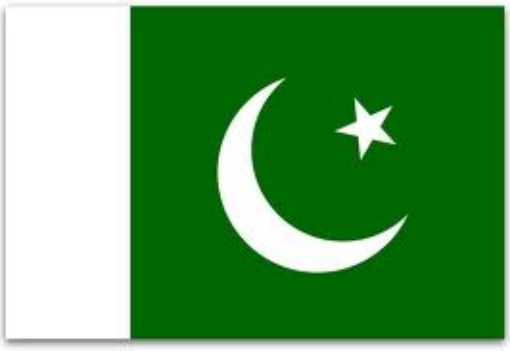
Saving the Lives
of Mothers & Children
Rising to the Challenge

Pakistan



1. Introduction

Pakistan is located **in** the north west o**f south Asia**. The country is characterized by an irregular terrain that accounts in large part for the dispersion of population. It is the sixth most populous country in the world with a population of 176.7 million, 63.8% of which live in rural areas.[1]According to Pakistan Demographic and Health Survey (PDHS) the total fertility rate in Pakistan has decreased from very high (6) in the early 1984 to 4.1 children per woman in 2007. Adolescent fertility rate remains high at 50 births per 1000 women aged 15-19 years.

Sociodemographic characteristics

Pakistan population is young where 62 million population is under the age of 15 years (35.4% of the population)[1]

Total fertility rate (2011)[2]	3.5
Total estimated under-5 population (000) [2010][1]	21 418
Population growth rate [2011][2]	2.1%
Estimated number of births (000) [2010][1]	4778
Percentage of rural population [2011][2]	65%

[1]United Nations, Department of Economic and Social Affairs, Population Division (2011): http://esa.un.org/unpd/wpp/country-profiles/country-profiles_1.htm (accessed January 2013)
[2]WHO Regional office for the Eastern Mediterranean, Demographic, social and health indicators for countries of the Eastern Mediterranean, 2012, based on country reports

Pakistan is ranked 145 out of 187 countries on the UNDP human development index[1], with 22.6% of the population living below the international poverty line of US$ 1.25 (in purchasing power parity terms PPR) a day.[1]

It is also among the 10 countries in the Eastern Mediterranean Region with highest child and maternal mortality rates, accounting for almost one third of regional child and maternal mortality. Despite the efforts of the authorities and the civil society, Pakistan remains far from achieving 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 suggests 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

Until 2010, Pakistan had been implementing health sector reforms through its federal level policy and planning conduits, i.e. National Health Policy; Five Year Strategic Plan etc. However, in 2010, the Parliament introduced the 18th amendment to the Constitution by which health and population was devolved to provincial governments and Federal Ministry of Health abolished.

The health care system in Pakistan comprises both public and private health facilities. Conventionally, the public sector provides healthcare through a three-tiered health care delivery system and a range of public health interventions. The total number of facilities are around 6884 which comprise 862 tertiary care

[1] UNDP 2011 Human Development Report, 2011

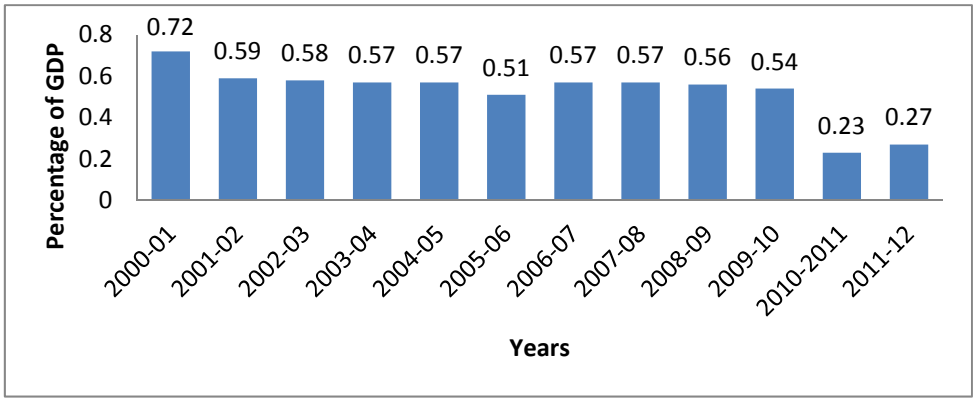
hospitals, 108 district headquarters hospitals (DHQs), 280 *tehsil* headquarter hospitals (THQs) which three levels provide comprehensive emergency obstetric and neonatal care (EmONC), 638 rural health centres (RHCs) and 4996 basic health units which provide basic EmONC. In addition, there are dispensaries, MCH centres, EPI centres which provide one or two elements of primary health care services. Basic health units are the first level that provides the full package of primary health care including child health care. RHCs, THQs and DHQs provide primary child health care and are the referral facilities for BHUs.

The total human resources in MNCH related facilities is 225 445 which include registered doctors (149 201), nurses (76244), LHVs (11 510) while more than 100 000 lady health workers along with nearly 8000 community midwives are providing MCH services at the community level.

The private health sector is evolving. The majority of the citizens (72%) receive health care from private facilities in both rural and urban settings, with highest (63%) levels in Punjab. In 2009-2010, the total estimated number of private health care providers in the country reached 206 712. Out of the total estimated 4380 hospitals in Pakistan, 529 belong to nongovernmental organizations/not-for-profit sector[2].

According to the National Health Accounts Report 2007-08, general government expenditure accounts for 25.1% out of total health expenditure while private expenditure constitutes 72%, of which 92% is out-of-pocket expenditure. The share of donors/development partners is 3%. Natural disasters and militancy in the past decade have negatively impacted on social sector spending.

Public sector health expenditure as % of GDP (2000-01 to 2011-12)



Source: Pakistan Economic Survey, 2011-12, Finance Division, Government of Pakistan

II.2 MNCH policies and strategies

Investment in the health of women and children is recognized by the Government of Pakistan as a key development factor for reducing poverty and building peaceful and productive societies. This has been translated through its commitment to several global initiatives including achieving the MDGs. Keeping in view the vision and objective of the Government, the following policies, strategies and programmes were developed:

- community-based primary health care and family planning (lady health worker programme) 1994
- International Code of Marketing of Breast-milk Substitutes 2002
- maternal and child health strategy 2005 – 2012
- accelerated MNCH programme 2007-2012
- national population policy 2010
- national infant and young child feeding strategy 2008
- introduction of Hib vaccine 2008

[2] Pakistan Standard of Living Measurement Survey (PSLMs) 2010-11

- community treatment of pneumonia with antibiotics 2010
- national immunization policy 2004
- introduction of pneumococcal vaccine 2012
- National Policy for Development and Empowerment of Women (NPDEW, 2002)

Despite the development of these policies and strategies, inadequate implementation has caused barriers to achieving the output of the interventions to their fullest. The NPDEP ensures health rights of women and child but it is not fully implemented.

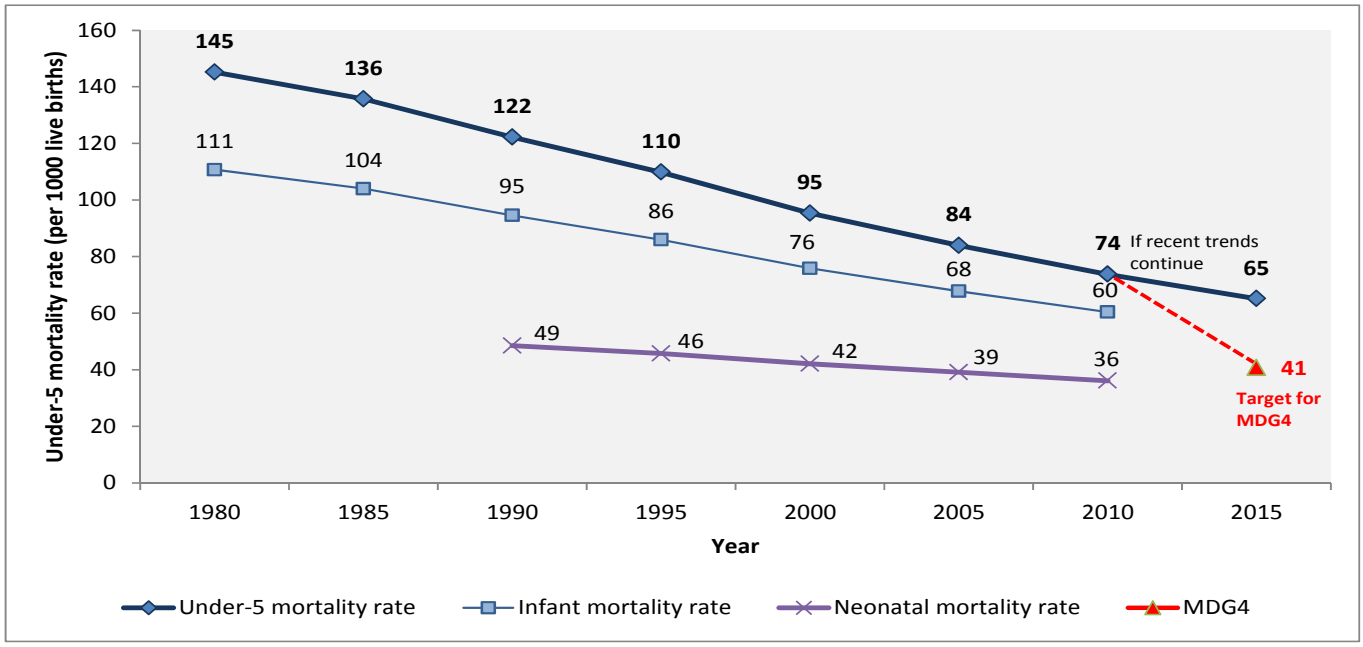
II-3 Maternal, neonatal and child health (MNCH) current status

II-3.1 Maternal, newborn and child mortality

During the past two decades Pakistan has shown a consistent decreasing trend in under-5 mortality rate (U5MR). U5MR decreased by 41% between 1990 and 2011 which falls short of achieving the 66% reduction targeted by MDG4. The neonatal mortality rate has declined by 27% during the same period. Pakistan has the slowest rate of child mortality reduction in Asia.

Data showed that the distribution of under-5 deaths is very balanced between the neonatal period (48%) and the post-neonatal period (52%). Of 481 surveyed neonatal deaths in the four years preceding the PDHS, 37% occurred on day 0, 46% on days 0 and 1 combined, and 75% during the first week of life.

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

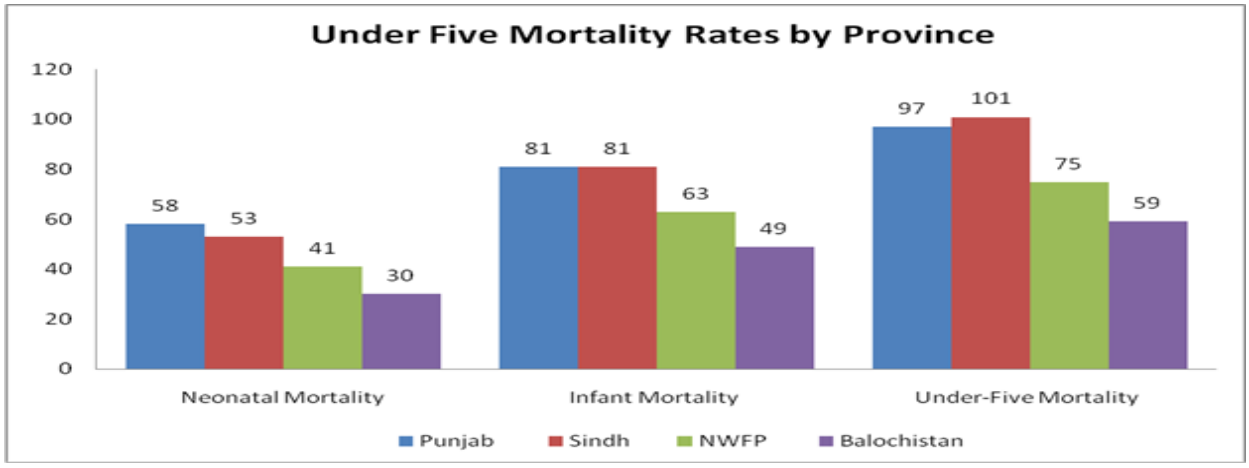


Source: United Nations Interagency Group on Child Mortality Estimation (Report 2012)

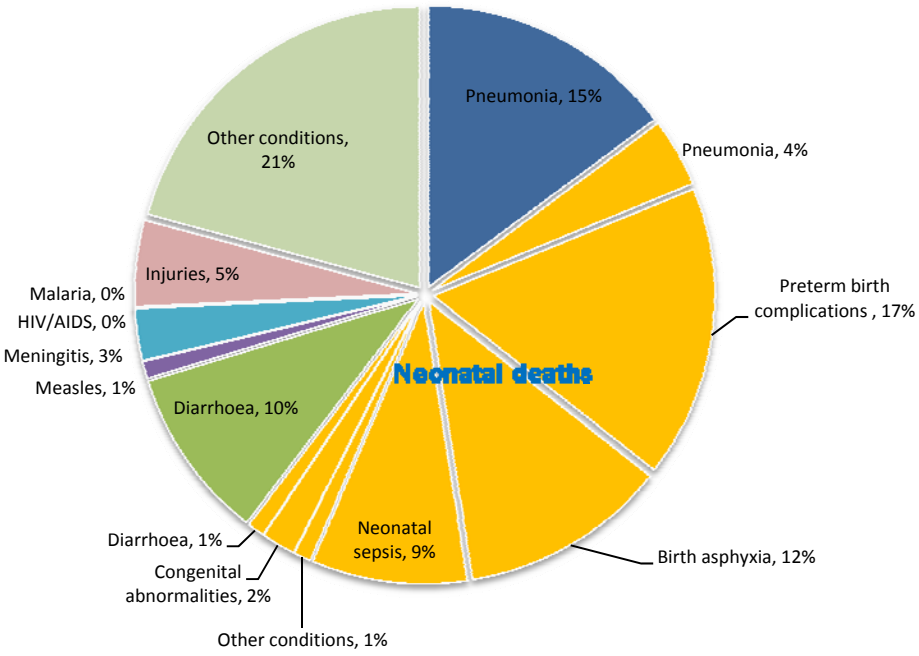
According to PDHS 2006-2007, the highest under-5 mortality rates were seen in the province of Sindh and the lowest was in Balochistan. There was a 1.7-fold difference in the magnitude of U5MRs between the highest and lowest risk provinces.

Still according to PDHS 2006-2007, there were also differences in the neonatal mortality rates (NNMRs) between provinces. NNMRs varied from 30 per 1000 live births in Balochistan to 58 per 1000 live births in Punjab, translating into a nearly 2-fold difference between the province with highest NNMR and that with the lowest NNMR.

Child mortality by province



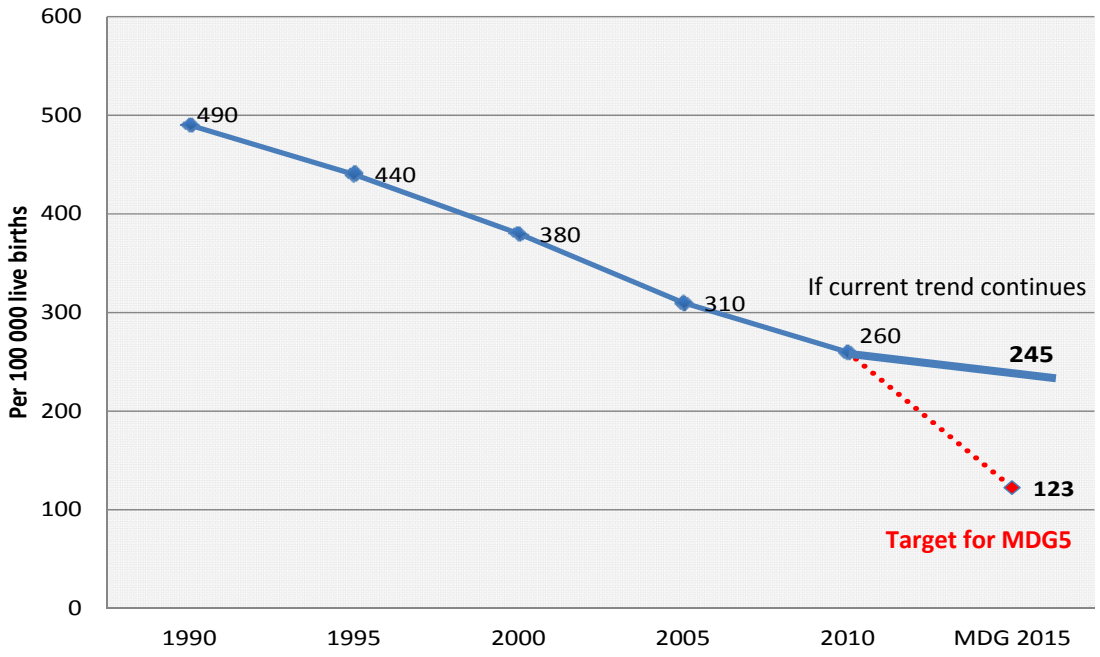
Pneumonia (19%) was overall the leading cause of mortality in 2010. Together with other Infectious diseases such as diarrhoea (11%) and measles (1%) accounted for about one-third (31%) of the deaths that occurred among children under 5 years in Pakistan. Other important causes of death in the neonatal period included prematurity, birth asphyxia and neonatal sepsis (17%, 12% and 9% respectively).



Causes of under-5 deaths

Source: CHERG/CAH for distribution of causes of neonatal and under-5 deaths (Black et al, *The Lancet* 2010; and *World Health Statistics 2011*)

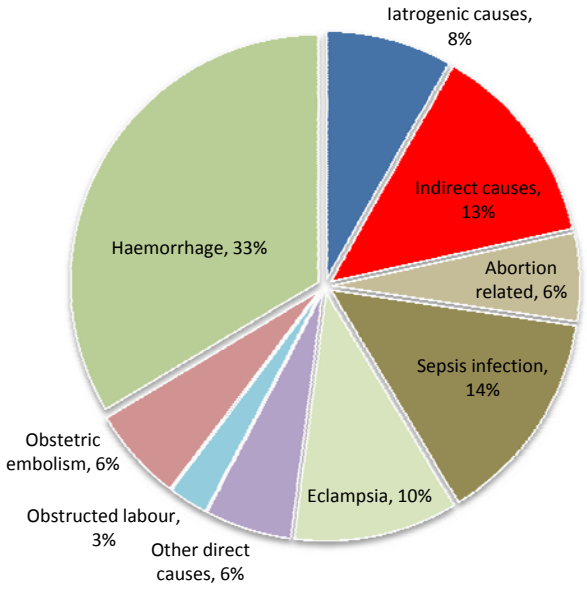
Trends in maternal mortality reduction between 1990– 2010 and extrapolation to 2015



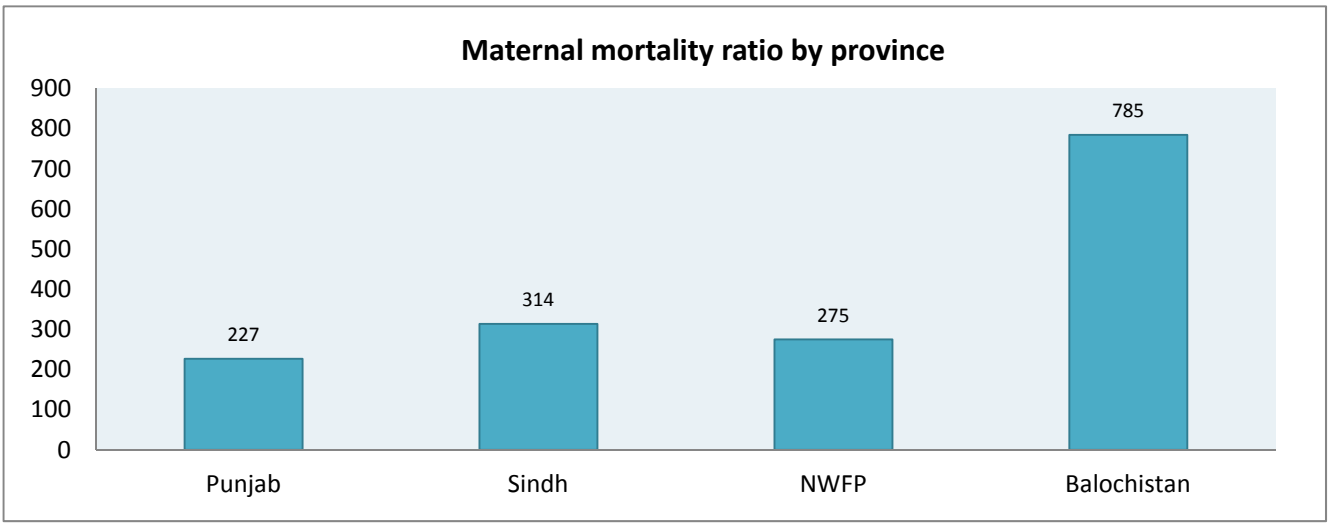
Source: WHO, UNICEF, UNFPA and The World Bank estimates, Trends in maternal mortality: 1990 to 2010, published 2012.

Pakistan witnessed a 47% reduction in maternal mortality ratio between 1990 and 2010. The PDHS (2006/07) demonstrates that women living in rural areas are almost at double the risk of dying of maternal causes than women living in urban areas: maternal mortality ratio 319 and 175 deaths per 100 000 live births, respectively. MMR varies considerably between provinces, from 227 in Punjab and 785 in Balochistan.

The same survey showed that postpartum haemorrhage is the leading direct cause of maternal deaths (33%), followed by puerperal sepsis and eclampsia. Obstetric bleeding (postpartum and antepartum haemorrhage) is responsible for one third of all maternal deaths in Pakistan. Eight percent (8%) of maternal deaths is attributed to iatrogenic causes such as treatment failure or complications of medical procedures, which reflect the poor quality of services provided to women.



Causes of maternal death



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

II-3.2 Maternal, newborn and child morbidity

Acute respiratory infections, mostly pneumonia, diarrhoea and malaria complicated by a chronic and high level of malnutrition are the common causes of morbidity among children less than 5 years of age.

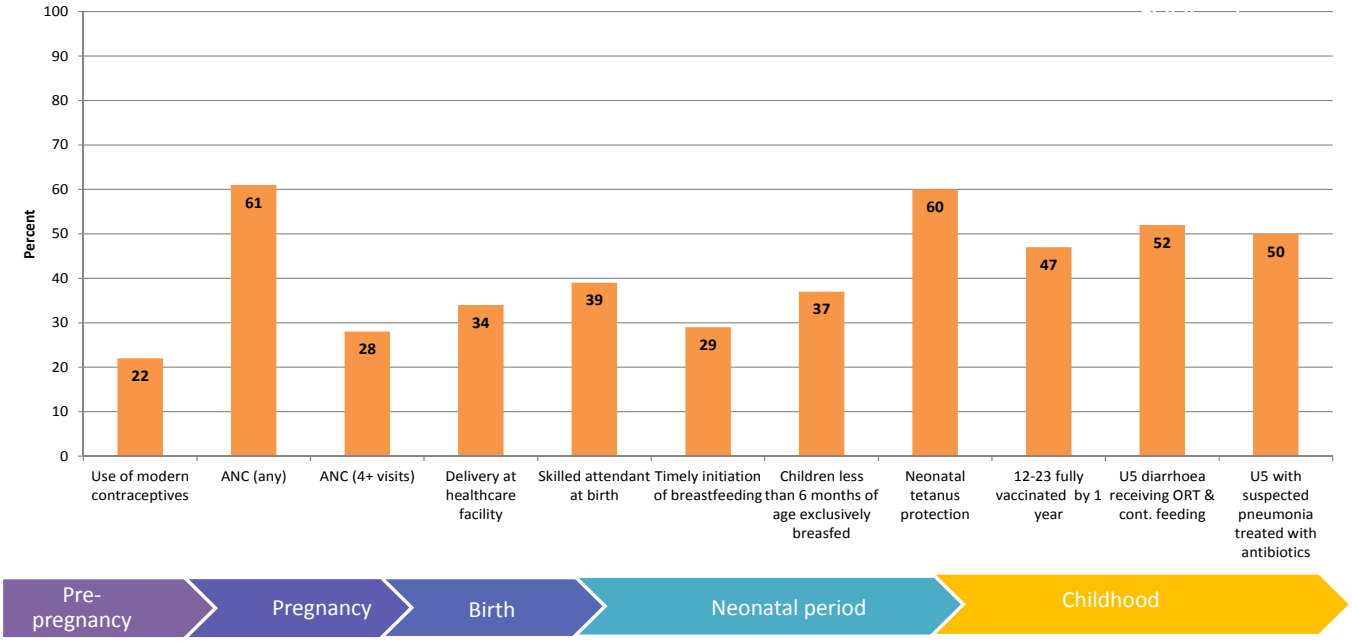
Maternal, newborn and child health	
Maternal	45%
Anaemia mothers of <5[1]	
Newborn:	
Low birth weight in newborns[2]	31.10%
Child:	
Children under 5 with suspected pneumonia[2]	14.0%
Children under 5 with diarrhoea[2]	22.0%

Nutritional status in children under 5[1]	
Stunting	44.0%
Wasting	15.1%
Underweight	32.0%
Moderate Vit. A deficiency	23%
Moderate anaemia	58%
Severe anaemia	5%
Night blindness	0.9%

[1]National nutrition survey 2011
[2]PDHS (2006/7)

II-3.3 Coverage indicators across the continuum of care

According to PDHS (2007), the coverage rates of key maternal, newborn and child health interventions are low (<50%) for most interventions, with disparities between provinces.

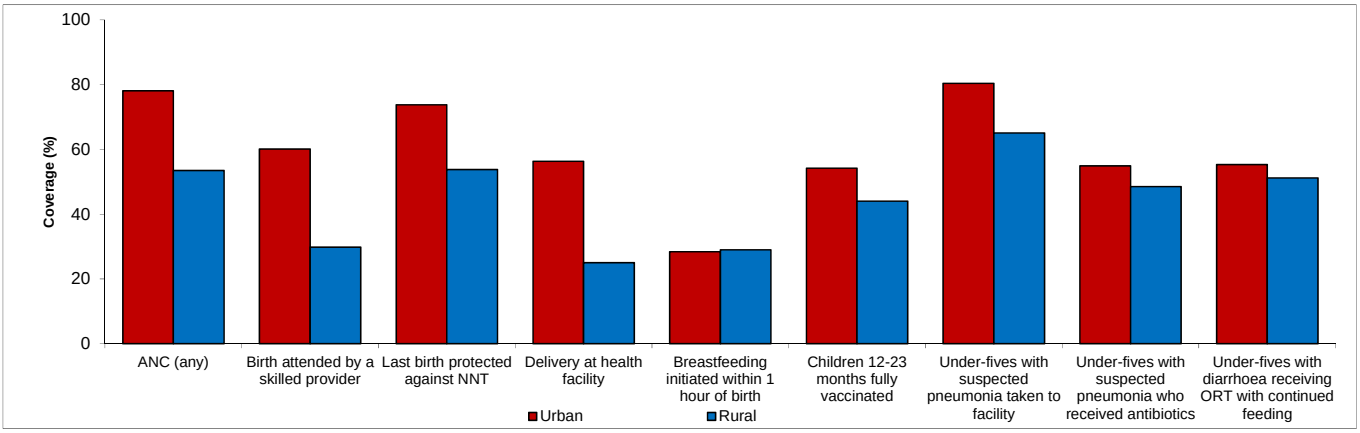


Coverage of effective maternal and child health interventions along the continuum of care by Province (PDHS: 2007)

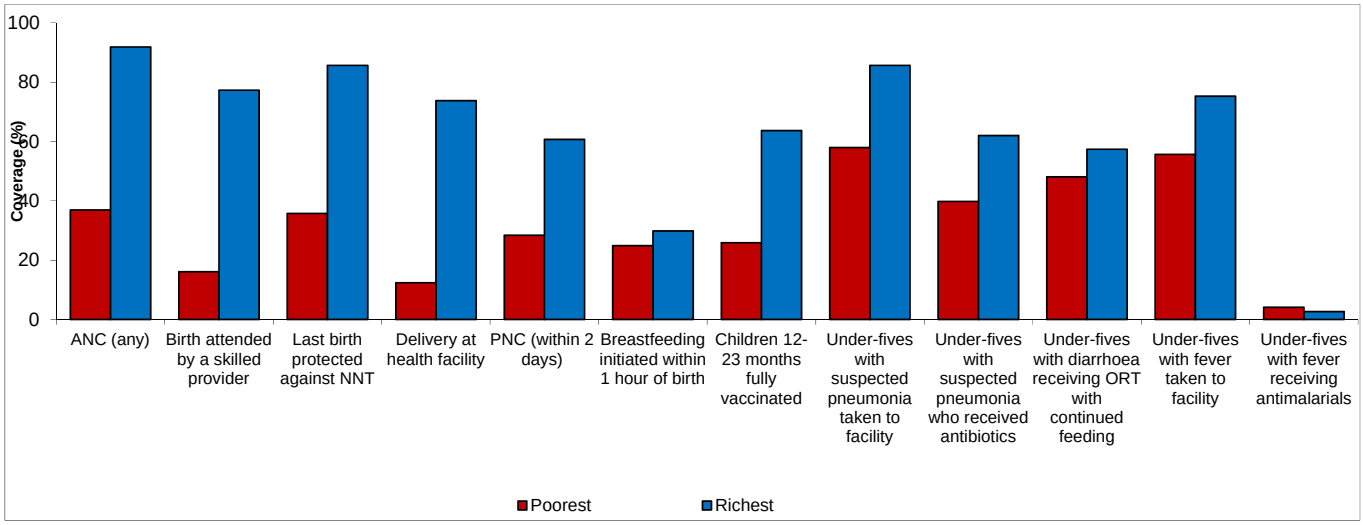
	Punjab	Sindh	NWFP	Baluchistan
Treatment of malaria during pregnancy	12.9	24.9	12.3	16
Last birth protected against neonatal tetanus	65.1	58.3	51.2	30.9
Delivery at health facility (%)	33.4	41.7	29.7	18.2
Delivery by C-section	9.2	6.5	2.9	1.5
Birth attended by a skilled provider	37.7	44.4	37.9	23
Use of safe delivery kit	34.2	24.2	32.2	28.3
Post natal care of mothers (within 2 days)	36.4	57.2	23.4	31.2
Breastfeeding initiated within 1 hour of birth	30.4	19.3	34.8	41.9
Under-5 with diarrhoea who received ORT	49.8	64.3	54	71.1
Under-5 with diarrhoea who received ORS	35.1	53.7	37.5	51.8
Children 6-59 months who received Vit. A in previous 6 months	57.5	69.5	56.5	53.6
Children 12-23 months fully vaccinated	53	37	47	35
Under-5 with suspected pneumonia taken to health facility/provider	70.9	78	49.8	56.1
Under-5 with suspected pneumonia received antibiotics	59.1	41.1	40.6	35.3
Under-5 with fever taken to health facility/provider	65.6	75	50.4	49.1
Under-5 with fever received antibiotics	53.7	42.1	44.2	24.5

Coverage by key maternal and child health interventions increased between 1990/1 and 2006/7 (PDHS). For instance, skilled birth attendance has increased from 20% to 39%, and exclusive breastfeeding from almost 21% to 37%. Under-5 children with suspected pneumonia who received antibiotics ranges from 59% in Punjab to 35% in Balochistan. Skilled birth attendance varies from 44% in Sindh to 23% in Balochistan; postnatal care varies from 57% in Sindh to 23% in Khyber Pakhtunkhwa. Early initiation of breastfeeding varies from 42% in Balochistan to as low as 19% in Sindh.

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



As shown by the graph above, differences exist between urban and rural settings regarding the coverage with cost-effective interventions. Seventy eight (78%) of urban women receive care during pregnancy (any visit) whereas just above half (54%) receive the same care in rural areas. There are no significant differences between urban and rural regarding initiation of breastfeeding one hour after birth (28% and 29% respectively). This will require more focus on infant and young child feeding practices with special reference to this indicator.



Source: PDHS Pakistan 2006–2007

The coverage indicators are markedly better among the richest compared with the poorest quintiles. The above graph reflects the marked disparity in deliveries conducted by skill birth attendants among the richest (77%) and the poorest (16%). There was a six-fold difference regarding deliveries at health facility between richest compared to poorest (PDHS 2006/7)

Women in the richest quintile are almost three times more likely to use modern family planning than women in the poorest quintile. Similarly, modern contraceptive use among women with higher education is 31.4% vs. 18.9% among women with no education. 62% of children living in the richest household with suspected pneumonia received treatment with antibiotics, while only 40% of those living in the poorest household with suspected pneumonia received treatment with antibiotics.

II-4 Towards the MDGs 4 & 5

Recognizing the poor maternal and child health indicators, Pakistan is making considerable efforts to improve the MNCH indicators. These include:

- a high level of political commitment to maternal and child health resulting in MNCH plans being included in the national health plans and budgeted;
- countries signatory to the MDGs
- MNCH is a priority of provincial health sector policies, strategies and plans;
- donors and development partners (Norway, DFID, AuSAID, USAID, GIZ WB, UN agencies namely UNFPA,UNICEF and WHO etc.) are interested and are pledging considerable funds to catalyse the government funds;
- maternal and child health is one of the six main components of the joint plans under the One UN Programme of Pakistan (2007 to 2012), continuing under the new plan 2013-2017.
- several international nongovernmental organizations and technical institutions, such as JHPIEGO, Save the Children, Research Advocacy Fund (RAF), Technical Resource Facility etc., are taking the lead to complement government efforts to reduce maternal and child mortality.

II-4.1 Child health

A set of interventions targeting the main causes of under-5 mortality in Pakistan has been packaged and implemented under the umbrella of the Integrated Management of Neonatal and Childhood Illness Strategy (IMNCI). The three components of the IMNCI 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.

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.

Overall utilization of public primary health care facilities where these packages are delivered is 20% to 30% on average (Draft national health policy 2010). Different initiatives have been undertaken to improve the quality of care at primary health care level in order to enhance its utilization by those most in need. These include:

- enhancement of the skills of the health workforce to provide primary quality care for newborns and children using standardized protocols such as essential newborn care (ENC) and IMNCI; however less than half of primary health care centres implementing IMNCI. This will require greater efforts to scale up IMNCI as it covers majority of the cost-effective interventions;
- provision of drugs, supplies and equipment through GAVI Alliance support, although the gap is still too wide to ensure sustained provision of the essential drugs and commodities;
- initiation of pre-service IMNCI in medical schools and paramedic training institutes;
- strengthening of health facilities by providing drugs and non-drugs items;
- provision by the LHW programme of extension services at community level, focusing on child and maternal health, in one of the strongest initiatives undertaken by the Government. While the community component of IMNCI is implemented through LHWs, enhancement of the skills of LHW is required.

Pakistan has witnessed remarkable improvement in routine vaccination coverage during the past few years. However, polio still stands as a major challenge in child health. On one hand, though not fatal, it affects child development, and on the other hand it consumes most external and national funding. The country has witnessed improvement in reported routine vaccination coverage with DTP3/Penta3 coverage; from 61% in 2003 to 82% in 2011 (WHO/Pakistan EPI report 2012). Despite this, measles outbreaks remain a challenge, with several wide outbreaks witnessed in 2012[3].

With GAVI Alliance support and government commitment to co-financing, Pakistan has successfully introduced Hib vaccine and pneumococcal vaccine. They address the major cause of under-5 deaths (pneumonia) and will have significant impact on reduction of under-5 mortality and contribute to achieving the target of MDG.

II-4.2 Maternal health

The maternal and newborn health package of interventions includes the following elements:

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

This package is delivered at:

- primary and secondary health care (PHC) facilities,
- at community level (ANC, SBA,PNC)

[3] Disease Early Warning System, WHO/ Pakistan

A national communication strategy that promotes key family practices had been developed by the former Federal Ministry of Health. Currently provinces are developing their own communication strategies (e.g. Punjab and Sindh) .

The MNCH Project covering 2007-2012 in accordance with the national MNCH strategy of 2005 focuses on enhancing skilled birth attendance through the production and deployment of 12 000 community midwives (for the first time in Pakistan), improved basic EmONC in 550 facilities and comprehensive EmONC in 275 facilities, and family planning[4]. Other strategies, such as the National Policy for Development and Empowerment of Women and National Population Policy, all include directives/elements that enhance the health of mothers and newborns. However the slow pace of implementation hampers progress towards the MDGs

II-4.3 Can Pakistan reach the targets set by MDGs 4 and 5 by 2015?

Despite the fact that Pakistan has been making progress on the MDGs, the pace of progress is slow. The average annual rate of reduction (AARR) of under-5 mortality between 1990 and 2011 was 2.5%. Despite this progress, achieving MDG4 would require an AARR of 14.2% between 2011 and 2015, which is a very high rate and almost six times as high as the one achieved until 2011.

In terms of MMR, only 25% reduction has been achieved over the past ten years (from 350 to 260) .If this trend continues Pakistan will lag behind the target of reducing MMR to 140, reaching instead 215/100 000 by 2015.

III. Feasibility analysis

- The recent devolution in Pakistan provides a good opportunity for district planning to address local needs. However, it has negative implications in areas that require legislation and effective procurement of drugs and commodities for which provincial capacities require greater support.
- The primary health care network of facilities is reasonable. However the quality of services provided is not up to the standard that attracts patients.
- Having the wide sector of community health workers facilitates community outreach services. However salaries and incentive packages, along with mobility of supervisors, need to be addressed as issues.
- Although the total public health and population welfare expenditure has increased, at US$ 8 per person per year it is much less than the US$ 34 recommended by the Commission on Macroeconomics and Health. Development of the health workforce requires major investments.
- Repeated crises, ranging from natural disasters to militancy, are a major risk to expansion of many initiatives. Many health facilities were destroyed during the 2005 earthquake and 2010 floods.
- Donors are providing substantial funding, however coordination and convergence of efforts need to be improved.
- Pakistan has made progress in strengthening the district health system. However there are many gaps to be bridged to strengthen the health information system and accountability, drugs and supplies; monitoring and supervision need to be put in place.
- In-service training, mainly on IMNCI, has been introduced in 18 medical schools, but is perceived as an additional burden on medical colleges. The commitment of the MNCH programmes and departments of health is inadequate. Moreover it needs to be implemented in paramedical and public health schools.
- Proper implementation of the reaching every district (RED) approach, especially in districts with vaccination coverage of <80%, and ensuring integration of EPI in all health care delivery points require high commitment and investment from the country to achieve the target of 90% coverage of routine immunization at national level and 80% coverage in each district.

[4] MNCH programme document.

- Partnership and coordination mechanisms are inadequate, between the public and private sectors, between the community and the health departments, and between the programmatic linkages (CMWs, LHWs, LHVs).
- Community case management is an approach to increase outreach services coverage; it requires adequate financial support to provide required supplies and supervision to ensure good quality.
- Substantial investments are required to implement health system reforms (contracting out and in, voucher schemes, etc.

IV. Is it achievable?

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

V. Conclusions: key drivers

The recent initiative of establishing a national commission on information and accountability for women's and children's health will provide great opportunity to track the MNCH information and accountability indicators.

With the active support of the international community, the country should aim at accelerating the pace of reduction of under-5 and maternal deaths by scaling up interventions in light of the set coverage target by MNCH programmes at the departments of health. Although MDGs 4 and 5 are unlikely to be achieved, the accelerated pace of reduction will bring the country closer to the set MDG targets. This acceleration requires:

- Donors like USAID, GIZ, DFID and Norway along with federal support focusing on certain provinces; this is expected to provide more opportunity to address post-devolution issues.
- Ensuring the high level of political commitment to child and maternal health considering it at the top of the country's priorities and as major indicators for the national development.
- Putting the related policies and strategies into effect, and MNCH specific policies, such as use of misoprostol at primary health care level, require investment and training.
- Improve governance with focus on provincial and district leadership and management, through phased contractual management agreements.
- Due to cultural aspects female health workers are a key pillar to enhancing MNCH. Provinces are developing human resource strategies, focusing on availability, especially female health care providers in remote areas as well as overall health workforce development and competencies..
- Strengthening partnerships and coordination among concerned stakeholders to contribute to one national plan for MNCH and to achieving the national related targets. Mechanisms for best utilization and orientation of this support need to be developed.
- The One UN Programme is one of the platforms for developing such synergies. Strategies like sector-wide approaches might be considered.
- Donors and partners are assisting in development of integrated strategies such as the integrated national nutrition plan.
- Focusing on the areas and populations most in need: geographic, economic and social.
- Moving towards universal access by adopting innovative approaches, such as voucher schemes to address out-of-pocket payment and contracting out to accelerate the provision of quality MNCH services.
- Building capacities to produce adequate qualified workforce to meet the services needs of the population (in-service and pre service).

- Ensuring the continued supply and availability of medicines and vaccines as key elements to reduce mortality. Evaluation of the MNCH programme with support of donors recommended implementation of a public procurement regulatory authority to address issues of availability of and quality of medicines and supplies.
- Strengthening information and accountability systems building on provincial specific plans.
- Establishment of a national commission to focus on MNCH information and accountability to coordinate provincial efforts.

WRH/WP/13.13