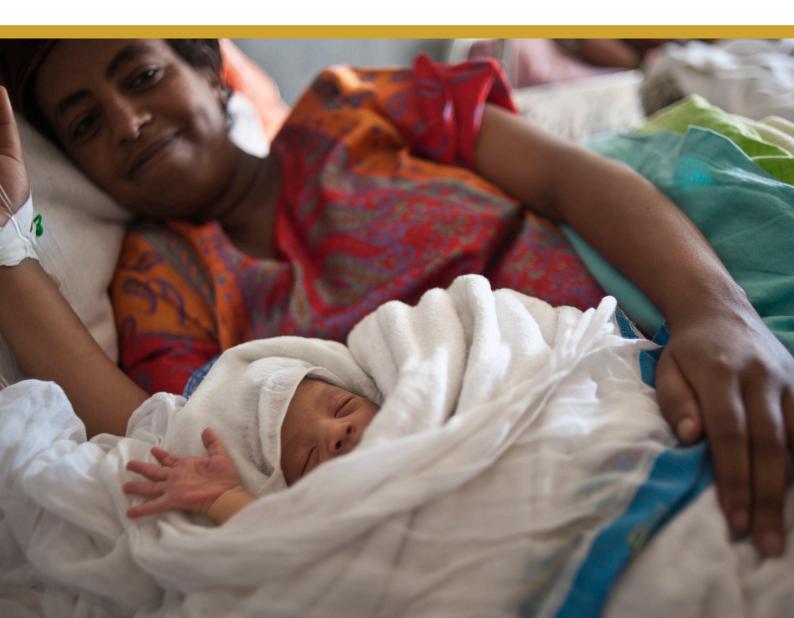








COUNTDOWN TO A HEALTHIER ETHIOPIA: Building on Successes to Accelerate Newborn Survival



BACKGROUND: THE COUNTDOWN COUNTRY CASE STUDY

In September 2013, two years ahead of the deadline, the Federal Ministry of Health (FMOH) and UNICEF jointly announced that Ethiopia had successfully reduced the under-5 mortality rate by two-thirds between 1990 and 2012. Ethiopia had already achieved Millennium Development Goal 4.¹

In an effort to better understand Ethiopia's remarkable achievement of MDG 4, a team of researchers, led by the Ethiopian Public Health Institute in cooperation with the Federal Ministry of Health and other partners, conducted an in-depth Countdown Country Case Study, with support from Countdown to 2015. The study's findings, summarised in this policy brief,* provide valuable guidance on best practices and lessons learnt for other low-income countries that seek to accelerate health improvements and reduce child deaths. Based on rigorous methods for synthesizing evidence, the case study offers new insights on how Ethiopia achieved its dramatic reduction in child mortality, and examines key factors, both within and outside of the health sector, that contributed to this success. Finally, it identifies gaps and emphasises important areas where progress has been too slow and offers practical recommendations for policy and programmatic strategies to accelerate further progress.

METHODS

This in-depth Countdown Case Study utilised a mixed methods approach to explore how policy development, strategic planning, programme implementation, health system performance, and funding for health care contributed to improvements in child survival. Research methods included: extensive desk review and synthesis of existing research studies, policy and programme documents; in-depth analysis of quantitative data from national surveys; and triangulation of evidence using expert opinion from in-depth interviews. A range of coverage indicators and equity measures were analysed, and estimates of deaths averted were developed using the Lives Saved Tool (LiST). Key events influencing governance, the health care system, and policy were analysed using tools developed by Countdown to 2015, and summarised in a timeline of key policies, strategies, and programmes, which demonstrates how the sharpened national focus on reproductive, maternal, newborn, and child health (RMNCH) contributed to Ethiopia's achievement in reducing under-5 mortality.



Photo: UNICEF: Ethiopia

A detailed report of Ethiopia Countdown Case Study findings will be available soon at www.ephi.gov.et.

MAJOR FINDINGS AND KEY MESSAGES

Success Stories

- Dramatic reduction in child mortality, especially since 2005 — Ethiopia has achieved its MDG 4 target
- Improved access to and utilisation of essential health care services — Ethiopia substantially increased coverage for interventions across the continuum of care
- Improved nutritional status of under-5 children, particularly reduced stunting — largest single factor in reduced mortality

Remaining Gaps

- Limited progress on newborn health neonatal mortality is among the world's highest
- Low coverage for key lifesaving interventions, despite gains — *especially low for services at and around childbirth*
- Health funding mainly dependent on external donors — government health expenditure has grown more slowly

Keys to Success

- Sustained high level commitment and multisectoral policy platform — *contributions from inside and outside the health system, including economic development, agriculture, and education*
- Broader access to basic infrastructure improved roads, electricity, telecommunications
- Rapid increase in growth in health funding, especially from international donors — *helped expansion of health infrastructure and health work force*
- Comprehensive health sector planning and Health Extension Programme — brought essential health services to rural areas
- Early adoption of global initiatives including MDGs — mobilised funding and drove stronger collaboration and partnership

TARGETING NEWBORN SURVIVAL

- Ethiopia must *renew* and *deepen* its commitment to saving newborn lives.
- Ethiopia must build on its successes in improving child survival to reduce newborn mortality.
- Ethiopia must *invest* in the health and well-being of its *next* generation.
- Ethiopia CAN and MUST succeed in dramatically improving newborn survival.



Photo: UNICEF: Ethiopia

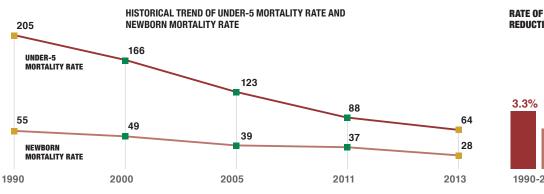
DRAMATIC PROGESS ON CHILD SURVIVAL

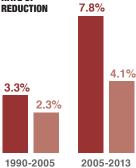
Ethiopia Achieved MDG 4 ahead of schedule

In 1990, Ethiopia's under-5 mortality rate was among the highest in the world, at 204 per 1,000 live births. By 2012, when Ethiopia's achievement of MDG 4 was announced three years before the MDG deadline, the rate had dropped to 68,and it reached 64 per 1,000 live births by 2013.^{1, 4} The average rate of reduction was significantly higher than the rates of decline observed in many other Sub-Saharan African countries and even in some middle-income countries.^{2, 3} The annual rate of decline accelerated to 7.8% between 2005 and 2013. However, Ethiopia's neonatal mortality rate, one of the highest in the world, declined much more slowly. Newborn deaths remain a major challenge: newborns account for more

than 40% of under-5 deaths (Figure 1).

Analysis of trends in the prevalence of nutritional risk factors shows a substantial decline over the years 2000 to 2014 in the proportion of children under five years of age that are stunted, underweight, or experienced wasting. In 2000, close to 60% of children were stunted; by 2011 the stunting rate dropped to 44.4% and further decreased to 40.1% in 2014. Similarly, the proportion of children categorized as underweight declined from 41% in 2000 to 28.7% by 2011. However, wasting, a measure of acute malnutrition, changed only slightly from 2000 to 2011.^{4, 5, 6}





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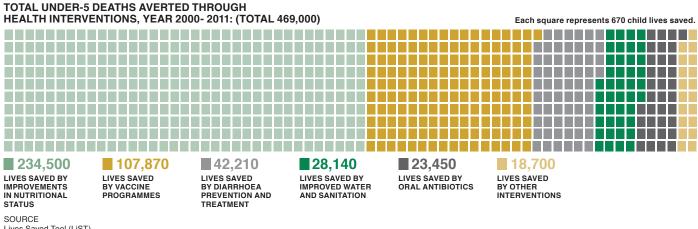
SOURCES 1990, 2013: UN Inter-agency Group for Child Mortality Estimation (IGME) Report 2014; 2000, 2005, 2011: Ethiopia DHS

Figure 1. Reduction in under-5 and newborn mortality

HOW ETHIOPIA AVERTED NEARLY HALF A MILLION CHILD DEATHS

Estimates developed using the Lives Saved Tool (LiST) show that about 469,000 child lives were saved between 2000 and 2011 as a result of Ethiopia's scale-up of high-impact interventions, as shown in *Figure 2*. Improvements in nutritional status accounted for about half of under-5 deaths averted, with reduced stunting (resulting from a combination of health and non-health factors) accounting

for 44% and reductions in severe wasting for 6%. The scale up of key child health interventions also provided substantial returns, as vaccination programmes accounted for 23% of deaths averted, treatment of childhood diarrhoea for 9%, pneumonia for 5%, improved water and sanitation for 6%, and insecticide-treated bednets (ITNs) for malaria prevention for 3%.*



Lives Saved Tool (LiST)

Figure 2. Deaths averted through health interventions, 2000-2011

COVERAGE TRENDS: KEY RMNCH INTERVENTIONS

Coverage for essential health interventions has shown significant improvement across the continuum of care, especially since scale-up of Ethiopia's flagship Health Extension Programme in 2005. Changes in intervention coverage resulted from increased access to health care and from overall improvement in socio-economic conditions.

Among interventions during pre-pregnancy, contraceptive prevalence rate (CPR) rapidly increased from only 8% in 2000 to 28.6% in 2011 and 42% in 2014, while demand for family planning satisfied increased from 18.4% to 53.1% and 63.2% in the same years. With increased access to and use of contraceptives, the total fertility rate has shown a rapid decline from 5.5 in 2000 to 4.1 births per woman in 2014. Maternal and newborn health interventions, including 4 or more antenatal care visits (ANC 4+), skilled birth attendance (SBA), and protection against neonatal tetanus toxoid (TT2+), also showed incremental improvement over the period. Coverage of preventive and curative child health interventions increased significantly, with BCG vaccine, DPT3 vaccine, and full immunisation coverage all increasing sharply. Treatment of diarrhoea with Oral Rehydration Solution (ORS) rose from 13% to 26% and care-seeking for pneumonia from 16% to 27% between 2000 and 2011, but coverage of pneumonia treatment has hardly budged, remaining very low at only 6.8%. The proportion of families with at least one insecticide-treated bednet (ITN) shot from nearly non-existent in 2000 to over 69% in 2005, but had declined to 55% by 2011^{4, 5, 16, 17} (*Figure 3*).

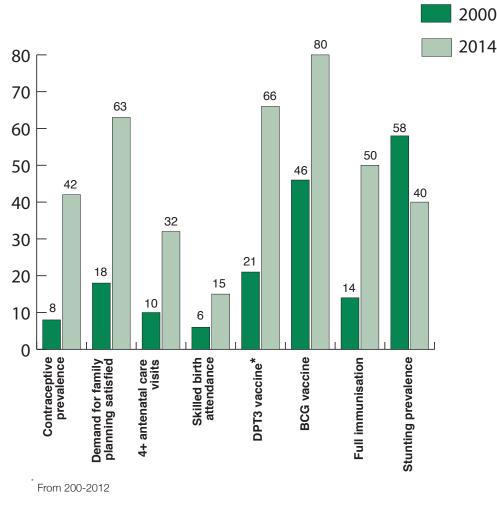


Figure 3. Trends in coverage for key RMNCH intervention, 2000 to 2014

KEYS TO SUCCESS

1. Macro-level policies and overall socioeconmic development

Guided by a series of comprehensive macro-level policies^{*} that were implemented with extraordinary commitment, Ethiopia achieved high economic growth and significant poverty reduction (*Figure 4*). This progress, coupled with a number of multisectoral and cross-cutting policies and strategies, appears to have

contributed to the success in reducing under-5 mortality rate. In particular, the contributions of policies — rural development, agricultural, disaster management, food security, especially the Productive Safety Net Programme (PSNP) — cannot be overemphasised.^{6,7}



SOURCES

GDP: IMF World Economic Outlook Database; Poverty: Ministry of Finance and Economic Development Figure 4. GDP growth and poverty rate

2. Health policies, programmes and strategies

The National Health Policy, ratified in the early 1990s, laid the foundation for Ethiopia's successes in improving child survival. It focused on decentralisation, democratisation, and equitable distribution of health services to the rural poor and disadvantaged, and particularly to women and children, and emphasised health promotion and preventive care. Guided by the health policy, four Health Sector Development Plans (HSDPI-HSDPIV) were formulated and implemented since 1998. The HSDPs provided opportunities for better coordination and integration of health sector efforts, and enabled development of relevant strategies, programmes, and interventions.¹¹⁻¹⁴

Accordingly, many high-impact programmes and interventions for child survival were formulated and implemented under the umbrella of the HSDPs, among which the Health Extension Programme (HEP) was particularly important for reduction of child mortality. The timeline in *Figure 5* shows other key policies and programmes that were relevant for improvements in child health and survival.^{9, 10, 15}

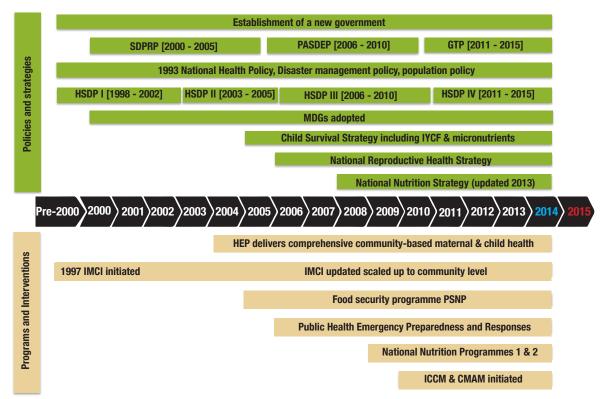
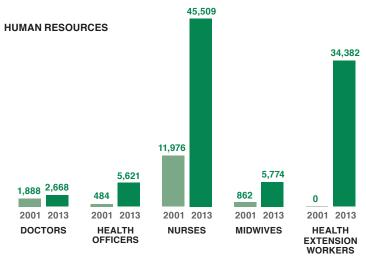


Figure 5. Time line for key milestones, policies, strategies and programmes relevant to RMNCH

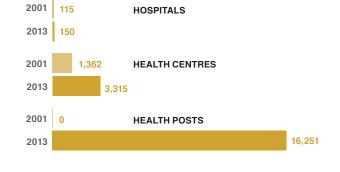
* PSDPR – Programme on Sustainable Development and Poverty Reduction; PASDEP – Plan for Sustained Development to End Poverty; GTP – Growth and Transformation Plan

3. Health system strengthening and governance

The Government of Ethiopia made intensive, and largely successful, efforts to improve health system management and governance, and to ensure an adequate and sustainable supply of resources. Health management systems have been continuously strengthened through engagement of a wide range of stakeholders, including the community at the grassroots level. Monitoring and evaluation systems were further reinforced by annual review meetings, joint review meetings, and mid-term and end-line evaluations. Adoption of the "one plan, one budget, and one report" approach has provided opportunities to strengthen planning, supervision, and monitoring and evaluation of health programs. Remarkable achievements have been attained in human resource and health infrastructure development *(Figure 6)*, as well as in ensuring adequate medicines, equipment, and other necessary supplies.



HEALTH CARE FACILITIES



SOURCES

HR: FMOH Health and Health Related Indicators 2005 EC (2012/2013);

Facilities: HSDP-4 Annual Performance report 2006 EFY (2013/14)

Figure 6. Trends in human resource and health infrastructural development

4. Increased investment in health care

Total health expenditures increased seven-fold, and per capita health expenditures more than five-fold, between 1995/96 and 2010/11. This change is attributable to the introduction of strategies such as rapid increase of the overall health worker cadre and expansion of the scope of primary care services through the Health Extension Programme. A pivotal change in total health expenditure

was observed from 2004/05 onwards, marking an important turning point as increasing resources for health resulted in overall improvements in health service delivery. Between 2004/05 and 2010/11, Ethiopia's total health expenditure increased at more than double the rate that it had increased during the previous decade (*Figure 7*).

TOTAL PER CAPITA HEALTH EXPENDITURE (USD, BY FUNDING SOURCE)

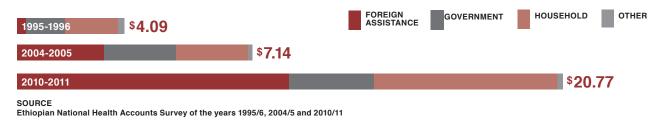
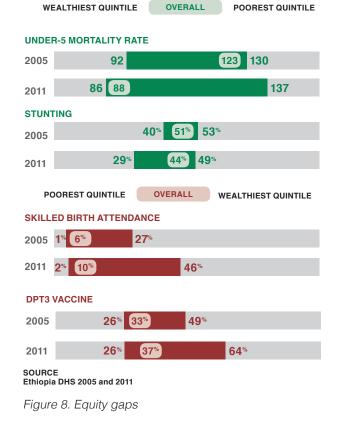


Figure 7. Total per capita health expenditure (USD, by funding source)

CHALLENGES

1. Inequities in health care

The issue of equity still remains a major health sector challenge. The disparity across wealth quintiles between the poorest 20% and the richest 20% of the population — is extreme in several coverage indicators, including skilled birth attendance, contraceptive prevalence, care-seeking for pneumonia, access to improved sanitation facilities, and access to improved water sources. The under-5 mortality rate has declined for all of the top four wealth quintiles, but has actually increased among the poorest 20%, from 130 live births in 2005 to 137 per 1,000 in 2011. Disparities in coverage also remain large across Ethiopia's administrative regions, and between residents of urban and rural areas. In two emerging regions (Afar and Somali), a significant majority receive 2 or less out of 8 essential RMNCH interventions, while in Addis Ababa a vast majority of children receive at least 6 out of the 8. These poorest children, and those who live in remote areas, are being left behind in Ethiopia's progress on child survival (*Figure 8*).



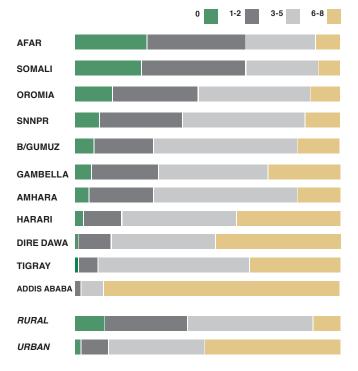
2. Slow progress on newborn survival

Ethiopia's newborn mortality rate, at 28 per 1,000 live births in 2013, is still among the world's highest, and IGME estimates that as much as 43% of under-5 mortality is attributable to deaths during the first month of life.

While newborn health began to receive policy attention in 2007, when newborn resuscitation equipment was introduced at facility and community levels, coverage of interventions targeting neonatal health has lagged behind. According to qualitative findings, Ethiopia's slow progress in reducing neonatal mortality can be

GEOGRAPHIC GAPS, 2011

Of 8 essential RMNCH interventions, % of eligible population receiving zero, some, or nearly all interventions, by region:



attributed to several factors, including lack of focus and commitment, poor health system governance, weak and uncoordinated referral systems, widely prevailing and deeply-rooted cultural practices, and low skill and confidence among health extension workers in providing essential neonatal care services. Moreover, health care facilities are often ill-equipped, in terms of the skilled health workers, sophisticated equipment, and expensive drugs needed to provide emergency obstetric and newborn care.

What causes newborn deaths in Ethiopia?

The majority of newborn deaths in Ethiopia occur due to conditions related to prematurity and neonatal asphyxia, which contribute to nearly 60% of total newborn deaths. Another 12% of newborn deaths are caused by neonatal sepsis, and pneumonia and tetanus account for about 8% and 7%, respectively. The vast majority of newborn deaths are preventable through provision of high-quality health services at and around childbirth, including skilled birth attendance and postnatal care.

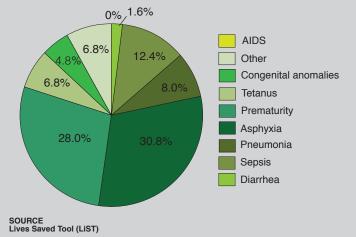




Photo: Gates Foundation

3. Low coverage of key health interventions, especially around birth

Despite positive trends over time, coverage of most interventions remains very low. This slow progress and low level of coverage is especially pronounced for interventions targeting maternal and newborn health.

4. Insufficient human resources

The Ethiopian health system faces serious challenges related to the shortage and high turnover of skilled health workers — particularly for advanced-level care, including lifesaving child health services — and of health extension workers (HEWs) at the health post and community levels. The qualitative findings underscored that deficiencies among the HEWs are often exacerbated by poor leadership, lack of supportive supervision, and high workloads, including both health and non-health activities. HEWs dedicate significant time to reporting into newly-revised health management information systems, detracting from direct service delivery. Further challenges include reduced commitment and accountability, as well as ethical and behavioural problems.

5. Unsustainable health care financing

The budget allocated for the health sector showed a marked increase after 2005; this should be considered as one of the key factors enabling Ethiopia to achieve MDG 4. National Health Account analysis reveals that both total health expenditure and per capita health expenditure tripled between 2005 and 2011. In the same period, total child health care expenditure and reproductive health expenditure increased by at least three or fourfold. The strategic shift in financial flows, utilisation, and accountability, as a result of adoption of "one plan, one budget, one report," appears to have contributed to the successful flow of funds into the health sector.

While government health expenditure increased, it remained low as a percentage of GDP, at 5.2% in 2010-11. In addition, health spending was 13.4% of total government expenditure in 2010, lower than the 15% target set by the Abuja Declaration in 2001.¹⁸ The greatest portion of government health expenditure (43%) was spent on drugs, while only 22% was allocated to hospitals.¹⁹ This contrasts with stated policies, which call for a focus on improving primary health care services.

Ethiopia's policy makers must:

- 1. Pay equal attention to health system and non-health system factors: The case study shows that factors both within and outside the health care delivery system contributed towards the achievement of the MDG4 target continuing to address these factors simultaneously will produce better health outcomes.
- Maintain commitment, support, and momentum: Strong commitment of local and federal government officials laid the groundwork for effective formulation, implementation, and evaluation of key RMNCH programmes, strategies and interventions — continued support is needed to maintain and increase this momentum.
- **3.** Address and reduce Ethiopia's high newborn mortality rate: Nearly half of all children who die do not even survive their first month of life by addressing the causes of newborn mortality, Ethiopia can reduce its under-5 mortality rate even further.
- 4. Alleviate health inequalities: Regional, urban-rural, and wealth status disparities in access and utilisation of health care services must be addressed, through demand-generation activities that confront barriers to access and quality of care *Ethiopia must leave no newborn or child behind.*
- 5. Scale up evidence-based, high-impact interventions: Programmes like iCCM, CMAM, EOS and Hib vaccination have contributed immensely to the reduction of under-5 mortality the scale-up and quality of these services must be strengthened.
- 6. Strengthen and expand Community-Based Newborn Care (CBNC) and advanced obstetric care (BEmONC & CEmONC services): More midwives should be trained to provide skills-based, high-impact childbirth and post-natal care services these interventions are proven to improve maternal and newborn health outcomes.
- 7. Tackle cultural barriers and traditional practices: Lack of awareness, and conformity to traditional practices, appear to be major constraints that prevent women from seeking skilled delivery services behaviour change communication and related activities should be strengthened.
- 8. Strengthen health sector management processes: Planning, implementation, monitoring and evaluation of health programmes, as well as use of HMIS, should be strengthened — this will create opportunities for greater improvement in key health indicators, and will save lives.



Photo: UNICEF: Ethiopia 2009/Tuschmar



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