Background Paper

Success Factors for Women’s and Children’s Health: Country Specific Review of Data and Literature on 10 Fast-Track Countries’ Progress Towards MDGs 4 and 5

An input to the country policy analyses and multistakeholder review meetings

November 2013

Developed by Options Consultancy Services/Evidence for Action (E4A), Cambridge Economic Policy Associates (CEPA), and the Partnership for Maternal, Newborn & Child Health (PMNCH)
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November 2013

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1. Introduction

The Success Factors Study for Women’s and Children’s Health is a collaborative effort that seeks to draw lessons from fast-track countries on accelerating progress towards reducing preventable maternal and child mortality. The study uses different methods: statistical analysis and econometric modelling of data across 144 low and middle-income countries; literature review; country-specific data review in 10 fast-track countries for MDGs 4 & 5; and policy analysis and multi-stakeholder reviews in 10 countries that were on the ‘fast-track’ in 2012 to achieving MDGs 4 and 5a. The ten countries were: Bangladesh, Cambodia, China, Egypt, Ethiopia, Lao PDR, Nepal, Peru, Rwanda and Viet Nam.

This paper presents a review of data and literature of the 10 fast-track countries’ progress towards MDGs 4 and 5. For each country it describes how policies and programmes within the health sector and sectors outside of health have helped shape progress on MDG 4 and 5. It also contains sections on the country context, key trends and timelines related to achieving MDG 4 and 5, governance and leadership, lessons learned and future priorities.

2. Methods

The data and literature review for the 10 fast-track countries used the search strategy and exclusion criteria outlined in Annex 1. Data and trends for each country related to the indicators in the Success Factor study analytical framework (Annex 2) were also reviewed. Two to three experts in women’s and children’s health in each country reviewed the information to help validate the background reviews.
3. Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Bangladesh has made significant improvements in the health of women and children and is one of 10 ‘fast track’ countries that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality). Several important strategies have supported this progress:

Health sector: Service delivery constraints are a significant challenge in the public health system. These challenges are, at least in part, addressed by the strategies and actions of the government and other stakeholders to strengthen the health system. These include: supporting the private sector in the delivery of health services; training additional community health workers, doctors and nurses; prioritizing essential health interventions, such as those to increase immunization coverage, reduce fertility and integrate the delivery of services; and interventions targeted at underserved populations.

Sectors outside of health: Nutrition has been a key focus area in Bangladesh. Progress in improving nutritional status has been observed following the implementation of a number of policies and programmes. Other programmes in the country have also supported improvements in child and maternal mortality, such as the Female Secondary School Stipend Project, which supported the expansion of female secondary schooling, and the Rural Electrification Programme, which brought electricity to rural areas. Bangladesh has embraced the use of new technology for the improvement of health services; progress has been supported by the rapidly increasing use of mobile telephones. In recognition of its efforts, Bangladesh received the 2011 United Nations “Digital Health for Digital Development” award for outstanding contributions to using information and communications technology (ICT) for health and nutrition.

Lessons learned: Despite the significant improvements made by Bangladesh, some key challenges remain. In order to accelerate further progress, it will be necessary to: (i) increase access to quality health services through strengthening the health workforce; (ii) strengthen the health infrastructure and commodity supply chains to ensure the availability of services and support efforts to plan for future demographic changes; (iii) support the equitable delivery of health interventions and services, particularly for underserved populations and marginalized groups; and (iv) reduce neonatal deaths.

2) INTRODUCTION

Bangladesh is one of 10 ‘fast track’ countries (which also include Cambodia, China, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Peru, Rwanda and Viet Nam) that is making progress to achieve MDGs 4 (to reduce child mortality by two thirds) and 5a (to reduce maternal mortality by three quarters). There is evidence that improvements in gross domestic

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1 In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

**Health sector:** health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal and financial entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health:** education; nutrition; and infrastructure, water and sanitation; innovation and research

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping Bangladesh make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Bangladesh has developed and implemented as part of efforts to maximize performance in key health and development areas.

### 3) COUNTRY CONTEXT

**Overview**
The People’s Republic of Bangladesh (Bangladesh) is characterized by two distinct areas: a delta plain, which is subject to frequent flooding, and a hilly region in the southeast and northeast of the country. Bangladesh is the world’s twelfth most densely populated country with 155 million people living on a landmass of 147,570 square kilometres [2]. The population increased at a rate of 1.72% between 1990 and 2010, slightly below that of South Asia, whose population increased at 1.74%. The population consists of approximately 98% ethnic Bengalis, with different tribal groups making up 2% of the population [3]. The majority of the population are Muslim (89.5%) with the remainder comprised of Hindus (9.6%), Buddhists (0.5%), Christians (0.3%) and other religious groups [3].

Bangladesh’s economy, as measured by gross domestic product, grew at an impressive annual rate of 6% between 1990 and 2010, although below that of South Asia as a whole (8%) [4]. It also has industries that employ large numbers of women, many of whom migrated from rural areas. The country has set a national target of reaching the status of a ‘middle-income country’ by 2021, which would require an increase of gross national income (GNI) per capita (Atlas method) from US$ 840 in 2012 to at least US$ 1,036 [4]. Although Bangladesh has shown modest improvements in its Human Development Index value, in 2012 it was ranked in the lowest quartile (146 of 186 countries) [5].

(For Table 1 see Section 9)

### 4) KEY TRENDS, TIMELINES AND CHALLENGES

Bangladesh is one of seven countries – together with, Cambodia, China, Egypt, Lao PDR, Nepal and Viet Nam – on track to meet MDG 4. However, progress in reducing neonatal mortality (deaths in the first 28 days of life) has not been as rapid as the reduction in under-five mortality. Bangladesh experienced declines in the total fertility rate (TFR), from 5 births per woman in
1990 to 2011 (see Table 1: Key Country Indicators), accompanied by significant reductions in the maternal mortality ratio (MMR), from 800 maternal deaths per 100,000 live births in 1990 to 240 in 2010 [4]. Bangladesh is therefore on track to meet its MDG 5a target (134 maternal deaths per 100,000 live births) [6].

Progress towards meeting MDG 5b has, however, been mixed. For example, the contraceptive prevalence rate increased from 39.7% in 1990 to 61.7% in 2010, although linear projections suggest that this will only increase to 68% by 2015, below the MDG target of 72% [7]. Reductions in the adolescent birth rate and unmet need for family planning have been even slower as has also been the case with improvements in antenatal care coverage [7]. Geographical and financial barriers to care have contributed to higher under-five mortality rates among the poor, among girls and in rural areas [8]. These challenges have been compounded by poor quality of care.

Poverty and high out-of-pocket costs remain a key challenge in Bangladesh. Despite increases in gross domestic product per capita (purchasing power parity (PPP) Int$), which rose from $732 in 1990 to $1,623 in 2012 (see Table 1: Key Country Indicators), poverty is a substantial problem which often renders health care unaffordable for the poorest [4, 9].

Other challenges in Bangladesh relate to the capacity and distribution of health services, particularly in rural areas, which restrict access to skilled care [10]. Alongside this, rapid expansion of the urban poor population places an added burden on the health system.

(For Trends figures and Table 2 – RMNCH coverage data – see Section 9)

5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Health sector investments
Bangladesh has made a series of investments in the health sector in response to both the short-term needs of the population and the longer-term goals of the country.

Health financing: Total health expenditure per capita (PPP, Int$) rose from $24 per capita in 1995 and 2000 to $67 in 2011 (see Table 1: Key Country Indicators). As a percentage of total government expenditure, expenditure on health increased from 7.6% in 2000 to 8.9% in 2011; South Asia saw smaller increases over the same period, from 6.7% to 7.5% [4]. Bangladesh is also a focus country for a number of donor, multilateral-organization and nongovernmental-organization (NGO) programmes and interventions. Between 2000 and 2011, external resources for health on average accounted for 7.5% of total health expenditure, as compared to 2.2% across South Asia. In 2011, net bilateral aid flows from Development Assistance Committee (DAC) donors to Bangladesh totalled US$ 1.2 billion, which placed Bangladesh in the top 20 aid recipient countries [4].

Health workforce: Several ‘on track’ countries have increased their physician workforce since the 1990s. Bangladesh has maintained a particular focus on its established network of community health workers: at present, there are 0.36 community health workers per 1000 population, compared to an average of 0.09 for the World Health Organization (WHO) South-East Asia region as a whole (which includes Bangladesh). Community health workers have been engaged in Bangladesh to address shortages in the health workforce. In Bangladesh, training programmes such as those implemented by BRAC (an international nongovernmental organization (NGO) established in Bangladesh) have helped to maintain a widespread network

Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5. 7
of community health workers. BRAC trains and supports 80 000 community health promotion volunteers per year (approximately one per village).

Increasing the capacity of the health workforce is a key objective of the government. Through the Health, Population and Nutrition Sector Development Programme (HPNSDP) (2011–2016), the government aims to increase the number of registered doctors from around 50 000 to 70 000 and the number of nurses from 27 000 to 40 000 between 2011 and 2016.

Health systems: In Bangladesh, the persistent service delivery constraints in the public health system have led to expansion in the role of the private sector. Between 2007 and 2011, the utilization of private sector health facilities for delivery care increased by 91%, while that of public sector health facilities grew by only 49% [8]. In 2011, just over half the births which took place in a health facility were in private sector health facilities [8]. The government is supporting the role of the private sector, for example by contracting privately owned information and service centres which are able to use telemedicine to increase access to services (e.g. for the referral and consultation of clinical cases), particularly among underserved populations [10]. In addition, NGOs such as BRAC and the Grameen Foundation who provide community-based health services, cross-subsidize health services from revenues from their commercial activities, such as telecommunications.

The HPNSDP (2011–2016) sets out some of the government’s further aims: to collaborate with private providers; to incentivize service delivery in hard-to-reach areas; and to support improvements in service delivery through updating accreditation tools and establishing waste management systems in hospitals [11].

Outcomes monitored using evidence
The Government of Bangladesh uses two main types of evidence to inform health sector planning [12]. In common with Egypt, Lao PDR, Nepal and Rwanda, Bangladesh uses data generated from national surveys and evaluation reports and the Management Information System (MIS) to support the development of operational and/or strategic sector plans. Bangladesh also collects evidence-based suggestions and recommendations received from stakeholders such as professional associations and experts to plan future interventions. The government is taking ongoing action to improve the collection and processing of data [10]: as in Cambodia, Ethiopia and Peru, subnational data in Bangladesh are used to identify and tailor responses in specific geographical areas. Geographical information systems are used for disease surveillance and mapping service availability. Innovations in e-health allow routine data to be collected in the field and health statistics to be accessed by SMS. Efforts to strengthen frameworks and databases ensure that information collected by different sources is aligned with the Bangladesh Health Information Systems Architecture. Finally, coordination of the Ministry of Health and Family Welfare (MoHFW), BRAC University, the Bureau of Statistics and the Ministry of Local Government has allowed the development of a harmonized digital platform to serve as Bangladesh’s vital registration system.

Political prioritization of essential health interventions
The government of Bangladesh has prioritized a number of essential health interventions over the past decades. The use of oral rehydration therapy for the treatment of dehydration due to diarrhoea began in 1979, for example (see Health Sector Spotlight). More recently, the HPNSDP has focused on the following areas:

Increasing immunization coverage: Bangladesh has made significant progress in increasing

Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5.
immunization coverage among both urban and rural populations. For example, between 1997 and 2011, measles coverage among children aged 12 to 23 months increased equitably, rising from 75% to 94% among urban populations and from 69% to 93% among rural populations [8, 14]. This progress has been a key factor supporting the decline in child mortality in Bangladesh [10, 15]. The HPNSDP, through the Expanded Program on Immunization, aims to increase the coverage of children under one year that are fully immunized to 90% by 2016. Recent estimates suggest that this has already increased to more than 82% from a baseline of 78% prior to the programme inception in 2011 [8, 11].

**Reducing fertility:** A key strategy used to help reduce maternal mortality in Bangladesh has been the expansion of reproductive health and family planning services, particularly to underserved populations. Bangladesh's 1976 Population Policy identified population growth rate as the country’s ‘number one problem’ and a constraint to improving standards of living. Since then, reducing population growth has been a priority in Bangladesh; the TFR more than halved between 1990 and 2011, from 5 to 2 births per woman (see Table 1: Key Country Indicators).

This decline is attributable to the government’s sustained efforts to ensure women's access to family planning services (with the support of donors and NGOs), particularly through the provision of services at the community level and in rural areas [16, 17]: the improved use of modern contraceptive methods in Lao PDR and Viet Nam has similarly been the result of increased access to reproductive health care services in peripheral areas. In Bangladesh, mass communication campaigns were also engaged to increase demand for family planning services.

**Integrating the delivery of health care:** Bangladesh adopted the Integrated Management of Childhood Illness (IMCI) strategy in 1998 to focus on the major causes of child mortality and to improve community child health care through health worker training [17]. As of June 2011, IMCI was being implemented in 395 out of 482 sub-districts across the country, including in ‘community clinics’; these are small clinics at the grass-roots level and can be found even in hard-to-reach areas. A cluster randomized trial in the Matlab sub-district between 2002 and 2009 found that the IMCI strategy resulted in a reduction of 4.2 child deaths per 1000 live births in its last two years of implementation and in increased usage of IMCI facilities, increased rates of exclusive breast- feeding and reductions in the prevalence of stunting [17] (see Table 2: Key RMNCH Coverage Indicators). Bangladesh has also succeeded in increasing the coverage of vitamin A supplementation among children aged 5–59 months (from 67% in 1996–1997 to 88% in 2007) [18], largely due to integrating its delivery with National Immunization Days for polio vaccination [19].

**Legal and financial entitlements, especially for underserved populations**

The Constitution of the People's Republic of Bangladesh (May 2004) sets out the state's obligation to ensure public health to all citizens and has undertaken focused efforts to ensure that these rights are realized by targeting underserved populations and improving access to good-quality health care.

The Demand-side Financing Programme is one example of these efforts. Initiated in 2007, the programme is a government-led voucher scheme initiative which targets poor women and incentivizes them to give birth in a health facility. The scheme provides: “three antenatal check-ups; safe delivery care in a health facility or at home with a skilled birth attendant; emergency care for obstetric complications, including caesarean sections; one postnatal care check-up within six weeks of delivery; cash incentives to cover routine and emergency transport, some food and medicine costs for the family; and a small gifts box” [10]. An evaluation found the programme to be ‘strongly and significantly’ associated with higher rates of skilled birth attendance, institutional deliveries and postnatal care visits, particularly
among the poor [19].

Bangladesh has an ongoing commitment to ensuring social protection for underserved populations. In particular, Bangladesh's Health Financing strategy 2012-2032 sets out the Government's ambition to expand social protection for health and move towards universal health coverage. The strategy includes three key interventions:

- Design and implement a Social Health Protection Scheme, with some aspects focusing specifically on those living below the poverty line;
- Strengthen financing and the provision of public health care services, such as through the use of Results-based Financing and the scale up of the Demand-side Financing Programme;
- Strengthen national capacity to design and manage the Social Health Protection Scheme, as well as in financial management and accountability, and monitoring and evaluation [20].

**HEALTH SECTOR SPOTLIGHT**

**Reducing childhood deaths due to diarrhoea**

The use of oral rehydration therapy for the treatment of dehydration due to diarrhoea began in 1979, although the use of pre-packaged Oral rehydration salts (ORS) under the brand name ‘ORSaline’ gained momentum in the 1990s [21].

With support from the Government and BRAC, the Social Marketing Company (SMC) took responsibility for promoting and selling ORSsaline in 1990 and undertook a mass communication and marketing campaign on childhood diarrhoea and its management through ORS [21]. The campaign, which has been a key contributing factor in increasing the percentage of children with diarrhoea receiving ORS, utilized a wide range of mass media, including radio, TV, cinema, billboards, wall paintings, neon signs, mobile film units, point-of-purchase advertisements and printed educational materials [19, 21]. The cost of the campaign, which continues today, is estimated to be approximately US$ 0.5 million per year [21]. Other actors involved in supporting the scale-up of ORS include the Grameen Foundation, which provided business opportunities for women to buy ORS packets at a subsidized price and sell them for a profit, as well as the United Nations Children’s Fund (UNICEF) and the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), which also promoted ORS through a marketing campaign.

Between the 1993–1994 the Bangladesh Demographic Health Survey (BDHS) and the 2007 BDHS, the proportion of children with diarrhoea receiving ORS increased from 59% to 81% in urban areas, and 49% to 76% in rural areas [18]. The scale-up of ORS through the campaign activities had a ‘major impact’ on under-five deaths from diarrhoea, which decreased from 12 deaths per 1000 live births (1993) to 4 deaths per 1000 live births (2004) [17, 22].

6) **INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR**

**Education**

Bangladesh has prioritized improving education for several decades, highlighting it as a key tool for country development. Female education has a beneficial impact on infant and child mortality, which is lower amongst children born to mothers with secondary education than
those born to mothers with no education [16]; the positive effect of female education on health outcomes is echoed across other ‘fast track’ countries. Targeted initiatives have been used to improve access to education for underserved populations. In Bangladesh, female secondary schooling has expanded rapidly since the 1990s, especially in rural areas. Bangladesh has made good progress to eliminate gender disparity in education and the target for the ratio of girls to boys in primary and secondary education [7]; indeed as of 2010, the gross enrolment ratio of girls is greater than boys in both primary and secondary school.

The use of stipends and poverty reduction schemes in Bangladesh has provided financial compensation for school attendance. Bangladesh’s Female Secondary School Stipend Project, established in 1994, aimed to increase the enrolment of girls in secondary school, as well as contribute to delaying marriage and childbearing [16]. The project operates through paying a stipend to all girls in rural areas on the basis that they attend at least 75% of school days, maintain a passing grade and remain unmarried. As the project gained traction, the proportion of female youths (15–24) who are literate increased, from 38% in 1991 to 80% in 2011 [26]. However, Bangladesh needs to make much more progress to achieve 100% literacy rate among 15–24-year-olds (both male and female). Challenges which have impeded progress include: high primary education drop-out rates, poor quality education, poor adult literacy programmes and minimal government investment.

Nutrition
Bangladesh has demonstrated sustained commitment and political will in establishing national plans, strategies and laws to address malnutrition and micronutrient deficiencies. Nutrition has been the focus of a number of programmes and strategies in Bangladesh and is a sector where there is a dynamic and active policy environment. In Bangladesh the integration of nutrition programmes and alignment of policies, stakeholders and donors across sectors has proved to be effective. The Bangladesh Integrated Nutrition Programme (BINP), the first large-scale policy programme for nutrition (1995–2002), later repackaged and expanded as the National Nutrition Plan (NNP) (2003–2011), targeted malnourished children and mothers for the delivery of community-based nutrition services (such as supplementary feeding, nutrition, education and homestead gardening) [23] (see Spotlight of a sector outside of health).

Through the BINP (1995–2002), the government published the first significant nutrition policy document: in 1997, the National Plan of Action for Nutrition (NPAN) set out the country’s goal to improve nutritional status and reduce malnutrition [25]. Specific areas of focus of the NPAN included: developing human resources; empowering communities to understand nutritional problems; ensuring food security, safety and quality; protecting, promoting and supporting breastfeeding; ensuring support for the socioeconomically deprived and nutritionally vulnerable; reducing micronutrient deficiencies; promoting nutrition advocacy, education, and community participation; and assessing, analysing and monitoring the nutritional status of the population [24].

Nutrition programmes are not restricted to Bangladesh’s efforts: since 1997, MoHFW has streamlined nutrition services with other health services at the community level through community clinics. In 2007, the government also introduced the National Strategy for Anaemia Prevention and Control in Bangladesh; this strategy aims to improve maternal, infant and young child nutrition, incorporating specific measures, including micronutrient supplementation, dietary improvement and food fortification, for the reduction of anaemia.
Through these efforts, Bangladesh has made progress towards meeting the MDGs related to nutrition, however recent trends highlight that more progress in this area is still needed. In particular, the prevalence of children under five who are underweight has reduced from 66% in 1990 to 45% in 2009, with more recent evidence suggesting this fell to 36% in 2011; the target by 2015 is 33% [7, 25].

Infrastructure, water supply and sanitation
Infrastructure plays a significant role in promoting a country’s growth and alleviating poverty. For example, between 1997 and 2002, the multi-donor supported Rural Electrification Programme in Bangladesh (which supported the objectives of the Rural Electrification Board to provide electricity across rural areas in Bangladesh by 2005) led to positive income effects and reduced infant and child mortality by approximately 5 per 1000 live births and 10 per 1000 live births respectively [16]. Power consumption, measured by kilowatt hours per capita, increased from 48 in 1990 to 259 in 2011 (see Table 1: Key Country Indicators).

Bangladesh has made progress to halve the proportion of population without sustainable access to safe drinking-water and basic sanitation. The proportion of the population with access to clean water increased from 76% in 1990 to 83% in 2011 and the proportion of the population using an improved sanitation facility increased from 38% in 1990 to 55% in 2011 [27] (see Table 1: Key Country Indicators).

In particular, rural access to improved water sources and sanitation facilities increased from 75% to 79% and 34% to 55% respectively from 1990 to 2010 [26]. A study of child mortality inequalities and linkages with sanitation facilities in Bangladesh also highlighted that “water supply and availability of sanitary facilities had a strong association with child mortality, even after controlling for the effects of socioeconomic and geographical variables” [28].

Innovation and research
The proportion of households using mobile phones in Bangladesh increased from 11% in 2005 to 63% in 2010; coverage among rural households increased from 6% to 56% in the same period [29]. Mobile phone and e-health technology has been used in Bangladesh to improve reporting, data collection, access to data, data storage, referrals and communication between patients and facilities. In Bangladesh, patients use SMS messaging during pregnancy to register for antenatal care and prompt referral to facility-based care [10].

In 2011, Bangladesh’s outstanding contribution to using ICT for health and nutrition was recognized by the United Nations: the 2011 United Nations “Digital Health for Digital Development” award was awarded to Bangladesh, demonstrating that the country is perceived to be a leader in using innovative solutions to improve its health information system.

SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH

Bangladesh Integrated Nutrition Plan and National Nutrition Programme
The Bangladesh Integrated Nutrition Plan (BINP; 1995–2002), managed by MoHFW and funded by the World Bank, was the first large-scale policy intervention to be implemented in nutrition. The BINP was implemented in 60 sub-districts by NGOs which were responsible for
delivering community-based nutrition services, including supplementary feeding, nutrition, education, homestead gardening and other health and nutrition services [23]. The services were targeted specifically at malnourished children and mothers with a focus on counselling to bring about behaviour change [16]. An evaluation of the BINP found that the programme led to a 5% reduction in malnutrition and a small increase in birth weights in the project areas [16]. Based on the results and lessons learned, the project was then scaled up between 2002 and 2011 to the National Nutrition Programme (NNP), which was implemented in a further 79 sub-districts before being rolled out nationwide.

7) LESSONS LEARNED AND FUTURE PRIORITIES

Despite the significant progress made by Bangladesh towards achieving MDGs 4 and 5, some key challenges to accelerating further progress remain.

Health workforce: Investment is required to expand the skill base, size and equitable distribution of the health workforce in Bangladesh. Bangladesh is facing a critical health workforce crisis: in 2011, there were less than 1 health worker (doctors, nurses and midwives) per 1000 population (see Table 1: Key Country Indicators). The figure required to achieve 80% coverage for key essential interventions is 23. There is a significant opportunity to increase access to quality health services through strengthening the health workforce in Bangladesh. Specifically, this includes prioritizing investment for increasing the number and capacity of doctors, nurses and midwives [15, 19].

Commodity supply and health infrastructure: Investing in commodity supply chains will help to ensure the availability of services and commodities through the public health system. Strengthening health infrastructure will also support Bangladesh’s efforts to plan for future demographic changes in the country, such as the continued expansion of the urban poor population [19].

Equity of service delivery: Socioeconomic and geographical inequities adversely affect health outcomes in Bangladesh. Further support for the equitable delivery of health interventions and services presents an opportunity for Bangladesh to ensure continued progress in reducing child and maternal mortality [11].

Neonatal mortality: Significant progress has been made in reducing child mortality, however, the same has not been the case for improving newborn survival. In Bangladesh, the proportion of neonatal deaths as a percentage of all child (under-five) deaths, has increased persistently, from 37% in 1990 to 47% in 2000 and 57% in 2011. Bangladesh is ranked 157 out of 163 countries in the global rank for neonatal deaths in the first 28 days of life, and 121 of 163 countries in the global rank for neonatal mortality rate. Therefore, prioritizing newborn health, for example through scaling up low-cost effective interventions for newborn survival and ensuring that services are delivered equitably, represents a significant opportunity for Bangladesh to ensure further progress is made towards achieving MDG 4 [15].

8) REFERENCES


*Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5.*
2013.


Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5.
9) TABLES AND FIGURES

Table 1: Key Country Indicators

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<th>TABLE 1: KEY COUNTRY INDICATORS** (BANGLADESH)</th>
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<td>INDICATOR</td>
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<td>HEALTH WORKFORCE</td>
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<td>ENVIRONMENTAL MANAGEMENT</td>
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<tr>
<td>HUMAN DEVELOPMENT</td>
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<tr>
<td>INDEX (Composite of life expectancy, literacy, education, standards of living, quality of life)</td>
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<tr>
<td>GOOD GOVERNANCE</td>
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</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators +Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)
Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>MOST RECENT AVAILABLE</th>
<th>SOURCE</th>
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<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning)</td>
<td>82 (2011)</td>
<td>BDHS 2011</td>
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<tr>
<td>PREGNANCY TO POST-NATAL</td>
<td>ANTE-NATAL CARE (% of women attended at least 4 times during pregnancy by any provider)</td>
<td>26 (2011)</td>
<td>BDHS 2011</td>
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<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (as % of total births)</td>
<td>32 (2011)</td>
<td>WDI</td>
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<td></td>
<td>POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth)</td>
<td>27 (2011)</td>
<td>BDHS 2011</td>
</tr>
<tr>
<td>NEWBORN TO CHILDHOOD</td>
<td>INFANT FEEDING (Exclusive breastfeeding for first six months)</td>
<td>64 (2011)</td>
<td>BDHS 2011</td>
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<td></td>
<td>PNEUMONIA (Antibiotic treatment for pneumonia)</td>
<td>71 (2011)</td>
<td>BDHS 2011</td>
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**Figure 1:** Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Bangladesh

**USMR / NMR - Bangladesh**

![Graph showing trends of U5 Mortality Rate (USMR), Neonatal Mortality Rate (NMR), Maternal Mortality Rate (MMR), and Total Fertility Rate (TFR) and Nutrition in Bangladesh.](image)

Source: World Development Indicators

**MMR / TFR – Bangladesh**

![Graph showing trends of Maternal Mortality Rate (MMR) and Total Fertility Rate (TFR) in Bangladesh.](image)

Note: Dashed line indicates missing data. Source: World Development Indicators
Bangladesh: Review of Data and Literature on Progress Towards MDGs 4 and 5.

Nutrition – Bangladesh

Note: Dashed line indicates missing data. Source: World Development Indicators

Timeline with key Policy inputs - Bangladesh

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>1953 Initiation of Family Planning Programme;</td>
<td>1995-2002 Bangladesh Integrated Nutrition Programme (BINP);</td>
<td>2003-2011 Health, Nutrition and Population Sector Programme (HNPS) and National Nutrition Programme (NNP);</td>
</tr>
<tr>
<td>1975 Establishment of Directorate of Family Planning;</td>
<td>1997 National Plan of Action for Nutrition (NPAN);</td>
<td>2007 Demand-side Financing Programme – designed to incentivize births in a health facility;</td>
</tr>
</tbody>
</table>

1) EXECUTIVE SUMMARY

Progress: Cambodia has made significant progress in improving the health of women and children and is one of 10 ‘fast track’ countries that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). Several factors have played a key role in driving this progress;

Health sector: Since the 1990s, the Cambodian Government has demonstrated the political will to address reproductive, maternal, newborn and child health (RMNCH) challenges. Evidence-based policies to improve RMNCH have included: the reversal of pro-natalist policies to expand access to family planning services, the legalization of abortion, the promotion of breastfeeding and the alignment of health sector plans to MDG goals alongside broader maternal, newborn and child survival interventions. Expansion of health care to underserved populations through health equity funds and voucher schemes has played a role in reducing inequity in key health services.

Sectors outside of health: The government has prioritized equitable access to education since the 1980s through a school readiness programme and targeted scholarships, which have increased admission and enrolment rates and eliminated gender disparities. Improvements in education are related to better health outcomes: educated women in Cambodia are more likely to deliver in a health facility. In the last decade, a favourable policy environment has improved some nutritional indicators; Cambodia is currently on track to achieve its MDG target on increasing iodized salt intake in households. Construction of health facilities, including maternity waiting homes and delivery rooms, and road rehabilitation and development, have helped improve access to health care. Access to safe water supply and sanitation services has increased, and the Cambodian Government is on track to meet MDG targets 4 and 5a.

Governance and leadership: Innovative public-private partnerships in which the government contracts non-governmental organizations (NGOs) have helped improve access to and coverage of health services throughout the country.

Lessons learned: To sustain progress on MDGs 4 and 5, the following challenges need to be addressed: (i) reduce socioeconomic inequities; (ii) improve newborn health and child nutrition; (iii) enhance quality of care; (iv) scale up the midwifery workforce; and (v) decrease high out-of-pocket expenditure for health.

2) INTRODUCTION

Cambodia is one of 10 ‘fast-track’ countries (which also include Bangladesh, China, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Peru, Rwanda and Viet Nam) that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1].

---

[1] In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

**Health sector:** Health sector: Health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal entitlements to high-quality healthcare, especially for underserved populations.

**Sectors outside of health:** Education; nutrition; and infrastructure, water and sanitation; Innovation and research

This summary highlights policies and programmes in health and sectors outside of health, as well as other key areas, such as governance and leadership, identified in the literature and by key informants as helping Cambodia make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Cambodia has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) **COUNTRY CONTEXT**

**Overview**
Cambodia is situated in South-East Asia and is comprised of lowlands and mountainous terrain [2]. Cambodia gained independence from France in 1953. In 1975, five years after a military coup, the Khmer Rouge came to power and applied a radical and genocidal regime. The Khmer Rouge was defeated in 1979, after causing the deaths of almost two million civilians, including significant numbers of health care staff. In an attempt to rebuild the political system and economy, the Paris Peace Accord was signed in 1991. A free election was held in May 1993 and the country became the Kingdom of Cambodia, a constitutional monarchy, marking its progress toward democracy [3].

Despite civil unrest, Cambodia’s economy has improved. Gross domestic product per capita increased in the past decade, from $774 in 1993 to $2150 in 2012 (purchasing power parity (PPP, Int$)) (see Table 1: Key Country Indicators). Economic growth has been driven by agriculture, diversification, export and private investment. A large proportion of Cambodia’s population of 15 million live in rural areas (80%); 90% of the country’s poor are rural dwellers. Cambodia has industries that employ large numbers of women, many of whom migrated from rural areas. Economic growth has since created employment opportunities and contributed to declines in poverty,

(For Table 1 see Section 10)

4) **KEY TRENDS TIMELINES AND CHALLENGES**

Cambodia has made remarkable progress in reducing maternal and child mortality and is on track to meet MDG 4 and 5 targets. From 1990 to 2011, sharp decreases in fertility were observed alongside corresponding declines in maternal mortality. Although reductions in child mortality were evident in Cambodia, the level of change for neonatal (first month of life) mortality was marginal.

Many hurdles were overcome to achieve this progress, including: shortages in and inequitable
distribution of health-care providers; inadequate coverage of emergency obstetric and newborn care (EmONC) services; low uptake of family planning services; limited access to safe abortion services; poor usage of institutional and skilled care during pregnancy and childbirth; low nutritional status among children and inadequate education levels. Compounding this were wide disparities in access to RMNCH services and outcomes by wealth and area of residence [4]. High individual out-of-pocket expenditure constituted a large portion of total health sector financing, creating barriers to accessing health care [5].

In response, the Ministry of Health (MoH) prioritized and implemented a range of interventions resulting in marked improvements in health service coverage across the continuum of care: key RMNCH coverage indicators are detailed in Table 2.

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) HEALTH SECTOR INITIATIVE AND INVESTMENTS

Health sector investments
Contributions from the government and substantial private sector resources have increased health investment in Cambodia, while collaboration with development partners has helped align external funding to health sector priorities. Health sector investments have paved the way for improvements in RMNCH; Cambodia has strengthened its health workforce over the past two decades.

Health financing: Since the 1990s, the MoH has delivered major reforms, including the 1996 Health Financing Charter to regulate point-of-service payment. While government allocation towards health has been variable over time, total health expenditure per capita increased from $41 in 1995 to $135 in 2011 (PPP, Int$) [6]. Although out-of-pocket expenditure has been decreasing since 1995, it accounted for 57% of the total expenditure on health in 2011 (see Table 1: Key Country Indicators), showing that households prioritize health over other commodities and services. Government prioritization of interventions to facilitate safe deliveries has resulted in increased coverage of births attended by a skilled attendant in Cambodia. In 2007, a national incentive scheme was launched by the Cambodian Government to encourage facility deliveries with a skilled birth attendant. In Cambodia subsidies and incentives provided to clients and facility staff have increased coverage of skilled delivery at birth. Health staff are paid US$ 10–15 for each live birth in a health centre or a referral hospital [7], which led to a substantial rise in health facility deliveries between 2006 and 2009 [8]. Performance-based financing has also boosted immunization services in Cambodia.

Donor alignment: Donors contribute a sizeable amount to Cambodia’s health budget [9]; however, resources have not always been aligned with national health priorities [5]. The Council for Administrative Reform worked closely with ministries and donors to coordinate external resources. Through a sector-wide approach, coordination of funding streams from external partners is now linked with key priorities set out in the government’s Health Sector Strategic Plans (HSSPs). Similar approaches have been employed in Ethiopia and Rwanda to help improve aid effectiveness and facilitate greater coordination with government health priorities and plans.

Human resources: A comprehensive approach to strengthening Cambodia’s health workforce has been undertaken since the 1990s. Cambodia faces human resources challenges, including skills constraints and inequitable distribution of health staff. In particular, Cambodia has an
Cambodia: Review of Data and Literature on Progress Towards MDGs 4 and 5.

... alarming shortage of midwives [10]. Well-defined targets based on reliable data influenced the Council of Ministers to increase civil service workers to the health sector by 50% in mid-/late 2000. In 2007, a High-level Midwifery Taskforce was convened in response to findings from a 2006 comprehensive midwifery review. Increasing the number of midwives was found to be paramount: the MoH adopted the slogan “place midwives in all health centres” as the cornerstone of its efforts to reduce maternal mortality. By 2009, all health centres had at least one primary midwife (with one year’s training) and over half had a secondary midwife (with three years’ training) [8]. In 2010, Cambodia had 1.1 health care professionals per 1000 population, fewer than the 2.5 per 1000 benchmark required for 80% of deliveries to be attended by a skilled birth attendant [12]. However, by 2011, Cambodia had just met the minimum global benchmark for the provision of midwives: six to provide care for 1000 births per year [11].

Outcomes monitored using evidence

Sub-national evidence, health management information systems (HMIS) and quality of care data are regularly used to monitor and improve RMNCH services in Cambodia.

HMIS: efforts to strengthen the HMIS have resulted in data being publically available since 2011. Monthly data from all government health facilities can be accessed on a website to facilitate transparency. This has made health information publically accessible to enable a wider range of stakeholders to use information to improve health services.

Sub-national tracking of MDGs: The Commune Database (CBD) facilitates the use of local data for monitoring and decision-making, collecting sub-national data on key areas including poverty, health, water supply and sanitation, education, and governance. In 2011, using CBD data, the Ministry of Planning and the United Nations Development Programme (UNDP) developed scorecards to help track Cambodia’s progress on MDGs. Disseminated to all 24 provinces, the scorecards enable a comparison of performance over time in each commune, district and province. The information is used to support planners in prioritizing resources and tailoring responses in order to reach MDG targets [13].

‘The MDG scorecard is like a map showing us direction. Without it we had difficulty knowing where we needed to act more to make things better.’ Interview, Local NGO Coordinator, Phnom Penh.

Quality of care responses: In 2008 the MoH conducted a national assessment of EmONC services, which identified shortages of services in rural areas and minimal implementation of evidence-based interventions. An EmONC improvement plan (2010–2015) was subsequently developed to support the implementation of an evidence-based package [14]. The MoH upgraded guidelines on the management of eclampsia and newborn asphyxia to reflect international evidence, and expanded the number of health facilities able to provide EmONC services, from 294 in 2004 to 901 in 2010 [15]. The plan recognizes that implementing targeted EmONC requires strong, supportive systems, including for health worker training, referral, information and communications, transport, equipment, drugs and supplies.

Political prioritization of essential health interventions

Since the early 1990s, Cambodia has prioritized the implementation of essential RMNCH interventions. The expansion of RMNCH services, particularly to underserved populations, has been a key strategy in reducing maternal mortality, as in Bangladesh, Egypt, Lao PDR and Viet Nam. In Cambodia, the pro-natalist policies that dominated between 1971 and 1991 were...
reversed in the early 1990s and a focus was placed on increasing access to family planning methods to respond to maternal and re-productive health needs [16]. A birth spacing policy was implemented in 1995, which lead to substantial improvements in access to and use of family planning methods. The effects of this policy can be observed today: among women in Cambodia, there is almost universal knowledge of modern contraceptive methods (99% of women in 2010), while the use of modern methods of contraception continues to increase (from 19% in 2000 to 35% in 2010) [3].

In 1997, abortion was legalized (up to the 12th week of pregnancy). The law is one of the most liberal in Asia; however, implementation only commenced in 2005, with the help of external partners [9]. Health-care providers in public and private facilities were trained on safe abortion and, in 2010, medical abortion was registered. As a result, more women now have access to safe abortion services, with noted declines in maternal deaths resulting from unsafe abortion [17].

Since the development of the National Safe Motherhood Policy in 1997 and related action plans, efforts have been focused on improving infant and maternal survival. Defined targets for women accessing antenatal care (ANC) and skilled attendance at birth were set; by 2010, these had already been surpassed [16]. Skilled attendance at birth increased from 34% in 1998 to 71% in 2010 (see Table 1: Key Country Indicators), while during this same timeframe, ANC (at least one visit during pregnancy) increased from 38% to 89% [3]. Continued political commitment to improving RMNCH has been demonstrated through actions detailed in two HSSPs and the National Strategic Development Plan (NSDP), each geared towards MDG achievements [18].

The political will of the Cambodian Government to address RMNCH was particularly noticeable when global commitments to accelerate progress on MDG 4 were translated into national action. In 2004, indicators on child survival were developed to enable tracking of key child survival interventions using a scorecard approach [19]. Cambodia has implemented targeted interventions in response to key gaps in RMNCH services. A focus was placed by the Cambodian Government on increasing rates of exclusive breast-feeding and breastfeeding was adopted as a very high priority for child survival. This led to a multi-pronged strategy that included endorsement of the International Code of Marketing of Breast Milk substitutes, skill building of health staff and health promotion campaigns [20]. Large improvements in early initiation and exclusive breastfeeding rates were noted, from 5% in 2000 to 74% in 2010 [3], as a result of prioritized, focused efforts (see Table 2: Key RMNCH Coverage Indicators). During this time, the implementation of the integrated management of childhood illness in health centres, a key strategy of the MoH, expanded sevenfold. A Child Survival Strategy (2006–2015) was subsequently developed to help achieve universal access to cost-effective evidence-based interventions. Strong political commitment was further signalled through the formulation of a Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality (2010–2015) to guide domestic and external investments around interventions known to enhance survival.

Although breastfeeding was universal, Cambodia made a concerted effort to promote early initiation of breastfeeding with no pre-lacteal feeds, and exclusive breastfeeding to 6 months of age. The Cambodia Ministry of Health adopted a National Policy on Infant and Young Child Feeding Practices in 2002. In 2004 a mass media campaign was launched focusing on the themes of diarrhoea, acute respiratory illness, immunization, child nutrition including the promotion of early initiation and exclusive breastfeeding, and pre and post-natal care. TV spots were developed with a message for exclusive breastfeeding emphasizing that ‘not even water’ should be given to young infants. Radio spots were also developed which included a ‘Breastfeeding song’. A TV soap opera with 24 episodes was screened with health messages including those

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promoting immediate and exclusive breastfeeding. World Breastfeeding Week activities and a toolkit for health staff and NGO partners focused on the same messages along with leaflets, posters, banners and songs [21]. Knowledge and practice improved and national exclusive breastfeeding rates increased from 11% in 2000 to 60% in 2005 and 74% in 2010.

Legal and financial entitlements, especially for underserved populations
A range of financial protection measures, including health equity funds (HEFs), vouchers and community-based health insurance (CBHI) schemes, have been implemented since the mid-1990s in an effort to reduce high out-of-pocket health expenditure and improve health care access for the poor [22] (see Health Sector Spotlight).

CBHI schemes are not-for-profit voluntary schemes based on risk pooling and pre-payment that cover a list of predefined health services at contracted public health facilities. Over 73,000 beneficiaries have been reached to date through CBHI schemes [8]. Vouchers help stimulate demand for maternal health care and are provided to poor pregnant women to cover three ANC visits, delivery and one postnatal care visit, as well as transport costs to health facilities [20]. HEFs are financed and managed by government and external partners at district level. The funds are used to pay the costs for transport, food and medical fees for the poor [21]. Reimbursements by government and international donors are provided directly to health facilities for a specified range of services. HEFs have demonstrated positive results, including an increase in health facility deliveries, and improvements in health outcomes, financial viability and management capacity (see Health Sector Spotlight) [20]. Through the HEF and voucher schemes, 68% of the poor population (or over 2.8 million people) are financially protected against the burden of health care costs in Cambodia [8].

An analysis conducted on six reproductive and maternal health services in Cambodia found that from 2000 to 2010, inequity was substantially reduced across several categories: in uptake of ANC, facility-based deliveries and births attended by skilled birth attendants, met need for family planning, and abortions by a skilled provider [24].

HEALTH SECTOR SPOTLIGHT

Health Equity Funds used to expand RMNCH services to poor women
HEFs were first implemented in 2000 and pay the costs for poor women to access health facilities [25]. Financed and managed at district level, HEFs are used to pay the costs for food, transport and medical fees for the poor. Reimbursements by government and international donors are provided directly to health facilities for a specified range of services.

An evaluation of HEFs alongside other financial interventions, such as vouchers for poor women, financial incentives for skilled birth attendants, and performance-based contracting, was conducted in three operational districts of Kampong Cham province. The evaluation reported an increase in facility deliveries from 16% in 2006 to 45% in 2008 after the introduction of HEFs and vouchers [22]. According to the evaluation, HEFs are most successful when combined with vouchers and financial incentives to ensure the supply of quality maternity services and address non-financial barriers to utilization of services [22].

Given their success, HEFs became an integral part of key government policies such as the National Poverty Reduction Strategy 2003–2005, the Health Strategic Plan 2003–2007 and the Fast Track Initiative Road Map (2010–2015). HEFs now reach more than half of all health districts [26], with nationwide coverage planned by 2015 [23].

Cambodia: Review of Data and Literature on Progress Towards MDGs 4 and 5.
6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
Infant mortality rates in Cambodia among children of mothers with no schooling are approximately two times higher than children of mothers with a secondary education [3]. Improved educational status in women has also been related to lower infant mortality rates and improved uptake of health services. Educated Cambodian women (with seven or more years of education) are six times as likely to deliver in a facility than those without any schooling [27].

The Government of Cambodia has introduced legislation and national programmes to promote universal and free education in Cambodia. The government has placed a high priority on facilitating equitable access to good-quality education since the 1980s, resulting in notable improvements in net primary education admission and enrolment rates [27]. In Cambodia, female adult and youth literacy rates have improved since 1998, reaching 66% and 86% respectively in 2009, while gender disparities in primary and lower secondary schools’ net enrolment rates have been eliminated [28]. A commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality have contributed to improvements in education.

National budget allocations to the education sector have increased from US$ 44 million in 2000 to US$ 178 million in 2009. Various government strategies have sought to enhance enrolment and retention rates, including: a school readiness programme, a child-friendly school programme, a school feeding programme, expansion of early childhood education programmes, targeted scholarships for the poor, and training and deploying female teachers throughout the country.

Nutrition
The Cambodia Nutrition Investment Plan (2003–2007) was instigated to address the high rates of malnutrition and micronutrient deficiencies afflicting the country. In 2003, a Sub-Decree on the Management and Exploitation of Iodized Salt was developed to increase salt consumption and reduce iodine deficiency disorders. By 2008, 72% of Cambodian households were using iodized salt; Cambodia is on track to meet this MDG target, of at least 90% of households consuming adequately iodized salt.

In 2007, the MoH developed National Guidelines for the Use of Iron/Folate Supplementation to Prevent and Treat Anemia in Pregnant and Post-partum Women. A national Vitamin A policy was also developed during this time to increase its uptake among pregnant women and children. A favourable policy environment has allowed strategies to be implemented that have improved some nutritional indicators [3]. The prevalence of anaemia declined from 62% in 2005 to 55% in 2010, by which point 84% of children were living in households using iodized salt, and 71% of children had received vitamin A supplements, doubling the percentage reached in 2005. Despite these improvements, Cambodia still needs to invest heavily to improve nutrition levels if it is to reach MDG targets in reducing the prevalence of children underweight and stunted [18].

Infrastructure, water supply and sanitation
The Health Coverage Plan (1996) guided the construction of health facilities, particularly in rural areas [29], based on population and geographical accessibility. By 2008, there were 967 health centres, 198 health posts and 84 referral hospitals through-out the country [8]. The construction of maternity waiting homes and delivery rooms at some health centres has improved the
accessibility and availability of maternal health services [7]. The construction and upgrading of health facilities in Nepal and Peru has had a similar positive result.

A focus on infrastructure has improved access to and quality of education in Cambodia. Road rehabilitation and construction has been a priority of the Cambodian Government, which has further facilitated access to health care [9]. A focus on increasing the proportion of paved roads in Cambodia has helped reduce travel times to health services.

Innovation and research
As part of the 1996 Health Coverage Plan to improve access to health services [2], two health contracting models have been implemented through innovative public-private partnerships. The ‘contracting in’ (CI) model involves NGOs providing assistance to the MoH in managing health services, while the ‘contracting out’ (CO) model enables NGOs to have full responsibility for delivering and managing specific health services, including hiring their own staff [29]. Improvements in key RMNCH coverage indicators were noted in contracting areas [30]. Although the CO model was associated with greater costs, it considerably reduced out-of-pocket expenditure for health care [30] (see Spotlight of sector outside of health).

Innovative approaches to health service delivery have also been critical to progress. Performance based financing has been used in Cambodia to improve the coverage of RMNCH services, for example to boost immunization services [31].

**SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH**

**The National Nutrition Programme (NNP)**
Between 1998 and 2003, the MoH tried an innovative approach to increase the health status of its population by contracting health services to NGOs.

Contractors provided a minimum package of services covering prevention and simple curative services. The intervention took place in nine operational districts comprising three CI districts, two CO districts and four control districts, where services continued to be delivered by the MoH. An evaluation of the project reported improvements in key coverage indicators such as facility deliveries, immunization and contraceptive prevalence rates in contracted districts. Moreover, the poor benefited more in the contracted districts than in control areas [32, 34]. For instance, children living in poor households were more likely to be fully immunized if living in the contracted rather than non-contracted districts [35].

The evaluation demonstrated that contracting health services was cost-effective and improved coverage and equity of key interventions important to reducing infant, child and maternal mortality [35].

**7) GOVERNANCE AND LEADERSHIP**

The Rectangular Strategy (2003–2008) is an overarching policy of the Cambodian government; as with Rwanda’s Vision 2020 Strategy, it places good governance at the heart of its approach for the advancement of sustainable development [18]. In this way, the strategy recognizes the broader environment required for the reduction of poverty and meeting of MDG targets: the
rule of law and political stability are necessary components.

Cambodia demonstrates either a stronger or similar overall level of good governance compared to other countries in the East Asia and Pacific region with similar levels of maternal and child mortality [30]. Good progress has been made in ensuring political stability since 1990. In 2011, the First Lady of Cambodia became the UN’s National Champion for Women’s and Children’s Health.

8) LESSONS LEARNED AND FUTURE PRIORITIES

Significant progress has been made in reducing maternal and child mortality through a combination of strategies. Sustaining these advances will require concerted action on the challenges that remain:

Reduce socioeconomic inequities: Cambodians living in rural areas, from poorer households, and without an education suffer the greatest inequities in RMNCH coverage, services and outcomes [28,35]. Efforts being made to reduce inequities in RMNCH service use in Cambodia [23], including through HEFs and vouchers, should continue to help redress socioeconomic differences in health outcomes.

Intensify efforts on newborn health and child nutrition: Although newborn health is stipulated as a priority area, implementation gaps remain [9]. Low-cost evidence-based interventions known to improve newborn survival should be expanded nationally to ensure wide coverage. Given the high prevalence of stunting among children, improvement in the nutritional status of children requires priority attention [3]. Recent evidence from Ethiopia, Peru and Rwanda shows that targeted interventions, backed by investment and commitment to action, can lead to a reduction in stunting.

Improve quality of care: Demand for health care has increased with the rapid expansion of health facilities and greater use of RMNCH services. Complementary efforts are needed to improve quality of care and, in particular, the monitoring and coverage of EmONC services [9].

Scale up the midwifery workforce: While substantial progress has been made in increasing the number of midwives, Cambodia needs to double its midwifery workforce [12] in order to reach MDG targets and ensure their equitable distribution across the country. A continued focus on building capacity and equitably deploying the health workforce is required, and being undertaken in Cambodia and in other ‘fast track’ countries. In Lao PDR, for example, the National Health Personnel Development Strategy (2009-2010) and the Decree on incentives for civil servants posted to rural areas (2011) both address challenges of health worker capacity and health worker distribution among urban and rural areas.

Decrease high out-of-pocket expenditure: Alternative health financing mechanisms have shown positive results; however, out-of-pocket expenditure still comprises a large share of total expenditure on health [6]. Further efforts to expand health services to underserved populations are needed to ensure universal health coverage. The ‘mutuelles’scheme in Rwanda has shown that it is possible to extend CBHI coverage to 90% of the population, reducing out-of-pocket expenditure and removing financial barriers to care.
REFERENCES


[22] Ir P et al. Using targeted vouchers and health equity funds to improve access to skilled


### 10) TABLES AND FIGURES

#### Table 1: Key Country Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1990-1999</th>
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<th>2010-PRESENT</th>
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<tr>
<td><strong>POPULATION</strong></td>
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<tr>
<td><strong>HEALTH FINANCING</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>ECONOMIC DEVELOPMENT</strong></td>
<td></td>
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<tr>
<td>Gini Index (0 equality to 100 inequality income distribution)</td>
<td>38 (1994)</td>
<td>36 (2009)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>HEALTH WORKFORCE</strong></td>
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</tr>
<tr>
<td>Physicians (per 1000 population)</td>
<td>0.1 (1992)</td>
<td>0.2 (2000)</td>
<td>0.2 (2010)</td>
</tr>
<tr>
<td>Nurses and Midwives (per 1000 population)</td>
<td>N/A</td>
<td>0.9 (2000)</td>
<td>0.9 (2010)</td>
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<td><strong>EDUCATION</strong></td>
<td></td>
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<tr>
<td>Adult Literacy Rate (% of males (M) and % females (F) aged 15 and above)</td>
<td>79 (M) 57(F) (1998)</td>
<td>85 (M) 64 (F) (2004)</td>
<td>83 (M) 66 (F) (2009)</td>
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<tr>
<td><strong>ENVIRONMENTAL MANAGEMENT</strong></td>
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<td><strong>URBAN PLANNING/RURAL INFRASTRUCTURE</strong></td>
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<td><strong>HUMAN DEVELOPMENT INDEX</strong> (Composite of life expectancy, literacy, education, standards of living, quality of life)</td>
<td></td>
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<tr>
<td>Value (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>N/A</td>
<td>.45 (2000)</td>
<td>.54 (2012)</td>
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<td>Country Rank (2012)</td>
<td></td>
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<td>138</td>
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<tr>
<td><strong>GOOD GOVERNANCE</strong> (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance)</td>
<td></td>
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<tr>
<td>Control of Corruption (extent that public power is used for private gain)</td>
<td>-0.96 (1996)</td>
<td>-0.85 (2000)</td>
<td>-1.04 (2012)</td>
</tr>
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</table>

*See Table 2 for data on coverage of key RMNCH indicators
+Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)

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<table>
<thead>
<tr>
<th>Continuum of Care Stage</th>
<th>Indicator</th>
<th>Most Recent Available</th>
<th>Source</th>
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<td>Pre-Pregnancy</td>
<td>Demand for family planning satisfied (% of women age 15-49 with met need for family planning)</td>
<td>75 (2011)</td>
<td>Countdown snapshot 2013/UNPF</td>
</tr>
<tr>
<td>Pregnancy to Post-Natal</td>
<td>Antenatal care (% of women attended at least 4 times during pregnancy by any provider)</td>
<td>59 (2010)</td>
<td>DHS 2010</td>
</tr>
<tr>
<td></td>
<td>Skilled attendance at birth (as % of total births)</td>
<td>71 (2010)</td>
<td>WDI</td>
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<tr>
<td></td>
<td>Postnatal care for mothers (% of mothers who received care within two days of childbirth)</td>
<td>70 (2010)</td>
<td>DHS 2010</td>
</tr>
<tr>
<td>Newborn to Childhood</td>
<td>Infant feeding (Exclusive breastfeeding for first six months)</td>
<td>74 (2010)</td>
<td>DHS 2010</td>
</tr>
</tbody>
</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Cambodia

USMR/NMR - Cambodia

Source: World Development Indicators

MMR / TFR - Cambodia

Source: World Development Indicators

Cambodia: Review of Data and Literature on Progress Towards MDGs 4 and 5.
Nutrition – Cambodia

Note: Dashed line indicates missing data. Source: World Development Indicators
**Timeline with key Policy inputs - Cambodia**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1975-1979</strong> Pro-natalist policies;</td>
<td><strong>Early 1990s</strong> Pro-natalist policies reversed;</td>
<td><strong>2001-2005</strong> National Strategic Plan of Action for a Comprehensive and Multi-sectoral Response to HIV/AIDS;</td>
</tr>
<tr>
<td><strong>1979-1989</strong> Immunization programmes began.</td>
<td><strong>1995</strong> Birth-spacing policy;</td>
<td><strong>2003-2007</strong> Health Strategic Plan (HSSP); Cambodia Nutrition Investment Plan;</td>
</tr>
<tr>
<td></td>
<td><strong>1996</strong> Health Coverage Plan; Health financing charter;</td>
<td><strong>2004</strong> National Water Supply and Sanitation Policy; ‘A Cambodia Fit for Children’ launched by the Prime Minister;</td>
</tr>
<tr>
<td></td>
<td><strong>1997</strong> National Safe Motherhood Policy; Health Workforce Development Plan;</td>
<td><strong>2006</strong> Cambodia Midwife Council formed;</td>
</tr>
<tr>
<td></td>
<td><strong>1996-2005</strong> Legalization of abortion;</td>
<td><strong>2007</strong> Live birth incentive scheme launched; Health Sector Strategic Plan II;</td>
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<tr>
<td></td>
<td><strong>1998</strong> Pilot of community-based health insurance (CBHI) programmes; Pilot of contracting of health services to NGOs;</td>
<td><strong>2008-2015</strong> Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality;</td>
</tr>
<tr>
<td></td>
<td><strong>2000</strong> First implementation of the health equity funds (HEFs).</td>
<td></td>
</tr>
</tbody>
</table>
5. China: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: China has made substantial progress in improving the health of women and children. China is one 10 ‘fast track’ countries that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality). A number of strategies have helped to achieve this progress:

Health sector: The government has significantly increased its health expenditure and has focused on improving the capacity of the health workforce as part of broader health sector reforms. China has implemented a series of programmes for Maternal and Child health (MCH), and the country’s structured service delivery system has been key to achieving improvements in women’s and children’s health. Targeted initiatives for rural and migrant populations have improved access for underserved populations. In addition, China’s women and children’s health surveillance network is one of the largest centralized networks of its kind, and has been critical for improving monitoring and accountability.

Sectors outside of health: China has made education compulsory, focusing, in particular, on rural areas. China has achieved its MDG 2 target of universal primary education ahead of schedule and gender disparities in primary education also seem to have been eliminated. China has also made strong progress in reducing the number of underweight under-five children, and has also reduced the prevalence of stunting among children under five.

Key actors and political economy: China has put in place a policy and legal system to ensure the development of MCH services, through two national programmes targeted specifically at children and women.

Governance and leadership: The government also has two key priorities for e-health: establishing hospital and regional information platforms and the provision of long-distance medical care.

Lessons learned: Despite making strong progress towards achieving the health MDGs, China faces challenges which need to be addressed to ensure progress towards achieving MDG 4 and 5 targets is accelerated. These include: (i) government financing for health; (ii) socioeconomic and gender barriers; (iii) the capacity and distribution of the health workforce; and (iv) the health of migrant populations.

2) INTRODUCTION

China is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Peru, Rwanda and Viet Nam) that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
Health sector: health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal and financial entitlements to high-quality health care, especially for underserved populations;

Sectors outside of health: education; nutrition; and infrastructure, water and sanitation; innovation and research

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping China make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies China has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) COUNTRY CONTEXT

Overview
China is the most populous country in the world and has a vast and diverse landscape. There are 56 different ethnic groups, with Han comprising around 92% of the population, and hundreds of languages are spoken [2]. China has witnessed significant demographic changes over recent decades, with decreasing fertility rates and increasingly skewed sex ratios: in 2011, the sex ratio at birth was almost 108 boys for every 100 girls, which is higher than the normal ratio of 102–106 boys for every 100 girls [3]. An estimated 230 million people are defined as ‘floating population’ (people who live and work in areas other than their registered address) [4].

Since initiating market reforms in 1978, China has transformed itself from a highly centralized planned economy to a dynamic market economy, with industries that employ large numbers of women, many of whom migrated from rural areas. China has experienced an average gross domestic product growth rate of more than 9% per annum. In 2010, China became the second largest economy in the world (in terms of gross domestic product) [4]; by 2012, China’s gross domestic product per capita (purchasing power parity, PPP, Int$) was $7958 (see Table 1: Key Country Indicators). Development has differed widely among China’s three economic zones, with provinces in Eastern China being more developed than provinces in Central and Western China [2].

(For Table 1 – Key country indicators see Section 10)

4) KEY TRENDS, TIMELINES AND CHALLENGES

China has witnessed a sustained reduction in mortality and fertility rates since 1990. Despite slow initial progress, China met its MDG target for reducing the under-five mortality rate (U5MR) in 2009. However, declines in neonatal mortality have not matched the pace of progress in under-five mortality. Sustained reductions have been made to maternal mortality: China is on track to meet its MDG 5a target. The total fertility rate (TFR) has also stabilized in recent years to around 2 births per woman [6] (see Table 1: Key Country Indicators).

China has performed well against many indicators, including births attended by skilled health personnel (100% in 2010) and percentage of children immunized with three doses of combined
diphtheria, pertussis and tetanus immunization (99% in 2011) [7]. Despite achieving significant progress in improving maternal, newborn and child health (MNCH), China has faced the following constraints:

**Socioeconomic disparities:** Significant disparities in access to health services exist between urban and rural populations, different population groups (e.g. migrant and resident and different ethnic groups) and different regions in the country (e.g. east and west) [4]. Such socioeconomic disparities are compounded by geographical barriers to health care: in China rural populations in remote areas may have to travel for a long time to access health services.

**Financial barriers:** The limited health insurance coverage, which is skewed towards people living in urban areas, has resulted in a significant emphasis on fee-for-service. China’s out-of-pocket expenditure (as a percentage of total expenditure on health) was 46% in 1995, although this reduced to 35% in 2011 [6] (see Table 1: Key Country Indicators). High levels of out-of-pocket expenditure have resulted in many interventions (including immunization and safe delivery) being beyond the means of rural households [8].

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) **HEALTH SECTOR INITIATIVES AND INVESTMENTS**

*Health system investments*

**Health financing:** China’s government health expenditure per capita (PPP, $Int) increased significantly from $53 in 1995 to $432 in 2011 [6]. Private sector health expenditure in China has also increased simultaneously.

In China, national health insurance schemes have reduced out-of-pocket costs and have been associated with increases in institutional deliveries. China’s out-of-pocket expenditure as a proportion of total health expenditure had decreased from 46% in 1995 to 35% in 2011 (see Table 1: Key Country Indicators). The New Rural Co-operative Medical Scheme and Urban Residents Basic Medical Insurance were launched in 2003 and 2007 respectively, complementing the existing Urban Employee Basic Medical Insurance, which was introduced in 1998. By the end of 2010, 1.26 billion people had joined urban and rural medical insurance schemes [4]; by 2011, out-of-pocket expenditure on health as a proportion of the total health expenditure had fallen to 35%.

**Health workforce:** The Chinese government has focused on facilitating training of health personnel in allopathic medicine (modern, evidence-based medicine) and on increasing staff levels. Health workforce strengthening has increased the numbers of its physician workforce since the 1990s. China has worked towards increasing and achieving equitable distribution and deployment of their health workforce. New positions or roles have been created to extend services to underserved areas. In the 1980s, China created MCH clinician positions to provide antenatal services at the township level and strengthen delivery of basic services by village ‘barefoot doctors’. Barefoot doctors are rural community members who received minimum basic medical and paramedical training and work in rural villages. In China the delivery of maternal and child care is centred on doctors [11]. The numbers of both doctors and nurses have continued to grow (see Table 1: Key Country Indicators).

The Health Sector Reforms initiated by the government in 2009 aim to establish a health care system that provides universal coverage [9]. The reforms have five key areas of focus: (i) accelerating development of the basic health security system; (ii) establishing an essential
medicines system; (iii) improving the grass-roots health care system; (iv) promoting equitable access to basic health services; and (v) advancing pilot projects in public hospitals [2]. In 2009, the government initiated training of health sector personnel as a part of its health sector reforms. By the end of 2010, 72 000 health workers in township hospitals, 208 000 health workers in village hospitals, and 420 000 health workers in community health care facilities had received training [9]. In addition, the 12th Five-Year Plan for Health Sector Development (2011–2015) aims to strengthen the health workforce at the primary level by training 150 000 General Practitioners so that every 10 000 urban residents will have over two General Practitioners, and every township hospital will have one General Practitioner. Improving the quality of health services is also a key aim of China’s health system reforms. Several efforts have been made: the national MoH Department of Supervision of Medical Services was established; and the MoH issued the Standards of Qualified Nursing Service in Hospitals in 2010, Clinical Nursing Practice Guidelines in 2011, and Plan to Enhance Qualified Nursing in 2012 [2].

**Health systems**: The Chinese health system has adapted effectively to address the changing needs as its economy has evolved. Since the 1960s, the health system has modernized to address the complex health system challenges of an increasingly industrialized economy [10]. China’s structured service delivery system has been key to achieving improvements in MNCH. China has a comprehensive three-tier medical and health service network it consists of clinics and municipal and district hospitals, and in rural areas, of village clinics, county hospitals, and township health centres. The MCH stations were established by the government in rural areas to improve access to health services and encourage facility-based clean deliveries using standardized protocols. The role of the MCH stations was expanded further with the inclusion of primary and secondary levels of MCH services. As part of the Health Sector Reforms, 32 700 township health centres, 37 800 urban community health centres and 648 000 village clinics were built in the first two years of implementation [12].

**Outcomes monitored using evidence**
The National Maternal and Child Health (MCH) Routine Reporting System in China is one of the largest centralized networks of its kind. It was formed by merging several MCH surveillance networks in 1996 that were established in the 1980s [13]. There are four main information sources for MCH data in China that inform policy and programmes – MCH annual reports, surveillance systems, national health and household surveys, and the national census. The MCH annual reports provide rich information about many aspects of maternal, infant and child mortality. Surveys complement both the surveillance system and MCH reports by providing data on service demand and supply, as well as health outcomes. In 2000, maternal death reviews were initiated to complement these data, to ensure that information on MCH be readily available in China [10]. The National Maternal Mortality Surveillance System is used to identify, analyse and inform actions to reduce the number of maternal deaths, is a well-established population-based maternal death registration system set up by the Ministry of Health [14].

**Political prioritization of essential health interventions**
The alignment of government and external partner efforts has helped drive momentum on MNCH in China. Since the 1990s, the Chinese government has implemented many international MCH programmes and interventions in cooperation with development partners, such as the Baby-Friendly Hospital and the Baby-Friendly Initiative, and Strengthening MCH and Family Planning Services in grass-roots level (jointly implemented by UNICEF, UNFPA and WHO) [11]. The Baby Friendly Hospital Initiative was launched to ensure that all maternity facilities become centres of breastfeeding support.
At present, China has more than 6000 Baby-Friendly Hospitals; exclusive breastfeeding in rural areas rose from 29% in 1992 to 68% in 1994, and in urban areas increased from 10% to 48% over the same period [15].

In addition, in 2002, the Ministry of Health launched the Preventing Mother-to-Child Transmission of HIV pilot project in eight of mainland China’s 1464 counties (scaled up to 1156 counties in 2010). As of 2010, more than 13.9 million pregnant women had received HIV counselling and testing in the project area [16]; the mother-to-child transmission rate was 30% as of 2010 (see Table 2: Key RMNCH Coverage Indicators).

In 2007, the Chinese government began to allocate central funds for the Expanded Program on Immunization. Since then, the central government has overseen the purchase of all vaccines and syringes, and the central and provincial governments have offered subsidies to health workers who carry out this immunization work [20]. These efforts helped to increase immunization in measles from around 84% in 2000 to 99% in 2011 [7]. China also met its target of reaching 90% immunization coverage by 2010, as stipulated in its 11th Five-Year Plan (2006–2010) [12].

As a result of the implementation of other key interventions during the 11th five-year plan period, the percentage of under-five children suffering from moderate to severe malnutrition reduced by 49%; the rate of detection of newborn conditions reached 57% [2]; and close to 98% of rural women gave birth in hospitals. The Programme to Reduce Maternal Mortality and Eliminate Neonatal Tetanus (2000–ongoing) has been associated with a rise of 46% in the hospital delivery rate between 2001 and 2007 across the 1000 counties where the programme has been implemented (see Health Sector Spotlight).

Prioritization of interventions to facilitate safe deliveries has resulted in increased coverage of births attended by a skilled attendant. In China, subsidies are provided to primarily poor women to give birth in a health facility and incentives are given to health care providers to identify pregnant women and provide maternal health services. As part of China’s Health Sector Reforms, initiated in 2009, 8.85 million rural women were subsidized for hospital delivery in the first two years of implementation.

Legal and financial entitlements, especially for underserved populations
The New Rural Co-operative Medical Scheme was introduced in 2003. It was organized at the county level and included a maternal health care benefits package. Over 95% of eligible people enrolled in the scheme [4]. Subsidies provided under the scheme helped in reducing out-of-pocket costs, contributed to reducing catastrophic health expenditure and were associated with an increase in institutional deliveries between 2000 and 2007 [19].

The State Council also introduced regulation for family planning services for migrant populations in 2009. More recently, local family planning service delivery points under the National Population and Family Planning Commission have been promoting equal access to basic health care services and free family planning services for migrants through the ‘Love and Care’ programme [20].

“The establishment of the New Rural Co-operative Medical Scheme in rural China is considered as an important step towards universal coverage. The rapid population coverage and the development of institutional structures have built a foundation for further improvements in the scheme.”

Health Care Financing in Rural China: New Rural Cooperative Medical Scheme Report, 2009
HEALTH SECTOR SPOTLIGHT

Programme to Reduce Maternal Mortality and Eliminate Neonatal Tetanus (2000–ongoing)
The programme was jointly implemented by the Ministry of Health, National Working Committee for Children and Women and the Ministry of Finance in 2000 in several West China counties, and was expanded to 1000 rural counties in Mid-west China by 2004. The goal of the programme was to reduce the risk of maternal mortality by enhancing hospital delivery. Three main measures were carried out to improve hospital delivery: health education, health infrastructure and social mobilization.

The programme had two main innovations: (i) a subsidy strategy was revised from only traditional supply-side reimbursements to include demand-side reimbursements, where pregnant women could access direct subsidies from the local government or maternal care institutions managed by local governments to encourage hospital deliveries; (ii) obstetric experts from provincial tertiary hospitals supported primary maternal care centres to help reinforce local capacity in terms of initiating referral and training local staff [17].

Obstetric service quality and techniques in local medical centres improved through the use of basic and emergency obstetric doctors, and the development of obstetric emergency centres and express ‘green channel’ referral networks [18]. Green channel is an express obstetric emergency service or a referral network for high-risk pregnancies and pregnant women at three levels – village, township and county. The project also contributed to a rapid increase in hospital delivery rates: hospital delivery costs, which had previously been a heavy burden for poor women, were reduced and reimbursements increased. The hospital delivery rate increased by an average of 46% between 2001 and 2007, and evidence suggests that the increase in hospital delivery rate was associated with reductions in maternal mortality [18].

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
A commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality, has led to improvements in education in China.

The Chinese government has made education compulsory, ensuring at least nine years of education. Legislation and national programmes to introduce universal and free education have been introduced. Targeted initiatives have been used to improve access to education for underserved populations in China. There has been a particular focus on rural areas: the Nine-Year Compulsory Education in Rural Areas programme has concentrated on investments in infrastructure, including the provision of basic school facilities, the free distribution of textbooks and the training of teachers and principals (see Spotlight of a sector outside of health). The prioritization of education has been an important part of China’s national development strategy [20].

China has achieved its MDG 2 target for universal primary education ahead of schedule; between 1990 and 2009, China’s net primary school enrolment rate increased from 97% to around 99%; over a similar period, literacy rates for adults aged 15 years and above also increased, for both males (from 87% to 97%) and females (from 68% to 91%) (see Spotlight of a Sector outside of health) [6]. In addition, almost all high-performing countries have already met or are on track to achieve 100% literacy rate of 15–24-year-olds. The Chinese government had set itself a target of eliminating gender inequities in primary and secondary education by 2005 and this target has also been achieved, with
the retention rate for boys and girls in primary schools at 99.4% and 99.3% respectively [6].

**Nutrition**

China has shown its commitment to improving its population’s nutritional status through the political prioritization of national plans, strategies and laws to improve malnutrition and micronutrient deficiencies. Demonstrable progress has already been made by both China and Peru to halve the proportion of people suffering from hunger.

Nutrition and social protection programmes have been targeted to vulnerable, marginalized and key populations. The Chinese government formulated the Outline for the Development of Food and Nutrition in China (2001–2010), which focused on nutrition for children and teenagers, women and babies and the elderly. The plan aimed to reduce the rate of illness among underweight children, and encourage the exclusive breastfeeding of infants.

Other nutritional interventions adopted by China include the implementation of strategies for the prevention of anaemia. In 2010, the Ministry of Health and UNICEF initiated a nutrition-enhancing project for infants in Wenchuan earthquake-stricken area in West China to reduce the prevalence of anaemia and other illness [20].

China has made strong progress in reducing the percentage of underweight children under-five (from 13% in 1990 to 4% in 2010), and the percentage of under-five stunted children (from 32% in 1990 to 10% in 2008) [7]. China has met the MDG target, to reduce the prevalence of underweight children under-five [20] and compares favourably with its neighbours in terms of its rate of reduction of malnutrition: China currently has the lowest prevalence of children under-five who are underweight in the East Asia region [8].

Through the National Children’s Development Plan (2011–2020), the government has proposed further action to improve children’s nutritional status, such as strengthening the construction and management of baby-friendly hospitals, and improving and implementing relevant policies to support exclusive breastfeeding.

**Infrastructure, water supply and sanitation**

China has made considerable progress to improve access to water and sanitation and has met its MDG 7 targets to increase the proportion of the population using improved drinking-sources and sanitation facilities [20]. Over 200 000 water supply projects have been launched to provide access to safe drinking-water for 220 million rural residents [21]. Access to improved water sources has improved from 67% in 1990 to 92% in 2011, and access to improved sanitation facilities improved from 24% in 1990 to 65% in 2011 [6].

**Innovation and research**

In line with the growing use of information technology and demand for health services, increasing attention has been given to e-health in China. The government has two key priorities for e-health: establishing hospital and regional information platforms; and the provision of long-distance medical care. An example of a pilot e-health project is the partnership between the China Unicorn Guangdong Company and the Nanfang Hospital. The organizations jointly established a remote medical centre to conduct interactive clinical consultations, remote imaging and long-distance training among 140 grass-roots hospitals using third generation (3G) technology [23].

China has also built up a national communicable disease and public health emergencies direct...
online reporting system, which, by 2011, covered 100% of centres for disease control and 94% of township hospitals [4].

**SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH**

**National Project on Compulsory Education in Poverty Areas**

The National Project on Compulsory Education in Poverty Areas focused on meeting the basic learning needs of children in 852 poor counties, aiming to reach 250 million people. Universal primary education coverage was the principal aim of the project, and universal lower secondary education was an additional objective. The main intervention areas included provision of basic school facilities, training of teachers and principals and free distribution of textbooks. The project was carried out in two phases. The first phase was implemented between 1995 and 2000 and the second phase from 2001 to 2005:

- Enrolment rates in the project counties reached 99% at the primary level and 91% at the lower secondary school levels. In addition, 428 counties reached the national literacy standards, and 242 counties achieved universal primary education. This contributed positively to national goals, which were to achieve nine-year compulsory education and literacy in 2540 counties with a population coverage of 85%.
- School infrastructure was strengthened with the establishment of 4000 new schools and renovation or expansion of 30 000 existing schools.
- A mass training programme was carried out to build teachers’ capacities. Around 450 000 teachers and 70 000 principals received training; 94% of primary school principals obtained the required qualifications.
- China’s schools were re-mapped in order to work out how best to use resources. The re-mapping exercise proved effective: subsequently, enrolment of children increased by 4.37 million, the average primary school size was raised to 168 and lower secondary school size raised to 660.

By 2000, the teacher:student ratio reached 1:22.7 for primary schools and 1:18.2 for secondary schools [22].

7) **GOVERNANCE AND LEADERSHIP**

To ensure the promotion of MCH and support its development in China, policies for a favourable institutional environment have been developed through the promulgation of laws and MCH-related policies [11]. In order to fulfil its commitment to the MDGs, the State Council issued the National Programme for Children’s Development in China and the National Programme for Women’s Development in China, integrating women’s health care, including reproductive health, into the overall strategic plans for socioeconomic development. The National Working Committee for Children and Women was set up by the State Council to support the Ministry of Health to develop plans to implement these programmes at all levels [11]. In addition, women held 21% of the seats in the National People’s Congress in 2008 [21].

8) **LESSONS LEARNED AND FUTURE PRIORITIES**

Although China has met its MDG 4 target and is on track to meet its MDG 5 target, it continues to face several challenges, which, if addressed, could accelerate further progress in reducing maternal and child mortality.

*China: Review of Data and Literature on Progress Towards MDGs 4 and 5.*
**Government financing for health:** Reducing out-of-pocket expenditure and increase public health financing is necessary to ensure universal health care coverage. Despite China’s progress in reducing out-of-pocket expenditure, it remains a barrier to access. There is a need to alleviate personal financial burdens through increasing public funding for health and strengthening existing insurance schemes to ensure progress is equitable [20].

**Socioeconomic and gender disparities:** In China, significant disparities in health outcomes persist across different socioeconomic groups and by urban–rural residency and geographic location. Mortality in the poorer Central and Western economic zones remains higher than that of the wealthier Eastern economic zone. The quality of accessible health care services available to the rural population, floating population and children of ethnic minorities is also lower than for other groups [20]. In addition, gender disparities owing to income, residential status and culture persist: most women still work in the agricultural sector as unpaid family workers.

**Capacity and distribution of the health workforce:** Investment is required to expand the skill base, size and equitable distribution of the health workforce. The number of doctors, nurses and midwives per 1000 population has increased over the last decade; however, there is unequal distribution of health workers in favor of urban and higher-income counties [6]. The distribution and capacity of the health workforce (in particular the knowledge and skills of midwives and obstetric personnel) needs to be improved in a way that is equitable and benefits different population sub-groups [4].

**Health of migrant populations:** China’s migrant population (estimated to be 230 million in 2010), constitutes a challenge as they do not have access to the urban medical insurance system, basic health care services or education [24]. According to the United Nations Development Programme’s China Human Development Report (2007–2008), the maternal mortality ratio among urban residents was 25 per 100 000 live births compared with 71 per 100 000 live births among migrant workers [25]. Migrant workers and communities could be engaged through outreach programmes, such as through the Love and Care programme, to ensure access.

9) REFERENCES


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China: Review of Data and Literature on Progress Towards MDGs 4 and 5.
### 10) TABLES AND FIGURES

**Table 1: Key Country Indicators**

**Table 1: Key Country Indicators** (China)

<table>
<thead>
<tr>
<th>TABLE 1: KEY COUNTRY INDICATORS** (CHINA)</th>
<th>INDICATOR</th>
<th>1990-1999</th>
<th>2000-2009</th>
<th>2010-PRESENT</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>GINI INDEX (0 equality to 100 inequality income distribution)</td>
<td>32 (1990)</td>
<td>43 (2002)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
<td>N/A</td>
<td>1 (2005)</td>
<td>2 (2011)</td>
</tr>
<tr>
<td><strong>EDUCATION</strong></td>
<td>GIRLS’ PRIMARY SCHOOL NET ENROLLMENT (% of primary school age children)</td>
<td>94 (1992)</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td></td>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
<td>87(M) 68(F) (1990)</td>
<td>95(M) 87(F) (2000)</td>
<td>93 (2010)</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL MANAGEMENT</strong></td>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
<td>67 (1990)</td>
<td>80 (2000)</td>
<td>92 (2011)</td>
</tr>
<tr>
<td><strong>HUMAN DEVELOPMENT INDEX (Composite of life expectancy, literacy, education, standards of living, quality of life)</strong></td>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>.50 (1990)</td>
<td>.59 (2000)</td>
<td>.70 (2012)</td>
</tr>
<tr>
<td></td>
<td>COUNTRY RANK (2012)</td>
<td>101</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GOOD GOVERNANCE</strong> (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance)**</td>
<td>CONTROL OF CORRUPTION (extent that public power is used for private gain)</td>
<td>-0.25 (1996)</td>
<td>-0.24 (2000)</td>
<td>-0.48 (2012)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators

**Source:** World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)

China: Review of Data and Literature on Progress Towards MDGs 4 and 5.
Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>MOST RECENT AVAILABLE</th>
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<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (%) of women age 15-49 with met need for family planning</td>
<td>N/A</td>
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<tr>
<td>PREGNANCY TO POST-NATAL</td>
<td>ANTENATAL CARE (%) of women attended at least 4 times during pregnancy by any provider</td>
<td>N/A</td>
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<td></td>
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<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (%) of total births</td>
<td>100 (2010)</td>
<td>WDI</td>
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<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (%) of women attended at least 4 times during pregnancy by any provider</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>NEWBORN TO CHILDHOOD</td>
<td>INFANT FEEDING (Exclusive breastfeeding for first six months)</td>
<td>28 (2008)</td>
<td>National Health Services Survey (NHSS) 2008, p. 85</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>PNEUMONIA (Antibiotic treatment for pneumonia)</td>
<td>N/A</td>
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</table>
**Figure 1:** Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - China

USMR / NMR - China

![Graph showing trends in U5 Mortality Rate (USMR) and Neonatal Mortality Rate (NMR).](image)

Source: World Development Indicators

MMR / TFR – China

![Graph showing trends in Maternal Mortality Rate (MMR) and Total Fertility Rate (TFR).](image)

Note: Dashed line indicates missing data. Source: World Development Indicators

*China: Review of Data and Literature on Progress Towards MDGs 4 and 5.*
Nutrition - China

Note: Dashed line indicates missing data. Source: World Development Indicators

Timeline with key policy inputs – China

China: Review of Data and Literature on Progress Towards MDGs 4 and 5.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>1978</strong> Expanded Program on Immunization; One Child Policy;</td>
<td><strong>1992</strong> Outline Programme for Chinese Children’s Development;</td>
<td><strong>2001-2010</strong> National Programme for Women’s Development in China; National Programme for Children’s Development in China;</td>
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<tr>
<td><strong>1980s</strong> Position of the MCH Clinician created;</td>
<td><strong>1994</strong> Law on Maternal and Infant Health Care; MCH department created;</td>
<td><strong>2002</strong> Law of Family Planning; Prevention of Mother-to-Child Transmission of HIV Programme;</td>
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<td><strong>1990-1994</strong> Diarrheal Disease Control Programme;</td>
<td><strong>1995-2000</strong> Programme for Development of Chinese Women;</td>
<td><strong>2003</strong> New Cooperative Medical Scheme;</td>
</tr>
<tr>
<td></td>
<td><strong>2000</strong> Programme to Reduce Maternal Mortality and Eliminate Neonatal Tetanus (or Safe Motherhood Programme); Maternal death reviews initiated.</td>
<td><strong>2009</strong> Regulation on Provision of Family Planning Services to the Migrant Population;</td>
</tr>
<tr>
<td></td>
<td><strong>2011-2012</strong> Health Sector Policy Reforms;</td>
<td><strong>2011</strong> Implementation Guidelines of the Law on MCH;</td>
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<td><strong>2011</strong> Implementation Guidelines of the Law on MCH;</td>
<td><strong>2015</strong> 12th Five-Year Plan for Health Sector Development;</td>
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<td><strong>2011-2020</strong> National Programme for Women’s Development; National Programme for Child Development;</td>
<td><strong>2011-2020</strong> National Programme for Women’s Development; National Programme for Child Development;</td>
</tr>
</tbody>
</table>
6. Egypt: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Egypt has made strong progress in improving the health of women and children. Egypt is one of 10 ‘fast track’ countries that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). A number of strategies have facilitated this progress:

Health sector: Government expenditure on health as a proportion of overall government expenditure is amongst the highest in the region. The health workforce has increased significantly since the 1990s and has greater capacity than the regional average. Several initiatives have been undertaken to improve the distribution of the health workforce. Health sector reforms aim to deliver universal access to a basic package of health care services, and children’s right to health is enshrined in law. Egypt has a wide network of public, nongovernmental organization (NGO) and private facilities for providing health care services and the government of Egypt has prioritized reproductive, maternal, newborn and child health (RMNCH) interventions as a core part of its strategy. These include immunization and family planning services.

Sectors outside of health: Egypt has demonstrated a strong commitment to improving education, which has been identified as a key development tool. The government has initiated several educational reform programmes, with a particular focus on increasing enrolment of girls in schools and improving the ratio of girls to boys in education. Egypt has historically had relatively high rates of access to improved water and sanitation facilities, and in recent years these have improved further.

Governance and leadership: The government has provided strong leadership in placing the health and development of children at the forefront of its agenda. Successive Ministers of Health have provided vision and political impetus for initiating health reforms, and research is fostered within the Ministry of Health and Population (MoHP).

Lessons learned: Despite this demonstrable success to date, Egypt faces a number of constraints which if addressed, could help to ensure progress towards achieving MDG 4 and 5 targets is sustained. These include: (i) reducing socioeconomic disparities, particularly between Upper and Lower Egypt; (ii) strengthening gender equality; (iii) improving the nutritional status of children; and (iv) increasing financing for health insurance.

2) INTRODUCTION

Egypt is one of 10 ‘fast track’ countries (which also include Bangladesh, Cambodia, China, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Peru, Rwanda and Viet Nam) that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality). There is evidence that improvements in gross domestic product per capita are

*In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in
generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

**Health sector**: health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal and financial entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health**: education; nutrition; and infrastructure, water and sanitation; innovation and research

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping Egypt make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Egypt has developed and implemented as part of efforts to maximize performance in key health and development areas.

### 3) COUNTRY CONTEXT

**Overview**

Egypt, one of the most populous countries in North Africa, is a desert plateau divided by the Nile valley, formed of two distinct regions. Upper Egypt, in the south of the country, is predominantly rural and has had enduring poor health outcomes, particularly high maternal mortality. Lower Egypt, in the north of the country, including cities such as Cairo and Alexandria, is more urbanized and affluent. Around half of Egypt’s population are below 15 years of age and less than 4% are above 60 years of age [2].

Egypt is a lower-middle-income country whose economy relies on four main sources of income: tourism, remittances from Egyptians working abroad, revenues from the Suez Canal and oil [3]. Its gross domestic product grew by 5.3% in 2010, but growth slowed to 2.2% in 2012/13 owing to dramatic changes in the political landscape. Egypt’s gross domestic product per capita (purchasing power parity (PPP), current international $ ($Int)) increased from $3266 in 1990 to $5795 in 2012 (see Table 1: Key Country Indicators) [4].

(For Table 1 – Key country indicators see Section 10)

### 4) KEY TRENDS, TIMELINES AND CHALLENGES

Under-five mortality has declined rapidly since 1990, with an annual rate of reduction of almost 7% to 2011: Egypt has met its MDG 4 target. Over the same period, maternal mortality declined by over two thirds: Egypt is on track to meet its MDG 5a target. The total fertility rate (TFR) has reduced from 4 in 1995 to 3 in 2011 [4].

Egypt has also performed well against many reproductive health indicators, including antenatal care coverage (66% in 2008, as against the regional average of 44%) (see Table 2: Key RMNCH Coverage primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
Low capacity and inequitable distribution of the health workforce: Egypt faces challenges relating to human resources for health. Low levels of resources have been allocated for both initial and continuous training of health workers.

Although Egypt has a sufficient number of health providers, the health workforce is distributed unequally, with a particularly low level of providers in rural Upper Egypt. In Upper Egypt, only 60% of mothers were assisted by a skilled birth attendant at delivery in 2008 compared to the national figure of 80% [6].

Limited and poor-quality obstetric care: Poor obstetric care has been a major bottleneck to reducing the number of maternal deaths: Egypt has an insufficient number of facilities, and delays in the provision of basic emergency care are frequent. For example, in the early 1990s no protocols for dealing with obstetric emergencies existed, and most emergencies were being managed by junior staff. Women’s perception that the quality of services is poor is a barrier to the use of antenatal and delivery services [7].

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Health system investments
Health financing: Government expenditure on health as a proportion of overall government expenditure (7% in 2011) and as a proportion of total expenditure on health (40% in 2011), has remained relatively constant over the last decade and is amongst the highest in the WHO Eastern Mediterranean Region. Total health expenditure per capita (PPP, Int$) also increased from $110 in 1995 to $310 in 2011 [4]. Half of the country’s population – in particular, civil servants, government retirees and students – is covered by health insurance through the Health Insurance Organization. In 1997, a ministerial decree extended insurance coverage to children aged under 12 months. Egypt is now rolling out a new insurance scheme to achieve universal coverage, based on a family physician model which will separate financing from service provision [3].

Health workforce: The number of doctors per 1000 population has increased significantly since 1990. The health workforce has greater capacity compared to the regional average, with around 2.8 doctors and 3.5 nursing and midwifery personnel per 1000 population in 2010 (see Table 1: Key Country Indicators) [4]. Egypt has undertaken initiatives to increase the number and equitable distribution of the health workforce, and, in particular, of midwives.

The MoHP implemented an integrated set of interventions as a part of the Healthy Mother/Healthy Child Project (1993–2009) to improve the quality of obstetric and emergency care: for instance, competency-based training was carried out to improve skills of health personnel, training nurses in midwifery skills. The MoHP also has an ongoing training programme for nurses to become skilled midwives and has significantly improved the training and professionalism of its secondary-level nurses. A medical education reform initiative was undertaken between the Faculty of Medicine in Alexandria and the World Health Organization (WHO) to pioneer reforms in health professional institutes in Egypt [3].

Egypt: Review of Data and Literature on Progress Towards MDGs 4 and 5.
**Health systems**: Egypt has a wide network of public, NGO and private facilities to provide health care services. The MoHP’s primary health care facilities provide: maternal and child health services, communicable disease control, environmental health services and health education, amongst other services. There are approximately 5000 public primary care facilities and 1100 public hospitals. Egypt’s private sector network (which includes general practitioners, laboratories and pharmacists) plays an important role in delivering health care and manages private clinics as well as specialized hospitals [3].

“Investing in its children is the best investment Egypt can make” Minister of State for Family and Population 2009–2011 [8]

**Outcomes monitored using evidence**

Egypt has made the transition from implementing vertical interventions to an integrated health service approach, with a continued focus and priority placed on RMNCH. As vertical programmes, such as family planning and the Expanded Program on Immunization, became increasingly integrated, their surveillance systems were merged into the national health information system. The national health information system is maintained by the MoHP, which collects data at the local, regional, district and governorate level. Egypt uses data gathered through health management information systems to inform health sector strategic plans, monitor results, assess progress and facilitate priority setting, planning and resource allocation.

Most ‘fast track’ countries routinely use evidence from surveys and studies to inform policy, redress gaps in services and improve quality of care on RMNCH. Egypt’s First Maternal Mortality Study was carried out in 1992–1993 under the Child Survival Project (1990–1996), and helped in identifying significant disparities in maternal mortality between Upper and Lower Egypt. The recommendations and results of the National Maternal Mortality Study were used to design a series of interventions aimed at reducing maternal mortality [9].

The establishment of maternal mortality surveillance systems has helped identify, analyze and inform actions to reduce the number of maternal deaths in Egypt. In Egypt, a maternal mortality surveillance system was instituted in 2001 at all levels of the health system to identify maternal deaths and analyse and discuss factors contributing to mortality. This system helped to build government capacity to independently conduct studies on maternity care and formulate strategies for reducing risk before and after delivery [10]. The MoHP also established Safe Motherhood Committees to review and investigate maternal deaths.

Egypt developed a national health sector plan and monitoring and evaluation plan for 2007–2011, which includes specific RMNCH indicators. An annual review is also conducted for performance of the health sector plan. A rapid assessment of the status and practice of the civil registration and vital statistics system was conducted in 2011, which included two chapters on maternal and child mortality. Health information has been made publically accessible helping to facilitate transparency of results and enable a wider range of stakeholders to use information to improve health services: the MoHP official website publishes vital statistics results and reports on an annual basis, and information is disseminated on a periodic basis to interested parties [11].

**Political prioritization of essential health interventions**

The government of Egypt has transitioned from implementing vertical interventions to an integrated approach to service delivery, and prioritized RMNCH interventions as a part of its strategies. This has contributed to considerable improvements in maternal and child health.

*Egypt: Review of Data and Literature on Progress Towards MDGs 4 and 5.*
**Immunization:** The Expanded Program on Immunization increased full vaccination coverage against six vaccine-preventable diseases from 67% in 1992 to 92% in 2008 for children aged 12–23 months. In addition, Egypt, like Viet Nam, prioritized tetanus vaccination for pregnant women: annual tetanus-related newborn deaths were reduced from 6000–7000 in the 1980s to 11 in 2009 [10]. WHO declared Egypt free of neonatal tetanus in 2006 [6]. There was also an increase in measles immunization coverage from 86% in 1990 to 96% in 2011 [4].

**Increased utilization of family planning services:** The expansion of reproductive health and family planning services, particularly to underserved populations, has been a key strategy in helping reduce maternal mortality across many high-performing countries. The Egyptian government prioritized family planning with the National Population Policy in 1973, launched campaigns, and invested in generating ownership of service provision among health service providers. The total contraceptive prevalence rate for all methods increased between 1976 and 2008 from 18.8% to 60.3%, with the use of contraceptives rising more rapidly in rural areas. The programme is associated with a decline in the total fertility rate, from 4 in 1990 to 3 in 2011 [4].

**Child deaths from pneumonia averted:** The National Acute Respiratory Infection programme was initiated in 1990 as a part of the MoHP- and United States-Agency-for-International-Development (USAID) supported Child Survival Project. At the time, pneumonia was a leading cause of infant and child mortality, and the aim of the programme was to reduce infant mortality caused by acute respiratory infection. Acute-respiratory-infection-related infant mortality declined by 35% between 1990 and 1996, 14% between 1996 and 2000, and a further 12% between 2000 and 2004 [10].

Given Egypt’s highly concentrated but low HIV prevalence, priority has been given to increasing prevention using mass media, counselling and peer-to-peer education to reach high-risk groups [10]. Prevention of mother-to-child transmission of HIV (PMTCT) guidelines are in place, and one of the five objectives of Egypt’s Round 6 Global Fund grant (2006–2012) was to prevent mother-to-child transmission of HIV through the development and implementation of a PMTCT programme. Through the grant, 27 health facilities were equipped to provide the minimum package of PMTCT services, and PMTCT services were also offered to refugees [12].

**Legal and financial entitlements, especially for underserved population**

Egypt has made explicit commitments or implemented strategies to promote equitable access to health care. The Egyptian government has sought to improve equity by targeting Upper Egypt, where the burden of maternal morbidity and mortality is higher. From 1996–2000, maternal interventions were more extensive in Upper Egypt than in Lower Egypt [13]. Interventions targeted at Upper Egypt include the Mother Care Initiative (1996) and the Healthy Mother/Healthy Child Programme (1993–2009) (see Health Sector Spotlight). Between 1992/93 and 2000, Upper Egypt (59%) showed a greater decline in maternal mortality than Lower Egypt (30%). In 2008, amendments were made to the Law of the Child to include a rights-based approach to ensure Egyptian children’s right to education, health, social care and right to family [13].

In Egypt policies and laws have been implemented to ensure that all citizens have access to health care services and that these services are delivered in an equitable manner. Egypt’s Health Sector Reform Programme (which has been extended to 2018), aims to deliver universal access to a basic package of health care services, so that every person in the country has the same access to and benefits from basic health care.

It is guided by the principles of universality (covering the entire population with the basic package of
services), quality, equity (where people of all income levels and across different regions receive the same health services), efficiency and sustainability.

**HEALTH SECTOR SPOTLIGHT**

**Healthy Mother/Healthy Child Programme (1993–2009)**

The Healthy Mother/Healthy Child Programme focused on reducing the risk factors of maternal and neonatal mortality in nine governorates of Upper Egypt—a region associated with poor health statistics. A set of interventions was designed and implemented using an integrated approach involving policy, technical management and community-based components. This programme was implemented by the MoHP with assistance from USAID and John Snow Inc.

The first National Maternal Mortality Study (1993) documented maternal mortality rates across Egypt and determined that the majority of maternal deaths were the result of avoidable causes. Based on this information, a programme was designed systematically to address the major causes of maternal deaths in areas with the highest maternal mortality. The essential package of maternal and child health services and standards for antenatal and postnatal care, delivery, obstetric care, neonatal care and preventive services for child health were developed. Some of the activities undertaken include: the introduction of standards for basic and emergency obstetric care into the health system, first in target districts and later in governorates; the reduction of avoidable causes of death due to mismanagement by doctors in hospitals, through on-the-job training and supervision to support practitioners; competency-based training to improve skills of health personnel; renovation of facilities to ensure they were capable of providing good-quality services; and the provision of essential equipment and supplies.

These interventions contributed to 2.6 million females of reproductive age and approximately 660,000 infants born in the region each year having better access to essential obstetric and neonatal care. Medically assisted delivery increased from 38% in 1988 to 80% in 2008. This change was associated with a number of strategies including a MoHP policy to promote medical providers and phase out traditional birth attendants, a programme to train nurses in midwifery skills, and improved care in facilities. The number of maternal deaths per 1000 live births in Egypt declined from 174 in 1993 to 84 in 2000 as measured by the two National Maternal Mortality Studies [15].

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

**Education**

Egypt has demonstrated a strong commitment to education as a key development tool since the 1990s, embarking on ambitious and comprehensive programmes of educational reform. Targeted initiatives to improve access to education for underserved populations are common across many countries, including Bangladesh, China, Egypt, Nepal and Peru. In Egypt, the government has implemented programmes to increase the enrolment of girls in school, including the: Community School Initiative (1992, see Multi-sector Spotlight); One Classroom Initiative (1993); and Girls Education Initiative (2000).

Egypt has demonstrated a commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality, by establishing legislation and national programmes to introduce universal and free education. Like China, Ethiopia, Nepal, Peru, Rwanda and Viet Nam, Egypt is thus on track to achieve MDG 2 on universal primary
education; it is also set to meet the MDG target to increase the ratio of girls to boys in primary, secondary and tertiary education [6]. Girls primary school net enrolment is at 87% as of 2000 (see Table 1: Key Country Indicators) [4]. The youth literacy rate (15–24 years of age) also increased from 73% in 1996 to 86% in 2007, alongside a primary education completion rate that had reached 98% in 2011. Adult literacy rates (aged 15 years and above) improved significantly from 67% in 1996 to 80% in 2010 for males, and from 44% to 64% for females [4].

**Nutrition**

Egypt is on track to meet MDG 1c, to halve the proportion of people suffering from hunger; China and Peru have already met their targets. Egypt has sought to improve the nutritional status of children through: the promotion of exclusive breastfeeding, fortification of food, providing relevant counseling and distribution of subsidized milk formula for women who cannot breastfeed their children.

**Infrastructure, water supply and sanitation**

Access to safe drinking-water and improved sanitation are associated with better health outcomes. Egypt has historically had relatively high rates of access to improved water and sanitation facilities, and in recent years these have further improved. Egypt has met its MDG 7c target of halving the proportion of population without sustainable access to safe drinking-water and basic sanitation [6]. The proportion of people with access to improved water sources steadily increased from 93% in 1990 to 99% in 2011, and access to improved sanitation facilities also increased from 72% to 95% over this period (see Table 1: Key Country Indicators) [4]. In rural areas, 75% of the population have a household connection to piped water [3]. Egypt also has a well-developed infrastructure of roads, and coupled with Egypt’s high population density, this ensures both urban and rural populations are within close reach of medical facilities [7].

**Innovation and research**

The National Academy of Science and Technology is the main organization for planning national research in the country, and formulates five-year plans for research projects on major health problems prioritized by the MoHP and the Health Council. The MoHP pursues a policy of building linkages between health research programmes and policy formulation by decision-makers. Examples of research activities in this area include: technical auditing to identify gaps in resource allocation to build a national master plan; epidemiological and demographic studies to identify targeted priorities and assessment to identify training needs of family practice, referral and integrated programmes, amongst others. The MoHP has also established a Scientific Committee for Health Research to assess health needs at all levels of care; assess common health problems in the country; and monitor and evaluate health programmes [17].

Innovative approaches to adapt and scale up service delivery models have also been critical to progress. In Egypt, adding quality of care indicators to PBF e.g. on patient satisfaction, resulted in increased use and better quality of family planning services [18].

**SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH**

**Community School Initiative**

The Community School Initiative was financed and launched by UNICEF and the Egyptian Ministry of Education and implemented in Upper Egypt through local NGOs. The project aimed to demonstrate a sustainable community school model to increase access to primary education in remote areas, with a special focus on girls. The schools provided an integrated approach, offering courses outside of regular schools hours, including non-formal adolescent education. Young women were recruited.
locally and provided with pre-service training to become facilitators. The project was implemented in three phases:
- Phase 1: Pilot (1992–1995). Four community schools were initially established in one governorate.
- Phase 2: Expansion (1996–1999). By 1999, 207 schools were established in the three governorates serving around 4600 students.

In 2003, there were 227 community schools in the three governorates. The total number of students enrolled was 5500, of which 66% were girls [16]. Some positive outcomes of the project were: - The community school model was a success in terms of students able to pass official Ministry of Education examinations in the third and fifth grades. - The schools were considerably more cost-effective than public schools at producing fifth-grade completers who could pass the national examination.

The success of the initiative facilitated an informed dialogue in Egypt on the role of community schools. Lessons learned from the initiative included how to provide education effectively to girls and children in remote areas; and how to engage students, teachers and communities in active learning and democratic decision-making.

7) GOVERNANCE AND LEADERSHIP

The government of Egypt has provided the leadership to steer and drive progress in reducing maternal and child mortality, and has supported health sector reform. The first (1989–1999) and second (2000–2010) Decades of the Egyptian Child placed children at the forefront of the development agenda. The government has invested in developing local leadership through the Leadership Development Programme, which also aims to generate ownership of service provision among health service providers to improve quality of services, and has shown positive results.

Successive Ministers of Health have provided vision and political impetus for initiating health reforms and organized donor support for collaboration and harmonization. For example, in recent years, the MoHP has created an improved climate for investment- and private-sector-development-specific priorities [10]. The government has asked for increased private sector participation and investment [19].

In addition to the Government, actors across society have played leadership roles in Egypt’s progress. In 1937 there were public religious concerns about family planning methods. A group of university professors formed the “Happy Family Society” and worked with religious leaders to obtain a fatwa (religious declaration) that Islam is not against family planning [20]. This paved the way for greater social acceptance of population policies and demand for family planning services. These demand-side considerations, including patient satisfaction continue to be an important factor in the utilization and quality of family planning services [18].

8) LESSONS LEARNED AND FUTURE PRIORITIES

Egypt continues to face constraints to further reductions in maternal and child mortality. Addressing the following challenges will help to accelerate progress.

Socioeconomic disparities: Many health indicators are poorer in Upper Egypt than in Lower Egypt,
and in rural areas compared to urban areas. For example, in 2008 the TFR was higher among the poorest groups, at 3.4, than among the wealthiest, at 2.7. Similarly, the TFR is lower among women with secondary education, at 3.0, than among women with no formal education, at 3.4 [21]. Thus, there is a need to focus on extending quality health care services to rural areas, and to strengthen the referral system by, for example, instituting emergency transport and establishing maternity waiting homes at hospitals to accommodate women from remote communities who wish to stay close to the hospital prior to delivery [21].

**Gender equality**: Improving gender disparities in access to health and education to enable women full autonomy in health-seeking behaviour and decision-making is a priority for Egypt. Despite improvements in female school enrolment and literacy rates, women are not able to make autonomous decisions concerning their own health. For the majority of women, husbands make these decisions without their input [7]. The labour force participation rate was 45% in 2011, with the rate for men (74%) almost three times higher than the rate for women (24%) [4]. In addition, Egypt is not on track to achieve MDG indicator target on the proportion of seats held by women in the national parliament [6]. Thus, there is a need for emphasis on women and girls’ empowerment through strengthening employment prospects for girls and women, educating and empowering women and girls to make reproductive health choices, as well as involving men in supporting women’s health and well-being [21].

**Nutritional status of children**: Childhood malnutrition remains a key challenge to address, both in Egypt. The Egypt Demographic and Health Survey (2008) suggests that malnutrition levels have increased dramatically among the children of Egypt. The percentage of underweight under-five children increased from 5% to 7% between 2005 and 2008, and stunting levels increased from 23% in 2000 to 31% in 2008. Policies for improving the nutritional status of children could include promoting exclusive breastfeeding for six months and promoting a healthy diet for breastfeeding mothers [6, 22]. Targeted programmes could involve providing postnatal supplements for vulnerable mothers at low prices, iron supplements for pregnant mothers, and iron and Vitamin A supplementation for children under five [6, 22].

**Financing for health insurance**: The Health Insurance Organization provides health insurance to employees, students, widows, pensioners and newborns, and covers only about 45% of Egypt’s population. The organization is constrained by limited revenues to provide adequate services to the targeted groups, which has resulted in out-of-pocket payments for private services. The out-of-pocket expenditure for health as a percentage of total health expenditure increased from 48% in 1995 to 58% in 2011 [4]. Egypt is not alone in needing to reduce high out-of-pocket expenditure: over half of high-performing countries including Cambodia, China, Ethiopia Lao PDR, Peru and Viet Nam, face a similar challenge if they are to achieve universal health care coverage [19].

**Changing political landscape**: Effective governance improves health outcomes and, conversely, poor governance contributes to poor health outcomes [24]. Despite the positive governance in health outlined in the section above, a government-wide approach to health is needed. Some improvements in Egypt’s good governance indicators have been noted between 1996 and 2000, however, recent dramatic changes in the political landscape have led to deterioration across all three indicators of governance between 2000 and 2011 – control of corruption, rule of law and political stability and absence of violence. While the new constitution commits the state to guaranteeing a sufficient allocation of public spending to health and the provision of improved health care and education services, free of charge for those who are unable to pay [25], new institutions and accountability mechanisms for health will be needed.
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10) TABLES AND FIGURES

Table 1: Key Country Indicators

<table>
<thead>
<tr>
<th>TABLE 1: KEY COUNTRY INDICATORS ** (EGYPT)</th>
<th>1990-1999</th>
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<th>2010-PRESENT</th>
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<tbody>
<tr>
<td></td>
<td>GINI INDEX (0 equality to 100 inequality income distribution)</td>
<td>32 (1991)</td>
<td>33 (2000)</td>
</tr>
<tr>
<td></td>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
<td>N/A</td>
<td>3 (2005)</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>GIRLS’ PRIMARY SCHOOL NET ENROLLMENT (% of primary school age children)</td>
<td>84 (1994)</td>
<td>91 (2000)</td>
</tr>
<tr>
<td></td>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
<td>67(M) 44(F) (1996)</td>
<td>83(M) 59(F) (2005)</td>
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<tr>
<td>ENVIRONMENTAL MANAGEMENT</td>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
<td>93 (1990)</td>
<td>96 (2000)</td>
</tr>
<tr>
<td></td>
<td>ACCESS TO SANITATION FACILITIES (% of population with improved access)</td>
<td>72 (1990)</td>
<td>86 (2000)</td>
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<tr>
<td>HUMAN DEVELOPMENT INDEX (Composite of life expectancy, literacy, education, standards of living, quality of life)</td>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>.50 (1990)</td>
<td>.59 (2000)</td>
</tr>
<tr>
<td></td>
<td>COUNTRY RANK (2012)</td>
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<tr>
<td>GOOD GOVERNANCE (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance)</td>
<td>CONTROL OF CORRUPTION (extent that public power is used for private gain)</td>
<td>-0.07 (1996)</td>
<td>-0.39 (2000)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators **Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)
Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>MOST RECENT AVAILABLE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (of women age 15-49 with met need for family planning)</td>
<td>84 (2008)</td>
<td>DHS 2008</td>
</tr>
<tr>
<td></td>
<td>PRE-PREGNANCY DEPENDENCY FOR FAMILY PLANNING (of women age 15-49 with met need for family planning)</td>
<td>84 (2008)</td>
<td>DHS 2008</td>
</tr>
<tr>
<td>PREGNANCY TO POST-NATAL</td>
<td>ANTENATAL CARE (of women attended at least 4 times during pregnancy by any provider)</td>
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<td>DHS 2008</td>
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<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (as % of total births)</td>
<td>79 (2008)</td>
<td>WDI</td>
</tr>
<tr>
<td></td>
<td>ANTIRETROVIRALS FOR WOMEN (HIV-Positive pregnant women to reduce mother-to-child transmission)</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (of mothers who received care within two days of childbirth)</td>
<td>65 (2008)</td>
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Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Egypt

USMR / NMR - Egypt

Source: World Development Indicators

MMR / Fertility – Egypt

Note: Dashed line indicates missing data. Source: World Development Indicators

Egypt: Review of Data and Literature on Progress Towards MDGs 4 and 5
Nutrition - Egypt

Note: Dashed line indicates missing data. Source: World Development Indicators

Timeline with key Policy inputs – Egypt
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1973 Compulsory BCG vaccination; National Population Policy;</td>
<td>1993-2009 Ministry of Health and Population created Healthy Mother/Healthy</td>
<td>includes initiatives of improving referral systems and increasing female</td>
</tr>
<tr>
<td></td>
<td>Project;</td>
<td>service providers;</td>
</tr>
<tr>
<td>1977 Compulsory measles vaccination;</td>
<td>1996 Law of the Child; Mother Care Project;</td>
<td>2004 Regulation on the Promotion of Maternal and Child health;</td>
</tr>
<tr>
<td>1984 Expanded Program on Immunization; Child Survival Project National</td>
<td>1997-2005 Health Sector Reform Programme; Maternal Mortality surveillance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project;</td>
<td>system established;</td>
</tr>
<tr>
<td>1987-1995 Acute Respiratory Infections Programme;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1988 National Council for Childhood and Motherhood formed;</td>
<td></td>
<td></td>
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<tr>
<td>1989-1999 First Decade of the Egyptian Child;</td>
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<td></td>
<td>2000-2010 Second Decade of the Egyptian Child.</td>
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</tbody>
</table>
7. Ethiopia: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Ethiopia has made significant progress towards improving the health of women and children. Ethiopia is one of 10 ‘fast-track’ countries that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and is making progress towards achieving MDG 5a (to reduce maternal mortality). Several factors across multiple sectors have played a key role in driving this progress:

Health sector: Ethiopia is addressing major challenges in the health sector, including lack of human resources for health (HRH) and low utilization of health services, through its innovative Health Extension Programme (HEP). The HEP trains Health Extension Workers (HEWs) to deliver a basic package of health services, including maternal and child health (MCH) services, in urban, rural and pastoral areas. The HEP has seen training and deployment of thousands of health workers and construction of new health posts and facilities in efforts to increase access to essential services.

Sectors outside of health: Access to safe drinking-water and improved sanitation are associated with better health outcomes. Ethiopia appears to be on track to achieve MDG 7c, halving the proportion of the population without sustainable access to safe drinking-water and basic sanitation. A number of programmes are in place to improve water and sanitation, including the HEP, where HEWs provide education to communities on safe sanitation practices.

Governance and leadership: The Ethiopian government welcomes and supports innovation and research, as is demonstrated in the HEP as well as the development of mid-level health professionals called Emergency Surgical Officers, trained to provide comprehensive emergency obstetric and newborn care (CEmONC).

Lessons Learned: Despite progress, low utilization of maternal health services, including skilled attendance at birth, and inequities in health service utilization are key challenges, which provide the basis for Ethiopia’s priorities to accelerate progress towards achieving MDGs 4 and 5. Priorities include: (i) increasing skilled attendance at birth; (ii) increasing HRH; (iii) improving quality of care; (iv) promotion of community-based newborn care; and (v) increasing resources for health financing.

2) INTRODUCTION

Ethiopia is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, China, Egypt, Lao People’s Democratic Republic (PDR), Nepal, Peru, Rwanda and Viet Nam) on track in 2013 to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality). There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

Health sector: Health sector investments; monitoring outcomes; political prioritization of essential health interventions; ensuring legal entitlements to high-quality healthcare, especially for underserved populations.
**Sectors outside of health**: Education; nutrition; infrastructure; water and sanitation; innovation and research

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping Ethiopia make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Ethiopia has developed and implemented as part of efforts to maximize performance in key health and development areas.\(^5\)

**3) COUNTRY CONTEXT**

**Overview**

Ethiopia is a large landlocked country consisting of nine regional states and two city administrations. The terrain is geographically diverse, ranging from mountainous highlands to tropical forests. It is the second most populous country in Sub-Saharan Africa, with a steadily growing population of 92 million. It is a mainly rural country with only 17% of the population living in urban areas (see Table 1: Key Country Indicators); Christianity and Islam are the main religions, and there are more than 80 ethnic groups and 90 languages [2].

Ethiopia is an ancient country but it is also one of the poorest, with a gross domestic product per capita Int$1139 in 2012. Although its gross domestic product has grown on average by 9.3% between 2001 and 2011, it has a Human Development Index of 0.396 (giving it a rank of 173 out of 187 countries). However, recently the economy has been growing rapidly, at an average of 9.9% per year from 2004/05 to 2011/12 [3]. The percentage of Ethiopians living in extreme poverty has decreased from 38.7% in 2004/05 to 29.6% in 2009/10 [3].

Politically, the government has shown strong leadership to support improvements to the RMNCH programme, thereby creating an enabling environment to drive change.

(For Table 1 see Section 10)

**4) KEY TRENDS, TIMELINES AND CHALLENGES**

Ethiopia is on track to meet MDG 4 (to reduce child mortality) and goals related to gender parity in education, HIV/AIDS and malaria. It is also on track to meet MDG 5 based on rates of absolute reductions and modelled estimates.

Ethiopia faces a range of challenges which have hindered progress towards MDG goals. Ethiopia’s very low utilization of RMNCH health services – by 2011, only 10% of births were being attended by a skilled birth provider (see Table 2: Key RMNCH Coverage Indicators) and unmet need for contraception stood at 71% [2] – is the result, at least in part, of enduring sociocultural and gender barriers. Women’s social status is often low and the quality of care, particularly culturally sensitive care can be poor [4]. Geographical barriers also restrict access to care in Ethiopia.

Ethiopia has insufficient numbers of health facilities and transport can be a challenge, particularly in rural and isolated communities [4]. Compounding these difficulties in access to care is the shortage

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\(^5\) In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Since 1990, government health expenditure as a proportion of total government expenditure has increased in Ethiopia. Absolute government expenditure on health has risen dramatically in the last decade, from US$ 11 per capita in 2000 to US$ 26 per capita in 2010. Ethiopia was also the fourth largest recipient of official humanitarian aid in 2010, receiving US$ 3.5 billion in total aid [6]. The 2007/08 National Health Accounts found that government spending on health was 4.5% of gross domestic product, nearly meeting the World Health Organization (WHO) recommendation that countries should spend 5% of gross domestic product on health. Between 2004/05 and 2007/08, government spending on health increased by 71% [7].

An agreement between the Federal Ministry of Health (FMoH) and its major health development partners was signed in 2005 to guide the conduct of all partners in support of the Health Sector Development Programme (HSDP). The H4 group (comprising WHO, the United Nations Children’s Fund (UNICEF), the United Nations Population Fund (UNFPA) and the World Bank) has met regularly over the past five years. It is a functional group that aids harmonization and avoids duplication between donors. The focus is on ensuring one-plan, one-budget and one-report at all levels of the health system.

Private sector health expenditure has been on the increase in Ethiopia and in several other high-performing countries. Ethiopia has adopted a sector-wide approach to improve aid effectiveness and facilitate greater linkages with government health priorities and plans. In Ethiopia, one strategy used to streamline these resources is the MDG Pool Fund, through which all available funding for health activities (government and donor sources) is combined to flow through government channels. A national Steering Committee led by the Minister of Health and heads of agencies decides how best to allocate financial resources.

Outcomes monitored using evidence
The establishment of a functional health management information system (HMIS) is currently underway following the formation of an HMIS national advisory committee during HSDP II (2000/01–2005/06). The civil registration system in Ethiopia currently records only 7% of births [8]. Thus, Ethiopia has relied to a large extent for health outcome measurement on the series of Demographic and Health Surveys (DHSs), conducted in 2000, 2006 and 2011, and these have been instrumental in highlighting RMNCH as a political priority.

Emergency Obstetric and Newborn Care Surveys have been used in Ethiopia to influence RMNCH policy. Ethiopia had its first such survey in 2008/9, which was important in determining the number of new facilities required to meet the identified need. Two other means of measuring outcomes to inform decision-making have been employed in Ethiopia. In 2011, the Government of Ethiopia developed scorecards based on HMIS data to promote accountability, facilitate use of local data for monitoring and decision-making, track progress, respond to service gaps and inform action. In Ethiopia, eighteen indicators, including deliveries by a skilled birth attendant, low birth weight and mortality rates, are tracked for each region in the country and updated quarterly showing performance by region against national and international targets. These are reviewed at the National Review Meeting and Joint Steering Committee with the regions to prioritize resources and inform
action.

As the Minister of Health observed with respect to tackling maternal mortality: “The scorecard is a very powerful tool... You can really track at the facility, community, region and national levels. So it will also give you the opportunity to make sure that you have an equitable health service delivery system across the country and to try to address the disparities we have in different parts of the country” [9].

Maternal death reviews are used to understand causes of deaths and to inform health sector planning and policy decisions. In Ethiopia, a new maternal death surveillance and review (MDSR) system is being rolled out by the FMoH in seven regions with the aim of recording, reviewing and responding to every maternal death. Supported by National Guidelines launched in May 2013, training is currently in progress and it is expected that data will start to flow by the end of 2013.

Political prioritization of essential health interventions
Since its launch in 1996/7, Ethiopia’s HSDP has given high priority to RMNCH through improvement of, quality of and access to services for all segments of the population.

Many ‘fast-track’ countries have implemented targeted interventions in response to key gaps in RMNCH services. As part of strategies to reduce child morbidity and mortality in Ethiopia, the HSDP has initiated several activities focused on: strengthening routine immunization; expanding community services and facility-based integrated management of neonatal and childhood illness; successful scaling-up of the integrated community case management of childhood illness; strengthening the HEP; and implementing locally relevant and effective child health interventions including bed net use.

Vaccination coverage among children aged 12–23 months in Ethiopia has increased markedly over the past 10 years. The largest increase is seen in measles coverage, from 38% in 1990 to 57% in 2011 (see Table 1: Key Country Indicators): this improvement is cited as a key factor in the decline in under-five mortality [10]. The annual average number of malaria cases has fallen from 3 million between 2000 and 2005 to an average of 1.7 million in 2009 [4].

Ethiopia has worked towards increasing and helping ensure equitable distribution and deployment of its health workforce. The HEP is an innovative health service delivery programme that aims for universal coverage of primary health care services (see Health Sector Spotlight). The programme facilitates access to basic preventive and curative health services in rural areas through the expansion of physical health infrastructure and increasing the number of HEWs. Efforts by the Ethiopian government to train a new cadre of HEWs form a key component in increasing the availability of comprehensive emergency obstetric and neonatal care, which will have a direct positive impact on health and is also likely to benefit areas of nutrition and water and sanitation.

Legal and financial entitlements, especially for underserved populations
As part of the HSDP, huge efforts have been made to train health workers and build facilities in underserved rural areas. For example, by the end of HSDP III, a total of 33 819 HEWs had been trained and deployed, and the numbers of facilities constructed, upgraded and equipped had nearly reached their targets (14 416 health posts, 2 689 health centres and 111 public hospitals) [10].

With the aims of expanding the achievements of the HEP deeper into communities, improving community ownership and scaling up best practices, a Community Engagement Health Development Army was established. Targeted community- based approaches have been implemented to reach underserved populations. In Ethiopia, over 33 000 HEWs were trained and deployed alongside the
construction and rehabilitation of health facilities to reach rural areas. The Community Engagement Health Development Army has a variety of roles, include discussing ‘birth preparedness’ and working with HEWs to disseminate pregnancy-related information.

A legal measure undertaken to improve access to care is the 2005 amendment to Ethiopia’s abortion legislation, which expanded the set of circumstances in which women can legally seek an abortion. Since this adaptation, evidence suggests a decreasing trend in mortality associated with abortion [11,12]. In 2010, however, legal, safe abortions performed in a health facility, still constituted only 27% of all terminations in Ethiopia.

“There are best practices in the Region; developing individual and team-level plans and regular evaluation as best practice, (reversing) the preference of home delivery, networking and solving economic problems.”

_Tigray Regional Health Bureau Annual Report 2005 (Ethiopian calendar)_

**HEALTH SECTOR SPOTLIGHT**

**The Health Extension Programme**

In 2004, the HEP was developed by the Ethiopian government with support from development partners as a key strategy to achieve MDGs and increase access to and utilization of primary care by promoting community-based MCH services. The HEP is implemented by HEWs, a new type of community-based health worker, who are selected from the community in which they live. HEWs are all female (except in pastoralist areas), to balance gender in the workforce and ensure cultural sensitivity, as HEWs often conduct house visits to provide services to mothers and children. HEWs provide 17 health interventions that target the major disease burdens in the population, focusing on four areas: maternal, child and newborn health; disease prevention and control; personal and environmental hygiene and sanitation; and education.

Since its initiation in 2004, the HEP has had a positive impact on HRH, access to health services, and improved sanitation in rural areas. The health workforce has doubled since the programme’s inception: more than 15 000 health posts have been constructed, with more than 34 000 HEWs deployed throughout the country. Coverage of primary health services has increased in rural communities, resulting in increased levels of RMNCH care. The percentage of women making four or more antenatal visits nearly doubled between 2000 and 2011; contraceptive coverage quadrupled from 6% to 27% over the same period [1]. Access to latrines in rural communities has increased, with two thirds of the rural population now having access to improved facilities.

Several factors have contributed to the effectiveness of the HEP: multisectoral collaboration, attention to local contexts, strong ownership and leadership by government and local communities, and strong partnerships and greater investment in health, capacity building and system-wide support have been key to its achievements [13, 14, 15].

**6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR**

**Education**

A commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality, has led to improvements in education in Ethiopia.
Ethiopia has passed legislation and established national programmes to introduce universal and free education. Ten years of effective programmes and policies promoting education have seen improved access to and a reduction in the gender gap for schooling. The Education Sector Development Programme was initiated in 1998 with the aim of providing universal education by 2015. The programme covers education from basic to tertiary level, including: building, upgrading and renovating schools; reforming curricula; improving teachers’ skills; and increasing the provision of equipment and books.

Total primary enrolment has nearly doubled, from 8.1 million children attending primary school in 2001–2002 to 17 million in 2011–2012. The ratio of girls to boys in primary grades 1–4 increased from 0.74 in 2001–2002 to 0.90 in 2011–2012, and from 0.58 to 0.96 in grades 5–8. The overall ratio of girls to boys enrolled in school increased from 0.65 in 2000 to 0.91 in 2012. The overall enrolment rate for secondary school stood at 36.9% in 2011–2012, about double the level in 2001–2002 [16]. Ethiopia is in a group of countries including China, Egypt, Nepal, Peru, Rwanda and Viet Nam that have met or will reach universal completion of primary education. Ethiopia is on track to achieve a 100% literacy rate among 15–24-year-olds.

The expansion of general education has occurred at the same time as a major expansion of both technical and vocational education and higher education sub-sectors, which showed an annual average increment of 21.8% and 18.1% respectively between 2006–2007 and 2010–2011.

**Nutrition**

Ethiopia is on track to meet MDG 1c. In Ethiopia, the integration of nutrition programmes and alignment of policies, stakeholders and donors across sectors has helped improve nutrition. The political prioritization of, commitment to and establishment of national plans, strategies and laws to improve malnutrition and micronutrient deficiencies are documented across many high-performing countries.

In Ethiopia nutrition has been integrated into social protection and poverty reduction programmes, targeting vulnerable populations through various mechanisms including cash transfer schemes. Nutrition-focused and cross-cutting programmes working at the community level have been implemented, and in Ethiopia, the Community-Based Nutrition Program was prioritized as a key component of the National Nutrition Programme (NNP) (see Spotlight on a sector outside of health). Since the inception of the two programmes a downward trend in the proportions of stunted and underweight children has been observed.

**Infrastructure, water supply and sanitation**

Ethiopia is on track to reach the MDG target of halving the population without access to clean water by 2015. In recent years a number of programmes have supported access to safe water and sanitation services and better management of water resources. The proportion of Ethiopia’s population with access to safe drinking-water increased from 14% in 1990 to 49% in 2011 (see Table 1: Key Country Indicators) [17].

Ethiopia’s development has been held back by a significant infrastructure gap: it has one of the lowest road densities in Africa. Ethiopia’s roads programme has succeeded in increasing both the length and quality of the road network, from under 20 000 km in 1991 to over 63 000 km in 2012 [8].

**Innovation and research**

Several ‘fast-track’ countries have implemented reforms and policies to address shortages in the health workforce. Ethiopia has employed the strategy of engaging community health workers to help respond to the human resources gap. The HEWs (see Health Sector Spotlight) are an example of an
innovative cross-cutting intervention: they have a direct and positive impact on health and are also likely to bring benefits in the areas of nutrition and water and sanitation.

Another innovation in human resources is the recent development of a cadre of mid-level health professionals called Emergency Surgical Officers. Five Ethiopian Universities run the three-year Master of Science (MSc) programme to train as an Emergency Surgical Officer and this provision is being extended to five further training institutions. Emergency Surgical Officers facilitate task-shifting and are a key component of the plan to increase the number of functional CEmONC facilities.

The first graduates completed their training in 2012 and have been deployed alongside teams of midwives and anaesthetists to more remote areas.

**SPOTLIGHT ON A SECTOR OUTSIDE OF HEALTH**

**The National Nutrition Programme (NNP)**

Ethiopia is tackling malnutrition, an underlying cause of child mortality, through multisectoral national planning. In 2008, the Government of Ethiopia launched the NNP, moving away from an earlier focus on food aid to provision of comprehensive nutrition services in a single strategy. The NNP is aligned with the government’s social protection strategies, including the Food Security Strategy, which includes the Productive Safety Net Programme. Initiated in 2005, the Productive Safety Net Programme either hires people for public works or provides families with cash transfers or food to increase food security. Other key social protection strategies include a safety net programme targeting people in the poorest areas of the country, an emergency and response system targeted to people who are not served by the safety net programme, expansion of community nutrition programmes, micronutrient supplementation and treatment of severe acute malnutrition and a package of free health services, including family planning, pneumonia treatment, distribution of insecticide-treated bednets and treatment of acute diarrhoea.

The Community-based Nutrition Programme is a key component of the NNP, and is delivered by HEWs. The nutrition programme aims to improve the nutritional status of children under the age of two, strengthen communities’ ability to identify undernutrition, equip communities with the knowledge to identify causes of undernutrition, and improve the use of family, community and external resources. In the five years since its inception, the programme has expanded from 39 to 228 districts; by 2012, 71% of children aged 6–59 months were being provided with vitamin A supplements and 52% of children aged 0–5 months were being exclusively breastfed. In 2013, a revised NNP is expected to be released with a sharper focus on multisectoral nutrition interventions [21]. There has been a downward trend in the proportion of children stunted and underweight in recent years. Stunting prevalence decreased from 58% to 51% between 2000 and 2005 and fell to 44% between 2005 and 2011. A similar pattern is also observed for the proportion of children underweight [2].

7) **GOVERNANCE AND LEADERSHIP**

According to the World Governance Indicators, ‘government effectiveness’ and ‘control of corruption’ in Ethiopia improved significantly in the period from 1996 to 2011. Government reforms have improved efficiency, collaboration and coordination of the health sector in Ethiopia. After dialogue within the country and with development partners, including the World Bank, the Government of Ethiopia committed to a series of governance reforms in its current poverty reduction strategy. These reforms are focused on: civil service and public sector capacity building; financial management; human rights and conflict prevention; democratic representation; access to

*Ethiopia: Review of Data and Literature on Progress Towards MDGs 4 and 5*
information; the justice system; decentralization; and civil society participation [18].

In 2011, 15 hospitals with strong leadership qualities were identified across Ethiopia and designated as ‘lead hospitals’. Part of their role is to support neighbouring hospitals in improving their services; facilities selected as lead hospitals receive a financial award.

Ethiopia has been recognized for its innovative HEP. Policymakers, medical practitioners and public health professionals from seven African countries participated in a field observation of the programme, so that participants could learn from the programme and determine how to apply lessons learned to their own countries [18]. Ethiopia’s Minister of Health was awarded the Stanley T Woodward Lectureship at Yale University in recognition of his contribution to working towards universal access to health services in Ethiopia through the HEP [2].

8) LESSONS LEARNED AND FUTURE PRIORITIES

The MDGs remain the main focus for the health sector; concerted efforts are needed to improve maternal survival and maintain the downward trend in child mortality. The priorities include:

**Health workforce:** Ethiopia requires investment in expanding the skill base, size and equitable distribution of their health workforce, particularly midwives. In Ethiopia, increasing the numbers of midwives, doctors and Emergency Surgical Officers is essential. Improving the quality of midwifery education, increasing the capacity of the workforce and addressing retention/recruitment issues are part of this challenge. Addressing the low levels of skilled birth attendance and contraceptive accessibility is a clear priority for efforts to reduce maternal mortality. In the five years preceding the 2011 EDHS, 10% of births were assisted by a skilled provider; although this represents an increase on the 2006 survey, it remains a dangerously low level [2]. This is compounded by the inequities between different population groups: for example, while skilled providers attended 51% of births in urban areas, only 4% of rural births were similarly attended.

**Quality of care:** Improving the quality of RMNCH care is a closely related priority and one shared by many ‘fast-track’ countries. The MDSR is a key part of Ethiopia’s strategy to address this issue.

**Newborn health:** Neonatal mortality has shown less improvement than under-five mortality; however, further efforts to eliminate maternal and neonatal tetanus may have an impact. Community-based newborn care is being promoted through Save the Children’s Community-based Interventions for Newborns in Ethiopia (COMBINE) trial, providing a package of community-based interventions in the HEP, which include promotion of ANC, clean and safe delivery, and postnatal follow-up of mother and baby.

**Financing health services:** Ethiopia must reduce out-of-pocket expenditure and increase its public health financing if it is to ensure universal health care coverage. Ethiopia only spends US$ 15.50 per person on health, which is less than half the average across African countries, and far below WHO’s recommendation of US$ 34 [22]. Finding ways to increase the amount of spending is a priority.

9) REFERENCES


*Ethiopia: Review of Data and Literature on Progress Towards MDGs 4 and 5*
## Table 1: Key country indicators

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<td><strong>INDICATOR</strong></td>
</tr>
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<td>PHYSICIANS (per 1000 population)</td>
</tr>
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<td>NURSES AND MIDWIVES (per 1000 population)</td>
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<tr>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
</tr>
<tr>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
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<td>ACCESS TO SANITATION FACILITIES (% of population with improved access)</td>
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<tr>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
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<td>COUNTRY RANK (2012)</td>
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**USMR / NMR – Ethiopia**

![Graph showing trends of U5 Mortality Rate (USMR) and Neonatal Mortality Rate (NMR)].

Source: World Development Indicators

**MMR / TFR – Ethiopia**

![Graph showing trends of Maternal Mortality Rate (MMR) and Total Fertility Rate (TFR)].

Note: Dashed line indicates missing data. Source: World Development Indicators
Nutrition - Ethiopia

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### Timeline with key Policy inputs - Ethiopia

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<tr>
<td>1959 Malaria eradication;</td>
<td>1997 Health Sector Development Program I (HSDPI) (prioritizes RMNCH);</td>
<td>2001 HSDP II;</td>
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<td></td>
<td></td>
<td>2003 Government Food Security Program;</td>
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<td></td>
<td></td>
<td>2004 Enhanced Outreach for Child Survival; HEP; Water Supply, Sanitation and Hygiene Programme;</td>
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<tr>
<td></td>
<td></td>
<td>2005 Abortion Law; National Strategy for Child Survival; HSDP III; A Plan for Accelerated and Sustained Development to End Poverty;</td>
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<td></td>
<td></td>
<td>2006 Reproductive Health Strategy;</td>
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<td></td>
<td></td>
<td>2008 National and community-based nutrition programme; Integrated Emergency Obstetrics Surgery and Accelerated Midwifery Programmes;</td>
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<td></td>
<td></td>
<td>2010 HSDP IV;</td>
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<tr>
<td></td>
<td></td>
<td>2012 National Road Map for Accelerating Reduction of Maternal and Neonatal Mortality and Morbidity</td>
</tr>
</tbody>
</table>

*Ethiopia: Review of Data and Literature on Progress Towards MDGs 4 and 5*
8. Lao PDR: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

**Progress:** Lao People’s Democratic Republic (PDR) has made significant progress in improving the health of women and children. Lao PDR is one of 10 ‘fast-track’ countries that is making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). A number of strategies have played a key role in driving this progress.

**Health sector:** Lao PDR’s key health system challenges – the capacity and the distribution of health workers – are being addressed through several government policies, and there has been increased private sector participation in health service delivery. The government has collaborated with development partners to develop and implement a number of strategies, and the integrated reproductive, maternal, newborn and child health (RMNCH) service package has been a core focus area. Four health insurance schemes are in place to help improve equity, and free health care services are available to all children under the age of five years and pregnant women.

**Sectors outside of health:** Access to safe drinking-water and improved sanitation are associated with better health outcomes. Over the last decade, Lao PDR’s average annual progress in increasing the population’s access to improved sanitation was the second highest in the world. This has been driven by a focus on implementing sanitation initiatives in the poorest districts, amongst other interventions.

**Governance and leadership:** Lao PDR has a strong commitment to improving women’s and children’s health. Lao PDR aims to achieve universal access to health care by 2020 and has developed a clear vision and plan for the health system to meet this goal.

**Lessons learned:** Despite progress, inequity is a key challenge which underpins Lao PDR’s priority actions for accelerating progress to ensure that MDG 4 and 5 targets are met by 2015. Key priorities for future action include: (i) increasing state health financing; (ii) strengthening human resources for health; (iii) improving emergency obstetric and neonatal care; (iv) improving nutrition; and (v) increasing coverage of live births attended by a skilled health worker.

2) INTRODUCTION

Lao PDR is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, China, Egypt, Ethiopia, Nepal, Peru, Rwanda and Viet Nam) that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality)6. There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

**Health sector:** health sector investments; monitoring of outcomes; political prioritization of

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6 In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).

Lao PDR: Review of Data and Literature on Progress Towards MDGs 4 and 5
essential health interventions; and ensuring legal and financial entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health:** education; nutrition; and infrastructure, water and sanitation; innovation and research

This summary highlights policies and programmes in health, multi-sector and cross-cutting areas identified in the literature and by key informants as helping Lao PDR make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Lao PDR has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) **COUNTRY CONTEXT**

**Overview**
Lao PDR is a landlocked, mountainous country in South-East Asia. Over one-third of the population are under 15 years of age, and around two-thirds live in rural areas. Many rural areas do not have paved roads and are difficult to access [2, 3].

Lao PDR is one of the most ethnically diverse countries in the world, with 49 official ethnic groups. Each group has its own dialect, customs, beliefs and health-seeking behaviour (including the use of traditional or herbal medicine). Ethnic minorities mostly live in the highlands whereas Ethnic Lao, which make up over half the population, predominantly inhabit the lowlands [2, 4].

Lao PDR has significant natural resources, including forestry and minerals, as well as hydropower potential [4]. Increased foreign direct investment in these industries, following a shift to a market-oriented economy in line with the New Economic Mechanism (1986), has been a key driver for a decade of unparalleled growth: gross domestic product has grown on average 8% per annum [2]. The gross domestic product per capita (purchasing power parity, PPP, Int$) increased from $933 in 1990 to $2522 in 2012 (see Table 1: Key Country Indicators). Lao PDR has recently been reclassified as a lower-middle income country; however, it ranked 138 out of 186 countries on the Human Development Index in 2012 [5]. Agriculture is one of largest sectors in the Lao PDR economy, contributing to around one third of gross domestic product and employing nearly 80% of the labour force [4].

(For Tables 1 see Section 10)

4) **KEY TRENDS, TIMELINES AND CHALLENGES**

In the early 1990s, Lao PDR had high levels of infant and under-five mortality; the intervening years have seen sustained reductions through to 2011. A decline in fertility rates has been accompanied by progress in reducing maternal mortality. As a result, Lao PDR is on track to meet its MDG 4 and 5a targets (48 and 400 deaths per 1000 live births respectively).

Despite significant progress, Lao PDR’s health-related outcomes remain the poorest in the region: its contraceptive prevalence rate is among the region’s lowest, as is the level of antenatal care coverage, while the adolescent birth rate and unmet need for family planning are higher than those in neighbouring countries [6, 7]. Lao PDR has some of the greatest economic and geographic disparities in intervention coverage in South-East Asia [8]. This is due to a number of
factors:

**Poor and underused health infrastructure:** Low quality of care has led to underuse of the available health facilities; use of traditional medicines is prevalent [9]. Low uptake is compounded by the geographical barriers in access to health care for populations in remote areas.

**Sociocultural barriers:** For cultural reasons, women in some areas prefer to deliver at home without assistance, and this is a further barrier to access [9]. Interventions that have not been developed using community engagement do not always meet the specific needs of ethnic minorities [9].

**High out-of-pocket costs:** Out-of-pocket spending makes up for 40% of the total expenditure on health, although this is lower than levels in previous years [10]. In many cases the poor are unable to afford services, a problem common across other ‘fast-track’ countries [9].

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) **HEALTH SECTOR INITIATIVES AND INVESTMENTS**

*Health sector investments*

While resources for health have historically been limited, the government has taken measures in recent years to improve funding.

*Health financing:* In 2011, general government expenditure on health per capita (PPP, Int$) was $38. The government made a commitment to increase the share of health expenditure as a proportion of total government expenditure to 9% in 2011/12 onwards, from 6% in 2010 [11]. The National Health Financing Strategy 2011–2015 also aims to reduce out-of-pocket spending, which is a key barrier to access.

*Health workforce:* Since the 1990s, Lao PDR has increased its physician workforce. The two key challenges faced by Lao PDR – the capacity and the distribution of health workers – are being addressed by the National Health Personnel Development Strategy (2009–2020) and the Decree on incentives for civil servants posted to rural areas (2011). The 2011 National Health Statistic Report noted improvements in health worker capacity. As part of its 2010 commitment to the Global Strategy for Women’s and Children’s Health, Lao PDR also committed to producing 1500 new midwives by 2015 by upgrading existing staff and training and recruiting new staff. Initiatives to increase the number of staff with midwifery skills have been undertaken in Lao PDR. In Lao PDR, the National Skilled Birth Attendance Development Plan is a key mechanism to achieve this goal, providing a roadmap to strengthen human resources in order to reduce newborn and maternal mortality. Almost 500 midwives had been deployed by the end of 2012 [12].

*Health systems:* The majority of health services are delivered by the public sector; however, private sector delivery is growing, where the private sector has been involved in delivering health care and managing health facilities. Following the introduction of the market reform policy in 1986, the number of private clinics in Lao PDR grew from 0 (1986) to over 250 (2010). Over the same period, the number of private pharmacies grew from around 30 to almost 2000; pharmacies provide an important service for people from lower socioeconomic groups, who can often only afford drugs and limited advice and are not able to pay for examinations and diagnosis [13]. In April 2013, the Ministry of Public Health announced it would issue licences to over 1000 private medical clinics across the country, to allow them to begin or continue to provide services [14].
Outcomes monitored using evidence
One of the five goals of Lao PDR’s Health Information System Strategic Plan is to develop and implement population- and institution-based data collection systems, especially the vital registration system, so as to improve health and disease recording. Efforts to strengthen vital registration and maternal surveillance systems have been undertaken across other high-performing countries, such as Bangladesh and Peru. In Lao PDR, an inter-agency task force is in place to support the development of the civil registration and vital statistics systems. In the interim, national standardized forms for facility-based death reporting are in place, and a computer-based system is being piloted in selected central hospitals. A maternal death review system has been implemented in two provinces and will be scaled up to other provinces; community reporting and feedback are also in place in selected provinces. The government has also begun to collect data disaggregated by sex [15].

A National Sector Working Group for Health and several Technical Working Groups serve as coordination mechanisms to support monitoring of health results. The 7th National Health Sector Development Plan (2011–2015) includes specific output and impact indicators. The Integrated MNCH Strategy and Planning Framework also includes outcome and impact indicators and targets for national, provincial and district levels, and also development partners. The National Commission for Mothers and Children is responsible for monitoring the strategy [2].

The Commission on Information and Accountability for Women’s and Children’s Health recommended that existing national oversight mechanisms be strengthened; in May 2012, Lao PDR finalized its Country Accountability Framework, in line with this recommendation. The framework assesses the existing accountability mechanisms and details a roadmap to improve accountability for health. Priority areas for action identified in the framework include civil registration and vital statistics systems and monitoring of resources [15].

Political prioritization of essential health interventions
The alignment of resources for health in Lao PDR through a sector-wide approach (SWAp) has improved aid effectiveness by coordinating funding streams under key government health priorities and plans. In Lao PDR, Health Sector Wide Coordination Mechanisms are led by the Ministry of Health at policy, operational and technical levels. The mechanisms are used to align and direct the contribution and activities of government ministries (including health, labour, social welfare and finance) and development partners to facilitate policy dialogue, technical discussions and strategic and operational coordination [2].

The government has collaborated with development partners to draft, approve and implement a number of strategies in order to address key issues of health development in the country [16]. These include [17]:

- The National Birth Spacing Policy (1997), which recognized the importance of family planning as a means of child spacing in order to reduce maternal mortality;

- The Safe Motherhood, Deliveries and Neonatal Care Policy (1997), which focused on a number of aspects such as the provision of family planning information and services, antenatal care, clean, safe and attended deliveries, the management of complications in pregnancy, emergency obstetric care and post-partum care; and The National Population and Development Policy (NPDP) (1999), which notes a reduction in maternal mortality as a specific objective and gives priority to extending reproductive health services (including family planning) to all areas of the country.
An MNCH Technical Working Group was established in 2007 and meets monthly. The Technical Working Group developed the Strategy and Planning Framework for the Integrated Package of MNCH Services (2009–2015) [18]. The MNCH package includes an essential set of services and an additional optional set. Lao PDR has made a transition from implementing vertical interventions to an integrated health service approach: reproductive health services are integrated within the primary health care network and emphasis is placed on maternal and child health [19].

The integrated MNCH service package provision has been expanded nationally [18]. The Ministry of Health and UN Joint Programme Supporting the Implementation of the National Integrated Package of MNCH services in Lao PDR is also being implemented. The goal of the programme is to strengthen the capacity of the Ministry of Health at national and sub-national level to implement the Integrated Package of MNCH Services in selected districts, with a specific focus on the most vulnerable, especially in remote rural areas. There are four key implementing partners – the United Nations (UNFPA), United Nations Children’s Fund (UNICEF), World Health Organization (WHO) and the World Food Programme (WFP) – working in close collaboration with the Ministry of Health and other strategic partners. Partners work complementarily in different geographical locations and focus on areas of their specific expertise [2]. For example, key strategic partners and donors broadly work in three different regions: the Asian Development Bank in the north, the Luxembourg Agency for Development Cooperation in central regions, and the World Bank in the south.

As part of its commitment to the Global Strategy for Women’s and Children’s Health, the government has also pledged to: (i) provide free deliveries in order to ensure access to the most vulnerable; (ii) increase immunization coverage from 67% to 90% by 2015; (iii) increase the proportion of births attended by a skilled attendant; and (iv) increase the proportion of couples with access to modern contraception.

The expansion of reproductive health and family planning services has been employed as a key strategy used to help reduce maternal mortality in Lao PDR. The expansion of reproductive health care services to underserved populations in peripheral and remote areas has improved the uptake and use of modern contraceptive methods (see Health Sector Spotlight).

Legal and financial entitlements, especially for underserved populations
Lao PDR has made explicit commitments and implemented strategies to promote equitable access to health care. In Lao PDR policies and laws aim to ensure that all citizens have access to health care services and that these services are delivered in an equitable manner. Lao PDR’s Law on Health Care (2005) stipulates that all citizens have the right to receive health care services regardless of their gender, age, ethnicity, race, religion or socioeconomic status. It also states that services should be delivered in an equitable manner [2].

Health insurance schemes have been implemented in Lao PDR to support equity in access to health care, provide financial protection against catastrophic health care costs and help achieve universal coverage. In Lao PDR, four health insurance schemes have been put in place for different population subgroups: State Authority for Social Security (for civil servants), the Social Security Office (for private sector employees), Community-based Health Insurance (for informal sector employees), and Health Equity Funds (for the poor) [20]. Although initially low, coverage of these schemes has improved, from 13% in 2009 to 18% in 2011; the government has endorsed a decree to merge these social health protection schemes and improve equity in health care coverage.

In 2010, the government also introduced a policy to provide free health care services to all children under the age of five years and all pregnant women. In 2012, the Lao PDR government
funded implementation in 16 districts across four provinces and development partners supported roll-out in around 25% of country districts (37 in total). Based on the policy’s early success and lessons learned, implementation is being scaled up to 117 (80% of ) districts. A similar targeted free health care policy in Nepal has helped address financial barriers to health care and increase health service utilization.

HEALTH SECTOR SPOTLIGHT

Culturally appropriate and community-based family planning services
The project was initiated in June 2006 to deliver cost-effective community-based family planning services in a culturally appropriate way to improve access to information and services amongst marginal groups. It was implemented by the Ministry of Health’s Mother and Child Health Centre with technical assistance and funding from UNFPA. Villages in three poor southern provinces were selected for intensified development efforts. Volunteers were selected and trained to serve as community-based family planning service providers (agents).

These agents belong to their communities, speak the same language and share the same social norms. Agents were responsible for providing outreach family planning services (including provision of condoms, oral contraceptives and injectables) free of charge to all those in need. Their specific duties were to:

- Visit households on a monthly basis to provide family planning information and services to couples, other family members and adolescents without discrimination; and
- Prepare a monthly report to the district maternal and child health manager which included a summary of services provided and a request for resupply
- Reports were fed into the contraceptive logistics management information system and were also disseminated at provincial and central levels.

The contraceptive prevalence rate increased sharply in several areas: for one catchment area the rate was reported to have reached 61% in 2009 from a baseline of 0.6% in 2006. The level of family planning services also exceeded service levels in some district hospitals.

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
A commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality, has led to improvements in education. Education is one of the better-performing sectors in Lao PDR, and Lao PDR is on track to meet MDG targets on literacy rates of 15–24 year olds and the net enrolment ratio in primary education.

Improvements in education over the past decade are attributable in part to government policy and interventions. The Decree on Compulsory Education (1996) provided for free and compulsory primary education for all children between 6 and 14 years of age. Education was one of the four pillars of the poverty reduction strategy outlined in the sixth National Socio Economic Development Plan (2006–2010). Similar to the fifth plan (2001–2005), the sixth plan provided detailed targets for the period and noted three priorities for education: (i) equity and access; (ii) quality and relevance; and (iii) strengthened administration and management [4]. The Ministry of Education also published an Education Sector Development Framework (2009–2015), a major sector-wide plan which reflects a shared government and development partner vision and commitment to the education sector.
Since 1990, the primary school net enrolment rate has increased significantly, from 66% to 97% by 2011. This increase was equitable, with the net enrolment rate for girls in particular increasing from 55% in 1992 to 96% in 2011. Lao PDR has made good progress to meet the MDG target for ratios of girls to boys in primary, secondary and tertiary education.

**Nutrition**

The Lao PDR government has taken steps to improve the policy environment for nutrition. For example, the 2008 National Nutrition Policy provides a framework for engaging different actors around nutrition issues; and the 2010–2015 National Nutrition Strategy, which was issued in 2009, provides the strategic direction for stakeholders to improve nutrition [30].

**Infrastructure, water supply and sanitation**

Lao PDR has made significant progress towards the MDG targets for the proportion of population using an improved drinking-water source and proportion of population using an improved sanitation facility.

These achievements have been driven by a range of factors. There has been a focus on implementing sanitation initiatives in the poorest districts, most of which are rural; government policy has ensured that poorer and marginalized groups are prioritized in both project design and implementation and toolkits have been developed to improve targeting of these groups [21]. Such community-based interventions have led to the broadening of knowledge about basic sanitation, and as incomes have risen, households have chosen to make private investments in improving their facilities (see Multi-sector Spotlight).

The proportion of the population with access to clean water increased dramatically from 40% in 1994 to 70% in 2011. Lao PDR’s improvements in water supply are matched by similar progress in sanitation, although access to safe drinking-water remains more widespread than access to basic sanitation [4]. The proportion of the population using improved sanitation rose dramatically, from 20% in 1994 to 62% in 2011 [22].

Lao PDR has rehabilitated and increased their proportion of paved roads: Lao PDR has become increasingly ‘land-linked’. Infrastructure has played a key role in health outcomes by reducing the time to travel to clinics, and therefore improving access to facilities. Compared to rural areas without roads, rural areas with roads have lower fertility rates, more prevalent use of contraceptives and proportionally more births assisted by skilled health personnel [3].

**Innovation and research**

Lao PDR has engaged in a number of cross-cutting innovations to advance RMNCH progress, including health policies and strategies integrating information and communications technology (ICT), and the adaptation of services to meet the cultural needs of different populations.

- The ‘Silk Home’ project has seen Maternity Waiting Homes (‘Silk Homes’) established in 17 districts of Saravan, Sekong and Attapeu provinces in southern Lao PDR, which have a majority of people living in remote areas, and high maternal and infant mortality. The Silk Homes were unique in combining maternal and infant health services with opportunities for micro credit and income-generating activities, and allowing non-harmful traditional practices to co-exist along allopathic services (modern, evidence-based medicine). Research found that the approaches addressed the key economic, social and cultural barriers to usage of safe birthing options in these remote communities [28].

- The government worked with a leading ICT company to devise a pilot e-health system [29] with
an online connection that allows videoconferencing and the sharing of diagnostic data through an online platform. The system linked the Central Hospital with Luangphabang Provincial Hospital and doctors were able to collaborate and consult using real-time access to clinical databases and the ability to view patient symptoms on the screen.

The national Health Information System (HIS) Strategic Plan (2009–2015) also includes a specific e-health component, and one of the priority actions Lao PDR has signed up to as part of the Country Accountability Framework is to provide e-health devices such as mobile phones, tablets and computers to health centres in selected districts, along with relevant training.

SPOTLIGHT OF SECTOR OUTSIDE OF HEALTH

Community-based water supply and sanitation project with revolving funds [23, 24, 25]
The project was launched in 2006, as part of the United Nations Human Settlements Programme’s (UN-HABITAT’s) Mekong Region Water and Sanitation programme, and in cooperation with the Water Supply State-owned Enterprise of the Province of Luang Prabang. Eight villages in Xieng Ngeun district were connected to a water supply network, and the households were able to subscribe to piped water.

The communities were actively involved in the project from planning to implementation. In 2007 two ‘revolving funds’ were set up: one for connecting households to the piped water network and one for supporting households in latrine construction. Households could apply for interest-free loans from the funds, which helped to make the scheme accessible to the poorest households, who may not have otherwise been able to pay the initial costs. Loans were granted on the basis of income, so that the poorest households were given priority.

The households were also offered training in latrine construction. By 2008, 156 households had received a loan from the revolving fund for water connection and 73 households had received a loan from the latrine fund. The fund for water was particularly successful, with all applicants in the eight villages connected to the water network and a loan repayment rate of 98%.

Following this, the revolving fund began granting loans to applicants from other villages in the area. By July 2010, using a seed fund of US$ 30 000 provided by UN-HABITAT, over 640 households had used over US$ 65 000 of revolving funds for water connection or latrine construction.

7) GOVERNANCE AND LEADERSHIP

Lao PDR was selected as a pilot country for the MDG Acceleration Framework; Lao PDR’s President launched the framework at the MDG Summit in September 2010. In October 2010, the government and development partners signed an MDG Compact in support of the full achievement of the MDGs in Lao PDR by 2015 [26].

Lao PDR has a strong commitment to improving women’s and children’s health. The Lao PDR Government has a long-standing goal to graduate from Least Developed Country status by 2020. Health indicators, in particular child mortality indicators, are considered in the ‘human assets weakness’ criterion which Lao PDR must satisfy in order to graduate from Least Developed Country status. Reduction of maternal mortality has also been a top government priority [19]. Lao PDR aims to achieve universal access to health care by 2020 and has a clear vision for health system reform to
help meet this goal: the Seventh Five-year Health Sector Development Plan (2011–2015) [16]. Lao PDR has implemented initiatives to enable civic participation and improve accountability to the public. Between 1990 and 2003 the proportion of women members in the national legislature tripled [4]; by 2011, one quarter of the lower single house of parliament was made up of women. In 2011, Lao PDR established two targets for women’s participation in politics: that women constitute 30% of the National Assembly; and that 15% of decision-making positions be held by women [27]. Lao PDR’s Parliament had a woman speaker for the first time in 2012, and is on track to meet its MDG target for the proportion of seats held by women in national parliament. The government now explicitly recognizes the importance of gender parity and rights for women, including through the Law on the Development and Protection of Women (2004) [31].

8) LESSONS LEARNED AND FUTURE PRIORITIES

Improving equity in access to and distribution of health services is a key challenge which underpins Lao PDR’s priority actions for accelerating progress to ensure that MDG 4 and 5 targets are met by 2015.

**Human resources for health**: Lao PDR needs to invest in expanding the skill base, size and equitable distribution of its health workforce. Per 1000 population, Lao PDR has only 0.3 doctors, compared to a WHO Western Pacific Region (WPRO) regional average of 1.5; this proportion has decreased since 2004. Lao has only 1 nurse/midwife per 1000 population, compared to the WHO / WPRO regional average of 1.9; this proportion has not increased since 2004 [22]. The health workforce in Lao PDR is in critical need of expansion. Lao PDR committed to producing 1500 new midwives by 2015 by upgrading existing staff and training and recruiting new staff; however, action is also needed to address the acute shortage of doctors, especially in district hospitals and health centres.

**State health financing**: High out-of-pocket costs remain a key barrier to access in Lao PDR. Increased public health financing is required if countries are to achieve universal health care coverage. In Lao PDR, the continued timely implementation of government commitments to increasing health expenditure and the National Health Financing Strategy 2011–2015 are two key actions needed to reduce the financial burden of health care on households.

**Nutrition**: Malnutrition remains a significant concern in Lao PDR. Despite the efforts made to date, the percentage of children younger than five years of age that are underweight has remained around the 40% mark for the past decade. Chronic malnutrition, or stunting, is a major issue and affects over 40% of children under 5. Nutrition requires urgent and continued attention by both government and the development community [4, 30].

**Emergency obstetric and neonatal care**: Lao PDR faces a challenge in improving emergency obstetric care. Hospitals are mandated to provide such services, and to prioritize maternal, neonatal and paediatric wards, but there are low levels of good-quality service provision. Providing basic and comprehensive emergency obstetric care and ensuring access could avert one in six neonatal deaths [8] and reduce more than 70% of maternal deaths [4].

**Coverage of live births attended by a skilled health worker**: Although coverage has improved marginally over the last decade, other countries which in 2000 had similar coverage rates to Lao PDR, such as Pakistan, have made dramatic progress in improving coverage [7]. Estimates suggest that skilled birth attendants could reduce maternal and neonatal deaths by around one third [4]. Delivering Lao PDR’s commitment to the Global Strategy for Women’s and Children’s Health to increase coverage is a key priority.
‘Fast-track’ countries such as Lao PDR have made significant progress in improving maternal and child health and have either met or are on track to achieve MDGs to reduce maternal and child mortality. This summary does not attempt to draw causal inferences linking improvements in RMNCH to the implementation of particular policies and programmes. Instead, the progressive policies and programmes discussed illustrate leading strategies in health, multi-sector and cross-cutting areas that have helped Lao PDR make progress on MDGs 4 and 5.

Lao PDR has demonstrated sustained political will in addressing maternal and child mortality, and has seen the implementation of a number of innovative, community-based and culturally sensitive interventions to improve its population’s health outcomes. Investments in infrastructure have been associated with improvements in health. However, progress has not benefited all population sub-groups equitably. In order to sustain the progress made to date and further reduce the child and maternal mortality equitably, attention should be focused on key priority areas: (i) state health financing; (ii) human resources for health; (iii) emergency obstetric and neonatal care; (iv) nutrition; and (v) coverage of live births attended by a skilled health worker.

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### 10) TABLES AND FIGURES

**Table 1: Key Country Indicators** *(Lao PDR)*

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<td>GINI INDEX (0 equality to 100 inequality income distribution)</td>
<td>35 (1997)</td>
<td>33 (2002)</td>
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<td><strong>HEALTH WORKFORCE</strong></td>
<td>PHYSICIANS (per 1000 population)</td>
<td>0.23 (1990)</td>
<td>0.35 (2004)</td>
<td>0.27 (2010)</td>
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<tr>
<td></td>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
<td>N/A</td>
<td>0.97 (2004)</td>
<td>0.97 (2010)</td>
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<tr>
<td></td>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
<td>73(M) 48(F) (1995)</td>
<td>81(M) 58(F) (2000)</td>
<td>77 (M) 69 (F) (2011)</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL MANAGEMENT</strong></td>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
<td>40 (1994)</td>
<td>46 (2000)</td>
<td>70 (2011)</td>
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<td>ELECTRIC POWER CONSUMPTION (kilowatt hours per capita)</td>
<td>N/A</td>
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<td><strong>HUMAN DEVELOPMENT INDEX</strong></td>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>.38 (1990)</td>
<td>.45 (2000)</td>
<td>.54 (2012)</td>
</tr>
<tr>
<td><strong>GOOD GOVERNANCE</strong></td>
<td>COUNTRY RANK (2012)</td>
<td>138</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators. +Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)*

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**Lao PDR: Review of Data and Literature on Progress Towards MDGs 4 and 5**

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**Table 2: Key RMNCH Coverage Indicators**

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>TREND</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning)</td>
<td>82 (2011)</td>
<td>LSIS 2011/12 MICS 2006</td>
</tr>
<tr>
<td>PREGNANCY TO POST-NATAL</td>
<td>ANTENATAL CARE ( % of women attended at least 4 times during pregnancy by any provider)</td>
<td>37 (2011) 35 (2006)</td>
<td>LSIS 2011/12 MICS 2006</td>
</tr>
<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth)</td>
<td>40 (2011)</td>
<td>LSIS 2011/12</td>
</tr>
</tbody>
</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition – Lao PDR

USMR / NMR – Lao PDR

Source: World Development Indicators

MMR / TFR – Lao PDR
Note: Dashed line indicates missing data. Source: World Development Indicators

Nutrition – Lao PDR

Note: Dashed line indicates missing data. Source: World Development Indicators
### Timeline with key Policy inputs — Lao PDR

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>1997 Safe Motherhood, Deliveries and Neonatal Care Policy;</td>
<td>2005 Law on Health Care; National Reproductive Health Policy;</td>
</tr>
<tr>
<td></td>
<td>2000 Primary Health Care.</td>
<td>2008-2015 National Nutrition Policy; Decree on Establishment of Private Hospitals; Skilled Birth Attendant Development Plan;</td>
</tr>
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<td></td>
<td>2009-2020 National Health Personnel Development Strategy;</td>
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<td></td>
<td>2010 Free Maternal and Child Health Policy;</td>
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<td></td>
<td></td>
<td>2011-2015 Decree on incentives for civil servants posted to rural areas; Seventh Five-year Health Sector Development Plan; National Health Financing Strategy;</td>
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<tr>
<td></td>
<td></td>
<td>2012 Decree on National Health Insurance.</td>
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</table>
9. Nepal: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

**Progress:** Nepal is one of 10 ‘fast-track’ countries that is ‘making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). Several factors have contributed to this progress:

**Health sector:** Political prioritization, increased financial investment and the focused efforts of government and donors have been central to achieving improved reproductive, maternal, newborn and child health (RMNCH) outcomes. There has been a successful focus on increasing the use of health services for delivery care, antenatal care (ANC) and skilled birth attendance through a combination of financial incentive programmes and policies such as the National Policy for Skilled Birth Attendance. There has also been an emphasis on community-based care. Targeted free health care and programmes directed and improving community engagement and empowerment have also been used to reach underserved populations.

**Sectors outside of health:** Women’s educational status has been inversely linked with maternal and neonatal mortality in Nepal. In recent years, girls’ enrolment in schools has increased, driven partly by targeted free education policies. There has also been a rapid expansion of the road networks and construction of health facilities, increasing access to health care.

**Governance and leadership:** Nepal has clear political commitment to RMNCH and a progressive approach to the use of research to drive policy.

**Lessons learned:** To sustain progress on MDGs 4 and 5, the following challenges need to be addressed: (i) inequity remains a huge issue in Nepal, and further progress in RMNCH will require targeted interventions to reduce health differentials and reach underserved populations; (ii) neonatal mortality rates have stagnated recently and now need focused attention; (iii) as more women deliver in health facilities, the quality of facility-based care needs to be improved to prevent avoidable deaths; (iv) under-nutrition among children needs to be tackled; (v) the gap in human resources for health need to be reduced.

2) INTRODUCTION

Nepal is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, China, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Peru, Rwanda and Viet Nam) that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality)\(^1\). There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

**Health sector:** Health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal entitlements to high-quality healthcare especially for underserved populations;

\(^1\) In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
Sectors outside of health: Education; nutrition; and infrastructure, water and sanitation; Innovation and research.

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas, such as governance and leadership identified in the literature and by key informants as helping Nepal make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Nepal has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) COUNTRY CONTEXT

Overview
Nepal is a landlocked country, with three ecological zones: mountain, hill and Terai (plains). There are significant disparities in health, education, wealth and access to care between Nepal’s 126 distinct ethnic/caste groups, and between people living in different regions [2].

The Kingdom of Nepal was founded in the 18th century, and enjoyed relative stability under a succession of monarchs until the country underwent a violent struggle for democracy in the 20th century. Nepal has experienced considerable political instability since democracy was introduced in 1990. In 1996, a Maoist insurgency broke out leading to a civil war, which ended in 2006 when Nepal was declared a federal democratic republic. An Interim Constitution was formed in 2007, but the country remains politically unstable.

A low-income country, Nepal had a gross domestic product per capita (purchasing power parity, PPP, Int$) of $1279 in 2012. The poverty rate has declined from 42% to 25% in the past 15 years [3], partly owing to the inflow of remittances. Life expectancy in Nepal has increased steadily in the past 20 years to 65 years for males and 67 years for females. The under-five mortality rate (U5MR) has decreased significantly in recent years, as has the maternal mortality ratio (MMR). The prevalence of HIV/AIDS appears to have stabilized at 0.5% and the MDG target for reversal of HIV/AIDS and other diseases is likely to be met [4].

(For Table 1 see Section 10)

4) KEY TRENDS, TIMELINES AND CHALLENGES

Nepal has seen a significant decline in MMR since 1996 and is currently on track to achieve MDG 5a [4]. The reduction in Nepal’s MMR has been driven partly by a fall in the total fertility rate (TFR), from 5 in 1990 to 2 in 2011 [5]. TFR fell during this period despite stagnation in the contraceptive prevalence rate between 2006 and 2011, and has been partly attributed to spousal separation caused by migration. The use of maternal health services has improved since 1996, with increases in ANC visits, rates of institutional deliveries as well as deliveries attended by a skilled birth attendant.

Nepal is also on track to achieve MDG 4; however, in the past few years, the neonatal (first month of life) mortality rate has remained stagnant at around 33 deaths per 1000 live births. This compares to a rate of 32 in India (2011) and 36 in Pakistan (2011) [3]. Neonatal mortality is a serious concern in Nepal, accounting for 69% of the infant mortality rate and 54% of the U5MR in 2006.
“The future safety of Nepal’s women, and our ability to continue to reduce MMR, depends on how far we are able to effectively improve quality of maternity care in all facilities, including private institutions”. Interview, Maternal health professional, Kathmandu

(For Trends figures and Table 2 – RMNCH Coverage Indicators see Section 10)

5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Health financing: In Nepal, total health expenditure per capita increased from $35 in 1995 to $68 in 2011 (PPP, Int$) [5] and there are ambitious targets to increase the proportion of total government expenditure on health to 10% by 2014, from 7% in 2011 [6, 7]. Since 1990, government health expenditure per capita across all 10 high performing countries has increased.

There has also been substantial financial investment from the donor community, particularly since 2004 when a sector-wide approach (SWAp) was adopted to finance healthcare and improve aid effectiveness. This approach is used to facilitate greater, more coordinated linkages between external development partners and government health priorities and plans. In 2011, donor contributions made up 39% of Nepal’s Ministry of Health and Population Services budget [7].

Health workforce: In recent years, there has been some growth in the health workforce, partly prompted by ambitious targets to increase the availability of skilled birth attendants (SBAs) [8]. Shortages in the workforce have been somewhat alleviated by task-shifting [9], but there are still large human resources gaps. The use of nearly 50 000 Female Community Health Volunteers (FCHVs) to provide community-based care in Nepal has further relieved the burden [10].

Outcomes monitored using evidence
In the absence of functioning vital registration systems, Nepal uses data from censuses, studies and surveys to monitor mortality rates and inform programme design [11, 12]. Rwanda, in contrast, has helped fill the data gap through community health workers who capture information on births and deaths. Nepal uses a national health management information system (HMIS) to track service use, monitor results and define priorities and plans. In Nepal disaggregated data are used to assess progress against targets. Areas of poor performance are flagged during annual reviews so that action can be taken. Maternal death reviews have been used to understand the causes of institutional deaths in hospitals [8] and there are efforts to link findings to government policy decisions [13]. Perinatal death reviews have also been implemented in Nepal and are now being scaled up to the national level.

Political prioritization of essential health interventions
Political prioritization and the focused efforts of donors have been central to improving RMNCH [14, 15]. Nepal’s progressive policy environment has developed rapidly since the National Health Policy: a series of effective programmes have since been implemented.

“Female Community Health Volunteers (FCHVs) have shown to be effective providers of community-based care. However, over the years, they have been given more and more responsibility and have been asked to perform increasingly complex tasks in a growing number of areas. If this trend continues, there is a risk that we will ask too much of them, give them responsibilities that they do not have capacity to fulfil. We must be careful not to overburden FCHVs”. Interview, Maternal health professional, Kathmandu

Financial incentives are provided to pregnant women from poor households to access a variety
of maternity services, including ANC, delivery in a facility and postnatal care. In Nepal, a cash incentive is paid to women for attending four ANC visits; the Aama (Mother) programme has seen the introduction of free delivery care and incentive payments to clients and payments to facilities (see Health Sector Spotlight).

The National Policy for Skilled Birth Attendance has been implemented to ensure that sufficient numbers of new SBAs are trained, and to improve and build on the skills of existing staff through in-service training. Similar initiatives have been undertaken in Cambodia, Egypt, Lao PDR, Rwanda and Viet Nam to improve access to SBAs. Nepal has focused on strategies to improve the provision of emergency obstetric and neonatal care (EmONC) resulting in a near threefold increase in the number of comprehensive EmONC facilities between 2004/5 and 2010/11. Implementation of the National Blood Policy has also helped improve the availability of safe blood for emergency care, while the issue of quality of care in maternity facilities is being addressed by the development of systems and frameworks [16].

Family planning programmes have contributed to increased contraceptive prevalence rates, which in turn have been identified as an important contributory factor in fertility decline. The government has focused on making contraceptives available at all levels of health facilities, and through FCHVs. The legalization and roll-out of safe abortion services, despite opposition from some religious groups, represents a major breakthrough in maternal health and has contributed to a reduction in serious abortion-related mortality (see Multi-sector Spotlight).

Programmes in Nepal targeting child health include: the Community-based Integrated Management of Childhood Illness programme, delivered by FCHVs, which has been credited with reducing under-five mortality by 28% by improving effective management of pneumonia [28]; the National Newborn Care Package, currently under revision, which was built on global evidence about the management of newborn infections, promotion of newborn care practices and the use of birth- preparedness programmes; and the National Immunization Programme, which reduced the proportion of children aged 12–23 months who did not receive any of the six basic immunizations to 3% by 2011 [29]; contributed to the goal of polio elimination; and helped eliminate neonatal tetanus by 2005 [17].

In addition, Nepal has also seen rapid expansion of the private sector, contributing to improved access to care. In 2011, for example, 24% of all children with diarrhoea were taken for treatment in private pharmacies and 9% of deliveries occurred in private or nongovernmental organization (NGO) facilities [29].

**Legal and financial entitlements, especially for underserved populations**

Nepal’s health sector has responded positively to a strong national mandate to improve gender equality and social inclusion. In particular, targeted free health-care policies, through the removal of user fees for delivery care, and financial incentive programmes have addressed financial barriers to health care (see Health sector spotlight).

Targeted community-based approaches have been implemented to reach underserved populations in Nepal. Community engagement with the health sector has improved through programmes such as the Equity and Access Programme [a women’s empowerment and rights-based community mobilization programme] [8]. Social auditing, which is used to hold facilities accountable to the needs of local people, including underserved populations, is currently being scaled up across Nepal.
HEALTH SECTOR SPOTLIGHT

Reducing financial barriers to safe delivery care
In 2005, the government introduced the Maternity Incentive Scheme, later renamed the Safe Delivery Incentives Programme (SDIP), in order to help overcome the financial barriers to accessing maternity care faced by the poor. Under the SDIP, financial incentives were given to women and health workers to encourage increase uptake of ANC, skilled birth attendance and institutional deliveries [18]. More recently, user fees for delivery care have been removed, and in 2009 the government merged SDIP with free delivery scheme to form the Aama Surakshya Karkram – known as The Aama (meaning ‘mother’) Programme.

Under Aama, women receive free delivery care and a cash payment to cover their transport costs to a facility to give birth; health staff receive an incentive for attending a home delivery; and health facilities receive funds to cover the costs of delivery services and to enable investment in service quality. Larger payments are given for complicated deliveries and for providing a caesarean section.

SDIP and Aama have contributed to improved maternal and child health by addressing both supply- and demand-side barriers to service uptake, and by responding to the needs of different communities. Higher incentives are available for women in mountain districts (which are poorer and where the travel to facilities is often difficult) than for those in Terai districts. The programme has contributed to increased service use rates [19].

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
Women’s educational status has been linked with maternal and neonatal survival in Nepal [9, 20]. Nepal is committed to ensuring that all children have access to free, compulsory, good-quality primary education. To help achieve this, a National Plan of Action 2001–2015 was developed in response to agreements made by Nepal at the World Forum on Education for All. Measures have subsequently been taken to increase access to education, particularly for the poor and other disadvantaged groups. Although Nepalese women lag behind their South Asian counterparts in terms of educational attainment, increased girls’ enrolment in school has improved, and the proportion of women with no education halved between 1996 and 2011 [21]. Nepal has made good progress towards achieving MDG targets on literacy rate of 15–24 year olds, and primary education completion rates [4]. However, further progress is needed to meet the target for net enrolment ratio in primary education.

Nutrition
Nepal is on track to meet MDG 1c, to halve the proportion of people suffering from hunger. In general, the nutritional status of children has improved over the past 15 years and Nepal is now close to achieving 2015 MDG target for the percentage of children aged 6–59 months who are underweight [29]. Overall, by 2011, 70% of children aged under six months were exclusively breastfed (see Table 2: Key RMNCH Coverage Indicators); other successes include the high coverage of vitamin A supplementation and deworming programmes [29] and increased use of iodized salt following government legislation [21]. However, anaemia remains a major child health problem and considerable differences in the nutritional status of children by caste and ethnicity endure [2]. Contrastingly, the nutritional status of women has improved only slightly in the past 15 years, and in 2011, 18% of women were malnourished [29]. Rates of anaemia amongst women also appear to have stagnated since 2006.

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**Infrastructure, water supply and sanitation**

In Nepal the upgrading and construction of health facilities has contributed to improving access to care in some areas of the country. Policy changes in 1991 prompted the mass construction and upgrading of health facilities.

Although remote areas of Nepal remain extremely isolated, the number of birthing centres increased dramatically from 422 in 2007/8 to 940 in 2010/11 [10, 22], considerably improving access to health care in some areas. There has also been an increase in the proportion of paved roads [3], which has facilitated access to care. The recent expansion of mobile phone networks across Nepal and increasing use of mobile technology may also help increase access to care in Nepal’s most underserved communities and could improve communication between facilities, which was identified as a factor in poor maternal outcomes [12].

In addition, Nepal has made progress on the availability of safe water, and the proportion of population using an improved drinking-water source [4], which is likely to contribute to improving health outcomes. However, further efforts are needed to meet Nepal’s MDG target for the proportion of its population using improved sanitation facilities.

**Innovation and research**

Nepal has adapted delivery of care and services to meet local needs. The government has been progressive in its adoption of innovative, context-specific strategies and has fostered a culture of using evidence to inform programme design [23]. Research and pilot studies have prompted various efforts, including misoprostol use to address postpartum haemorrhage in communities and its inclusion on the National Essential Drug List.

Innovative evidence-based interventions include: the vitamin A supplements programme, developed in response to evidence of a link to childhood mortality; and the legalization of abortion (see Spotlight of a sector outside of health).

Innovative approaches to adapt, test and rapidly scale up service delivery models have also been critical to progress. The Government of Nepal has continually sought, tested and scaled up innovative, community based approaches for RMNCH [23].

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**SPOTLIGHT ON A SECTOR OUTSIDE OF HEALTH**

**Using innovation and research findings to improve health outcomes**

The government has a strong track record of taking innovative approaches to improve health outcomes based on available evidence. In 2004, founded on evidence on the effectiveness of misoprostol in addressing postpartum haemorrhage, the government piloted the distribution of misoprostol during home births in the remote Morang district of Nepal. The pilot delivered promising results and although considered controversial by some commentators, the use of community-distributed misoprostol in remote districts was expanded. In 2009, misoprostol was also included in the National Essential Drug List [23].

The government has also demonstrated a willingness to respond to community pressure for legislative change when the evidence base is strong. The government took action in response to research findings about abortion in 2002 after two studies demonstrated that induced septic abortion was a factor in maternal mortality and morbidity in Nepal. Campaigns were mounted by national pressure groups and in 2002 abortion was legalized despite opposition from some religious groups. Over 500 000 women have benefited from safe abortion care since 2004, and safe abortion
has contributed to a reduced rate of serious abortion-related morbidity [25].

7) GOVERNANCE AND LEADERSHIP

Nepal has made modest progress in strengthening voice and accountability, but achieved little change in terms of rule of law and control of corruption from 2002 to 2011 [24]. Social auditing is used to devolve authority and improve accountability to the people served, especially the poor and marginalized [30].

Nepal’s interim constitution explicitly recognizes human rights, including in relation to women’s and children’s health and the Supreme Court has ruled on violations of these rights. The Secretary of the Ministry of Health and Population affirmed that: “Reframing basic health needs as health rights has remained the main thrust of the policies of the Government of Nepal...Many government strategies and policies related to safer motherhood, neonatal health, nutrition and gender are anchored in the principles of human rights”. There is evidence that these human rights based policies and programmes have contributed to strengthened community participation, and more equitable service delivery with improved accessibility, availability and utilization [31].

8) LESSONS LEARNED AND FUTURE PRIORITIES

Significant progress has been made in reducing maternal and child mortality through a combination of health, cross-cutting and multi-sector factors. Sustaining these advances will require concerted action on the challenges that remain:

Tackle inequalities and improve access to care in remote areas: There is evidence of worsening economic inequalities in access and use of health services. Maternal mortality is higher among women from mountain districts, rural areas, and in certain caste/ethnic groups [12]. There are also differences in the nutritional status of children by caste/ethnicity. The factors leading to inequalities in health outcomes and service use need to be better understood and addressed [2]. Based on progress achieved in other countries and recommendations from the literature, a number of strategies may reduce inequities and poor access to care in remote areas of Nepal in particular. Measures could include: (i) taking steps to limit the extent to which terrain and distance impact on uptake of care, e.g. by strengthening outreach services, addressing financial barriers to reduce out-of-pocket spending on transportation and establishing rationally located birthing centres; (ii) improving the availability and quality of care available to remote and vulnerable communities, e.g. by testing the use of mHealth technologies and forming partnerships with NGOs and the private sector; (iii) increasing equality and strengthening monitoring systems so that data on service use can be disaggregated by caste and ethnicity.

Target neonatal mortality: In recent years, neonatal mortality rates have stagnated. Neonatal care in health facilities needs to be strengthened and the Newborn Care Package requires careful monitoring to ensure its successful integration into existing programmes [13].

Improve quality of care: As the number of deliveries occurring in institutions grows [29], it is increasingly important that the quality of care is closely monitored to prevent avoidable deaths. As private sector facility use also increases, monitoring of quality in the private sector is also needed [13]. In Nepal the roll-out of maternal death reviews is a strategy to help improve quality of care.

Improve uptake of family planning: Nepal requires further progress to meet the MDG contraceptive prevalence rate target. In order to further reduce total fertility (which would help
reduce maternal and child mortality) disparities in contraceptive use need to be addressed, and the reasons for non-use need to be better understood [26]. An improved mix of contraceptives, with less reliance on sterilization, is also needed. Nepal could also focus on the integration of sexual education in schools and target interventions to adolescents to improve uptake of contraception.

**Reduce undernutrition:** Anemia remains a major child and maternal health problem: 18% of women were malnourished in 2011. Better coordination between various sectors and ministries is required: multi-sectoral collaboration will be necessary to address maternal undernutrition.

**Fill human resources gaps:** Nepal requires investment in expanding the skill base, size and equitable distribution of their health workforce, and of midwives in particular. In 2010, Nepal had just seven doctors, nurses and midwives per 10 000 population, compared with the World Health Organization ‘critical threshold’ of 23 per 10 000 population [27]. Staff shortages remain an obstacle, and the quality of training, particularly for SBAs, needs to be improved [16]. In Nepal, although task-shifting has, to an extent, mitigated some of the impact of workforce shortages, measures are also needed to ensure that FCHVs are not overburdened [13].

9) REFERENCES

### Table 1: Key Country Indicators *(NEPAL)*

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>1990-1999</th>
<th>2000-2009</th>
<th>2010-PRESENT</th>
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<tr>
<td><strong>POPULATION</strong></td>
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<td><strong>HEALTH FINANCING</strong></td>
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<tr>
<td><strong>ECONOMIC DEVELOPMENT</strong></td>
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<tr>
<td><strong>HEALTH WORKFORCE</strong></td>
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<tr>
<td>PHYSICIANS (per 1000 population)</td>
<td>0.05 (1990)</td>
<td>0.05 (2001)</td>
<td>N/A</td>
</tr>
<tr>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
<td>N/A</td>
<td>0.46 (2004)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>EDUCATION</strong></td>
<td></td>
<td></td>
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<tr>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
<td>49(M) 17(F) (1991)</td>
<td>63(M) 35(F) (2001)</td>
<td>71(M) 47(F) (2011)</td>
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<tr>
<td><strong>ENVIRONMENTAL MANAGEMENT</strong></td>
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<tr>
<td>ACCESS TO SANITATION FACILITIES (% of population with improved access)</td>
<td>7 (1990)</td>
<td>21 (2000)</td>
<td>35 (2011)</td>
</tr>
<tr>
<td><strong>URBAN PLANNING/RURAL INFRASTRUCTURE</strong></td>
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<td><strong>HUMAN DEVELOPMENT INDEX</strong></td>
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<tr>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>.34 (1990)</td>
<td>.40 (2000)</td>
<td>.46 (2012)</td>
</tr>
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<td>COUNTRY RANK (2012)</td>
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<td></td>
<td>157</td>
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<tr>
<td><strong>GOOD GOVERNANCE</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CONTROL OF CORRUPTION (extent that public power is used for private gain)</td>
<td>-0.01 (1990)</td>
<td>-0.54 (2000)</td>
<td>-0.83 (2012)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators. Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)*
### Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>MOST RECENT AVAILABLE</th>
<th>SOURCE</th>
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<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning)</td>
<td>64 (2011)</td>
<td>DHS 2011</td>
</tr>
<tr>
<td></td>
<td>PREGNANCY TO POST-NATAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANTENATAL CARE (% of women attended at least 4 times during pregnancy by any provider)</td>
<td>50 (2011)</td>
<td>DHS 2011</td>
</tr>
<tr>
<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (as % of total births)</td>
<td>36 (2011)</td>
<td>WDI</td>
</tr>
<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth)</td>
<td>45 (2011)</td>
<td>DHS 2011</td>
</tr>
<tr>
<td>NEWBORN TO CHILDHOOD</td>
<td>INFANT FEEDING (Exclusive breastfeeding for first six months)</td>
<td>70 (2011)</td>
<td>DHS 2011</td>
</tr>
<tr>
<td></td>
<td>PNEUMONIA (Antibiotic treatment for pneumonia)</td>
<td>7 (2011)</td>
<td>DHS 2011</td>
</tr>
</tbody>
</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Nepal

USMR / NMR – Nepal

Source: World Development Indicators

MMR / TFR – Nepal

Note: Dashed line indicators missing data. Source: World Development Indicators.

Nepal: Review of Data and Literature on Progress Towards MDGs 4 and 5
Nutrition - Nepal

**Timeline with key Policy inputs – Nepal**

<table>
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<tbody>
<tr>
<td><strong>1977</strong> Expanded Program on Immunization;</td>
<td><strong>1991</strong> National Health Policy;</td>
<td><strong>2001-2015</strong> National Plan of Action (education)</td>
</tr>
<tr>
<td><strong>1975</strong> First Long-term Health Plan;</td>
<td><strong>1993</strong> National Blood Policy;</td>
<td><strong>2002</strong> Abortion legalized</td>
</tr>
<tr>
<td><strong>1979</strong> National Immunization Programme;</td>
<td><strong>1997-2017</strong> Community-based Integrated Management of Childhood Illness; National Reproductive Health Strategy; National Safe Motherhood Programme; National Plan of Action for Gender Equality and Women’s Empowerment; Second Long-term Health Plan</td>
<td><strong>2004</strong> Sector-wide approach adopted; National Neonatal Health Strategy</td>
</tr>
<tr>
<td><strong>1988</strong> Female Community Health Volunteer Programme.</td>
<td></td>
<td><strong>2005</strong> Safe Delivery Incentive Programme (later the Aama programme);</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2006-2017</strong> National Skilled Birth Attendant (SBA) Policy; National Safe Motherhood and Newborn Health Long-term Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2007</strong> Interim Constitution; Free Health Care Policy;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2009</strong> Community-based Newborn Care Package;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2010-2015</strong> Second Nepal Health Sector Plan.</td>
</tr>
</tbody>
</table>

*Note: Dashed line indicates missing data. Source: World Development Indicators*
10. Peru: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Peru has made significant progress in improving the health of women and children. Peru is one of 10 ‘fast-track’ countries that making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). Several factors have played a key role in driving this progress:

Health sector: Health sector reform in the 1990s and the subsequent development of policies and programmes to address barriers to health care, with prioritization for women and children, have supported Peru’s progress in meeting its targets. Health insurance schemes and cash transfer programmes have been developed with a focus on rural areas and vulnerable populations, leading to an increased number of institutional births. Retention strategies and financial incentive schemes have been implemented to combat human resource capacity constraints in the health sector.

Sectors outside of health: The enforcement of legislation that guarantees access to education for all has impacted positively on maternal health and child nutrition. Educated mothers are most likely to make informed decisions throughout their pregnancy. Furthermore, international agencies and the government have addressed malnutrition rates through the development of exclusive breastfeeding initiatives, health promotion campaigns and nutrition supplementation.

Governance and leadership: The Government of Peru has taken a pivotal role in developing the country’s health care system, enforcing a rights-based approach to its policies, which include social protection and public investment initiatives. Peru has undertaken innovative and culturally sensitive approaches to improve access to health services and has used evidence and results from demographic health surveys and national data to inform decision-making.

Lessons learned: Peru continues to advance towards meeting its development goals. However, challenges remain and must be prioritized in order to accelerate efforts. These include: (i) tackling socioeconomic and geographic inequity; (ii) expansion of human resources for health; (iii) increased public spending on health; (iv) alignment of policies and programmes to ensure a streamlined approach; (v) prioritization of newborn health; (vi) provision of a comprehensive reproductive health service; and (vii) improvement in the quality of health services.

2) INTRODUCTION

Peru is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, China, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Rwanda and Viet Nam) that is making progress to achieve MDGs 4 and 5a (to reduce maternal mortality). There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development. Progress in improving the health of women and children can also be accelerated by a range of health sector, multi-sector and cross-cutting strategies.

Health sector: Health sector investments; monitoring of outcomes; political prioritization of essential

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4 In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).

Peru: Review of Data and Literature on Progress Towards MDGs 4 and 5
health interventions; and ensuring legal entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health:** Education; nutrition; and infrastructure, water and sanitation; Innovation and research.

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping Peru make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Peru has developed and implemented as part of efforts to maximize performance in key health and development areas.

### 3) COUNTRY CONTEXT

**Overview**

Peru is situated in western Latin America and has had a turbulent political history. Between 1960 and 1990, the country was held back by long periods of economic stagnation or, worse, economic crisis, which had a negative impact on health systems and outcomes [1]. However, since 2000, Peru has enjoyed a period of relative political stability: prudent macroeconomic policies and a favourable growth of Peru’s gross domestic product per capita, as it grew by more than 50% between 1990 and 2012 (see Table 1: Key Country Indicators).

The government has prioritized economic growth and equity improvement within Peru’s development plans. Low inflation, reduction of external debt and poverty alleviation are key contributors to the country’s progress. Strong economic growth has had a positive impact on reducing national poverty rates. Peru is currently one of the highest-performing economies in Latin America.

Peru’s indigenous population represents 25% of the country’s population; it is the largest indigenous population in Latin America in terms of proportion of the population [2]. Although only 22% of the total population live in rural areas, these communities are most affected by poverty (see Table 1: Key Country Indicators). Targeted social policy frameworks have given priority to providing employment and economic opportunities for impoverished communities and social investment for market access and income improvement.

(For Table 1 see Section 10)

### 4) KEY TRENDS, TIMELINES AND CHALLENGES

Peru has made significant progress towards achieving MDG 4: throughout the world, it is the country which is making the greatest advances in reducing its under-five mortality rate (USMR) [4]; it has also made strides in improving newborn health. The total fertility rate (TFR) has reduced from 4 in 1990 to 2 in 2011 and progress is being made to reduce maternal mortality and meet MDG 5.

Peru has faced many challenges to achieve this progress [5]. Peru’s geography restricts certain populations’ access to health care, with rural, often indigenous, populations living in remote, hard-to-reach areas. Economic barriers prevail in Peru: out-of-pocket expenditure remains high and high levels of poverty endure, while public spending on health is low. The health workforce is constrained by human resource shortages, low capacity and inequitable distribution; quality of care is limited or poor.
Finally, service uptake is low: sociocultural and gender barriers restrict access to health care. Peru has low levels of institutional delivery and a lack of culturally appropriate delivery and health services for women.

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Health sector investments

Strategic health investments by the Government of Peru and external development partners have been aligned under numerous short- and long-term social protection and public investment strategies to tackle poverty and to improve the supply of and demand for health services [2, 7, 8]. The alignment of government and external partner efforts has helped drive momentum on reproductive, maternal, newborn and child health (RMNCH). In Peru, as in Nepal, focused efforts by external development partners have been central to improving RMNCH outcomes.

Total public and private health expenditure per capita has increased from (PPP, Int$) $194 in 1995 to $496 in 2011 (see Table 1: Key Country Indicators), with a general trend of prioritization of women. The national comprehensive health insurance scheme, Peru Health Reforms Support (PARSalud), and other programmes and investments, including cultural adaptations to delivery of services, have made significant contributions to improving the proportion and quality of institutional deliveries (see Health Sector Spotlight) [9].

A government and international focus on reproductive and family planning, during the 1990s, led to the implementation of a National Family Planning programme. The programme was not without controversy: in the late 1990s, there were concerns about informed consent and violations of human rights surrounding the promotion of female sterilization [10]. However, the TFR decreased from 4 in 1990 to 2 in 2011, while the use of modern methods of family planning amongst married women doubled between 1986 and 2009 (from 23% to 50%) (see Table 1: Key Country Indicators).

During the 2000s, efforts were made to build the capacity of human resources across several national and regional programmes; these investments were seen to be effective [9].

Several initiatives have been employed to improve the distribution of health professionals [11, 12]. A system of incentives has been developed that offers financial rewards based on improvements in the quality of health service delivery. This intervention has worked in parallel with initiatives focusing on staff retention and the targeted allocation of health workers in remote and poor areas to improve the distribution of health professionals.

Other achievements in human resources for health (HRH) have included the development and implementation of a strategic plan (2010–2014) and the establishment of a national HRH observatory [12]. However, Peru continues to face challenges in this field: there is limited evidence on effective mechanisms to address HRH shortcomings [13].

Outcomes monitored using evidence

Despite continued challenges to the implementation of a comprehensive health information system, achievements in data collection and vital statistics have led to improved decision-making and prioritization of RMNCH. Sub-national data are collected to identify and tailor responses in specific geographical areas. In Peru, poverty maps and household targeting systems have been used by the public sector to guide efforts and to improve equity in the allocation of funds and delivery of services.
Most ‘fast-track’ countries routinely use evidence from surveys and studies to inform policy, redress gaps in services and improve quality of care on RMNCH. Peru has used findings from Demographic and Health Surveys (DHS) to improve health services and monitoring systems and to highlight RMNCH as a political priority. Findings from the 1996 DHS, indicating a lack of progress in the reduction of maternal and newborn mortality, prompted the Government of Peru to adapt its strategy and programmes [14].

Registration at birth is estimated to have coverage of 93% (as of 2007). However, coverage of cause of death is estimated to be lower, at 50–74% [15]. The establishment of a maternal mortality surveillance system has helped to identify, analyse and inform actions to reduce the number of maternal deaths in Peru. Improvements to government forms and death certificates and civil-society-led advocacy efforts to amend the Peruvian Civil Code to enable unmarried mothers to register children without a father present, have led to improvements in the reporting of vital statistics [14,16]. This improved vital registration system has been used alongside other data such as national surveys to improve decision-making and prioritize RMNCH.

**Political prioritization of essential health interventions**

The Government of Peru’s sustained political will to improve RMNCH and the efforts of development partners have driven improvements in the quality of health facilities and the rate of institutional births. The government has prioritized improvements in maternal and newborn health, as demonstrated through its commitments to achieving several international and national development goals, as well as targeting institutional delivery rates as a key indicator of progress [17]. The ‘Roundtable for the Fight Against Poverty’ (Mesa de Concertación de Lucha Contra la Pobreza) and the development of a National Agreement (Acuerdo Nacional), are both significant multi-sector efforts to align government policies, reduce poverty, and meet the MDGs and other development priorities based on stakeholder input and coordination [8, 18]. Health-sector-specific investments have included: investments in PARSalud that focus on improvement of health through infrastructure, equipment, human resources and incorporation of culturally sensitive birthing practices; and a maternal and newborn health (MNH)-specific strategy integrated within the overall health sector plan (2011–2015) [7]. The government, international organizations and several nongovernmental organizations (NGOs) have recently partnered to create a neonatal alliance, the ‘Colectivo de Salud Neonatal’ prioritizing improvements to newborn health, meeting MDG 4 and regional commitments to deliver appropriate and good-quality care for mothers and newborns, to ensure a healthy and productive life [19].

**Legal and financial entitlements, especially for underserved populations**

For over 40 years, Peru has prioritized reaching poor, rural and indigenous populations by implementing social protection programmes and facilitating access to culturally appropriate, affordable care [2]. National Comprehensive Health Insurance (SIS) was established in 2002, combining and building on existing maternal-infant and school children insurance schemes; its aim was to eliminate direct user fees in public health facilities and reduce economic barriers to care [7, 9]. Various forms of insurance schemes have been implemented across ‘fast-track’ countries to provide financial protection against catastrophic health care costs and help achieve universal coverage. In Peru such a national health insurance scheme aims to reduce out-of-pocket costs and has been associated with increases in institutional deliveries. SIS has increased demand, coverage and use of health services included in the benefits package, with the proportion of institutional deliveries increasing from 24% of births in rural areas and 58% of births in urban areas in 2000 to 58% of rural and 85% of urban births in 2012 [7].
By 2011, over 85% of deliveries were being assisted by skilled attendants as a result of the SIS programme and the reduction in financial barriers to accessing maternity services (see Table 1: Key Country Indicators). The prioritization of interventions to facilitate safe deliveries has resulted in increased coverage of births attended by a skilled attendant. In Peru, as elsewhere, this increase in institutional delivery has been associated with a significant decline in maternal mortality ratio (MMR).

JUNTOS (‘Together’), a conditional cash transfer programme, complements these investments in the health sector. JUNTOS distributes cash incentives to targeted individuals on the condition that they access certain services. The programme focuses on rural areas with higher levels of poverty, targeting vulnerable populations including children under 14, pregnant women, widowed parents and/or older adults. JUNTOS has increased the demand for preventive health services including family planning, vaccinations for children, antenatal care (ANC) for women of childbearing age and children under five [2].

“The increase of programmes to improve the supply of maternal care and the increase in demand via the SIS have proven to be a winning combination.” Peru’s Comprehensive Health Insurance and New Challenges for Universal Coverage Report, 2013

HEALTH SECTOR SPOTLIGHT

FEMME Programme

The Foundations to Enhance Management of Maternal Emergencies (FEMME) programme was implemented in Ayacucho, a northern region of Peru, between 2000 and 2005, to address the high rate of maternal mortality, unmet need for obstetric health care, inefficiency of health services and poor management systems. The programme targeted five facilities and aimed to promote a rights-based approach to health and strengthen functional capacity of facilities [20].

Key components of the FEMME intervention include: the development of evidence-based, culturally appropriate emergency obstetric and newborn care (EmONC) protocols and guidelines; capacity building and training of health providers; strengthened community-based health and formation of a multisectoral Committee for Reduction of Maternal Mortality; improved data collection and information systems; minor infrastructural improvements; and criterion-based audits for improved quality of care.

Evaluation of the programme reported that throughout its implementation, FEMME successfully reduced barriers faced by pregnant women and strengthened facilities to provide EmONC. Met need for emergency care increased by 54% from 2000 to 2004 and there was an 80% reduction in the case fatality rate [20]. MoH reported a 45.5% increase in the number of obstetric complications dealt with and a 49% reduction in MMR [21].

FEMME received significant regional and national political support, as guidelines and protocols were incorporated into curriculums for midwifery and nursing institutions in Ayacucho. Parts of the programme were scaled up nationally as the MoH introduced FEMME’s clinical protocols and guidelines for implementation into the national framework [21].
6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
Education plays a crucial role in maternal and child survival in Peru. Improved educational status of women has been linked to lower infant mortality rates and improvements in other health indicators. Educated mothers in Peru are more likely to receive antenatal care and skilled assistance during birth; mothers with secondary and higher education are more likely to provide children with adequate nutrition [22].

Peru has some of the highest primary and secondary school attendance rates in Latin America; compulsory and free pre-primary schools have also been introduced. Peru is currently on track to achieve the MDG 2 target for universal primary education. Peru’s achievements are largely the result of key legislation, e.g. the 2003 General Law of Education, and national programmes to introduce universal and free education, which is of measurable quality, equitable, intercultural, inclusive and available to all regardless of economic means [23].

Governments, development partners and other stakeholders have aligned efforts in education to national development priorities. In Peru, making public school attendance free up to secondary level has helped reduce drop-out rates. Health promotion and behaviour change programmes have educated the population on nutrition, hygiene and HIV prevention [24].

Nutrition
Early and continuing efforts to address nutrition started in the 1980s. During the 1990s, several donor and government initiatives prioritized exclusive breastfeeding; improvements in stunting and overall child mortality in Peru have subsequently been documented [25]. Recent donor-supported efforts have provided food baskets, nutritional supplements and health promotion materials to disadvantaged families. According to the latest MDG progress report, Peru has met MDG 1, halving the proportion of people suffering from hunger [26].

Since 2006, malnutrition has achieved political prominence and has been prioritized by Peru’s government and leaders (see Multi-sector Spotlight). Similar levels of political commitment have been seen across many ‘fast-track’ countries, where national plans, strategies and laws have been established to address malnutrition and micronutrient deficiencies. The integration of nutrition programmes and alignment of policies, stakeholders and donors across sectors to improve nutrition has also been effective. In Peru nutrition has been integrated into social protection and poverty reduction programmes, targeting vulnerable populations through various mechanisms including cash transfer schemes.

The prevalence of wasted and underweight children is low in Peru compared to other Latin American countries, although stunting prevalence is high (22.9%, 2005), particularly in rural areas (up to 60%). Malnutrition rates fell from 22.6% to 17.9% between 2005 and 2010, with reductions primarily in rural areas, where malnutrition rates are highest [27]. More recently, interventions to promote healthy child growth and development focused on the first 1000 days from conception have been implemented across Peru [28, 29]. A focus on this critical period highlighted that supplementary feeding interventions beyond 24 months may be counterproductive, increasing the risk of later chronic diseases [30].

Infrastructure, water supply and sanitation
By the 1990s, responsibility for the water and sanitation sector had been transferred to the national level and a national water holding company was created. In subsequent years important
improvements were made to Peru’s water and sanitation infrastructure. Key commitments have led to improved access to clean water as coverage has increased from 75% in 1990 to 85% in 2011; sanitation coverage has increased from 54% in 1990 to 72% in 2011, although this is lower in rural areas (see Table 1: Key Country Indicators). Peru has made good progress to meet MDG 7 targets for improved access to clean water and sanitation facilities, but continued progress on access to drinking-water is needed [26].

The National Fund for Social Compensation and Development funded over 40,000 economic and social infrastructure community projects from the 1990s, with substantial investment in rural areas [31]. Recent improvements in Internet access and mobile phone networks are associated with increased inclusion of rural areas in the market economy, increased incomes and falling poverty rates [32].

Innovation and research
In Peru, there are prohibitive challenges for a pregnancy woman in rural mountainous regions to access a health facility at the time of childbirth. Facilities are few and hard to reach with limited transportation options. Culturally sensitive strategies have contributed to increases in institutional delivery in rural areas, amongst Andean and Amazonian indigenous women in particular. Developing protocols and training health professionals in vertical delivery and establishing ‘Mamawasi’, maternity waiting homes or the Casa Materna (mother’s house) resembling typical indigenous households, represent two adaptations based on population demands [34, 35]. Women from remote communities can stay at the Casa Materna until the time of delivery. They are transported to a regional hospital for specialist care, where they have the option of choosing a western-style delivery bed, or a more culturally sensitive option, traditional birthing chair, with women not needing to undress. Such policies have increased the institutional delivery rate by 20% between 1996 and 2004, with greatest improvements in rural areas, where rates tripled, from 15% to 45% [33].

Trends in increasing mobile phone usage have been identified across ‘fast-track’ countries. Mobile and electronic technology for health have been used to improve data collection, data storage, referrals and communication between patients and facilities. Initiatives in Peru are facilitating reporting of and access to data by health professionals [36]. Although there is limited documentation on the impact of these efforts on health outcomes in Peru, evidence from Rwanda demonstrated an increase in ANC visits and facility deliveries following the implementation of e-health technologies.

SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH

CRECER Programme
Working with civil society, international NGOs and the donor community, the Peruvian Government implemented the multisectoral strategy CRECER (‘Grow’) to address social exclusion and poverty issues. CRECER combines health, education, water and sanitation, housing and agricultural policies to create an integrated strategy, aligning efforts to focus on the reduction of stunting and anaemia [37].

Programmatic strategies included: conditional cash transfers with health and education components through the JUNTOS programme; improving water and sanitation infrastructure; and prioritizing care for children and women and educational programmes. The policy covered 755,044 beneficiaries in 2008, targeting districts with the highest rates of poverty and malnutrition [2]. Scale-up of the programme has led to a positive impact on household welfare indicators and contributed to reductions in childhood chronic malnutrition, from 22.6% to 17.9% in 2005 and 2010 respectively, with accentuated reductions in rural areas [2, 27, 37].
7) GOOD GOVERNANCE AND LEADERSHIP

Peru has demonstrated improvements in governance for the control of corruption (see Table 1: Key Country Indicators). Since the 2000s, government reforms and decentralization across all sectors, particularly within the health sector, have improved efficiency, collaboration and coordination in Peru. Legislation mandates that all regions and municipalities employ participatory budgeting, allowing the population to contribute to decision-making and prioritization [31]. ‘Fast-track’ countries employ different social accountability mechanisms to improve civic participation and accountability: in Nepal, social audits are to be implemented nationally, while in Viet Nam, parliamentary forums and monitoring on RMNCH are being organized.

In Peru, laws to improve sharing of government information have been implemented; these policies are upheld and monitored by the Ombudsman office [14]. A comparison of Peru with five other Latin American countries found it to have the greatest budget transparency on maternal health [36].

8) LESSONS LEARNED AND FUTURE PRIORITIES

Peru has made impressive progress towards reducing maternal and child mortality through multiple innovative health, cross-cutting and multi-sector efforts. Continued efforts to ensure further progress include:

Reduce socioeconomic and geographic inequities: Despite significant economic progress, infrastructure gaps and inequalities in education, health and access to basic amenities including water and sanitation still prevail. While Peru has experienced overall improvements in health outcomes, there are drastic regional differences, with less improvement among Amazonian indigenous populations. In Peru, Universal Health Insurance has been identified as a priority [7]; however, sustained efforts are needed to implement this policy to ensure that all Peruvians can access affordable, high-quality care.

Scale up health workforce: Peru is identified as one of 57 countries worldwide facing a HRH crisis, with significantly fewer nurses and midwives than the regional average (see Table 1: Key Country Indicators). There is a lack of medical specialists (e.g. paediatricians, gynaecologists and surgeons) outside urban areas, and high turnover of health professionals working in rural health facilities. These shortages have a negative impact on the continuity and quality of services and user confidence, leading to lower service utilization. In Peru, sound research to develop acceptable and sustainable incentive packages is urgently needed to identify context-specific solutions to overcome the challenges facing HRH [38].

Increase public spending on health: Political prioritization of SIS has shown positive results; however, public spending on social programmes and the health sector continues to lag behind the regional average and out-of-pocket payments represent a significant proportion (38% in 2011) of health funding [2, 7].

Improve coordination of health policy, programmes and data collection systems: Efforts are needed to align policies and initiatives in health and data collection systems to avoid overlap and fragmentation by decentralization and amongst government, donors and other stakeholders. Improvements to the health information system to ensure access to local and timely information will minimise underreporting, monitor achievement towards MDGs and inform decision-making [14].

Prioritize newborn health: Although MDG 4 has already been met, progress in reducing neonatal
mortality (deaths within the first month of life) has been limited. Despite Peru’s progress in childhood immunization and breastfeeding, recent evidence demonstrates declines; efforts should focus on remaining challenges to ensure progress continues.

**Better provision of comprehensive reproductive health services**: There is a need for family planning programmes in Peru, to support women’s rights and sustain declines in TFR. Efforts to overcome opposition to safe abortion services are required. The integration of sexual education programmes in Peru’s schools is particularly important, as HIV infection is highest amongst people 20–39 years of age.

Improve the quality of health services: Although the number of people with access to health care has increased significantly, the quality of these services continues to need improvement as it remains lower than in other countries in the region [2].

9) REFERENCES

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[33]. ECLAC, Millennium Development Goals: Progress Towards the Right to Health in Latin America and the Caribbean. 2008: Santiago, Chile. p. 49.
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Peru: Review of Data and Literature on Progress Towards MDGs 4 and 5


### TABLE 1: KEY COUNTRY INDICATORS** (PERU)

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>1990-1999</th>
<th>2000-2009</th>
<th>2010-PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>POPULATION</td>
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</tr>
<tr>
<td>HEALTH FINANCING</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ECONOMIC DEVELOPMENT</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HEALTH WORKFORCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYSICIANS (per 1000 population)</td>
<td>1.1 (1990)</td>
<td>0.9 (2009)</td>
<td>0.9 (2009)</td>
</tr>
<tr>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
<td>0.7 (1999)</td>
<td>1.3 (2009)</td>
<td>1.3 (2009)</td>
</tr>
<tr>
<td>EDUCATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
<td>93(M) 82(F)(1993)</td>
<td>93(M) 82(F)(2004)</td>
<td>N/A</td>
</tr>
<tr>
<td>ENVIRONMENTAL MANAGEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
<td>75 (1990)</td>
<td>80 (2000)</td>
<td>85 (2011)</td>
</tr>
<tr>
<td>ACCESS TO SANITATION FACILITIES (% of population with improved access)</td>
<td>54 (1990)</td>
<td>63 (2000)</td>
<td>72 (2011)</td>
</tr>
<tr>
<td>URBAN PLANNING/RURAL INFRASTRUCTURE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COUNTRY RANK (2012)</td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>GOOD GOVERNANCE (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance)</td>
<td>CONTROL OF CORRUPTION (extent that public power is used for private gain)</td>
<td>-0.17 (1996)</td>
<td>-0.49 (2000)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators

+Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)

Peru: Review of Data and Literature on Progress Towards MDGs 4 and 5
### Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator Description</th>
<th>Year 1 (2011)</th>
<th>Year 2 (2012)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Pregnancy</strong></td>
<td>Demand for family planning satisfied (% of women age 15-49 with met need for family planning)</td>
<td>93</td>
<td>92</td>
<td>DHS 2011</td>
</tr>
<tr>
<td><strong>Pregnancy to Post-Natal</strong></td>
<td>Antenatal care (% of women attended at least 4 times during pregnancy by any provider)</td>
<td>94</td>
<td></td>
<td>DHS 2011</td>
</tr>
<tr>
<td></td>
<td>Skilled attendance at birth (as % of total births)</td>
<td>85</td>
<td></td>
<td>WDI</td>
</tr>
<tr>
<td></td>
<td>Antiretrovirals for women (HIV-Positive pregnant women to reduce mother-to-child transmission)</td>
<td>100</td>
<td></td>
<td>UNAIDS, Report on the Global AIDS Epidemic, 2012, published via AIDSinfo</td>
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<tr>
<td></td>
<td>Postnatal care for mothers (% of mothers who received care within two days of childbirth)</td>
<td>92</td>
<td></td>
<td>DHS 2011</td>
</tr>
<tr>
<td><strong>Newborn to Childhood</strong></td>
<td>Infant feeding (Exclusive breastfeeding for first six months)</td>
<td>71</td>
<td></td>
<td>DHS 2011</td>
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<tr>
<td></td>
<td>Immunization (Children ages 12-23 months receiving DTP3)</td>
<td>91</td>
<td>83</td>
<td>WHO and UNICEF Estimates of National Immunization Coverage (WUENIC) 2012</td>
</tr>
<tr>
<td></td>
<td>Pneumonia (Antibiotic treatment for pneumonia)</td>
<td>51</td>
<td></td>
<td>DHS 2010</td>
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</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Peru

USMR / NMR - Peru

Source: World Development Indicators

MMR / TFR - Peru

Note: Dashed line indicates missing data. Source: World Development Indicators
Nutrition – Peru

Note: Dashed line indicates missing data. Source: World Development Indicators
### Timeline with key Policy inputs - Peru

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>1970s</strong> First social protection policies introduced</td>
<td><strong>1990s</strong> Economic and social reforms (including health sector reform);</td>
<td><strong>2000s</strong> Political decentralization (including health);</td>
</tr>
<tr>
<td><strong>Early 1980s</strong> Food assistance programmes established</td>
<td><strong>1991</strong> National Fund for Compensation and Social Development (FONCODES);</td>
<td><strong>2001-2003</strong> National Roundtable for the Fight against Poverty (Mesa); Cultural Adaptation Strategy of Maternity Services;</td>
</tr>
<tr>
<td>(Cocinas Populares and Vaso de Leche)</td>
<td><strong>1992-1997</strong> National Family Planning programme</td>
<td><strong>2002</strong> Comprehensive Health Insurance (SIS);</td>
</tr>
<tr>
<td><strong>1986</strong> Initiation of Demographic and Health Surveys (ENDES)</td>
<td><strong>1994</strong> Program for Basic Healthcare for All (PSBT);</td>
<td><strong>2003</strong> General Education Law;</td>
</tr>
<tr>
<td><strong>Pre-1990</strong> Implementation of vertical programmes for child health by the Ministry of Health (MoH).</td>
<td><strong>1994-2002</strong> Local Health Administration Committees (CLAS) ;</td>
<td><strong>2005</strong> MoH vertical delivery technical standard</td>
</tr>
<tr>
<td></td>
<td><strong>1998</strong> Maternal and Child Health Insurance (SMI) ;</td>
<td><strong>2006</strong> Multisectoral Strategic Plan for HIV/AIDS</td>
</tr>
</tbody>
</table>
11. Rwanda: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Rwanda has made significant progress in improving the health of women and children. It is one of 10 ‘fast-track countries making progress to achieve Millennium Development Goals (MDGs) 4 (to reduce child mortality) and 5a (to reduce maternal mortality). A combination of factors have played a key role in driving this progress:

Health sector: In response to a severe health workforce shortage (especially of midwives), limited health infrastructure, and very high rates of maternal and child mortality, the Government of Rwanda prioritized reproductive, maternal, newborn and child health (RMNCH) throughout its policies and major health sector reforms within a context of strong national ownership and health sector decentralization. In the last 10 years, the focus on health systems strengthening and integration of services, as well as the rapid expansion of innovative financing mechanisms, have increased the availability of, and equity in access to, RMNCH services.

Sectors outside of health: In recognition of the strong links between health and sustainable development, the government of Rwanda has prioritized multi-pronged approaches encompassing the health sector and other areas such as education, nutrition, and water and sanitation. Free primary education is available and special attention has been paid to eliminate gender disparity in primary and secondary education.

Governance and leadership: The Government of Rwanda has employed innovative and evidence-based reforms to develop a coordinated response to improving RMNCH outcomes. It has aligned all ministries and development partners under the Vision 2020 Strategy and its subsequent policies, and established intersectoral collaborations, which have been an essential driver in the improvement of RMNCH outcomes.

Lessons Learned: Despite notable improvements in RMNCH, maternal and newborn mortality and morbidity remain high in Rwanda. Key priority actions to accelerate progress are to: (i) increase the number and improve the distribution of skilled birth attendants; (ii) improve the quality of health services; (iii) improve geographical access to health facilities; and (iv) strengthen efforts in the areas of family planning, newborn health and nutrition.

2) INTRODUCTION

Rwanda is one of 10 ‘fast-track’ countries (which also include Bangladesh, Cambodia, China, Egypt, Ethiopia, the Lao People’s Democratic Republic (PDR), Nepal, Peru and Viet Nam) that is making progress to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality)9. There is evidence that improvements in gross domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of strategies from within and outside the health sector.

Health sector: Health sector investments; monitoring of outcomes; political prioritization of

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9 In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).

Rwanda: Review of Data and Literature on Progress Towards MDGs 4 and 5
essential health interventions; and ensuring legal entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health:** Education; nutrition; and infrastructure, water and sanitation; innovation and research

This summary highlights policies and programmes in health and sectors outside of health as well as other key areas such as governance and leadership identified in the literature and by key informants as helping Rwanda make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Rwanda has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) **COUNTRY CONTEXT**

**Overview**
Rwanda is a land locked country in central east Africa with both mountainous terrain and plateaus. Following decades of unrest, up to a million lives were lost during the 1994 genocide, which left a further two million homeless. The government began to rebuild the country with policies to support equitable economic development. Policies emphasized investment in major infrastructure, commercial and agricultural productivity and skills development. Agriculture and the service sector became key contributors to economic growth.

The gross domestic product per capita rose from (purchasing power parity, PPP, Int$) $707 in 1990 to $1167 in 2012 (see Table 1: Key Country Indicators) [2]. Further social and political reform led to higher living standards and increased life expectancy. The total fertility rate (TFR) is at 5 births per women and nearly half of the population are below 14 years of age; despite urbanization, over 81% of the population lives in rural areas (see Table 1: Key Country Indicators) [2].

(For Table 1 see Section 10)

4) **KEY TRENDS, TIMELINES AND CHALLENGES**

In the last decade, Rwanda has made dramatic improvements in RMNCH and is on track to achieve MDGs 4 and 5a (see graphic MDG 4 and 5 trends). Between 2000 and 2010, the modern contraceptive prevalence rate increased from 4% to 42%; the presence of a skilled provider during child birth increased from 31% to 69%; and full child immunization coverage increased from 69.8% to 90.1%. Rwanda’s maternal mortality ratio (MMR) decreased by more than 50% over the same period and the under-five mortality rate (USMR) fell by more than 70% [3, 5].

To achieve the much-needed progress in RMNCH outcomes in post-genocide Rwanda, the government had to overcome a number of challenges. Rwanda faced a severe health workforce shortage, especially of midwives. Other challenges included its limited health infrastructure, poor access to institutional and skilled care during pregnancy and child birth and inadequate coverage of emergency obstetric and newborn care (EmONC) services, as well as an extremely low uptake of family planning services in a context of rapid demographic growth. In Rwanda there are both socioeconomic and geographic barriers to health care that prevent women from accessing essential RMNCH services [5].
In response, the Government of Rwanda prioritized RMNCH throughout its policies and major health system reforms. On its road to universal health care, the country has focused on health systems strengthening, government-led planning, evidence-based policy making, strong community involvement, innovative health financing, health workforce and infrastructure development, a community-based health insurance (CBHI) scheme and a performance-based financing (PBF) system. The complementarity of these various supply- and demand-side interventions has enabled marked improvements in coverage and access to health services (see Table 2: Key RMNCH coverage indicators) [5, 8].

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) HEALTH SECTOR INITIATIVES AND INVESTMENTS

Health sector investments

Health financing and donor alignment: The Government of Rwanda has strong oversight and ownership over its national development agenda [8]. Any health system spending and decision-making in Rwanda is steered by the central and local government and organized under a sector-wide approach (SWAp) framework and the Vision 2020 Strategy. The SWAp framework has helped improve aid effectiveness and facilitated greater coordination across government health priorities and plans. In Rwanda, domestic and external partners are required to align to the government’s legislation, policies and strategies. The health sector is governed through a decentralized system, where 30 districts are responsible for implementing health financing policies and for delivering equitable and efficient health services.

In line with the Government of Rwanda’s objective to be independent from development aid by 2020, there has been a decrease in external funding (as a proportion of the total health expenditure), from 52% in 2000 to 42.6% in 2008 [9]. However, from 2003 to 2010, official development aid for RMNCH has increased annually by US$ 7.4 million, which equates to a 29.5% mean annual increase [10]. The health sector’s budget as a percentage of the total government expenditure has also been on a continual increase, from 8.2% in 2000 to 18.2% in 2008 (see Table 1: Key country indicators). Since 1990, government expenditure on health per capita has increased [9].

Human resources: Delivering quality RMNCH services requires an adequate number of skilled health workers. Decades of instability in the region have greatly reduced Rwanda’s health workforce through emigration and mortality [8, 9]. As of 2010, there were 0.10 doctors per 1000 population and 0.7 nurses/midwives per 1000 population [2]. Prior to 1997, no midwifery cadre was trained in Rwanda. Since 2005, the government of Rwanda has increased its efforts to address the challenge of the human resource shortage through various reforms and initiatives, such as the decentralization of human resource management and the increase in the number and quality of skilled birth attendants (especially midwives). Rwanda has also gone further and established new norms and professional standards to improve quality of care [11–14].

The government has invested in a long-term vision to build a profession high quality sustainable workforce at all levels. As well as engaging health personnel from other countries, e.g. to re-establish the Kigali Central Referral Hospital, the government also focused on expanding its human resources beyond small scale cooperatives. It has partnered with a consortium of US Institutions of medicine, nursing, health management and oral health [15,16].

To mitigate the workforce shortage in Rwanda, 45,000 community health workers (CHWs) provide essential health services at the village level, an initiative that started in 1995 [13]; Rwanda has
worked towards increasing and achieving equitable distribution and deployment of their health workforce. One of Rwanda’s strategies has been to create new positions and roles: traditional birth attendants have been given new responsibilities as community mobilizers for RMNCH. The financing of health facility staff and CHWs is based on Rwanda’s national PBF system (see Health Sector Spotlight); salaries of health facility staff are adjusted according to improvements in quantity and quality of their outputs [17].

**Outcomes monitored using evidence**

To ensure effective decision-making within the health sector, the government has prioritized evidence-based policies and strategies [8]. All services within the health sector, from the community to the national level, are integrated under a monitoring and evaluation (M&E) framework [13]. This comprehensive system has enabled the close monitoring and analysis of RMNCH, for improved priority setting, planning and resource allocation [12, 13].

The web-based Health Management Information System integrates data from a breadth of sources, such as the CHW Information System, the CBHI Monthly Indicator Reporting System, and data from private health facilities [13]. Data from the health management information system are reviewed regularly to inform health sector strategic plans, monitor results, assess progress and facilitate priority setting, planning and resource allocation.

Since 2009, maternal death reviews have been scaled up at the national level in three forms: facility-based audits, verbal autopsies (community-based reviews) and confidential enquiries into maternal deaths. Maternal death reviews are used to understand causes of deaths and to inform health sector planning [18]; training for child and newborn death reviews is currently being scaled up. In the absence of functional vital registration systems, some ‘fast-track’ countries have found solutions to help gather data. In Nepal, census data, surveys and studies are used to monitor mortality, while in Rwanda, there is a systematic and functional community reporting system in place, where CHWs are employed to record births and maternal and child deaths [13]. Various community committees participate in M&E activities, through the verification of facility activity reports and by providing feedback on health service provision [15]. Rwanda has made health information publically accessible to enable a wider range of stakeholders to use information to improve health services.

**Political prioritization of essential health interventions**

The numerous health sector reforms that have taken place in the last decade confirm the government’s prioritization of MDGs 4 and 5. The government’s sustained focus on health systems strengthening has been a key factor in providing effective RMNCH services. Instead of implementing vertical and disease-specific programmes, the government has been pooling these funds (i.e. The US President’s Emergency Fund for AIDS Relief and Global Fund to fight AIDS, TB and Malaria) to finance the integration of services: namely, primary health care services [9]. This transition from a vertical to an integrated health service approach has also been implemented in other ‘fast-track’ countries.

In Rwanda, all health facilities whether public, private or not-for-profit (mainly faith-based) are integrated within the public health system and governed by the Ministry of Health (MoH). Although faith-based health centres may not offer modern methods of family planning, they are obliged under the Family Planning Policy to provide clients with information on all family planning options and to refer them to family planning outlets (postes secondaires) where they can access the required services [19]; this is another example of service integration.

Until recently, Rwanda had very restrictive abortion laws that only permitted abortion to protect a...
woman’s physical health or to save her life, which included heavy administrative procedures. In May 2012, the government made a step towards securing women’s reproductive rights by including cases of rape, incest, forced marriage and fetal impairment as legal grounds for abortion.

Legal and financial entitlements, especially for underserved populations

In the Vision 2020 Strategy and throughout the government’s policies and strategies there is a commitment to securing equitable social and economic development [8, 20]. The government’s objective of providing universal health care is an indication of its readiness to address economic and social barriers to accessing health services [7, 13].

Insurance schemes have been implemented in Rwanda to provide financial protection against catastrophic health care costs and help achieve universal coverage. Various initiatives have been implemented since 2000 to improve financial and geographic access to RMNCH services, such as the innovative CBHI scheme known as mutuelles [5, 7, 21–23] (see Multi-sector Spotlight). A measure of its impact is that between 2000 and 2007, growth in utilization of health services was greatest among the poorest quintile [6]. Such schemes were further reformed in 2011 to a three-tiered system of premiums to enable the poorest households to pay a lower premium or no premium at all [7, 23] (see Health Sector Spotlight).

In Rwanda, a key initiative that has promoted access to RMNCH care is the CHW strategy. These elected community members broaden the reach of the health system by connecting communities (especially in remote areas) to health services and monitoring health at the village level. Each village elects three volunteers who are then trained by the MoH: a male and female community member for general diseases and an additional woman for RMNCH services. They provide curative services, e.g. for malaria, pneumonia and diarrheal diseases, and play a key role in expanding the coverage of family planning, antenatal care and childhood immunization; when required, they can also refer patients to health centres and hospitals [24].

“The overall objective of the latest Health Sector Strategic Plan III (2012–2018) is to ensure universal accessibility (in geographical and financial terms) of quality health services for all Rwandans.” Health Sector Strategic Plan III, 2012 [13].

**HEALTH SECTOR SPOTLIGHT**

**Improving access to RMNCH services**

*The impact of performance-based-financing:* Since 2005, a PBF system has been implemented nationwide, covering both public and private facilities as well as CHW cooperatives. This innovative results-based financing system has increased political prioritization of RMNCH at the district and village level since all health facilities and CHW cooperatives are rewarded financially based on a number of indicators (mainly RMNCH-related), such as the proportion of women delivering at health facilities, the percentage of children receiving a full course of basic immunizations and other qualitative measures such as the correct use of a partograph [13, 18]. Rwanda’s community-based PBF system incentivizes health services and referrals provided by CHWs [26]. The PBF system fosters competition between facilities and districts, as users of the PBF web database can monitor their targets against the performance of other service providers [5]. To minimize manipulation of data and corruption, government and community-based verification and audit systems have been put into place.

Several studies show that PBF increases utilization of maternal health services, boosting family planning coverage [12] and numbers of institutional deliveries [12, 17], and reducing out-of-pocket health expenditure [12]. The contractual approach also improves health facility performance [11].
and promotes the increase of district health budgets through involvement of district officials [5]. The full impact of PBF is however difficult to measure as other parallel initiatives within the health system tend to confound the results, especially in terms of outcome indicators. A next step would be to assess the impact of PBF on RMNCH health outcomes.

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
Women’s level of education has an impact on a variety of factors such as fertility rates, childbearing age and modern contraceptive use [4]. Improved educational status in women has been shown to be related to lower infant mortality rates and improved performance on other health indicators. In Rwanda, under-five mortality is almost twice as high for children born to women with no education than women with at least secondary education (63 versus 125 deaths per 1000 live births) [4].

Rwanda has made great efforts in attaining MDG 2 and is on track to achieving universal primary education. A commitment to establishing and meeting national and international targets have led to improvements in education. Rwanda has met or will reach targets for universal completion of primary education. The introduction of legislation and national programmes to introduce universal and free education is also a common theme across high-performing countries. The Government of Rwanda is implementing a 9 Year Basic Education programme which provides free primary education to all Rwandan children. As of 2012, the 12-year basic education programme is also being rolled out [27,28]. Furthermore, an increasing number of schools have adopted the United Nations Children’s Fund (UNICEF) child-friendly initiative promoting the integration of gender-sensitive initiatives to support retention of girls in schools.

Coordination between government, donors and other stakeholders has aligned efforts in education based on national development priorities. In Rwanda, these collaborations, based on multi-stakeholder partnerships, a SWAp framework and comprehensive policies and strategies, were identified as critical to improving educational outcomes. All activities are aligned under the Vision 2020 Strategy, the 2003 Education Sector Policy, the 2008 Girls’ Education Policy and the Education Sector Strategic Plan 2010–2015. In line with the Government’s multisectoral approach, the MoH contributes to various health promotion programmes in schools in the area of hygiene, nutrition and HIV prevention [26]. Similar health promotion and behaviour change programmes have also been implemented in Ethiopia, Peru and Viet Nam.

Nutrition
Achieving MDG 1 (to eradicate extreme poverty and hunger) and addressing malnutrition is a priority area within Rwanda’s multisectoral approach [13]. The political prioritization, commitment and establishment of national plans, strategies and laws to improve malnutrition and micronutrient deficiencies are documented across high-achieving countries, including Rwanda.

The integration of nutrition programmes and alignment of policies, stakeholders and donors across sectors to improve nutrition has been effective in Rwanda. Since Rwanda’s adoption of the National Nutrition Policy in 2007, an inter-ministerial and coordinated approach to addressing malnutrition has been devised, through the implementation of the National Emergency Plan to Eliminate Malnutrition, a National Protocol for the Treatment of Malnutrition, a National Strategy for the Elimination of Malnutrition and the District Plan for the Elimination of Malnutrition [13]. These strategic documents have promoted a district-based national scale-up of various nutrition interventions, such as the community-based nutrition programme, nutrition activities in schools,
and improved management of malnutrition cases within health facilities and at the community level. CHWs have been involved in active nutrition screening of children since 2009 [13].

Although Rwanda needs further progress to reduce the proportion of people who suffer from hunger by 2015 [29], it has improved some key nutrition-related indicators. Between 2005 and 2010, the percentage of underweight children reduced from 22% to 11%; however, as in Cambodia, Lao PDR and Nepal, continued focus is needed. From 2005 to 2010, the prevalence of anaemia among children in Rwanda decreased from 52% to 38%, and from 33% to 17% among women aged 15–49. There has also been an increase in Vitamin A administration, from 87% to 93% for children aged 6–59 months and from 34% to 52% for mothers in the postpartum period [4, 30].

Infrastructure, water supply and sanitation

After the 1994 conflict, the government focused on rebuilding the country’s infrastructure, including the health system. Today, 60% of the population lives within a 5 km radius of a health facility and 85% within 10km [31]. The 2005 National Health Sector Policy prioritized the development of health infrastructure in response to gaps in geographical accessibility to health services. The availability of and access to services improved during the second and third health sector strategic plans (HSSP II and III, 2005–2009 and 2009–2012) through the construction and equipment of district hospitals and health centres. In 2012, there were five national referral hospitals, 40 district hospitals, 450 health centres, and 157 private health facilities. On average, each district has at least one district hospital and one health centre per 20 000 population [13, 18].

Access to safe drinking water and improved sanitation are associated with better health outcomes. With its high population density and growth, Rwanda has faced challenges in securing environmental health and sustainability, and continued efforts are needed to increase access to clean water. Moreover, Rwanda needs to improve access to sanitation facilities for its population [29]. However, a number of policies and programmes have been elaborated to achieve the MDG targets for water and sanitation, under the umbrella of the Vision 2020 strategy which aims for universal access to clean water and sufficient sewage and disposal systems by 2020 [20].

Innovation and research

There is high political commitment for the promotion of research and innovation in Rwanda, which is emphasized across Rwanda’s policy framework [8, 20]. In 2012, a specific Health Sector Research Policy was developed to further promote and streamline the linkages between health research, policies and programmes within the health sector, as well as reinforce country ownership of the research agenda.

Rwanda has engaged in a number of innovations in the RMNCH field, with its pioneering health financing policies (PBF and mutuelles), its remarkable focus on health systems strengthening and its investment in expanding the use of information and communication technology. Since 2010, an innovative application developed by UNICEF, called RapidSMS, has been scaled up at the national level and is now an integral part of the health system. All 15 000 CHWs responsible for RMNCH promotion are linked to a central MoH server via mobile phone. They use the tool to stay connected with pregnant women, monitor ANC, identify and refer women at risk and alert the nearest health facility in case of an emergency. CHWs also use the tool to report maternal and child births and deaths within their communities [14]. Mobile and electronic technology have provided a means to improve reporting, data collection, access to data, data storage, referrals and communication. An initial evaluation of the RapidSMS pilot in Musanze district revealed an increase in ANC visits and facility deliveries [32].
SPOTLIGHT OF A SECTOR OUTSIDE OF HEALTH

Rwanda’s network of Community-based Health Insurance schemes improve access to RMNCH services

Mutuelles de santé is an innovative CBHI scheme that was established in line with the Government’s National Health Strategy to provide universal health care to the Rwandan population [7]. The scheme was piloted in 1999 and extended nationwide in the mid-2000s with the objective of providing a long-term solution to financial barriers in accessing primary health care, focusing on RMNCH services [5, 8]. The scheme intends to provide financial risk protection by lowering catastrophic out-of-pocket payments and ensuring access to health care for vulnerable populations through a network of 30 district-based mutuelles [19], managed by the district and central government. Community committees play a key role in the scheme as they are responsible for mobilizing and registering members, collecting fees and clearing bills from health facilities [5, 7, 21].

Annual premiums are approximately RWF 1000 (US$ 2) plus a 10% co-payment for each episode of illness [5,8]. CHWs transfer premiums to district-level mutuelles funds, which are 50% subsidized by external donors [7, 22]. Funds are used to pay health-care providers on a capitation basis or payment per case; a standard set of RMNCH services is covered by the scheme, such as antenatal care, deliveries, EmONC, family planning, laboratory work and essential drugs [25]. Members are entitled to ambulance transport, a minimum service package at a health centre and a complementary package at district facilities and national referral hospitals [7].

The insurance scheme was made compulsory in 2008 [7,22]. By June 2012, 90% of the Rwandan population was enrolled [8]. The scheme enhanced the performance of primary health-care providers and improved medical care utilization [7, 22]. Furthermore, the scheme was shown to reduce excessive out-of-pocket-payments and was significantly associated with a higher degree of financial risk protection [22, 23]. The mutuelles system is promoted and supported by the government, international agencies and nongovernmental organizations.

7) GOVERNANCE AND LEADERSHIP

Good governance has been prioritized through its integration into Rwanda’s overarching country development policies, and is the first pillar of the country’s Vision 2020 Strategy [20]. The government’s emphasis on cross-sector collaboration, decentralization and the SWAp framework has promoted accountability between the local and national level. There is monthly district-level Joint Action Development Forum in which all sectors and partners meet to coordinate activities. Multiple actors and sectors are brought together under government priorities. The districts also have an annual performance contract with the President’s office. This approach has helped to strengthen partner alignment and accountability for resources and results [33].

Rwanda’s performance- based environment and zero tolerance policy on corruption has further strengthened accountability among actors and institutions. The MoH and development partners participate in Bi-annual Joint Health Sector Reviews and Health Sector Working Groups (including a RMNCH working group), which promote active collaboration within the health sector [13]. Female representation within the parliament is very high, with women currently holding a majority of seats. According to the Worldwide Governance Indicators, Rwanda has been continually improving in securing political stability, rule of law, control of corruption, and government effectiveness (see table 1: Key Country Indicators) [34].
8) LESSONS LEARNED AND FUTURE PRIORITIES

Through an effective combination of innovative and evidence-based reforms within the health sector, Rwanda has made significant progress in attaining MDGs 4 and 5. Further accelerating this progress will require addressing the following challenges:

*Strengthen the midwifery workforce:* Investment is need to expand the skill base, size and equitable distribution of their health workforce. The critical shortage and poor distribution of midwives in Rwanda requires investment to be made in training and in supplementary midwifery schools. Rwanda needs 586 additional midwives to attain 95% skilled birth attendance by 2015 [14]. Examples from Ethiopia, where Emergency Surgical Officers are deployed alongside midwives, and Nepal show the value in task-shifting, providing potential strategies to reduce pressure on stretched human resources.

*Improve geographical access:* Currently, 40% of patients live more than an hour away from a health facility. To further increase access to RMNCH services, investments in infrastructure and equipment should be prioritized in underserved areas.

*Improve quality of care:* The various health sector reforms have increased the utilization of RMNCH health services. Interventions should also focus on continuous improvement and monitoring quality of care and health outcomes.

*Sustain the focus on family planning:* With Rwanda’s rapid demographic growth and high fertility rate, focus should be sustained on addressing unmet need for family planning. An integrated approach to providing family planning services, including to young people, will be necessary to further curb maternal mortality in Rwanda.

*Intensify efforts in mother and child malnutrition:* Although nutrition is an interministerial priority within the government, progress in several key indicators is lagging behind. Today, 44.2% of children are classified as stunted (51% in 2005) and severe anaemia among children and women is on the increase [4]. Better coordination between sectors and ministries and greater budget allocation will be necessary to make further progress.

*Greater focus on newborn health:* Although infant and child mortality rates have fallen dramatically, reduction in neonatal mortality is slow: it currently accounts for 39% of all deaths among children [35].

9) REFERENCES


10) TABLES AND FIGURES

Table 1: Key Country Indicators

<table>
<thead>
<tr>
<th>TABLE 1: KEY COUNTRY INDICATORS ” (RWANDA)</th>
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<tr>
<td>INDICATOR</td>
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<tr>
<td>POPULATION</td>
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<tr>
<td>HEALTH FINANCING</td>
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<tr>
<td>ECONOMIC DEVELOPMENT</td>
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<tr>
<td>GINI INDEX (0 equality to 100 inequality income distribution)</td>
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<tr>
<td>HEALTH WORKFORCE</td>
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<tr>
<td>PHYSICIANS (per 1000 population)</td>
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<tr>
<td>NURSES AND MIDWIVES (per 1000 population)</td>
</tr>
<tr>
<td>EDUCATION</td>
</tr>
<tr>
<td>ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)</td>
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<tr>
<td>ENVIRONMENTAL MANAGEMENT</td>
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<tr>
<td>ACCESS TO CLEAN WATER (% of population with access to improved source)</td>
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<tr>
<td>URBAN PLANNING/RURAL INFRASTRUCTURE</td>
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<tr>
<td>ELECTRIC POWER CONSUMPTION (kilowatt hours per capita)</td>
</tr>
<tr>
<td>HUMAN DEVELOPMENT INDEX (Composite of life expectancy, literacy, education, standards of living, quality of life)</td>
</tr>
<tr>
<td>COUNTRY RANK (2012)</td>
</tr>
<tr>
<td>GOOD GOVERNANCE (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators

+Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)
**Table 2: Key RMNCH Coverage Indicators**

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator</th>
<th>Data (Year)</th>
<th>Source</th>
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<tbody>
<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning)</td>
<td>73 (2010)</td>
<td>DHS 2010</td>
</tr>
<tr>
<td>PREGNANCY TO POST-NATAL</td>
<td>ANTE-NATAL CARE (% of women attended at least 4 times during pregnancy by any provider)</td>
<td>35 (2010)</td>
<td>DHS 2010</td>
</tr>
<tr>
<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (as % of total births)</td>
<td>69 (2010)</td>
<td>WDI</td>
</tr>
<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth)</td>
<td>19 (2010)</td>
<td>DHS 2010</td>
</tr>
<tr>
<td>NEWBORN TO CHILDHOOD</td>
<td>INFANT FEEDING (Exclusive breastfeeding for first six months)</td>
<td>85 (2010)</td>
<td>DHS 2010</td>
</tr>
</tbody>
</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition - Rwanda

USMR / NMR - Rwanda

Source: World Development Indicators

NMR / TFR – Rwanda

Note: Dashed line indicates missing data. Source: World Development Indicators

Rwanda: Review of Data and Literature on Progress Towards MDGs 4 and 5

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Nutrition - Rwanda

Note: Dashed line indicates missing data. Source: World Development Indicators
### Timeline with key Policy inputs - Rwanda

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<tr>
<td><strong>1980</strong> Expanded Programme on Immunization (EPI) Strategy; <strong>1985</strong> Health system decentralization; Development of a decentralized primary health care system post-genocide.</td>
<td><strong>1999-2000</strong> CBHI pilot project</td>
<td><strong>2001</strong> PBF pilot project;</td>
</tr>
<tr>
<td></td>
<td><strong>2000</strong> Vision 2020 Strategy; Integrated management of childhood illnesses (IMCI) strategy.</td>
<td><strong>2002</strong> Revitalization of the EPI strategy and campaign;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2003</strong> National Reproductive Health Policy;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2004</strong> National Health Policy; Nationwide implementation of PBF system</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2006</strong> Nationwide implementation of CBHI system;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2008</strong> National Facility-based Childbirth Policy; National Family Planning Policy; Institutionalization of maternal death audits; Girls’ Education Policy;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2011</strong> Pro-poor adaptation of CBHI scheme; Human Resource Strategic Plan;</td>
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<tr>
<td></td>
<td></td>
<td><strong>2012</strong> Rwanda Family Planning Policy;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2012-2018</strong> Strategic Plan to Accelerate Progress towards Reducing Maternal and Neonatal Morbidity and Mortality.</td>
</tr>
</tbody>
</table>
12. Viet Nam: Review of Data and Literature on Progress Towards MDGs 4 and 5

1) EXECUTIVE SUMMARY

Progress: Viet Nam has made significant progress in reducing infant (children under the age of one year), under-five and maternal mortality, and is ‘on track’ to achieve Millennium Development Goal (MDG) 4 (to reduce child mortality). It has already achieved MDG 5a (to reduce maternal mortality) and made good progress towards achieving 5b (universal access to reproductive health). Several strategies have played a key role in driving this progress:

Health sector: Per capita government spending on health has increased more than five-fold since 1990, and Viet Nam has also expanded the network of health care facilities and workers. The overarching reproductive health strategy has been a key mechanism for prioritizing essential interventions, including skilled birth attendance, tetanus vaccination of pregnant women and family planning services. Universal coverage is a stated objective of Viet Nam’s health systems and investment policies, and both legal and financial provisions are in place. These include general health insurance and a specific health care fund targeted at the poorest.

Sectors outside of health: Viet Nam has made significant progress in increasing access to improved drinking-water and sanitation; advances have been helped by key government policies and programmes targeted at marginalized, poor and ethnic minority households. Laws on universal education have supported improvements in school enrolment and literacy rates, while the implementation of several nutrition programmes and policies have created a positive enabling environment for significant reductions in stunting. Viet Nam has government-wide and health-sector-specific information and communications technology (ICT) strategies in place: e-health is a key area of focus.

Governance and leadership: The government has a high degree of coordination with civil society, and the media also play an active role in disseminating information related to reproductive, maternal, newborn and child health (RMNCH) issues.

Lesson learned: Despite the progress, inequity in health care access owing to geographical and financial barriers is a challenge which Viet Nam needs to address to ensure further progress towards the MDGs. Other areas of priority include improving neonatal (first month of life) intervention quality and coverage, addressing stunting and increasing youth awareness about reproductive health issues.

2) INTRODUCTION

Viet Nam is one of 10 ‘fast-track’ countries (which also include: Bangladesh, Cambodia, China, Egypt, Ethiopia, Lao People’s Democratic Republic (PDR), Nepal, Peru and Rwanda) that is making progress to achieve MDGs 4 (to reduce child mortality by two thirds) and 5a (to reduce maternal mortality by three quarters)10. There is evidence that improvements in gross

10 In addition to MDGs 4 and 5a, other targets discussed in this brief, where relevant, include MDG 3a (to eliminate gender disparity in primary and secondary education), MDG 5b (to achieve universal access to reproductive health), and MDG 7c (to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation).
domestic product per capita are generally correlated with improvements in health and development [1]. Progress in improving the health of women and children can also be accelerated by a range of health sector, multi-sector and cross-cutting strategies.

**Health sector:** Health sector investments; monitoring of outcomes; political prioritization of essential health interventions; and ensuring legal and financial entitlements to high-quality health care, especially for underserved populations;

**Sectors outside of health:** Education; nutrition; and infrastructure, water and sanitation; Innovation and research

This summary highlights policies and programmes in health, multi-sector and cross-cutting areas identified in the literature and by key informants as helping Viet Nam make progress on MDGs 4 and 5. This summary does not attempt to draw causal inferences linking these policies and programmes to improvements in maternal and child health. Instead, the policies and programmes discussed illustrate strategies Viet Nam has developed and implemented as part of efforts to maximize performance in key health and development areas.

3) **COUNTRY CONTEXT**

**Overview**

Viet Nam is the easternmost country on the Indochina peninsula in South-East Asia. The northern and central parts of the country consist of highlands and the Red River Delta, while the southern part is composed mainly of coastal lowlands, forests and the Mekong River Delta. Viet or Kinh is the dominant ethnic group, constituting 86% of the population, with ethnic minority groups of Hmong, Tay, Dao, Khmer and Nung making up the remainder of the population [2]. Approximately 30% of the population live in urban areas, and the urban population is growing at a much faster rate than the rural population.

Viet Nam is classified as a lower-middle-income country. Its gross domestic product per capita in 2012 (purchasing power parity (PPP), $Int) was $3133, a significant increase from $905 in 1990 [3] (see Table 1: Key Country Indicators). Although Viet Nam was historically an agrarian society, agriculture contributed less than 22% of the country’s gross domestic product in 2012, with other industry (41%) and services (38%) contributing larger shares. Following the political and economic reforms in 1986, known as Doi Moi, which transformed the economy from a highly centralized, planned economy to a socialist-oriented market economy. Viet Nam has many industries that employ large numbers of women, many of whom migrated from rural areas. There has been significant progress in economic development, poverty reduction and improvement in health outcomes over a relatively short period of time [4].

(For Table 1 see Section 10)

4) **KEY TRENDS TIMELINES AND CHALLENGES**

Viet Nam has achieved sustained reductions in infant (under-one) and under-five mortality, and is on track to meet its MDG 4 target. Considerable progress has also been made in reducing maternal mortality, with almost two-thirds of the decrease attributable to safer pregnancies [6]. Viet Nam has achieved its target for MDG 5a; its fertility rate has been relatively stable since 2000 [7]. Good progress has been made to expand access to quality reproductive health, including family planning and increased use of modern contraception,

*Viet Nam: Review of Data and Literature on Progress Towards MDGs 4 and 5*
with the contraceptive prevalence rate (CPR) increasing from 74% in 2001 to 80% in 2008 for the age-group 15–49 years [6, 8].

However, progress has been inequitable and there are disparities in health outcomes between population groups [9]. Key challenges to progress towards the MDG targets have included:

**Geographical barriers and inequity:** Viet Nam is home to rural populations in remote areas, posing geographical challenges in access to health care. The highland regions in Northwest and Central Viet Nam are more difficult to service than the Mekong and Red River Deltas. Interventions requiring significant support from the health system or multiple service points, such as multiple antenatal care visits, are the most inequitably distributed [8].

**High out-of-pocket health expenditure:** The Doi Moi reforms resulted in a significant reduction in health spending by the state. Health services have been increasingly financed by out-of-pocket payments, which reached a peak of 68% of expenditure on health in 2005. Out-of-pocket payments have since reduced, but remain high at 56% in 2011 [3].

(For Trends figures and Table 2 – RMNCH coverage data – see Section 10)

5) **HEALTH SECTOR INITIATIVES AND INVESTMENTS**

**Health sector investments**

Since 1990, government health expenditure per capita has increased. Viet Nam’s progress against its MDG 4 and 5 targets has in part been attributed to the country’s ability to link maternal, neonatal and child health interventions to broader health system investment [10].

The total health expenditure per capita in Viet Nam (public and private expenditure, purchasing power parity, PPP, Int$), has increased more than four-fold from $51 in 1995 to $231 in 2011 and is higher than that of neighbouring countries Cambodia and Lao PDR [11]. This increase has coincided with a reduction in the proportion of out-of-pocket health expenditure from 63% to 56% over the same period. Improvements in the provision of RMNCH services, through improved facilities, hospitals, clinics and training of medical staff, have also led to improvements in health outcomes.

Reproductive health services are provided by a service delivery network ranging from central- to commune-level provision. Every province in Viet Nam has reproductive health centres and most district health centres also provide reproductive health services. At the local level, 99% of communes have health centres, 93% of communes have midwives and 66% have doctors; 84% of hamlets and villages have health care workers. All hamlets and residential blocks have volunteer family planning collaborators [8].

Viet Nam has increased its physician workforce since the 1990s, and has established a professional midwives’ association that is affiliated to the International Confederation of Midwives (ICM). The capacity of the health workforce has been boosted by the targeted use of community health workers. The government network of facilities is further bolstered by nongovernmental organizations (NGOs), social organizations and other community partners [12].

**Outcomes monitored using evidence**
Viet Nam has made efforts to strengthen its vital registration system. The roles and responsibilities of the different ministries and government bodies regarding civil registration and vital statistics are established by a government decree. All deaths (including maternal deaths) are required to be registered within 15 days, and the level of reporting of deaths in hospitals is high. At the commune level, the commune health centre staff are responsible for reporting on vital events [8].

The National Health Survey (NHS) also includes a monitoring and evaluation (M&E) plan. The RMNCH M&E plan includes all 11 indicators recommended by the Commission on Information and Accountability. The data are published on the website of the Ministry of Health (MoH), allowing a wider range of stakeholders to use the information.

Additionally, the National Assembly is active in monitoring the implementation of critical health and related legislations, such as the National Health Insurance Law (2009) and the Law on Child Protection, Care and Education (2004). Central-level ministries coordinate on monitoring missions, visits and meeting at the provincial and district levels to actively monitor the implementation of relevant RMNCH-focused legislations, among themselves and with provincial- and district-level leaders. The missions’ findings are documented and reported to the MoH [8].

**Political prioritization of essential health interventions**

The expansion of reproductive health and family planning services, particularly to underserved populations, has been a core strategy to help reduce maternal mortality in Viet Nam.

Viet Nam’s National Strategy on Reproductive Health Care for the period 2000–2010 is a policy targeted at improving reproductive health and reducing child and maternal mortality. The strategy aims to maintain the trend in decreasing fertility, while ensuring the rights of women and couples to have children and select quality contraceptives and reduce unsafe abortions (abortions are legal in Viet Nam). It is targeted at diverse age-groups, aiming to improve the health status of women and mothers, to deliver reproductive health care to the elderly and to improve reproductive and sexual health of adolescents through education and counselling. Education will not be restricted to adolescents, however: one of the strategy’s stated objectives is to increase awareness about sex and HIV/AIDS and other sexually transmitted diseases in the general population. Viet Nam has prioritized certain interventions as part of its strategy to reduce child and maternal mortality [8].

Antenatal care and birth attendance by trained health workers: Enhanced antenatal care has been identified as an important factor contributing to safer deliveries and a reduction in obstetric complications, maternal mortality and neonatal deaths. The number of women receiving at least four antenatal check-ups is relatively high, at 60% in 2011 (see Table 2: Key RMNCH Coverage Indicators). The overall coverage of births attended by trained health workers has also increased, with 93% of births in 2011 attended by a trained health worker [7, 8].

Tetanus vaccination for pregnant women: In line with the World Health Organization (WHO) recommendations on maternal and neonatal tetanus elimination, Viet Nam has prioritized tetanus immunization during pregnancy as an essential intervention. In 2008, the national average percentage of pregnant women receiving at least two doses of tetanus vaccination stood at 94.8%; all the regions have upwards of 90% coverage for this indicator (with the exception of the Northwest) [8]. A similar focus on tetanus vaccination for pregnant women in Egypt resulted in the elimination of neonatal tetanus in 2006.
**Increasing the use of contraceptives and family planning services:** The use of contraceptives among women aged 15 to 49 years increased from 74% in 2001 to 80% in 2008, compared to 80% for Thailand (2009), 51% for Cambodia (2010) and 57% for Indonesia (2008) [3, 6, 8]. The CPR for those aged 35–44 was close to 90% in 2008, compared to around 85% in 2001. The usage rates have been mostly constant across provinces. The use of modern contraceptive methods has also increased with the met need for contraception at 78% (see Table 2: Key RMNCH Coverage Indicators). These achievements stem largely from the expansion of the reproductive health care service network from central to provincial level [8].

Viet Nam has implemented targeted interventions to improve child health. The UNICEF Child Survival and Development Programme (see Multi-sector Spotlight) adopted a multisectoral approach to tackling the issue of mortality among children under the age of five.

**Legal and financial entitlements, especially for underserved populations**

Viet Nam’s focused effort to target rural and marginalized populations has been a key factor in its progress towards its MDG 4 and 5 targets [10]. Universal coverage is a stated objective of the government’s health systems and investment policies. The state’s commitment to subsidized premium payments and developments in the health care, financing and payments systems are key to achieving this goal [14]. Viet Nam doubled its social security health expenditure as a percentage of general government health costs from 20% in 2002 to just short of 40% in 2011. The proportion of health expenditure funded by out-of-pocket expenditure has fallen over this time: Viet Nam is one of six ‘fast-track’, alongside Cambodia, China, Ethiopia, Nepal and Rwanda, to have effected such a reduction [11].

Various forms of health insurance schemes have been implemented to provide financial protection against catastrophic health care costs and help achieve universal coverage. The Health Care Fund for the Poor (HCFP) was created in 2003 in order to increase access to health services for the poor and marginalized (see Health Sector Spotlight). In 2009, the National Health Insurance Law was established, outlining an implementation plan for the national health insurance policy and its aim to achieve universal health coverage by the year 2014 (see Health Sector Spotlight). Participants are eligible for a health insurance card, which enables them to access health care from government health facilities. The National Health Insurance Law (2009) identifies the most vulnerable groups – the poorest and children under the age of six years – and looks to address their health care needs [15]. In 2013, the coverage rate of the social health insurance system was 64% [16].

**HEALTH SECTOR SPOTLIGHT**

The Health Care Fund for the Poor (HCFP) [17, 18]

The HCFP was created in 2003 in order to increase access to health services for the poor and marginalized sections of the population. It was designed in accordance with the following broad principles:

- Funded primarily by the central government, with some contribution from the provincial governments;
- Sets out clear eligibility criteria in terms of the target population;
- Covers all levels of health care service delivery, from the commune level and upwards;
- Establishes clear guidelines for implementation.
The HCFP was administered by provincial health offices, and the programme aimed to provide free health care to poor households and ethnic minorities in the mountainous regions of Viet Nam. Additionally, the programme also identified children under the age of six years as target beneficiaries. The beneficiaries were issued with a free health care card for availing services. After the introduction of a new National Health Insurance Law in 2009, the HCFP was converted into the Compulsory Health Insurance (CHI) scheme, which entitled beneficiaries with health insurance to health care fully subsidized from government revenues.

An impact evaluation found the programme to be well-targeted at the poor, with more than half of the programme beneficiaries in 2004 being in the poorest 20% of the country’s population (2004).

The evaluation also concluded that the programme has been successful in increasing the utilization of services and has reduced the risk of catastrophic out-of-pocket spending. The initial impact of the programme, however, was more pronounced for inpatient care than for outpatient care. By 2007, it was estimated that 18% [9] of the country’s population (around 15 million people) was covered by the HCFP.

6) INITIATIVES AND INVESTMENTS OUTSIDE THE HEALTH SECTOR

Education
Viet Nam has prioritized improvements in education for several decades, highlighting it as a key tool for country development.

The Viet Nam Government signed the ‘World Declaration on Education for All’ in 1990; the following decade saw the introduction of the Law on Universalization of Primary Education (1991) and the Law on Education (1998) [19]. Legislation and national programmes have been introduced to increase access to universal and free education. Viet Nam has made good progress in promoting gender equality, increasing girls’ participation in education and towards its MDG 3 target of eliminating gender disparity in education. Its MDG 3.1 target (ratio of girls to boys in primary, secondary and tertiary education) has already been met.

Viet Nam has made good progress to meet targets for net enrolment ratio in primary education, completion of primary education, and on improving the literacy rate of 15–24-year-olds. In 2010, the adult literacy rates for males and females aged 15 years and above were 95% and 91% respectively (see Table 1: Key Country Indicators).

Nutrition
Viet Nam has made good progress to reducing the prevalence of underweight children under five years of age: the prevalence of stunting in Viet Nam declined significantly from 57% in 1990 to 29% in 2010, while that of underweight children declined from 51.5% to 17.5% in the same period [20]. The government has introduced a number of laws and policies to tackle the issue, with support from multilateral agencies, such as WHO and the United Nations Children’s Fund (UNICEF). Other ‘fast-track’ countries have also demonstrated similar commitment in establishing and prioritizing national plans, strategies and laws to address malnutrition and micronutrient deficiencies. In Viet Nam, recent developments have included the introduction of the ten-year National Nutrition Strategy plan (2010–2020) and Action Plan for Infant and Young child Feeding (2012–15) (see Multi-sector Spotlight).

The integration of nutrition programmes and alignment of policies, stakeholders and donors
across sectors to improve nutrition has been effective in Bangladesh, Ethiopia, Peru and Rwanda as well as Viet Nam. The Viet Nam Government has worked with multilateral agencies on a variety of interventions: e.g. developing behaviour change communication campaigns; promoting breastfeeding, and regulating the trading and use of breast milk substitutes.

**Infrastructure, water supply and sanitation**

Community-based programmes for water, sanitation and infrastructure have been identified as key contributors to progress in women’s and children’s health. Viet Nam’s national programme for Hunger Eradication and Poverty Reduction (HEPR) and Programme 135, launched in 1998 and aimed at marginalized and poor households and ethnic minorities, prioritized development of basic infrastructure incomes in all communes. Communes were provided with the resource allocation to invest in identified local projects of their choosing, including roads, health centres, schools and irrigation and water supply systems [3].

Viet Nam has made good progress towards increasing proportion of the population using an improved drinking-water source and improved sanitation facility respectively. The percentage of the population with access to improved sanitation facilities increased significantly from 37% in 1990 to 75% in 2011. Over the same period, the percentage of the population with access to improved water sources increased from 58% in 1990 to 96% in 2011. Progress has been equitable, narrowing the gap between rural and urban populations with access to improved water sources. In 1990, 49% of rural and 88% of urban populations were using an improved drinking-water source; by 2010, 93% of rural and 99% of urban populations had access [6].

**Innovation and research**

In Viet Nam mobile and electronic technology have been used to improve reporting, data collection, access to data, data storage, referrals and communication between patients and health-care providers. Viet Nam has developed e-health capabilities by putting in place an overarching ICT strategy for all sectors, and the MoH has also developed its own ICT strategy. All hospitals at the provincial level and 75% of hospitals at the district level have Internet connectivity. E-health services and applications are applied in data storage, reporting and transfer, and the approach is being reviewed to ensure it is streamlined and applied consistently in different programmes [21].

<table>
<thead>
<tr>
<th>SPOTLIGHT OF SECTOR OUTSIDE OF HEALTH</th>
</tr>
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<tbody>
<tr>
<td>The UNICEF Child Survival and Development Programme adopted a multisectoral approach to tackling the issue of mortality among children under the age of five years. The programme explicitly focused on targeting the disadvantaged population groups such as ethnic minorities and the poor in urban and rural areas. It addressed financial, supply and demand barriers to accessing maternal, newborn and child health care, along with nutrition and water and sanitation. Some key features and outcomes of the programme in terms of improving the policy and enabling environment in Viet Nam are summarized below:</td>
</tr>
<tr>
<td>• The National Plan of Action for Accelerating Reduction in Stunting was formulated, feeding into the strategies adopted under the National Nutrition Programme for the period 2011–2020. The government decreed the legal basis for promoting breastfeeding practices and curbing illegal marketing of breast milk substitutes. The government further adopted an integrated RMNCH service package, including provisions for nutrition and water and sanitation.</td>
</tr>
<tr>
<td>• The programme helped the government in establishing the systems and the broader</td>
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</table>
environment for action and donor involvement in the area of women, children and HIV/AIDS, including the roll-out of the Preventing Mother-to-Child Transmission National Programme of Action.

- Several other programmes and M&E initiatives related to environment preservation, water quality management and community approaches to sanitation and schooling were rolled out. A specific example is the Maternal Mortality Audit (MMA), developed by the MoH, the United Nations Population Fund (UNFPA) and WHO. As of 2012, a National MMA Committee has been established and the MMA has been implemented in 14 provinces. The government is working on expanding the MMA to the whole country [21].

7) GOVERNANCE AND LEADERSHIP

Viet Nam has made open commitments to enable civic participation and improve government accountability and transparency to the public. The National Assembly has constituted a parliamentary committee on social affairs, which is also responsible for health issues, and organizes forums and monitoring missions of members of parliament on RMNCH. The government has a high degree of coordination with civil society organizations (CSOs); such collaborations have helped to create evidence on best practices and influence policy through advocacy.

The Vietnamese media play an active role in disseminating information about RMNCH issues, and are supported by a number of national bodies towards this end [21]. Like Peru, which has passed legislation to improve sharing of government information and transparency, Viet Nam appears committed to facilitating improvements in the public’s access to information.

Multistakeholder partnerships are being used to promote sustainable development through education (25). UNESCO and Samsung are working together with the government and local communities to develop and distribute multimedia teacher-training materials on “Education for Sustainable Development (ESD)” to primary schools in areas affected by climate change.

8) LESSONS LEARNED AND FUTURE PRIORITIES

Despite the significant progress made by Viet Nam towards achieving MDGs 4 and 5, key challenges need to be addressed to ensure that the gains made so far are maintained and that further progress is accelerated.

Equitable access: Inequalities in infant and under-five mortality between the poor and better-off have continued to widen in Viet Nam [9]. Geographic inequalities are also widening: Viet Nam’s richer south and Red River Delta have reduced infant mortality faster than the poorer central and northern regions of the country [22]. Reducing inequity is key to improving maternal and child health outcomes. In Viet Nam, critical actions needed to improve equitable access include: addressing financial barriers to access; investing in health systems in marginalized areas; and strengthening communication and transportation networks. The MoH-led, joint UN-supported review of equity- and health-related MDGs is a positive step, and the resolution from the Prime Minister to all provinces (planned for December 2013) could help advocate for resource allocation to address equity issues.

Neonatal intervention quality and coverage: Despite significant progress in reducing child mortality, a greater focus on newborn health is needed. Neonatal mortality in Viet Nam accounts for 60% of all deaths in infants under one year of age and 40% of all deaths in children.
under the age of five years [7, 23]. Viet Nam is placed relatively low on the global ranking for neonatal deaths within the first 28 days of life (131 of 163 countries) and for neonatal mortality rate (83 of 163 countries) [24]. To ensure that child mortality is further reduced, investment is required to: improve antenatal care; ensure better coverage of birth registrations; bolster the service quality and delivery infra-structure in the remote and mountainous regions of the country; and promote sound practices to encourage women to travel and stay at facilities around the time of delivery for safe birth [6].

**Malnutrition and stunting:** Childhood malnutrition remains a key challenge for Viet Nam. Despite the progress made by Viet Nam, there are opportunities for better coordination between various sectors and ministries on addressing malnutrition (such as safe water, sanitation, hygiene and nutrition). Increased budget allocations to health care and for better routine data collection are required to address the issue of stunting [6].

Youth awareness about reproductive health issues: Viet Nam is not alone in needing to strengthen its reproductive health services. The limited awareness among youth about reproductive health issues can lead to unsafe sexual practices [8]. A 2010 survey of youths highlighted that teenagers lacked adequate knowledge about sex [8]. The unmet need for contraception among young people (age groups 15–19 and 20–24 years) is also high, leading to a number of unwanted pregnancies and unsafe abortions (abortions are legal in Viet Nam) [6]. Interventions targeted specifically at youths and their particular needs are required.

**Scaling up sanitation and hygiene:** At present diarrhoea and pneumonia contribute to 10% and 12% of under-five mortality respectively. Related morbidity and mortality can be reduced with improved sanitation and critical hygiene behaviours. Only 24% of care-givers use soap for hand-washing after faecal contact and only 6.5% use soap for hand-washing before feeding a child*. Only 76% of the population have access to improved sanitary facilities. An improved policy, institutional and funding environment will be required, in order to internalize the latest approaches to community mobilization, pro-poor sanitation marketing, and hand-washing promotion.

‘Fast-track’ countries such as Viet Nam have made significant progress in improving maternal and child health and have either met or are on track to achieve MDGs to reduce maternal and child mortality. This summary does not attempt to draw causal inferences linking improvements in RMNCH to the implementation of particular policies and programmes. Instead, the progressive policies and programmes discussed illustrate leading strategies in health, multi-sector and cross-cutting areas that have helped Viet Nam make progress on MDGs 4 and 5.

Viet Nam has shown admirable commitment to reducing maternal and child mortality: collaboration between government, civil society and multilateral partners and a focus on community-based approaches have helped to sustain advances. However, further steps could be taken to ensure that progress is equitable across populations. In order to continue the advances made so far and further reduce the incidence of child and maternal mortality, further efforts need to be made in reducing disparities in access by addressing geographical and financial barriers, improving neonatal (first month of life) intervention quality and coverage, addressing stunting and increasing youth awareness about reproductive health issues.
9) REFERENCES


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[24]. Every Newborn Action Plan to End Preventable Deaths, Viet Nam Toolkit, UNICEF and WHO.

## Tables and Figures

### Table 1: Key Country Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1990-1999</th>
<th>2000-2009</th>
<th>2010-Present</th>
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<tbody>
<tr>
<td><strong>Population</strong></td>
<td></td>
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<tr>
<td><strong>Health Financing</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Economic Development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gini Index (0 equality to 100 inequality income distribution)</td>
<td>36 (1993)</td>
<td>36 (2008)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Health Workforce</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians (per 1000 population)</td>
<td>0.4 (1990)</td>
<td>0.5 (2001)</td>
<td>1.2 (2010)</td>
</tr>
<tr>
<td>Nurses and Midwives (per 1000 population)</td>
<td>N/A</td>
<td>0.8 (2002)</td>
<td>1 (2010)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls’ Primary School Net Enrollment (% of primary school age children)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Adult Literacy Rate (% of males (M) and % females (F) aged 15 and above)</td>
<td>94(M) 87(F) (1999)</td>
<td>94(M) 87(F) (2000)</td>
<td>95(M) 91(F) (2011)</td>
</tr>
<tr>
<td><strong>Environmental Management</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Urban Planning/Rural Infrastructure</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Human Development Index</strong> (Composite of life expectancy, literacy, education, standards of living, quality of life)</td>
<td>VALUE (Reported along a scale of 0 to 1. Values nearer to 1 correspond to higher human development)</td>
<td>.44 (1990)</td>
<td>.53 (2000)</td>
</tr>
<tr>
<td><strong>Country Rank (2012)</strong></td>
<td></td>
<td></td>
<td>127</td>
</tr>
<tr>
<td><strong>Good Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control of Corruption (extent that public power is used for private gain)</td>
<td>-0.43 (1996)</td>
<td>-0.60 (2000)</td>
<td>-0.56 (2012)</td>
</tr>
</tbody>
</table>

*See Table 2 for data on coverage of key RMNCH indicators

*Source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)
### Table 2: Key RMNCH Coverage Indicators

<table>
<thead>
<tr>
<th>CONTINUUM OF CARE STAGE</th>
<th>INDICATOR</th>
<th>MOST RECENT AVAILABLE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-PREGNANCY</td>
<td>DEMAND FOR FAMILY PLANNING SATISFIED (%) of women age 15-49 with met need for family planning</td>
<td>95 (2011)</td>
<td>MICS 2011</td>
</tr>
<tr>
<td></td>
<td>PREGNANCY TO POST-NATAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANTEPARTUM CARE (%) of women attended at least 4 times during pregnancy by any provider</td>
<td>60 (2011)</td>
<td>MICS 2010-2011, RH.7</td>
</tr>
<tr>
<td></td>
<td>SKILLED ATTENDANCE AT BIRTH (%) of total births</td>
<td>93 (2011)</td>
<td>WDI</td>
</tr>
<tr>
<td></td>
<td>POSTNATAL CARE FOR MOTHERS (%) of mothers who received care within two days of childbirth</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>NEWBORN TO CHILDHOOD</td>
<td>INFANT FEEDING (%) Exclusive breastfeeding for first six months</td>
<td>17 (2011)</td>
<td>VNM_MICS_2010-2011</td>
</tr>
<tr>
<td></td>
<td>IMMUNIZATION (%) Children ages 12-23 months receiving DTP3</td>
<td>95 (2011)</td>
<td>WHO and UNICEF Estimates of National Immunization Coverage (WUENIC) 2012</td>
</tr>
<tr>
<td></td>
<td>PNEUMONIA (%) Antibiotic treatment for pneumonia</td>
<td>68 (2011)</td>
<td>MICS 2010-2011</td>
</tr>
</tbody>
</table>
Figure 1: Trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR); Maternal Mortality Rate (MMR) / Total Fertility Rate (TFR) and Nutrition – Viet Nam

USMR / NMR – Viet Nam

![Graph showing trends of U5 Mortality Rate (USMR)/Neonatal Mortality Rate (NMR) over time with Source: World Development Indicators.]

MMR / TFR – Viet Nam

![Graph showing trends of Maternal Mortality Rate (MMR) and Fertility Rate (TFR) over time with Source: World Development Indicators.]

Note: Dashed line indicates missing data. Source: World Development Indicators.
Nutrition – Viet Nam

Note: Dashed line indicates missing data. Source: World Development Indicators
Timeline with key Policy inputs – Viet Nam

|----------|-----------|-----------|
13. Conclusion and next steps

This country specific data and literature review has highlighted key policies, strategies and programmes in the health sector and in sectors outside of health that have contributed to progress on MDGs 4 and 5 in 10 fast-track countries. As a subsequent analysis, in each of the 10 countries, ministries of health and health and development partners will consider this background review as one input to a multistakeholder review and policy analysis of success factors for women’s and children’s health. Success factor study teams in each country will support the policy analyses.

Countries use a range of resources and reports to track their progress on women’s and children’s health, such as national MNCH reviews, MDGs reviews, post-2015 consultations. The objective of the multistakeholder review will be to synthesize lessons learned from a range of resources and to capture different stakeholder’s perspectives, from both within and outside the health sector, on key policies and programmes that made a difference for women’s and children’s health. Countries can use this opportunity to describe how they achieved the improvements, focusing on the factors, drivers, actors and contexts that contributed to reductions in maternal and child mortality.

Success factor country teams have highlighted why the multistakeholder review and policy analysis will be a useful process, such as, to:

- Synthesize a range of different reports for an overarching policy story on country progress for women’s and children’s health and the MDGs
- Identify lessons learned to inform national planning processes
- Provide opportunities for policy dialogue with development partners, nationally and internationally
- Highlight country success and facilitate sharing lessons across countries
- Inform the post-2015 development agenda
14. Annexes

Annex 1 – Data and literature review: Methods

**Literature review**
The literature search strategy comprised an initial standardized search and then a tailored search depending on the relevance of results generated for each country. The search results across all countries have been documented in the flowchart below.

The initial standardized search consisted of the following approaches:

- Overall success factors study literature review and synthesis by Frost et al (2012)\(^1\). This literature review method and search strategy was then adapted for the individual country summaries as described below.
- A literature search using PubMed and Google Scholar databases.

Search strings for the databases were developed based on the literature review conducted by Frost et al (2012) and the specific requirements of the country summary reports. Variations of search strings were run in the different databases to identify which combinations would bring up the most relevant results across each country.

Depending on the results emerging from this initial search, a more tailored search for the country was conducted to generate more relevant findings and/or to identify context specific policies and programmes. This involved looking at government and organizational websites, as well as conducting bibliographical searches from retrieved articles. Search strings for the tailored searches have been documented for each country.

A two phase process was undertaken to assess abstracts and full-text articles for review based on the following exclusion criteria:

- **Outcomes:** The document does not explain how reductions were achieved for at least one of the following study outcomes: a) change in rates of under-5 mortality (birth to 59 months); b) change in rates of neonatal or neonatal mortality (birth to 1 month); c) change in rates of infant mortality (1 month – 12 months); d) change in rates of post-neonatal mortality (1 month-59 months); e) change in rates of maternal mortality (death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management).
- **Country focus:** The document mentions the country name but does not provide further MNH information.
- **Sub-national:** The document has a subnational (i.e. district level) focus only with no national impact.
- **Timeline:** The document refers to information pre-1990

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http://www.who.int/pmnch/knowledge/publications/qualitative_evidence_synthesis.pdf

\(^2\) http://search.who.int/search?q=rwanda&ie=utf8&site=default_collection&client=pmnch_en&proxystylesheet=pmnch_en&output=xml_no_dtd&oe=UTF-8&sitesearch=http://www.who.int/entity/pmnch&ip=58.169.184.103&access=p&sort=date:D:d1&entqr=3&ud=1&proxycustom=%3CADVANCED/%3E
- Duplicate: The document is a duplicate version of another report or study that is published elsewhere.
- Commentary: The document is conceptual, an advocacy piece, a commentary, or a textbook that does not include national-level empirical data.
- Inaccessible: Books or reports that are not publically accessible for screening within the study’s time period.

**Flow Chart for all 10 countries: Bangladesh, Cambodia, China, Egypt, Ethiopia, Lao PDR, Nepal, Peru, Rwanda, and Vietnam**

**Extraction of quantitative data**
To facilitate comparisons across countries and across methods, (e.g. between the 10 fast-track countries and with the statistical analysis of 144 low and middle income countries over 20 years), health indicators and coverage data was analysed from global data sources, such as Countdown to 2015. The World Bank DataBank and other databases were used to obtain data on demographic, economic, socio-political, infrastructure, health workforce and good governance indicators for all countries. Data from the World Bank DataBank were also used to develop charts highlighting trends over time for maternal, child and newborn mortality as well as fertility rates for each country.
Interviews with key experts

Key informant interviews were conducted with 2 to 3 experts in women’s and children’s health in each country. The objective of these interviews was to gain further insight into the key policies and programmes that contributed to reductions in maternal and child mortality in each country and to help validate the literature and data reviews. Experts were identified through existing stakeholder and partner networks and WHO focal points, and represented academia, government, UN and civil society organizations.
Annex 2 – Analytical framework for the success factors study

INDEPENDENT VARIABLES - POLICY INVESTMENTS AND INTERVENTIONS

Well-functioning health systems with universal access to services:
- Service delivery (e.g. skilled birth attendance)
- Health workforce (e.g. doctors per 1000 population)
- Health Information (e.g. health information systems)
- Medical products, vaccines and technologies (e.g. measles vaccine coverage)
- Financing (e.g. total health expenditure per capita)
- Leadership and Governance (e.g. health sector policies and programmes)

Public investments and policies outside the health sector
- Promoting vibrant rural and urban communities, including infrastructure investments (e.g. electricity: kilowatt hours per capita)
- Ensuring education (e.g. universal enrolment and completion of primary education and greatly expanded access to and completion of post-primary and higher education)
- Environmental management (e.g. access to clean water, control of air pollution)
- Building national capacities in science, technology and innovation (e.g. number of scientific publications, Global Innovation Index)

Cross-cutting factors
- Demographics/ Population Dynamics (e.g. Total Fertility Rate, % urban population)
- Overcoming inequalities (e.g. GINI; Gender Inequality Index)
- Good Governance (e.g. Control of corruption),
- Women’s political, economic and social participation (e.g. % women in parliament, female labor force participation)
- Economic development (e.g. GDP)

OUTCOME/DEPENDENT VARIABLES
- Maternal mortality ratio
- Under five mortality rate
- Note: Other health status or outcome variables were considered as outcome or dependent variables e.g. related to underweight and stunting as indicators of nutritional status, and global burden of communicable and non-communicable diseases

Adapted from the UN Millennium Project’s ‘clusters of public investments and policies’\(^{13}\) and WHO’s ‘health systems building blocks’\(^{14}\)

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