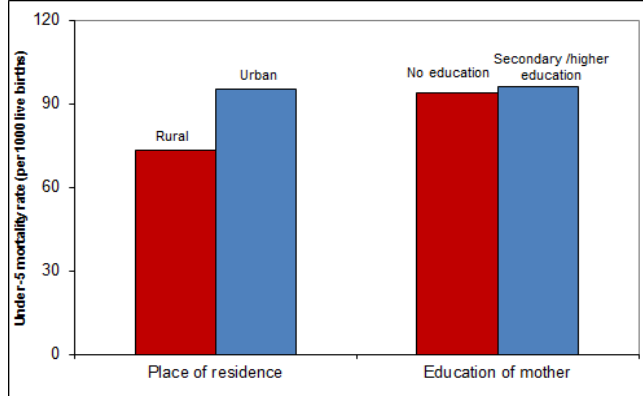
Annex III

Inequities in U-5 mortality in the MDG 4 and 5 priority countries in the Region, by residence, wealth and mothers' education

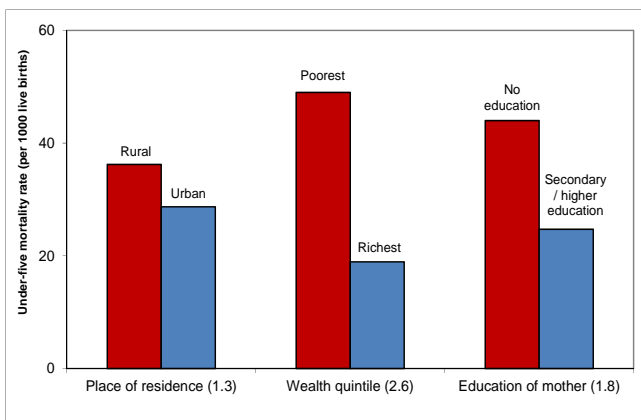
Source: most recent country population based surveys



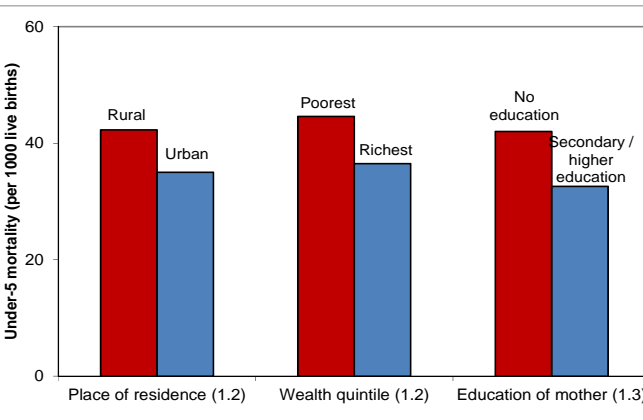
Afghanistan



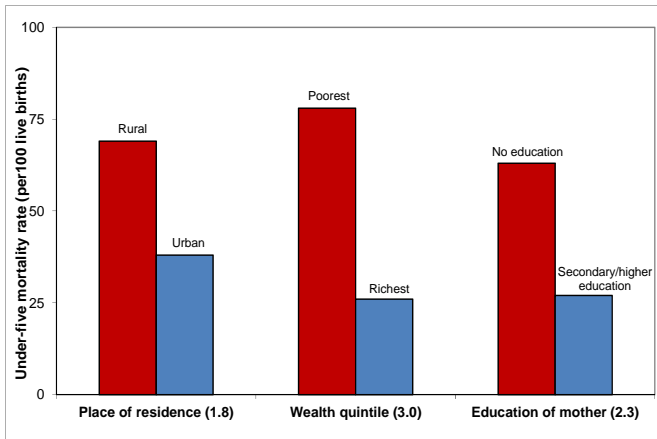
Djibouti



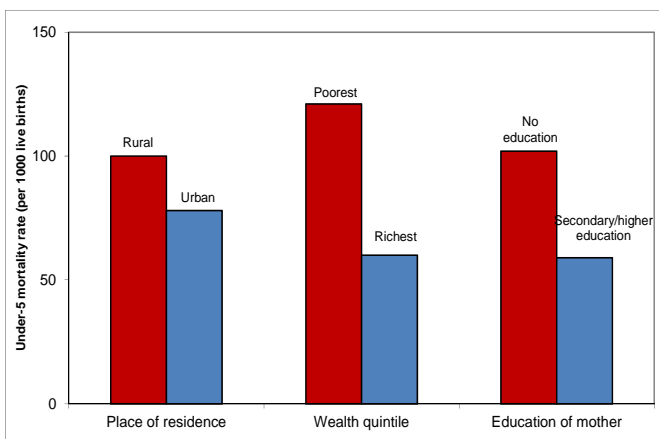
Egypt



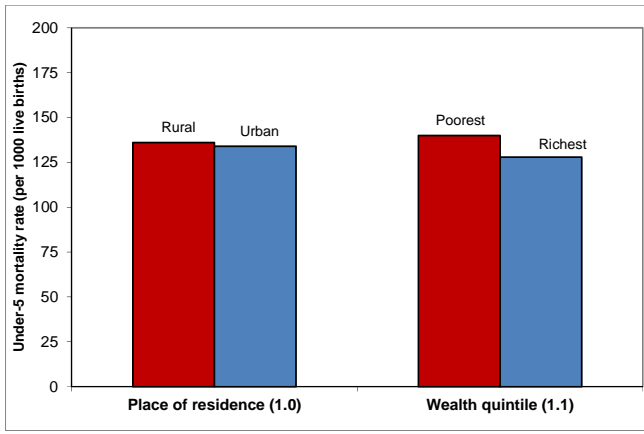
Iraq



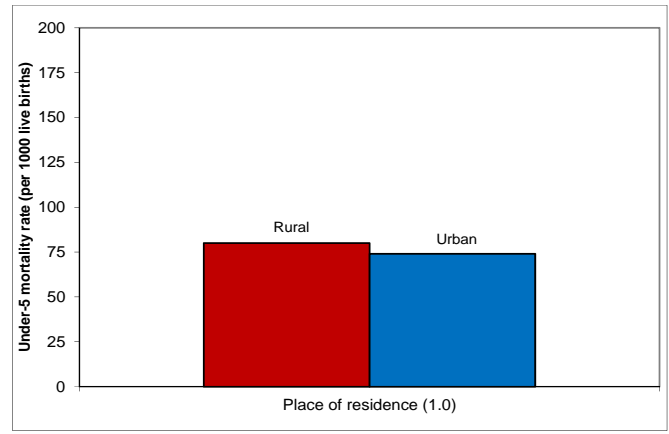
Morocco



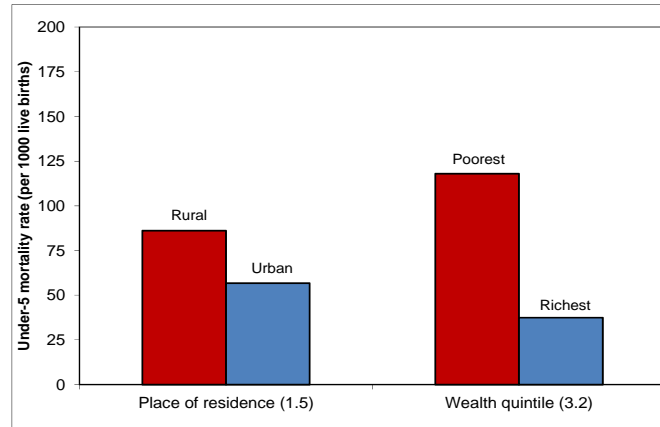
Pakistan



Somalia



Sudan

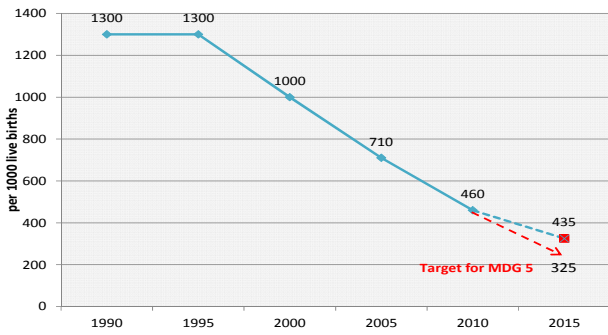


Yemen

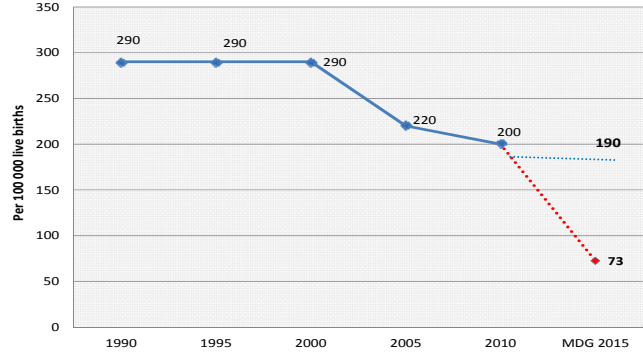
Annex IV

Trends in maternal mortality in the MDG 4 and 5 priority countries

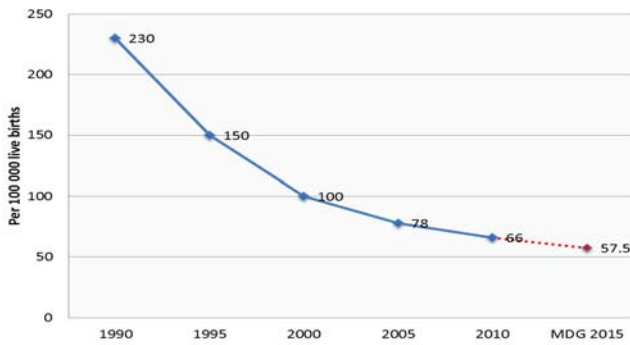
Source: Based on WHO, UNICEF, UNFPA and The World Bank estimates, Trends in maternal mortality: 1990 to 2010, published 2012.



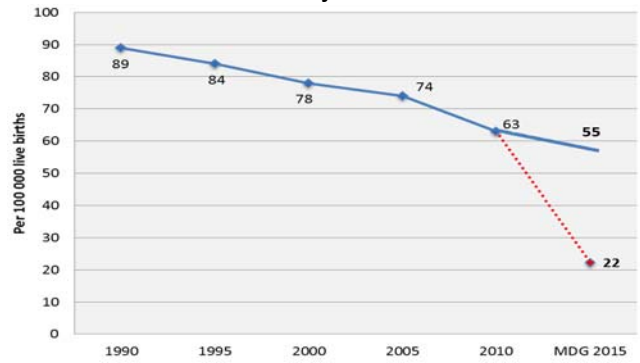
Afghanistan



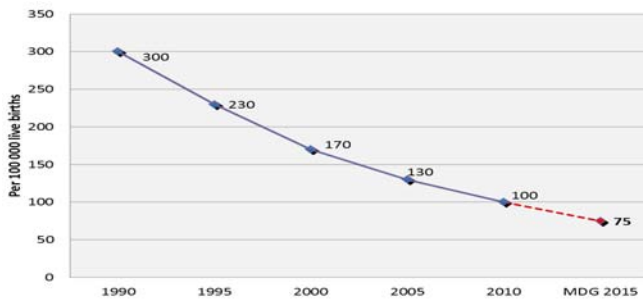
Djibouti



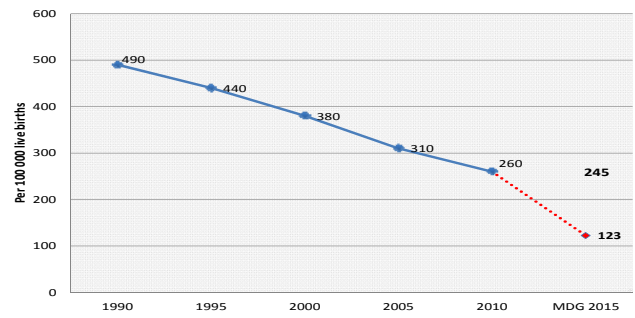
Egypt



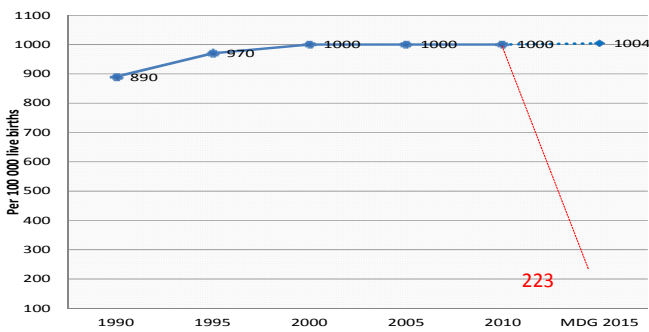
Iraq



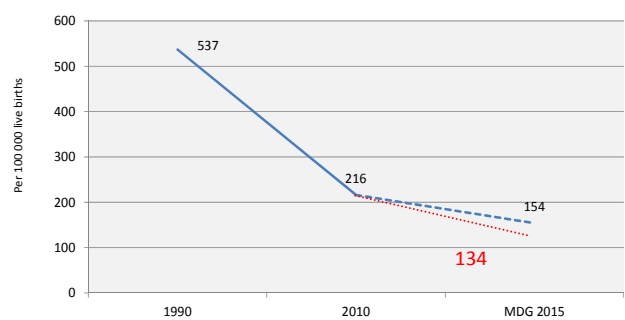
Morocco



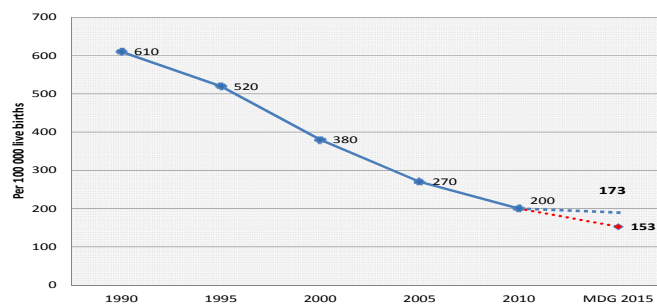
Pakistan



Somalia



Sudan

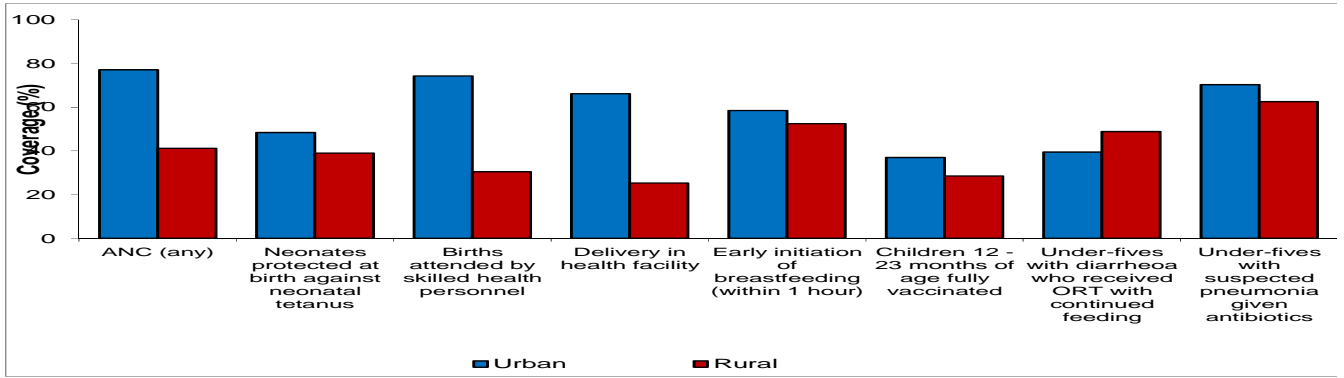


Yemen

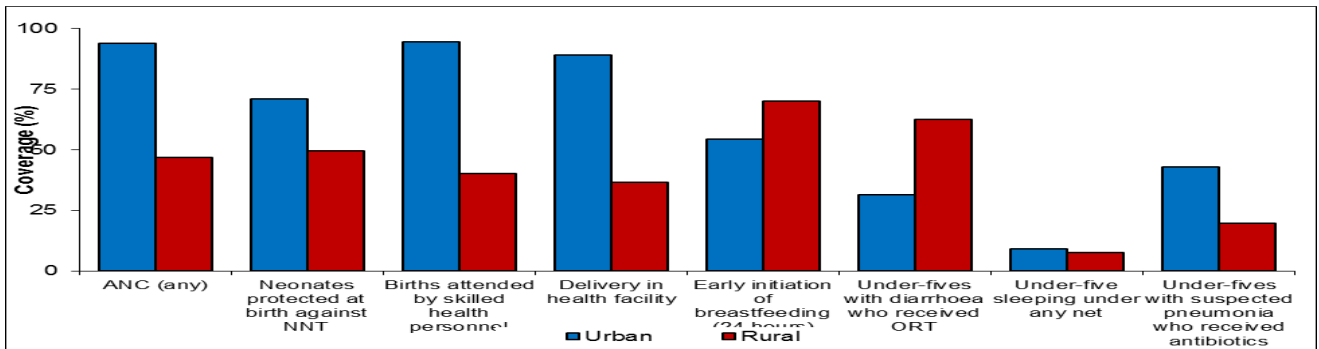
Annex Va

Inequities in coverage of MCH interventions across the continuum of care by residence

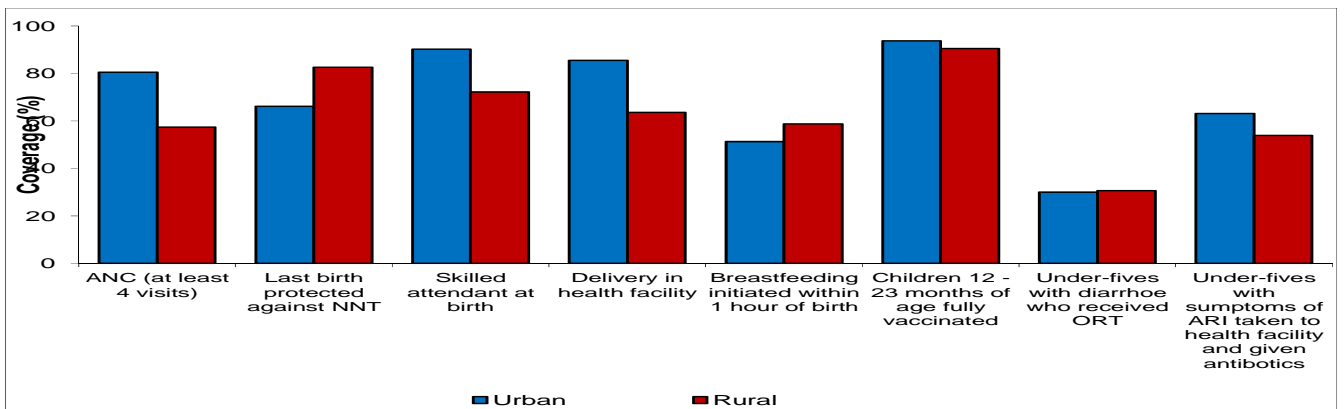
Source: most recent population based surveys



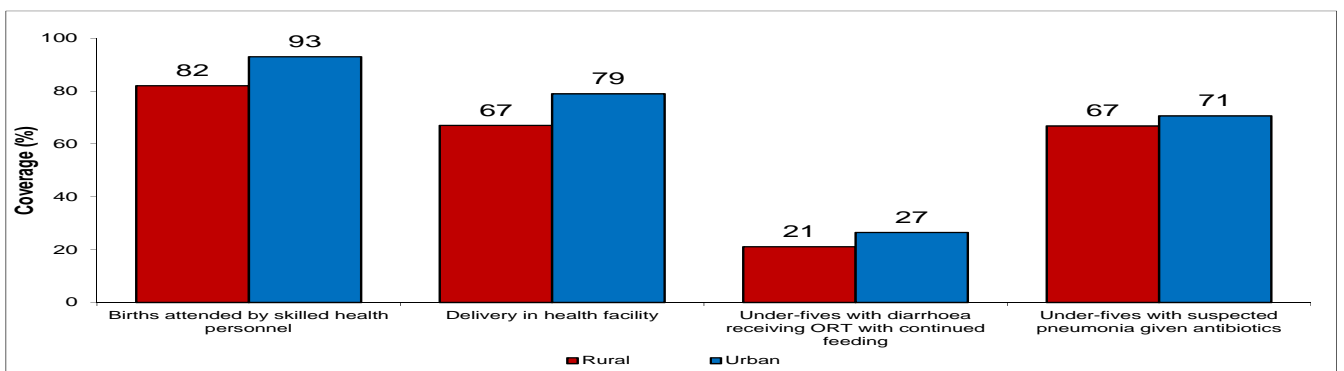
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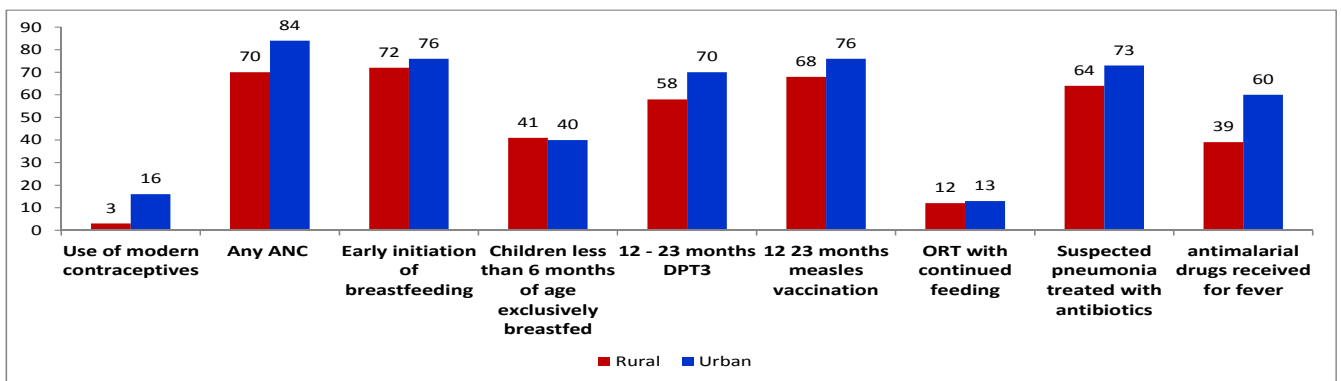
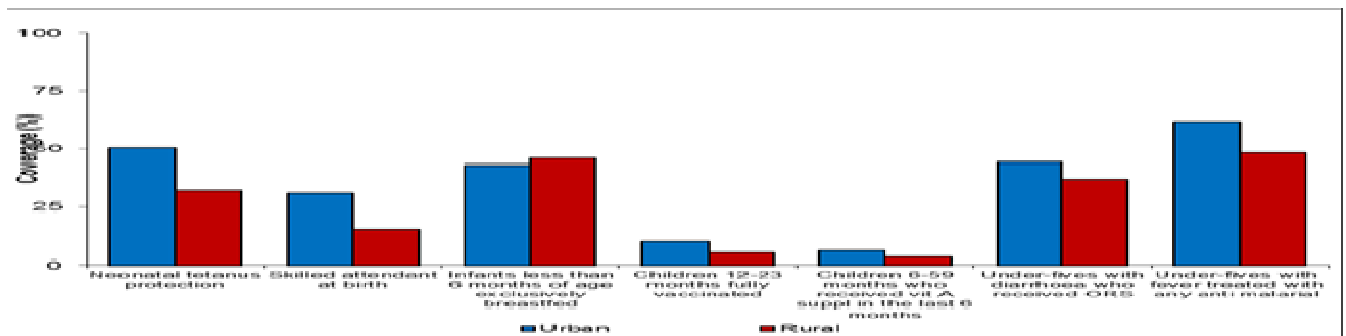
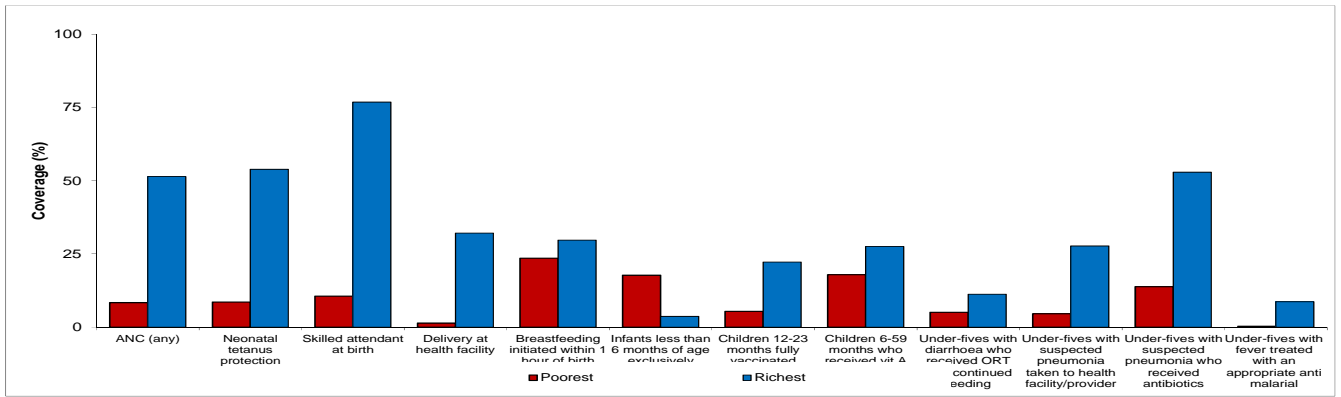
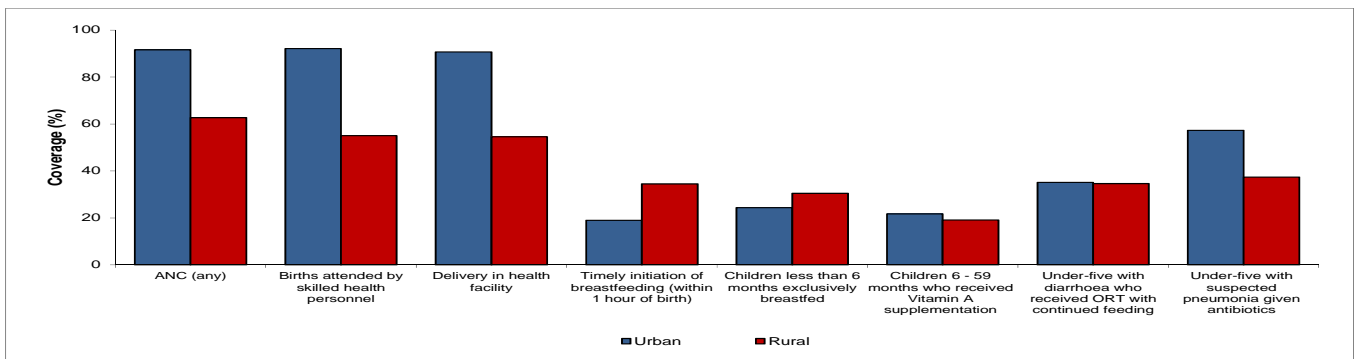
Djibouti

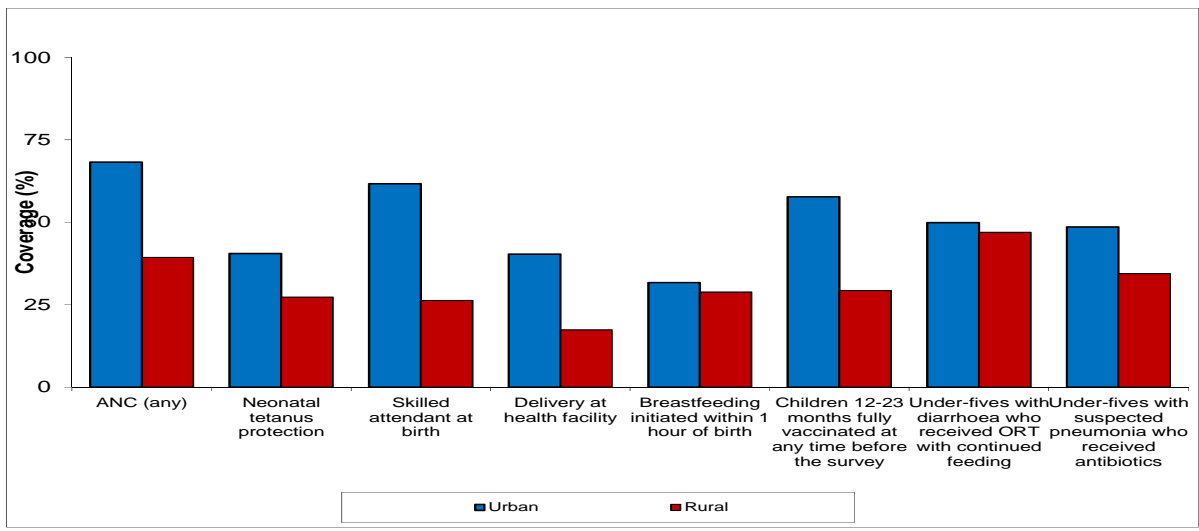


Egypt



Iraq

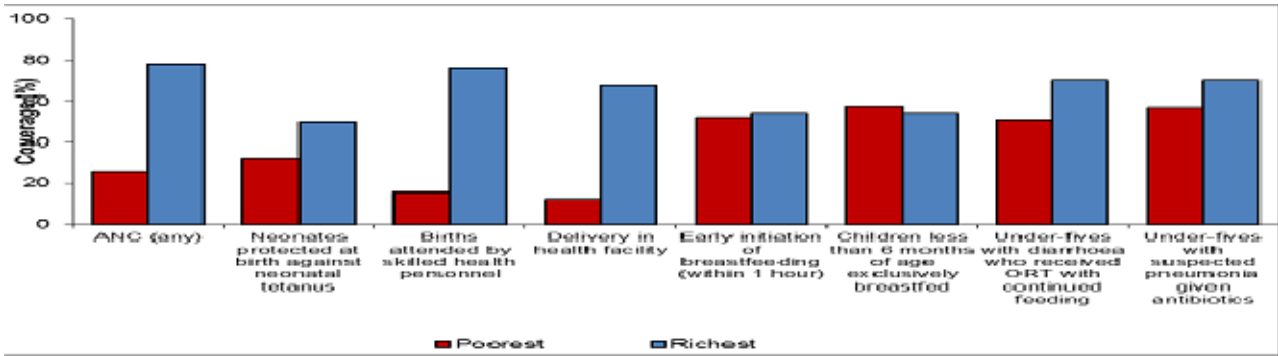




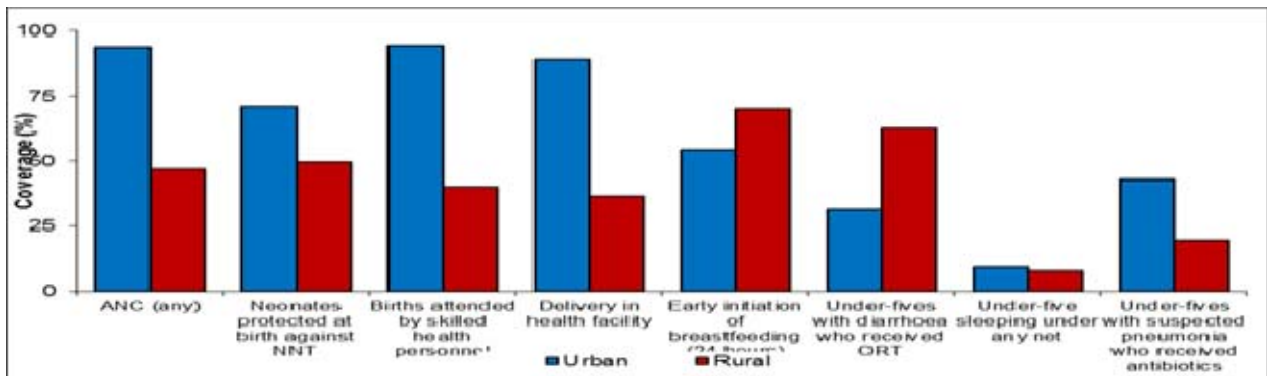
Yemen

Annex Vb

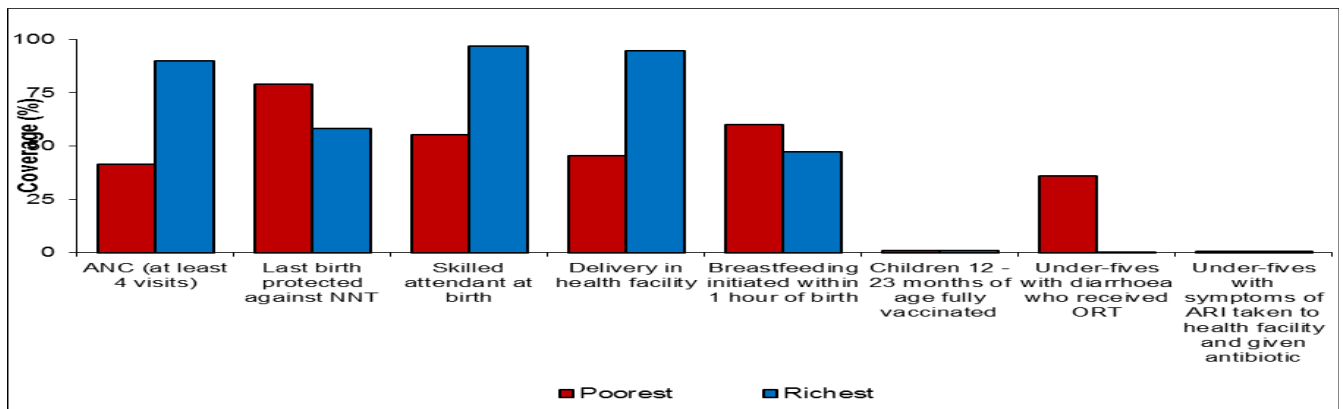
Inequities in coverage of MCH interventions in the 10 MDGs priority countries in the Eastern Mediterranean Region by wealth quintile



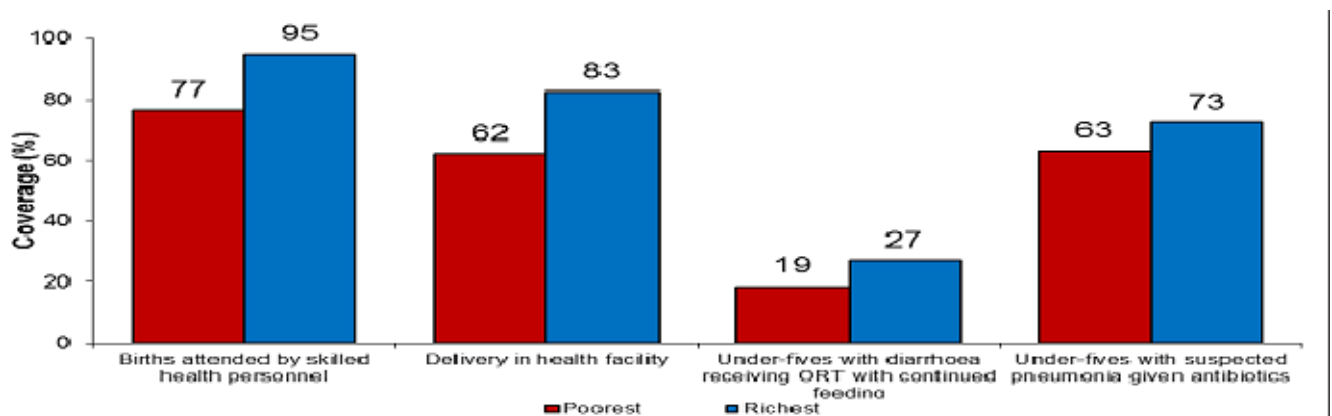
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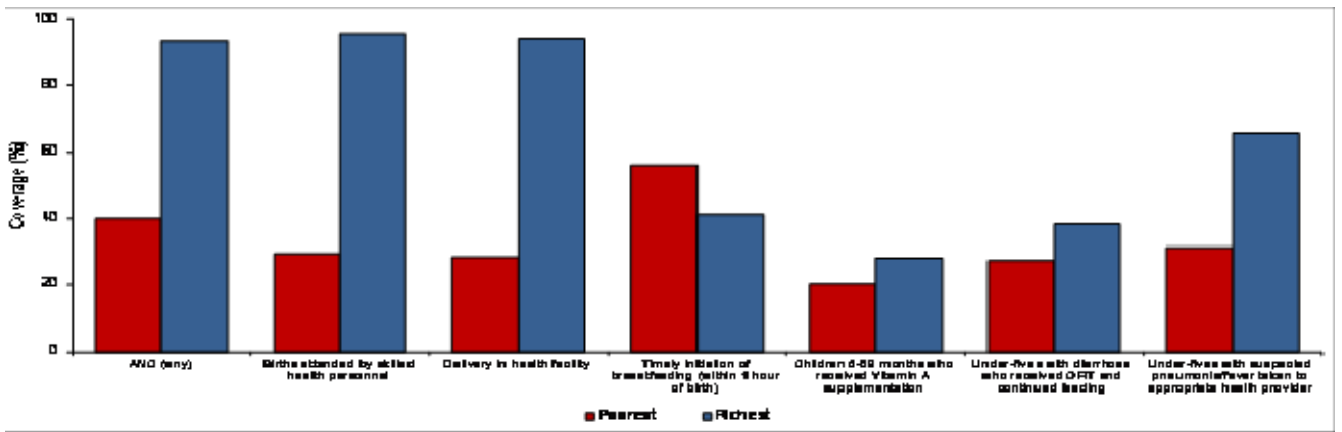
Djibouti



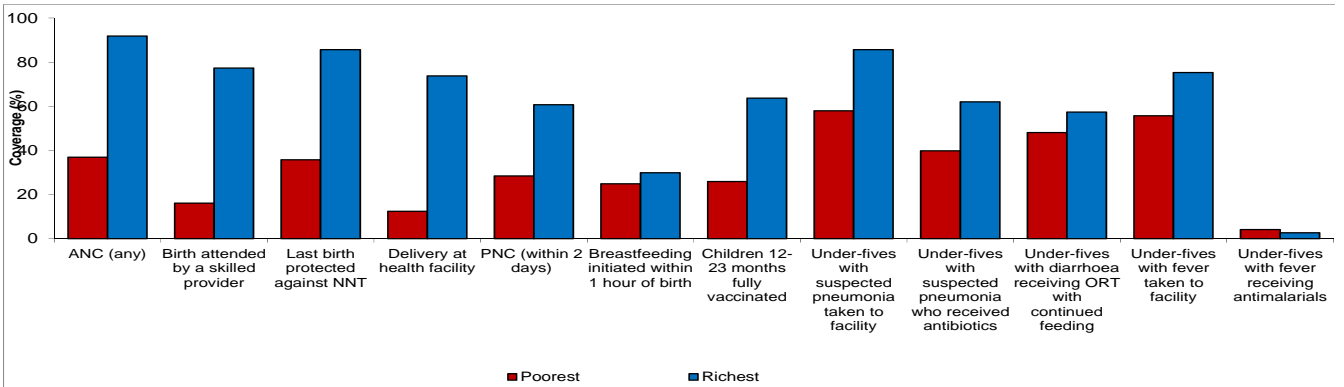
Egypt



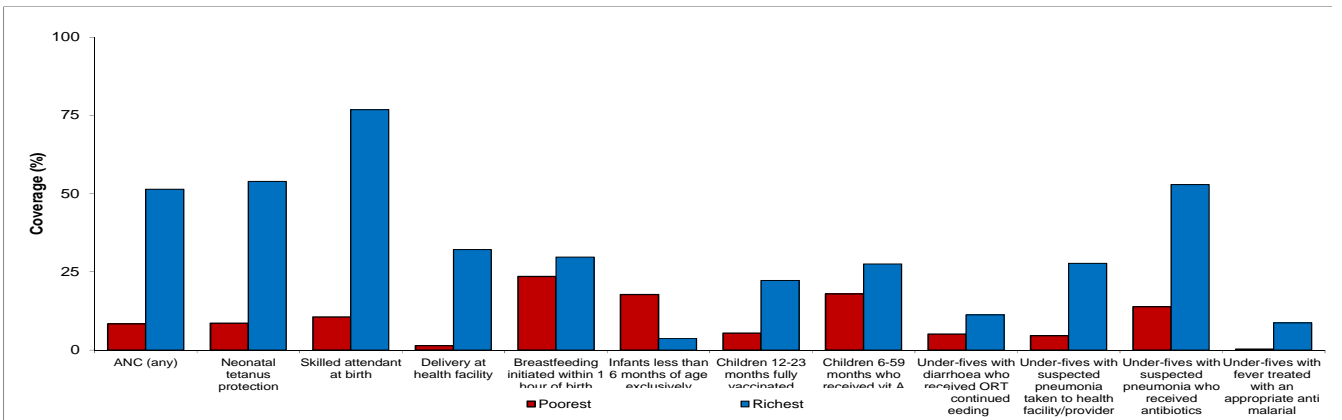
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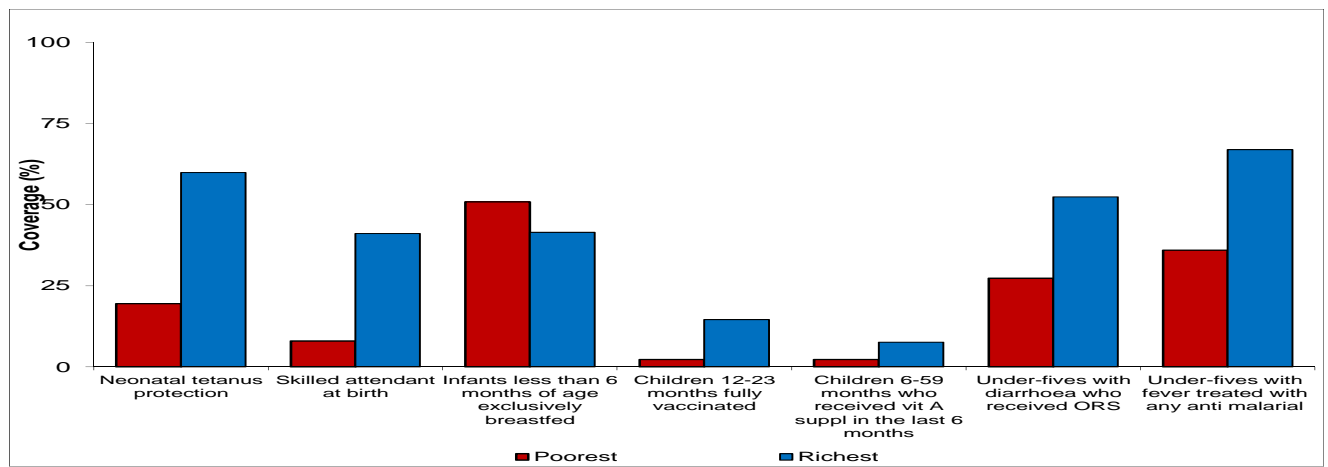
Morocco



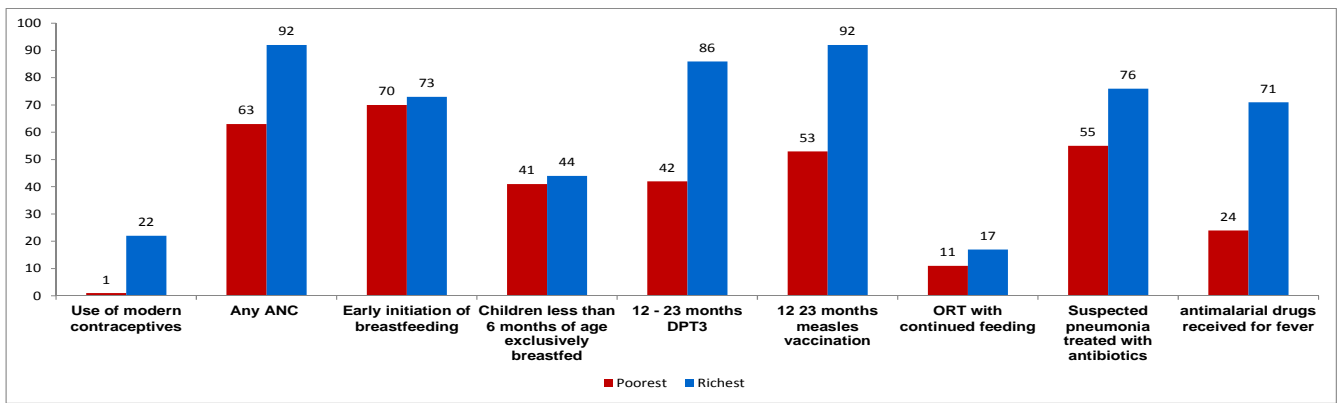
Pakistan



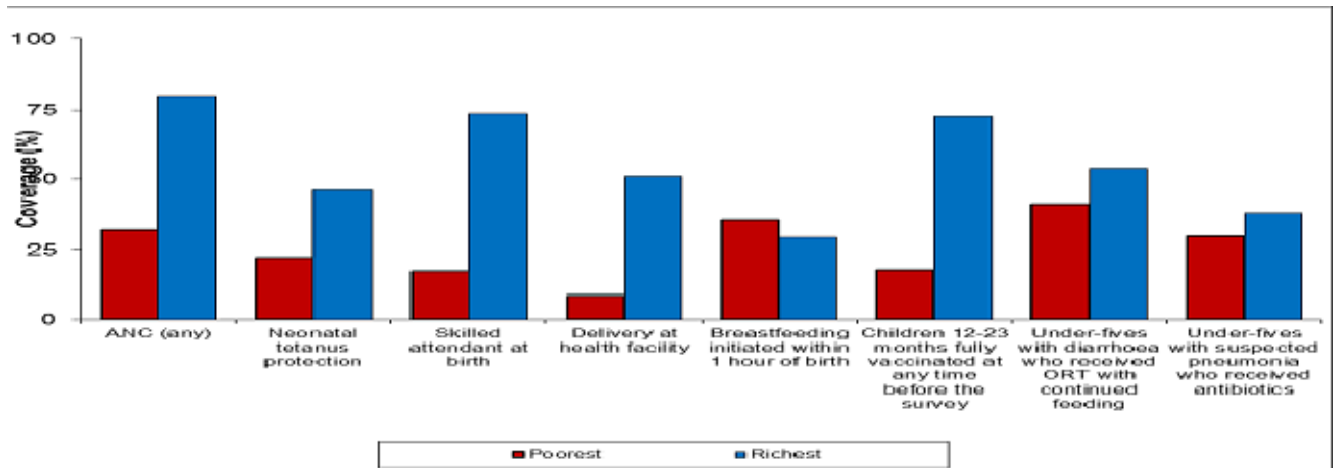
Somalia



South Sudan



Sudan



Yemen

