THE LOTTERY OF BIRTH

Giving all children an equal chance to survive

NO CHILD BORN TO DIE

Save the Children

Front cover: Bianca, six hours old, in Kopsiro Health Facility in Bungoma County Kenya.
(Photo: Colin Crowley/Save the Children)

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Save the Children works in more than 120 countries.
We save children's lives.
We fight for their rights.
We help them fulfil their potential.

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THE LOTTERY OF BIRTH AT A GLANCE

FAIRER PROGRESS OFTEN LEADS TO FASTER PROGRESS

INEQUALITY IS NOT RISING IN ALL COUNTRIES

Countries that are reducing inequalities between social and economic groups have seen overall child mortality fall 6% faster on average over the course of ten years.

THESE FINDINGS CONTRADICT WIDESPREAD BELIEF THAT REACHING THE POOREST AND MOST DISADVANTAGED GROUPS IS HARDER AND THEREFORE LIKELY TO SLOW DOWN PROGRESS.

INEQUALITIES IN CHILDREN'S SURVIVAL CHANCES ARE SET TO CONTINUE INTO THE FUTURE

LOOKING BELOW NATIONAL AVERAGES – TOO MANY GROUPS ARE BEING LEFT BEHIND

An international target to reduce child mortality to no more than 25 deaths per 1,000 live births is being discussed for inclusion in the post-2015 global development framework. Of countries carrying the majority of the world's burden of child mortality, 47% would reach this target at the national level if recent trends continue, but disadvantaged social and economic groups would be left behind.

WITH A STEP CHANGE IN ACTION, WE COULD REWRITE THE FUTURE. BY 2030, NO POST-2015 TARGET SHOULD BE CONSIDERED MET UNLESS IT IS MET FOR ALL.

BACK FROM THE BRINK

Just a few months before this photo was taken, two-year-old Jalil's life was in grave danger. After he was weaned, he developed diarrhoea – globally, one of the main causes of death among children under five. Jalil began refusing food. He became weak and emaciated.

Jalil's mother, Amina, brought him to a clinic – or outpatient therapeutic programme. Amina and Jalil live in northern Nigeria, where rates of child mortality are very high.

"When we came to the clinic, he was examined. They gave me medicine and nutrient-enriched milk to give to Jalil. After that he changed dramatically. Now he's plump, and he's getting bigger and bigger. Before, I was without hope, but now I'm so happy."

The clinic where Jalil was treated is based in the grounds of a government hospital. When Amina was pregnant with Jalil she did not have antenatal care and gave birth to him at home. However, following Jalil's successful treatment at the clinic, Amina, who was pregnant, started going to the hospital for antenatal care and then chose to have her next baby – Jalil's sister – there.

Photo: Lucia Zoro/Save the Children

EXECUTIVE SUMMARY

KEY MESSAGES

- A child's chances of survival should not depend on where they are born, how wealthy their parents are, or their ethnic identity. Yet across the world, these factors continue to determine whether a child lives to celebrate his or her fifth birthday – factors which, for the child, are purely a matter of chance. **This unfair lottery of birth violates every child's right to an equal start in life**.

- While we have seen important progress on reducing under-five child mortality across the world over the past 15 years, **in too many countries inequality is actually worsening**. Progress in reducing child mortality is slower among some groups of children who are falling even further behind their more fortunate peers. Ending this lottery is a defining challenge for our generation, and one that we must tackle head-on.

- Thankfully, inequality is not rising in all countries. Some have managed not only to reduce child mortality at a fast rate, but to do so equitably – meaning that progress for excluded groups has been faster than the national average. In fact, contrary to popular belief, our research finds that **pursuing an equitable pathway to reducing child mortality is associated with 6% faster progress over the course of ten years**, on average.

- **A range of policies make equitable progress more likely**, including steps towards the progressive realisation of Universal Health Coverage to ensure that poor and marginalised groups have access to quality services that meet their needs and that they are protected from financial hardship.

- Governments should ensure that the successor framework to the Millennium Development Goals (MDGs), to be agreed in September 2015, shifts the world onto a more equitable pathway of progress. **By 2030 no target should be considered met unless it is met for all social and economic groups**. This is the only way to achieve Save the Children's ultimate vision – a world in which no child dies from preventable causes, no matter where they are born or who their parents are.

A STORY OF FAST BUT UNEVEN PROGRESS

In many countries across the world, the odds of children surviving to celebrate their fifth birthday have improved considerably in recent years. Today, 17,000 fewer children die every day than was the case in 1990 and the global under-five child mortality rate nearly halved, from 90 to 46 deaths per 1,000 live births, between 1990 and 2013. But not all countries have succeeded in improving children's life chances, and some of the world's poorest countries – many of which have been ravaged by conflict and instability – are very much lagging behind. Nevertheless, there has been unprecedented progress globally over the past two decades in increasing children's chances of survival.

But this good news story is marred by a worrying fact. Digging beneath the surface of national averages reveals considerable differences in mortality rates between children within the same country. Too often, particular groups of children suffer from persistently high levels of mortality, even in countries that have seen very rapid declines overall. These children already have much lower chances of survival than their peers, and are now falling even further behind, unfairly left out of global and national progress. These children are the focus of this report.

WHAT DOES IT MEAN TO BE LEFT BEHIND BY PROGRESS

Examples from around the world

- In **Niger,** a child born in the subnational region with the highest mortality rate in 2012 was nearly **five times more likely to die** before their fifth birthday than a child born in the region with the lowest rate. These inequalities in life chances have doubled since 1998.
- In **Indonesia**, a child born into the poorest 40% of households in 2012 was nearly **two and a half times more likely to die** than a child in the richest 10%. This inequality has doubled since 2002.
- In **Honduras**, in 2012, a child born in Islas de Bahia region was **three and a half times more likely to die** than a child born in the most advantaged regions of the country. This inequality has increased considerably since 2006.
- In **Vietnam**, children born into the Kinh ethnic group in 2010 were nearly **three and a half times less likely to die** than their non-Kinh peers.

NEW RESEARCH REVEALS THAT PARTICULAR GROUPS OF CHILDREN ARE BEING LEFT BEHIND BY PROGRESS

This report focuses on four different types of social and economic group for which data are available and where there are notable disparities in under-five child mortality rates between children from advantaged and disadvantaged groups: subnational regions, urban and rural areas, ethnic groups and economic groups.

Our research, which is based on new analysis of disaggregated data for 87 countries, reveals that in most cases, particular groups of children are being left behind by progress in reducing child mortality.

- **In 78% of the countries, at least one social or economic group has been making slower progress than more advantaged groups and is therefore being left behind** – whether that group is from the poorest section of society, from disadvantaged regions inside the country, from rural areas, or from disadvantaged ethnic groups.
- **In 16% of the countries**, inequalities in children's survival chances increased across *all* the groups for which we have data.

EQUITABLE PROGRESS IS POSSIBLE, AND DOES NOT SLOW DOWN OVERALL RATES OF CHANGE

While the global picture looks challenging, there are grounds for optimism. Our analysis reveals that a number of countries are achieving impressive reductions in child mortality rates while at the same time reducing disparities between social and economic groups. Clearly, equitable progress is possible. In fact, our findings indicate that equitable progress is associated with faster than average overall progress, revealing a small but positive correlation between the two:

- About a fifth of countries included in our research have achieved fast and above median reductions in child mortality over the past decade, while at the same time ensuring that no group of children is left behind.
- More than half of countries that have reduced inequalities in survival chances between groups have also experienced fast (above median) declines in overall child mortality.
- **On average, pursuing an equitable pathway to reducing child mortality was associated with 6% faster progress over the course of ten years**.

These findings contradict a widespread belief that reaching the poorest and most disadvantaged groups is harder and therefore likely to slow down progress.

Further grounds for optimism lie in our finding that disparities between economic groups and between urban and rural areas have been decreasing in most of the countries included in our research. However, disparities between subnational regions and ethnic groups have been increasing in most countries.

Importantly, middle-income countries are not always effectively harnessing the fruits of enhanced economic growth for the benefit of children who are furthest behind. For example, middle-income countries account for 13 of the 15 countries with the highest levels of regional inequality in child mortality, despite making up only around half of the total sample.

WITHOUT A STEP CHANGE IN ACTION, THE UNFAIR LOTTERY OF BIRTH WILL CONTINUE INTO THE FUTURE

Our analysis suggests that, if current trends continue, particular groups of children in countries across the world will continue to die from preventable causes for generations to come. Within the post-2015 global development framework, discussions are taking place to include an international target to achieve an under-five child mortality rate of no more than 25 deaths per 1,000 live births in all countries by 2030. Our research shows that if countries that carry the majority of the world's burden of child mortality continue with the best rates of progress they have achieved in recent years, 47% would reach this target as a national average. **However, looking beneath national averages, only 25% would meet the target for all economic groups. Most countries (53%) would fail to meet the target for rural as well as urban areas, and only 14% would reach the target for all subnational regions**. Accelerated and more equitable progress will be crucial if post-2015 targets are to be achieved for all children.

OPTING FOR EQUITABLE PATHWAYS: CRAFTING POLICIES THAT PUT THE FURTHEST BEHIND FIRST

The fact that a significant number of countries are achieving rapid rates of reduction in under-five child mortality while ensuring that particular groups of children are not left behind suggests that governments can pursue policies that make equitable progress more likely.

- Research indicates that countries on fast and more equitable pathways to reducing child mortality have made concerted efforts to **ensure that hard-to-reach groups have access to essential, cost-effective and high-impact health services** that address the leading causes of child mortality. However, even in those countries that have seen success, maintaining progress will depend on improving the quality of services, and ensuring that all children can access them free of charge as part of the **progressive realisation of Universal Health Coverage**. With undernutrition now the leading cause of nearly half of all under-five deaths worldwide, and an increasing proportion of all child deaths occurring in the neonatal period, the gross neglect of nutrition, and maternal and newborn health, must be reversed.

- In many countries, disadvantaged groups have also seen rapid declines in child mortality rates as a result of efforts to **tackle the related dimensions of poverty and its root causes**. Evidence from a diverse range of countries, from Brazil to Bangladesh, highlights the importance of measures to tackle the social determinants of health. These include bolstering accountability and ensuring that disadvantaged groups can make their voices heard; improving water, sanitation and hygiene; access to quality education; and ensuring that disadvantaged groups can enjoy a decent standard of living through social protection mechanisms and economic policy. There is abundant evidence that the children of empowered, educated women are more likely to survive beyond their fifth birthday. These experiences show that policies which **take into account the multidimensional nature of poverty** have greater potential to deliver equitable reductions in child mortality.

- To put children who are left behind first, it will be critical to **ensure adequate investment in health systems and other social sectors**. Dramatic increases in domestic financing are needed in many countries, supported by more, and more effective, aid. With regional inequalities in child mortality rates increasing in most of the countries included in our analysis, the redistribution of national resources to ensure maximum investment in regions that have been left behind should be a priority for financing strategies.

Photo: David Wardell/Save the Children

Expectant mother Kamala and her husband Binod in Nepal. Kamala's first baby contracted pneumonia a few days after it was born and tragically died. "I don't want this baby to go through the same fate as my other baby. I want everything to go smoothly. If the same thing happens again it will be very heartbreaking," Binod says. "My wife will give birth at the hospital. It's better there because there are nurses and doctors there who can give advice. There are also better facilities."

THE POST-2015 FRAMEWORK: AN OPPORTUNITY TO SHIFT THE COURSE OF PROGRESS SO THAT NO ONE IS LEFT BEHIND

The post-2015 global development framework to be agreed in September 2015 offers an important opportunity to shift the global course of development to ensure that people are no longer left behind simply by virtue of their social or economic group. The new framework must not only aim to finish the job that the MDGs started – with a bold child survival target – but must also go further and tackle the inequalities that have been masked by the focus on national progress. **By 2030, no post-2015 target should be considered met unless it has been met for all social and economic groups.**

The framework should focus immediate and ongoing attention on the needs of children who are the furthest behind. It must promote equity across the framework, including through stepping stone targets – ie, interim targets set for intermediate dates between 2015 and 2030 to reduce inequality in life chances between advantaged and disadvantaged groups. Supported by improvements in the disaggregation, transparency and accessibility of data, stepping stone equity targets have the potential to incentivise the changes in policy and practice that are needed at international, national and local levels to accelerate progress among disadvantaged groups.

Mothers with their babies in Chad. Chad has the third highest child mortality rate in the world, with 148 children dying per 1,000 live births.

SUMMARY OF RECOMMENDATIONS

Save the Children calls on all global and national leaders to meet their obligations to children and pursue equitable pathways towards an end to preventable child mortality. The course of action is clear:

1) Global and national leaders must work to secure an ambitious and implementable post-2015 framework, which promotes equity at its core.
This must include:

- Agreeing a politically salient framework that has the potential to be truly transformative. As a generation-changing objective, ending preventable child and maternal deaths should be a central commitment of the framework.
- Establishing clear targets to advance Universal Health Coverage and address the multidimensional drivers of poverty and inequality, supported by standalone goals on gender equality and accountable governance.
- A core commitment that no target will be considered met in 2030 unless it is met for all social and economic groups, supported by stepping stone equity targets for interim dates to focus attention on groups that remain furthest behind.
- Strong reporting and accountability mechanisms that hold governments, donors and multilateral agencies to account for delivering on their commitments and responsibilities.

2) Governments must review national and sector-specific policies and plans to support the achievement of post-2015 goals and targets.
This must include:

- Establishing policies to address the proximate and underlying causes of high child mortality rates among specific social and economic groups.
- Establishing financial risk protection for healthcare, expanding the fiscal space for health, increasing investment in health to at least 15% of the total government budget, and ensuring that public budgeting is underpinned by equity principles and redistribution.
- Ensuring coordination across public sectors that impact on health, and establishing time-bound equity targets within national and sector plans, following a multidimensional approach.
- Strengthening accountability and opportunities for citizen participation in policy-making and planning.

3) Donors, multilateral agencies, civil society and other development partners must:

- Step up action and align behind the national and sector plans of developing country governments – meeting aid commitments, increasing the allocation of aid budgets to health, supporting implementation and upholding aid effectiveness principles.
- Provide technical and financial support to help the poorest countries increase financing for health and other social sectors through sustainable and progressive domestic revenue sources.
- Create an enabling environment for countries to maximise domestic resource mobilisation, including through increasing the coherence of the international tax system and clamping down on tax avoidance by international companies operating in developing countries.
- Support the strengthening of statistics systems at national and international levels to ensure that progress for disadvantaged groups can be better monitored.
- Review their own policies and plans to focus on inequalities in health and other social sectors.
- Hold themselves and each other accountable for implementation of the post-2015 framework through regularly reviewing and reporting publicly on their contribution, in coordination with accountability mechanisms established for the post-2015 framework.

ADAPTING TRADITION TO CLOSE THE SURVIVAL GAP

Just six days' old, Rakhal has been brought by his mother, Mala, to his local health clinic for a check-up.

For Mala and her community, this is ground-breaking. Traditionally in her community in Habijganj, Bangladesh, a mother and her newborn baby should not leave the house in the first month after birth. Mala has been supported in breaking from tradition by her mother-in-law. She accompanied Mala and Rakhal to the clinic, bringing a small bag of earth taken from the house so that they remain connected to the family home.

The clinic, within walking distance of Mala's home, was built by the Bangladesh government in 2012, in partnership with Save the Children. Before that, Mala's family and others in their village faced a journey of many hours to get to a health clinic.

Photo: CJ Clarke/Save the Children

1 INTRODUCTION

THE LOTTERY OF BIRTH

Meet Rabia, born in a rural village in north Nigeria. Rabia's mother, Laila, does everything she can for her daughter. But Rabia's prospects for the future do not lie fully in her mother's hands. Compared to her more affluent peers in the North West region of Nigeria, Rabia is twice as likely to die before she reaches her fifth birthday.[1] If she had been born into a rich family in the South West region where Lagos, the largest city in Nigeria, is located, she would have been about three and a half times less likely to die. And compared to the average child mortality rate in the UK, she is 38 times more likely to die than British children.

This is the lottery of birth. Across the world, children's chances of surviving to see their fifth birthday depend on where they happen to be born, how much their parents can afford to invest in their well-being, the ethnic identity that has been ascribed to them, whether or not they have a disability, and other factors that are all outside their control. As a result, there are significant gaps in child mortality levels between children who have been lucky enough to be born into advantaged circumstances, and those who have not.

Even more worryingly, these gaps are growing in many countries. This dynamic is the focus of this report. Many disadvantaged groups of children are seeing slower reductions in child mortality than their more advantaged peers. In these cases, disparities in survival chances between groups are growing, and significant numbers of children are being left behind by progress.

This situation is fundamentally unjust. It represents a violation of every child's inherent right to life and every government's obligation to ensure children's survival and development to the maximum extent possible, as laid out in the United Nations Convention on the Rights of the Child (UNCRC). Every child has the right to a standard of health that allows them not only to survive, but also to grow and develop, reaching their full potential in life – no matter where they are born or who their parents are.

Photo: Lucia Zoro/Save the Children

Rabia, seven months, with her mother at a malnutrition clinic in north Nigeria.

THE GLOBAL BACKDROP

History may well judge the MDGs as a turning point, given that children's chances of survival have improved considerably in countries across the world over the past decade. The global under-five child mortality rate nearly halved from 90 to 46 deaths per 1,000 live births between 1990 and 2013. This means that 17,000 fewer children now die every day than was the case in 1990.[2] Global child mortality rates are also falling faster now than at any time in history, largely as a result of action on immunisation, family planning, nutrition and treatment of common childhood illnesses, as well as improvements in the wider social determinants of health.[3]

This is a huge achievement, and must be celebrated. The dramatic progress achieved by some of the world's poorest countries has led many to speculate that an end to preventable child mortality is within our reach. Within a generation, we could live in a world where no child dies from preventable causes – conditions such as diarrhoea and pneumonia for which cost-effective treatment is available, or complications at birth that could be resolved through the presence of a skilled birth attendant.

However, there is still a long way to go. More than 6 million children died in 2013, despite being born into an era when we have the means to prevent unnecessary deaths.[4] If current trends continue, it will take until 2028 to reach the commitment enshrined in MDG 4 – to cut the global under-five mortality rate by two-thirds. That's 13 years after the 2015 deadline.[5] Under this scenario, more than 4 million children under the age of five will die in 2030.[6]

A child's country of birth has a dramatic impact on their chances of survival, giving rise to an international lottery of birth. The national average under-five mortality rate in low-income countries is 12 times higher than in high-income countries, at 76 deaths per 1,000 live births.[7] A child born in Angola – the country with the highest child mortality rate in the world – is 84 times more likely to die than a child born in Luxembourg, the country with the lowest rate.[8]

Worryingly, many of the countries that have the highest child mortality rates also have the slowest rates of child mortality reduction (see Table 1). These countries are being left behind on the global stage. Many are conflict-affected and fragile states, which accounted for one-fifth of all child deaths in 2013.[9]

This international lottery has been the focus of international efforts to reduce preventable deaths, including through the Millennium Development Goals (MDGs) and the UN Secretary-General's Every Woman Every Child initiative, established in 2010 to support MDGs 4 and 5.[11] This attention to disparities in child mortality rates between countries has been important, and in many cases has paid significant dividends. The MDGs and Every Woman Every Child have helped to spur on the global progress on child mortality that we have seen in recent years, aligning development partnerships behind a set of clear, time-bound global objectives in order to accelerate change. The global annual rate of reduction of child mortality is now three times faster than it was before the MDGs were agreed.[12] Recent research has found that this acceleration was particularly notable in countries with high child mortality rates, putting 21 countries on track to achieve the MDG target that would otherwise have missed it had rates of change continued as they were before.[13]

However, global efforts to reduce child mortality under the MDG framework have suffered from two key weaknesses. First, they have focused on disease-specific interventions. While this has had a significant impact on some of the leading causes of under-five deaths, other key policy areas have been neglected. These include action on newborn health and nutrition, reflected by high neonatal mortality and stunting rates in countries with high child mortality (Table 1). Due to insufficient improvements in maternal and neonatal care, an increasing proportion of those children who die in every region of the world are newborn babies, comprising 44% of all under-five deaths globally.[14] Undernutrition is an underlying cause of nearly half of all under-five deaths across the world. Ending preventable

TABLE 1: COUNTRIES WITH THE HIGHEST CHILD MORTALITY RATES

Country	Annual rate of reduction (2000-2013)	Child deaths per 1,000 births (2013)	% share of neonatal deaths in total (2013)	Under-five stunting rate (indicator of severe malnutrition)[10]
Angola	1.3%	167	27.8%	29.2%
Sierra Leone*	2.2%	161	27.5%	44.9%
Chad*	1.6%	148	27.3%	38.7%
Somalia*	0.9%	146	32.1%	42.1%
Central African Republic*	1.0%	139	31.2%	40.7%
Guinea-Bissau*	2.6%	124	36.0%	32.2%
Mali*	3.1%	123	33.7%	38.5%
Congo, DR*	1.7%	119	32.7%	43.5%
Nigeria	2.6%	117	32.5%	36.4%
Niger	4.9%	104	27.4%	43.0%

All figures from UN Inter-agency Group for Child Mortality Estimation, 2014, unless otherwise stated. * Denotes countries in the World Bank's list of Fragile Situations (FY15)

child deaths will therefore depend on significant improvements in antenatal and newborn care and in maternal and child nutrition in countries across the world.[15]

Second, the global focus on national averages and inequalities between countries has led to neglect of the significant disparities that exist between different social and economic groups *within* countries – which is the focus of this report. This has effectively hidden some of the world's poorest and most marginalised groups from view – children whose extreme vulnerability to death from preventable causes has been masked by their country's relatively strong progress in reducing the national child mortality rate.

FROM THE MDGS TO THE POST-2015 FRAMEWORK: A WINDOW OF OPPORTUNITY TO END THE UNFAIR LOTTERY OF BIRTH

In September 2015, world leaders will gather at the United Nations to agree the post-2015 global sustainable development framework, setting priorities for domestic and international action on poverty and environmental sustainability. This presents a critical opportunity to put an end to the global lottery of birth and spur action towards our ultimate goal – a world in which no child is left behind, no matter where they are born or who their parents are. This is an opportunity that must not be missed.

The post-2015 framework must be clear, motivating, and capable of galvanising national and international partnerships behind the common objective to finish the job that the MDGs started. Importantly, it must address the fundamental blind spot of the MDGs to inequalities, focusing attention on the needs of the most disadvantaged children. If backed up by political action and funding, including through more and better bilateral aid and a renewed Every Woman Every Child mechanism supported by an effective Global Financing Facility,[16] such a framework has the potential to drive an unprecedented step change in progress.

THIS REPORT: NEW EVIDENCE TO SPUR ACTION

This report shines a spotlight on children who have been left behind by global and national progress in child mortality reduction in order to make the case that action to tackle inequalities should lie at the heart of the global fight against poverty – including in the post-2015 framework and in national development strategies.

The research presented in this report lifts the lid on global and national progress in child mortality reduction to look at the trends that lie beyond national averages, exploring the following critical questions:

- What is the magnitude of the problem? How many countries are leaving children behind, and what does this mean for future prospects for ending preventable child deaths?
- Is inequitable progress, in which the most disadvantaged groups make the slowest progress, inevitable?
- Does focusing on disadvantaged groups to ensure more equitable progress mean that overall rates of change will necessarily be slower?
- What can be done to allow countries to shift onto more equitable pathways, ensuring that disadvantaged groups catch up with those with lower child mortality rates?

Our research is based on new analysis of disaggregated data for 87 countries. We focus on four social and economic groups where there are notable disparities in child mortality rates between disadvantaged and advantaged groups of children: subnational regions, urban and rural areas, ethnic groups, and economic groups (measured through an asset index as a proxy for poorer and richer groups within society).[17]

We begin in Chapter 2 by exploring the nature and magnitude of inequalities in child mortality rates between social and economic groups. As well as looking at levels of inequality within countries, we identify which groups of children are the very furthest behind on the global stage.

Chapter 3 moves on to explore trends over time in order to determine who is being left behind in the progress that is being made on reducing child mortality. Our analysis addresses a critical question: is it inevitable that particular groups of children will always be left behind, or are some countries ensuring that disadvantaged groups are catching up with their peers? And what does this mean for prospects for ending preventable child deaths among all social and economic groups within a generation? We also examine what different pathways of progress mean for overall, national rates of progress.

Chapter 4 draws on this analysis to consider how countries can shift onto more equitable pathways that accelerate progress in reducing child mortality among disadvantaged groups. We explore the experience of countries that have successfully reduced inequalities in child mortality rates between particular groups of advantaged and disadvantaged children, looking at the kinds of policies that have helped to drive change. Our analysis focuses on policies that affect health systems directly as well as on the relationship between multidimensional poverty and the social determinants of health and child mortality, including issues of gender inequality and the capacity of disadvantaged groups to hold governments to account. The report includes country case studies from Bangladesh, Ethiopia, Malawi, Mexico, Nepal and Rwanda, labelled as 'spotlights'.

The final chapter shifts the focus to the post-2015 development framework and its potential to drive change. We consider what can be done to ensure that the framework creates incentives for governments, donors and development practitioners to focus on the world's poorest and most marginalised children.

HELPING CHILDREN SURVIVE AND THRIVE

Edna, age eighteen, lives with her daughter Heloise in her mother-in-law's home in Petrolina, a town in the state of Pernambuco in north-east Brazil.

Brazil is one of the world's largest economies, but it suffers from extreme inequality and the north and north-east areas lag behind the rest of the country.

Edna is benefiting from the Mãe Coruja (Mother Owl) project which is run by the state government. The project aims to help more children survive and grow up healthy by providing healthcare to pregnant women and children under five. Women like Edna can enrol in cooking classes, and learn skills to help them improve their income.

"I found out about Mãe Coruja through my sister's friend and the support they've given me and my baby has been wonderful. Mãe Coruja explains through books, talks and workshops how to take care of our babies, and they make sure children get all their vaccines. Next month I'm looking forward to starting some of their courses and participating in meetings in my neighborhood. Most mothers prefer to take the cooking for schools course as there are more job opportunities."

Edna also benefits from Family Allowance (Bolsa Família), a conditional cash transfer system through which families living in poverty gain a basic monthly income.

Photo: Genna Naccache/Save the Children

2 DIGGING DEEPER

HOW NATIONAL AVERAGES MASK DISPARITIES

It is widely acknowledged that too many children have been left behind by the MDG framework, and that looking solely at national averages can mask inequalities in rates of progress between different groups. For example, in the outcome document of the 2010 MDG Review Summit, UN Member States identified "inequalities between and within countries" as a significant challenge.[18]

But what is the nature and magnitude of the challenge at hand? Our analysis of disaggregated data explores the extent of inequalities in survival chances between different groups of children (see Box 1).

BOX 1: NEW DISAGGREGATED DATA ON UNDER-FIVE CHILD MORTALITY

There are numerous challenges involved in systematically monitoring progress in under-five child mortality for various social and economic groups across a large number of countries. Unfortunately, the disaggregated data that are essential for such analysis are scarce and dispersed across various sources and in different formats. This report has made substantial efforts to compile existing statistics and produce additional data.

GROUPS AND INEQUALITY DATABASE

The background research in this report is based on data either calculated or compiled from public sources into the groups and inequality database (GRID). This was developed by Save the Children in collaboration with the Development Progress Project at the Overseas Development Institute (ODI). It is based on direct data processing of 257 Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), aggregated public sources (the UN Inter-agency Group for Child Mortality Estimation, World Health Organization, UNICEF, World Bank), and official disaggregated figures for a few countries without survey data. The GRID covers a total of 87 countries with disaggregated data on disparities across social and economic groups, and a total of 64 countries with data over time for up to seven data points (170 periods). In the current version, GRID contains measures of stunting, child mortality, and access to piped water and flush toilets. Each of these indicators is disaggregated by the following groups: boys/girls; urban/rural areas; subnational regions; ethno-linguistic groups; poorest 40% and richest 10% of children (according to the DHS/MICS asset index); and quintiles based on the same asset index. The asset index is used as a proxy for living standards and economic status.

GROUP-BASED INEQUALITIES METRICS

The metric used in the report to measure inequality is the ratio between groups with the highest and lowest under-five child mortality rates, which effectively shows how much more likely a child from one group is to die than a child from the other group. There are at least three reasons for this choice. Child survival is a basic human right – any differences between groups can be ascribed to systematic differences in life chances and are fundamentally unjust. The gap between the most and least advantaged groups is revealing of the extent of inequity. Second, the gap between the most and least advantaged is easy to understand for politicians and citizens alike, and should therefore motivate action. Third, examining the performance of the top-performing group in society shows what level and pace of progress is possible within a given country context. We are aware that the ratio does not provide a full account of the entire distribution, and have used other, less communicable, but comprehensive measures for robustness tests, which yielded very similar results.

For further details see Appendix 1: Methodology.

INEQUALITIES STEMMING FROM SYSTEMATIC DISADVANTAGE

Inequalities in survival chances are driven by a range of different forms of poverty and disadvantage. These include monetary poverty; on average, children born into the poorest fifth of the population are twice as likely to die before their fifth birthday as those in the richest fifth.[19] But economic resources are not the only driver of unequal life chances. Disadvantaged children with lower chances of survival also include: those born into remote or marginalised regions and rural localities that have been deprived of vital investment in health infrastructure; children who are discriminated against on the basis of disability or ethnicity; and children who are particularly vulnerable as a result of living on the street, in refugee camps or in institutions. In some contexts gender is also an important factor, where boys receive preferential treatment to their female siblings or where practices of sex-selective abortion and infanticide still prevail.[20]

Statistics paint a stark picture of the wide disparities within countries, and how they are, in many cases, increasing:

- In **Niger**, a child born in the subnational region with the highest mortality rate in 2012 was nearly **five times more likely to die** before their fifth birthday than in the region with the lowest rate. This inequality has doubled since 1998.
- In **Indonesia**, a child born into the poorest 40% of households in 2012 was nearly **two and a half times more likely to die** than a child in the richest 10%. This inequality has doubled since 2002.
- **In Honduras**, in 2012, a child born in Islas de Bahia region was **three and a half times more likely to die** than a child born in the most advantaged regions of the country. This inequality has increased considerably since 2006.
- In **Vietnam**, children born into the Kinh ethnic group in 2010 were **three and a half times less likely to die** than their non-Kinh peers.

These gaps in child survival rates matter. Their sheer scale underscores the fact that they are not happening as a result of random chance. They stem from the fact that certain groups are systematically disadvantaged compared to other groups. Why? Because the government is not investing sufficiently in healthcare in particular regions. Because the financial barriers to healthcare for poor households are too high. And because certain groups are being discriminated against in the provision of services. In Indonesia, for example, only 43% of the poorest quintile of the population have access to six or more of the eight essential preventive interventions that address some of the leading causes of child mortality, compared to 75% of the richest quintile.[21] In Vietnam, patients from minority ethnic groups are less aware of government health programmes and rarely receive information about their conditions and treatment – an issue exacerbated by discriminatory public attitudes towards minority groups and by language barriers.[22]

The statistics presented here provide a snapshot of the nature and extent of inequalities in child survival in different countries. But what does the global picture look like? Which groups of children have particularly high rates of child mortality, both in relation to other groups within their country and to disadvantaged groups in other countries? In other words, which children are furthest behind in the global race to end preventable child deaths?

INEQUALITIES IN CHILD SURVIVAL CHANCES ACROSS ECONOMIC GROUPS

A family's material well-being or economic group is an important determinant of children's survival chances. Children in the poorest 40% of households face a higher risk of under-five mortality than those in the richest 10%.[23] The UN Inter-agency Group for Child Mortality Estimation describes under-five mortality rates above 100 per 1,000 live births as 'very high', and those above 40 per 1,000 live births as 'high'.[24] As Figure 1 shows, countries with very high child mortality rates among the poorest 40% of households often have very large disparities between economic groups. Notable examples include Niger, Cameroon, Nigeria, Lesotho and Pakistan, where the poorest 40% of children are among the furthest behind in the world, not just in their own countries. There is also significant variation between countries with similar national average child mortality rates. For example, both Guinea and Côte d'Ivoire have an average child mortality rate of 100 deaths per 1,000 live births. However, the bottom 40% in Guinea is further behind than those in Côte d'Ivoire, with a child mortality rate of 121 deaths per 1,000 live births compared to 104 deaths per 1,000 live births.

INEQUALITIES IN CHILD SURVIVAL CHANCES ACROSS ETHNIC GROUPS

Recent data on child mortality among different ethnic groups are scarcer than for other groups. In nearly all countries with data, children from disadvantaged ethnic groups have much higher child mortality rates than the most advantaged groups (see Figure 2). Relative inequality between ethnic groups is particularly large in the Philippines, Vietnam, Ghana and Ethiopia, where children from groups with the highest mortality rates are more than three times more likely to die than those in ethnic groups with the lowest rates.

FIGURE 1: UNDER-FIVE MORTALITY RATES FOR THE POOREST AND RICHEST ECONOMIC GROUPS IN SELECTED COUNTRIES

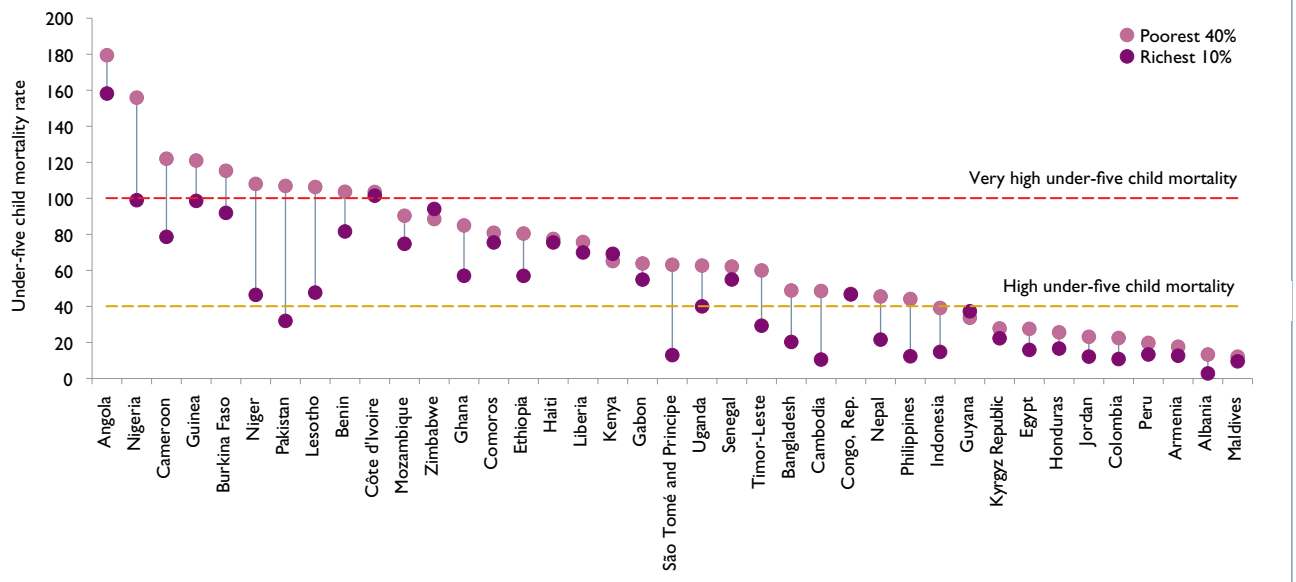
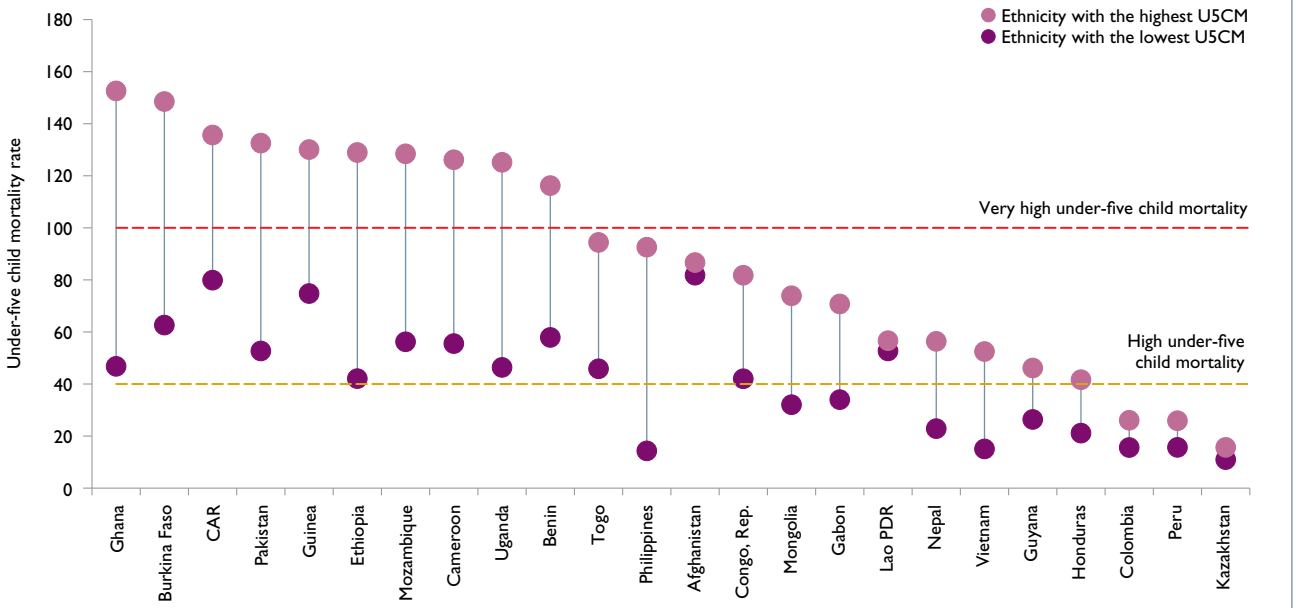


FIGURE 2: UNDER-FIVE MORTALITY RATES FOR ETHNIC GROUPS WITH THE HIGHEST AND LOWEST CHILD MORTALITY RATES IN SELECTED COUNTRIES



INEQUALITIES IN CHILD SURVIVAL CHANCES ACROSS URBAN AND RURAL AREAS

Whether children live in an urban or rural area also affects their survival chances (see Figure 3). In almost every country for which we have recent data, living in rural areas entails a higher risk of dying before reaching the age of five.[25] The largest inequality is observed in Cambodia, where the rate of child mortality in rural areas is nearly three times higher than in urban areas. However, even relatively small inequalities can translate into extremely large differentials in the number of deaths if child mortality rates are high. For example, in Cameroon, child mortality among rural children is more than one and a half times higher than for urban children, with an estimated child mortality rate of 112 deaths per 1,000 live births compared with 70 per 1,000 in urban areas. This means that in Cameroon, over 18,000 fewer rural children would die every year if their chances of survival were the same as in urban areas.

INEQUALITIES IN CHILD SURVIVAL CHANCES ACROSS SUBNATIONAL REGIONS

Geographic location also has a large effect on children's survival chances. In 32 of 44 countries for which data disaggregated by subnational level are available, being born in the region with the highest rate of under-five child mortality at least doubles children's risk of death compared with the region with the lowest rate.

Figure 4 illustrates the extent of inequality faced by children in the regions that are furthest behind on reducing child mortality. Disparities are particularly striking in the Philippines, Guyana, Niger and Bhutan, where children from the furthest behind regions are five times or more likely to die than their peers in better-performing regions. Niger is a particularly worrying case. While regional inequalities in child mortality rates are decreasing for the other countries (those shown in green in the figure), they are increasing in Niger (coloured red). Children in the most disadvantaged region were two and a half times more likely to die in 1998 than those from the best-performing region. By 2012, regional inequality had increased, and children in the furthest-behind region were nearly five times more likely to die than children from the best-performing region. Children in the most disadvantaged region in Niger are not only extremely *far* behind, but are also being *left* behind by national progress.

FIGURE 3: UNDER-FIVE MORTALITY RATES FOR URBAN AND RURAL AREAS IN SELECTED COUNTRIES

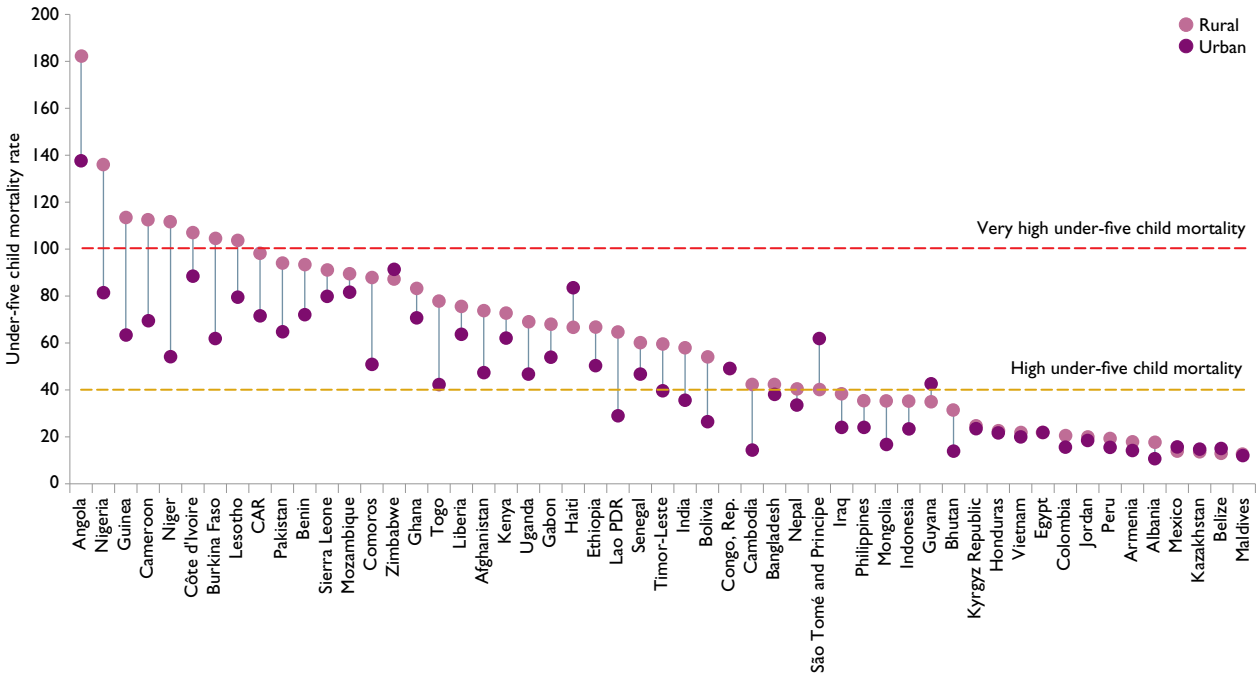
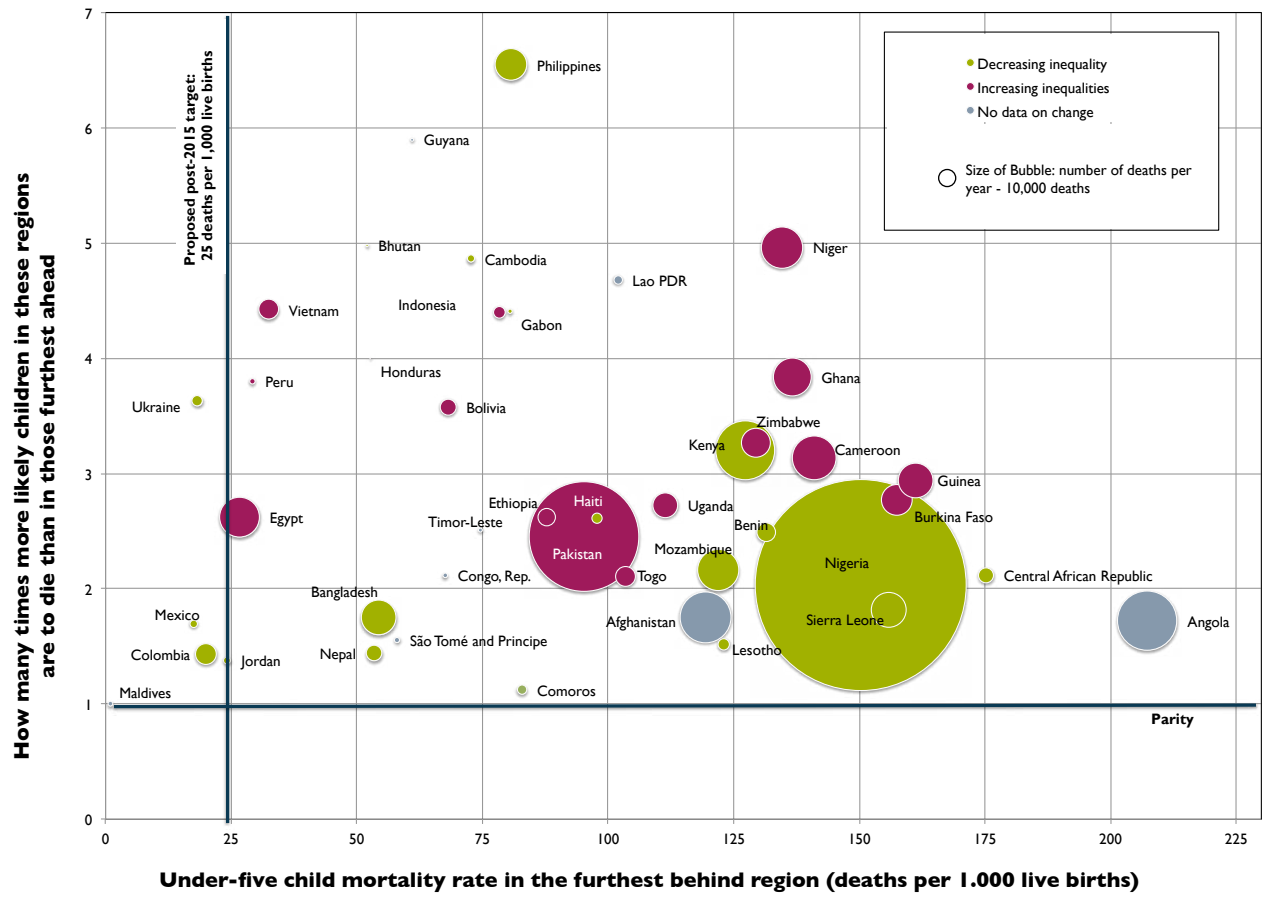


FIGURE 4: REGIONS WITH HIGHEST UNDER-FIVE MORTALITY RATES IN SELECTED COUNTRIES



Children in the furthest-behind region in Niger are also being left behind on the global stage. The child mortality rate in Tillabéri, for example, is estimated to be 135 deaths per 1,000 live births – much higher than the 100 per 1,000 threshold classed as 'very high' by the UN Inter-agency Group. Other countries with subnational regions that are being left behind – both within their countries and on the global stage – include low-income countries like Zimbabwe, Guinea and Burkina Faso, and lower-middle income countries such as Ghana and Cameroon. In other countries, disparities between subnational regions are not as large, but child mortality rates are extremely high for every group. Angola is a notable example. While regional disparities are relatively smaller, children in the furthest-behind region face the highest probability of death compared with children in any other country – an estimated 207 children die for every 1,000 live births. These children are the furthest behind of all of the countries in our sample.

Figure 4 also illustrates that absolute numbers matter. Some of the world's furthest-behind regions are home to a large number of people, and therefore see a staggering number of child deaths in absolute terms. This is depicted by the size of the bubble on the graph in Figure 4. In Nigeria, not only are children in the furthest-behind North West region twice as likely to die than their peers in the best-performing region, but this region sees over 2.7 million children born every year, over 400,000 of whom are likely to die before their fifth birthday. However, this region is at least catching up with the best-performing region. The picture is less positive in Pakistan, where the furthest-behind Sindh region not only sees a large number of deaths in absolute terms, but is also making slower progress in reducing child mortality rates than the best-performing Islamabad region. In Sindh, 1 million children are born every year, over 95,000 of whom die before they are five years old. Other regions in Pakistan, including Balochistan and Punjab, also have extremely high child mortality rates and see large numbers of deaths in absolute terms.[26]

This analysis does not imply that there is less urgency in tackling inequalities in regions with high child mortality rates but smaller absolute numbers of children, such as Mboum region in Central African Republic or Khmu region in Lao PDR. Action must be taken to end preventable deaths in all regions, no matter how small their child populations, and starting with those that are furthest behind. The analysis does, however, provide insights into the scale of the challenge in different countries, and should be taken on board in decisions about how international resources should be distributed.

Middle-income countries are not always effectively harnessing the fruits of enhanced economic growth for the benefit of children who are furthest behind. Our sample contains a roughly even split between low- and middle-income countries, yet the latter comprise 12 of the 15 countries with the highest levels of regional inequality, including Guyana, Bhutan, Vietnam and Indonesia. These countries arguably had greater potential than others in the sample to advance equal life chances for children, with more resources available to invest in child health. While child mortality rates in the furthest-behind regions of these countries are relatively lower than most of the sample, in all but four of the countries (Vietnam, Peru, Ukraine and Maldives) they are still above the 40 per 1,000 threshold that the UN Inter-agency Group categorises as 'high'. Of the 12 countries, nine have sufficient data to assess trends over time. Seven of these are seeing regional inequalities increase – the Philippines, Vietnam, Gabon, Honduras, Ghana, Peru and Bolivia.[27] These countries have high and persisting inequalities, probably deriving from systemic issues that are preventing child mortality rates from falling in some disadvantaged regions as they have done in others.

THE COMPOUND EFFECT OF INTERSECTING INEQUALITIES

Of course, in reality, these different forms of inequality will often be closely related to each other. For example, ethnic groups in some sub-Saharan African countries have a distinctive geographical distribution. In these contexts, unequal geographical progress may therefore also be reflected in unequal progress across ethnic groups. In some contexts, geographical regions or cities may be heterogeneous, with pockets of poverty alongside relative advantage. In other contexts, certain regions or rural cities may be more homogeneous. These dynamics are important, but internationally comparable data with sufficient disaggregation to explore them are limited. This is an area with significant methodological challenges and it requires improvements in the availability of disaggregated data (see Box 2).

Different forms of disadvantage also often overlap or intersect with each other.[28] Children who experience more than one form of disadvantage are likely to have the lowest survival chances – for example, children living in poor households in remote regions are likely to be more at risk than those from affluent households in more advantaged localities. Box 2 illustrates these intersecting inequalities with reference to Nigeria.

Photo: Alejandro Kirchuk/Save the Children

Raida carries her daughter Evelyn, eight months old, in Sotopampa, rural Peru. Evelyn is recovering from pneumonia. As there are no facilities that could treat her in her district, Raida had to take her to the hospital of Huancavelica, the capital of the region.

BOX 2: INTERSECTING INEQUALITIES BETWEEN ECONOMIC GROUP AND REGIONAL LOCATION IN NIGERIA

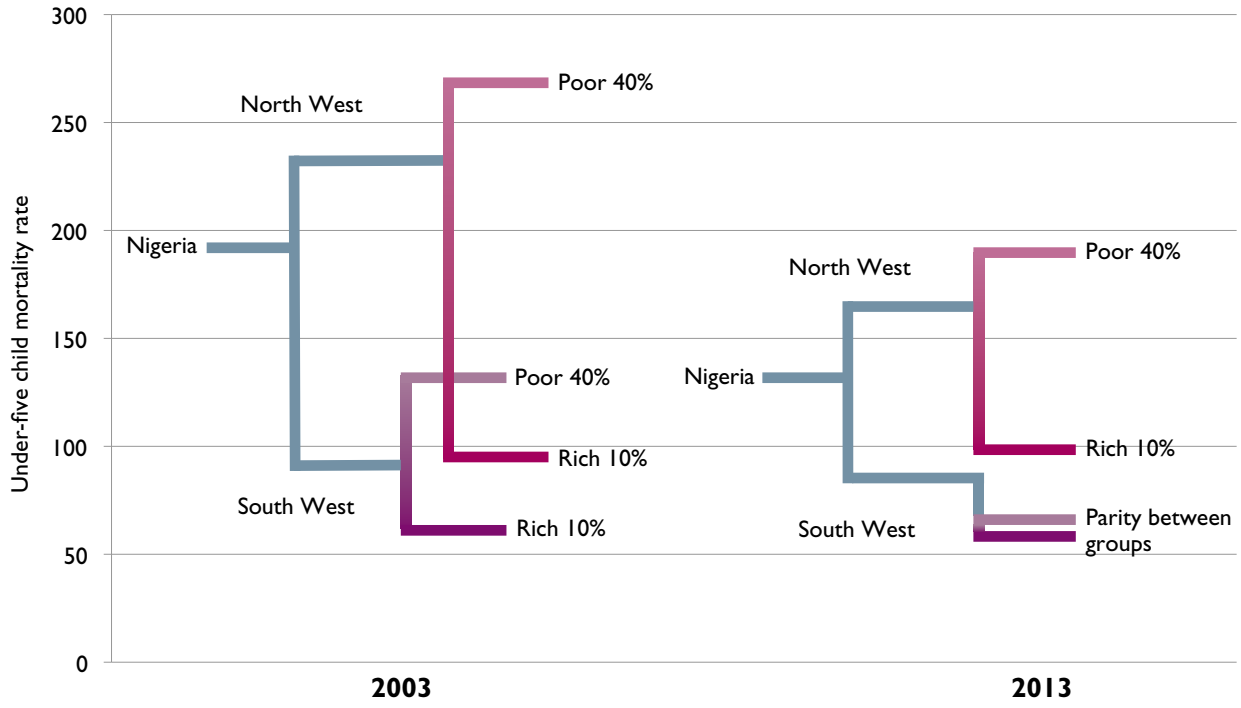
The compound effect of intersecting inequalities is illustrated for the case of Nigeria in Figure 5 below. Nigeria experienced an under-five child mortality rate of 117 deaths per 1,000 live births in 2013 but, as the graph shows, this national average masks wide disparities. Of six geographical zones or regions covered by the Demographic Health Survey used in our analysis, the South West region has the lowest child mortality, with a rate of 73 per 1,000. This is where Nigeria's largest city, Lagos, is located. The most disadvantaged region is the North West, with a rate of 150 deaths per 1,000 live births.

To analyse the compounding effect of economic group and regional location, Figure 5 presents the child mortality rate for the poorest 40% and richest 10% within each region. Children born in a household from the poorest 40% in the North West region are 3.6 times more likely to die before the age of five than poor children born in the South West region. Even children born in the richest 10% of households in the North West region are 1.8 times more likely to die compared to those in the best performing South West region.

Compared to 2003, inequalities between the most disadvantaged and most advantaged groups have decreased as a result of the relatively good progress of the poorest 40%. This is especially the case in the most advantaged region, where the poorest 40% even managed to catch up with the richest 10%. Despite this progress, levels of inequality and child mortality rates remain very high. The bottom 40% in the North West still has a very high child mortality rate of 175 deaths per 1,000 live births.

It is important to analyse these intersections to understand the profile of inequalities in a country. This example shows how regional averages could hide large inequalities. Analysing intersecting inequalities in child mortality is methodologically challenging due to sample sizes of household surveys. Even when samples are large, their size quickly reduces when we break down by subgroup. As a result, estimates are loose in statistical precision, and it is difficult to rank groups and make comparisons over time.[29]

Figure 5: Intersecting inequalities in Nigeria



BUILDING EQUAL SOCIETIES FOR BRIGHTER FUTURES

For a wide range of cultural and practical reasons, around one-third of girls do not attend primary school in Pakistan, and 59% of mothers are illiterate. The children of mothers with fewer than four years of schooling are twice as likely to die in infancy. In Pakistan, the children of mothers with no education are far more likely to be stunted than children born to mothers who have been to school. And while the benefits of exclusive breastfeeding are well established – including reducing the risks of child mortality – two-thirds of Pakistani mothers do not exclusively breastfeed for the first six months of their child's life.

Elders, especially in Upper Sindh, Balochistan and Southern Punjab exert their influence on infant and child feeding practices. Those who are least involved in decision making are the mothers themselves.

Save the Children runs nutrition awareness-raising sessions that help empower women and improve the health of their children and themselves. We also target the male community to help engage fathers and educate them about their roles and responsibilities in combating child and maternal malnutrition.

Iffat with her youngest child, Ahmad. Iffat was 15 years old when she got married in Muzzafargarh, Pakistan. Now 19, she has three children.

Photo: Ayesha Vellani/Save the Children

3 GLOBAL TRENDS

FAIRER PROGRESS IS POSSIBLE AND OFTEN FASTER

Our analysis so far has explored the magnitude of the inequalities that lie beneath global and national averages for child mortality rates. But how have these changed over time? While it is, of course, very worrying that certain countries have extremely high levels of inequality, it is even more worrying if those inequalities are also increasing rather than decreasing. It is in these countries that children are being left behind by national and global progress.

This chapter looks at the number of countries that have been pursuing equitable pathways, ensuring disadvantaged groups are catching up with those furthest ahead, and how many are leaving children behind (see Box 3).[30] While it has often been assumed that fast overall progress is likely to be unequal because getting to the 'hardest to reach' is more difficult, our research suggests that this is not necessarily the case. In fact, the opposite could be true: our data shows that countries on more equitable pathways are 6% more likely to see faster progress overall.

Photo: Paul Smith/Save the Children

Solanji with her three–week-old baby girl, Luisa, in the Puertas del Sol barrio, Colombia.

BOX 3: WHAT DO EQUITABLE PATHWAYS TO REDUCING CHILD MORTALITY LOOK LIKE?

In this report, we refer to countries that are reducing inequalities in child mortality rates between different groups of children as being on equitable pathways. But what do we mean by this? For purposes of illustration, Figure 6 below shows changes in child mortality over time for the poorest and richest groups in Mozambique, an example of a country on an equitable pathway.

The absolute gap between the poorest and richest children is reducing in Mozambique. In 1997 around 118 more poor children were dying per 1,000 live births than richer children. By 2011 this gap had reduced to 34 children per 1,000 live births. Such gap reductions are a step forward (ie, reducing the gap between the green and blue line on the graph). But the ultimate goal is to progressively equalise the relative chances of survival between groups (ie, have a steeper decline in the blue line so it converges with the green). Mozambique is also an example of success in this regard. In 1997 a child in the poorest quintile was nearly twice as likely to die than a child in the richest quintile. By 2011, these odds had reduced to 1.4. A country is on an equitable pathway if it is reducing both the absolute gap between groups and inequalities in the relative chances of survival between them.[31]

While Mozambique still has a long way to go to eradicate preventable child deaths, it is on an equitable pathway of child mortality reduction in terms of progress for children from poorer and richer economic groups. These trends have been driven by an expansion of essential health services in under-served areas, spurred through increased demand as a result of education and outreach efforts, and supported by a comprehensive and adequately funded health policy that has prioritised maternal and child health and HIV and AIDS.[32]

Figure 6: Trends in child mortality rates in Mozambique (an example of a country on an equitable pathway)

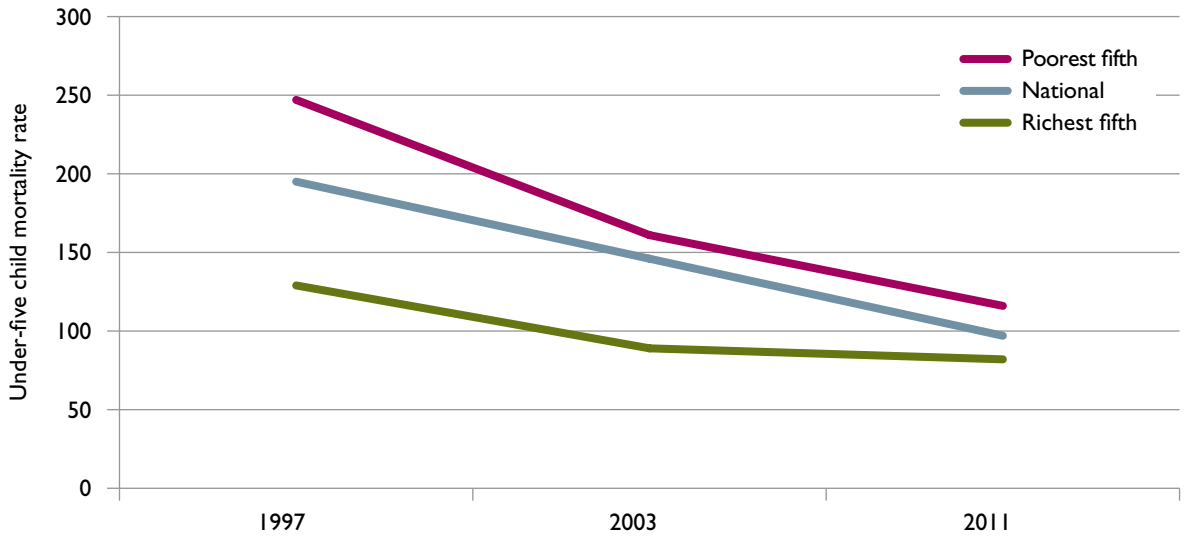
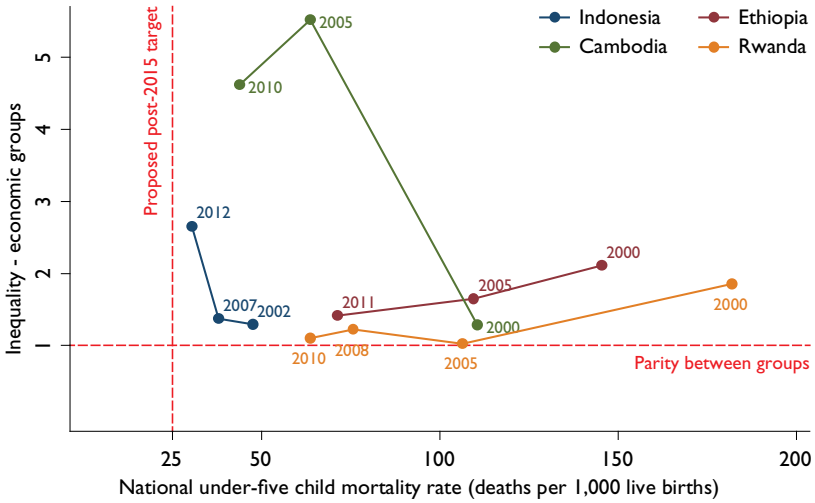
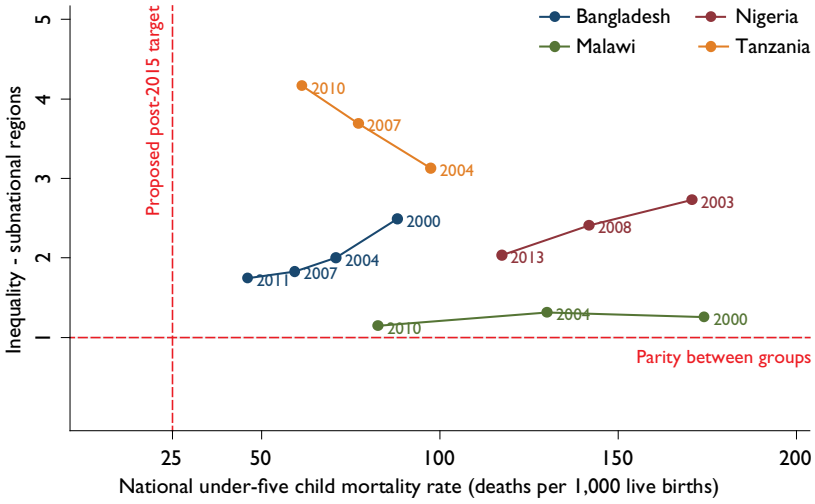


FIGURE 7: ILLUSTRATION OF FAST AND SLOW PROGRESS IN REDUCING INEQUALITY BETWEEN ECONOMIC GROUPS



Cambodia and Indonesia are examples of countries that have seen fast but uneven progress between economic groups, with the poorest children being left behind. Ethiopia has followed a more equitable pathway of child mortality reduction, halving national child mortality rates while making the fastest improvements for the poorest children. Rwanda's story is even more positive, with the country seeing extremely fast rates of child mortality reduction while at the same time virtually eliminating disparities in survival chances between poor and rich children.

FIGURE 8: ILLUSTRATION OF FAST AND SLOW PROGRESS IN REDUCING INEQUALITY BETWEEN SUBNATIONAL REGIONS



Tanzania and Bangladesh had lower levels of under-five mortality in the early 2000s. Both made progress over the following decade, yet pursued very different pathways in their efforts to reduce child mortality. In the ensuing years, regional inequalities increased in Tanzania and decreased in Bangladesh. The graph also highlights progress in Nigeria, where regional disparities fell, and Malawi, where they remained low.

Note – the data for Nigeria refers to six geographical zones rather than states. These are large geographical areas made up of a large number of states, between which disparities also exist.

ANALYSING GLOBAL TRENDS AND INEQUALITIES IN CHILD SURVIVAL

Our analysis reveals that **too many countries are leaving particular groups of children behind, including children from disadvantaged economic groups, certain ethnic groups, rural areas or particular subnational regions**. A total of 78% of the countries considered in the analysis (43 out of 55) saw an increase in disparities in under-five child mortality rates for at least one of these social or economic groups over the past decade.[33] In 16% of the countries (9 out of 55), inequalities in survival chances between advantaged and disadvantaged children had increased across all social and economic groups analysed. These include Bolivia, Cameroon, Central African Republic, Chad, Iraq, Niger, Pakistan, the Philippines and Togo.[34]

These trends are illustrated in the four graphs in figures 9–12 on page 17. These graphs show not only which countries have seen increases in inequality in under-five child mortality rates over the past decade, but also whether they have been making relatively faster or slower overall progress.[35]

The most desirable position for a country to be in on each graph is the upper right quadrant, as close as possible to the top right-hand corner. These are countries that are achieving fast, above-median reductions in child mortality rates while at the same time reducing inequalities between groups. In other words, they are on fast and equitable pathways towards ending preventable child deaths. Rwanda (RWA) and Malawi (MWI) are two countries on the graph that are achieving this positive progress across economic groups, geographical regions and urban–rural areas.[36] In Malawi, for example, children from rural areas were one and a half times more likely to die than children from urban areas in 2000. These disparities were reduced to parity by 2010 as rural regions improved faster and caught up with urban areas (see Malawi Spotlight, page 18). Other positive examples include Bangladesh, Kenya, Mozambique and Namibia.[37]

In contrast, the least desirable position for countries to be on the graphs in Figures 9–12 is in the bottom left quadrant, which represents countries making slow and unequal progress in reducing child mortality. Pakistan is one example: under-five child mortality not only fell slowly between 2006 and 2012, but inequalities also increased between economic groups, geographical regions and urban–rural areas.[38] The poorest 40% of children were about twice more likely to die than the richest 10% in 2006. By 2012, this ratio had increased to over three times, mainly because the poorest 40% experienced much slower progress than the richest 10%.

Trends in inequalities across different groups in the same country can of course vary – a country might be reducing inequalities between some groups while at the same time seeing an increasing gap between others. This is the case with the Republic of Congo, for example; here, disparities between regions increased slightly, but gaps narrowed between children from different economic groups and between children in urban and rural areas.

Photo: Colin Crowley/Save the Children

Nurse and midwife Claire Musamali carry out a post-natal check-up for Emily and her son Ramsey at Emily's home in Cheptais, Kenya. Having given birth just four days earlier, Emily did not have the stamina to make it to the health facility for the check-up, so Claire walked to Emily's home. Claire says, "It's very important to have trained midwives in this area. If we weren't here, we'd have so many maternal deaths. We're making a big difference in the community."

FIGURE 9: PROGRESS ACROSS ECONOMIC GROUPS IN THE PERIOD 2000 - 2013

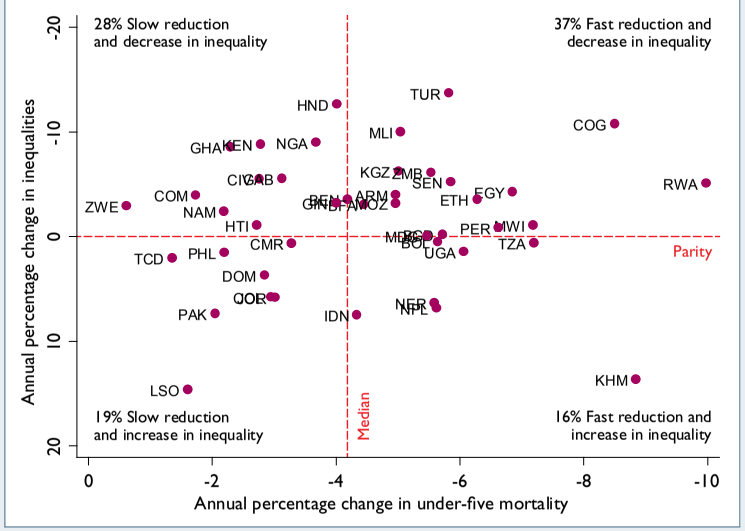


FIGURE 10: PROGRESS ACROSS GEOGRAPHICAL REGIONS IN THE PERIOD 2000 - 2013

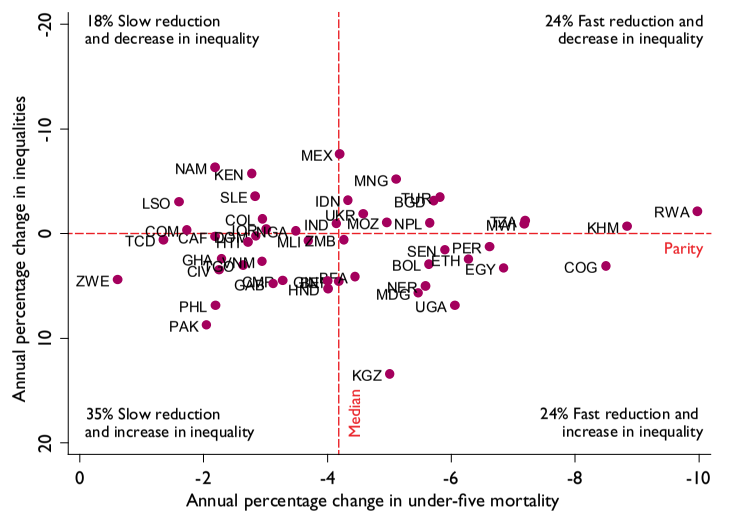


FIGURE 11: PROGRESS IN URBAN–RURAL AREAS IN THE PERIOD 2000 - 2013

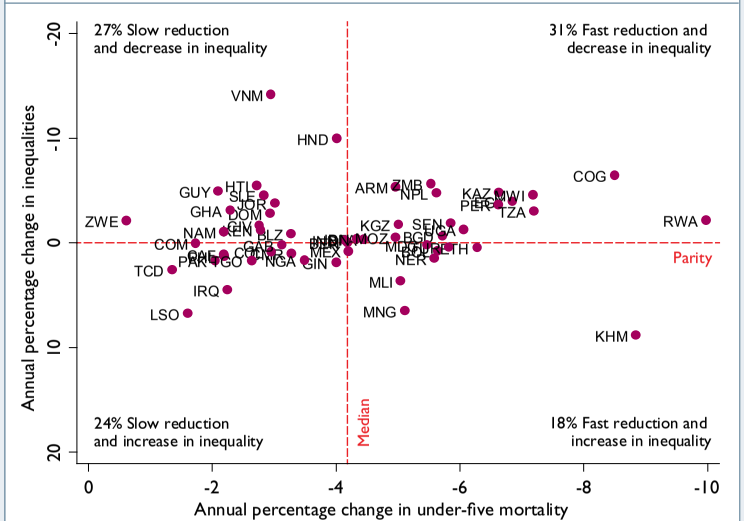
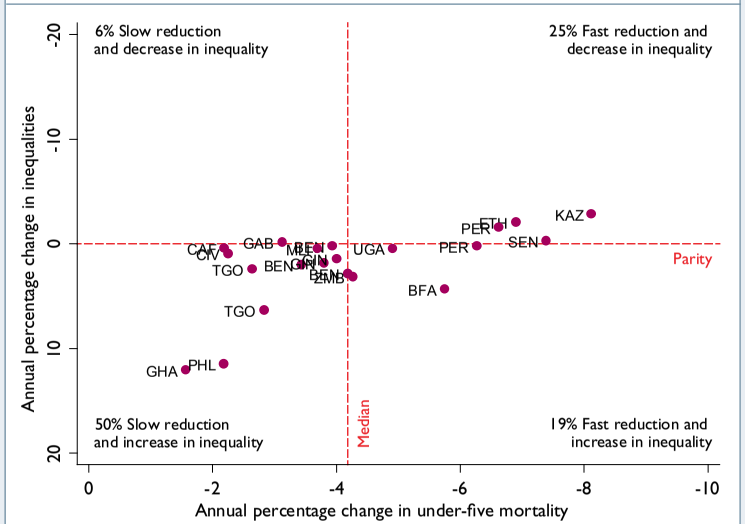


FIGURE 12: PROGRESS ACROSS ETHNIC GROUPS IN THE PERIOD 2000 - 2013



SPOTLIGHT ON **MALAWI**

PROGRESS OVERVIEW

Malawi has achieved substantial reductions in child mortality rates in recent years, from 244 deaths per 1,000 live births in 1990 to 68 per 1,000 in 2013. This progress has been more equitable than in other countries with similar levels of GDP per capita and child mortality. Inequalities have been falling between regions and economic groups. However, greater progress will have to be made in reducing the latter if Malawi is to reach the post-2015 target by 2030 for all economic groups. In terms of service provision, Malawi ranks third most equitable for coverage of eight core maternal, newborn and child health (MNCH) interventions across economic groups out of 31 Countdown countries for which data are available. Coverage of DTP3 vaccinations rose from 78% in the poorest wealth quintile in 2000 to 91% in 2010, compared to coverage in the richest quintile of 94%. The poorest lag further behind for other key indicators, with only 63% of births in the poorest quintile taking place with a skilled attendant present, compared with 88% in the richest. This equity gap has, however, been reducing since 2000, and is considerably smaller than in many developing countries.

OUTCOMES

MDGs

Child mortality rate: 68 per 1,000
MDG target: 82 per 1,000 – MET
Number of child deaths per year: 41,000
Average annual rate of reduction (2000–2013): 5.6% – ACCELERATING
Equity of child mortality progress (2000-2010):

- Economic groups: Decreasing inequality
- Regions: Decreasing inequality
- Urban/rural: Decreasing inequality

POST-2015

On track for post-2015 nationally: Yes
On track for all groups: No

- Economic groups: No, but with potential
- Regions: Yes
- Rural and urban: Yes

Figure 13: Trends in intervantion coverage

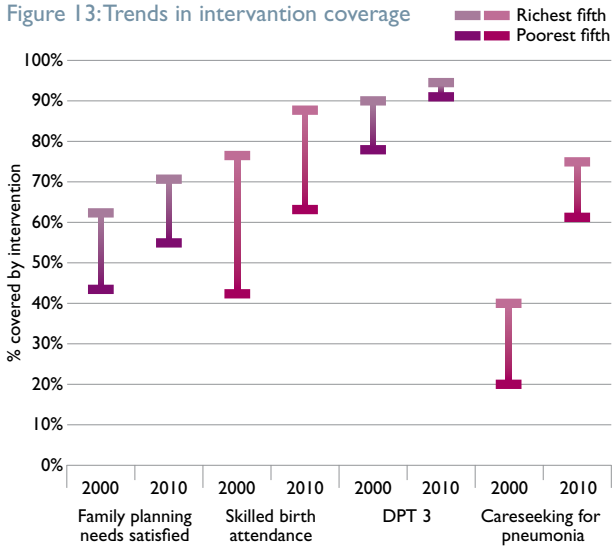
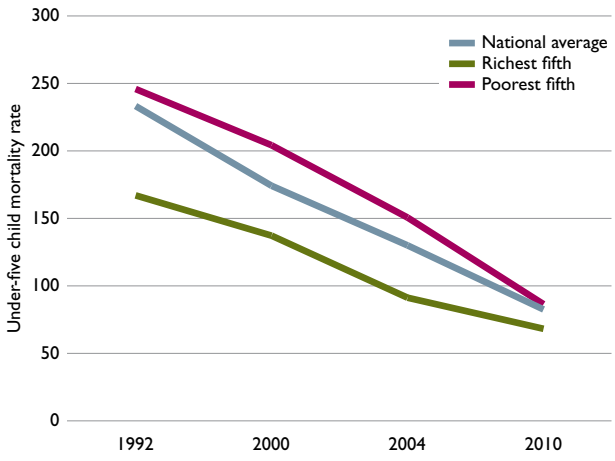


Figure 14: Trends in under-five child mortality rate



Policy spotlight: investing in hard-to-reach communities

Malawi's Ministry of Health has prioritised integrated Community Case Management (iCCM) of childhood illness to ensure that children affected by malaria, diarrhoea, pneumonia, malnutrition and other causes of mortality receive timely and effective treatment. Initiated in 2008 and scaled up throughout the country with donor support in 2010, the programme has been designed to ensure access to interventions for poor and remote children. More than 3,000 community health workers deliver the programme in over 10,400 communities, 2,300 of which are classed as hard to reach (located more than 5km from a health facility).

Malawi is one of the few countries in sub-Saharan Africa that has met (and even surpassed) the Abuja target to spend at least 15% of the total government budget on health, allocating 18% of expenditure to the sector in 2012. The absence of user fees has contributed to much lower than average out-of-pocket spending on healthcare, at 13% of total expenditure on health. Bolstering free and timely access to essential services will be critical if Malawi is to eliminate preventable child deaths within the next 15 years.

Complementary drivers of change

- **Focus on equity within Health Sector Strategic Plan**. The 2011 Plan, *Moving Towards Equity and Quality*, prioritises cost-effective interventions and expansion of services to under-served population groups.

Challenges

- **Governance and accountability:** In 2013, corruption and mismanagement of financial resources led a number of donors to withdraw budget support from Malawi. Donor confidence in public financial management has yet to be restored, and funding to the health sector is lower than required.
- **Quality of services:** While considerable progress has been made in recent years, quality of care remains a significant problem, particularly for maternal and neonatal health services.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

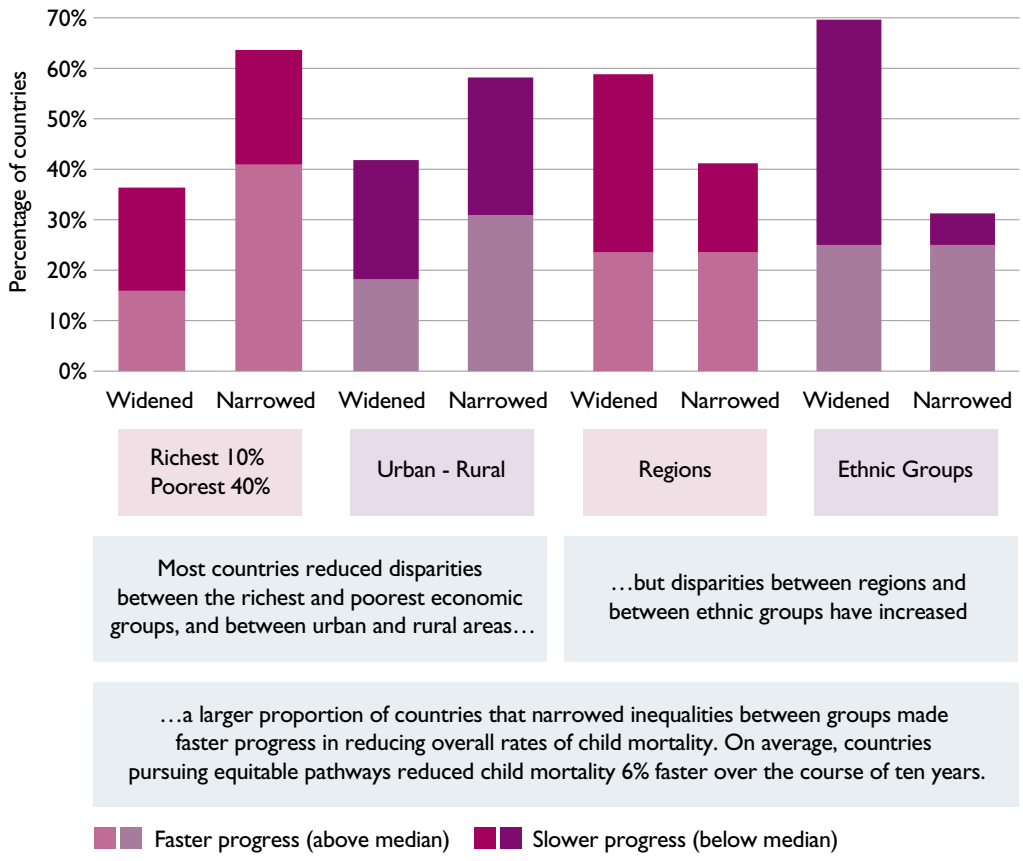
GROUNDS FOR OPTIMISM: FAST AND EQUITABLE PROGRESS IS POSSIBLE

While many countries have seen inequitable progress in recent years, a number of countries are achieving both impressive reductions in national child mortality rates and reductions in disparities between social and economic groups. **About a fifth of countries have achieved fast, above-median reductions in child mortality over the past decade, while at the same time ensuring that no group of children is left behind**. Clearly, with the right policies and investment, fast and equitable progress is possible.

Contrary to popular belief that reducing inequalities in child mortality rates between different groups is likely to slow down overall rates of change, our analysis shows that there is no trade-off between pursuing equitable pathways and pursuing fast progress. Fast or slow progress can be achieved with either an increase or a reduction in disparities across social and economic groups. Data points are fairly evenly distributed across the four quadrants of the graphs in Figures 9–12. For example, both Malawi (2000 – 2010) and Uganda (2000 – 2011) have experienced faster-than-average progress, but while Malawi has seen reductions in disparities between advantaged and disadvantaged groups, Uganda has seen increases.[39]

In fact, if there is any relationship between the speed and equity of progress, it is that **faster progress is more common among countries that have narrowed the gap in child mortality rates between advantaged and disadvantaged groups** (see Figure 15). More than half of the countries that reduced inequalities in children's survival chances between groups also experienced fast (above median) declines in overall child mortality. We found that reducing inequalities across social and economic groups has a small but positive correlation with faster progress.[40] For example, countries that reduced regional inequalities achieved an average annual reduction in child mortality of 4.7% compared to 4% in countries in which disadvantaged regions have been left behind. The effect of reducing inequalities on overall rates of progress is similar for economic and rural groups, and slightly higher for ethnic groups (it is also robust to a range of methodical choices as showed in Appendix 1).[41]

FIGURE 15: SUMMARY OF PROGRESS IN REDUCING CHILD MORTALITY AND INEQUALITIES



What does this positive association mean in the long run? Countries reducing inequalities between different groups of children have reduced national child mortality rates by between 38% and 48% on average over the course of ten years. In countries where inequalities are increasing and some groups of children are being left behind, child mortality rates have on average fallen by only 30% to 35%. **In other words, countries pursuing equitable pathways have, on average, reduced child mortality 6% faster over the course of ten years.**[42]

Further grounds for optimism lie in our finding that disparities between rich and poor children have been reducing in the majority of countries (64%), as well as between children in urban and rural areas (58%).[43] However, children from disadvantaged geographical regions and ethnic groups were left behind in the majority of countries. Subnational regional disparities increased in 59% of the countries for which data are available, and disparities between ethnic groups increased in 76%.[44] In most countries, children's survival chances are increasingly dependent on the region and ethnic group they happen to be born into, suggesting that these forms of group-based inequality require particular attention.

Naazdana, age three months, waits with her father for her first dose of the measles and polio vaccine in Pakistan.

WITHOUT A STEP CHANGE IN ACTION, THE UNFAIR LOTTERY OF BIRTH WILL CONTINUE INTO THE FUTURE

The fact that only a relatively small proportion of countries – around a fifth – are making both fast and equitable progress has worrying implications for the global aspiration to end preventable child deaths. To explore what future trends might look like in practice, we projected under-five mortality rates for countries monitored by the international Countdown to 2015 initiative forward to 2030. These are the 75 countries where more than 95% of all maternal and child deaths occur, including the 49 lowest-income countries.[45]

The aim of these projections was to assess how many countries, and social and economic groups within them, can be expected to meet the under-five child mortality target that has been proposed for the post-2015 framework: to reduce child mortality rates to no more than 25 deaths per 1,000 live births by 2030 (see Box 4). Our 'business as usual' scenario considers how many countries meet the target both as a national average and for different social and economic groups,[46] assuming that the rate of progress that have been achieved in the recent past continue into the future.[47]

According to our analysis, under this 'business as usual' scenario, many countries could meet the post-2015 target as a national average, but some social and economic groups will be left behind. If countries continue to reduce under-five mortality at the average rate they have done in the past, nearly half (47%) could meet the 25 per 1,000 target by 2030 as a national average. However, if we dig beneath the surface, we find that the number of countries that meet the target for all groups is much smaller. Take Ethiopia for example: under the optimistic 'business as usual' scenario, the country could meet the target at national level and make important progress across social and economic groups. However, poor groups, rural areas, and some subnational regions inside Ethiopia will still have child mortality rates above 25 per 1,000 by 2030. The same would be true in many other countries (see Table in Appendix 2). **Only 47% of the countries would reach the target for both urban and rural areas, 25% for all economic groups, and 14% for all regions inside the country**.[48]

Unfortunately, data for all economic and social groups are not available for all countries. Only 35 Countdown countries have time-series data disaggregated by all three groups included in our analysis (economic group, urban–rural location and subnational region). From these 35, almost half could meet the target at national level under a 'business as usual' scenario. However, only three – Bangladesh, Egypt and Peru – are projected to meet the target for all three social and economic groups.[49]

The message is clear: national averages provide an incomplete picture of progress in reducing child mortality and hide the fact that some social and economic groups will be left behind. This finding is in line with other research which suggests that virtually all countries will need to step up several gears from 'business as usual' in order to meet proposed child survival targets by 2030.[50] If the countries included in our analysis were to do this – ensuring that disadvantaged groups make progress that is at least as fast as more advantaged groups have made in the past – the proportion reaching the target would increase considerably (see 'equitable progress' scenario in the table in Appendix 2). It is important to note that **achieving more equitable progress would also mean that a larger number of countries would achieve the target as a national average**. Under the equitable scenario, 80% of countries achieve the target as a national average compared to only 47% under the 'business as usual' scenario.

While the global picture is challenging, our findings do not mean that levels of ambition should be lowered. Post-2015 targets need to be ambitious, aspirational and attainable, stretching our shared definition of sustainable development success. What our research does underscore is that, for the child mortality target to be achieved for all groups of children, accelerated and more equitable progress will be crucial. We know this is possible, as demonstrated by the fifth of countries in our research that we found have been making fast and equitable progress. To make this a reality in all countries, rather than in just a minority, governments will need to commit an unprecedented level of political will, building on best practice, putting the children that are furthest behind first, and recognising child mortality as a defining development indicator for our generation. Only then do we stand a chance of ensuring that no child loses in the lottery of birth by 2030.

BOX 4: THE PROPOSED POST-2015 UNDER-FIVE CHILD MORTALITY TARGET: 25 DEATHS PER 1,000 LIVE BIRTHS

There is growing consensus that the post-2015 framework should contain a target to put the world on course for ending preventable maternal, newborn and child deaths.[51] The international Partnership for Maternal, Newborn and Child Health (PMNCH)[52] and UNICEF have proposed a target of no more than **25 under-five deaths per 1,000 live births in every country by 2030**.[53] Achieving this target by 2030 would put countries on track for meeting the established international target developed by UNICEF and other partners of reducing under-five child mortality rates to 20 deaths per 1,000 live births by 2035.[54]

Some Countdown countries that still carry a large proportion of the world's burden of child mortality have already achieved these targets. For example, Mexico, a country profiled in this report, currently has a child mortality rate of 15 deaths per 1,000 live births. Health systems, resources, staff and technology available in such countries allow more child deaths to be prevented than in other Countdown countries. These countries could set ambitious child mortality targets under the post-2015 framework far below the 25 per 1,000 threshold, aiming to bring rates in line with the average of around seven deaths per 1,000 live births in countries belonging to the Organisation for Economic Co-operation and Development (OECD).

In 2013, the UN Secretary-General's High-level Panel on the Post-2015 Development Agenda made the important recommendation that no post-2015 target should be considered met unless it is met for all relevant social and economic groups.[55] The UN Secretary-General has supported this recommendation in recognition of the fact that national averages can mask significant disparities in progress between economic, gender, ethnic, regional and other groups.[56] For child mortality, this would mean that the 25 per 1,000 target must be met by all social and economic groups, and not just as a national average.

Photo: Oli Cohen/Save the Children

Hassana and Housseina, five-week-old twins, at the Save the Children supported centre for the treatment of severe malnutrition cases with complications in Aguie, Tessaoua district, Niger. The twins, born prematurely at seven months, were both malnourished at birth.

SPOTLIGHT ON **RWANDA**

PROGRESS OVERVIEW

Rwanda is one of the few sub-Saharan African countries on track to achieve MDGs 4 and 5. Child mortality fell rapidly between 2000 and 2013 from 182 to 52 deaths per 1,000 live births. Maternal mortality fell from 1,000 deaths to 320 per 100,000 live births. Rwanda has also seen a significant reduction in health inequalities – both in mortality rates and coverage of services. Disparities in child mortality rates have reduced significantly between socioeconomic groups as well as between rural and urban areas over the past decade. Impressive improvements have also been made in the coverage of services – 98% of one-year-olds received the DTP3 vaccine in 2010, higher than in the UK. Equity gaps have also been closing between rural and urban areas and socioeconomic groups across a wide range of indicators. In 2000, women in the richest economic group were three times more likely to give birth in the presence of a skilled attendant. By 2010, this ratio had reduced to 1.4, with coverage among the poorest group rising from 22% to 64%. There is a still a long way to go, but this trend is encouraging.

OUTCOMES

MDGs

Child mortality rate: 52 per 1,000
Child deaths per year: 22,000
MDG target: 51 per 1,000 – ON TRACK
Average annual rate of reduction (2000–2013): 10.0% – ACCELERATING
Equity of progress (2000–2010):

- Economic groups: Decreasing inequality
- Regions: Decreasing inequality
- Urban/rural: Decreasing inequality

POST-2015

On track for post-2015 nationally: Yes
On track for all groups: No

- Economic groups: Yes
- Regions: No, but with potential
- Rural and urban: Yes

Figure 16: Trends in intervantion coverage

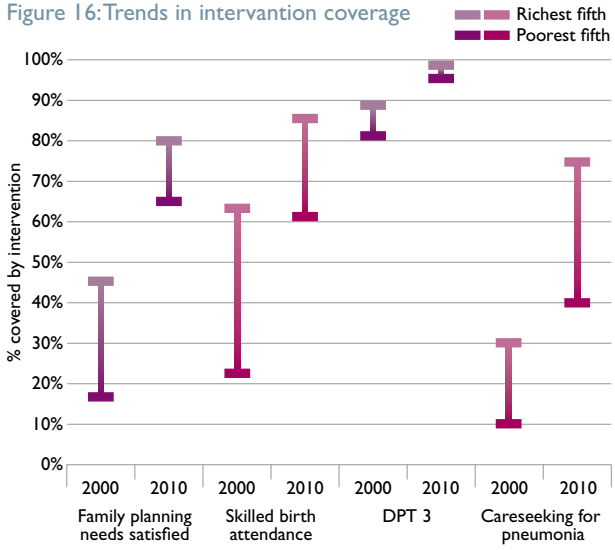
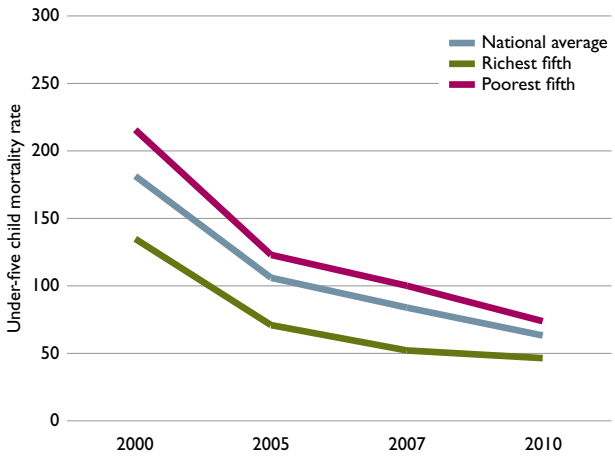


Figure 17: Trends in under-five child mortality rate



Policy spotlight: investment in the national health system

Rwanda's achievements in health outcomes are linked to improvements across a range of sectors and programmes, including its National Social Protection Strategy and significant progress in water, sanitation, education, and gender equality. Specific investments have also been made in health:

- Rwanda has increased health spending to 6% of GDP, far beyond the average for other sub-Saharan African countries (2%). Rwanda is one of just six African countries that allocated more than 15% of its budget to health, meeting the Abuja declaration of 2001.
- A national health insurance system, the *Mutuelles de santé*, covers more than 98% of the population with a comprehensive benefits package. The compulsory scheme includes national subsidies for the poorest. It has both dramatically reduced out-of-pocket spending and increased utilisation of health services.
- In addition to a national subsidy system, Rwanda uses performance-based financing, which appears to have had a positive impact on the utilisation of maternal health services by both the poorest and richest socioeconomic groups.
- Rwanda has also emphasised greater coordination of donors and aid sustainability.

Challenges

While Rwanda's benefit packages are quite comprehensive on paper, a shortage of health workers means that few facilities are fully staffed to deliver them. The poor quality of health services remains an issue, largely because of a lack of well-trained health workers. Utilisation rates are still lower among the poorest quintiles and for certain patients, such as children with acute illnesses.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

Life can be tough for Modeste and her husband, who live in Burera district, Rwanda. They are farmers, with a small plot of land and eight children to bring up, and money is tight. Sometimes there isn't enough food to eat and they struggle to pay school costs.

But ill health is one thing that they don't have to worry about as much anymore.

Despite being one of the world's poorest countries, Rwanda is investing in its health system – and seeing infant and maternal mortality rates fall as a result. The introduction of a new national health insurance system is a key factor in this change for the better.

In the past, Modeste often couldn't afford to seek medical help when she or her children were ill. But when her youngest child, six-week-old Eliabu, was sick with whooping cough, Modeste took him straight to the health centre.

She said, "I was very worried. I thought I could even lose my baby. But when I came here they gave me the drugs and I followed the instructions. I kept seeing some improvement.

"Previously a child could fall sick because there was no insurance system. I kept my child at home sometimes because I didn't have money to pay. Now, when you get a problem you can immediately come to the clinic.

"And for little children who get pneumonia or diarrhoea, we have community health workers who live in the village who can attend to that."

Photo: Hannah Maule-Ffinch/Save the Children

4 EQUAL LIFE CHANCES

THE POLICIES THAT CAN GET US THERE

The evidence we have presented in this report shows that equitable progress in reducing child mortality is possible. A number of countries are simultaneously achieving fast progress and narrowing the gap in survival chances between advantaged and disadvantaged children. But what are the key policies and strategies that can help to spur such progress, allowing countries to shift onto more equitable pathways towards ending preventable child deaths?

There is no magic bullet for achieving equitable progress in child mortality reduction; the most favourable pathways will vary according to country context, reflecting demographic, epidemiological and economic profiles. However, we can draw some general lessons from those countries that have reduced child mortality across social and economic groups, while at the same reducing inequalities in mortality rates.

This section highlights two important areas of action that have worked: building stronger health systems that put the needs of the poorest children first, and addressing the underlying social and economic drivers of inequalities in health so that people are able to live full and healthy lives.

A. STRONGER HEALTH SYSTEMS THAT PUT THE NEEDS OF THE POOREST FIRST

I. ACHIEVING EQUITABLE COVERAGE OF HIGH-IMPACT SERVICES

In countries with high child mortality rates across all or particular groups, there is potential to scale up access to quality, cost-effective, high-impact health services that address the lead causes of child mortality along the continuum of care (see Box 6 on page 27). Improvements in the coverage of essential services have contributed to the fast reductions in child mortality that have been seen at national level in some of the world's poorest countries over the past 15 years, including in Bangladesh, Ethiopia, Malawi, Niger, Rwanda, and Tanzania.[57]

However, as analysis in this report shows, not all of these countries have reduced mortality equitably. The key to fast, equitable progress is to scale up use and coverage of quality essential services among the most disadvantaged groups first, and to ensure access for all without financial hardship. This approach is known as progressive universalism – a concept gaining momentum within the wider movement for Universal Health Coverage (see Box 5). Pursuing such an approach has put countries like Malawi and Rwanda on a track to fast and more equitable reduction of child mortality. In many cases, this has been supported by a strong and explicit focus on equity within national health sector policies and plans (see Malawi and Nepal country spotlights on pages 16 and 26), supported by protection of the right to health and freedom from discrimination enshrined in the constitution.[58]

SPOTLIGHT ON **NEPAL**

PROGRESS OVERVIEW

Nepal has made significant progress in child mortality reduction over the past decade, halving under-five and newborn mortality between 2000 and 2013. Disparities in child mortality rates between subnational regions have narrowed marginally. However, disparities between socioeconomic groups have been rising. While inequalities in DTP3 vaccination coverage have been narrowing, they have widened for skilled birth attendance. By 2011, the difference in skilled birth attendance between the richest and the poorest groups was around 70 percentage points, up from 50 in 2006. Gaps have also increased significantly for care-seeking for pneumonia. Under-five stunting rates have fallen more slowly than child mortality, and remain high at 41%. Inequalities in stunting rates between the poorest and richest quintiles grew between 2001 and 2011.

OUTCOMES

MDGs

Child mortality rate: 40 per 1,000
MDG target: 47.4 per 1,000 – MET
Number of child deaths per year: 23,000
Average annual rate of reduction (2000–2013): 5.6% – ACCELERATING
Equity of progress (2001-2011):

- Economic groups: Increasing inequality
- Regions: Decreasing inequality
- Urban/rural: Decreasing inequality

POST-2015

On track for post-2015 nationally: Yes
On track for all groups:

- Economic groups: Yes
- Regions: No data available
- Rural and urban: Yes

Figure 18: Trends in intervention coverage

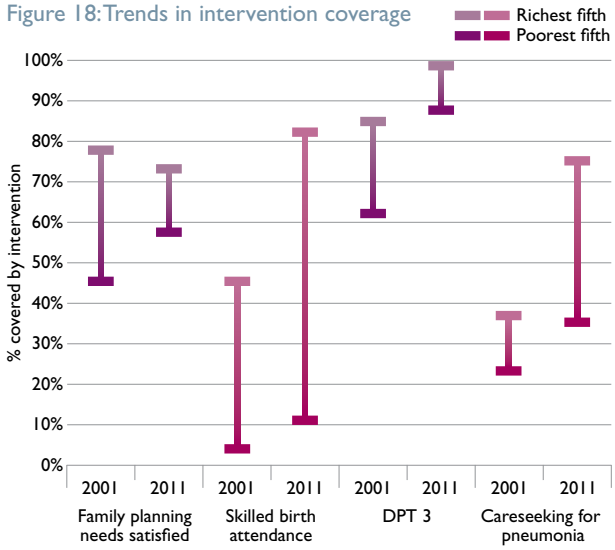
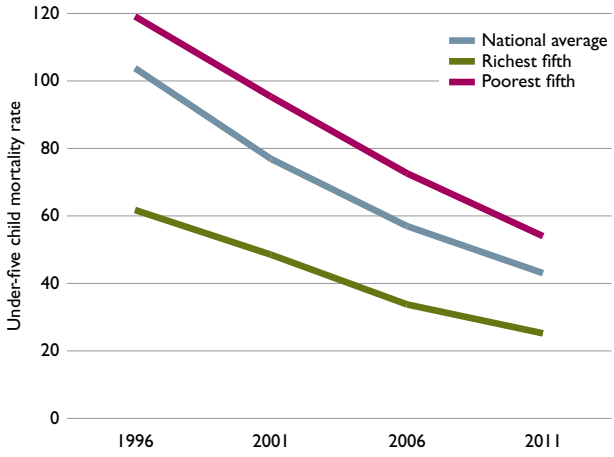


Figure 19: Trends in under-five child mortality rate



Policy spotlight: designing policies and strategies to reach the unreached

The Nepalese government is implementing a number of public health programmes in an attempt to address inequalities in health outcomes and intervention coverage. These include the Free Health Services Programme (FHSP) introduced in 2007 for primary health, and the Amaa Suraksha Programme (2009). In 2014, the National Health Policy established Universal Health Coverage as a key objective, and the government is currently drafting a 2015–2030 strategy to help implement the policy, the National Strategy for Reaching the Unreached to Reduce Health and Nutrition Inequities in Nepal. This identifies the specific barriers that are preventing poor, remote, disabled and minority groups from accessing services, and outlines concrete actions that will be pursued and indicators to monitor progress. The strategy is being translated into a costed action plan and monitoring framework, supported by pooled funding from government and development partners. If implemented effectively, these plans hold significant potential for addressing health inequalities in Nepal.

Complementary drivers of change

- Gender-responsive planning and budgeting processes are helping to ensure that the needs of women and girls are considered across all sectors, including the health sector, with the percentage of government programmes assessed as contributing to gender equality doubling from 11% in 2007 to 22% in 2011.
- Conditional cash transfers are provided for pregnant women to cover transport costs, with additional benefits in remote areas, and incentives for health workers to attend facility and home deliveries.
- There has been a particular focus on community-based planning and delivery since 2002 through Health Facility Operation and Management Committees (HFOMCs). Programmes have been established to empower and train committee members, resulting in an increase in the participation of Dalits in these committees from 30% to 61% between 2008 and 2011, as well as an increase in their uptake of health facilities.

Challenges

Out-of-pocket spending remains high in Nepal, representing nearly half of total health expenditure. Health facilities are underfunded and government spending on health was only 2% of GDP in 2011. The government has committed to increase its budget allocation to health and to implementing a National Health Insurance policy, which aims to improve equitable access to health services by curbing out-of-pocket payments and strengthening the health system.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

BOX 5: UNIVERSAL HEALTH COVERAGE AND EQUITY

Universal Health Coverage (UHC) is gaining global momentum and features in the discourse around the post-2015 Sustainable Development Goals (SDGs). The World Health Organization (WHO) defines UHC as ensuring that "all people obtain the health services they need without suffering financial hardship when paying for them".

UHC embodies health and social goals: it is the aspiration that all people can obtain the quality health services they need (equity in service use) without facing financial hardship (financial protection). UHC promotes the realisation of the human right to health, disassociating lack of access to services from inability to pay (Kutzin 2012). UHC has been framed as a direction for countries, rather than a destination. All countries across the world can continue to make progress towards UHC, for instance through expanding the range of services provided, improving the quality of care, and increasing the level of financial protection.

Crucially, an expansion in coverage of services must not come at the expense of equity. In this report, we support the concept of progressive universalism, which aims to "ensure that people who are poor or otherwise disadvantaged gain at least as much as those who are better off, every step of the way towards universal coverage".[59] This concept implies that reforms must be designed to increase coverage among the most disadvantaged groups first. A recent report from Save the Children, UNICEF, the Rockefeller Foundation and WHO (Universal Health Coverage: a commitment to close the gap) examined equitable pathways towards UHC, specifically looking at equity in the financing of UHC.

References:
WHO (2014) *What is universal health coverage?* http://www.who.int/features/qa/universal_health_coverage/en/
Kutzin, J. (2012) 'Anything goes on the path to universal health coverage? No.' *Bulletin of the World Health Organization 2012; 90:867-868.*

BOX 6: BASIC INTERVENTIONS ALONG THE CONTINUUM OF CARE

All mothers, newborns and children should have access to a core set of services from pre-pregnancy, antenatal care through to delivery, postnatal care and early childhood. Together these interventions impact directly on newborn and child mortality.[60] These interventions work - countries with a higher coverage of these essential interventions have lower child mortality rates, even when controlling for the strength of the national economy or other factors.[61] Interventions must be provided through a continuum of care throughout the **lifecycle** (from adolescence, pregnancy, childbirth, the postnatal period and childhood) and also between **places** of caregiving (households and communities, outpatient and outreach services and clinical-care settings).[62] An illustrative list is below:

- **Reproductive health**: family planning services, such as contraceptive use.
- **Antenatal & postnatal care**: with a skilled provider, integrated with other services.
- **Childbirth care**: Skilled & emergency care at birth for mothers and newborns, including hygiene, warmth, breastfeeding, resuscitation. Prevention of mother to child transmission of HIV.
- **Newborn baby care**: Management of neonatal illnesses, extra care for premature babies.
- **Child health and care**: vaccinations, malaria prevention and treatment, care of children with HIV. Integrated treatment for childhood illnesses (such as pneumonia & diarrhoea).
- **Family and community care** including exclusive breastfeeding, nutrition, healthy home behaviours. Where use of facilities is low, some community case management of childhood diseases.

For full details of recommended interventions see: The Partnership for Maternal, Newborn & Child Health (2011) *A Global Review of the Key Interventions Related to Reproductive, Maternal, Newborn and Child Health (Rmnch)*. Geneva:PMNCH

Research shows that developing countries that have achieved the fastest rates of progress in overall levels of basic service coverage have seen faster gains in coverage for the poorest than for the richest.[65] This implies that focusing on the poorest can be an effective strategy for improving overall coverage. Bangladesh, for example, has achieved fast and equitable increases in immunisation and family planning, with a focus on improving coverage among the poor (see Spotlight on Bangladesh on 29). Even for new interventions and innovations that have relatively low coverage among all groups, equitable progress can be driven through adopting deliberate strategies to prioritise access for poor and disadvantaged groups.[66]

Evidence also suggests that pursuing focused strategies to ensure that poor and disadvantaged groups can access basic services can be more cost effective, countering the general assumption that focusing on groups that are hardest to reach is necessarily more expensive.[67] Much depends on the country context; the incremental cost of reaching disadvantaged and marginalised groups or areas is often higher,[68] and equitable policies that focus on the most disadvantaged will only be more cost effective if the increase in the effectiveness of interventions is greater than any increased costs associated with implementation.

One study of 14 developing countries and one province[69] found that more lives can be saved for a given amount of investment if it is focused on services that meet the needs of more deprived populations, rather than on those that are more accessible or relevant to the needs of more advantaged people. Such equity-focused services include, for example, employing community health workers in hard-to-reach areas to deliver preventive and primary care and undertake community-based case management for the treatment of common illnesses, rather than relying on the delivery of these interventions through healthcare facilities. Across countries with different patterns of inequality, investing US $1 million in services that meet the needs of the most disadvantaged is associated, on average, with saving 81 children's lives and averting 244 cases of stunting, compared to saving 49 lives and averting 84 cases of stunting if the same amount is invested in services that do not prioritise equity.[70] While further research is required in this area, the existing evidence base suggests that promoting equity is not only a moral necessity, but is also a practical policy option that has the potential to achieve better development outcomes.[71]

Globally, more progress has been made in improving the coverage of some interventions than others among disadvantaged groups. Community-based interventions have seen impressive and equitable increases in coverage, including for antenatal care and vaccines. Progress is slowest, and inequities largest, in interventions that require quality facilities or more highly trained providers, such as skilled birth attendance.[72] In the long term, high, sustainable and equitable service coverage can only be achieved through a strong health system. How this system is designed, resourced and managed – from the delivery of services to financing, health workers, governance, drugs and information systems – determines whether it alleviates or exacerbates health inequalities.[73]

The challenge for policy-makers is to identify and tackle weaknesses in health systems that are preventing disadvantaged groups from benefiting from particular services or receiving quality of care that has the potential to save vast numbers of lives.[74] The remainder of this section considers approaches for addressing common systemic bottlenecks relating to the financing and affordability of services, shortage of health workers and poor quality of services.

Photo: Anne-Sofie Helme/Save the Children

Community health worker Fetelework Gezahegne tests eight-month-old Tenaya for malaria. Ramada Health Post in southern Ethiopia provides healthcare to people from remote communities at low cost.

SPOTLIGHT ON **BANGLADESH**

PROGRESS OVERVIEW

Bangladesh has achieved significant reductions in child mortality over the past two decades, with under-five mortality falling from 144 to 41 deaths per 1,000 live births between 1990 and 2013. The equity picture is mixed. While gaps in child survival rates between rich and poor have reduced over the past two decades, they actually increased in the most recent five-year period. Gender inequalities in mortality rates have halved in two decades, although there is still a clear survival disadvantage for girls. Bangladesh ranks 16 out of 31 Countdown countries for equitable coverage of eight core MNCH interventions across economic groups. Equity gaps have been closing for some services such as DTP3 vaccinations, but challenges remain around newborn care. Skilled birth attendance has risen faster among the rich than the poor, resulting in the equity gap widening (quintile 1 3% to 31%, quintile 5 27.9% to 52.2%). While regional disparities in child mortality rates are falling, they remain high for key interventions along a broad east/west divide.

OUTCOMES

MDGs

Child mortality rate: 41 per 1,000
MDG target: 48 per 1,000 – MET
Number of child deaths per year: 129,000
Average annual rate of reduction (2000–2013): 5.4% – ACCELERATING
Equity of progress (2000–2011):

- Economic groups: No change
- Regions: Decreasing inequality
- Urban/rural: No change

POST-2015

On track for post-2015 nationally: Yes
On track for all groups: Yes

- Economic groups: Yes
- Regions: Yes
- Rural and urban: Yes

Figure 20: Trends in intervantion coverage

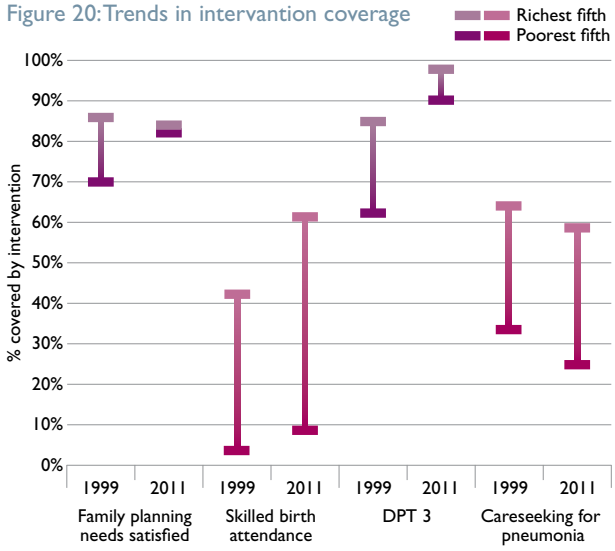
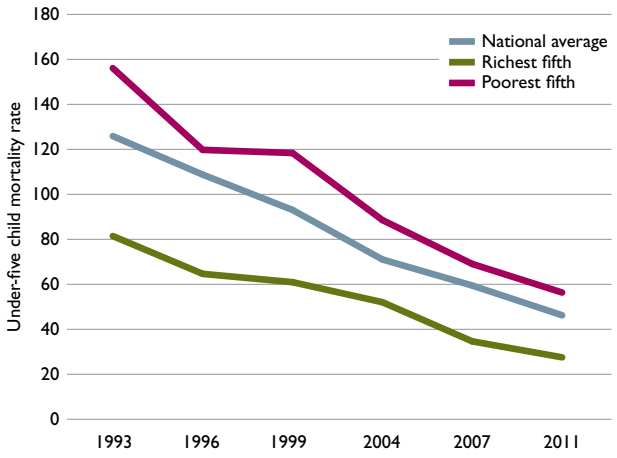


Figure 21: Trends in under-five child mortality rate



Policy spotlight: improving coverage and equity in services focusing on the needs of the poor

- **Community mobilisation and outreach for immunisation and treatment of diarrhoea**, integrated into the primary healthcare system and backed by intensive media campaigns to create demand, has achieved speed and scale in coverage. Community health workers successfully demonstrated how rehydration salts for diarrhoea can be made with household ingredients and provide vaccinations at clinics and through outreach sessions. Increases in immunisation coverage have been seen across all groups, with equity gaps closing (DPT3 coverage was 65% in rural Bangladesh in 1993 and 79% in urban areas; this has improved to 93% and 94% respectively in 2011). Gender disparities, which were very evident in the 1990s, have now disappeared.
- **Improvements in family planning** brought the fertility rate down from seven children per woman in the 1970s to 2.5 in 2010. Intensive community outreach for family planning has been a priority since the 1970s, deploying female outreach workers and social marketing to change norms and attitudes. However, more remains to be done, as Bangladesh has one of the highest rates of child marriage in the world.
- **Improvements in access to and utilisation of health services** have been driven by: consistent national policy commitment and investment in women's education, employment and microcredit schemes; improved infrastructure; foreign remittances; and collaboration between government and a strong non-governmental organisation (NGO) network.

Challenges

- **Coverage of essential health services remains low**; less than one-third of births are attended by a skilled health worker. Differential investment is needed to address regional inequalities in key intervention indicators.
- **Public investment in health is among the lowest anywhere in the world**, at US$9 per person in 2013 (less than 1% of GDP). Health financing depends largely on out-of-pocket payments, which create major barriers for the poorest people and are a significant cause of financial hardship.
- **Health systems are weak and characterised by poor quality of care**, with inefficiency exacerbated by governance and accountability issues.
- **Child malnutrition rates in Bangladesh are among the highest in the world**, with a 41.3% under-five stunting rate and 6 million children chronically undernourished. High rates of malnutrition cut across all segments of society, suggesting that a universal approach is needed to tackling the issue, including through nutrition-sensitive social protection.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

II. FINANCING, RESOURCES AND QUALITY OF CARE

Equitable financing for health: How funds are raised for health and how they are spent are central components of health systems, and directly affect inequalities in health services and outcomes.[75] In many low- and middle-income countries, health financing is insufficient, inequitably raised, and inequitably allocated – failing to harness the potential of tax systems to help distribute resources to benefit poor and marginalised groups. This is partly due to a shortage of resources, but also to lack of political attention and prioritisation of the health sector.

It has recently been estimated that low-income countries need to spend a minimum of US$86 per person on health to deliver a basic package of services.[76] Most low-income countries spend far less than this, relying on out-of-pocket cash spending by patients – the most regressive form of financing that has a disproportionate impact on poor people.[77] To ensure that health is financed according to ability to pay, countries should eliminate or substantially reduce out-of-pocket payments and expand progressive mandatory prepayment – for example, through taxation mechanisms such as compulsory social health insurance contributions (see Mexico spotlight on 31). Pooling funds across groups with different economic and health status is also necessary for a more efficient system that redistributes resources and compensates for the imbalance of risk between affluent, healthy citizens and those who are poor and experience chronic illness.

Recent research by Save the Children shows that even the poorest countries can afford to spend more on health, raising domestic revenue through progressive taxation systems and allocating a greater share of national budgets to health.[78] Public resources are essential to subsidise the cost of services for poor populations, particularly in low-income countries with a large informal sector. Rwanda has increased its financing for health in recent years, and seen dramatic improvements in outcomes (see Spotlight on Rwanda, page 23).

While raising domestic resources is critical to expanding coverage, low-income countries will require effective development assistance for some time in order to provide a basic package of health services. Donors must step up their support for these countries, meeting existing aid commitments and increasing the amount they allocate to support national health plans. Mechanisms such as the proposed new Global Financing Facility to support the UN Every Woman Every Child initiative also have the potential to help scale up access to services, if they are designed and implemented to provide additional funds and comply with international aid effectiveness principles.[79] Donor countries also have an additional role to play in ensuring that the international tax system is more coherent and prevents tax avoidance by international companies operating in developing countries.[80]

Increasing spending on health will not ensure better outcomes for all groups; that will depend on how funds are allocated, to which populations and for which interventions.[81] One approach to equity in resource allocation provides certain services, such as primary healthcare or maternal and child health, free at the point of use to all people immediately. The package of services is then expanded as budgets expand. Such approaches have been pursued in a range of countries, from Chile to Burundi, and help to ensure that the most vulnerable and disadvantaged populations are included from the outset. Intra-government transfers from central to devolved governments and targeted support to the poorest parts of the country are also useful strategies for mitigating national inequalities, and have been successful in South Africa, Tanzania and Rwanda.[82]

SPOTLIGHT ON **MEXICO**

PROGRESS OVERVIEW

Mexico has seen a significant reduction in under-five mortality in recent years, from 46 deaths per 1,000 live births in 1990 to 15 per 1,000 in 2013, meeting its MDG 4 target ahead of schedule. However, despite progress at national level, there are disparities between states and among different population subgroups, especially among indigenous groups and between rural and urban areas. In the south of Mexico, a child's risk of dying during their first year is 4% higher than in the rest of the country, and 14% higher for early neonatal mortality. While the proportion of births attended by a skilled attendant rose from 77% to 96% as a national average between 1990 and 2012, only 61% of births had a skilled attendant present in Chiapas, one of the most marginalised states. Newborn mortality rates have failed to keep pace with overall declines in child mortality, constituting 45% of all child deaths in 2013. Mexico is severely off track for the MDG target on maternal mortality; if average rates of progress since 1990 continue, the target will not be achieved before 2030.

OUTCOMES

MDGs

Child mortality rate: 15 per 1,000
MDG target: 15 per 1,000 – MET
Number of child deaths per year: 33,000
Average annual rate of reduction (2000–2013): 5.1%
Equity of progress (2000–2012):

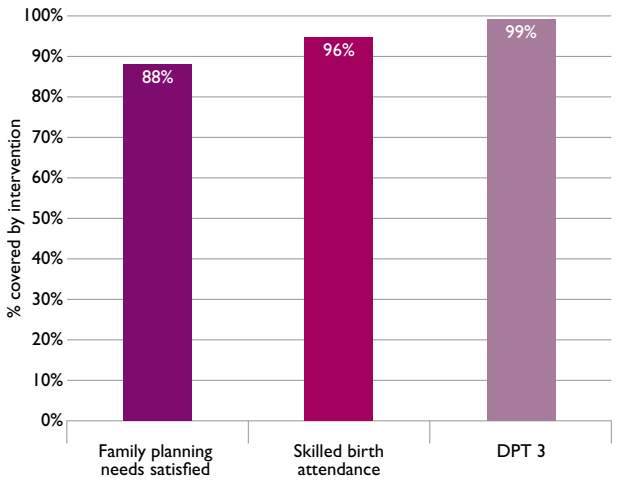
- Regions: Decreasing inequality
- Urban/rural: Decreasing inequality

POST-2015

On track for post-2015 nationally: Yes
On track for all groups:

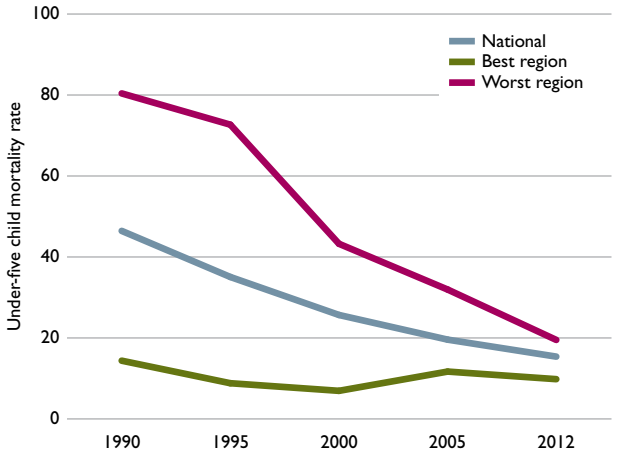
- Regions: Yes
- Rural and urban: Yes
- Economic groups: No data

Figure 22: Coverage of interventions (national average)



Disaggregated data not available.

Figure 23: Trends in under-five child mortality rate



Policy spotlight: protection from financial hardship on the road to Universal Health Coverage

Until 2006, access to social security in Mexico was dependent on working in the formal sector. While the Ministry of Health was responsible for providing health services to the significant number of people working in the informal economy, demand outstripped supply, leading to high levels of out-of-pocket spending on health by Mexico's poorest families. In 2000, it was estimated that between 3 million and 4 million families were forced to make catastrophic or impoverishing expenditure on health. In an attempt to pursue Universal Health Coverage, the government introduced General Health Insurance, *Seguro Popular*, in 2006, funded by increased public budget allocation to health. This insurance is open to all citizens, and contributions are proportionate to ability to pay. The programme has increased access to healthcare for disadvantaged groups, although challenges remain. Out-of-pocket spending on health remains stubbornly high, at 50% of total expenditure. More affluent citizens who could help to contribute to pooled financing opt out of the scheme due to the poor quality of services.

Complementary drivers of change

- The conditional cash transfer scheme, Prospera (formerly Oportunidades) has improved access to health and nutrition services for the poorest people.

Outstanding challenges

- **Malnutrition**: Despite some progress in recent years, chronic malnutrition among children remains a significant barrier to ending preventable deaths. While rates of malnutrition are falling, in rural areas the rate is around twice as high as in urban areas, and rates have fallen faster in the north and central regions than in the south. Households with low income and indigenous groups have the highest prevalence of food insecurity. On average, between 1999 and 2012, the rate of child malnutrition fell by one percentage point per year. At this rate, it would take nearly 15 years to eradicate chronic malnutrition. Further steps are required to tackle the structural causes of malnutrition beyond nutrition interventions, including food insecurity.
- **Quality of healthcare**: The lack of correlation between skilled birth attendance and maternal mortality in Mexico is one manifestation of the significant variation in quality of health services. Capacity-building and improvements in infrastructure are needed urgently in areas that have disproportionately high maternal and child mortality rates.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

Addressing health worker shortages in remote and disadvantaged areas: Ending preventable deaths will require every mother and child to have access to a health worker with appropriate skills when and where they need them. Low and inequitable coverage of skilled birth attendance reflects a global shortage of health workers, with recent estimates suggesting a gap of 7.2 million professional health workers.[83] Health workers are also least likely to be found where they are needed most, and tend to be concentrated in affluent, urban areas. Unequal distribution and shortages are best addressed through multi-pronged strategies that combine recruitment, training and compulsory service contracts with positive incentives such as sufficient pay, scholarships and improved working conditions.[84] Effective strategies have included financial incentives (India, Mozambique, Nepal, Senegal and South Africa); continuing professional development opportunities (Nepal); introducing periods of training in rural areas (Ghana, Mexico, the Philippines and South Africa); and non-financial incentives such as free housing, better diagnostic facilities, security, and free healthcare (Mozambique, Nepal and the Philippines).[85]

Some countries, such as Ethiopia (see Spotlight on Ethiopia, 33), have expanded coverage of interventions and achieved impressive reductions in child mortality rates in remote and rural areas through a national community health worker, or health extension worker strategy. These health workers are often non-professionals, recruited from the communities they work in; but they can play a critical role in raising awareness about the health facilities and services available locally, helping to improve care-seeking as well as household practices, and delivering basic healthcare.[86] Such strategies have been most effective when the community health workers are an integrated part of a continuum of care that operates from the household through to the hospital, and when appropriate training, management and remuneration structures are in place.[87] Task-shifting can also help to fill certain service gaps, with tasks that are usually performed by qualified health professionals undertaken by less-qualified staff without compromising the quality of services.[88]

Quality of healthcare: Achieving equity in healthcare also requires equal access to good-quality services. Increasing the coverage of services will only result in improved health outcomes if those services are of sufficient quality. Research in Ghana, Bangladesh, Vietnam and Rwanda found that mothers were deterred from using health facilities due to poor infrastructure and lack of water, sanitation and electricity, coupled with a perception (often justified) of poor quality of care.[89] In Egypt, while 65% of births occur in health facilities, only 17% of these have equipment for respiratory support for newborns, and only 8% of births are attended by a midwife trained in resuscitation.[90] Quality concerns have been found to be more prevalent among the poor than the non-poor, suggesting that inequalities in the quality of services that people have access to reflect and exacerbate inequalities in health outcomes.[91] Data to track quality of care are currently available for a very limited number of countries, and improvements in data collection and comparability are needed in order to improve monitoring and create incentives for change.[92]

Improving the quality of care also requires action to be taken to ensure that all groups can access and use services without discrimination on the basis of their identity, language or other factors. In Vietnam, for example, patients from minority ethnic groups are less aware of government health programmes and rarely receive information about their conditions and treatment – an issue exacerbated by discriminatory public attitudes towards minority groups and by language barriers.[93]

Peru is an example of a country that has made rapid gains in improving access and quality of care in remote regions in recent years. This has been achieved through action to tackle financial, cultural and geographical barriers that have historically prevented indigenous communities from accessing child and maternal health services.[94]

SPOTLIGHT ON **ETHIOPIA**

PROGRESS OVERVIEW

Ethiopia's national child mortality rate fell from 204 deaths per 1,000 live births in 1990 to 64 in 2013, meeting its MDG 4 target ahead of schedule. The inequality picture is mixed. Inequalities have been falling or remaining static between economic, urban/rural and ethnic groups since 2000, but regional inequalities are rising. Regional and wealth gaps are closing for most service coverage indicators, although they remain worryingly high for some services. Skilled birth attendance is 22 times higher in the richest wealth quintile than the poorest, and 12 times higher in Addis Ababa (84%) than in the Afar region (7%). Ethiopia ranks 28 out of 31 Countdown countries for equity in coverage of eight core MNCH interventions. While many poorly performing regions accelerated progress across MDG 4 indicators between 2005 and 2011 much faster than regions that are further ahead, regional progress is still extremely diverse. For example, coverage of DPT3 vaccination quadrupled in the Somali region, albeit from a very low base, but remained static in Oromiya.

OUTCOMES

MDGs

Child mortality rate: 64 per 1,000
MDG target: 68 per 1,000 – MET
Number of child deaths per year: 196,000
Average annual rate of reduction (2000–2013): 5% – ACCELERATING
Equity of progress (since 2000–2011):

- Economic groups: Falling inequality
- Regions: Increasing inequality
- Urban/rural: No change
- Ethnic groups: Falling inequality

POST-2015

On track for 25/1000 target nationally: Yes
On track for all groups: No

- Economic groups: No, but with potential
- Regions: No, but with potential
- Rural and urban: Yes

Figure 24: Trends in intervantion coverage

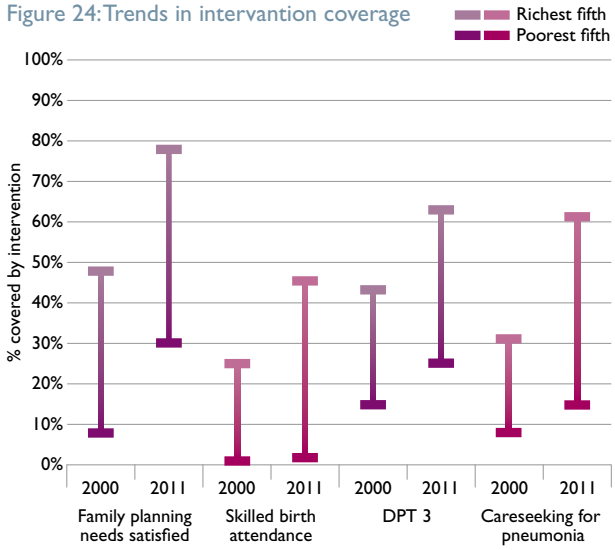
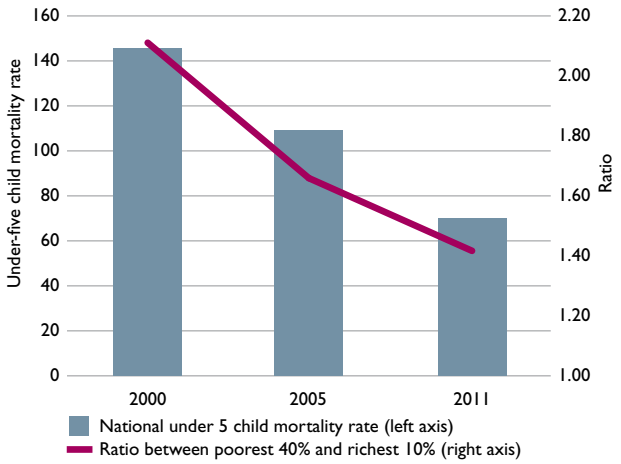


Figure 25: Trends in under-five child mortality rate



Policy spotlight: improving coverage of basic MNCH services through community health workers

Ethiopia launched the Health Extension Programme in 2003 as part of a health sector strategy to improve coverage of health services in underserved areas. Under the programme, health extension workers (HEWs) are recruited from the local community, trained and paid government salaries. Their job is to deliver a basic package of preventive and curative interventions and promote healthy behaviour. The package of interventions was selected to address the main causes of childhood mortality across health, nutrition and sanitation sectors.

Under the programme, human resources for health doubled in five years, with 15,000 health posts built and 38,000 HEWs deployed. Coverage of improved sanitation facilities, vaccinations and maternal health services improved at a faster rate in villages with HEWs compared to those without. The programme's success has been attributed to: political leadership and commitment to equity and universal coverage; mechanisms to enhance coordination between development partners and across sectors; local ownership through local recruitment of workers and their representation on councils; mobilisation of adequate resources to fund the scheme; and accountability and supervision mechanisms to ensure quality.

Outstanding challenges

- Maternal and newborn care: The proportion of newborn deaths has increased, reaching 43% of all under-five deaths in 2013. Ethiopia has also made slow progress in reducing maternal mortality, and is off track to meet MDG 5.
- Health financing: User fees have been removed for basic services and community and social health insurance schemes have been introduced. However, out-of-pocket spending as a percentage of total health expenditure is very high, at 63%. Government expenditure on health as a percentage of total public spending is relatively low, at 8% – far short of the Abuja target of 15%.

See Appendix 3 for guidance on interpreting data, and References section for sources used for policy analysis.

B. ADDRESSING THE UNDERLYING CAUSES OF POOR HEALTH AND INEQUALITIES IN HEALTH OUTCOMES

Many international health investments focus on specific diseases or interventions, yielding results that can be measured as direct returns on investment. This approach, while addressing medical causes, does not address the root drivers of poor health and inequalities in health outcomes,[95] which include inadequate access to services in other social sectors. A recent multi-country study found that 50% of all reductions in child mortality achieved by the world's best-performing countries have been attributable to investments outside of the health sector.[96] Critical areas include:

- **Women and girls' empowerment:** Tackling discriminatory social norms and rights violations that disempower women and girls, preventing them from making meaningful choices about the direction of their own lives, is a critical component of any strategy to eliminate preventable child deaths. As outlined in Box 7, there is abundant evidence that the children of empowered women are more likely to survive beyond their fifth birthday.[97] Advancing gender equality will require adequate attention to women's and girls' rights within national budget and planning processes. Gender equality institutions or departments within governments and public bodies also need to be strengthened, together with support for collective action and outreach involving women and men in efforts to shift deeply entrenched social norms.[98]

- **Education:** Parents' education is strongly correlated with child mortality in countries across the world, and is particularly important for supporting women and girls to have freedom and control over their own lives. Education is a key determinant of health service utilisation, helping to bolster understanding of health and sanitation and to empower women to make decisions concerning their health and pregnancy.[99] Ensuring that all women complete primary education would have the potential to reduce child deaths by 15% globally. If all young girls completed secondary education, it could almost halve child mortality rates, saving the lives of 2.8 million children[100] – equivalent to the number of newborn babies who died in 2013.[101]

- **Nutrition:** Undernutrition is the underlying cause of nearly half of all under-five deaths globally, and disproportionately affects children in rural areas and lower economic groups.[102] One study found that child mortality could be reduced by 15% if coverage of ten essential nutrition interventions was scaled up to 90% in countries carrying the world's highest burden of undernutrition.[103] Priority must be given to nutrition-specific programmes such as maternal dietary supplementation and the promotion of breastfeeding, as well as nutrition-sensitive initiatives to address underlying drivers of malnutrition through early childhood development, agriculture and social protection policies (see Box 8).[104]

- **Water and sanitation:** While great progress has been made in recent years, diarrhoea remains the third biggest killer of children under five, causing half a million deaths each year. The bulk of these deaths are linked to contaminated water, poor sanitation and inadequate hygiene.[105] Significant group-based disparities exist in access to improved water and sanitation facilities.[106] Positive stories of success in some countries demonstrate that rapid and equitable progress can be made – for example, outreach by community health workers in Ethiopia has helped to reduce regional disparities in sanitation and hygiene.[107]

Photo: Suzanne Lee/Save the Children

Nisha, 19, holds her one-month-old baby girl, Pushpa, in her mother's house in Kalyan village, mid-Western Nepal. Nisha eloped when she was a young teenager but used contraceptives to delay pregnancy.

BOX 7: THE LINK BETWEEN GENDER EQUALITY AND CHILD SURVIVAL

In countries across the world, girls and boys are often treated differently from the day they are born, because they are expected to play different roles in society as they grow up. Too often, girls are valued less than boys, or valued in different ways. This can lead to discrimination in access to healthcare within households on the basis of gender, particularly when resources are short. While data show that gender disparities in coverage of key health interventions are relatively small, they are significant in some cases. For example, in Nepal, in 2011, boys with diarrhoea were 38% more likely than girls to receive oral rehydration therapy and continued feeding – an increase from 26% in 2007.[108] Nepal is one of ten countries around the world that has been identified as having higher female mortality in comparison to boys than expected.[109]

Perhaps the most extreme manifestation of gender discrimination is sex-selective abortion and female infanticide. While sex differentials in child mortality are generally declining, prenatal sex selection is on the increase in line with the spread of prenatal diagnosis technology. An estimated 117 million women were missing from the global population in 2010 as a result of prenatal sex selection, mostly from China and India; 39 million of them would be under the age of 20 if they had been allowed to survive.[110] The child sex ratio in India has been in steady decline over the past 50 years as a result of gender-biased sex selection, and shows no sign of abating. In 1961, there were 976 girls for every 1,000 boys; in 2011, this figure had fallen to 918.[111]

The cumulative impact of the discrimination that girls and women face as they go through life also affects the health of their children, making women's empowerment a critical component of any strategy to end preventable child deaths. The following issues require greater attention:

- **Education:** An estimated 2.1 million children's lives were saved between 1990 and 2009 as a result of improvements in women's education.[112]
- **Nutrition:** Maternal undernutrition contributes to an estimated 800,000 neonatal deaths annually.[113]
- **Child marriage, reproductive rights and control over decision-making:** Children born to very young mothers are more likely to die, and where women have children soon after each other, there is a higher chance of child mortality.[114]
- **Women's participation in public and political life:** Countries that have made the fastest progress towards MDG 4 in recent years have significantly more female parliamentarians and higher-than-average female labour force participation rates than countries making less progress.[115]

All of these issues are, of course, extremely important in their own right; women's and girls' rights must be upheld, and no person should be deprived of education, healthcare, nutrition, sexual and reproductive rights, or participation in decision-making simply on the basis of their gender. The fact that violations of these rights also have knock-on effects on child survival rates only serves to strengthen the case for real, tangible progress on women and girls' empowerment.

BOX 8: IMPROVING NUTRITION TO END PREVENTABLE DEATHS

Globally, 51 million children globally are acutely malnourished,[116] putting them at immediate risk of death.[117] Maternal and child malnutrition is the cause of 45% of preventable child deaths[118] and leads to irreversible, lifelong consequences for a child's physical and cognitive development. The resulting human and economic cost of malnutrition is huge. Chronic malnutrition during childhood for poor children may lead to late enrolment in school, which in turn may lead to poor education outcomes and 20% less earning power than children who complete their education.[119] Stunted children are also at greater risk of becoming overweight and suffering from non-communicable diseases later in life.[120]

Undernutrition is a complex issue to address and requires contributions from many sectors. To achieve optimum nutrition children require access to: appropriate, affordable, diverse and nutrient-rich food; appropriate maternal and childcare practices; and adequate health services and a healthy environment including safe water, sanitation and good hygiene.[121] Relatively neglected as a development priority, recent years have seen a substantial increase in commitment to reduction of malnutrition at global and national levels.[122]

Improving maternal and child nutrition gives children the best possible start in life,[123] enabling them to reach their full potential. However, with 16 million adolescent girls giving birth each year, addressing women's undernutrition once they are pregnant is often too late to break the intergenerational cycle of malnutrition. Social protection is particularly useful for nutrition when targeted at the 1,000 days between a woman's pregnancy and her child's second birthday, helping maximise this unique window of opportunity to shape healthier and more prosperous futures.

THE IMPORTANCE OF SOCIAL, POLITICAL AND ECONOMIC PARTICIPATION AND ACCOUNTABILITY

In many contexts, children are left with inadequate healthcare and access to other essential services as a result of entrenched imbalances in the power and influence that particular groups have in society and the economy.[124] The cycle of economic, political and social inequalities leaves disadvantaged groups with little influence over political decision-making, limited capacity and voice to make their needs known to decision-makers, and limited money to invest in improving their situation. In some cases, this cycle is powered by discrimination and attitudes against certain groups – a further obstacle to change.[125]

So how can this cycle be broken? Research highlights the importance of measures to help disadvantaged groups make their voices heard, influence decision-makers, and hold leaders to account.[126] It is vital to develop a full understanding of the barriers holding disadvantaged groups back in order to design policies and programmes that support inclusion and equity.[127] Additional steps that governments and development partners can take to spur change include: ensuring that universal rights are upheld in law and in practice; supporting social movements and enabling environments for civil society and collective action; opening spaces for participation in decision-making; and implementing programmes to challenge discriminatory social norms.[128]

Economic inclusion for disadvantaged groups is also critical, pursued through inclusive economic growth strategies that ensure quality jobs for the poorest segments of society and allow small-scale producers to integrate into or move up value chains.[129] Developing strong social protection mechanisms is a critical element of this. Social protection has protective, productive and transformative potential. It is a human right and a means for states to protect their most vulnerable citizens.[130] Social protection provides a channel through which governments can redistribute income and resources and share the benefits of growth.[131] Investing in social protection brings multiple immediate and long-term gains for individuals and societies as a whole, from reducing people's vulnerability to shocks and stimulating and stabilising aggregate demand to improving the effectiveness of investments in health, education, nutrition, water and sanitation, and enhancing women's control over family budgets.[132]

The bold extension of social protection in many developing countries, from Brazil to China and Mexico to Mozambique, has underlined its key role in reducing poverty and vulnerability, redressing inequality and enhancing inclusive growth.[133] In South Africa, non-contributory grants have reduced the poverty gap by more than a third.[134] In Mexico, the Oportunidades programme reduced the number of people living in poverty by 10% and the poverty gap by 30%.[135] Social transfers and taxation are estimated to have reduced poverty by more than 50% in European countries.[136]

In some cases, conditional cash transfers have linked receipt of benefits directly to reproductive and child health objectives. For example, India's Janani Suraksha Yojana scheme, reaching more than 9.5 million beneficiaries, has led to a significant increase in the number of babies delivered in health facilities and potentially contributed to a recorded decrease in stillbirths and neonatal deaths.[137] In Bolivia, in an attempt to address high levels of inequality in child mortality between urban and rural areas and between poorer and richer families, the Juana Azurduy bonus pays a stipend to pregnant women and mothers over the course of 33 months in return for their attendance at antenatal and postnatal clinics.

While the optimal configuration and level of social protection spending varies from country to country, social protection systems that go beyond provision of safety nets for the poorest to offer protection for every member of society can help prevent poverty and insecurity and reduce inequality. Crucially, social protection must be sensitive to the particular vulnerabilities and experiences of poverty faced by different groups of children. The Advancing Child-Sensitive Social Protection joint statement,[138] agreed by the World Bank, UNICEF, the International Labour Organization (ILO), Save the Children and others, defines social protection as child sensitive when it aims to maximise opportunities and developmental outcomes for children by considering the different dimensions of their well-being. Child-sensitive social protection addresses the inherent social disadvantages, risks and vulnerabilities children may be born into, as well as those they experience later in childhood due to external shocks to the household.[139]

Photo: David Wardell/Save the Children

Santoshi and her baby girl at home in Nepal, the day after she was born.

SUPPORTING COMMUNITIES, SAVING LIVES

One-year-old Lozimary from a village in Malawi was severely malnourished. She was vomiting and had diarrhoea. Her body and feet were swollen. She was underweight and her growth was stunted.

Lozimary's local clinic referred her to the nearest hospital. She was given medication and therapeutic milk for a week. After that she was also given nutrient-rich peanut paste. Thankfully, she soon started to recover.

Lozimary's case underscores the importance of access to quality healthcare in the community, and its integration with the wider health system. In Malawi, Save the Children supports the community case management programme (CCM) of the Mchinji District Hospital. The CCM approach helps communities to access healthcare and prevent child mortality by targeting malnutrition and common childhood disease, such as pneumonia, diarrhoea and malaria.

Photo: Oli Cohen/Save the Children

5 THE POST-2015 FRAMEWORK

A CATALYST FOR EQUITABLE PROGRESS

Over the course of the past 15 years, the Millennium Development Goals have helped to mobilise and coordinate action at national and international levels around the shared global goal of reducing child mortality. As the MDG framework draws to a close, it is critical that its successor, the post-2015 framework, not only builds on the strengths of the MDGs but also drives a step change in progress for all social and economic groups. The new framework must inspire a generation to take action to end preventable child deaths – reducing child mortality for *all* groups of children.

This chapter outlines four key measures that would help to build a new framework that is capable of driving forward the change that is needed, namely:

- ensuring that the framework is ambitious but implementable
- embedding equity across the framework
- including a goal on open, inclusive and accountable governance
- strengthening statistical systems to improve data and accountability.

A. AMBITIOUS AND IMPLEMENTABLE GOALS AND TARGETS

The strength of the MDGs lay in their translation of selected elements of the Millennium Declaration into a limited number of clear, measurable and time-bound targets. These offered a focal point for the mobilisation of partnerships, and allowed for the identification of gaps that required more attention. They could also be nationally tailored and easily incorporated into national development plans, allowing countries to benefit from the partnerships and international commitment that lay behind the goals, and providing a core set of priorities that could be built on, expanded and adapted according to context and national priorities.

Building on this strength, the post-2015 framework should contain a discrete set of clear goals that can feasibly be implemented in all countries, whatever their income classification. The overarching aim should be to finish the job that the MDGs started, with goals to end critical dimensions of extreme poverty. Save the Children has outlined proposals for a 12-goal post-2015 framework in our report *Framework for the Future*. These include a goal to end preventable newborn, child and maternal deaths, supported by targets to strengthen health systems and address the financial and social determinants of health.

Once agreed, targets will only become meaningful if they are adopted at national level, incorporated into national plans and accompanied by accountability mechanisms that allow citizens to hold their governments to account for promises made. National accountability can be strengthened through global monitoring and accountability, as demonstrated under the MDGs by the Countdown to 2015 and Every Woman Every Child initiatives. The UN Secretary-General's renewed Every Woman Every Child mechanism must therefore be supported to accelerate progress under the post-2015 framework.

B. EMBEDDING EQUITY ACROSS THE FRAMEWORK

There must be a clear and explicit focus on equity across all goal areas of the post-2015 framework to ensure that the poorest and most marginalised groups in any society do not continue to be left behind. Our *Framework for the Future* proposes a number of ways in which equity should be embedded within the new framework. These include a standalone goal on women's and girls' empowerment; a target to reduce income inequality; a goal on equitable access to quality education; a goal on open, accountable and inclusive governance; and targets to incentivise policies that are known to reduce inequality, including social protection and financial risk protection in health.

In addition, two essential measures have particularly strong potential to spur equitable progress under the new framework, including progress in reducing child mortality.

First, all parties to the post-2015 framework must make a commitment that no target will be considered to have been met unless it has been met for all social and economic groups.[140] In the case of child mortality, this would mean that all social and economic groups in a country must have a child mortality rate of no more than 25 deaths per 1,000 live births by 2030, and significantly lower in countries that have already reached this target (see Box 4, page 21 for discussion of the proposed child mortality target).

Second, stepping stone equity targets must be set across all goal areas to reduce gaps between advantaged and disadvantaged groups. While it would represent an important statement, the *no target met unless met for all* commitment is, by itself, unlikely to drive the changes in policy and practice that will be required for countries to shift onto more equitable pathways of progress. The 15 years to 2030 will no doubt see changes in administration within governments, and politicians tend to be motivated by shorter-term wins that can be achieved within their electoral cycle – often around five years. There is therefore a danger that governments will continue to focus on serving groups that are easier to reach once the post-2015 framework is agreed, rather than making the more difficult changes in policy and practice that are required to meet the needs of those who are furthest behind.

The post-2015 framework must therefore contain additional mechanisms to spur equitable progress, ensuring that goals are pursued in ways that put the needs of the poorest and most marginalised groups first. Stepping stone equity targets are one such mechanism, initially proposed by Kevin Watkins (2014) and further developed in Save the Children's policy briefing, *Leaving No One Behind*.[141] Such targets would be set for interim dates between 2015 and 2030, and would aim to reduce systematic gaps between advantaged and disadvantaged groups while at the same time ensuring that all are on track to meet 2030 targets. Stepping stone targets would be set according to country context for groups that are furthest behind for each goal area. Box 9 uses data from the Philippines to illustrate how stepping stone equity targets might be set in practice, helping to focus immediate and ongoing attention on groups that are furthest behind.[142]

C. INCLUDING A GOAL ON OPEN, INCLUSIVE AND ACCOUNTABLE GOVERNANCE

It is ultimately the responsibility of governments to deliver the post-2015 framework and equitable public services that meet children's needs. But this will only be possible with capable, well-resourced and accountable public institutions that can deliver quality services.

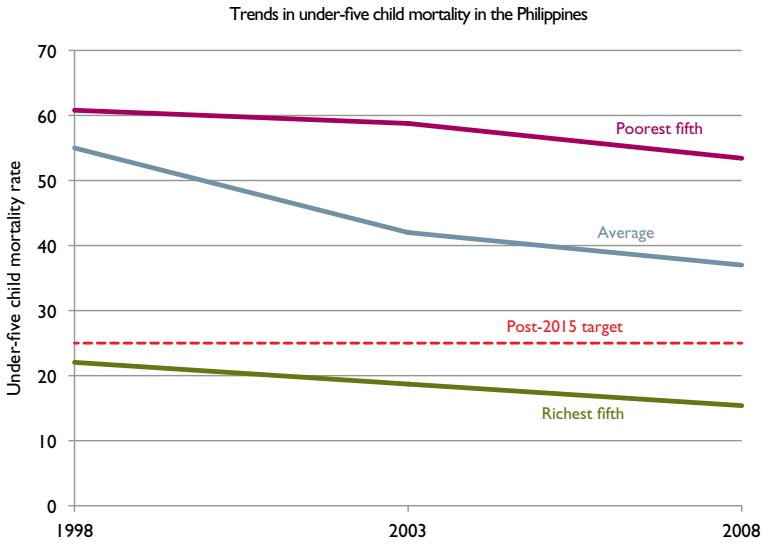
Accountable governance that is responsive to the needs of marginalised and vulnerable groups requires opportunities for citizens – including children and young people and those from the most marginalised groups – to participate in decision-making and hold governments to account. This is not only a legal obligation, but can also assist governments to design more accurate and relevant interventions and allocate resources more effectively. Transparency and accountability are also powerful tools for preventing corruption, theft and waste of natural resources, which deplete resources available to provide essential health services to children.[143] Civil society can facilitate public participation and bring the voices of the most marginalised citizens and groups to the table. But without the rights to freedom of expression, association and peaceful assembly guaranteed in law and realised in practice, civil society cannot play its part.

In view of this, and to ensure the realisation of a post-2015 framework where no one is left behind, a goal and targets to foster open, inclusive and accountable governance should be included in the framework.

BOX 9: SETTING STEPPING STONE EQUITY TARGETS

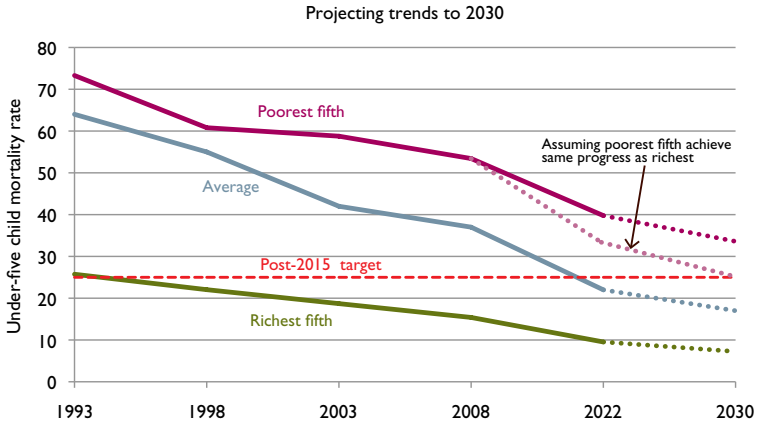
1. Identify groups that are furthest behind through an open and deliberative national process.

Groups might include poor or disadvantaged regions, rural areas, urban slums or ethnic minorities.



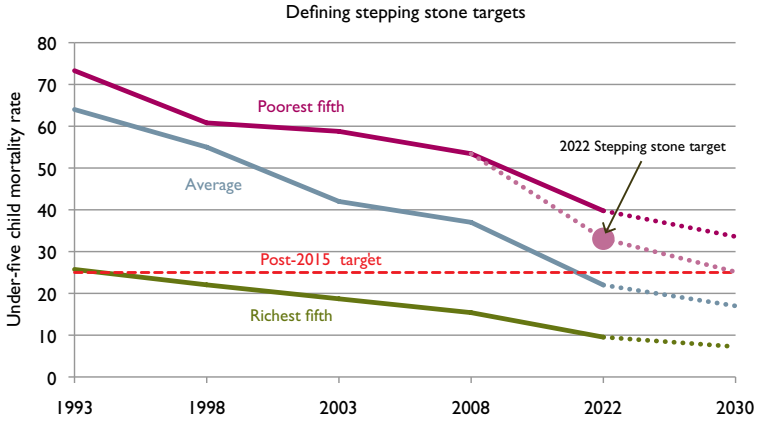
2. Define the rate of progress that the disadvantaged group needs to make to reach the 2030 target.

In the Philippines, the poorest fifth would need to accelerate progress to the same level as the richest fifth to reach the 25/1000 target.



3. Identify stepping stone targets for interim dates for the disadvantaged group and check criteria are met.

In the Philippines, the poorest fifth would need to accelerate progress to the same level as the richest fifth to reach the 25/1000 target.



- ✔ Good overall progress
- ✔ All groups on track
- ✔ Unfair gaps between groups are closing

D. STRENGTHENING STATISTICAL SYSTEMS TO IMPROVE DATA AND ACCOUNTABILITY

Improvements in the quality, coverage, timeliness and accessibility of data hold significant potential for accelerating progress towards the goal of ending preventable child deaths. High-quality, disaggregated data are essential for identifying disadvantaged groups, monitoring progress, and planning for improvements in health services and systems.

More and better data are also essential for supporting empowered, active citizens. High-quality, accessible and timely data enable citizens to hold governments and service providers to account, raise awareness within communities about healthcare options and healthy behaviour, and identify and communicate weaknesses within the system. Making data transparent and easily interpreted and used by citizens should be at the centre of strategies for strengthening data systems.[144]

Statistical systems are generally weak in countries that carry the highest burden of child mortality. While there have been considerable improvements in the quality and coverage of data systems in recent years, gaps remain. For example, around 70 countries do not have robust child mortality data for the past five years, and 13 do not have quality data spanning the past ten years.[145]

While availability of disaggregated data is improving, data are absent or inconsistent for many social and economic groups, particularly for disadvantaged ethnic ethnic groups and subnational regions. Moreover, household surveys do not always capture the world's most vulnerable children – for example, those who live on the street, in institutions or in refugee camps. An estimated 250 million people worldwide are estimated to fall through gaps that conventional household surveys cannot capture.[146]

The challenge under the post-2015 framework is to improve data collection and disaggregation for core indicators in ways that strengthen national health information and statistics systems, inform policy-making, and empower citizens to hold decision-makers to account. Priorities should include the following.

- **Investing in data:** Statistical systems are currently under-resourced, and lack adequate support from the international community. New funding mechanisms to help strengthen national statistical systems and improve data availability should be established through the Third International Conference on Financing for Development.[147]
- **Ensuring that disadvantaged groups do not fall through data gaps:** This can be achieved through strengthening household surveys and vital statistics systems. These should be complemented by additional mechanisms to capture data for minority and vulnerable groups, such as technologies to oversample minorities and dedicated surveys to capture data for vulnerable children not living in households covered by conventional surveys.[148]
- **Ensuring that data empower citizens and improve policy-making:** Data must be freely available and converted into information that is easy to understand and use, by practitioners and policy-makers (to improve decision-making) and by citizens. Community-driven data initiatives that can help to fill critical data gaps should be supported, while at the same time fostering citizen participation and demand for accountability (see Box 10).

Wina and her three-month-old son Hanum at home with her other children in Indonesia. Hanum was born at the local health clinic.

BOX 10: DATA FOR ACCOUNTABILITY AND ACTIVE CITIZENSHIP

Community data-collection initiatives can help to fill data gaps while at the same time fostering accountability and active citizenship. For example, in rural Indonesia, health workers used the opportunity presented by a local festival to weigh and record details for children under five so that they could make subsequent home visits to encourage families to use local services. Over time, the number of children attending the local growth monitoring centre increased by 40%, and skilled birth attendance increased by 9%.[149]

While simple reporting of information in the community will be an important and relevant step forward in many contexts, technology offers the potential for enhanced access, presentation and analysis. For example, Nigeria's MDG Information System (NMIS) platform brings together data from health, education and water facilities across the country, compiled from a geo-referenced baseline facility inventory and complemented by additional survey data.[150] Originally compiled for state and local government planning to achieve the MDGs, the platform was opened to the general public in 2014.

SKILLED SUPPORT FOR A SAFE BIRTH

When Ma Than Shi, 45, was pregnant with her son Ma Yee Mon Htwe, now one year old, the community health volunteer in her village took her to visit a midwife. Although this was her tenth pregnancy, it was the first time she had ever visited a midwife for an antenatal check up. Two of her babies died on the day they were born.

Limited access to healthcare in Kani, Myanmar, coupled with low levels of health education and a lack of access to clean water, means that communities, and children in particular, are vulnerable to illnesses such as diarrhoea and malnutrition. Save the Children is working to change this, through training and health promotion activities to improve the health of mothers and children.

Photo: Lynette Lim/Save the Children

6 CONCLUSIONS AND RECOMMENDATIONS

This report has shed light on the extent to which children across the world are being left behind by development progress, illustrated by significant disparities in child mortality rates both between and within countries. In 78% of the countries included in our research, at least one social or economic group has been making slower progress than more advantaged groups, and is therefore being left behind. In 16% of the countries, inequalities in survival chances increased across all the groups for which we have data. This is happening across multiple forms of group-based inequality, but children from disadvantaged regions and ethnic groups are among those most likely to be left behind. In short, despite impressive progress across the board, disadvantaged children are too often making slower progress and are falling even further behind their more advantaged peers – simply because of where they are born or who their parents are.

However, there are grounds for optimism. More equitable progress is possible, as demonstrated by the about a fifth of countries that are reducing child mortality at faster, above-median rates while simultaneously reducing inequalities in child survival between social and economic groups. Counter to the widespread belief that reaching the poorest and most disadvantaged groups is harder and therefore likely to slow down national progress in reducing child mortality, our research indicates that there is no trade-off between equitable and fast progress. If anything, overall progress has actually been faster in countries that are pursuing equitable pathways. According to our research, more than half of the countries that have reduced inequalities in survival chances between groups have also experienced fast (above-median) declines in overall child mortality. On average, pursuing an equitable pathway to child mortality reduction was associated with 6% faster progress over the course of ten years.

However, while a large proportion of countries are achieving faster reductions in child mortality for groups with the highest death rates, progress is not being made fast enough. It is unacceptable in this age of technological and scientific advancement and relative global prosperity that children are still dying unnecessarily from preventable causes. But as our research has shown, this shameful situation is likely to still be the case in 2030 unless global and national leaders take urgent action now. Without a step change in action, the unfair global lottery of birth will continue into the future.

It is within the power of government leaders across the world to change this situation, shaping a better, more just future for our children – and 2015 is the year to make that change. This is a year in which governments can take the bold step to commit to ending preventable child deaths – for all groups of children, not just some. All governments should take concrete, progressive steps towards Universal Health Coverage, ensuring that all people can access the services they need without financial hardship, and that the poorest and most disadvantaged groups gain at least as much as others every step along the way. The post-2015 negotiations offer an opportunity to establish a new global development framework to support endeavours to ensure that no one is left behind by progress, fostering cooperation and motivating action beyond 'business as usual'.

There are specific actions that governments, donors, multilateral agencies, civil society and development partners should take to shift onto faster, more equitable pathways to ending preventable child deaths. These are outlined below.

Governments must work to secure an ambitious and implementable post-2105 framework that promotes equity at its core.

This must include:

- Agreeing a politically salient framework that has the potential to be truly transformative, with goals that can be monitored, financed and delivered in every country, for every citizen. As a generation-changing goal, ending preventable child and maternal deaths should be a central commitment of the framework.

- Establishing clear targets for 2030 to put the world on track to ending preventable child and maternal deaths, including to strengthen health systems, achieve financial risk protection, and ensure water, sanitation and nutrition for all, supported by additional goals to achieve gender equality, equal access to quality education, and accountable governance (as detailed in Save the Children's report *Framework for the Future*).[151]

- Making it clear that tackling inequality is considered a defining feature of the post-2015 framework. The framework must clearly demonstrate a commitment to tackling inequality in ways that can be measured, monitored and held accountable, including through stepping stone equity targets for interim dates to focus attention on groups that are furthest behind.

- Enshrining a core commitment to the world's poorest and most marginalised groups within the new framework – that no target will be considered met in 2030 unless it is met for all social and economic groups. This would capture the sentiment of the rallying call that the framework must 'leave no one behind', and must be supported through commitments to producing fully disaggregated data.

- Embedding a goal to foster open, inclusive and accountable governance and institutions fit to deliver equitable public health services to children within an environment where people can influence their lives, participate in decision-making and voice their concerns.

- Establishing strong reporting and accountability mechanisms that hold governments, donors and multilateral agencies to account for their post-2015 commitments. These must be rooted in national accountability to citizens, helping to strengthen existing accountability institutions and human rights reporting mechanisms and link them to an international accountability process.

Governments must review national and sector-specific policies and plans to support the progressive realisation of Universal Health Coverage and achievement of both MDG 4 and post-2015 goals and targets.

This must include:

- **Addressing the proximate and underlying causes of high child mortality rates among specific social and economic groups, through:**
  - Strengthening health systems to ensure that all mothers, newborns and children have access to a core set of quality basic health services from antenatal care through to delivery, postnatal care and early childhood, with a particular focus on strengthening services for maternal and newborn care.
  - Establishing and strengthening social protection systems to redistribute resources and guarantee access to essential services and a basic standard of living for mothers and children.
  - Establishing proactive measures to advance women's and girls' empowerment, including through education, protection of sexual and reproductive health and other fundamental rights, and public communication and outreach to ensure that rights can be claimed by women and girls and are respected by men and boys.

- **Financing and resource allocation:**
  - Establishing financial risk protection for healthcare, moving towards progressive mandatory prepayment with a national pool of funding to share risk, and universal entitlements so that all mothers and children can access quality services free at the point of use.
  - Prioritising expanding fiscal space for health, reviewing opportunities to increase government tax revenues as a share of GDP to at least 20%, and to do so progressively.
  - Increasing investment in health to at least 15% of the total government budget.
  - Ensuring that public budgeting is underpinned by equity principles and redistribution, with formulas to channel resources to disadvantaged groups and regions that need them most.

- **Cross-sector planning and implementation:**
  - Ensuring coordination across health and nutrition, agriculture, education, finance, water, sanitation, infrastructure, and social security sectors in order to maximise synergies and address the social determinants of health.

- Establishing time-bound equity targets within national and sector plans to close gaps between specific advantaged and disadvantaged groups.

- **Strengthening accountability and opportunities for citizen participation in policy-making and planning:**
  - Providing open and timely access to data and information in formats that can be understood and used by poor and marginalised groups.
  - Establishing channels for dialogue and feedback that utilise the media and other communications platforms used by poor and marginalised groups.
  - Ensuring that rights, as outlined in international human rights treaties, are upheld in policy and practice and that all forms of discrimination are prohibited by law.

Donors, multilateral agencies, civil society and other development partners must:

- Step up action and align behind the national and sector plans of developing-country governments, meeting aid commitments, increasing the allocation of aid budgets to health, filling funding gaps, supporting implementation and upholding aid effectiveness principles.

- Provide technical and financial support to help the poorest countries increase financing for health through sustainable and progressive domestic revenue sources.

- Create an enabling environment for countries to maximise domestic resource mobilisation, including through increasing the coherence of the international tax system and clamping down on tax avoidance by international companies operating in developing countries.

- Support the strengthening of statistics systems at national and international levels, with a focus on ensuring that progress for disadvantaged groups can be better monitored.

- Review their own policies and plans to ensure that they contribute to reducing inequalities in health and other social sectors.

- Hold themselves and each other to account for implementation of the post-2015 framework through reviewing and publicly reporting on their contribution on an ongoing basis, in coordination with accountability mechanisms established for the post-2015 framework.

Five-day-old Ayush was born without complications in New Delhi, India. New Delhi is home to almost 17 million people. More than half of its population lives in slum areas, unauthorised colonies and Jhuggi Jhopdi clusters (shantytowns). Delhi's urban poor do not have access to basic healthcare and sanitation, damaging children's health and chances of survival.

APPENDIX 1
METHODOLOGY

There are numerous challenges in conducting systematic monitoring of progress in under-five child mortality for social and economic groups across a large number of countries. Unfortunately, the disaggregated data essential for such analysis are scarce or dispersed across various sources and in different formats. This report has made substantial efforts to compile existing statistics and produce additional data.

THE GROUPS AND INEQUALITY DATASET (GRID)

The background research in this report is based on data either calculated or compiled from public sources into the groups and inequality dataset (GRID), developed by Save the Children in collaboration with the Development Progress project at the Overseas Development Institute (ODI).[152] It is based on direct data processing of 257 Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), aggregated public sources (the UN Inter-agency Group for Child Mortality Estimation, WHO, and UNICEF)[153] and official disaggregated figures for a few countries without survey data.[154] It contains a total of 87 countries with disaggregated data on disparities across social and economic groups, and a total of 64 countries with data over time for up to seven data points (170 periods). In the current version, GRID contains measures of stunting, child mortality, and children's access to piped water and flush toilets. Each of these indicators is disaggregated by the following groups: boys/girls; urban/rural areas; subnational regions; ethnolinguistic groups; economic groups (either quintiles or bottom 40% and top 10% according to asset index).

THREE ANALYSES IN THE REPORT

The report presents three separate sets of analysis based on data from GRID:

1. *Furthest behind*: A static analysis identifying the social and economic groups that are furthest behind, and the level of disparities in child mortality in 2013 (Chapter 2).

2. *Analysis over time*: A retrospective analysis assessing past progress and changes in disparities in child mortality between 2000 and 2013 (Chapter 3).

3. *2030 projections*: An array of projections for child mortality rates by 2030 based on two scenarios: 'business as usual' and 'equitable progress' (Chapter 3).

UNDER-FIVE MORTALITY DATA

National-level under-five child mortality rates in GRID are compiled from UN Inter-agency Group estimates corresponding to the official MDG 4 figures. Throughout this report, in all national-level analyses and projections, we use national figures produced by the UN Inter-agency Group for Child Mortality Estimation (UN IGME). It uses all available nationally representative data that have been judged to be of good quality (ie, vital registration data, census data, household surveys and sample registration systems). Using these data, the methodology fits a statistical model (called Bayesian B-spline bias-reduction model) to generate a smooth trend curve that averages over possibly disparate estimates from the different sources.[155] These figures are arguably more accurate than the ones derived through surveys only.

Disaggregated estimates in GRID are derived through: (i) processing DHS/MICS data; (ii) public sources mentioned above; and (iii) national administrative accounts. GRID uses the direct estimation method for under-five child mortality when processing DHS/MICS data.[156] In such cases, the recall period in the birth history corresponds to the five-year period prior to the survey.[157] In retrospective and furthest-behind analysis, we used only those data which are able to capture short-term changes. In contrast, in all projections (except regional), we used data published in the DHS Statcompiler , which correspond to ten years previous to the survey.[158] These longer periods are less prone to significant fluctuations

than the shorter periods and therefore they better capture the actual trends, allowing more accurate projections. Finally, the national administrative data for a few countries are based on both vital registration records and survey data.

To make the DHS/MICS disaggregated figures compatible with the UN IGME national estimates, we adjusted them by applying the following formula:

$$\text{Adj } CMR_{gi} = CMR_{gi} * CMR / CMR_S \quad (1)$$

Where:

Adj CMR_{gi} = Adjusted child mortality rate for the group *i* of a total of *n* groups

CMR_{gi} = DHS/MICS mortality estimate for group *i* of *n* groups

CMR = UN IGME national child mortality estimate

CMR_S = National child mortality estimate based on DHS/MICS

n = number of groups

In all cases except static analysis, disaggregated figures are adjusted with the UN IGME national estimate for the year when the survey was conducted. As noted above, the static analysis compares disparities in child mortality in 2013. Since only some countries have survey data for this year, to derive group-level estimates for the furthest-behind analysis in 2013 we consider the level of disparities observed in the most recent available year (never going back more than five years).

DISAGGREGATION BY SUBNATIONAL REGIONS AND ETHNIC GROUPS

One of the advantages of GRID is that it contains sample sizes and confidence intervals for each of the disaggregated groups obtained from direct processing of DHS and MICS data. This is particularly useful, as in some cases DHS/MICS sample sizes are too small for particular groups (especially in countries which have dozens of regions and/or ethnicities) and confidence intervals of compared groups may be overlapping. Therefore, reported rates may simply be a data artefact rather than an indicator of genuine difference between the groups. To deal with this challenge, in GRID, groups with small sample sizes (less than 150 in DHS and less than 250 in MICS) have been combined with other group(s) that have the closest child mortality rates so that the combined groups always represent the most/least disadvantaged groups.

Changes in the ethno/regional classification also pose additional challenges. In a significant number of countries, the number of ethnic groups and/or administrative borders of regions have changed between surveys. For this reason, in the retrospective analysis we included only those countries where the number of regions and ethnic groups had experienced minimum changes.[159] In the projections, to make the regional data from different years compatible when changed for one group, we have estimated previous child mortality rates in the newly formed regions based on the previous shares of child births and new child mortality rates.[160] However, there have also been cases where the change of administrative borders was more complicated – for example, when a region was abolished and its parts were transferred to different regions. Such cases were excluded from the analysis.

DISAGGREGATION BY ECONOMIC GROUPS

In various parts of the report we use two different methods to define economic groups: bottom 40% vs top 10%, and quintiles based on asset index distribution. Both methods are widely used in the literature as each has particular advantages. For example, because of larger sample size, the quintile method more accurately captures the characteristics of the top of the wealth distribution than the top 10%. On the other hand, because of widespread poverty in many developing countries, the bottom quintile often fails to capture a large proportion of the poor population and therefore the bottom 40% is more representative of materially deprived groups. In the face of increasing polarisation of wealth distribution, the bottom 40%/top 10% approach is being used more frequently – for example, by the World Bank in its Shared Prosperity framework. However, in our case, the choice of which of the two methods to use in different parts of the report was guided by data considerations. In GRID, directly computed data are disaggregated by bottom 40%/top 10%, while the public source data (most importantly the DHS Statcompiler) are disaggregated by quintiles. As noted above, due to a number of considerations, for the retrospective and furthest-behind analysis we used the directly computed data, and in the projections we used the aggregated public data. Therefore, in the retrospective and furthest-behind analyses, economic groups are defined as bottom 40% and top 10%, while in the projections we use quintiles instead.

GROUP-BASED INEQUALITY METRICS

We considered using two main metrics for the analysis: the absolute gap and the relative ratio. The former measures absolute difference in the given indicator between disadvantaged and reference groups, while the latter measures how much more likely the disadvantaged group is to experience the given condition compared to the reference group. Reduction in the gap implies conversion in the total absolute number of children experiencing child mortality. Reduction in the ratio tells more directly about equalisation in life chances, as the measures effectively show how more likely a child from one group is to die than a child from another group. For the retrospective analysis, we opted for the ratio as it is more useful for making comparisons across countries/groups. As reference groups we used urban areas, top asset index groups (10% or quintile), and regions and ethnicities with the lowest child mortality rates.

We used the following formula:

$$\text{Ratio} = CM_d / CM_a, \quad (2)$$

Where:
Ratio = inequality in child mortality
CM_d = estimated child mortality in disadvantaged group
CM_a = estimated child mortality in advantaged group

There are three additional reasons that support our decision to use ratio as the main metric in our analysis. Child survival is a basic human right – any differences between groups can be ascribed to systematic differences in life chances and are fundamentally unjust. This means that the ratio between the top and bottom groups is revealing of the extent of inequity in life chances. Second, the gap between the most and least advantaged groups is easy for both politicians and citizens to understand, and should therefore motivate action. Third, examining the performance of the top-performing group in society shows what level and pace of progress is possible within a given country context.

We are aware that the ratio does not provide a full account of the entire distribution. For example, while the ratio between the most/least disadvantaged groups may increase, at the same time all other groups may be catching up with the best performer. There are alternative approaches – for example, we could compute a concentration index for quintiles based on asset index ranking, but the same could not be done for regions and ethnic groups as these cannot be ranked by predetermined criteria. To test the validity of our findings we have carried out robustness tests where, instead of the most advantaged groups, we used national averages as a reference point to which the rates of most disadvantaged groups were compared. We have also checked our findings using the absolute gap as a measure of inequality. In the vast majority of cases, these tests yielded results similar to those presented in the report (results from robustness tests are provided below).

ANNUALISED RATE OF PROGRESS

We used the annualised percentage rate of progress to compare periods of different lengths. To calculate the average percentage annual rate of reduction (AARR) in under-five child mortality, we used the following formula:

$$\text{AARR} = ((CM_L / CM_E)^{(1/n)})-1 \quad (3)$$

Where:
CM_L = child mortality rate from the latest year/survey
CM_E = child mortality rate from the earlier year/survey
n = the number of years between surveys

We also computed absolute rates of change, which would highlight progress among countries with high child mortality. We only report relative change for simplicity, and also because our analysis focuses more on comparing the same country over time.

RESULTS OF ROBUSTNESS TESTS

To check the robustness of our findings in the analysis over time, we carried out the following tests:

a) Change in the reference group: instead of comparing the most and least advantaged groups, we compared the average national rates and those of the most disadvantaged group.

b) Change in the metric to measure inequalities: instead of using the relative ratio we used the absolute gap between the most disadvantaged group and the reference group.

TABLE A1. ROBUSTNESS TEST OF TYPOLOGY OF PROGRESS

	Type of disadvantaged group			
	Economic	**Regions**	**Urban/Rural**	**Ethnicity**
Ratio most advantaged and disadvantaged group				
Increased Inequality	35% (15)	59% (30)	42% (23)	76% (16)
Decreased Inequality	65% (28)	41% (21)	58% (32)	24% (5)
Increased in at least one	78% (43)			
Increased in all	16% (9)			
Decreased in all	22% (12)			
Ratio most disadvantaged group and national average				
Increased Inequality	63% (27)	59% (30)	46% (25)	52% (11)
Decreased Inequality	37% (16)	41% (21)	55% (30)	48% (10)
Increased in at least one	84% (46)			
Increased in all	18% (10)			
Decreased in all	16% (9)			
Absolute gap advantaged and disadvantaged group				
Increased Inequality	35% (15)	31% (16)	42% (23)	29% (6)
Decreased Inequality	65% (28)	68% (35)	58% (32)	71% (15)
Increased in at least one	67% (37)			
Increased in all	11% (6)			
Decreased in all	33% (18)			
Absolute gap most disadvantaged group and national average				
Increased Inequality	47% (20)	43% (22)	49% (27)	33% (7)
Decreased Inequality	53% (23)	57% (29)	51% (28)	67% (14)
Increased in at least one	76% (42)			
Increased in all	20% (11)			
Decreased in all	24% (13)			

TABLE A2. ROBUSTNESS TEST OF DIFFERENTIALS IN RATE OF PROGRESS

	Type of disadvantaged group			
	Economic	**Regions**	**Urban/Rural**	**Ethnicity**
Ratio most advantaged and disadvantaged group				
Increased Inequality	-4.2	-4.0	-3.9	-3.6
Decreased Inequality	-4.7	-4.7	-4.6	-6.4
Ratio most advantaged group and national average				
Increased Inequality	-4.6	-4.3	-3.9	-4.2
Decreased Inequality	-4.3	-4.1	-4.7	-4.4
Absolute gap advantaged and disadvantaged group				
Increased Inequality	-4.1	-3.7	-4.0	-3.8
Decreased Inequality	-4.9	-4.7	-4.6	-4.5
Absolute gap most advantaged group and national average				
Increased Inequality	-3.6	-3.4	-3.9	-3.2
Decreased Inequality	-5.0	-4.7	-4.6	-4.7

METHODOLOGY FOR 2030 PROJECTIONS

For this report, two sets of projections were produced – the 'business as usual' scenario and the 'equitable progress' scenario.

Under the 'business as usual' projections, four possible scenarios were considered. These were based on an assumption that child mortality rates in countries/groups will continue to decrease at the average rates experienced between: a) 1990–1999; b) 1995–2005; c) 2000–2013; and d) 1990–2013.[161] The target is an under-five child mortality rate of 25 or less per 1,000 live births. Given that each country experienced different rates of reduction in these time periods, some countries might meet the target under one scenario, but not necessarily under others. The score card table in Appendix 2 presents the best of these projections. Hence, if a country is projected to have achieved the national/group target under any of the scenarios, it will be reported as such.

In the second scenario, 'equitable progress' projections were based on the assumption that countries reduce child mortality in all groups at the highest rate that any similar group has experienced in the country at any time period since 1990. This allows us to project the maximum progress that groups can achieve based on what has been achieved by other groups. In this scenario, the national-level target was projected to be met if a country managed to achieve the target at any of the group levels.

Formulas used in projections

The actual projections of national- and group-level child mortality rates by 2030 involved two stages. First, we calculated the average annual rate of reduction (AARR) as in formula (3) above.

Next, we used the formula:

$$CM_F = CM_L * ((1+AARR)^k) \quad (4)$$

Where CM_F = estimated child mortality rate in 2030
CM_L = child mortality rate from the latest year/survey
k = 2030 – the year when the latest survey was conducted.

As the formula shows, the projection models are based on linear trends, implying that the rate of change and trajectory (increase or reduction) is uniform throughout the whole period. In practice, the reduction in child mortality considerably slows down in line with progress: for example, it is more difficult to reduce child mortality from 15 to 10 than from 80 to 75. A more accurate method is to use the 'decreasing performance' approach;[162] however, it requires far more detailed data about the performance of separate groups over several time periods – data which were not available to us.

Classification of countries based on projected child mortality rates

Based on the results of projections, for each of the scenarios, countries were classified into three groups:

a) Green – countries projected to reach national/group target of reducing under-five mortality to 25 deaths per 1,000 live births
b) Amber – countries projected not to reach national/group target, but making considerable progress judged by various criteria (see Table A3)
c) Red – countries projected not to reach national/group target and not making considerable progress.

TABLE A3: CRITERIA FOR CONSIDERABLE PROGRESS IN REDUCING CHILD MORTALITY

	Business as usual	**Equitable progress**
National	Child mortality reduced by half or more between 2015 and 2030	Child mortality reduced by more than two-thirds between 2015 and 2030
Wealth quintile	Target met for at least three quintiles	Target met for at least three quintiles
Urban/rural	Child mortality reduced by half or more in both urban and rural areas between 2015 and 2030	Child mortality reduced by more than two-thirds in both urban and rural areas between 2015 and 2030
Regions	Target met in at least half of regions	Target met in at least half of regions

TABLE A4: NUMBER OF COUNTRIES INCLUDED IN DIFFERENT TYPES OF ANALYSIS

Databse/type of analysis	Disaggregation	Total number of countries	Number of countries with latest data from 2008	Number of countries with latest data from 2010
GRID database	Urban/rural	87	61	47
	Subnational Regions	87	61	47
	Economic groups	70	48	34
	Ethnic groups	55	30	25
	Total	87	61	47
Changes over time in Chapter 3 (only countries with two data points from 2000)	Urban/rural	55	49	41
	Subnational Regions	51	44	37
	Economic groups	43	37	30
	Ethnic groups	21	18	16
	Total	55	49	41
Furthest behind groups in Chapter 2 (only countries with data from 2008)	Urban/rural	54	54	42
	Subnational Regions	44	44	34
	Economic groups	40	40	28
	Ethnic groups	24	24	21
	Total	54	54	42
Projections in Chapter 3 (only Countdown countries)	Urban/rural	50	42	35
	Subnational Regions	37	31	26
	Economic groups	45	38	32
	Total	50	54	35

COUNTRIES INCLUDED IN THE ANALYSES

As noted above, the GRID database contains data from 87 countries. Because of the different focus, the number of countries in the three separate pieces of analysis varies.[163] In the changes over time analysis, we included 55 countries which have disaggregated data for at least two points in time since 2000. The static analysis of the furthest-behind groups covers 54 countries where the most recent disaggregated figures are from 2008 or later. The projections were produced for 50 Countdown countries with disaggregated data for at least two points in time since 1990. For detailed information on the number of countries with particular types of disaggregated data, as well as how recent these data are, see Table A4.

APPENDIX 2

PROJECTIONS UNDER THE 'BUSINESS-AS-USUAL' AND EQUITABLE PROGRESS SCENARIOS

TABLE A2: 2030 PROJECTIONS UNDER "BUSINESS-AS-USUAL" SCENARIO AND "EQUITABLE PROGRESS" SCENARIO

Note: Cells highlighted in green indicate that the country will meet the proposed post-2015 target of 25 deaths per 1,000 live births at the national level or for each social and economic group. Cells coloured red indicate that the target will not be achieved. Amber indicates that, despite not meeting the target, considerable progress is made (see Appendix 1 for further details). White cells indicate groups for which data is not available.

	Business as usual scenario				Equitable progress scenario			
Country	**Will the national target be met based on average national progress?**	**Do all groups meet the target?**			**Will the national target be met with equitable progress?**	**Do all groups meet the target?**		
		Economic groups	**Rural and urban**	**Regions**		**Economic groups**	**Rural and urban**	**Regions**
Afghanistan	NO							
Angola	NO							
Azerbaijan	YES		YES		YES		YES	
Bangladesh	YES	YES	YES	YES	YES	YES	YES	YES
Benin	NO	NO	NO	NO	YES	NO	NO	YES
Bolivia	YES		YES		YES	YES	YES	YES
Botswana	YES							
Brazil	YES							
Burkina Faso		NO			YES		NO	YES
Burundi	NO		NO		NO		NO	
Cambodia	YES	YES	YES		YES	YES	YES	YES
Cameroon	NO	NO	NO	NO	YES	NO	NO	YES
CAR	NO							
Chad	NO	NO	NO		NO	NO	NO	
China	YES							
Comoros	NO	NO	NO	NO	NO	NO	NO	NO
Congo	YES	YES	YES		YES	YES	YES	YES
Cote d'Ivoire	NO	NO	NO	NO			NO	
Congo DR	NO	NO	NO		NO	NO	NO	
Djibouti	NO							
Egypt	YES	YES	YES	YES	YES	YES	YES	YES
Equatorial Guinea	NO							
Eritrea	YES		YES		YES	YES	YES	
Ethiopia	YES		YES		YES	YES	YES	YES
Gabon	NO	NO	NO	NO	NO	NO	NO	NO
Gambia	NO							
Ghana	NO	NO	NO	NO	YES	YES	NO	YES
Guatemala	YES	NO	YES	NO	YES	YES	YES	YES
Guinea	NO	NO	NO	NO		NO	NO	
Guinea-Bissau	NO							
Haiti	NO	NO	NO		YES	YES	NO	
India	NO	NO	NO		YES		YES	YES
Indonesia	YES	YES	YES		YES	YES	YES	YES
Iraq	YES			NO	YES			YES
Kenya	NO	NO	NO		YES	YES	NO	YES

	Business as usual scenario				Equitable progress scenario			
Country	**Will the national target be met based on average national progress?**	**Do all groups meet the target?**			**Will the national target be met with equitable progress?**	**Do all groups meet the target?**		
		Economic groups	**Rural and urban**	**Regions**		**Economic groups**	**Rural and urban**	**Regions**
Korea DPR	YES							
Kyrgyzstan	YES	YES	YES		YES	YES	YES	
Lao PDR	NO							
Lesotho	NO	NO	NO	NO	NO	NO	NO	NO
Liberia	YES	NO			YES	YES	YES	
Madagascar	YES		YES		YES	YES	YES	YES
Malawi	YES		YES	YES	YES	YES	YES	YES
Mali	NO	NO	NO	NO	YES	NO	NO	YES
Mauritania	NO							
Mexico	YES		YES	YES	YES		YES	YES
Morocco	YES	YES	YES		YES	YES	YES	YES
Mozambique		NO	NO	NO	YES		NO	YES
Myanmar	NO							
Nepal	YES	YES	YES		YES	YES	YES	
Niger		NO			YES	NO		YES
Nigeria	NO	NO	NO	NO	YES	NO	NO	YES
Pakistan	NO	NO	NO	NO		NO	NO	
Papua New Guinea	NO							
Peru	YES	YES	YES	YES	YES	YES	YES	YES
Philippines	YES		YES		YES	YES	YES	
Rwanda	YES	YES	YES		YES	YES	YES	YES
Sao Tome and Principe	YES							
Senegal	YES		YES		YES	YES	YES	YES
Sierra Leone	NO	NO	NO	NO	YES	NO	NO	YES
Solomon Islands	YES							
Somalia	NO							
South Africa	YES							
South Sudan								
Sudan	NO							
Swaziland	NO							
Tajikistan	YES							
Tanzania	YES	YES	YES		YES	YES	YES	
Togo	NO		NO	NO	YES		NO	YES
Turkmenistan	NO							
Uganda	YES		YES		YES	YES	YES	YES
Uzbekistan	YES							
Viet Nam	YES		YES		YES	YES	YES	
Yemen	YES		NO		NO		NO	
Zambia		NO	NO	NO	YES	YES	YES	YES
Zimbabwe	NO	NO	NO	NO	YES	NO	NO	YES

APPENDIX 3

INTERPRETING THE SPOTLIGHT CASE STUDIES

This report contains six country 'spotlights' which provide analysis of trends in child survival indicators and explore the policy decisions and outstanding challenges that lie beneath them.

DATA AND SOURCES

All figures on national child mortality rates, number of child deaths and rates of change refer to under-five mortality for the year 2013. Source: *UN Inter-agency Group for Child Mortality Estimation (UN IGME) (2014) Levels and Trends in Child Mortality - Report 2014*. Data on inequalities in child mortality rates between groups correspond to those from GRID (see Appendix 1).

Data on disparities in the coverage of key interventions were drawn from Countdown to 2015 (2014) *Countdown Equity Analyses by Country, 2014*. Available at www.countdown2015mnch.org/documents/2014Equity/Countdown_Equity_Profiles_2014.pdf.

Data on health spending in the 'policy spotlight' section were drawn from the 2014 country profiles contained in Countdown to 2015 (2014) *Fulfilling the health agenda for women and children: The 2014 report*, available at www.countdown2015mnch.org/country-profiles

Please see References section for sources used for policy analysis.

INTERPRETING THE OUTCOMES BOX

Acceleration/deceleration: The average annual rate of reduction has been classed as 'accelerating' if it was faster in the period 2000–2013 than 1990–2000.

Data on 'equity of progress': refer to whether inequalities in child mortality rates between different social and economic groups increased or decreased between 2000 and 2013 for which data are available (detailed in the spotlight for each country). The figures correspond to those from the analysis of changes over time presented in Chapter 3 of the report (see Appendix 1 for further methodological details). Analysis is provided for all of the groups that have data available in the country concerned (economic groups [10:40 ratio], subnational regions, urban/rural areas and ethnic groups).

Data on 'Post-2015': refer to whether the country is expected to meet child mortality targets by 2030, both as a national average and for all social and economic groups (economic, subnational regions, urban and rural areas). This is based on the projections presented in Chapter 3 of the report (see Appendix 1 and 2 for methodological details). The post-2015 target used for the projections is an under-five child mortality rate of no more than 25 deaths per 1,000 live births (see Box 4, page 21). Labels in the projections correspond to the classification explained in Appendix 1.

- Yes – projected to reach national/group target of reducing under-five mortality to 25 deaths per 1,000 live births
- No, but with potential – projected not to reach national/group target, but making considerable progress judged by various criteria (see Table A3, Appendix 1)
- No – projected not to reach national/group target and not making considerable progress.

REFERENCES

1. The figures cited here compare the life chances of a child born into the poorest 40% of families in the region in Nigeria with the highest child mortality rate (North West) to the region with the lowest child mortality rate (South West). Figures are calculated from 2013 DHS data. DHS survey reports refer to these regions as 'zones' (of which there are six), to distinguish them from the states that are located within them.
2. UNICEF (2014) *Committing to Child Survival: A Promise Renewed*. Progress Report 2014. New York: UNICEF; UN Inter-agency Group for Child Mortality Estimation (UN IGME) (2014) *Levels and Trends in Child Mortality – Report 2014*. New York: UNICEF.
3. Kuruvilla, S. et al. (2014) 'Success factors for reducing maternal and child mortality'. *Bulletin of the World Health Organization Jul 1, 2014; 92(7): 533–544*.
4. UN IGME (2014) *Op. Cit.*
5. United Nations (2014) *The Millennium Development Goals Report 2014*. New York: United Nations.
6. Liu, L. et al. (2014) 'Global, regional and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis'. *The Lancet (online), 30th September 2014*.
7. All figures in this section relate to 2013, and are drawn from the UN IGME (2014) *Op. Cit.*
8. *Ibid.*
9. *Ibid.*
10. The reported rates are for the latest year for which data is available. Source: UNICEF-WHO-The World Bank project – 2013 Joint child malnutrition estimates, available at www.who.int/nutgrowthdb/estimates2013/en (accessed 19th January 2015).
11. In 2010 the UN Secretary-General's *Every Woman Every Child* initiative established a global roadmap for the achievement of MDGs and 5, supported by over 300 commitments from governments, civil society and the private sector to accelerate change. See www.everywomaneverychild.org (accessed 19th January 2015).
12. The annual rate of reduction in under-five child mortality has increased in recent decades, from an average of 1.2% per year (1980–1990), to 1.4% (1990–2000), and 4.0% (2000–2012). In the most recent period 2005–2012 the annual percentage reduction was the highest ever at 4.2%. UN IGME (2014) Op. Cit.
13. McArthur, J. (2014) 'Seven Million Lives Saved: Under-5 mortality since the launch of the Millennium Development Goals'. *Brookings Global working Papers No. 72, September 2014*. Washington DC: Brookings. It is of course difficult to prove causality, and define how much of this acceleration can be attributed specifically to the MDGs. Arguably, acceleration happened too late, and was certainly not enough to put the world as a whole on track to achieve MDG 4 by 2015. However, it appears that the MDGs and related initiatives have played a role in helping to galvanise action at national and international levels. For further discussion see UNDP (2010) *Beyond The Midpoint: Achieving the Millennium Development Goals*. New York: UNDP.
14. UN IGME (2014) *Op. Cit.*
15. Liu, L. (2014) *Op. Cit.* Save the Children's recent report *Ending Newborn Deaths* highlighted the urgent need to increase access to essential care around labour and delivery, immediately afterwards and within the first 28 days of a baby's life. See Save the Children (2014) *Ending Newborn Deaths: Ensuring every baby survives*. London: Save the Children.
16. For further information on the proposed Global Financing Facility, see 'A Global Financing Facility in Support of Every Woman Every Child' at http://everywomaneverychild.org/news-events/news/980-a-global-financing-facility-in-support-of-every-woman-every-child-the-partnership-for-maternal-newborn-child-health-to-coordinate-stakeholder-consultations (accessed 19th January 2015).
17. We do not present analysis of gender gaps in child mortality rates in this report as we did not find significant differences in under-five child mortality rates between girls and boys across countries. This is in line with other studies, for example with Alkema et al. (2014) identifying only ten countries which had higher-than-expected female mortality rates – Afghanistan, Bahrain, Bangladesh, China, Egypt, India, Iran, Jordan, Nepal, and Pakistan. Further research is required in these countries to understand whether these trends and their link to sex discrimination. Other studies have found that gender inequalities tend to be most visible in gender imbalances resulting from sex-selective abortion, and in children's health and wellbeing as they grow up (see for example UNFPA (2012); UNICEF (2010) and Young Lives (2013)). – However, gender equality is strongly linked to child mortality rates, with the cumulative impact of inequality and discrimination having extremely negative knock-on impacts on child mortality rates. Women's and girls' empowerment is therefore an essential component of strategies to end preventable child mortality (see Box 7 on page 35 for further discussion). Alkema, L. et al. (2014) 'National, regional, and global sex ratios of infant, child, and under-5 mortality and identification of countries with outlying ratios: a systematic assessment' *The Lancet Global Health vol2 (9): e521-530*; UNFPA (2012) *Sex imbalances at birth: Current trends, consequences and policy implications*. Bangkok: UNFPA Asia and the Pacific Regional Office; UNICEF (2010) *Progress for Children: Achieving the MDGs with equity*. New York: UNICEF; Woodhead, M., Dornan, P. and Murray, H. (2013) *What Inequality Means for Children: Evidence from Young Lives*. Oxford: Young Lives.
18. See also UNICEF (2010) *Op. Cit*; Save the Children (2010) *A Fair Chance At Life: Why equity matters for child mortality*. London: Save the Children; Save the Children (2012) *Born Equal: How reducing inequality could give our children a better future. London*: Save the Children.
19. I UN IGME (2014) *Op. Cit.*
20. See note 17, plus Box 7, page 35 for further discussion. In this report we use the term 'social and economic groups' as shorthand to refer to the groups that we have analysed in our research – subnational regions, rural/urban areas, ethnic groups and economic groups. This follows the post-2015 High Level Panel which recommended that post-2015 targets should only be considered achieved if met for all relevant income and social groups, a recommendation subsequently picked up by the UN Secretary General's post-2015 Synthesis Report. Under the post-2015 framework, the commitment that no target will be considered met unless met for all should not be limited to the groups covered in this research, which were selected according to relevance to child mortality and to data availability. Globally, the commitment should also cover people discriminated against on the basis of their gender or disability, and at the national level should also include any additional groups that experience systematic disadvantage in particular country contexts.
21. DHS 2012 data, from Countdown to 2015 (2014) *Countdown Equity Analyses by Country, 2014*. Available at http://www.countdown2015mnch.org/documents/2014Equity/Countdown_Equity_Profiles_2014.pdf.
22. UNICEF (2013) *Access to health services: analysing non-financial barriers in Ghana, Bangladesh, Vietnam and Rwanda using qualitative methods. A review of the literature*. Maternal, newborn and child health working paper, August 2013, edited by Juliet Bedford, Anshika Singh, Ma Bella Ponferrada, Lucy Eldred. New York: UNICEF; Malqvist, M. et al. (2013) 'Ethnic minority health in Vietnam: a review exposing horizontal inequity'. *Global Health Action Vol 6 (2013)*
23. With the exception of few countries where there is not much disparity and the richest 10% is not statistically significantly higher than the poorest 40%.
24. See UN IGME (2014) *Op. Cit.*
25. Notable exceptions are Haiti (2012) and Zimbabwe (2010).

26. Our analysis identified the Sindh region as having the highest rates of under-five mortality in Pakistan (2012 DHS data). Data analyses using other methodologies to calculate under-five child mortality identify Balochistan as the furthest behind region (see for example the DHS Statcompiler which uses a ten-year recall period to calculate mortality rather than the five-year period used in this report).
27. Data for Bolivia is for 2008 and does not reflect the impact of recent policies. The government of Bolivia has attempted to address economic barriers through the Juana Azurduy bonus that is paid to pregnant and postpartum women to attend antenatal and postnatal clinics and bring children to health clinics for up to two years after birth.
28. Kabeer, N. (2012) *Can the MDGs provide a pathway to social justice? The challenge of intersecting inequalities*. Brighton: IDS; Paz Arauco, P. et al. (2014) *Strengthening social justice to address intersecting inequalities post-2015* London: ODI.
29. For further details on methodological challenges see: Samman, E. & Roche, J.M. (2014) A Data Revolution to Match the Ambition of 'Leaving no one Behind', in *Maitreyee No. 24* Available at http://www.odi.org/publications/8836-group-inequality-intersectionality (accessed 19th January 2015).
30. This research builds on other studies that have analysed whether progress has been pro-poor. See: UNICEF (2014) Committing to Child Survival: A Promise Renewed. Progress Report 2014. New York: UNICEF; and Wagstaff, A. et al (2014) Progress Toward the Health MDGs: Are the Poor Being Left Behind?. Policy and Research Paper, WPS6894, World Bank.
31. If disparities in relative survival chances (ie, the ratio between groups) are reducing, absolute gaps will also be falling. However, the opposite is not true; the gaps can reduce, but inequalities in the odds of surviving increase if disadvantaged groups are left behind in relative terms. Both absolute and relative measures of inequality are important, and from a rights perspective the optimal goal is to reduce both. See methodological appendix for further discussion of metrics.
32. Rodriguez Pose, R., Engel, J., Poncin, A., and Manuel, S. (2014) *Against the Odds: Mozambique's gains in primary health care*. London: ODI.
33. The length of the time periods included in our analysis correspond to the DHS or MICS surveys that are closest to 2000 and 2013. As explained in the methodology section (see Appendix 1), changes are annualized to allow meaningful comparisons. Only the Philippines has data for all four of the social and economic groups. For all other countries, except Iraq, there is data for at least three types of groups. For Iraq, data is only available for urban-rural areas and regions.
34. Periods vary and may not reflect recent policies. In Bolivia for example the government has implemented innovative policies in order to reduce some of these inequalities (see note 25). The periods analysed for these countries are: Bolivia (1998–2008), Cameroon (1998–2011), Central African Republic (2006–2011), Chad (1997–2004), Iraq (2006–2011), Niger (1998–2012), Pakistan (2006–2012), Philippines (1998–2008) and Togo (1998–2010).
35. For simplicity we only present analysis here of changes in relative inequality between groups (the ratio between advantaged and disadvantaged), but it should be noted that absolute changes (the absolute gap between groups) may provide a slightly different picture. Relative figures highlight changes in countries with lower initial levels, while absolute figures highlight changes in countries with higher initial levels.
36. Data on ethnicity is not available for Rwanda. There is data on ethnicity for Malawi but analysis over time is a challenge due to differences in categories and small sample sizes.
37. All of these countries reduced inequalities in child survival for all social groups for which data is available.
38. Data for ethnic or religious groups is not available for Pakistan.
39. Uganda has seen increases in inequalities in child survival for all groups except for urban and rural disparities, which reduced between 2000 and 2011.
40. Correlation between annual average change in under-five child mortality and disparities between advantaged and disadvantaged groups are positive in all cases, even if very low. In economic groups the correlation was .095, in urban/rural .022, in regions .041 and in ethnicity .624.
41. The impact is higher for minority ethnic groups, with reducing inequality linked to an increase in average progress from 3.4% to 6.4%. However, it should be borne in mind that the sample size is much smaller for ethnic groups than for the other dimensions of inequality. See Appendix 1 for further discussion of our methodology and findings.
42. This is a weighted average of the difference in the ten-year average progress across group. The range depends on the specific social or economic group under consideration.
43. This is in line with the findings of the *Promise Renewed Annual Progress Report* (2014) which highlights that under-five mortality is falling among the poorest children in all global regions, with gaps between the richest and poorest narrowing. UNICEF (2014) *Committing to Child Survival: A Promise Renewed.* Progress Report 2014. New York: UNICEF. See also: Wagstaff, A. et al (2014) *Progress Toward the Health MDGs: Are the Poor Being Left Behind?*. Policy and Research Paper, WPS6894, World Bank.
44. Note that the sample of countries with data for ethnic groups is much smaller than for other groups, including only 16 countries, compared to a sample of 54 for urban/rural disparities.
45. The Countdown to 2015 initiative was established in 2005 to monitor country-level progress on key child survival indicators and interventions in order to stimulate and support country progress towards MDGs 4 and 5. For further details see: http://www.countdown2015mnch.org/about-countdown (accessed 19th January 2015).
46. Our analysis for economic groups in this section looks at the poorest and richest economic quintiles. See Appendix 1 for further details.
47. Either during 1990–2013 or 2000–2013, whichever is higher.
48. These figures are computed over the total number of countries with available data for each given group.
49. Given that Egypt and Peru met the target as a national average in the late 2000s, the fact that they meet the target for all groups is not a wholly unexpected achievement.
50. Previous Save the Children analysis has showed that, although challenging, the world could reach ambitious post-2015 targets by 2030 if countries take proactive steps to reduce income inequality to levels they have achieved in the past 20 years and improve government effectiveness and accountability. See Save the Children (2013) *Getting to Zero: How we could be the generation that ends poverty.* London: Save the Children.
51. Reflected by the inclusion of the target in the recommendations from the UN General Assembly's Open Working Group on Sustainable Development Goals
52. The PMNCH is a multi-stakeholder alliance, hosted by the WHO, of more than 500 organisations and institutions working on reproductive, maternal, newborn and child health (RMNCH). The Partnership fosters alignment and coordination between its members towards the achievement of MDGs 4 and 5, and towards the realisation of women's and children's rights to the highest attainable standard of health in the years to 2015 and beyond. See http://www.who.int/pmnch/about/en/ (accessed 19th January 2015).
53. PMNCH (2014) *Placing healthy women and children at the heart of the post-2015 sustainable development framework*. Available at www.who.int/pmnch/post2015_policybrief.pdf?ua=1 (accessed 19th January 2015).
54. UNICEF (2014) *Committing to Child Survival: A Promise Renewed.* Progress Report 2014. New York: UNICEF.
55. High Level Panel on the post-2015 development Agenda (2013) *A new global Partnership: Eradicate poverty and transform economies through sustainable development*
56. UN (2014) *The Road to Dignity by 2030: Ending Poverty, transforming all lives and protecting the planet*. Synthesis Report of the Secretary-General on the Post-2015 Agenda, December 2014. New York: UN.
57. Countdown to 2015 (2014) *Fulfilling the Health Agenda For Women and Children: The 2014 Report*. Geneva: World Health Organization and UNICEF; UNICEF (2014) *Op. Cit*
58. Universal health coverage is rooted in the right to health, enshrined in the Constitution of the World Health Organization and included in the Universal Declaration of Human Rights. Every country in the world has signed up to at least one treaty that acknowledges the right to health, and many countries' constitutions include this entitlement. Equity is included as an explicit objective in some national health strategies policies, and national health acts.
59. Gwatkin, D.R. and Ergo, A. (2011) 'Universal Health Coverage, friend or foe of health equity?' *The Lancet 2011 377, No. 9784:2160-2161*
60. Barros, A. et al. (2012) 'Equity in maternal, newborn and child health interventions in Countdown to 2015: a retrospective review of survey data from 54 countries' *The Lancet 2012 379, No 9822:1225-1233*..
61. UNICEF and WHO (2014) *Op. Cit.*
62. Kerber, K.J. et al. (2007)..'Continuum of care for maternal, newborn, and child health: from slogan to service delivery' *The Lancet , Volume 370 , Issue 9595 , 1358 - 1369*

63. Liu, L. (2014) *Op. Cit.*
64. *Ibid.*
65. Victora, C.G. et al., (2012) 'How changes in coverage affect equity in maternal and child health interventions in 35 Countdown to 2015 countries: an analysis of national surveys' *The Lancet 2012 380 No, 9848:1149-56*
66. *Op. Cit.*
67. Haddad, L. (2015) 'Equity: Not only for idealists'. *Development Policy Review 33(1)5-13*
68. Carrera, C. et al. (2012) 'The comparative cost-effectiveness of an equity-focused approach to child survival, health and nutrition: a modelling approach'. *The Lancet 380, October 13 2012, pp1341-1351.*
69. Ethiopia, Mali, Niger, Rwanda, Uganda, Benin, Ghana, Kenya, Nigeria, South Africa, Zimbabwe, Bangladesh Punjab province in Pakistan, Philippines, Vietnam.
70. Carrera, C. et al. (2012) *Op. Cit.*
71. Haddad, L. (2015) *Op. Cit.*
72. Requejo, J.H. (2014) 'Countdown to 2015 and beyond: fulfilling the health agenda for women and children' *The Lancet, June 2014, Online Version,* available at http://dx.doi.org/10.1016/S0140-6736(14)60925-9 (accessed 19th January 2015).
73. Gilson, L. & Doherty, J. et al. (2007) *Challenging equity through health systems.* Final report. Knowledge Network on Health Systems, WHO Commission on the Social Determinants of Health. Geneva: WHO. Service
74. *Ibid.*
75. Save the Children, Rockefeller Foundation, UNICEF, WHO (2013) *Universal Health Coverage: A commitment to close the gap*. London: Save the Children
76. McIntyre, D. and Meheus, F. 2013 Fiscal Space for Health Spending. Chatham House Working Paper 4. This updates the Health level Taskforce on Innovative Financing estimate of $60 pp to 2012 prices, taking into account exchange rates fluctuations and the impact of inflation
77. Out-of-pocket spending (OOPS) is unplanned expenditure by individuals or households on immediate health needs, and is higher in countries in which services are not provided free at the point of use. In 62 of 72 Countdown countries for which data are available out-of-pocket spending makes up more than 20% of total health spending. out-of-pocket spending on health is estimated to push 100 million households into poverty every year.
78. Save the Children (2014) *Within our means: paying to end preventable child deaths*. Save the Children UK working paper, 2014.
79. For further details see ' A Global Financing Facility in Support of Every Woman Every Child' at http://everywomaneverychild.org/news-events/news/980-a-global-financing-facility-in-support-of-every-woman-every-child-the-partnership-for-maternal-newborn-child-health-to-coordinate-stakeholder-consultations (accessed 19th January 2015).
80. Save the Children (2014) *Tackling Tax, Saving Lives*. London: Save the Children.
81. As well as how efficiently they are spent, analysis of which is beyond the scope of this report. The 2010 World Health Report identified ten typical inefficiencies within the health sector that account for wastage of an estimated 20–40% of health spending. WHO (2010) *Health Systems Financing: the path to universal coverage*. World Health Report 2010. Geneva: WHO.
82. Watkins, K. & Alemayehu, W. (2012) *Financing for a fairer, more prosperous Kenya a review of the public spending challenges and options for selected arid and semi-arid countries*. Brookings Center for Universal Education Working Paper 6. Washington DC: Brookings.
83. Global Health Workforce Alliance and WHO (2013) *A Universal Truth: No Health Without a Workforce*. Geneva: WHO.
84. Chopra, M. et al. (2012) 'Strategies to improve health coverage and narrow the equity gap in child survival, health and nutrition'. *The Lancet 380 No. 9850 : 1331–1340.*
85. Global Health Workforce Alliance and WHO (2013) *Op. Cit.*
86. Haines, A. et al. (2007) 'Achieving child survival goals: potential contribution of community health workers'. *The Lancet June 2007 vol. 369 pp 2121–31*
87. Save the Children (2011) *No Child Out of Reach: Time to End the Health Worker Crisis*. London: Save the Children.
88. Chopra et al. (2012) *Op. Cit.*
89. UNICEF (2013) *Op. Cit.*
90. Countdown to 2015 (2014) *Op. Cit.*
91. Ahmed, S., and Khan, M.M. (2010) '*A maternal health voucher scheme: what have we learned from the demand-side financing scheme in Bangladesh?*' Health Policy and Planning 26(1): 25–32.
92. Countdown to 2015 (2014) *Op. Cit.* The WHO and PMNCH have recently agreed a core set of indicators to track quality of care across countries, and are currently working to standardise definitions and improve data collection.
93. UNICEF (2013) *Op. Cit.*; Malqvis et al. (2013) *Op. Cit.*
94. Amnesty International (2009) *Fatal Flows. Barriers to Maternal Health in Peru*. London: Amnesty International; PMNCH et al. (2014) *Success Factors for Women's and Children's Health: Policy and programme highlights from 10 fast-track countries*. Geneva: WHO.
95. Ottersen, O.P. et al. (2014) 'The political origins of health inequity: prospects for change'. *The Lancet 383 (9917):630-667.*
96. Kuruvilla et al. (2014) *Op. Cit.*
97. Kuruvilla et al. (2014) *Op. Cit.*; Chopra et al. (2012) *Op. Cit.*; Countdown to 2015 (2014) *Op. Cit.*; WHO Commission on Social Determinants of Health (2008) *Closing the gap in a generation: Health equity through action on the social determinants of health*. Geneva: WHO. We conceptualise women's and girls' empowerment as their ability to make meaningful choices about their own lives, following Kabeer, N. (1999) 'Resources, Agency, Achievements: Reflections on the measurement of women's empowerment' *Development and Change Vol. 30 (1999): 435-464* and Kabeer, N. (2005) 'Gender equality and women's empowerment: a critical analysis of the third millennium development goal'. *Gender and Development 13(1).*
98. O'Niel, T., Domingo, P. and Valters, C. (2014) *Progress on women's empowerment: From technical fixes to political action*. Development Progress Working Paper 6, November 2014. London: ODI.
99. Sperling, G.B. and Herz, B. (2004) *What works in girls' education: Evidence and policies from the developing world*. New York: Council on Foreign Relations. Irwin, A. and Scali, E. (2007) 'Action on the social determinants of health: a historical perspective' *Global Public Health. 2007;2(3):235-56*
100. UNESCO (2014) *Teaching and learning: Achieving quality for all*. Education For All Global Monitoring Report 2013/14. Paris : UNESCO.
101. UN IGME (2014) *Op. Cit.*
102. UNICEF (2014) *Op. Cit.*; Countdown to 2015 (2014) *Op. Cit.*
103. Bhutta, Z. et al. (2013) 'Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?' *The Lancet Volume 382, Issue 9890 pp 452-477*
104. Gillespie, S. et al. (2013) 'The politics of reducing malnutrition: building commitment and accelerating progress'.
105. UNICEF (2012) *Pneumonia and Diarrhoea: Tackling the deadliest diseases for the world's poorest children*. New York: UNICEF.
106. WHO and UNICEF Joint Monitoring Programme (2014) *Progress on drinking water and sanitation: 2014 update*. Geneva: WHO and UNICEF.
107. *Ibid.*
108. Save the Children analysis of DHS Data.
109. Alkema, L. et al. (2014) *Op. Cit.*
110. UNFPA (2012) *Sex imbalances at birth: Current trends, consequences and policy implications*. Bangkok: UNFPA Asia and the Pacific Regional Office.
111. UN Women (2014) '*Gender-biased sex selection an extreme form and manifestation of gender discrimination and inequality against women, say UN Women and UNFPA*' Press Release, New Delhi, July 22 2014, Available at: ://www.unwomensouthasia.org/2014/gender-biased-sex-selection-an-extreme-form-and-manifestation-of-gender-discrimination-and-inequality-against-women-say-un-women-and-unfpa/ (Accessed 19th January 2014).
112. Gakidou et al. (2010) cited in UNESCO (2014) *Op. Cit.*
113. Bhutta, Z.A. et al. (2013) 'Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?' *The Lancet. 2013 Aug 3;382(9890):452–77.*
114. Save the Children (2011) *An Equal Start: why gender equality matters for child survival and maternal health* London: Save the Children and UNICEF (2013) *Op. Cit.*
115. Kuruvilla et al. (2014) *Op. Cit.*
116. United Nations Children's Fund, World Health Organization, The World Bank, UNICEF-WHO-World Bank Joint Child Malnutrition Estimates, 2014.
117. Black, Robert E., et al., 2013. Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet, Volume 382, no. 9890 (2013): 427–451.*

118. Note: Figure is for 2011. Source: Black et al. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries, Maternal and Child Nutrition, *The Lancet*.
119. Grantham-McGregor, S. et al., 2007. Development potential in the first five years for children in developing countries. *The Lancet, 369: 60–70.*
120. Grantham-McGregor, S. et al. (2007). Development potential in the first five years for children in developing countries. *The Lancet, 369: 60–70.*
121. UNICEF (2013) United Nations Children's Fund, 'Improving Child Nutrition: The achievable imperative for global progress.'
122. Black, Robert E et al. (2013). Maternal and child nutrition: building momentum for impact, *The Lancet, Volume 382, No. 9890:372–375.*
123. UNICEF (2014). A Post 2015 World Fit for Children, Issue Brief: Maternal and Child Nutrition. Available online: http://www.unicef.org/post2015/files/Nutrition_2pager_FINAL_web.pdf [Last assessed 14 Jan 2015]
124. WHO Commission on Social Determinants of Health (2008) *Op. Cit.*
125. UNICEF (2013) *Op. Cit.*
126. WHO Commission on Social Determinants of Health (2008) *Op. Cit.*; PMNCH et al. (2014) *Success Factors for Women's and Children's Health: Policy and programme highlights from 10 fast-track countries.* Geneva: WHO.
127. UNICEF (2013) Op. Cit.; Kabeer, N. (2012) *Can the MDGs provide a pathway to social justice? The challenge of intersecting inequalities.* Brighton: IDS; Samman, E. and Rodriguez-Takeuchi, L. (2013) *Old age, disability and mental health: data issues for a post-2015 framework* London: ODI.
128. Paz Arauco, P. et al. (2014) *Strengthening social justice to address intersecting inequalities post-2015* London: ODI.
129. WHO Commission on Social Determinants of Health (2008) *Op. Cit.*; Kabeer, N. (2008) *Paid work, women's empowerment and gender justice: Critical pathways of social change*. Pathways of women's empowerment working paper; Save the Children (2013) *Breaking the Mould: Transforming the economic development paradigm*. London: Save the Children.
130. This is confirmed in the Universal Declaration of Human Rights, the UN Convention on the Rights of the Child, the International Labour Organization's constitution and legal instruments on social security.
131. ILO (2014). *World Social Protection Report 2014/15*, International Labour Organisation: 154.
132. DFID, Help Age International, et al. (2009). *Advancing child-sensitive social protection* Available at: http://www.unicef.org/aids/files/CSSP_joint_statement_10.16.09.pdf (accessed 3 December 2014)
133. ILO (2014) *Op. Cit.*
134. Woolard, Harttgen and Kalsen (2010) *The evolution and impact of social security in South Africa*. Background Paper to the European Development Report 2010, Florence Robert Schumann Centre for Advanced Studies in ILO (2014) *Op. Cit.*
135. Skoufias and Parker (2001) in ILO (2014) *Op. Cit.*
136. *Ibid.*
137. Lim S.S. et al. (2010) 'India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation'. *The Lancet 375(9730):2009–23.*
138. DFID, Help Age International, et al (2009) *Op. Cit.*
139. For further discussion see Save the Children (2012) *A chance to Grow: How social protection can tackle child malnutrition and promote economic opportunities*. London: Save the Children
140. As proposed by the High Level Panel on the post-2015 development Agenda (2013) and supported in the UN Secretary-General's December 2014 Synthesis Report on the post-2015 agenda. In practice, this could be operationalised through all countries monitoring progress for a core set of groups (gender, age, disability, ethnic, urban/rural, regions and economic groups), or through each country defining groups that are experiencing systematic disadvantage in their country context through an open and inclusive process.
141. Watkins, K. (2014) 'Leaving no one behind: an agenda for equity'. *The Lancet, Early Online Publication, 9 May 2014.* Save the Children (2014) *Leaving No One Behind: Embedding equity in the post-2015 framework through stepping stone targets*. London: Save the Children.
142. To ensure that stepping stone targets are as effective and feasible as possible, a number of practical and technical details will need to be worked through, including selecting appropriate baselines, metrics and benchmarks, and considering how to set equity targets for global as well as national progress.
143. High-Level Panel on the post-2015 Development Agenda (2013) *Op. Cit.*
144. Partners for a People Centred Data Revolution (2014) *Open Letter to the Independent Experts Advisory Group on the Data Revolution*, available at http://post2015.org/2014/10/22/partners-for-a-data-revolution-open-letter-to-the-ieag/ (accessed 19th January 2015)/
145. UN IGME (2014) *Op. Cit.*
146. Carr-Hill, R. (2013) 'Missing millions and measuring development progress' *World Development 46:30–44.*
147. To be held in Addis Ababa in July 2015 to ensure that the post-2015 development agenda is adequately resourced. Recommendation made by the Independent Expert Advisory Group (IEAG) on a Data Revolution for Sustainable Development (2014) *A World that Counts: Mobilising the data revolution for sustainable development.*
148. Samman, E. and Roche, J. (2014) *Op. Cit.* and Partners (2014) *Op. Cit.*
149. World Vision (2014) *Op. Cit.*
150. See http://nmis.mdgs.gov.ng/about (accessed 19th January 2015).
151. Save the Children (2014) F*ramework for the Future*. London: Save the Children.
152. Colleagues from ODI contributed by computing the estimates from MICS, and by compiling disaggregated estimates for India.
153. Including: UN IGME data (www.childmortality.org), WHO stats (http://ow.ly/FMNDu), DHS Statcompiler (http://www.statcompiler.com/); UNICEF Data (http://ow.ly/FMMrw); Countdown equity profiles, http://countdown2015mnch.org/about-countdown/countdown-data; World Bank reports, http://documents.worldbank.org/curated/en/2012/01/16860295/inequalities-health-outcomes-child-health , http://documents.worldbank.org/curated/en/2012/01/16860889/inequalities-health-utilization-maternal-child-health-interventions
154. The cases of Brazil, China, India and Mexico.
155. UN IGME (2014) *Op. Cit.* For detailed discussion of the model please consult http://arxiv.org/pdf/1309.1602v1.pdf
156. Direct estimation method implies using retrospective birth or pregnancy histories to collect the data needed for computing child mortality rates. Birth or pregnancy histories include information for each birth or pregnancy that the interviewed woman has ever had. Usually as a minimum it includes: month and year of birth of each child; sex of each child; survival status of each child (ie, alive or dead); age of each surviving child; age at death of each deceased (or date of death). In the case of pregnancy histories, information on the outcome of each pregnancy (ie, live birth, still birth, miscarriage, or induced abortion) is collected (http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2011-2_MortEstMajorSampSurv.pdf).
157. Estimates published in DHS reports correspond to ten-year periods, but estimates for all periods are available in the DHS stat compiler. Our estimations match those at national levels for five years prior to the survey.
158. The only exceptions are countries for which we compiled official disaggregated data.
159. In most cases this implies exactly the same structure, and in some only one group has changed.
160. There were 15 such cases: Bangladesh, Benin, Burkina-Faso, Congo (Brazzaville), Côte d'Ivoire, Gabon, India, Kenya, Mali, Morocco, Niger, Pakistan, Peru, Senegal, Uganda
161. Not all countries have data for each of these periods. Furthermore, in several countries (Chad, Eritrea, Morocco, Togo, Vietnam) the most recent data was collected prior to 2005, therefore our projections do not take account of the progress they may have achieved since.
162. Osorio, R.G. (2008) 'Alternatives for projecting MDG indicators', Technical Paper Series, No. 2. Brasilia, International Poverty Centre (IPC). Available at: http://www.undp-povertycentre.org/pub/IPCTechnicalPaper2.pdf (Accessed 19th January 2015).
163. Out of 87 countries from the GRID database, the following have been excluded from the analysis either because the data was too old or because it was available only for one point in time: Belarus (2005), Brazil (1986,1996), Ecuador (1987), Jamaica (2005), Macedonia (2005), Maldives (2009), Paraguay(1990), Sri Lanka (1987), Sudan (1990), South Africa (1990), Swaziland (2006), Thailand (1987), Trinidad and Tobago (1987), Tunisia (1988), Uzbekistan (1996).

SPOTLIGHT CASE STUDY REFERENCES

Bangladesh

Balabanova, D., McKee, M. and Mills, A. (eds) (2011) *'Good Health at Low Cost' 25 years on: What makes a successful health system?* London: London School of Hygiene & Tropical Medicine.

Adams, A. et al. (2013) 'Explaining equity gains in child survival in Bangladesh, scale, speed and selectivity in health and development' *Lancet 2013; 382: 2027-37*.

UNICEF (2009) *Child poverty and disparities in Bangladesh*. Available at http://www.unicef.org/sitan/files/Bangladesh_Child_Poverty_Study_2009.pdf [Accessed 19th January 2015].

Chowdury, M. et al. (2013) 'The Bangladesh paradox, exceptional health achievements despite economic poverty' *Lancet 382 no. 9906: 1734-1745*

PMNCH et al. (2014) *Success Factors for Women's and Children's Health: Policy and programme highlights from 10 fast-track countries*. Geneva: WHO.

El Arifeen, S. et al (2013) 'Community Based Approaches and partnerships: Innovations in health service delivery in Bangladesh' *Lancet 382 no 9909:2012-2026*

Bhutta, Z.A, et al. 2010. Countdown to 2015 decade report (2000–10): taking stock of maternal, newborn, and child survival. *Lancet 2010; 375: 2032–44*

Neal, s. and Matthews, Z. (2013) 'Investigating the role of health care at birth on inequalities in neonatal survival: evidence from Bangladesh' *International Journal for Equity in Health* 2013, 12:17 (6 March 2013)

Quayyum, Z. et al. (2013) 'Can community level interventions have an impact on equity and utilization of maternal health care'' – Evidence from rural Bangladesh' *International Journal for Equity in Health* 2013, 12:22

Zere, E. et al. (2013) 'Equity in reproductive and maternal health services in Bangladesh' *International Journal for Equity in Health* 2013, 12:90

Ethiopia

UNICEF (2012) *Review of systematic challenges to the scape-up of Integrated Community case Management.* Maternal, newborn and child health working paper, UNICEF Health Section, Program Division. New York: UNICEF.

UNDP (2012) *Analyzing regional performance and disparities in health outcomes in Ethiopia*. Addis Ababa: UNDP Ethiopia.

UN Economic Commission for Africa (2008) *Mainstreaming health equity in the development agenda of African countries* Addis Ababa: UNECA

USAID (2012) *Health Extension Program: An innovative solution to public health challenges of Ethiopia – a case study*. Bethesda MD: Health Systems 20/20.

Tsegay, Y. et al. (2013) 'Determinants of antenatal and delivery care utilisation in Tigray region, Ethiopia: *a cross sectional study. International Journal for Equity in Health 12:30*

Wilunda et el. (2013) 'Measuring equity in utilisation of emergency obstretic care at Wolisso Hospital in Oromiya, Ethiopia: a cross sectional study' *International Journal for Equity in Health 12:27*.

Skaftun, E. et al. (2014) 'Understanding inequalities in child health in Ethiopia: Health achievements are improving in the period 2000-2011. *PLOS ONE Vol 9: Issue 8: e106460*

Kedir Bilal, N. et al. (2011) 'Health extension workers in Ethiopia: Improved access and coverage for the rural poor' in Chuhan-Pole, P. et al. (2011) *Yes Africa Can: Success stories from a dynamic continent.* Washington DC: The World Bank.

Malawi

UN Economic Commission for Africa (2008) *Mainstreaming health equity in the development agenda of African countries* Addis Ababa: UNECA

Jahn, A. et al. (2010) 'Declining child mortality in northern Malawi despite high rates of infection with HIV' *Bulletin of the World Health Organization* 2010;88:746-753. doi: 10.2471/BLT.09.075085

Austin, P. et al. (2014) 'Factors Associated with Infant Mortality in Malawi' *Journal of Experimental & Clinical Medicine Volume 6, Issue 4: 125–131*

Callaghan-Koru, J. et al. (2013) 'Contribution of community-based newborn health promotion to reducing inequities in healthy newborn care practices and knowledge: evidence of improvement from a three-district pilot program in Malawi' *BMC Public Health 2013, 13:1052*

Gwatkin, D. et al. (2007) ' Malawi's Health SWAp: Bringing essential services closer to the poor?' *Malawi Med J 2007, 18(1):1*.

Government of Malawi (2011) *Health Sector Strategic Plan 2011–2016: Moving towards equity and quality*. Available at http://www.medcol.mw/commhealth/publications/3%20Malawi%20HSSP%20Final%20Document%20%283%29.pdf [Accessed 19th January 2015].

Pearson, M. (2010) *Impact evaluation of the sector wide approach (SWAP), Malawi.* DFID, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67670/imp-eval-sect-wde-appr-mw.pdf [Accessed 19th January 2015]

UNICEF (2012) *Review of systematic challenges to the scape-up of Integrated Community case Management.* Maternal, newborn and child health working paper, UNICEF Health Section, Program Division. New York: UNICEF.

USAID (2012) *Country development cooperation strategy 2013-2018*. USAID Malawi

Malawi Ministry of Health and ICF International. (2014). *Malawi Service Provision Assessment Survey 2013-14: Key Findings*. Rockville: MMOH and ICF International.

Mexico

CIDE. (2013). Avances y temas pendientes de la política de salud en México. Una revisión de los principales indicadores.

Cuevas-Nasu L, R.-D. J.-L.-R.-G. (2014). Inseguridad alimentaria y estado de nutrición en menores de cinco años de edad en México. . Salud Publica Mex , 56 (supl 1), S47-S53.

De Castro F, A.-L. B.-C.-P. (2013). Indicadores de bienestar y desarrollo infantil en México. . Salud Publica Mex , 55 (suppl 2), S267-S275.

González-Block MA, S.-V. A.-T. (2010). Factores asociados a la demanda de servicios para la atención del parto en México. . Salud Publica Mex 2010;52:416-423. , 52, 416-423.

Hernandez-Prado, B. e. (2011). Perfil situacional y estrategias de intervención en la región mesoamericana en el área de salud materna, reproductiva y neonatal. Salud pública Méx [online] , 53 (suppl 3), s312-s322.

Jasso-Gutiérrez L, D.-A. L.-H.-G. (2012). Recommendations to improve healthcare of neonates with respiratory insufficiency beneficiaries of Seguro Popular. . Salud Publica Mex , 54 (suppl 1), S57-S64.

Jasso-Gutiérrez L, e. a. (2012). Nichos de oportunidad para la mejora en la atención médica de los niños afiliados al Seguro Médico para una Nueva Generación. Bol Med Hosp Infant Mex , 69 (6), 442-449.

Lazcano-Ponce E, S. R.-Z.-L.-G.-A. (2013). Cobertura de atención del parto en México. Su interpretación en el contexto de la mortalidad materna. . Salud Publica Mex , 55 (suppl 2), S214-S224.

Medina-Gómez O, L.-A. O. (2011). Asociación de los tipos de carencia y grado de desarrollo humano con la mortalidad infantil en México, 2008 . Cad. Saúde Pública , 27 (8), 1603-1610.

Morales-Ruán MC, S.-L. T.-R.-N.-M.-D. (2013). Programas de ayuda alimentaria en México, cobertura y focalización. 55 (suppl 2), S199-S205.

Perdigón VG, F. C. (2008). La mortalidad neonatal y postneonatal en México 1980 - 2005. Bol Med Hosp Infant Mex , 65, 412-414.

Pinzón Florez CE, R. L. (2014). Gasto en salud, la desigualdad en el ingreso y el índice de marginación en el sistema de salud de México . Rev Panam Salud Publica , 31 (1), 1-7.

Presidencia de la República. (2013). Los Objetivos de Desarrollo del Milenio en México Informe de Avances 2013. Presidencia de la República.

Rivera-Dommarco JA, C.-N. L.-L.-F. (2013). Desnutrición crónica en México en el último cuarto de siglo: análisis de cuatro encuestas nacionales. Salud Publica Mex , 55 (suppl 2), S161-S169.

Nepal

Alkema et al., (2014) 'National, regional, and global sex ratios of infant, child, and under-5 mortality and identification of countries with outlying ratios: a systematic assessment' *Lancet Glob Health 2014 [online];Vol.2: e521–30*

Bhandari T. and Dangal G., (2013) 'Safe delivery care: Policy, practice and gaps in Nepal' *J Nepal Med Assoc 2013;52(192):637-44*

GIZ and MoHP (2011) *Assessment of the Government Health Financing System in Nepal: Suggestions for Reform*. Available at http://p4h-network.net/wp-content/uploads/2013/10/GovernmentHealthFinancingSystem.pdf [Accessed 12th November 2014]

Witter, S. (2011) 'The national free delivery policy in Nepal: early evidence of its effects on health facilities' *Health Policy and Planning 2011;26:ii84–ii91, doi:10.1093/heapol/czr066*

ODI (2013) *Nepal's Story: Understanding improvements in maternal health*. Case study report. London: ODI

Rottach E. (2013) *Promoting Gender Equality and Social Inclusion in Local Health Governance in Nepal*. Washington: Health Policy Project

Nepal Family *Health Program II (2012) Health Facility Management Strengthening Program*. Technical Brief # 17. USAID, Available at http://nfhp.jsi.com/Res/Docs/TB17-HFMSP.pdf [last Accessed 12th November 2014]

Ban B. et al. (2012) 'Review of Health and Health Service Improvements in Nepal' *J Nepal Health Res Counc 2012 May;10(21):76-81*

Khanal (2012) 'Exploration and Innovation in Addressing Maternal, Infant and Neonatal Mortality' *J Nepal Health Res Counc 2012 May;10(21):88-94*

GIZ and MoHP (2011) *Assessment of the Government Health Financing System in Nepal: Suggestions for Reform*

Schmidt A. (2009) *Health aid effectiveness in Nepal. Paris, Accra, civil society and the poor*. Action for Global Health, Available at http://www.actionforglobalhealth.eu/fileadmin/user_upload/doc_library/Aid_effectiveness_in_Nepal_Final_01.pdf [Accessed 12th November 2014]

DFID (2011) *DFIDN Nepal Operational Plan: Gender Equality and Social Inclusion Annex*. Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67545/nepal-2011-annex.pdf [Accessed 12th November 2014]

Khanal D. R. (2014) *Social Security/Social Protection in Nepal. Situation Analysis, ILO Country office for Nepal, Series 10* Available at http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-kathmandu/documents/publication/wcms_216490.pdf [Accessed 12th November 2014]

Mathema K. B. (2006) *Crisis in Education and Future Challenges for Nepal*, Available at http://himalaya.socanth.cam.ac.uk/collections/journals/ebhr/pdf/EBHR_31_04.pdf [Accessed 12th November 2014]

Rwanda

Antunes AF, Saksena P, Elovainio R, Mathauer I, Kirigia J, et al. (2009) *Health Financing Systems Review of Rwanda: Options for universal coverage*. Geneva: World Health Organization and Republic of Rwanda Ministry of Health.

Binagwaho A. and Farmer P. (2013) *Linking an Equity Plan to a Delivery System in Rwanda*. Article published on 30 Apr 2013. Available at http://www.socialprogressimperative.org/blog/posts/linking-an-equity-plan-to-a-delivery-system-in-rwanda [Accessed 11th November 2014]

Farmer P.E. (2013) 'Reduced premature mortality in Rwanda: lessons from success' *BMJ 2013;346:f65 doi: 10.1136/bmj.f65*

Lu C., Chin B., Lewandowski JL.,. Basinga P., Hirschhorn L.R. et al. (2012) 'Towards Universal Health Coverage: An Evaluation of Rwanda Mutuelles in Its First Eight Years'. *PLoS ONE 7(6): e39282. doi:10.1371/journal.pone.0039282*

Hamblin J. (2014) 'Twenty years after genocide, Rwanda is a model of health equity' *The Atlantic [online]*. Available at http://qz.com/196118/twenty-year-after-genocide-rwanda-is-a-model-of-health-equity/ [Accessed 11th November 2014]

Basinga P et al. (2011) 'Effect on maternal and child health services in Rwanda of payment to primary health-careproviders for performance: an impact evaluation'. *Lancet. 2011 Apr; 377 (9775): 1421-8*.

Skiles M.P. et al. (2012) 'An equity analysis of performance-based financing in Rwanda: are services reaching the poorest women?' *Health Policy and Planning 2012; 1–13. doi:10.1093/heapol/czs122*

Makaka A., Breen S., Binagwaho A. (2012) 'Universal health coverage in Rwanda: a report of innovations to increase enrolment in community-based health insurance' *The Lancet, 21 October 2012 Vol. 380, Page S7 DOI: 10.1016/S0140-6736(13)60293-7*

Ministry of Health Rwanda, PMNCH, WHO, World Bank, AHPSR and participants in the Rwanda multi-stakeholder policy review (2014). *Success Factors for Women's and Children's Health: Rwanda.*

Logie D. E. (2008) 'Innovations in Rwanda's health system: looking to the future' *Lancet 2008 [online]; 372: 256–61, DOI:10.1016/S0140-6736(08)60962-9*

Ministry of Local Government (MINALOC) (2011) *National Social Protection Strategy* Available at http://www.ilo.org/gimi/gess/RessourcePDF.action?ressource.ressourceId=23208 [Accessed 7th November 2014]

UNICEF (2013) *Improving Child Nutrition. The achievable imperative for global progress*. New York: UNICEF.

THE LOTTERY OF BIRTH

Giving all children an equal chance to survive

***The Lottery of Birth* shines a spotlight on the children left behind by global and national progress in child mortality reduction. The report is based on inaugural analysis of disaggregated data from 87 low- and middle-income countries around the world.**

Examining inequality in children's chances of survival – between subnational regions, urban and rural areas, ethnic groups, and economic groups – this report explores a series of fundamental questions:

- What is the magnitude of the problem? How many countries are leaving children behind?
- Is inequitable progress in reducing child mortality inevitable?
- Does focusing on disadvantaged groups mean overall progress will necessarily be slower?
- What can be done to allow countries to shift onto more equitable pathways, ensuring that disadvantaged groups catch up with those with lower child mortality rates?

The new evidence presented in this report reveals that equitable progress is not only possible, but faster. It contradicts the widespread belief that reaching the poorest and most disadvantaged groups is harder and therefore likely to slow progress.

The report makes a powerful case for putting action to tackle inequalities in child survival at the heart of the global fight against poverty – including in the post-2015 framework and in national development strategies.

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