

NARROWING THE GAPS

THE POWER OF INVESTING IN THE
POOREST CHILDREN

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Narrowing the Gaps: The power of investing in the poorest children

In 2010, UNICEF made a bold prediction: Investing in the health and survival of the most deprived children would be more cost-effective, even though the costs of reaching them are higher, because the additional costs would be outweighed by greater results.

Now, new data and analysis back up UNICEF's prediction. Indeed, the study indicates that the number of lives saved per million dollars invested among the most deprived is almost twice as high as the number saved by equivalent investments in less deprived groups.

Key conclusions

UNICEF analysis indicates that:

Investments that increase access to high-impact health and nutrition interventions by poor groups have saved almost twice as many lives as equivalent investments in non-poor groups.

Access to high-impact health and nutrition interventions has improved rapidly among poor groups in recent years, leading to substantial improvements in equity.

During the period studied, absolute reductions in under-five mortality rates associated with improvements in intervention coverage were three times faster among poor groups than non-poor groups.

Because birth rates were higher among the poor, the reduction in the under-five mortality rate translated into 4.2 times more lives saved for every 1 million people. Indeed, of the 1.1 million lives saved across the 51 countries during the final year studied for each country, nearly 85 per cent were among the poor.

Intensified focus on equity-enhancing policies and investments – and monitoring gaps in coverage – can help countries achieve the Sustainable Development Goal newborn and child mortality targets (SDG3.2).

An equity-enhancing approach to child survival can also help break intergenerational cycles of poverty. When children are healthy, they are better able to learn in school and can earn more as adults.





A case for equitable investment

Of all the world's inequities – and injustices – this is perhaps the most fundamental: Children growing up in poverty are nearly twice as likely to die before reaching their fifth birthday as children growing up in better circumstances.

An unconscionable majority of them die unnecessarily. Most of these deaths could have been prevented with practical, high-impact, and, for the most part, low-cost health interventions: insecticide-treated nets to prevent malaria; oral rehydration salts to treat diarrhoea; early immunization against vaccine-preventable diseases; primary and community-based health services such as skilled birth attendants to reduce complications during labour and delivery; early initiation of breastfeeding continuing for the first six months of life; and care-seeking by parents of young children to treat illness.



But all too often, the mothers and children who need these interventions the most – the poorest and most deprived – do not receive them.

In 2010, as the world assessed its progress towards achieving the 2015 Millennium Development Goal (MDG) targets, among them MDG 4, to reduce the under-five mortality rate by two thirds, disaggregated data revealed a disturbing picture.¹ The global rate of child mortality was declining, but in some countries it was falling faster among better-off groups than among the poor – even in countries showing overall progress. The poorest children – who are at greatest risk of dying before their fifth birthdays – were being left behind.

As evidence of these equity gaps emerged, UNICEF set out to investigate whether the world could make faster progress towards the MDG target on child mortality by focusing greater investment and effort on reaching the poorest and hardest-to-reach children and communities. Would the gains in child survival realized by such an equity-enhancing approach be large enough to offset the additional costs of reaching the most deprived?

UNICEF's 2010 study, whose findings were first presented in a short report, *Narrowing the Gaps to Meet the Goals*, predicted that extending services to the most deprived children and the most marginalized communities would not only avert more deaths. It would also do so more cost-effectively, saving more children's lives for *every dollar spent* than focusing on the easiest to reach.

Published in *The Lancet*,² the study's findings informed UNICEF's refocus on equity. They have been the basis of its advocacy for an equity-enhancing approach to development and have informed its work in the field, especially in the areas of child survival and child health. UNICEF's network of country offices began to monitor the results of a deeper focus on the most disadvantaged. Over time, experts within the organization began to observe changing patterns in access to essential health services.

The UNICEF study team revisited its earlier prediction, using new data on changes in coverage from 51 countries and modeling tools to project associated changes in under-five mortality and to assess cost-effectiveness. Its conclusions lend new weight to UNICEF's contention: As coverage in the poorest households and communities has increased, equity gaps have, in fact, narrowed – and an equity-enhancing approach has yielded these results more cost-effectively.

Indeed, this follow-up study shows that on average, every US\$1 million invested in the health of the poorest children prevented nearly twice as many deaths as an equivalent amount spent on providing the same interventions for non-poor children.

These findings have important implications – especially as governments continue their work towards achieving the Sustainable Development Goals (SDGs).

The SDGs are more ambitious than the MDGs – setting a goal of ending all preventable child deaths. This universal goal demands new and urgent action in reaching the still-unreached children.

Even if current rates of decline in under-five mortality are sustained, without additional investment in reaching the poorest, nearly 70 million newborns, infants and young children will still die from preventable causes by 2030.

With so much at stake – and so many lives hanging in the balance – we cannot afford to ignore this new evidence.

The questions

A UNICEF team of child health experts designed this follow-up study to answer three key questions:

1. Have gaps between poor and non-poor groups in coverage of high-impact health and nutrition interventions changed in recent years?
2. What is the projected impact of these changes on under-five mortality?
3. Most important, are investments that focus on reaching the poor with such interventions more cost-effective than investments in the non-poor?

The study looked at the years from 2003 to 2016.³ It is important to note that the baseline and endline years varied among countries, depending on data availability. For this reason, study findings on coverage are presented in terms of annual change.

The approach

The authors of the study used data sources based on direct observations from household surveys carried out in accordance with international standards, including the Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). Where data limitations meant direct observation of results was not possible, the authors relied on certain proxies, assumptions and models. The methodology and findings of this study underwent external review by a panel of global experts in child health and health financing. Additional sensitivity analyses were conducted to test the robustness of the findings. The authors intend to publish the full methodology and complete findings of this study in the coming months.

Selecting the countries

To conduct the study, the team selected 51 countries with either relatively high rates of under-five mortality (at least 30 deaths per 1,000 live births) or substantial numbers of under-five deaths (at least 15,000 deaths annually), and sufficient data to track changes in intervention coverage over the period studied. Taken together, these countries accounted for 5.7 million under-five deaths in 2010 – more than four fifths of all global under-five deaths in that year.

The countries studied exhibited varying patterns of poverty, ranging from countries where the majority of children live in poor households to countries where the majority of children live in better conditions. This allowed the study team to test the case for equity across a variety of country contexts.

In addition to the data and modelling used in the study, the team looked at evidence from individual countries that had been particularly successful in reducing inequities. Some of these country case studies are summarized in this report.

Defining poverty

One of the key objectives of this study was to measure whether gaps between ‘poor’ and ‘non-poor’ groups in access to high-impact interventions had changed. Widening gaps would indicate that access was becoming less equitable, while narrowing gaps would represent an improvement in equity.

To measure these gaps, it was first necessary to define who should be considered poor and who should be considered non-poor. The team used data from household surveys to divide country populations into quintiles. For each country, people falling into quintiles where average income was below US\$3.10 a day (the World Bank’s moderate poverty line), were classified as poor. People in quintiles where average income was US\$3.10 a day or above were classified as non-poor.

Of course, patterns of poverty differed among countries. In wealthier countries, such as Peru and Viet Nam, only one of the five quintiles was classified as poor. In very poor countries, such as the Central African Republic and Chad, four quintiles were classified as poor.⁴

Once the poor and non-poor populations had been identified, the study looked at how coverage gaps between poor and non-poor populations had changed during the period studied.⁵ This analysis was first carried out for each country individually and then for the aggregate population of all 51 countries. The start and end years of the period studied varied among countries.

Measuring gaps in intervention coverage

Changes in coverage of high-impact interventions were measured based on data from household surveys. To analyse these changes, the study looked at coverage data for 35 high-impact health and nutrition interventions. These interventions were grouped into six ‘packages’ (see Table 1), each of which represents a link in the ‘continuum of care’ – the continuous chain of services and interventions starting before birth (antenatal care), continuing through the newborn period (delivery care, neonatal and infant feeding and care), and the first five years of life (environmental health, immunization, curative care for sick children).

To track trends in coverage, the study identified and monitored one representative tracer indicator for each package (see Table 1).

Using survey data for each of the 51 countries, the study team then looked at changes in coverage of these six tracer indicators among poor and non-poor groups between the baseline and endline years.

Table 1.

Tracer indicators used to assess the coverage of essential maternal, newborn and child health (MNCH) interventions

INTERVENTION PACKAGE NAME	REPRESENTATIVE OR TRACER INDICATOR
1. Environmental health	Children under five sleeping under insecticide-treated nets (%)
2. Neonatal and infant feeding and care	Rate of early initiation of breastfeeding
3. Antenatal care	Antenatal care (4+ visits) (%)
4. Immunization	Fully vaccinated children (%)
5. Delivery care	Births attended by a skilled birth attendant (%)
6. Curative care for sick children	Rate of care-seeking for children with diarrhoea, fever or pneumonia

Estimating lives saved

To estimate how changes in intervention coverage translated into lives saved, the team used the Lives Saved Tool (LiST), an evidence-based software package used widely in global child health research. The tool uses data on demographics, causes of death, intervention effectiveness, and other variables to predict the impact of changes in intervention coverage on child mortality.

To estimate the number of lives saved, the study used coverage data for all 35 high-impact interventions. This in turn allowed the analysis team to estimate how gaps in under-five mortality rates between the poor and non-poor groups had changed due to changes in coverage. This calculation was made for each country and then aggregated for all 51 countries.

Calculating cost-effectiveness

Among the questions asked by the team, the most critical was whether an equity approach was truly cost-effective. Investments that promote equitable access to high-impact health interventions that focus on the poor may save lives, but do they save more lives than investments that do not improve equity? Do they represent the best use of limited resources? In a world of competing priorities and limited budgets, does an equity strategy make financial sense?

This analysis was carried out for a subset of 24 countries for which data related to the cost of intervention coverage were extracted from peer-reviewed publications.⁶ It took into account costs associated with infrastructure, human resources and medical commodities, among other factors, and weighted these costs to reflect local prices and geographical accessibility. The calculation also included the costs of bringing information to families as well as transport and other costs borne by households. Critically, the analysis factored in the additional costs associated with reaching poorer children, who are often located in hard-to-reach areas. Because these costs were not directly observed, the authors used a combination of costing data drawn from existing studies and relevant proxies.⁷

By comparing the incremental costs incurred in poor and non-poor populations to the deaths averted in each of those groups, the team was able to estimate whether investing US\$1 million among poor groups prevented more deaths than an equivalent investment among non-poor groups.

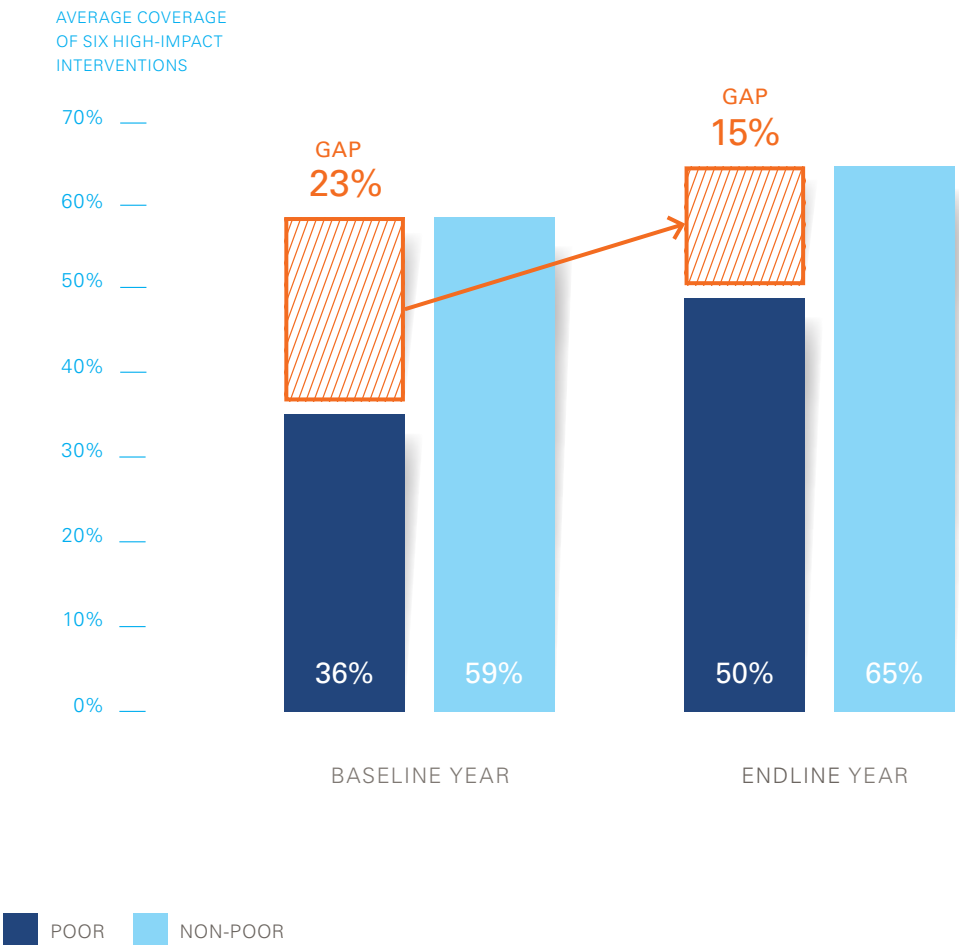
Reviewing the results

Three key findings emerge from the modelling and analysis described above – one for each of the questions posed at the outset. These findings validate the predictions set out in UNICEF’s 2010 *Narrowing the Gaps to Meet the Goals* report.

Gaps in intervention coverage have narrowed ...

For the 51 countries taken together, home to 400 million children under age 5, coverage gaps between poor and non-poor groups narrowed for all six tracer indicators (*Key Question 1*). Looking at the countries individually, gaps between poor and non-poor population groups narrowed for 37 of the 51 countries.

Figure 1: Coverage of high-impact interventions increased more rapidly for poor than non-poor
Average intervention coverage in poor and non-poor populations in 51 countries

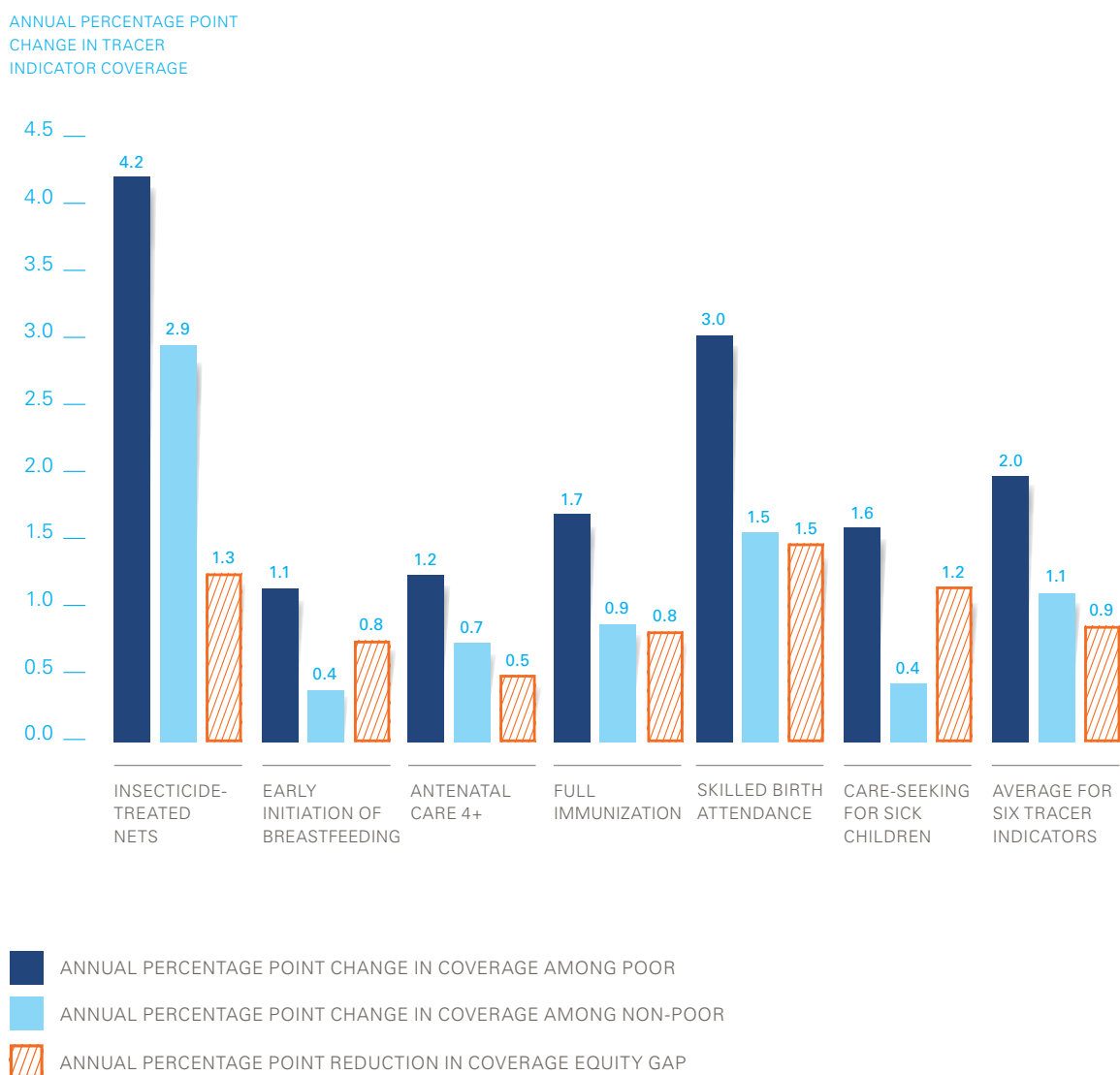


Source: UNICEF analysis based on data from Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).

Improved coverage among the poor did not come at the expense of the non-poor. Coverage improved among both poor and non-poor groups. However, the annual rate of improvement was fastest among the poor. On average, that rate was 1 percentage point faster each year for the six indicators. While a small number, when compounded over several years, this represents an impressive gain.

Equity gaps in skilled birth attendance narrowed faster than for any other tracer indicator, with annual increases of 3 percentage points among the poor compared to 1.5 percentage points among the non-poor (see Figure 2). The most dramatic increase in coverage for both poor and non-poor was seen for insecticide-treated nets, which are used to prevent malaria. Here, coverage increased by an average 4.2 percentage points annually among the poor and 2.9 percentage points among the non-poor.

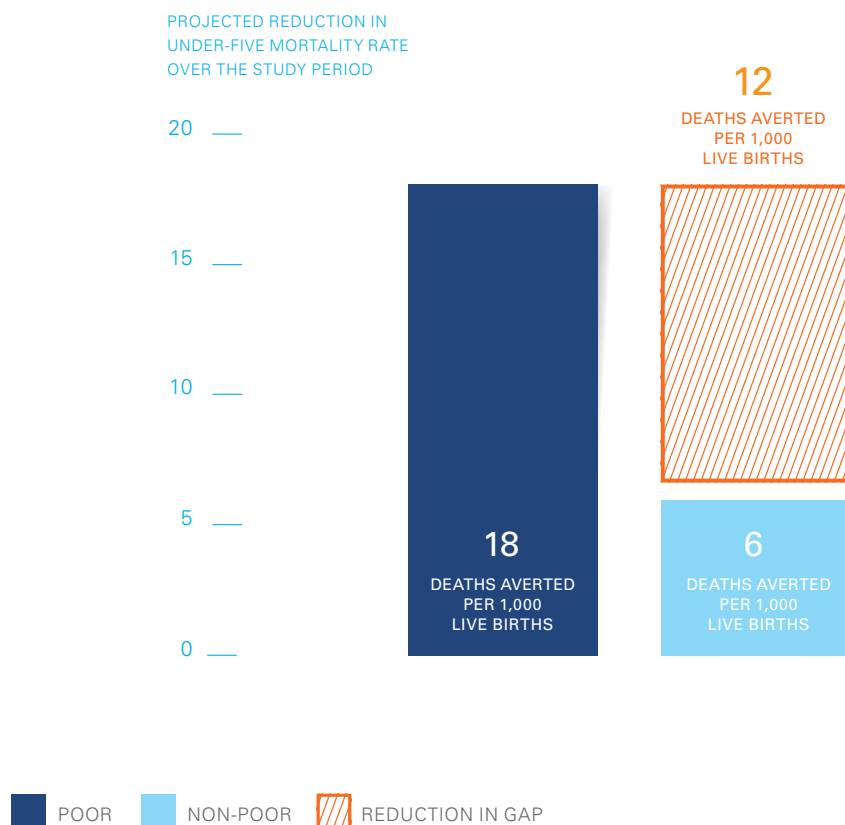
Figure 2: Coverage gaps shrank for poor and non-poor
Evolution of coverage for six tracer indicators in 51 countries



Source: UNICEF analysis based on data from DHS and MICS.

... and this has led to a reduction in inequities in under-five mortality.

Figure 3: Narrowing of intervention coverage gaps led to a narrowing of mortality gaps
Changes in average under-five mortality rates for poor and non-poor groups across 51 countries



Source: UNICEF analysis based on data from DHS and MICS.

Using the LiST model, the study estimated the number of deaths that occurred during the last year for which data was available for each country (*Key Question 2*). This number was then compared to the number of deaths that would have been expected in that year had there been no increase in coverage of lifesaving interventions, a useful simplification to acknowledge that other factors would also have had some impact.

By aggregating these figures, the study estimated the total number of under-five deaths averted by all countries through increases in intervention coverage in the final year analysed at 1.1 million. The majority, 940,000 in total, of these deaths were averted among poor population groups, where mortality rates were higher.

This led to a narrowing of the gaps in under-five mortality between poor and non-poor groups: For the aggregate population of the 51 countries, under-five mortality among the poor fell by an estimated 2.6 deaths per 1,000 live births each year, compared to 0.9 deaths per 1,000 live births among the non-poor.

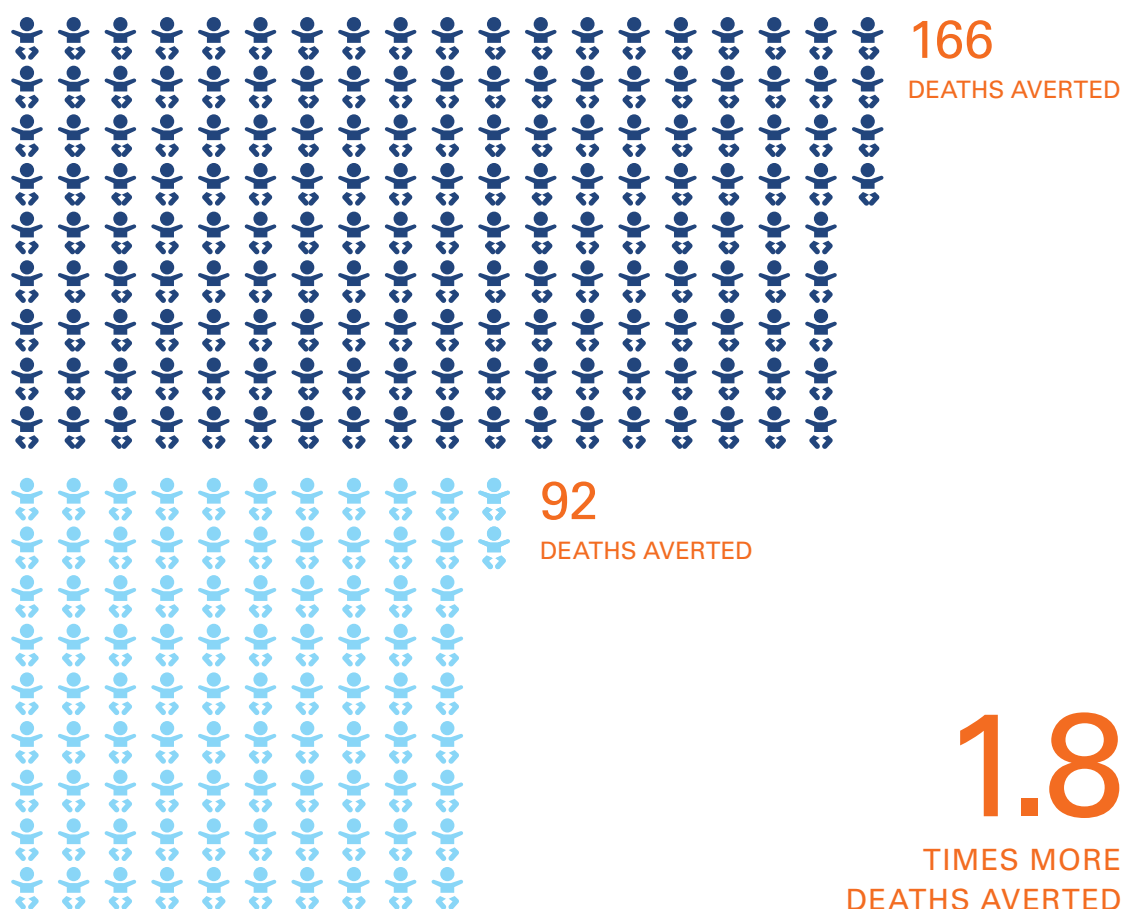
In other words, absolute reductions in under-five mortality rates associated with improvements in intervention coverage were three times faster among poor groups than non-poor groups.

Most important, investments that reach the poorest are cost-effective

The world's poorest children often live in remote or hard-to-access communities with unreliable infrastructure, making it more difficult and more expensive to reach them with lifesaving interventions. The study estimated that the average annual per-person cost for delivery of a full package of 35 high-impact interventions was US\$3.90 for poor groups in the 24 countries for which data related to the cost of intervention coverage were available.⁸

Figure 4: An equity-enhancing approach saved more lives and was more cost-effective

For every US\$1 million invested, the number of deaths averted was 1.8 times higher among poor than non-poor groups in 24 countries.



Source: UNICEF analysis.

This is, on average, around 1.5 times the cost for children and women in non-poor areas. However, as the LiST modelling shows, these improvements in service coverage among the poor saved 2.6 times more lives in these 24 countries.

In other words, while the investment needed to improve coverage among the poor is greater than that required to reach the non-poor, the number of deaths averted per US\$1 million invested is around 1.8 times higher among the poor than among the non-poor.

Some implications

The results of this study reinforce UNICEF's earlier prediction that equity-enhancing approaches achieve greater impact in reducing under-five mortality.

Most important, the results show that equity-enhancing approaches, although more costly, deliver a substantially greater return in terms of lives saved, compared to equivalent levels of investment among non-poor groups. They also show strong evidence of a welcome trend towards greater equity in many countries that have a high burden of under-five mortality.

This is certainly good news – with significant policy implications for the SDG agenda in general and child health in particular. It offers critical evidence that we must be serious about living up to the central pledge of the SDGs to leave no one behind.

An equity-enhancing approach will help save more children's lives, more cost-effectively. And investing in the health of the most disadvantaged children and families can also help break intergenerational cycles of poverty. Children who are healthy are better able to learn in school and to earn more as adults, providing their own children with greater opportunities and contributing to greater economic growth.⁹

Immense challenges and opportunities remain: The gaps have narrowed but not closed. The successes reported here are fragile and can be erased if we do not act with urgency. Inequities in coverage are still compounded by the poor quality of the care to which poor groups often do have access. But the results of this analysis demonstrate that it is not only principled but also feasible to prioritize equity-focused approaches in the SDG era.

As the brief case summaries presented in this report demonstrate, a number of countries with high burdens of child mortality have adopted equity-enhancing approaches to child survival. These efforts are achieving real results, expanding coverage of high-impact interventions to the children and families at greatest risk.

We can make faster, more cost-effective progress in reducing the number of children who die unnecessarily, year after year, by investing in the scale-up of equity-enhancing policies and programmes.

And we must. Because the lives of tens of millions of children depend on it.

In practical terms, there are several steps countries can take to reduce inequities:

Identify the poorest children and communities – disaggregating data to reveal inequities that are often masked by national averages and identify the children who are being left behind.

Invest in proven, low-cost, high-impact interventions – expanding immunization, nutrition, and other health programmes to protect vulnerable children against the biggest threats to their survival.

Strengthen health systems – building up the health workforce and focusing on community health initiatives that make high-impact interventions more widely and consistently available.

Innovate to find new ways of reaching the hardest to reach – working in new partnerships among sectors and particularly with the private sector to design for development.

Monitor results for equity – using household surveys and national information systems to track whether equity gaps are narrowing as the world makes progress towards the SDGs.

The analysis presented in this report reinforces UNICEF's 2010 prediction that an equity-enhancing approach would be cost-effective. Much work remains to address current limitations in data on the number of lives saved and the cost of intervention coverage. As part of its work with partners to help every child survive and thrive, UNICEF is committed to building on this current analysis over time by incorporating new data as they become available.







Conclusions

In 2010, UNICEF made a case for equity, predicting that a focus on the poor would drive progress towards global development goals. In 2017, UNICEF is able to add new evidence in support of this prediction: Pursuing equity is right in principle and right in practice. Focusing on the poorest children, families, and communities can, in fact, drive progress towards the global goal of ending preventable child deaths – while helping fulfil the central promise of the SDGs to leave no one behind.

This evidence comes at a critical time – especially as the value of money for global aid is increasingly being brought into question and evidence for impact demanded.

The stakes are very high – as is the cost of inaction. The latest estimates predict that if the world does not accelerate progress on child mortality, nearly 70 million children will die unnecessarily by 2030.

We should protect their lives and futures as if these children were our own. As, in a real sense, they are.

Case Study 1

Afghanistan

In 2003, Afghanistan began working closely with non-governmental organizations to overcome the extreme difficulties of providing access to essential health services in a country where the majority of the population live in areas that are difficult to access.¹⁰

The innovative 'outsourcing' initiatives the government and its partners developed have helped increase the country's community health workforce to a team of more than 28,000 community health workers, who deliver services to poor communities.¹¹ In addition, the number of physicians, nurses and midwives expanded from fewer than 1,400 to over 15,000.¹² Mobile health teams, including a midwife, a vaccinator and a nurse, fanned out across the country to reach remote areas of Afghanistan with lifesaving services. In addition to vaccination, they provide free antenatal and postnatal care, screening for malnutrition and other health complications, and other basic medical treatment and advice.

The result? Coverage of skilled attendance at birth has increased equitably – and mortality is projected to have fallen twice as rapidly among the poor as among the non-poor. Overall, Afghanistan halved under-five mortality between 1990 and 2015, from 181 deaths per 1,000 live births in 1990 to 91 deaths per 1,000 live births in 2015.





Case Study 2

Bangladesh

Since the early 2000s, Bangladesh has developed new policies designed specifically to improve the accessibility and affordability of high-impact, community-based health interventions to treat the major causes of child mortality: birth complications, pneumonia and diarrhoea, among others. The government and its partners have set up community clinics at the village level to provide routine services free of charge.¹³

At the same time, improving water, sanitation and hygiene has been a central focus of Bangladesh's approach. Working closely with community-based organizations, Bangladesh brought rates of open defecation down from 42 per cent in 2003 to just 1 per cent in 2015.^{14,15}

The result? Between 1990 and 2015, Bangladesh brought down under-five mortality by almost 74 per cent, from 144 deaths per 1,000 live births in 1990 to 38 deaths per 1,000 live births in 2015. Efforts are now under way to improve quality of care, particularly quality of care around the time of delivery for the most vulnerable mothers and their newborns.

Case Study 3

Malawi

In 1990, Malawi's under-five mortality rates were among the highest in the world, with almost one in four children dying before reaching age 5.

Malawi's approach to bringing down under-five mortality focused on improving equitable coverage of high-impact interventions to tackle the major causes of child death, including pneumonia, diarrhoea and malaria, expanding vaccination programming, promoting the use of insecticide-treated nets, and scaling up efforts to prevent child undernutrition.

Malawi also expanded community-based approaches, deploying an estimated 11,000 health extension workers to set up 4,300 village clinics in hard-to-reach locations and organizing child health days across the country twice a year to promote public awareness about health issues.¹⁶ The Government of Malawi also took an integrated approach to child health, focusing on both prevention and treatment to address the major killers of children.

The result? Rapid and equitable increases in coverage of insecticide-treated nets, early initiation of breastfeeding and skilled attendance at birth, and other factors have helped bring down Malawi's under-five mortality. Though, in 2015, it remained quite high at 64 deaths per 1,000 live births, the situation is far improved – and the government's efforts to reach the most vulnerable continue.





Case Study 4

Rwanda

Rwanda's long civil war in the 1990s greatly undermined the country's already-weak health system. To strengthen its health system and bring down high rates of under-five mortality, Rwanda has put the poorest at the centre of its approach. This includes expanding integrated community health services, reinforcing the rural health workforce with skills training, increasing salaries and performance incentives, widening the scale of efforts to encourage women to give birth in health facilities, and instituting a community-based health insurance plan to protect the most vulnerable from the financial hardship of seeking health services.

These initiatives have helped Rwanda achieve rapid progress in expanding coverage of lifesaving health interventions, with a higher percentage of births now supported by a skilled birth attendant, and more newborn breastfeeding within an hour of birth. More than 67 per cent of Rwandan children now sleep under insecticide-treated nets.

The result? In 1990, Rwanda's under-five mortality rate was 152 deaths per 1,000 live births. By 2015, that figure had fallen to 42 – a tremendous achievement. And this progress has benefited the poor, with under-five mortality rates having fallen twice as rapidly among poor groups as among the non-poor.

Case Study 5

Sierra Leone

In response to high child and maternal mortality rates, Sierra Leone introduced a package of basic services in 2010, targeting the major killers of vulnerable children and women. These services included insecticide-treated nets, promotion of early and exclusive breastfeeding, immunization, and birth attendance.¹⁷

To support this effort, the government trained 15,000 community health workers between 2000 and 2015, and provided on-the-job training for primary health care workers at each of the country's 1,200 primary health care centres.

Sierra Leone also conducted mass malaria prevention campaigns every two years, distributing insecticide-treated nets to pregnant women and children. In 2010, Sierra Leone launched the Free Health Care Initiative to improve access to health care for mothers and children.

Between 2000 and 2013, the country achieved particularly impressive improvements in intervention coverage among the poor – achieving up to 25 per cent increases for some interventions. And coverage of all six tracer indicators looked at in this study improved more rapidly among the poor than among non-poor groups.

The result? It is projected that the under-five mortality in Sierra Leone between 2008 and 2013 fell annually by an estimated 14 deaths per 1,000 live births among the poor, compared to 9 deaths per 1,000 live births among non-poor groups.

Sierra Leone is a good example of how expanding access to key services saves lives – and it is a cautionary tale of how fragile the results achieved can be. The 2014–2015 Ebola virus outbreak in Sierra Leone dealt a devastating blow – potentially setting back decades of progress in the country. The response to the crisis made clear the urgent need for sustained and additional investment in community health systems, scaling up the resources and staffing of hospitals and health centres, to reach the most deprived children and families, who are most vulnerable in such crises.



- ¹ United Nations Children's Fund, *Progress for Children: Achieving the MDGs with equity*, No. 9, UNICEF, New York, 2010.
- ² Carrera, Carlos, et al., 'The Comparative Cost-effectiveness of an Equity-focused Approach to Child Survival, Health, and Nutrition: A modelling approach', *The Lancet*, vol. 380, no. 9850, 13 October 2012, pp. 1341 – 1351.
- ³ In all countries, at least one quintile was classified as poor and at least one quintile was classified as non-poor. This was necessary to allow an assessment of the equity of health interventions in each country.
- ⁴ The organizing of quintiles into poor and non-poor groups uses surveys of monetary welfare, whereas analysis of coverage gaps uses alternative surveys that include questions on asset ownership, or wealth. For the purpose of this study, income quintiles were assumed to match one for one with wealth quintiles.
- ⁵ The baselines for study in each country ranged from 2003 to 2010; the endlines ranged from 2010 to 2016. The median baseline was 2006; the median endline was 2013.
- ⁶ Benin, Burkina Faso, Cambodia, Cameroon, the Democratic Republic of the Congo, Ethiopia, Ghana, Haiti, Honduras, Liberia, Malawi, Mali, Mozambique, Nepal, Niger, Nigeria, Philippines, Rwanda, Senegal, Sierra Leone, Uganda, the United Republic of Tanzania, Zambia, Zimbabwe.
- ⁷ This study employed the following costing methodology: 1. Costs associated with improved coverage (e.g. drug and commodity costs) were calculated based on observed increases in coverage for each of the interventions included in the study. 2. Costs associated with observed improvements in health system capacity were calculated based on an estimation of the additional resources and inputs required (e.g. human resource costs, facility) to achieve observed improvements. Among the 'programme and system' and infrastructure costs, the study considered the additional costs incurred by families to access care and utilize services, etc. 3. Costs outlined above were weighted to reflect country-specific pricing using published country-specific costing exercises. 4. A 'logistical adjustment factor', reflecting the additional costs associated with reaching remote and disperse populations, was applied to the costs outlined above, based on empirical information on country population density patterns.
- ⁸ Benin, Burkina Faso, Cambodia, Cameroon, the Democratic Republic of the Congo, Ethiopia, Ghana, Haiti, Honduras, Liberia, Malawi, Mali, Mozambique, Nepal, Niger, Nigeria, Philippines, Rwanda, Senegal, Sierra Leone, Uganda, the United Republic of Tanzania, Zambia, Zimbabwe.
- ⁹ Amiria, Arshia, and Ulf G. Gerdthamb, 'Impact of Maternal and Child Health on Economic Growth. New evidence-based analysis Granger causality and DEA analysis', study commissioned by the Partnership for Maternal, Newborn & Child Health (PMNCH), Geneva, March 2013; and Currie, Janet, 'Healthy, Wealthy, and Wise: Socioeconomic status, poor health in childhood, and human capital development', Working Paper No. 13987, National Bureau of Economic Research, Cambridge, MA, May 2008.
- ¹⁰ Akseer, Nadia, et al., 'Achieving Maternal and Child Health Gains in Afghanistan: A countdown to 2015 country case study', *The Lancet Global Health*, vol. 4, June 2016, e395–413.
- ¹¹ Akseer, Nadia, et al., *The Lancet Global Health*, vol. 4, June 2016.
- ¹² Akseer, Nadia, et al., *The Lancet Global Health*, vol. 4, June 2016.
- ¹³ Bangladesh Ministry of Health and Family Welfare, *Success Factors for Women's and Children's Health, Partnership for Maternal, Newborn & Child Health*, World Health Organization, World Bank and Alliance for Health Policy and Systems Research, Geneva, 2015, p. 24.
- ¹⁴ Hanchett, Suzanne, 'Sanitation in Bangladesh: Revolution, evolution, and new challenges', CLTS Knowledge Hub Learning Paper, Swedish International Development Cooperation Agency, Stockholm, May 2016, p. 6.
- ¹⁵ United Nations Children's Fund and World Health Organization, *Progress on Sanitation and Drinking Water: 2015 update and MDG assessment*, UNICEF and WHO, New York and Geneva, 2015, p. 56.
- ¹⁶ Joos, Olga, et al., 'Strengthening Community-Based Vital Events Reporting for Real-Time Monitoring of Under-Five Mortality: Lessons learned from the Balaka and Salima Districts in Malawi', *PLoS ONE*, vol. 11, no. 1, 2016, e0138406.
- ¹⁷ Government of Sierra Leone Ministry of Health and Sanitation, *Basic Package of Essential Health Services for Sierra Leone*, Sierra Leone, Freetown, March 2010.

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Narrowing the Gaps: The power of investing in the poorest children

A UNICEF study uses new data and analysis to show that focusing on the most deprived children and communities saves more lives for every dollar spent than investments that do not reach the poor. An equity-enhancing approach to child survival is cost-effective.

These findings come at a critical time: As the world joins forces to achieve the Sustainable Development Goals in an era of tightening budgets and shifting priorities in public spending, every dollar counts. And if we do not accelerate current rates of progress on child survival now, by 2030 almost 70 million children will die from preventable causes.

With so much at stake – and so much to be gained – we cannot afford to ignore this compelling evidence.

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