



COMMITTING TO CHILD SURVIVAL
A PROMISE RENEWED

Committing to Child Survival: A Promise Renewed

Progress Report 2013



unicef

A PROMISE RENEWED: A GLOBAL MOVEMENT TO END PREVENTABLE CHILD DEATHS

Committing to Child Survival: A Promise Renewed is a global movement to end preventable child deaths. Under the leadership of participating governments and in support of the United Nations Secretary-General's *Every Woman Every Child* strategy, *A Promise Renewed* brings together public, private and civil society actors committed to advocacy and action for maternal, newborn and child survival.

A Promise Renewed emerged from the *Child Survival Call to Action*, convened in June 2012 by the Governments of Ethiopia, India and the United States, in collaboration with UNICEF. The more than 700 government, civil society and private sector participants who gathered for the *Call to Action* reaffirmed their shared commitment to scale up progress on child survival, building on the success of the many partnerships, initiatives and interventions that currently exist within and beyond the field of health.

A PROMISE RENEWED

is based on the ethos that child survival is a shared responsibility and everyone — governments, civil society, the private sector and individuals — has a vital contribution to make. Since June 2012, more than 176 governments and many civil society organizations, private sector organizations and individuals have signed a pledge to redouble their efforts, and they are turning these commitments into action and advocacy.

More details on *A Promise Renewed* are available at <www.apromiserenewed.org>.

ANNUAL REPORTS

In support of *A Promise Renewed*, UNICEF is publishing annual reports on child survival to track progress and promote accountability for global commitments made to children. This year's report, released in conjunction with the child mortality estimates of the United Nations Inter-Agency Group on Mortality Estimation, presents:

- Trends and levels in under-five mortality over the past two decades.
- Analysis of progress towards Millennium Development Goal 4.
- Causes of and interventions against child mortality.
- Highlights of national and global initiatives by governments, civil society and the private sector to accelerate progress on child survival.
- Statistical tables of child mortality and causes of under-five deaths by country and UNICEF regional classification.

Committing to Child Survival: A Promise Renewed

Progress Report 2013

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This report, additional online content and corrigenda are available at <www.apromiserenewed.org>

For latest data, please visit <www.childinfo.org>

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Foreword

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What's at stake in a promise? If you've ever made a promise to a child, you know that she is not likely to forget it. Whether it's a new toy or a bedtime story, she will hold you accountable for following through — as you should hold yourself.

In 2000, the global community made a promise to children to reduce the under-five mortality rate by two-thirds between 1990 and 2015. With less than two years left until the deadline, our promise and our credibility are in jeopardy. *If current trends continue, the world will not meet Millennium Development Goal 4 until 2028.* Hanging in the balance are the lives of the estimated 35 million children who could die between 2015 and 2028 if we do not accelerate our progress. These staggering figures are all the more tragic because the majority of child deaths are preventable.

The prospect of failing to meet Millennium Development Goal 4 is cause for outrage. But moral indignation is only meaningful if accompanied by unrelenting action. This is why in June 2012, the Governments of Ethiopia, India and the United States rallied a broad coalition to renew the world's promise to give every child the best possible start in life.

What has been achieved in one year?

Under the banner of *Committing to Child Survival: A Promise Renewed*, 176 governments signed a pledge, vowing to accelerate progress on child survival. Each pledge represents a serious political commitment to save children from dying of preventable causes.

With each passing month, more governments are taking steps to translate the pledge into action. Under the stewardship of the Government of Ethiopia, more than 20 sub-Saharan African leaders took the unprecedented step of coming together to reaffirm their collective commitment to reduce under-five mortality rates to less than 20 deaths per 1,000 live births by 2035. Individual governments are also taking action. From Bangladesh to Zambia, India to Liberia, Ethiopia to the Democratic Republic of Congo, governments are setting bold, new targets for maternal, newborn and child survival. Targets such as that announced by the Government of Zambia, which aims to avert an additional 104,000 under-five deaths over the next four years.

Yes, these goals are ambitious. But they are attainable. As this report shows, dramatic reductions in maternal, newborn and child mortality can be achieved, even in the poorest contexts. Progress is most possible through the coordinated efforts of the public, private and civil society sectors, working together to improve outcomes in nutrition, water and sanitation, health, education and other sectors that impact outcomes for women and children.

Child survival is a shared responsibility. Every segment of society has a role to play. Through investments in domestic production, as well as research and development, the private sector wields enormous influence over the availability, affordability and quality of life-saving commodities and medicines.

Equally important are the civil society groups that advance the child survival agenda through action and advocacy. Whether delivering life-saving vaccines to the women and children in greatest need, or advocating on their behalf, civil society networks are powerful agents of change. They, like few others, can mobilize their communities to denounce the inevitability of preventable deaths. Each voice that speaks out against the death of a child is a reminder of unfulfilled promises and a call for urgent action.

There is no time to spare. We must accelerate progress towards Millennium Development Goal 4. The lives of nearly 35 million children are at stake. The global community cannot abandon its commitment to prevent these deaths. Our shared promise to give every child the best possible start in life must remain the rallying cry of every society, every government, every community, and every family...for every child.

Please, join us.

A handwritten signature in dark ink, reading "Anthony Lake".

Anthony Lake,
Executive Director, UNICEF

A Promise Renewed: Main Messages of the 2013 Progress Report

Despite rapid progress in reducing child deaths since 1990, the world is still failing to renew the promise of survival for its most vulnerable citizens.

- Global progress in reducing child deaths since 1990 has been very significant. The global rate of under-five mortality has roughly halved, from 90 deaths per 1,000 live births in 1990 to 48 per 1,000 in 2012. The estimated annual number of under-five deaths has fallen from 12.6 million to 6.6 million over the same period.
- Put another way, 17,000 fewer children die each day in 2012 than did in 1990 — thanks to more effective and affordable treatments, innovative ways of delivering critical interventions to the poor and excluded, and sustained political commitment. These and other vital child survival interventions have helped to save an estimated 90 million lives in the past 22 years.
- Encouragingly, the world is currently reducing under-five deaths faster than at any other time during the past two decades. The global annual rate of reduction has steadily accelerated since 1990-1995, when it stood at 1.2%, more than tripling to 3.9% in 2005-2012. Both sub-Saharan African regions* — particularly Eastern and Southern Africa but also West and Central Africa — have seen a consistent acceleration in reducing under-five deaths, particularly since 2000. And all regions with the exception of West and Central Africa and sub-Saharan Africa as a whole have at least halved their rates of under-five mortality since 1990.
- Despite these gains, child survival remains an urgent concern. In 2012, around 6.6 million children died before their fifth birthday, at a rate of around 18,000 per day. And the risk of dying before age 5 varies enormously depending on where a child is born. In Luxembourg, the under-five mortality rate is just 2 deaths per 1,000 live births; in Sierra Leone, it is 182 per 1,000.
- Since 1990, 216 million children have died before their fifth birthday — more than the current total population of Brazil, the world's fifth most populous country.

Without faster progress on reducing preventable diseases, the world will not meet its child survival goal (MDG 4) until 2028 — 13 years after the deadline — and 35 million children will die between 2015 and 2028 who would otherwise have lived had we met the goal on time.

- To reach Millennium Development Goal 4 — which seeks to reduce the global under-five mortality rate by two-thirds between 1990 and 2015 — the pace of reduction would need to quadruple in 2013-2015. And even if the world were to achieve MDG 4 on time, 15 million children under 5 would still die between 2013 and 2015, mostly from preventable causes. To achieve MDG 4 by 2015, an additional 3.5 million children's lives must be saved between 2013 and 2015 above the current trend rate.
- At the current rate of reduction in under-five mortality, the world will only make MDG 4 by 2028 — 13 years after the deadline — and 35 million more children will die between 2015 and 2028 whose lives could be saved if we were able to make the goal on time in 2015 and continue that trend. Only two regions — East Asia and Pacific, and Latin America and Caribbean — are currently on track to meet the 2015 deadline for MDG 4.

*All regional aggregates refer to UNICEF's regional classification. Sub-Saharan Africa includes West and Central Africa, Eastern and Southern Africa, Djibouti and Sudan. For further details on this classification please refer to *The State of the World's Children 2012*, pp.124-125, <<http://www.unicef.org/sowc2012/>>.

A Promise Renewed: Main Messages of the 2013 Progress Report

Of the 6.6 million under-five deaths in 2012, most were from preventable causes such as pneumonia, diarrhoea or malaria; around 44% of deaths in children under 5 occurred during the neonatal period.

- Even though there have been strong advances in fighting childhood diseases, pneumonia and diarrhoea remain leading causes of deaths among children under 5, killing almost 5,000 children under 5 every day. These are diseases of the poor and their distribution is highly concentrated, with three-quarters of global pneumonia and diarrhoea deaths occurring in just 15 countries.
- Malaria remains an important cause of child death, killing 1,200 children under 5 every day. It remains strongly concentrated in sub-Saharan Africa, where it accounts for 14% of child deaths, despite major gains in life-saving interventions in recent years.
- Despite declining rates globally, neonatal deaths are growing as a share of global under-five deaths amid faster progress in reducing mortality in the post-neonatal period. Most neonatal deaths are preventable.

Accelerating progress in child survival urgently requires greater attention to ending preventable child deaths in sub-Saharan Africa and South Asia, which together account for 4 out of 5 under-five deaths globally.

- South Asia has made strong progress on reducing preventable child deaths, more than halving its number of deaths among children under 5 since 1990. But nearly one in every three under-five deaths still takes place in this region, and it has not seen a major acceleration in the rate of reduction.
- Sub-Saharan Africa faces a unique and urgent challenge in accelerating progress. By mid-century it will be the region with the single biggest population of children under 5, accounting for 37% of the global total and close to 40% of all live births. And it is the region with least progress on under-five mortality to date.

West and Central Africa in particular requires a special focus for child survival, as it is lagging behind all other regions, including Eastern and Southern Africa, and has seen virtually no reduction in its annual number of child deaths since 1990.

- Within sub-Saharan Africa, there is beginning to be a divergence in child survival trends between Eastern and Southern Africa, and West and Central Africa. This has important implications for strategies, priorities, resources and leadership in the global drive to end preventable child deaths.
- Eastern and Southern Africa has managed to reduce its under-five mortality rate by 53% since 1990 — and in the past seven years has been among the best performing regions in the world, reducing under-five mortality at an annual rate of 5.3% in 2005-2012. But it still has high rates of mortality, with one in every 13 children dying before the age of 5.
- In contrast, West and Central Africa has seen a drop of just 39% in its under-five mortality rate since 1990, the lowest among all regions. Moreover, its annual rate of reduction, while accelerating, is still the slowest in the world. The region also has the highest rate of mortality, with almost one in every eight children dying before the age of 5.
- West and Central Africa is also the only region not to have at least halved its rate of under-five mortality since 1990, and the only region to have seen *virtually no reduction in the absolute number of children*

dying over the past 22 years. Its burden of child deaths now stands at about 2 million annually, almost identical to the level in 1990.

The good news is that much faster progress is possible. Country experience shows that sharp reductions in preventable child deaths are possible at all levels of national income and in all regions.

- Some of the world's poorest countries in terms of national income have made the strongest gains in child survival. Seven high-mortality countries (Bangladesh, Ethiopia, Liberia, Malawi, Nepal, Timor-Leste and United Republic of Tanzania) have already reduced their under-five mortality rates by two-thirds or more since 1990; six of these countries are low-income, proving that low national income is not a barrier to making faster and deeper gains in child survival. A further 18 high-mortality countries have also managed to at least halve their under-five mortality rates over the same period.
- Many middle-income countries have also made tremendous progress in reducing under-five deaths, and most high-income countries have also seen sharp declines since 1990 — proving that even in high-income countries, rapid declines in child mortality are possible.
- New analysis suggests that disparities in under-five mortality between the richest and the poorest households have declined in most regions of the world. And under-five mortality rates have fallen among the poorest households in all regions.
- These examples show that it is possible to sharply reduce preventable child deaths, even from initially high rates and among the poorest households, when concerted action, sound strategies, adequate resources, and political will are consistently applied in support of child and maternal health.

***A Promise Renewed* is a movement based on shared responsibility for child survival, and is mobilizing and bringing together governments, civil society, the private sector and individuals in the cause of ending preventable child deaths within a generation.**

- *A Promise Renewed* is a global movement that seeks to advance *Every Woman Every Child* — a strategy launched by Secretary-General Ban Ki-moon to improve the health of women and children — through action and advocacy to accelerate reductions in preventable maternal, newborn and child deaths.
- Since its launch just over a year ago, *A Promise Renewed* has driven several important developments. A current total of 176 governments have signed the APR pledge and thousands of civil society groups and private individuals have mobilized actions and resources in support of the goal.
- A diverse array of governments, from Bangladesh to Zambia, India to Liberia, Ethiopia to the Democratic Republic of the Congo, are setting bold new targets for maternal, newborn and child survival. Every month, more governments are following suit.
- Around the world, civil society is increasingly holding governments accountable for their promises, facilitated by new communication technologies and tools such as Uganda's SMS-based U-report.
- *A Promise Renewed* recognizes that leadership, commitment and accountability are vital if we are to end preventable child deaths. And since child survival is increasingly recognized as a shared responsibility, everyone has a role to play.



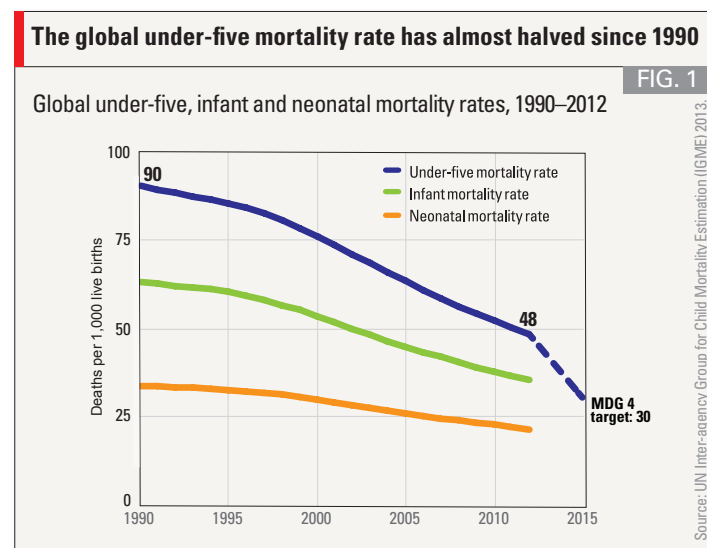
Chapter 1: Child survival

Chapter 1: Child Survival

The progress

Two years from now, the 2015 deadline to meet the Millennium Development Goals (MDGs) will have arrived, and the world will reflect on how it has kept its promises, particularly to its children. This report looks at the progress made so far in fulfilling the promise of survival to all the world's children — which is at the very heart of the global movement, *A Promise Renewed*.

The millennium story of child survival is strongly positive. Since 1990 — the base year for the MDGs — the global under-five mortality rate has dropped by 47%, from 90 deaths per 1,000 live births in 1990 to 48 per 1,000 in 2012 (*Figure 1*). Over the same period, the annual number of under-five deaths has fallen from 12.6 million to an estimated 6.6 million (*Figure 2*). Put another way, 17,000 fewer children died each day in 2012 than in 1990 — thanks to more effective and affordable treatments, innovative ways of delivering critical interventions to the poor and excluded, improvements in nutrition and maternal education, and sustained political commitment.

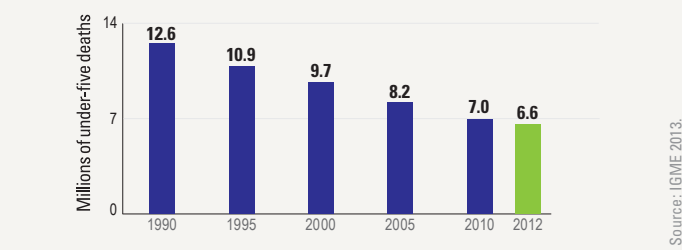


But even these headline figures do not tell the full story of advances in child survival globally. The past two decades have witnessed an acceleration of progress in lowering mortality among children under 5 globally, with the global annual rate of reduction (ARR, the percentage by which deaths decline per year) steadily increasing: From 1.2% in 1990–1995, the global ARR rose to 2.3% in 1995–2000, then to 3.7% in 2000–2005 and to 3.9% in 2005–2012. By 2012, 37 countries had already reduced their under-five mortality rate by two-thirds or more — the reduction required by the

The global burden of under-five deaths has fallen steadily since 1990

Global under-five deaths, 1990–2012

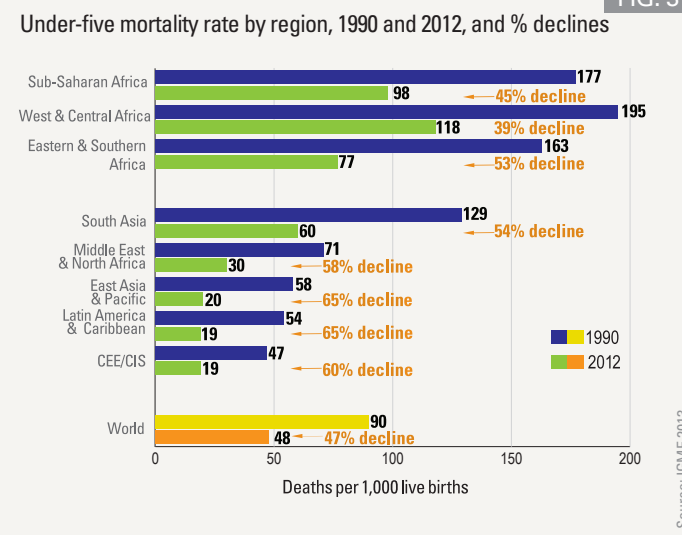
FIG. 2



MDG 4 target — between 1990 and 2015. Another 26 countries are expected to join them by the target year if current trends continue.

Most regions have reduced their under-five mortality rates by more than 50% since 1990

FIG. 3



REGIONAL PROGRESS

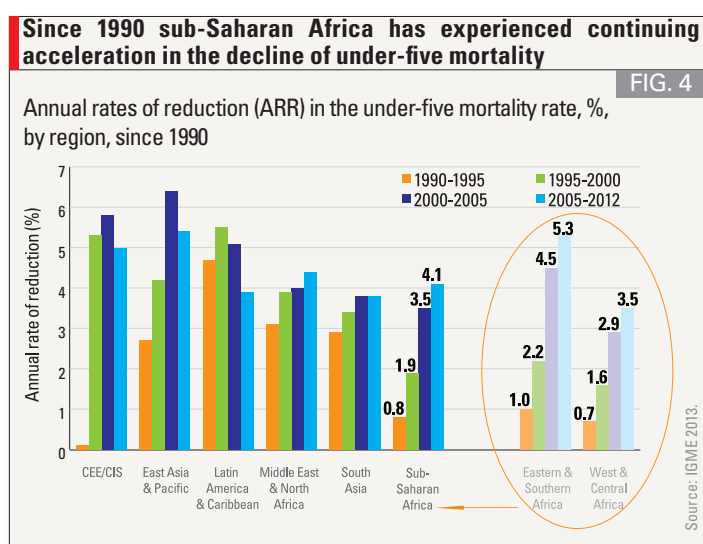
Regional trends are also encouraging (*Figure 3*).^{*} Three regions — East Asia and Pacific, Latin America and Caribbean, and Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS) — have reduced their under-five mortality rates by 60% or more. And all regions except sub-Saharan Africa have experienced continuously decreasing numbers of under-five deaths. South Asia, in particular, has more than halved the number of deaths among children under 5 since 1990. Sub-Saharan Africa continues to lag behind other regions, both in terms of its overall reduction in the under-five mortality rate since 1990 (45%) and its pace of decline in the total number of under-five deaths.

^{*}All regional aggregates refer to UNICEF's regional classification. Sub-Saharan Africa includes West and Central Africa, Eastern and Southern Africa, Djibouti and Sudan. For further details on this classification please refer to *The State of the World's Children 2012*, pp.124–125, <http://www.unicef.org/sowc2012/>

Chapter 1: Child Survival

But there is some noteworthy good news for sub-Saharan Africa as well. Its performance in recent years has been highly encouraging: Sub-Saharan Africa and Middle East and North Africa are the only regions that have experienced a consistent acceleration in the pace of reducing under-five mortality rates since 1990 (*Figure 4*). And since 2005, sub-Saharan Africa has been reducing its under-five mortality rate more than five times faster than during 1990–1995.

Both Eastern and Southern Africa, and West and Central Africa (which, together with Djibouti and Sudan, make up sub-Saharan Africa) have witnessed accelerating progress, although advances in Eastern and Southern Africa have been greater. Since 2005, only the East Asia and Pacific region has managed to reduce its under-five mortality rate faster than Eastern and Southern Africa.

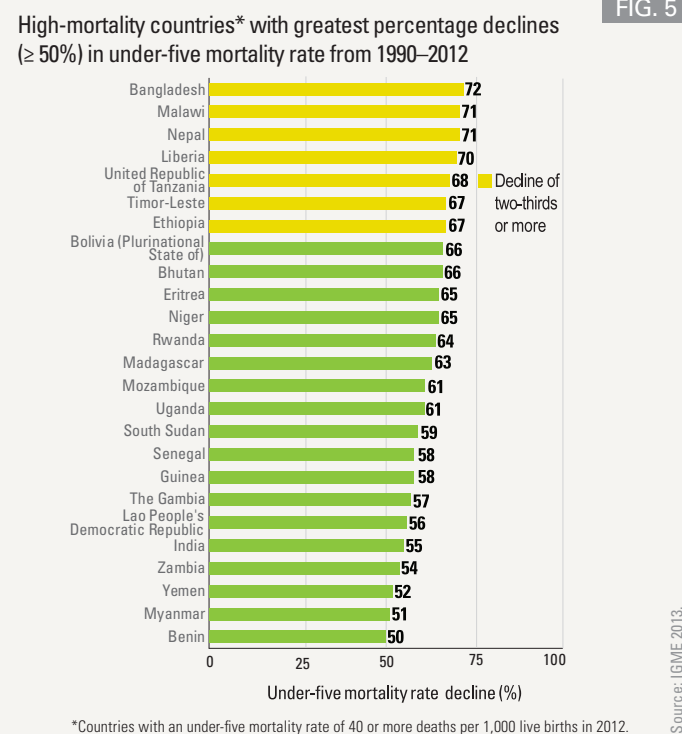


NATIONAL PROGRESS

At the country level, too, there are encouraging narratives of success and hope. Of the 61 high-mortality countries with at least 40 deaths per 1,000 live births in 2012, 25 managed to at least halve their under-five mortality rates between 1990 and 2012 — with seven (Bangladesh, Ethiopia, Liberia, Malawi, Nepal, United Republic of Tanzania and Timor-Leste) having already reduced the under-five mortality rate by two-thirds or more (*Figure 5*).

Examples of striking progress in reducing child mortality over a short period of time (25 years) are also found among countries that commenced major efforts to improve child survival before 1990, including Chile, which reduced

Many countries have made, and are still making, tremendous strides in lowering child mortality



its under-five mortality rate by 84%, from 117 deaths per 1,000 live births in 1965 to 19 in 1990; Oman, which lowered under-five mortality by almost 90%, from 167 in 1975 to 17 in 2000; and Algeria, which reduced under-five mortality by 84%, from 215 in 1975 to 35 in 2000.

In absolute terms, 15 low-income countries have achieved reductions in under-five mortality of more than 100 deaths per 1,000 live births since 1990; these countries include Bangladesh, Ethiopia, Guinea, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, South Sudan, Timor-Leste, Uganda, United Republic of Tanzania and Zambia. In addition, many middle-income countries have witnessed tremendous progress in lowering under-five mortality, and most high-income countries have also seen sharp declines — proving that even in high-income countries, rapid declines in child mortality are possible.

All of these examples demonstrate that it is possible to sharply lower child mortality, even from high initial rates, when concerted action, sound strategies, adequate resources and strong political will are consistently applied in support of child and maternal survival.

The challenge

At the same time, the unfinished business of child survival looms large. In 2012, an estimated 6.6 million children died before their fifth birthday, at a rate of around 18,000 per day. Wide disparities in child survival exist between countries: Under-five mortality rates currently range from 2 deaths per 1,000 live births in Luxembourg to 182 in Sierra Leone.

REGIONAL DISPARITIES

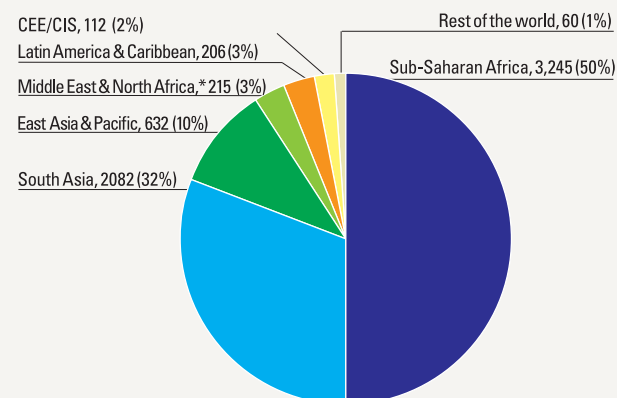
Significant disparities in child mortality also persist across regions. In sub-Saharan Africa, one in every 10 children born still dies before their fifth birthday, nearly 16 times the average rate in high-income countries. In 2012, there were 16 countries with an under-five mortality rate of at least 100 deaths per 1,000 live births; all are in sub-Saharan Africa. More rapid progress elsewhere and high fertility rates in the region have seen the global burden of under-five deaths shift towards sub-Saharan Africa; in 1990, this region accounted for 30% of all under-five deaths; by 2012, this figure had reached 50% (Figure 6).

South Asia has made faster progress in reducing child deaths and consequently has seen its share of global deaths fall from 37% in 1990 to 32% in 2012. This region has also seen its number of deaths more than halve, from 4.7 million to 2.1 million, over the same period — by far the largest absolute reduction among all regions.

Faster progress in other regions has seen the burden of global under-five deaths shift increasingly to sub-Saharan Africa

FIG. 6

Number and % of under-five deaths by region, 2012
(thousands and % of global total)



*In this chart, data for Djibouti and Sudan are not included in the Middle East and North Africa regional total, as they are already included in sub-Saharan Africa. Estimates are rounded, and therefore may not sum to 100%.

Source: IGME 2013.

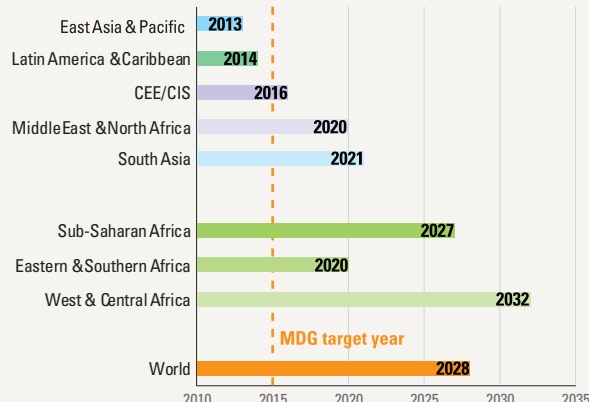
THE MILLENNIUM CHALLENGE FOR CHILD SURVIVAL

While the global rate of reduction of under-five mortality has more than tripled in 2005–2012 as compared to 1990–1995, it is still well below the required pace to meet the MDG 4 target, and would need to further quadruple between 2012 and 2015 to realize that target. Only two regions — East Asia and Pacific, and Latin America and the Caribbean — are currently on track to meet the 2015 deadline for MDG 4, with CEE/CIS set to reach the threshold a year later (Figure 7). Several regions are on track to meet the MDG 4 criteria by the 2020s, with both Eastern and Southern Africa and the Middle East and North Africa set to reach the goal by 2020, and South Asia by 2021.

Unless progress on saving lives accelerates across several regions, global achievement of MDG 4 will only occur in 2028

FIG. 7

Achievement of MDG 4 by year, globally and by region, if current trends continue in all countries



Source: UNICEF analysis based on IGME 2013.

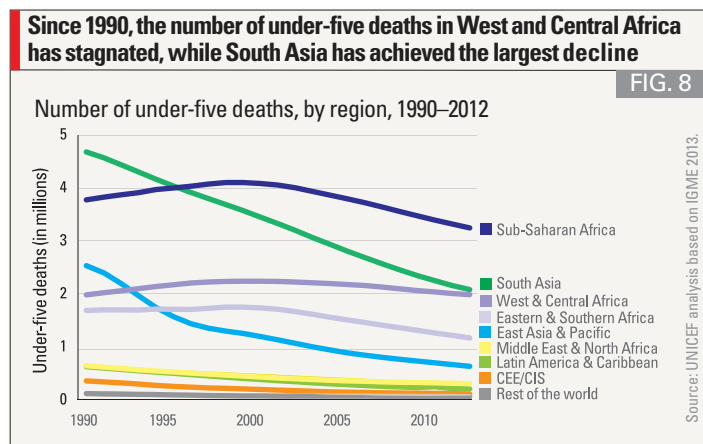
If current trends in all countries continue, the world as a whole will only reach the target by 2028, 13 years behind schedule, and it will take West and Central Africa four more years to attain the mark. On the same assumption, Eastern and Southern Africa will meet the target one year earlier (2020) than South Asia (2021). At the country level, if current trends persist 22 countries will not meet the MDG 4 target until 2036–2050 — and it is projected that 28 countries will still not have met the target by mid-century.

To meet the MDG 4 target by its agreed date of 2015, an additional 3.5 million children's lives above the current trend rate will need to be saved between 2013 and 2015 — more than two-thirds in sub-Saharan Africa and about one-quarter in South Asia.

Particular attention is required for South Asia and sub-Saharan Africa. By 2012, 81% of all under-five deaths were occurring in

Chapter 1: Child Survival

these two regions; without faster progress in both regions, they will almost certainly see a further concentration of global under-five deaths over the course of the next decade.



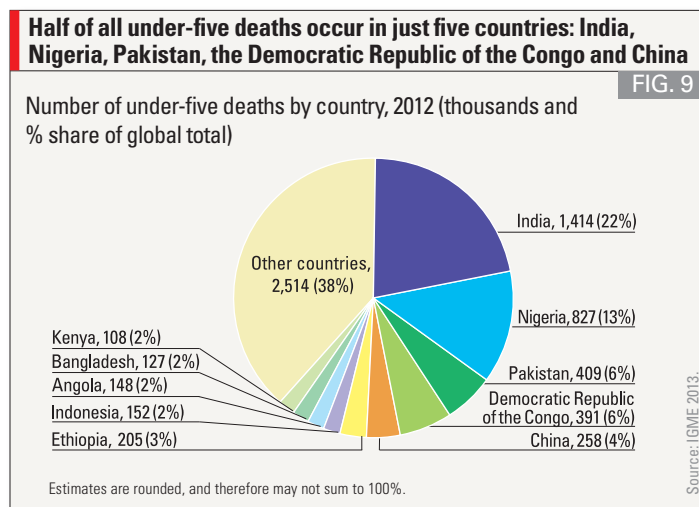
South Asia has made strong progress on reducing preventable child deaths, more than halving its number of deaths among children under 5 since 1990 (*Figure 8*). But nearly one in every three under-five deaths still takes place in this region, and it has not seen a major acceleration in the rate of reduction.

Sub-Saharan Africa faces a unique and urgent challenge in accelerating progress. It is the only region in which the under-five population has increased since 1990. And it is the region with least progress on under-five mortality to date. Within sub-Saharan Africa, there is beginning to be a divergence in child survival trends between Eastern and Southern Africa, and West and Central Africa. This has important implications for strategies, priorities, resources and leadership in the global drive to end preventable child deaths.

Eastern and Southern Africa has managed to reduce its under-five mortality rate by 53% since 1990 — and in the past seven years has been among the best performing regions in the world, reducing under-five mortality at an annual rate of 5.3% in 2005–2012. But it still has high rates of mortality, with one in every 13 children dying before the age of 5.

In contrast, West and Central Africa has seen a drop of just 39% in its under-five mortality rate since 1990, the lowest among all regions. Moreover, its annual rate of reduction, while accelerating, is still the slowest in the world. The region also has the highest rate of mortality, with almost one in every eight children dying before the age of 5. West and Central Africa has seen virtually no reduction in its annual number of child deaths since 1990 (*Figure 8*).

At the country level, under-five deaths are concentrated in a small number of countries. Four-fifths of all child deaths occur in just 26 countries, and half of all under-five deaths occur in just five countries (*Figure 9*): India (22%), Nigeria (13%), Pakistan, the Democratic Republic of the Congo (each 6%) and China (4%). With the exception of China, which has reduced under-five mortality rate by 74% since 1990, meeting the MDG 4 criteria will mean markedly stepping up advances in these countries. In particular, Nigeria and the Democratic Republic of the Congo still rank among the top 10 countries with the highest mortality rates, exceeding 100 deaths per 1,000 live births in 2012.



In the coming years, the total number of under-five deaths may very well begin to stagnate, or may even increase, if greater progress is not made in reducing child mortality in sub-Saharan Africa — given that this region's under-five population is set to grow rapidly (*Figure 10*), particularly in many countries in the region which currently have high rates of under-five mortality. By mid-century, it is estimated that 37% of the world's children under 5 will live in sub-Saharan Africa; and close to 40% of all live births will take place in that region. This is a huge increase on previous estimates, and also on historical proportions; to give some perspective, in 1950 the region accounted for just 9% of the global under-five population.

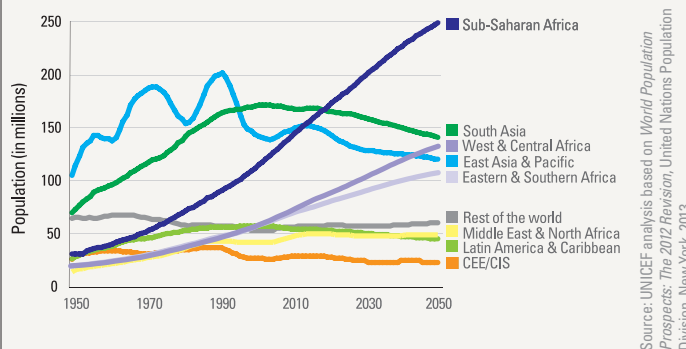
ECONOMIC STATUS AND CHILD SURVIVAL

Recent analysis by UNICEF confirms a well-known truth of human development: income — national, subnational and household level — is in general correlated with child survival. The richest countries overwhelmingly tend to have lower rates of child, infant and neonatal mortality than their less affluent peers.

Fast progress in reducing the number of under-five deaths in sub-Saharan Africa is imperative as its child population soars

FIG. 10

Number of children under age 5, by region, 1950-2050



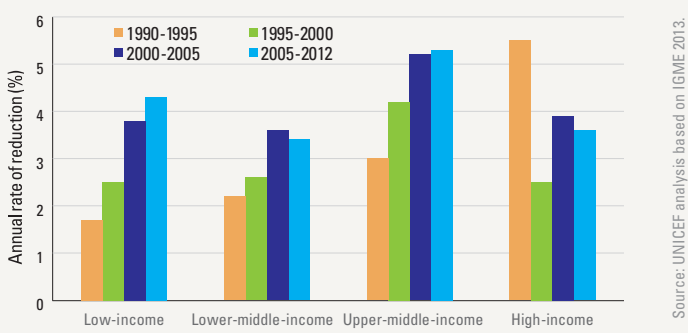
As countries develop and prosper the risk of dying in the earliest years of life decreases. High-income countries have the lowest rates of under-five mortality on average, at 6 per 1,000 live births in 2012 (Figure 11). Luxembourg, Iceland, Norway, Finland, Singapore, Sweden and Japan, all of which are high-income countries, have the lowest rates of under-five mortality. Upper-middle-income countries have enjoyed the most success in reducing under-five mortality rates between 1990 and 2012, registering a 63% decrease over the period.

Analysis also shows that countries at all income levels are steadily getting better at saving children's lives. The annual rate of reduction in the under-five mortality rate has accelerated since 1995 at all country income levels except high-income countries (Figure 12). Gains in low- and middle-income countries in particular have been substantial. And although there is a link between a country's level of income and its child mortality, the strong reductions in the under-five mortality rate in a few low-income countries — notably, Bangladesh,

Low- and middle-income countries have accelerated declines in under-five deaths since 1990

FIG. 12

Annual rate of reduction (ARR) in under-five mortality rate by country income levels, over four periods since 1990

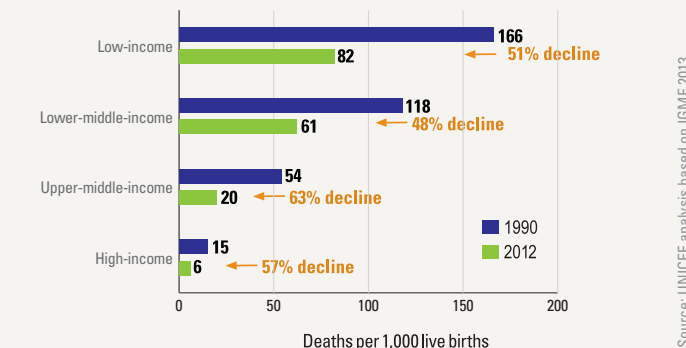


Cambodia, Eritrea, Ethiopia, Guinea, Liberia, Madagascar, Malawi, Mozambique, Nepal, Niger, Rwanda, Uganda and United Republic of Tanzania (Figure 13) — since 1990 and particularly since 2000 prove that low income need not be an impediment to saving children's lives. Even high- or middle-income countries with low mortality rates can often make substantial further progress. Among 53 countries that had an under-five mortality rate of 20 or fewer deaths per 1,000 live births in 1990, 36 have since at least halved their under-five mortality rate, and 11 of these have reduced it by at least two-thirds.¹ These and other country examples demonstrate that, at all levels of national income, it is possible to make rapid advances in reducing under-five mortality by combining political commitment, sound strategies and adequate resources.

Upper-middle-income countries have registered the greatest percentage decline in the under-five mortality rate since 1990

FIG. 11

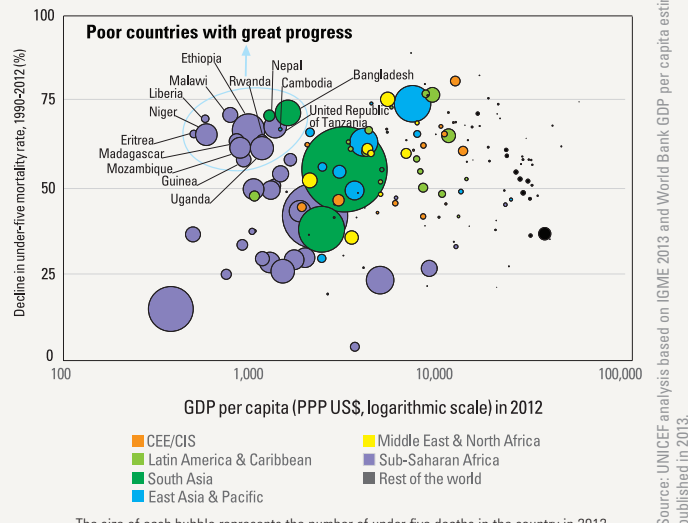
Under-five mortality rate by country income levels, 1990 and 2012, and % declines



Some poor countries have made great progress in reducing under-five mortality

FIG. 13

Decline in under-five mortality rate 1990-2012 and GDP per capita in 2012, by country



Chapter 1: Child Survival

Lives Saved, Lives Lost: The Potential Gains in meeting MDG 4 and beyond

Percentages are extremely useful measures of progress, and in percentage terms there have been major gains in child survival. The world has managed to reduce its rate of under-five mortality by 47% from 1990 to 2012. This percentage, however, does not fully reflect the cumulative absolute impact of child deaths, which has been enormous in the past 20 years — nor does it reveal the significance of the estimated number of lives saved thanks to increased efforts, resources and commitment to child survival.

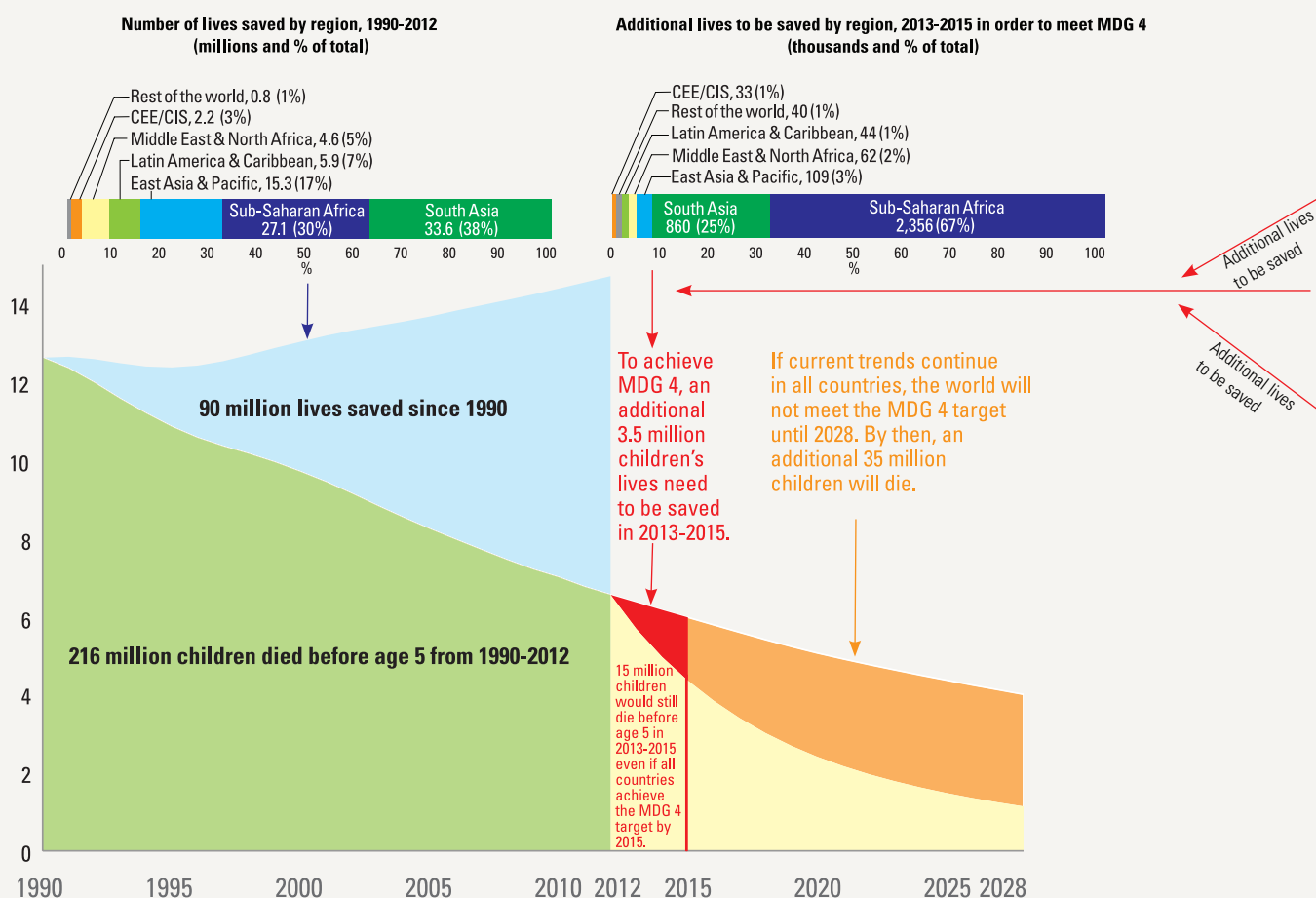
The global toll of under-five deaths over the past two decades is staggering: 216 million children died before the age of 5 between 1990 and 2012 (*Figure 14*) — more than the current total

population of Brazil, the world's fifth most populous country. And another 15 million will die between 2012 and 2015 even if the world were to reduce under-five deaths at an unprecedented rate and meet MDG 4 on time. On the other hand, if current trends continue in all countries, MDG 4 will not be met globally until 2028 — and an additional 35 million children will die between 2015 and 2028 that could otherwise have lived had we met MDG 4 on time and continued that trend.

Hope lies in the strong advances made since 1990, and particularly since 2000, in accelerating progress in reducing under-five mortality. The direct result of this progress has been the saving of around 90 million children's lives —

Progress in improving child survival has saved 90 million children's lives since 1990; additional millions of children must be saved if all countries are to meet MDG 4 on time

Number of lives saved since 1990 among children under age 5, and number of lives to be saved in order to achieve MDG 4



Estimates are rounded, and therefore may not sum to 100%.

lives that would have been lost had mortality remained at 1990 rates — a number more than the current population of Germany. Most of these lives saved have been children in South Asia (38%) and sub-Saharan Africa (30%).

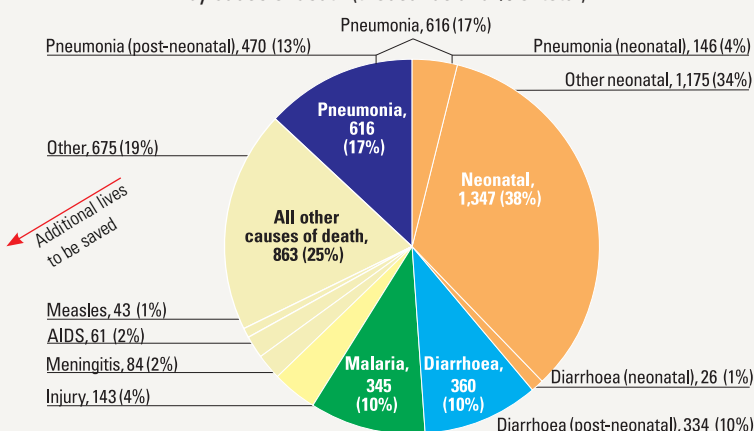
To achieve MDG 4 by 2015, an additional 3.5 million children's lives must be saved between 2013 and 2015 above the current trend rate. Breaking this projection down by country indicates where the greatest challenge lies to meet this international goal. One-third of these lives need to be saved in just two countries, Nigeria and the Democratic Republic of the Congo, with a further fifth in India and Pakistan. In total, two-thirds of these lives need to be saved in sub-Saharan Africa and about one-quarter in South Asia.

The challenge is immense. To achieve MDG 4 on time, the annual rate of reduction in under-five mortality would need to rise to 15.6% in 2012–2015 — much faster than the highest rate for any country since 1990 (*Figure 15*). But progress can and must be accelerated, even if the deadline is missed. As *Figure 14* shows, stepping up action against pneumonia and diarrhoea, malaria and neonatal deaths is particularly vital — and these conditions are also eminently preventable or treatable. More must also be done to address measles, HIV and AIDS and meningitis. As the next chapter discusses, substantial advances in tackling these diseases and conditions are taking place, but much more can and must be done to save children's lives in the coming years.

Breakdown of the additional 3.5 million children to be saved, 2013–2015 in order to achieve MDG 4

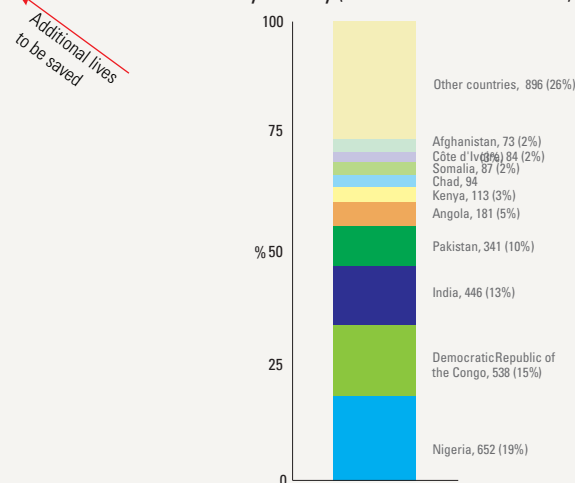
FIG. 14

Additional lives to be saved, 2013–2015 in order to meet MDG 4, by cause of death (thousands and % of total)



Globally, nearly half of all deaths among children under 5 are attributable to undernutrition

Additional lives to be saved in order to meet MDG 4, by country (thousands and % of total)

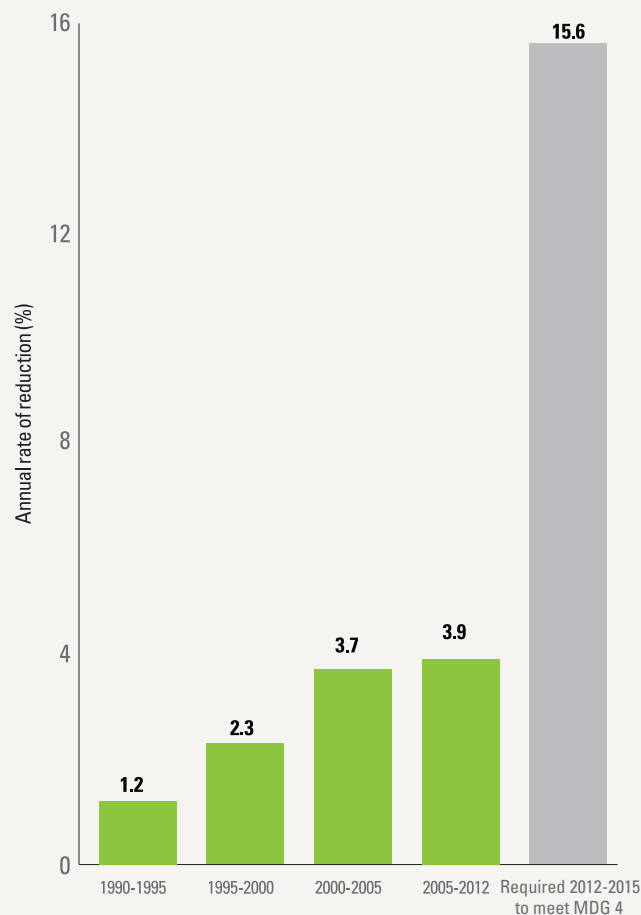


Source: UNICEF analysis based on IGME, WHO and CHERG 2013.

Progress in reducing child mortality has accelerated but is insufficient to achieve MDG 4 if current trends continue

FIG. 15

Global annual rate of reduction in under-five mortality, actual 1990–2012, and required to meet MDG 4



Source: UNICEF analysis based on IGME 2013.

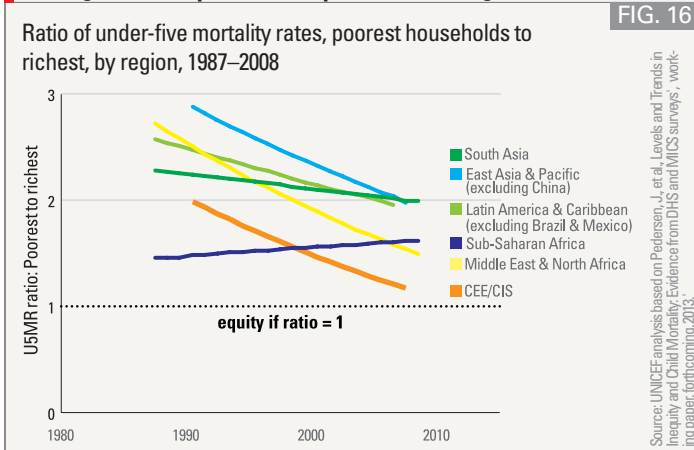
Chapter 1: Child Survival

NARROWING THE GAPS

New analysis³ of data from Demographic and Health Surveys and Multiple Indicator Cluster Surveys suggests that the gaps in under-five mortality between the richest and poorest households within most regions narrowed from 1987 to 2008, although the estimates are bound by a large range of uncertainty (*Figure 16*). The exception is sub-Saharan Africa, the region with the highest under-five mortality rate, which has experienced a slight increase in these disparities. In South Asia, the region with the second-highest under-five mortality rate, the decline in disparities is marginal.

One interpretation of these trends suggests that inequality in child mortality rates between the richest and the poorest households tends to be low at elevated levels of mortality.

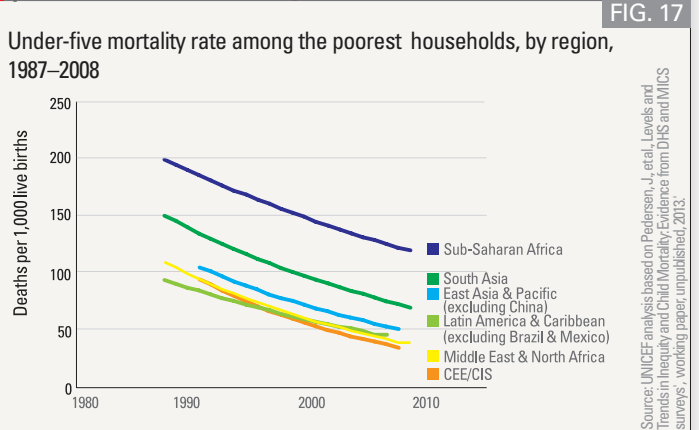
Disparities in under-five mortality between the poorest and the richest households have declined in all regions except sub-Saharan Africa, although wide disparities still persist within regions



It then tends to rise slightly as mortality levels decrease, because the richest groups are the first to benefit. Eventually the poorest groups begin to catch up and experience faster reductions than richer groups (owing to higher levels of fertility and a greater burden of death), narrowing the gap. Despite reductions in disparities, there is still significant inequality in mortality between the poorest and the richest households in all regions.

The unequivocally good news from the analysis is that under-five mortality rates have decreased even among the poorest in all regions of the world (*Figure 17*). More work needs to be done to fully understand these trends, but it could imply that eventually sub-Saharan Africa will also see a reduction in inequality as its mortality rates decline.

Under-five mortality rates have declined globally even among the poorest households in all regions



The promise

Much has already been achieved in child survival since the MDGs were set in 2000. The pace of reducing child deaths has sped up in most regions, and millions more children under 5 have access to basic health care, adequate nutrition and safe drinking water. At the same time, however, the unfinished business remains substantial: At the current rate of progress, few regions will meet MDG 4, and in some countries the target will not be met even by mid-century.

There is still time, however, to make a difference. Over the past 22 years, about 90 million children have survived who would otherwise have died had mortality rates prevailing in 1990 continued. Achieving MDG 4 globally would mean saving an additional 3.5 million children's lives above the current trend rate of reduction in child mortality. This *is* a goal worth striving for, and the world must do all it can in the remaining two years to get as close as possible to meeting MDG 4.

At the same time, plans must be made for the future beyond 2015. Finishing the unfinished business is not just about moving closer to global aggregate and national average targets. It is about ending preventable child deaths. And now, for most countries, it is mostly about who is still left out — and why. Arguments can and should be made for finishing the job by extending and deepening the MDGs. This means reaching children, mothers and families everywhere — no matter how poor or marginal — for this and for future generations.



League table of under-five mortality rates, 2012

Sub-Saharan Africa			Middle East & North Africa			Asia & Pacific		
Countries and areas	U5MR	U5MR rank	Countries and areas	U5MR	U5MR rank	Countries and areas	U5MR	U5MR rank
Sierra Leone	182	1	Djibouti	81	28	Afghanistan	99	18
Angola	164	2	Sudan	73	33	Pakistan	86	26
Chad	150	3	Yemen	60	43	Lao People's Democratic Republic	72	36
Somalia	147	4	Iraq	34	70	Papua New Guinea	63	41
Democratic Republic of the Congo	146	5	Morocco	31	72	Kiribati	60	43
Central African Republic	129	6	State of Palestine	23	83	Timor-Leste	57	48
Guinea-Bissau	129	6	Egypt	21	91	India	56	49
Mali	128	8	Algeria	20	95	Myanmar	52	55
Nigeria	124	9	Jordan	19	97	Bhutan	45	57
Niger	114	10	Iran (Islamic Republic of)	18	100	Nepal	42	59
Côte d'Ivoire	108	11	Tunisia	16	112	Bangladesh	41	60
Burundi	104	12	Libya	15	116	Cambodia	40	62
South Sudan	104	12	Syrian Arab Republic	15	116	Micronesia (Federated States of)	39	64
Burkina Faso	102	14	Oman	12	129	Marshall Islands	38	66
Guinea	101	15	Kuwait	11	132	Nauru	37	67
Equatorial Guinea	100	16	Bahrain	10	136	Indonesia	31	72
Lesotho	100	16	Lebanon	9	141	Solomon Islands	31	72
Congo	96	19	Saudi Arabia	9	141	Philippines	30	75
Togo	96	19	United Arab Emirates	8	147	Tuvalu	30	75
Cameroon	95	21	Qatar	7	150	Democratic People's Republic of Korea	29	77
Benin	90	22	Israel	4	170	Mongolia	28	78
Mozambique	90	22				Niue	25	81
Zimbabwe	90	22				Viet Nam	23	83
Zambia	89	25				Fiji	22	88
Mauritania	84	27				Palau	21	91
Swaziland	80	29				Samoa	18	100
Comoros	78	30				Vanuatu	18	100
Liberia	75	32				China	14	120
Gambia	73	33				Thailand	13	125
Kenya	73	33				Tonga	13	125
Ghana	72	36				Cook Islands	11	132
Malawi	71	38				Maldives	11	132
Uganda	69	39				Sri Lanka	10	136
Ethiopia	68	40				Malaysia	9	141
Gabon	62	42				Brunei Darussalam	8	147
Senegal	60	43				New Zealand	6	157
Madagascar	58	46				Australia	5	161
Rwanda	55	50				Republic of Korea	4	170
United Republic of Tanzania	54	51				Japan	3	185
Botswana	53	52				Singapore	3	185
Sao Tome and Principe	53	52						
Eritrea	52	55						
South Africa	45	57						
Namibia	39	64						
Cape Verde	22	88						
Mauritius	15	116						
Seychelles	13	125						

DEFINITIONS OF INDICATORS

Under-five mortality rate (U5MR) — Probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

U5MR rank: Countries and areas are ranked in descending order of their U5MRs. All calculations are based on unrounded numbers.

EXPLANATION OF SYMBOLS

— Data are not available

Source: IGME 2013.

League table of under-five mortality rates, 2012

Americas			Europe & Central Asia		
Countries and areas	U5MR	U5MR rank	Countries and areas	U5MR	U5MR rank
Haiti	76	31	Tajikistan	58	46
Bolivia (Plurinational State of)	41	60	Turkmenistan	53	52
Guyana	35	68	Uzbekistan	40	62
Guatemala	32	71	Azerbaijan	35	68
Dominican Republic	27	79	Kyrgyzstan	27	79
Nicaragua	24	82	Georgia	20	95
Ecuador	23	83	Kazakhstan	19	97
Honduras	23	83	Republic of Moldova	18	100
Saint Vincent and the Grenadines	23	83	Albania	17	109
Paraguay	22	88	Armenia	16	112
Suriname	21	91	Turkey	14	120
Trinidad and Tobago	21	91	Bulgaria	12	129
Panama	19	97	Romania	12	129
Barbados	18	100	Ukraine	11	132
Belize	18	100	Russian Federation	10	136
Colombia	18	100	Latvia	9	141
Peru	18	100	Slovakia	8	147
Saint Lucia	18	100	Bosnia and Herzegovina	7	150
Bahamas	17	109	Malta	7	150
Jamaica	17	109	Serbia	7	150
El Salvador	16	112	The former Yugoslav Republic of Macedonia	7	150
Mexico	16	112	Hungary	6	157
Venezuela (Bolivarian Republic of)	15	116	Montenegro	6	157
Argentina	14	120	Belarus	5	161
Brazil	14	120	Croatia	5	161
Grenada	14	120	Greece	5	161
Dominica	13	125	Lithuania	5	161
Antigua and Barbuda	10	136	Poland	5	161
Costa Rica	10	136	Spain	5	161
Chile	9	141	United Kingdom	5	161
Saint Kitts and Nevis	9	141	Austria	4	170
United States	7	150	Belgium	4	170
Uruguay	7	150	Czech Republic	4	170
Cuba	6	157	Denmark	4	170
Canada	5	161	Estonia	4	170
			France	4	170
			Germany	4	170
			Ireland	4	170
			Italy	4	170
			Monaco	4	170
			Netherlands	4	170
			Portugal	4	170
			Switzerland	4	170
			Andorra	3	185
			Cyprus	3	185
			Finland	3	185
			Norway	3	185
			San Marino	3	185
			Slovenia	3	185
			Sweden	3	185
			Iceland	2	194
			Luxembourg	2	194
			Holy See	—	—
			Liechtenstein	—	—





Chapter 2: Leading causes of child deaths

Chapter 2: Leading causes of child deaths

Despite strong advances in fighting childhood diseases and improving nutritional status, there were 6.6 million under-five deaths in 2012. Most of these deaths resulted from preventable causes.

- Although the toll of deaths from infectious diseases is declining, these diseases still accounted for more than half of the global total of deaths among children under 5 in 2012. Pneumonia and diarrhoea remain leading causes of under-five deaths, together killing almost 5,000 children under 5 every day. These are diseases of the poor and their distribution is highly concentrated, with nearly three-quarters of global pneumonia and diarrhoea deaths occurring in just 15 countries.
- Malaria remains a major cause of child death, killing 1,200 children under 5 every day. Malaria remains strongly concentrated in sub-Saharan Africa, where 97% of all global malaria deaths occur, and where — despite substantial recent progress in coverage of life-saving interventions — it still accounts for 14% of all under-five deaths.
- Around 44% of the global under-five deaths occurred in the neonatal period (the first 28 days of life) in 2012. Despite declining rates globally, neonatal deaths are growing as a share of global under-five deaths amid faster progress in reducing mortality in the post-neonatal period. Most neonatal deaths are preventable.
- Many under-five deaths occur in children already weakened by undernutrition, which is a contributing factor in around half of global under-five deaths.

Note: The estimates of cause-of-death presented in this report were analyzed by UNICEF based on the work of the UN Inter-Agency Group for Child Mortality Estimation (IGME) in 2013 and draw on provisional analysis by the World Health Organization and the Child Health Epidemiology Reference Group (CHERG) in 2013.¹ The numbers of under-five deaths by cause have been calculated by applying the percentage breakdown by cause provided by WHO and CHERG to the estimates of number of under-five deaths provided by IGME. This approach was used for comparability across diseases, and therefore these estimates may differ from those presented elsewhere. All regional aggregates refer to UNICEF's regional classification. For further details on this classification please refer to State of the World's Children 2012, pp.124–125, <<http://www.unicef.org/sowc2012/>>.

Overview

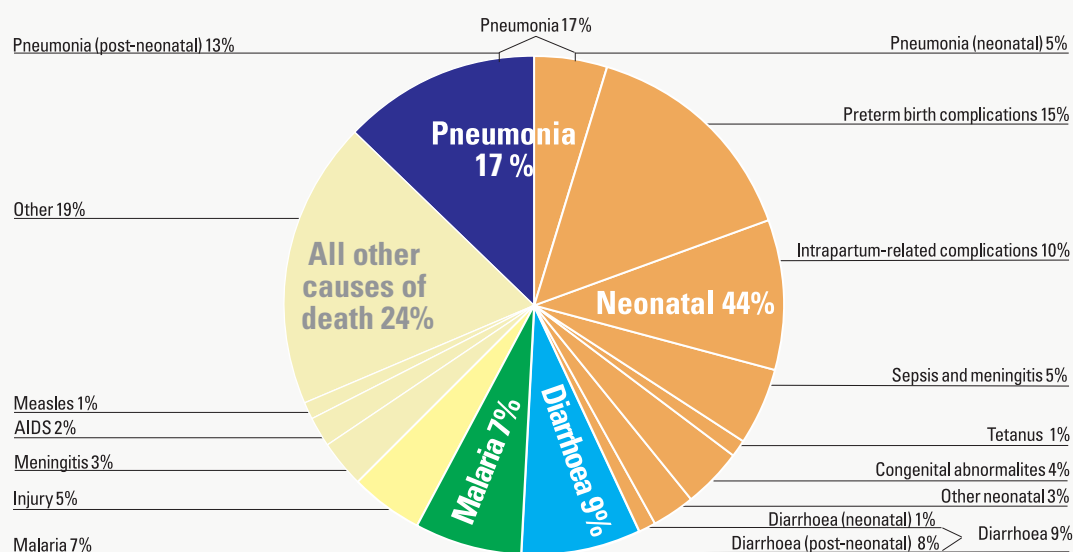
Renewing the promise of survival for the world's children relies on tracking and addressing the leading causes of child mortality. Infectious diseases (such as

pneumonia, diarrhoea and malaria), undernutrition and neonatal complications are responsible for the vast majority of under-five deaths — nearly all of which are preventable (*Figure 18*).

Infectious diseases such as pneumonia, diarrhoea and malaria are the leading killers of children under age 5; roughly 44% of deaths in children under 5 occur during the neonatal period

Global distribution of deaths among children under age 5, by cause, 2012

FIG. 18



Globally, nearly half of all deaths among children under 5 are attributable to undernutrition

Estimates are rounded, and therefore may not sum to 100%.

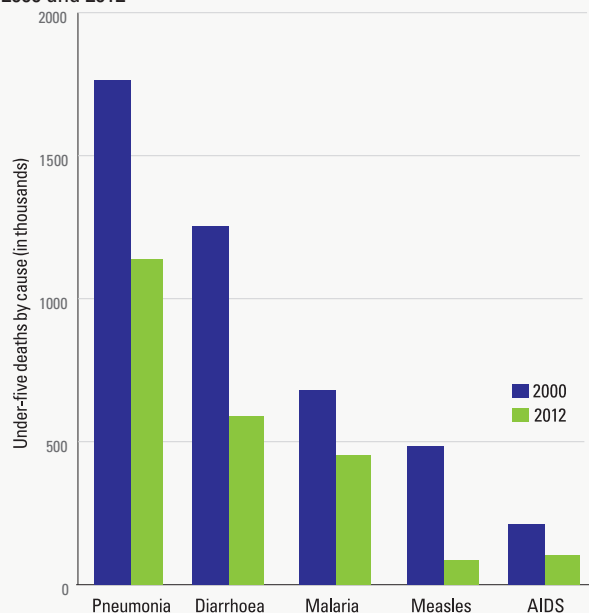
Source: UNICEF analysis based on IGME 2013, WHO and CHERG 2013.²

Chapter 2: Leading causes of child deaths

The past decade has seen major declines in child deaths due to leading infectious diseases

Global under-five deaths from five infectious diseases, 2000 and 2012

FIG. 19



Note: For comparability across diseases, this report presents analysis based on IGME 2013, drawing on provisional analyses by WHO and Child Health Epidemiology Reference Group (CHERG) 2013. These estimates may differ, therefore, from those presented elsewhere.

Source: UNICEF analysis based on IGME 2013, WHO and CHERG 2013.⁴

INFECTIOUS DISEASES AND NEONATAL CAUSES

The past decade has seen major declines in child deaths from leading infectious diseases. The most dramatic fall has been in measles deaths, which plummeted by more

than 80% between 2000 and 2012.³ Child deaths from diarrhoea and from AIDS each dropped by more than 50% over the same period, and deaths from pneumonia and malaria each fell by about a third (*Figure 19*).

Nonetheless, infectious diseases, which are most often diseases of the poor and which therefore represent a marker of equity, remain highly prevalent, particularly in sub-Saharan Africa and South Asia, and among low- and lower-middle-income countries. Of the 6.6 million child deaths in 2012, about one-third were caused by pneumonia (17%), diarrhoea (9%) or malaria (7%).

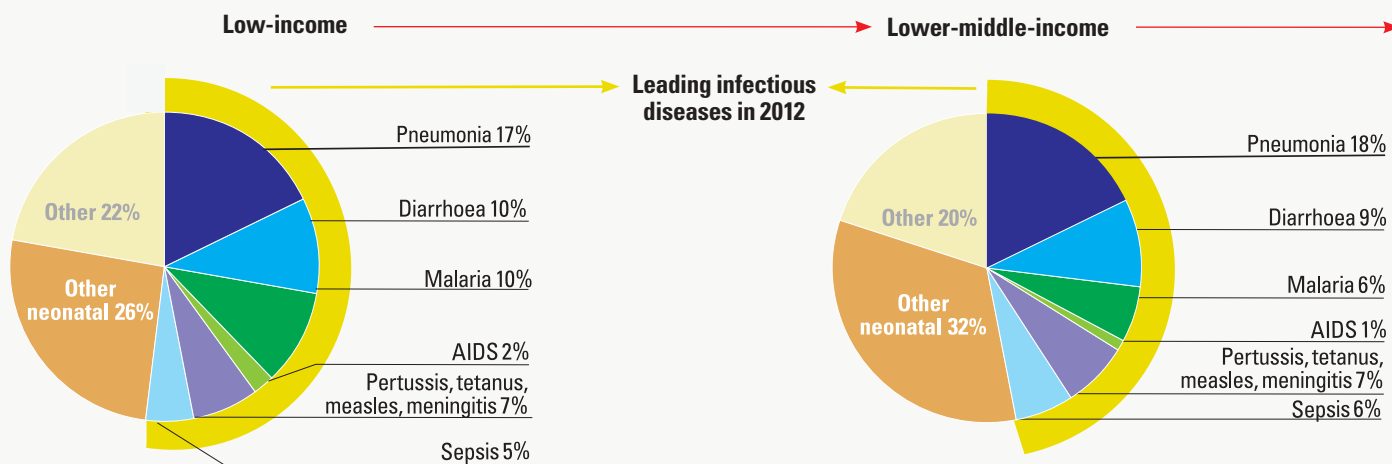
The first 28 days of life (the neonatal period) are a particular period of vulnerability for children. In 2012, around 44% of all under-five deaths occurred within the neonatal period, up from 37% in 1990. This suggests that greater attention and investment is required to address all neonatal causes of death, and particularly preterm birth complications and intrapartum (delivery-related) complications, which make up a large share of neonatal deaths.

INJURIES

Injury remains an important cause of child deaths, accounting for 5% of the global total. Although the share of child deaths resulting from injury varies across countries, it remains a cause for concern in both poor and rich countries; in some low- or very-low-mortality countries, injury accounts for at least 10% of under-five deaths. It is a particular concern for children living in countries that are in fragile situations. Much more needs to be done to under-

Preventable infectious diseases are still a major cause of under-five deaths in low- and lower-middle-income countries

Distribution of deaths among children under 5, by cause, across country income levels, 2012



Estimates are rounded, and therefore may not sum to 100%.

stand and address mortality related to childhood injury, with regard to both prevention and treatment, as well as the underlying factors that increase its prevalence.

COUNTRY STATUS AND CAUSES OF DEATH

The causes of under-five death vary by national income level (*Figure 20*). Leading infectious diseases (including pneumonia, diarrhoea, malaria, AIDS, pertussis, tetanus, measles, meningitis and sepsis) together are the greatest cause of under-five mortality in low-income countries, accounting for 52% of under-five deaths in these countries in 2012. Their share diminishes, however, with higher levels of national income. Among lower-middle income countries, less than half of under-five deaths result from these diseases, and among upper-middle income countries, the corresponding share is less than one-third. In high-income countries, the leading infectious diseases account for only about 10% of under-five deaths; neonatal deaths represent the largest share of under-five deaths in high-income countries, at more than half of the total.

Just as the global burden of under-five deaths from all causes has become concentrated in a small number of countries, so too has the burden of deaths from specific causes, notably preventable ones. More than half of the under-five deaths caused by pneumonia or diarrhoea occur in just four countries: India, Nigeria, Pakistan and the Democratic Republic of the Congo. Nigeria alone bears more than 30% of the global burden of under-five malaria deaths and more than 20% of the global burden of under-five deaths associated with HIV. Countries with higher bur-

dens of child deaths and high proportions of deaths from infectious diseases require fresh approaches and committed leadership to succeed in combatting these preventable killers.

Challenges in monitoring child mortality

Many countries remain without viable or complete vital registration systems to monitor causes of, and levels and trends in, child mortality. Only around 60 countries have such systems; the others rely mostly on household surveys, such as Demographic and Health Surveys and Multiple Indicator Cluster Surveys, to estimate levels and trends in under-five mortality. Modelling is often used to estimate these indicators, as less than 3% of the global causes of under-five deaths are medically certified. The UN Inter-agency Group for Child Mortality Estimation (IGME) regularly reviews and updates its estimation methods to provide the most accurate estimates possible.

Over the medium term, strengthening of vital registration systems is imperative, both to improve the accuracy of mortality estimation, and to track more closely those children whose rights to health, education, equality and protection remain unrealized. In the shorter term, however, household surveys will remain the primary sources of information on child mortality for most countries. Continued support and funding for these surveys represents the most cost-effective way to provide estimates of child mortality.

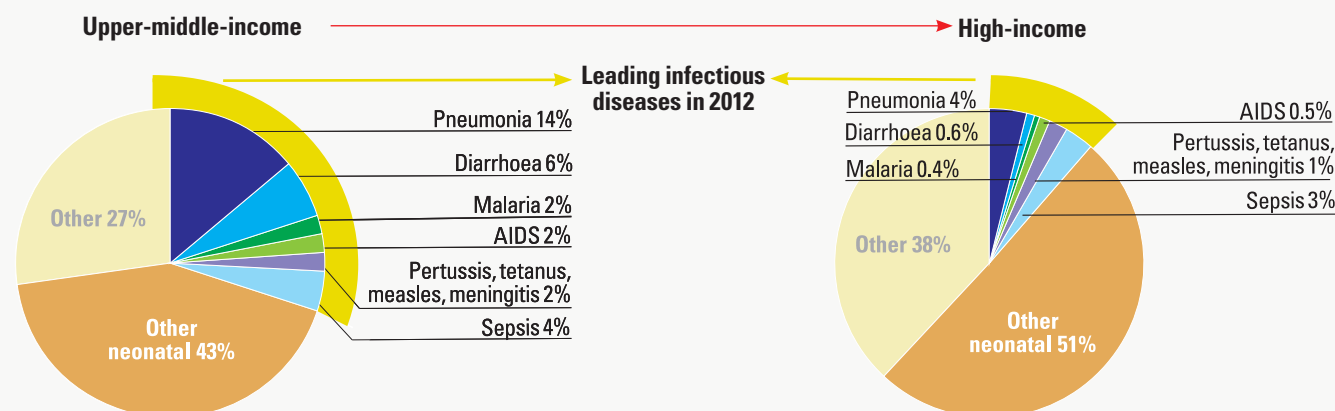


FIG. 20

Estimates are rounded, and therefore may not sum to 100%.

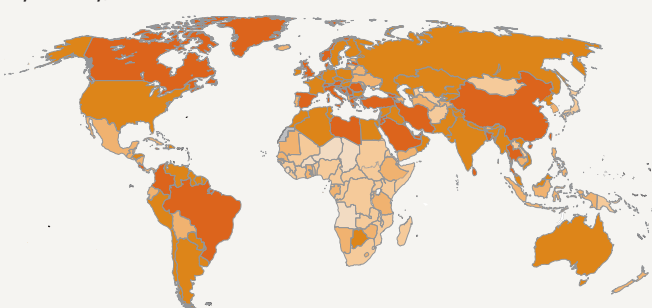
Source: UNICEF analysis based on IGME 2013, WHO and CHERG 2013.³

Neonatal mortality

Neonatal mortality is a very significant proportion of total under-five mortality in most countries

% of under-five deaths occurring in the neonatal period, by country, 2012

FIG. 21



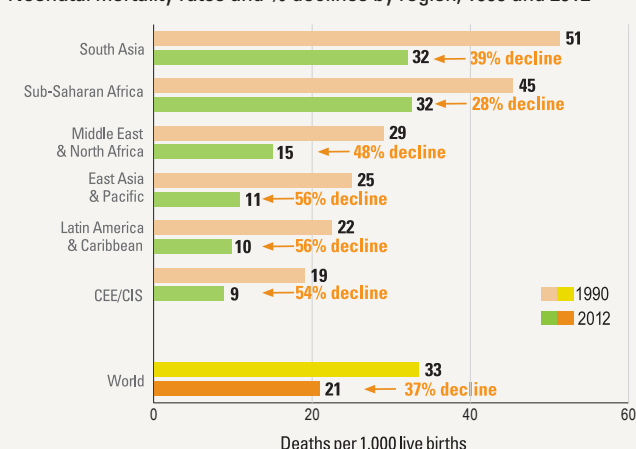
Below 30% 30-40% 40-50% 50-60% 60% or more Data not available
*See map disclaimer below.

Source: UNICEF analyses based on IGME 2013.

Global neonatal mortality is declining

Neonatal mortality rates and % declines by region, 1990 and 2012

FIG. 22

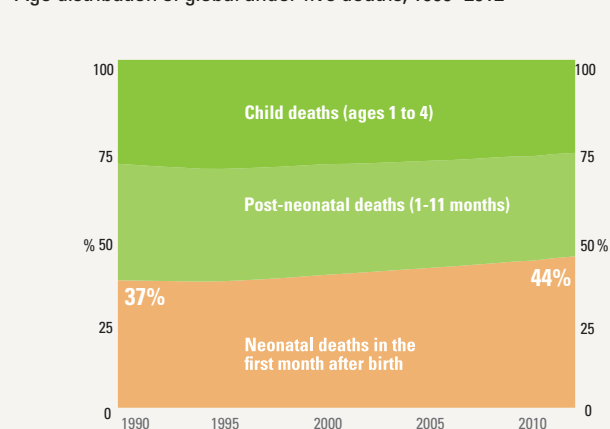


Source: IGME 2013.

Despite declining rates, neonatal deaths are growing as a share of global under-five deaths, amid faster progress in reducing mortality in the post-neonatal period

Age distribution of global under-five deaths, 1990–2012

FIG. 23



Source: UNICEF analysis based on IGME 2013.

Roughly 44% of global under-five deaths — now 2.9 million a year,^a — occur during this period, with around 1 million dying during their first day of life — yet over two-thirds of these deaths are preventable without intensive care.^b As child mortality rates fall, neonatal deaths typically increase as a share of overall child deaths.

The good news is that neonatal mortality is on the decline globally. The world's neonatal mortality rate fell from 33 deaths per 1,000 live births in 1990 to 21 per 1,000 in 2012 (*Figure 22*). All regions saw drops, with lower percentage reductions in South Asia and sub-Saharan Africa (39% and 28% respectively) than other regions; even the smaller regional reductions represent significant progress. The overall result was a reduction of global neonatal deaths from 4.6 million in 1990 to 2.9 million in 2012.^b

Despite falling rates and levels of neonatal mortality, its relative importance in the burden of under-five deaths has never been greater. Many countries that have made considerable progress in reducing child mortality have seen faster gains in reducing deaths among 1–4 year olds and 1–11 month olds than among neonates. Consequently, the proportion of under-five deaths that occur during the neonatal period has increased since 1990 (*Figure 23*). In four regions — Latin America and the Caribbean, Middle East and North Africa, South Asia, and East Asia and Pacific — neonatal deaths accounted for more than half of deaths among children under 5 in 2012.^c

A steadily increasing proportion of global neonatal deaths are occurring in sub-Saharan Africa. In part this reflects the shift in the global burden of under-five deaths to that region. In 1990, roughly 21% of the world's neonatal deaths occurred in sub-Saharan Africa; by 2012, the region's share had risen to 38%.^d And as sub-Saharan Africa accelerates progress in reducing under-five deaths, neonatal mortality is representing an increasing share of the burden of these deaths, from 26% of all under-five deaths in the region in 1990 to 34% in 2012.^e

Among countries, the variation in neonatal mortality rates is vast, ranging from just 1 per 1,000 live births in Andorra and Luxembourg to 50 per 1,000 live births in Sierra Leone.^f Around two-thirds of neonatal deaths occur in just 10 countries, with India accounting for more than one-quarter and Nigeria for a tenth.^g

Countries with high neonatal mortality are predominantly in sub-Saharan Africa and in fragile or emergency settings

Countries with highest neonatal mortality rates, deaths per 1,000 live births, 2012

FIG. 24

Country	Neonatal mortality rate, 2012
Sierra Leone	50
Guinea-Bissau	46
Somalia	46
Angola	45
Lesotho	45
Democratic Republic of the Congo	44
Pakistan	42
Mali	42
Central African Republic	41
Côte d'Ivoire	40

Source: IGME 2013.

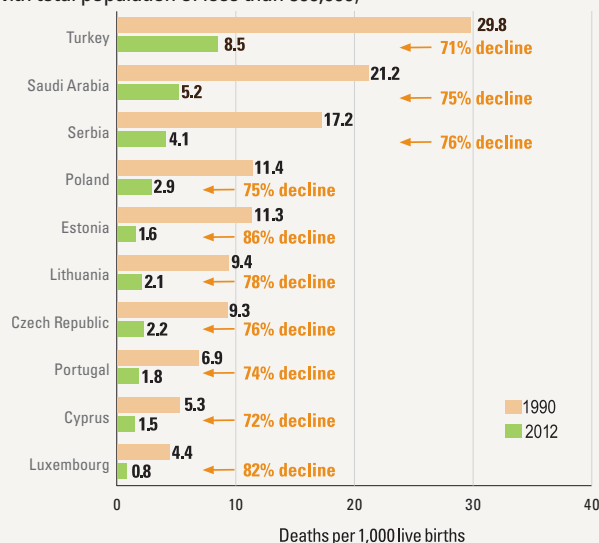
*This map is stylized and not to scale. It does not reflect a position by UNICEF on the legal status of any country or area or the delimitation of any frontiers. The dotted line represents approximately the Line of Control agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the Parties. The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined. The final status of the Abyei area has not yet been determined.

Neonatal mortality

The greatest improvements in neonatal mortality have been in high- or upper-middle-income countries

Ten countries with the highest percentage declines in neonatal mortality rate, 1990 and 2012, and % declines (excluding countries with total population of less than 500,000)

FIG. 25



Source: IGME 2013.

Neonatal deaths are increasingly important to address in many high-mortality countries

Ten high-mortality countries* with the highest proportion of under-five deaths occurring in the neonatal period in 2012 (excluding countries with total population of less than 500,000)

FIG. 26

Country	Under-five mortality rate in 2012	Neonatal mortality rate in 2012	Share of neonatal deaths in under-five deaths (%)
Bangladesh	41	24	60%
Nepal	42	24	57%
India	56	31	55%
Botswana	53	29	54%
Myanmar	52	26	51%
Pakistan	86	42	50%
Bhutan	45	21	48%
Lesotho	100	45	46%
Bolivia (Plurinational State of)	41	19	46%
Yemen	60	27	45%

Source: IGME 2013.

*Countries with an under-five mortality rate of 40 or more deaths per 1,000 live births in 2012.

There are 20 high-mortality countries in which at least 40% of under-five deaths occur in the neonatal period (see the top ten countries in *Figure 26*).^h More than 4 in 10 of all neonatal deaths worldwide occur in just three countries: India, Nigeria, and Pakistan.

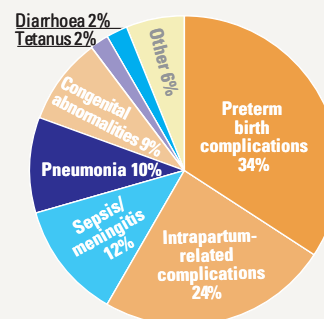
Countries that achieved the greatest percentage reductions in neonatal mortality during the past 22 years have mostly been those currently classified as high-income or upper-middle-income countries. Only 16 countries have managed to reduce the neonatal mortality rate by more than two-thirds since 1990 (*Figure 25* shows 10 countries with the greatest percentage declines).ⁱ

Children who die before they complete 28 days of life often do so as a result of diseases and conditions that are readily preventable or treatable with proven, cost-effective interventions.^j Globally, more than 20% of neonatal deaths were caused by sepsis and meningitis (12%) and pneumonia (10%) in 2012 (*Figure 27*). Sepsis, meningitis and pneumonia are highly treatable, provided simple interventions and basic treatment knowledge are available. Another 34% of neonatal deaths, the majority of them preventable, were caused by preterm birth complications.

Most neonatal deaths are from preventable causes

FIG. 27

Global distribution of neonatal deaths, by cause, 2012



About the chart: The cause distribution is calculated by applying the percentage breakdown by cause in 2010 provided by CHERG to the estimates of the number of under-five deaths in 2012 provided by IGME. Estimates are rounded, and therefore may not sum to 100%.

Source: UNICEF analysis based on IGME 2013, WHO and CHERG 2013.^k

Investment in maternal care, specifically labour and delivery care and other high-impact interventions focused on the 24 hours around the time of birth, holds the greatest potential for reducing neonatal mortality.^l Despite the increase in institutional deliveries globally since 2000, far too many births — in some countries, more than half — occur outside health facilities.

EVERY NEWBORN: A PLAN TO END PREVENTABLE DEATHS

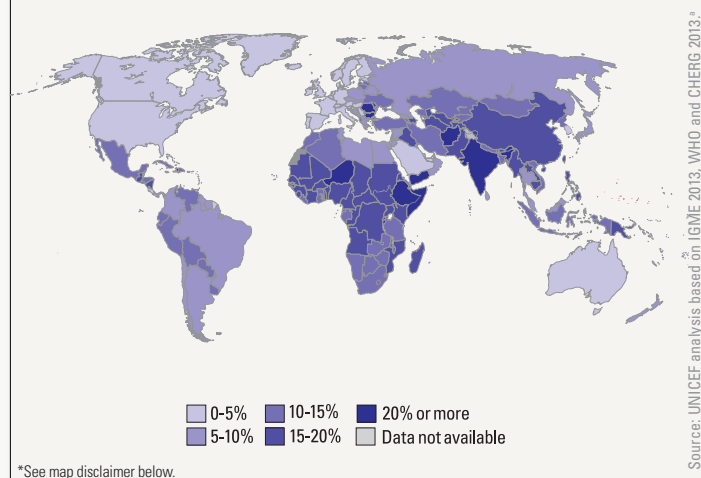
'Every Newborn: An action plan to end preventable deaths', <<http://www.globalnewbornaction.org>>, is being developed by a global coalition in 2013 through a country-led process with the involvement of key stakeholders coordinated by the World Health Organization and UNICEF. It seeks to focus attention on newborn health, and to identify actions for improving their survival, health and development. *Every Newborn* will assemble the latest available evidence on effective interventions and delivery mechanisms, enabling high-level policy makers and program managers to take action to accelerate progress. Set for a May 2014 launch, the plan takes forward the goals of the United Nations Secretary-General's *Global Strategy for Women's and Children's Health* and the commitments of *A Promise Renewed*.

Pneumonia

Childhood pneumonia mortality remains a major problem in a large number of countries

% of under-five deaths attributable to pneumonia, 2012*

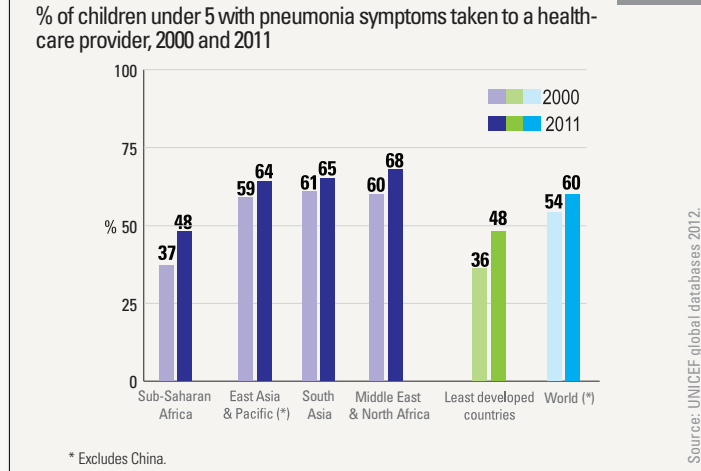
FIG. 28



Fewer than two-thirds of children with pneumonia symptoms are taken to a health-care provider

% of children under 5 with pneumonia symptoms taken to a health-care provider, 2000 and 2011

FIG. 29

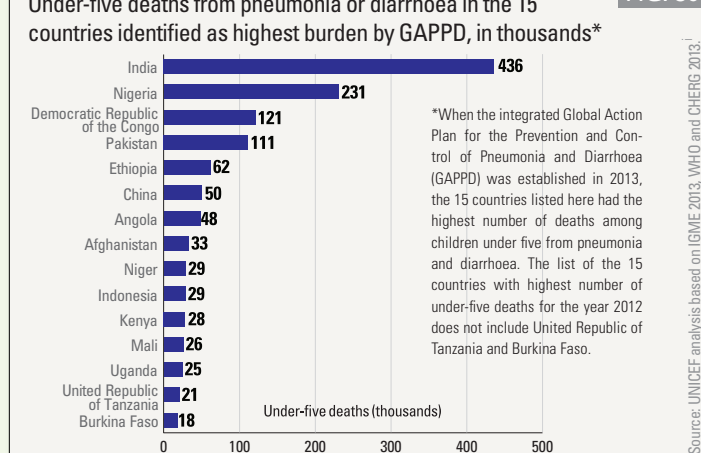


*This map is stylized and not to scale. It does not reflect a position by UNICEF on the legal status of any country or area or the delimitation of any frontiers. The dotted line represents approximately the Line of Control agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the Parties. The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined. The final status of the Abyei area has not yet been determined.

Three-quarters of childhood deaths from pneumonia or diarrhoea occur in 15 countries

Under-five deaths from pneumonia or diarrhoea in the 15 countries identified as highest burden by GAPPD, in thousands*

FIG. 30



BURDEN

Pneumonia killed more than 3,000 children under 5 years of age every day in 2012.^b Pneumonia is the single largest killer of children under 5 as well as the leading infectious cause of childhood mortality. It accounts for 17% of all under-five deaths, claiming the lives of 1.1 million children under 5 in 2012 – the bulk of whom are less than 2 years old.^c

Pneumonia takes a severe toll on children in many countries, especially in Africa and Asia (Figures 28 and 30); its impact is worst among the poorest and most marginalized children, and among those who lack access to safe drinking water or improved sanitation.^d

PROGRESS

The annual total of childhood deaths from pneumonia decreased by 35% from 1.8 million in 2000 to 1.1 million in 2012.^e

CARE SEEKING, BREASTFEEDING AND IMMUNIZATION SAVE LIVES

The first, most important and potentially life-saving step in caring for a child with pneumonia symptoms is to recognize the danger signs of pneumonia and to bring the child to a health care provider. However, globally this happens only among 60% of children with a cough and difficulty breathing, which are symptoms of pneumonia^f (Figure 29).

Progress in care-seeking has been slow over the past decade. In order to reduce pneumonia deaths among children, it is important to teach parents and communities to recognize the danger signs that indicate a child may have pneumonia, and it is essential to encourage care-seeking behavior, to ensure that quality health services are available close to communities, and to diagnose and treat children appropriately, including with antibiotics if necessary.

Breastfeeding, in addition to its other benefits, confers vital protection against pneumonia-related mortality. Available evidence suggests that children who are not breastfed at all could be at substantially greater risk than children who are either exclusively or even partially breastfed.^g

Two vaccines against bacterial pathogens – *Streptococcus pneumoniae* (pneumococcus) and *Haemophilus influenzae* type b (Hib) – are currently available in many countries as part of a package for the control of childhood pneumonia. By the end of 2012, Hib vaccine had been introduced in 184 countries (up from 177 countries in 2011), and pneumococcal vaccine in 88 countries (up from 73 countries in 2011).^h

PNEUMONIA AND DIARRHOEA: SAVING LIVES THROUGH AN INTEGRATED APPROACH

Pneumonia and diarrhoea are both diseases of poverty. The bulk of under-five deaths from these conditions occur in just a handful of countries, many of which are among the poorest in the world.ⁱ

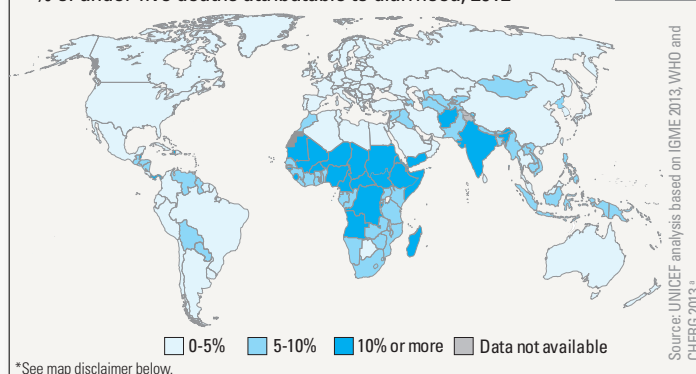
The vision of the *Global Action Plan for Pneumonia and Diarrhoea* (GAPPD) is to eliminate preventable pneumonia and diarrhoea deaths by 2025 and to reduce associated morbidity.^k The Plan seeks to accomplish these goals by promoting practices that are known to protect children from disease and by ensuring that every child has access to proven and appropriate preventive and treatment measures.

There is much overlap among the determinants of childhood pneumonia and diarrhoea. Risk factors that are common to both conditions include undernutrition, suboptimal breastfeeding, poor hygiene and zinc deficiency. A clean home environment, including access to safe water and to adequate sanitation, helps prevent both pneumonia and diarrhoea.

Deaths from diarrhoea among children under 5 are concentrated in the Sahel and in South Asia

% of under-five deaths attributable to diarrhoea, 2012

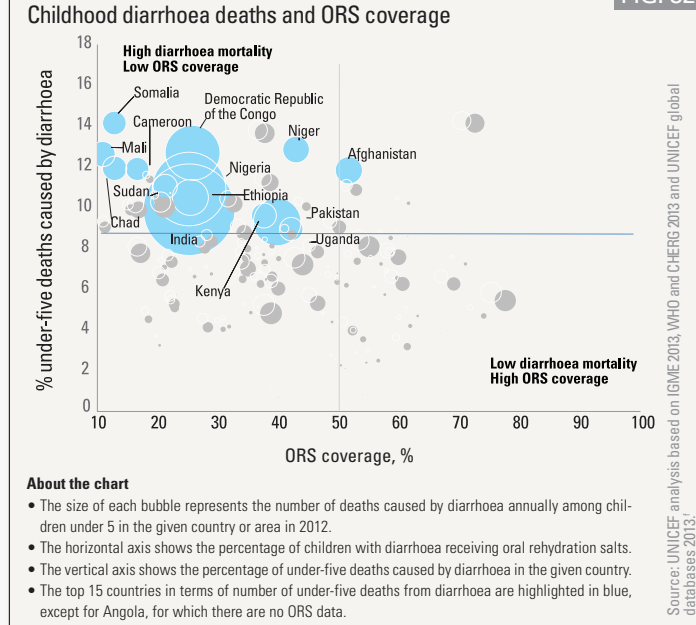
FIG. 31



Countries with the highest levels of childhood deaths from diarrhoea have the lowest levels of oral rehydration salts (ORS) coverage

Childhood diarrhoea deaths and ORS coverage

FIG. 32



*This map is stylized and not to scale. It does not reflect a position by UNICEF on the legal status of any country or area or the delimitation of any frontiers. The dotted line represents approximately the Line of Control agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the Parties. The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined. The final status of the Abyei area has not yet been determined.

BURDEN

Diarrhoea killed more than 1,600 children under 5 years of age every day in 2012.^b Diarrhoea remains one of the leading global causes of death among children under 5. It accounts for 9% of all under-five deaths – a loss of more than 580,000 child lives in 2012. Most of these deaths occur among children less than 2 years old.^c

Diarrhoea is most often caused by an infection of the intestinal tract, usually by a virus. Rotavirus is the most important cause of diarrhoea mortality in children; it is associated with 28% of deaths.^d

Effective, proven interventions for tackling diarrhoea do exist – for example, rotavirus vaccine, which had been introduced in 41 countries by the end of 2012.^e But children are still dying because these interventions are often not available or accessible where they are needed most. Provision of vaccines and remedies including oral rehydration salts (ORS) and zinc (Figure 33), as well as preventative measures including safe drinking water and improved sanitation, need to be scaled up and better targeted to reach the most vulnerable populations.

PROGRESS

From 2000 to 2012, the total annual number of deaths from diarrhoea among children under 5 decreased by more than 50%, from almost 1.3 million in 2000 to about 0.6 million in 2012.^g

COVERAGE OF LIFE-SAVING ORS AND ZINC MUST BE SCALED UP

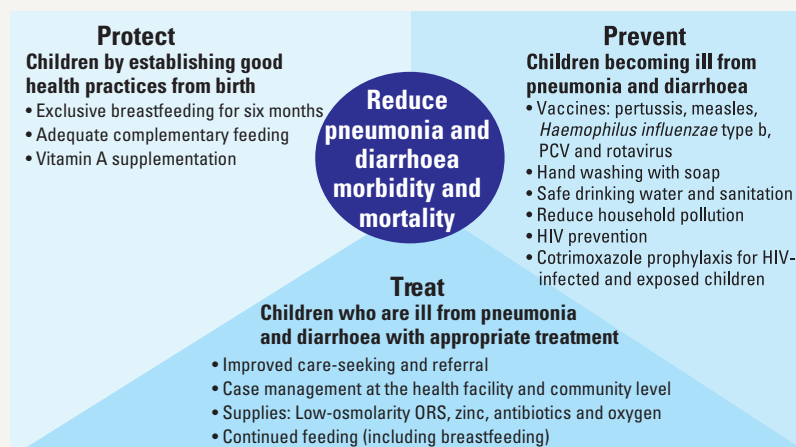
ORS and supplemental zinc, combined with continued feeding, are the recommended interventions for treating diarrhoea.^h Since the 1970s, oral rehydration therapy has been the foundation of treatment for the life-threatening dehydration that can result from diarrhoea. ORS is safe and inexpensive and is available in various packet sizes and assorted flavours to encourage use by children.

Three-quarters of all child deaths from diarrhoea occur in just 15 countries.ⁱ Yet ORS treatment coverage in these countries^j remains very low (Figure 32), in 2012 reaching less than 30% of children with diarrhoea. This represents only a 10% improvement over the coverage level in 2000.^k

There are also significant disparities in ORS coverage among population groups in these high-burden countries. Children in the richest 20% of households may be up to four times more likely to receive ORS when they are sick with diarrhoea than children in the poorest 20% of households.^l Treatment with zinc also remains largely unavailable in high-burden countries; significant effort should be devoted to scaling up availability and use.

The approach implemented through the integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea has three components — protect, prevent, treat

FIG. 33



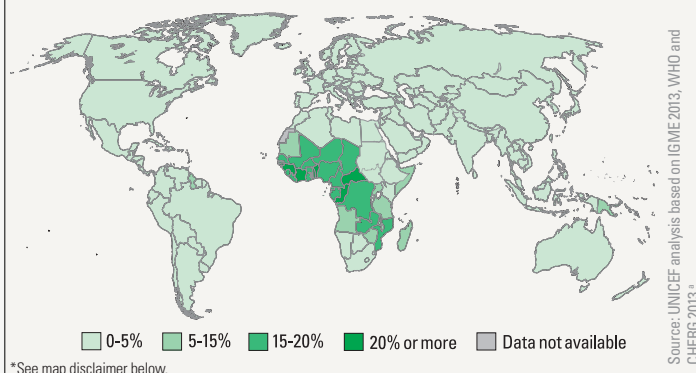
Source: GAPPD 2013.

Malaria

Malaria mortality is highest in sub-Saharan Africa

% of under-five deaths attributable to malaria, 2012

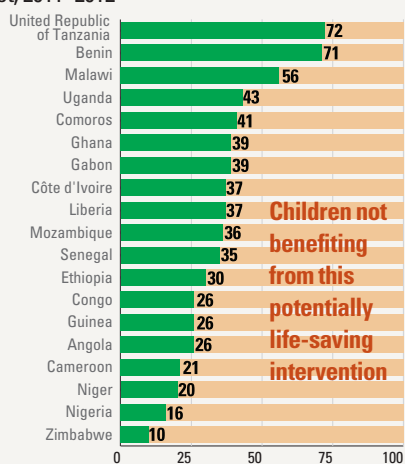
FIG. 34



Despite major progress in use of insecticide-treated mosquito nets, most sub-Saharan African countries fall far short of the target of universal coverage

% of children under 5 sleeping under an insecticide-treated mosquito net, 2011–2012

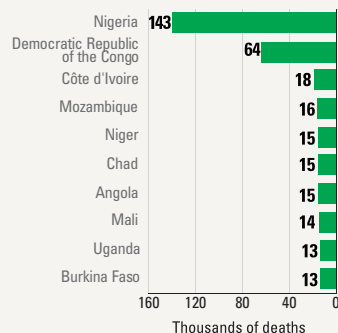
FIG. 35



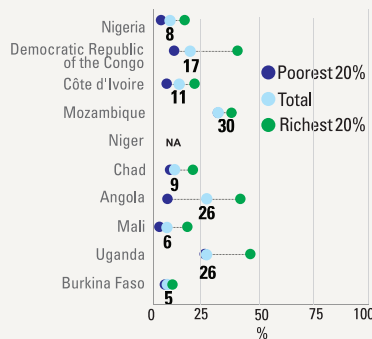
Children not benefiting from this potentially life-saving intervention

In the 10 countries with the highest numbers of under-five malaria deaths, diagnosis and appropriate treatment still need to be scaled up rapidly

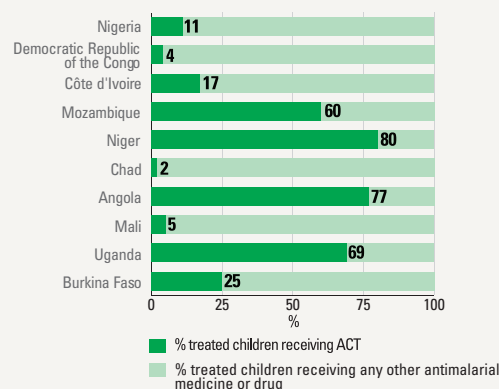
Ten countries with the highest numbers of malaria deaths in children under 5, 2012



% of children under 5 with fever who had confirmatory diagnosis for malaria, poorest 20%, total, and richest 20%, 2010–2012



% of children under 5 being treated for malaria who received artemisinin-based combination therapy (ACT), 2010–2012

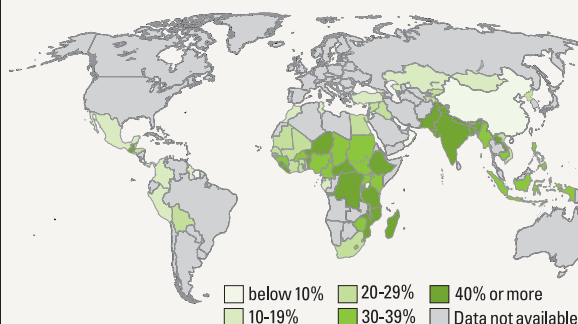


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The highest rates of stunting are found in South Asia and sub-Saharan Africa

% of children under 5 affected by moderate or severe stunting, 2008–2012

FIG. 37



Note: India data refer to 2005–2006.

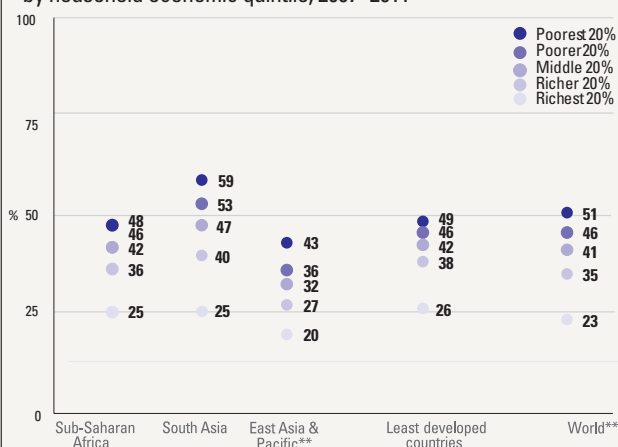
*See map disclaimer below.

Source: UNICEF global databases 2013.

Stunting is more prevalent among children from poorer households

% of children under 5 affected by moderate or severe stunting, by household economic quintile, 2007–2011*

FIG. 38



*Analysis is based on a subset of countries with available data by background characteristics and regional estimates are presented only where adequate population coverage is met. Data are from 2007 to 2011, except for Brazil and India.

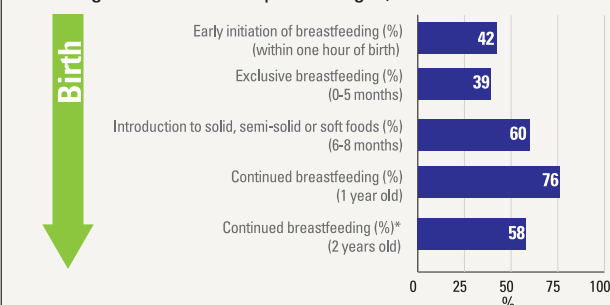
**Excludes China.

Source: Adapted from United Nations Children's Fund, *Improving Child Malnutrition: The achievable imperative for global progress*, UNICEF, New York, 2013.

Prevalence of optimal child feeding practices falls far short of 100%

% of children worldwide put to the breast within one hour of delivery; exclusively breastfed; receiving solid, semi-solid and soft foods; and continuing to breastfeed at specified ages, 2007–2011

FIG. 39



*Excludes China.

Source: UNICEF global databases, 2012.

BURDEN

Of all deaths among children under 5, nearly half — or approximately 3 million deaths a year — are attributable to undernutrition.*^a Some critical nutritional disorders that these deaths are attributable to include moderate and severe stunting — chronic forms of undernutrition; moderate and severe wasting — acute forms of undernutrition; and suboptimal breastfeeding practices.

Three-quarters of the world's stunted children live in South Asia or sub-Saharan Africa (*Figure 37*).^b Stunting is most prevalent among the poorest children and among those living in rural areas (*Figure 38*); an equity-based approach to nutrition programming is needed to address such disparities. In 2012, an estimated 51 million children under 5 suffered from wasting, with almost 80% of these children living in South Asia or sub-Saharan Africa.

Undernutrition puts children at greater risk of death from common infections, increases the frequency and severity of illnesses and delays recovery. The interaction between undernutrition and infection can create a potentially lethal cycle of worsening illness and deteriorating nutritional status. In addition to increasing mortality risk, poor nutrition in the first 1,000 days of a child's life can lead to stunted growth, which is irreversible and is associated with impaired cognitive ability and reduced school and work performance.^c

PROGRESS

The annual total of children under 5 affected by moderate or severe stunting fell by 38% from 257 million in 1990 to roughly 162 million in 2012.^d

INTERVENTIONS

Nutrition interventions that can help prevent stunting and reduce child mortality include the management of acute malnutrition; protection, promotion and support of breastfeeding and complementary feeding; and provision of appropriate micronutrient interventions for mothers and children. A community-based approach has been increasingly used to treat children with severe acute malnutrition. This approach has proven successful where applied: At least 75% of children thus treated are expected to recover.^e However, it is estimated that fewer than 1 in 8 children needing treatment were reached in 2012.^f

Optimal breastfeeding and complementary feeding practices have substantial potential for reducing child mortality. Unfortunately, the global prevalence of age-appropriate child feeding practices remains inadequate and there are large variations among regions. Globally, only two out five newborns are put to the breast within the first hour of birth; roughly the same low proportion of 0–5 month olds are exclusively breastfed (*Figure 39*). Furthermore, data from a limited set of available nationally representative surveys show that very few children aged 6–23 months receive a minimum acceptable diet in regard to food quality and frequency of feeding.^g

Vitamin and mineral deficiencies affect a child's health and chance of survival. For example, children who are deficient in vitamin A face a higher risk of dying from infectious diseases than those who are not deficient.^h Globally, 75% of children aged 6–59 months received two doses of vitamin A in 2011, fully protecting them against deficiency, but nearly half of the countries that reported data did not reach the 80% coverage target.ⁱ

*New evidence and improved statistical methods have led to the recent increase in this fraction from the one-third previously estimated and reported in the *APR Progress Report 2012*.

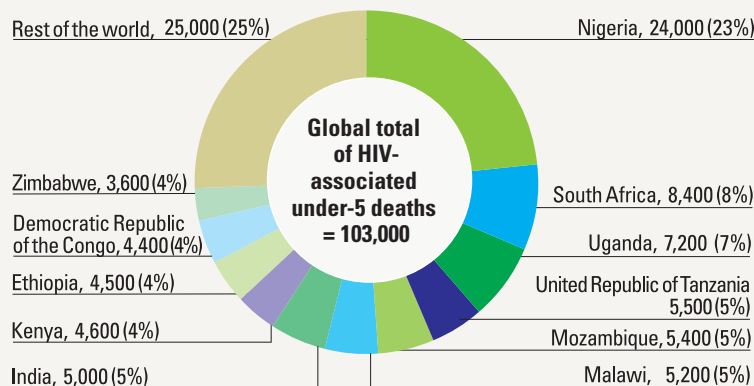
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HIV and AIDS

Three-quarters of all deaths associated with HIV among children under 5 occur in just 11 countries

% and number of deaths associated with HIV among children under 5, by country, 2012

FIG. 40



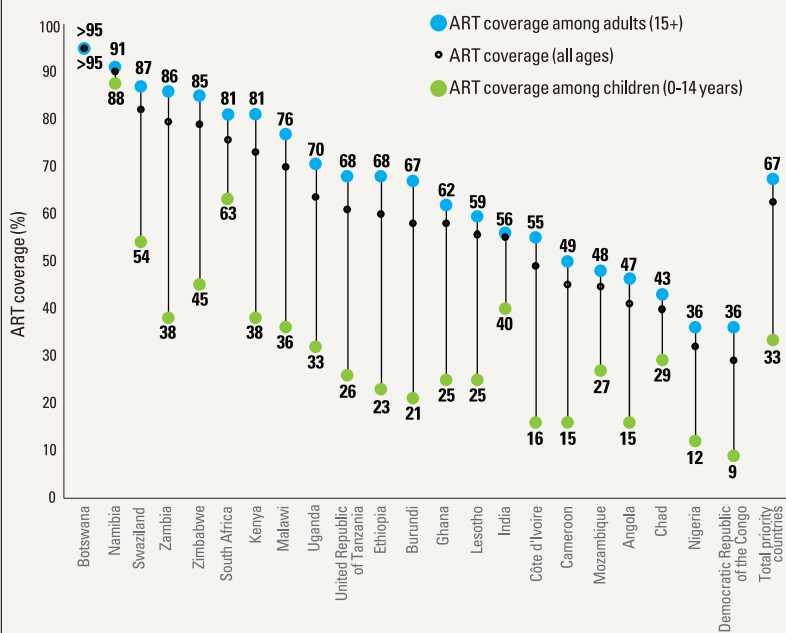
Estimates are rounded, and therefore may not sum to 100%.

Source: UNICEF analysis based on IGME 2013, WHO and CHERG 2013.*

Intensified efforts are needed to address inequities in care and treatment for children living with HIV

% antiretroviral coverage in 2012 among eligible adults, children (0–14 years old) and all ages in the 22 priority countries of the UN-supported Global Plan for eliminating mother-to-child transmission of HIV, 2012

FIG. 41



Source: UNAIDS, WHO, and UNICEF, 2013 progress report on the Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive, 2013. Geneva, Switzerland and WHO, UNICEF, and UNAIDS, Global Update on HIV Treatment Treatment 2013: Results, Impact and Opportunities, 2013, Geneva, Switzerland.

About 1.5 million girls and women (ages 15 and above) were pregnant and living with HIV in 2011 – more than 90% of them in sub-Saharan Africa.^b Without any interventions to prevent mother-to-child transmission of HIV (PMTCT), about half of these girls and women will pass infection on to their children during pregnancy, delivery or breastfeeding.^c Results achieved through the UN-supported *Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive*^d include increased provision of effective antiretroviral medicines for PMTCT in the Global Plan's 21 priority countries in sub-Saharan Africa,^e from 34% of pregnant women living with HIV in 2009 to 65% in 2012.^f Consequently, rapid reductions in new HIV infections among children have been observed in these countries. Globally, 40% fewer children were infected with HIV in 2011 than in 2001. The rate of reduction has accelerated in recent years: Between 2001 and 2009, the number of children newly infected with HIV declined by 22%, but from 2009 to 2011 this number declined by 24%.

Despite progress in preventing mother-to-child transmission of HIV, in 2011 about 900 children per day were newly infected with HIV.^g More than 90% of these new infections occurred in sub-Saharan Africa.^h Children born to women living with HIV, whether they become infected or not, are at increased risk of morbidity and mortality, and must be identified early in order to receive appropriate treatment and follow-up care. Uninfected children born to women living with HIV have slower early growth and a higher risk of morbidity and mortality from childhood diseases such as diarrhoea and pneumonia compared to children born to HIV-negative women.^{i,k}

Without antiretroviral treatment (ART), most children with HIV die of common childhood diseases before age 5; 30% die by age 1 and 50% by age 2.^{l,m} HIV-attributable mortality in 2012 among children under 5 ranged from 4% to 19% of total under-five mortality in some countries with high HIV prevalence in sub-Saharan Africa.ⁿ

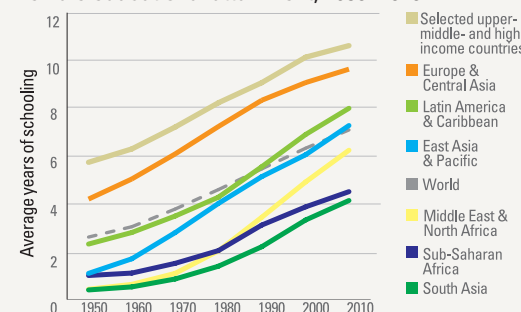
Although remarkable progress has been made in the past decade in expanding access to ART, in most countries progress for children has been slower than for adults (*Figure 41*). In low- and middle-income countries, only 28% of children aged 0-14 who were eligible for treatment in 2011 received ART, compared to 59% of eligible adults (15 and over).^o

It therefore remains imperative to identify both HIV-positive children, and children that are HIV-negative but born to women living with HIV, and to retain them in HIV follow-up care and treatment. Special attention should be given to integration with other child survival interventions such as immunization, nutrition and community involvement. New guidelines from WHO^p call for the immediate offer of HIV treatment to all pregnant and breastfeeding women and all children under 5 years living with HIV. New technologies for early infant diagnosis and HIV viral load monitoring at the point of care will further simplify testing and linkage to treatment for children and their families. Together, these will improve treatment outcomes and support child survival, growth and development.

Other contributing factors

Female educational attainment is increasing in all regions, but efforts must be accelerated in South Asia and sub-Saharan Africa

Female educational attainment, 1950–2010



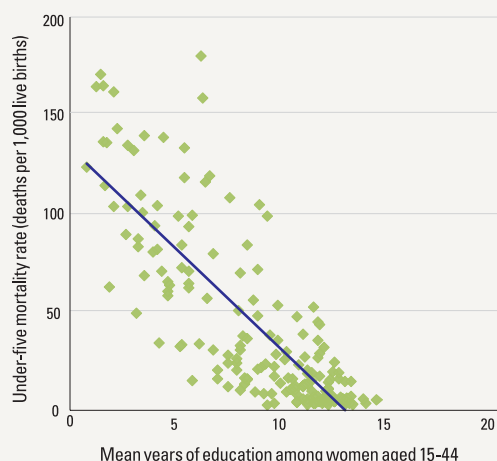
*The following countries are included in this category: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United States, United Kingdom.

FIG. 42

Source: Prepared by UNICEF based on Barro, Robert J., and Jong-Wha Lee, 'A New Data Set of Educational Attainment in the World: 1950–2010', National Bureau of Economic Research Working Paper no. 15902, NBER, Cambridge, Mass., April 2010.

Children born to better-educated mothers are at lower risk of death

Relationship between education level of women of reproductive age (15–44) and under-five mortality rate, 2009



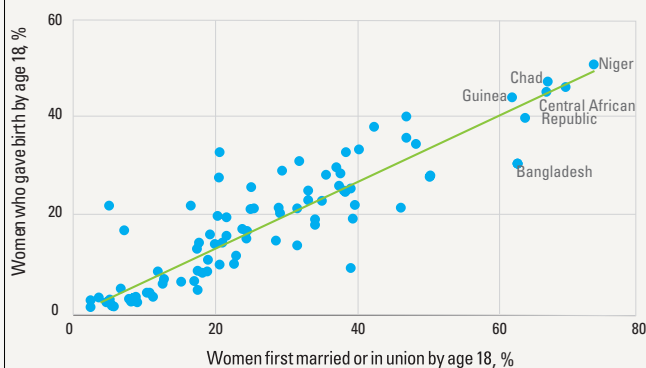
About the chart: Each diamond represents a country or area.

FIG. 43

Source: Prepared by UNICEF based on Gakidou, Emmanuel, et al., 'Increased Educational Attainment and Its Effect on Child Mortality in 175 Countries between 1970 and 2009: A systematic analysis', *The Lancet*, vol. 376, no. 9745, 18 September 2010, pp. 959–974.

Countries with high levels of child marriage tend to have high levels of early childbearing

% of women aged 20–24 who were first married or in union by age 18 and % of women aged 20–24 who gave birth by age 18, in selected countries with available data, 2005–2011



About the chart: Each dot represents a country or area.

FIG. 44

Source: UNICEF global databases, 2012.

MOTHERS' EDUCATION AND CHILD MORTALITY

Female educational attainment has been steadily increasing in all regions of the world for decades (*Figure 42*). This progress is considered to be linked to more than half of the recent reductions in under-five mortality (*Figure 43*).^a Mechanisms through which maternal education may have a positive impact on child survival include economic benefits acquired by the mother through education, providing access to better housing, sanitation and health care;^b improved immunization status of children born to better educated mothers;^c and other changes in usage of preventive and curative health services across the continuum of care.^d Education can also delay marriage and child-birth, which in turn has a positive impact on child survival.^{e,f} Research suggests that fathers' education also has a positive impact on child survival, although to a lesser extent than mothers' education.^g

Research also suggests that education levels among mothers are strongly associated with their own health and survival. A recent study has found that the risk of maternal death was 2.7 times higher among women with no education, and two times higher among women with 1–6 years of education, than among women having more than 12 years of education, even after adjusting for the effects of other factors such as marital status, maternal age and institutional capacity.^h This mortality differential may be due to educated mothers' enhanced capacity to obtain, understand and apply essential health information; and increases in the knowledge and confidence required to make appropriate health-related decisions and to seek health care.ⁱ

The relationship between increased education of mothers and child and maternal mortality underlines the interdependence and complementarity of several of the MDGs. Efforts to achieve MDG 4 (reduce child mortality) and MDG 5 (improve maternal health) will be bolstered by progress in achieving MDG 2 (universal primary education) and MDG 3 (gender equality and empowerment).

The world is still far from reaping the full benefits available through improved maternal education: In South Asia and sub-Saharan Africa, the average duration of schooling among women is still only a little more than 4 years, meaning that the majority of women in these regions do not complete primary school.

TOO EARLY, TOO MANY AND TOO SOON

Early childbearing — giving birth before age 18 — can potentially cause serious harm to the health and well-being of both children and their mothers. Adolescent mothers are at greater risk of experiencing potentially life-threatening complications, and their children are at greater risk of being born prematurely and of having low birth weight.^j Children of younger mothers face a greater risk of dying during the first month of life.^k Early marriage raises the likelihood of early childbearing (*Figure 44*), partly as a result of societal norms that influence when child-bearing is considered acceptable, or is even expected. Girls married as children typically cease their education, and thus lose out on the economic and health benefits conferred by additional years of schooling (*Figure 43*).^l

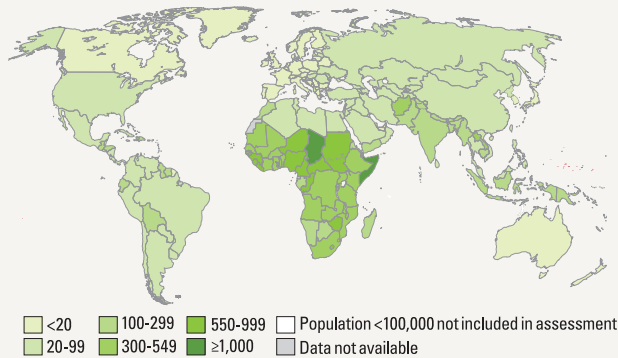
Birth spacing — the interval between the birth of one child and the birth of the next to the same mother — has important implications for child survival and health. In all countries, short birth spacing raises the risks of prematurity and of low birth weight, and in low- and lower-middle-income countries, maintaining a birth spacing of at least two years would cut mortality among infants (less than 1 year old) by 10%, and would cut mortality among children ages 1–4 by 21%.^m Access to contraceptives and family planning services thus has significant potential to improve child survival through increasing birth spacing.

Other contributing factors

Huge disparities exist in maternal mortality ratios across countries

Maternal mortality ratio (maternal deaths per 100,000 live births), 2010

FIG. 45



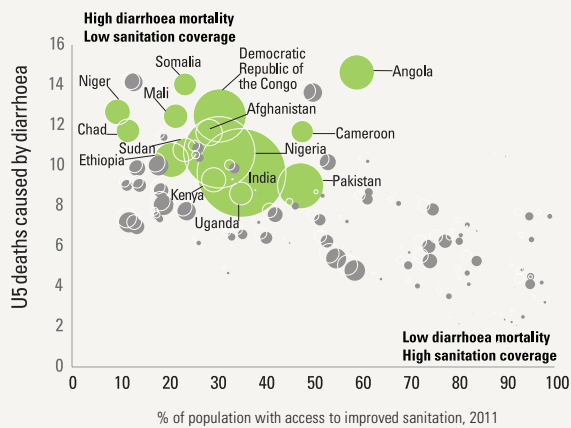
Source: WHO, UNICEF, UNFPA and the World Bank, *Trends in Maternal Mortality 1990-2010*, WHO, Geneva, 2012.

*See map disclaimer below.

Improved sanitation is associated with lower diarrhoea mortality among children under 5

Childhood diarrhoea deaths (2012) and sanitation coverage (2011)

FIG. 46



About the chart

- The size of each bubble represents the number of deaths caused by diarrhoea annually among children under 5 in the given country in 2012.
- The top 15 countries in terms of number of under-five deaths from diarrhoea are highlighted in green.
- The horizontal axis shows the percentage of the population with access to improved sanitation (2011).
- The vertical axis shows the percentage of under-five deaths caused by diarrhoea in the given country (2012).

Source: UNICEF global databases, 2013 and WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMPS), 2013.

MATERNAL MORTALITY

Every instance of maternal mortality is not only a tragic loss in itself, but is also a heavy blow to the prospects of the mother's surviving children. Infants who lose their mothers in the first six weeks of life face a greater likelihood of death before age 2 than do infants whose mothers survive.⁸ Countries with high rates of maternal mortality also have elevated rates of disabilities among women who survive childbirth; disabilities such as obstetric fistula can sometimes impose lifelong suffering and severely impair a mother's ability to care effectively for her children.⁹ Most maternal deaths occurring in low- and lower-middle income countries are preventable through adequate nutrition, proper health care and the presence of a skilled birth attendant during delivery, and these should constitute top policy priorities. Although major progress has been made globally in reducing maternal mortality since 1990, there remain huge disparities in maternal mortality ratios among countries (*Figure 45*).

WATER, SANITATION AND HYGIENE

Lack of access to safe drinking water, the practice of open defecation and poor hygiene habits are significant threats to the survival and health of children. Proper hygiene, including handwashing, was already identified in the 19th century as an important factor in public health. Recent evidence suggests that regular handwashing with soap could reduce the risk of lower respiratory tract infections such as pneumonia by 23%,¹⁰ and could reduce diarrhoea morbidity by 42%.¹¹

Open defecation — still practised by just over 1 billion people worldwide, mostly in rural areas of poorer countries¹² — puts entire communities at greater risk of diarrhoeal and other diseases, which exact a toll of deaths among children. Open defecation also raises the risk of infestation with intestinal worms. Recurrent diarrhoea and intestinal infestations can inflict lasting damage on children's development in the form of stunting — a condition with lifelong implications (see also Chapter 2, *Undernutrition*).

For all these reasons, the United Nations Deputy Secretary-General, with support from UNICEF, the World Bank and NGOs active in water and sanitation, has issued a Call To Action on sanitation calling for a global effort to end the practice of open defecation by 2025.¹³ If achieved, this will contribute greatly to the reduction of the disease burden of the youngest and most vulnerable. Increasing sanitation coverage is directly correlated with declining proportions of deaths from diarrhoeal diseases among children under 5 (*Figure 46*).

IMMUNIZATION: A GLOBAL IMPERATIVE TO REACH THE FIFTH CHILD

Immunization is among the most successful and most cost-effective health interventions, saving an estimated 2-3 million lives globally every year.¹⁴ It has an essential role in strategies to improve child survival. When the Expanded Programme on Immunization (EPI) was launched in 1974, less than 5% of the world's children were immunized during their first year of life against diphtheria, tuberculosis, pertussis, polio, measles and tetanus. Today, that estimate stands at more than 80%,¹⁵ — four out of every five children — and the enormous efforts to reduce the global burden of vaccine-preventable diseases are increasingly successful.

In recent years, much of the impetus on expanding immunization has been driven by the GAVI Alliance, a global public-private partnership whose mission is to save children's lives by increasing access to immunization in poorer countries. An increasing focus of the GAVI Alliance is on new and underused vaccines. The introduction of recently developed vaccines against pneumonia and diarrhoea, two of the leading causes of childhood mortality worldwide, and the development of a malaria vaccine have the potential to save many more lives.

Their success will depend on how well children can be reached. Today, nearly one in five children remains unreached¹⁶ by the life-saving potential of immunization, requiring additional efforts to overcome inequalities in immunization coverage. In low-income countries, 2012 coverage levels of three doses of diphtheria, tetanus toxoid and pertussis vaccine (DTP3) are about equal to the 1985 levels in high-income countries. That poor countries are more than 20 years behind wealthy ones in terms of coverage¹⁷ for such a basic health intervention as immunization is unacceptable, particularly when many of the underlying reasons are understood.¹⁸ This is not a time for complacency: Immunization programmes worldwide continue to require investments and commitments in order to have maximal impact on children's lives and to reach the fifth child.

*This map is stylized and not to scale. It does not reflect a position by UNICEF on the legal status of any country or area or the delimitation of any frontiers. The dotted line represents approximately the Line of Control agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the Parties. The final boundary between the Republic of the Sudan and the Republic of South Sudan has not yet been determined. The final status of the Abyei area has not yet been determined.



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IGNITING NATIONAL ACTION AND ADVOCACY TO END PREVENTABLE CHILD DEATHS

The first year of *A Promise Renewed* has seen strong commitments and innovative action to accelerated progress on child survival by governments, civil society and the private sector. As of August 2013, seven governments have taken important steps towards fulfilling their pledges to end preventable child deaths. Their countries collectively accounted for 2.2 million under-five deaths in 2012, one-third of the global total.

An eighth country, **Nigeria**, accounts for one in every eight child deaths globally. The Government has made a bold commitment under its national *Saving One Million Lives* initiative, with the aim of saving the lives of 1 million women and children by 2015. Launched in September 2012, the initiative focuses on scaling up proven, cost-effective interventions that address the leading causes of maternal and

child mortality and morbidity. A particular focus of the initiative is to support midwives, whose contribution to saving maternal, newborn and child lives is often overlooked.

In January 2013, the Government of **Ethiopia** convened *African Leadership for Child Survival*, a high-level summit of regional policymakers and technical experts. The summit concluded with more than 120 Ministry of Health delegations endorsing a consensus statement to accelerate progress on child survival in Africa (*see panel below for further details*). The Government of Ethiopia is a co-sponsor of the global Call to Action.

In February 2013, the Government of **India**, another co-sponsor of the global *Call to Action*, convened a national forum of state policymakers, technical advisors, civil society organizations and private-sector partners to identify and commit to high-impact strategies that can accelerate the decline in preventable child deaths.

African leadership for Child Survival — *A Promise Renewed*

MEETING CONSENSUS STATEMENT, 18 JANUARY 2013

In January 2013, under the stewardship of the Government of Ethiopia and under the banner of *A Promise Renewed*, delegations from across Africa endorsed a consensus regional framework to accelerate progress on child survival, and jointly issued the following statement.

“We the African Countries that have signed the pledge of *Committing to Child Survival, A Promise Renewed* met in Addis Ababa between 16 and 18 January 2013, as the first continental follow up to consolidate our efforts to accelerate progress in newborn, child and maternal health.

The African continent shares a significant global burden of newborn, child and maternal mortality. Most of these deaths are preventable. Thirty per cent of African countries are on track to achieve MDG 4, and some African countries have already reduced U5MR to below 20/1,000 live births.¹ However, many countries have to intensify their efforts to meet this important goal.

To accelerate progress we need targeted and effective implementation of high impact interventions. Dramatic reductions in preventable child deaths can be achieved through concerted action in five critical areas, outlined in the Global Roadmap:

1. **Geography:** Increase efforts in the areas where the most deaths occur, prioritizing budgets and committing to action plans to end preventable child deaths.
2. **High-burden populations:** Focus country health systems on scaling-up access for underserved populations, to include rural and low income groups.
3. **High-impact solutions:** Focus on the primary causes of child death.
4. **Gender equality:** Invest beyond health programs to include educating girls and boys, empowering women and men, and inclusive economic growth.
5. **Mutual accountability and financing:** Unify around a shared goal and common metrics.

We are committed to develop and implement country-led roadmaps that integrate on-going efforts to accelerate progress to end preventable deaths among children under five years of age by 2035, and reduce U5MR to below 20/1,000 live births in all African nations.” ■

In April 2013, the First Lady of **Zambia** hosted a national launch of *A Promise Renewed*, unveiling a four-year road-map that aims to save an average of 27,000 lives — 26,000 under-fives and 1,000 mothers — every year (*see panel below for further details*). And in May of the same year, the Ministry of Health of **the Democratic Republic of the Congo** launched a national acceleration framework that seeks to reduce under-five mortality by saving the lives of an additional 430,000 children and 7,900 mothers by 2035.

The Governments of **Bangladesh, Liberia and Senegal** all hosted national launches of *A Promise Renewed* in July 2013. The launch in **Bangladesh** marked the beginning of going beyond MDG 4 — the country has already far exceeded the national criteria for achieving that goal. Bangladesh pledged to prevent an additional 108,000 deaths annually to reduce the national under-five mortality rate to 20 per 1,000 live births by 2035 (*see panel on page 34 for further details*).

Liberia, too, has exceeded the MDG 4 target, having made remarkable progress in reducing its under-five mortality rate by 70% since 1990. A special focus of Liberia's commitment to *A Promise Renewed* will be neonatal survival and health. **Senegal** launched its National Plan on Accelerated Child Survival under *A Promise Renewed*, aiming to save the lives of 10,000 under-fives by 2015, with a particular focus on improving maternal and neonatal health care and survival.

PRIORITY INITIATIVES

National launches of *A Promise Renewed* or *Call to Action* represent more than political commitments alone. They mark the beginning of a process that involves setting in motion the three priority actions.

The first priority action of *A Promise Renewed* is to **sharpen national strategies for maternal, newborn and child health**. It entails **assigning costs to strategies, and setting and monitoring five-year milestones**, enabling governments to prioritize child survival within their current development frameworks and to hold themselves accountable for accelerating progress. **Bangladesh and Zambia** provide two examples of how governments are invigorating their child survival efforts under the banner of *A Promise Renewed*, with a particular focus on the most disadvantaged children and families.

Conventional child survival strategies focus disproportionately on the supply of services and commodities. While critical, the supply side focus is insufficient by itself to end preventable child deaths, particularly among the most disadvantaged. To sustain and deepen results, greater emphasis needs to be placed on building community demand for quality care; removing barriers to access; promoting health behaviours; and establishing shared responsibility for child survival initiatives among all stakeholders.

The second priority action involves **mobilizing broad-based accountability for the goals of *A Promise Renewed***. No one

Zambia's national agenda for equity in child survival

In recent years, equity has become a key focus of global efforts to improve child survival, as it has become clear that the push to end preventable child deaths cannot succeed without a stronger focus on the poorest and most disadvantaged children. This realization is changing the way that child survival efforts are planned and implemented.

One key example is the new national agenda for equity in child survival adopted by the Government of **Zambia**, in which it applied an innovative and equity-focused approach. First, it undertook a national disparity analysis to pinpoint disparities in child survival and development across the country; 16 districts most deprived of essential services were identified. Second, using UNICEF's Monitoring of Results for Equity System (MoRES) framework, the Government identified the key bottlenecks impeding service delivery and the barriers obstructing demand for services among populations. Third, under the auspices of the movement for *A Promise Renewed*, in April 2013, the Government brought together all partners to formulate a national response and acceleration strategy. The result was the creation and launch of a national agenda on equity in child survival that focuses specifically on the needs of the most deprived women and children.

The focus on equity is changing the way governments, civil society and the private sector see, think and act on child deprivations. Zambia's approach has been adopted in **the Democratic Republic of the Congo**, and several other countries have expressed their interest.

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Bangladesh commits to deepen already strong gains in child survival

In July 2013, the Government of **Bangladesh** announced its commitment to reducing child deaths by an additional 108,000 annually, as it launched a bold initiative under the banner of *A Promise Renewed*. The goal is to bring down child deaths to 20 per 1,000 live births by 2035, by progressively reducing under-five child mortality, with a particular focus on cutting the neonatal mortality rate. The initiative — *Ending Preventable Child Deaths by 2035: Bangladesh Call for Action* — was launched by the Ministry of Health and other stakeholders including civil society organizations and professional associations.

The initiative's goal is ambitious, but in 2000 when the MDGs were launched, very few would have guessed that Bangladesh would be able, not only to achieve MDG 4, but also to do so well before the target date. In the past five years, Bangladesh has made strong progress in key maternal, newborn and child survival interventions.

The *Bangladesh Call for Action* identifies a series of measures aimed at expanding the coverage of existing interventions, such as the provision of skilled attendants at birth, and new interventions, including pneumococcal and rotavirus vaccines. Equity lies at the core of the new initiative. Despite Bangladesh's significant progress in reducing child mortality in all quintiles, the gap in child mortality rates between the richest and poorest has scarcely narrowed. Specific coverage targets have been set for each of the key interventions using a new equity platform developed by UNICEF. Tracer interventions will be monitored to verify that high levels of effective coverage are achieved with equity. There will be a particular focus on urban slums, areas with ethnic minorities such as the Chittagong Hill Tracts, and low-performing districts.

The *Bangladesh Call for Action* also acknowledges that it is imperative to tackle long-standing and emerging threats to young lives. For example, drowning is an increasing concern. The *Call for Action* seeks to scale up innovative, community-based approaches to prevent drowning, such as the Anchal and Swim Safe interventions. It also commits the country to expanding nutrition-specific actions, building on the solid progress achieved in raising the national rate of exclusive breastfeeding during the first six months of a child's life to more than 60%.

Planned next steps include revising the operational plans of the Health, Nutrition and Population Sector Development Programme to reflect the *Call for Action* and expanding the use of communications technology to generate local health reports and maps and support accountability mechanisms. The *Call for Action* aims to build on Bangladesh's strong history of grassroots movements to bring about changes in social norms, such as the dramatic reduction of open defecation achieved during the last 20 years. From the grassroots to the executive and legislative levels, everyone will have an important role to play.

government, business, or civil society organization can reduce preventable child deaths independently. Each stakeholder has a role to play. And while governments bear the burden of overall accountability for children's survival, civil society organizations have an important role in pushing the child survival agenda forward. They can seize the initiative by educating citizens on government commitments and on child mortality in their communities, campaigning for the policies and services needed in the most disadvantaged segments of society, and organizing and supporting community-led efforts in support of child survival.

The final priority action focuses on **monitoring and reporting progress**. If the world is to end preventable child deaths within a generation, there must be greater accountability for keeping the promises made to the world's children. Ac-

countability can be strengthened only if citizens know what commitments their governments have made and can see evidence of progress or the lack thereof. Setting, monitoring and publicizing progress against specific national goals for maternal and child survival lets citizens track the gains made locally and nationally and provides a basis for them to support government-led efforts to close the gaps that remain.

RE-ENERGIZING THE GLOBAL CHILD SURVIVAL MOVEMENT

Bold targets for maternal, newborn and child survival can be achieved only through the collective and coordinated engagement of all organizations and partners — public and private — that are committed to the well-being of children

and women. The global partners that support *A Promise Renewed* coordinate their actions and advocacy through such forums as the International Health Partnership (IHP+), the H4+ (a joint effort of United Nations organizations to accelerate progress for women's and children's health) and the Partnership for Maternal, Newborn and Child Health (PMNCH). Since the launch of *A Promise Renewed*, global health partnerships have continued to build on the considerable efforts of the past decade in saving and improving child and maternal lives.

- The *United Nations Commission on Life-Saving Commodities for Women and Children* promotes the availability, affordability, accessibility and rational use of essential commodities for the health of women and children.
- *Scaling Up Nutrition* unites governments, civil society, the United Nations, businesses and researchers in a global effort to curb malnutrition.
- *Every Newborn*, an action plan that aims to end preventable deaths, brings together a broad coalition of partners dedicated to identifying and integrating critical strategies for reproductive, maternal and child health, with the goal of saving the lives of newborns and mothers.
- The integrated *Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea* (GAPPD) proposes a cohesive approach to ending preventable deaths caused by pneumonia and diarrhoea. GAPPD promotes healthy environments, identifies practices that protect children from disease, and advocates for access to appropriate measures to prevent and treat pneumonia and diarrhoea.

Focused on addressing some of the major causes of maternal and newborn mortality, these global initiatives add momentum to the multiple efforts that are already under way to save 16 million lives in the world's 49 poorest countries by 2015, the goal outlined in the United Nations Secretary-General's *Every Woman Every Child* strategy.

Regional forums are essential means for mobilizing governments, civil society, the United Nations and the private sector in pursuit of the goals of *A Promise Renewed*. One such forum was the PMNCH-sponsored Asia-Pacific Lead-

ership and Policy Dialogue for Women's and Children's Health, held in Manila in November 2012.

Another example was the high-level meeting on Saving the Lives of Mothers and Children, sponsored by the World Health Organization (WHO), UNICEF and the United Nations Population Fund (UNFPA) and held in Dubai in January 2013. A Declaration on accelerating progress on maternal, newborn, child and adolescent health was issued at this meeting; it is being followed up with detailed action plans, including cost estimates, for the 10 priority countries in the eastern Mediterranean area that have some of the highest child mortality rates found outside of sub-Saharan Africa.

CITIZEN-LED ACCOUNTABILITY FOR CHILD SURVIVAL

Partnerships and movements to address specific life-threatening diseases and conditions among children are being complemented by new or strengthened alliances among an ever-widening array of stakeholders. Civil society, faith-based groups, the private sector, academia and others are reaching out across their specific technical areas and constituencies to save the lives of children in greater numbers than ever before.

One such partnership is Religions in Action, encompassing more than 300 faith leaders and more than 80 faith-based organizations that have signed the pledge for *A Promise Renewed*. The reach of this partnership is immense: Taken together, the leaders and organizations can potentially reach more than 260 million followers — almost 4 % of the world's population. The partnership has also made a declaration to save and improve the lives of all children by promoting, encouraging and advocating for priority interventions and behaviours in health, nutrition, water, hygiene, sanitation and protection for children (*see panel on page 36 for the full text of the declaration*).

Johnson and Johnson is a partner in the *Mobile Alliance for Maternal Action* (MAMA), an example of how the private and public sectors can team up to help save child lives. The alliance develops mobile phone-ready SMS (text messages) that can be sent directly to mothers to educate and encourage them to take good care of their children. Messages include tips on breastfeeding and nutrition, hand-washing and malaria prevention; reminders about health appointments; and how to access oral rehydration salts (ORS) and zinc to treat diarrhoea, antibiotics to treat pneumonia and other essential drugs. Formed in 2011, the

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Ten Promises to Our Children: Religions in Action

“United in our common goal to save the lives of children in need, we pledge to take action to advance the life-saving behaviors listed below. These priority behaviors — ten life-saving acts for children—can and should be adopted by local families and communities. Doing so will help save the lives and reduce the burden of disease for millions of children. These behaviours are endorsed by UNICEF and other major international aid organizations because they work. Our respective religious doctrines are different, but we are united in the moral conviction that we must save children from needless deaths. Thus, we commit ourselves to ensure that our respective faith communities promote these behaviors sustainably, even as we also support additional needed efforts to strengthen public health systems. We ask all, throughout the world, who have held a child in love, with joy for its life, with tears for its pain, to join us in advancing these life-saving behaviors

To save and improve the lives of all children, we pledge to promote, encourage, and advocate for the following actions by parents and children:

1. Breastfeed all newborns exclusively through the age of six months;
2. Immunize children and newborns with all recommended vaccines, especially through the age of two years;
3. Eliminate all harmful traditions and violence against children, and ensure children grow up in a safe and protective environment;
4. Feed children with proper nutritional foods and micronutrient supplements, where available, and deworm children;
5. Give oral rehydration salts (ORS) and daily zinc supplements for 10–14 days to all children suffering from diarrhea;
6. Promptly seek treatment when a child is sick; give children antibiotic treatment for pneumonia;
7. Have children drink water from a safe source, including water that has been purified and kept clean and covered, away from fecal material;
8. Have all children wash their hands with soap and water especially before touching food, after going to the latrine or toilet and after dealing with refuse;
9. Have all children use a toilet or latrine, and safely dispose of children’s feces; prevent children from defecating in the open;
10. Where relevant, have all children sleep nightly under insecticide-treated bed nets to prevent malaria, and at the immediate onset of fever, seek medical care for children to receive proper malaria testing and treatment.

We are committed to working in collaboration with intergovernmental, governmental and civil society bodies — many of whom, such as UNICEF and leading bilateral development agencies, have been strong promoters of positive multi-religious action — and we urge them to support us to develop simple toolkits and roll-out mechanisms that the leaders and congregations of each religion can use to harness their respective beliefs and believers in the implementation of these vital behavioral changes.”

alliance has programmes in Bangladesh, India and South Africa. In Bangladesh, there are over 100,000 subscribers to the mobile phone service.

Communication technology provides an opportunity to improve health information flows, which in turn is critical for delivering timely and effective interventions to prevent child deaths. An illustrative example is *Saving Mothers, Giving Life*, a programme in Uganda and Zambia that integrates interventions for child and maternal survival, including mobile health solutions. In Zambia, mHealth programmes are making it easier to document patient treatment and referrals. Hundreds of health workers in both countries have been trained to provide emergency obstetric and newborn care, and more facilities can offer these services. Community health workers, known as Village Health Teams in Uganda and Safe Motherhood Action Groups in Zambia, have been trained to encourage birth preparedness as well as to collect data to track progress. Essential supplies and equipment, including 'Mama kits' and toolkits for the treatment of postpartum haemorrhage and eclampsia, have been distributed to promote safe deliveries in health facilities. There are plans to scale up the programme in both Uganda and Zambia beyond the eight pilot districts and to expand it to other countries in sub-Saharan Africa.

CHILD SURVIVAL: A SHARED RESPONSIBILITY

A Promise Renewed is based on the ethos that child survival is a shared responsibility. While governments bear overall responsibility and accountability, citizens, civil society organizations and private sector entities are increasingly becoming involved by taking direct action and mobilizing their constituencies to do the same.

And it is action that is needed. The world now knows more than ever before about how to end preventable child deaths through improvements in disease prevention and treatment, childcare and nutrition, water and sanitation, education, laws and policies — and that knowledge is growing. But reaping the benefits of knowledge requires action. The sooner urgent action can be initiated, the closer we move towards a world in which no mother or child dies from preventable causes.

The cost of inaction is alarmingly high. If current trends persist, the world will not meet MDG 4 until 2028. And if that happens, between 2015 and 2028 approximately 35 million children will die who could have lived had MDG 4 been met on time. That is why *A Promise Renewed* was born — to do

everything possible in the remaining years before the 2015 deadline to accelerate progress towards meeting MDG 4, and set the grounds for faster progress in the years to come.

The first year of *A Promise Renewed* has laid the foundation for a truly global, broad-based movement for child survival in the twentieth-first century. But the task has only just begun. Work is ongoing to encourage more and more countries to take action necessary to meet their commitments made under the banner of *A Promise Renewed*. New and expanded monitoring and accountability mechanisms are being developed for civil society to track progress and hold all to the promises they have made.

The analysis presented in this report illustrates the tremendous progress that is possible when countries and their citizens are committed to child survival. *A Promise Renewed* strives to make that potential a reality for every child in every community. It is time for us all to share responsibility for the promise to give every child an equal chance to survive.

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 - 3 **Note on interpretation of the regional estimates in this text and succeeding figures:**
 - Regional estimates summarize the average experience of changes in under-five mortality by subgroups across countries. They do *not* take account of the differences in the total number of under-five deaths across countries or subgroups.
 - Countries with a large number of observations with small standard errors provide more information (i.e., have a greater influence on the regional average) than countries with fewer observations with larger standard errors.
 - In the hierarchical model, country coefficients can be interpreted as a weighted average of estimated coefficient from a fit to data from the country alone, and a regional coefficient informed by all countries in the region. The more information in the country of interest, the more its estimates will be determined by its own data. For countries with less information, estimates will be more influenced by the regional experience. In particular, for countries with one data point only, the trend line is determined by the regional trend.
- Caveats of the study**
- With exception of sub-Saharan Africa, available data for other regions are not entirely representative and therefore should be interpreted with caution.
 - Regional averages are not weighted by population, thus small countries may disproportionately affect the average.
 - There is wide uncertainty around estimates; therefore estimates should be interpreted with caution.

CHAPTER 2

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CHAPTER 3

- 1 Based on the latest estimates generated by the UN Inter-agency Group for Child Mortality Estimation (IGME), 22% (12 out of 54 African countries) are on track to achieve MDG 4, and five African countries have already reduced the under-five mortality rate to 20 deaths or less per 1,000 live births; UNICEF analyses based on IGME 2013.



Tables: Country and regional estimates of child mortality and causes of under-five deaths

Country estimates of child mortality and causes of under-five deaths

	Under-five mortality rank	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
					Decline (%) 1990–2012	Annual rate of reduction (%) 1990–2012										
Countries and areas	2012	1990	2000	2012			1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Afghanistan	18	176	134	99	44	2.6	96	103	120	71	66	73	50	36	27	37
Albania	109	43	29	17	61	4.2	4	1	37	15	3	1	17	8	2	0
Algeria	95	50	35	20	60	4.1	41	20	42	17	34	17	23	12	19	12
Andorra	185	8	5	3	61	4.3	0	0	7	3	0	0	2	1	0	0
Angola	2	213	203	164	23	1.2	106	148	126	100	64	90	52	45	26	41
Antigua and Barbuda	136	24	16	10	58	3.9	0	0	20	9	0	0	12	6	0	0
Argentina	120	28	20	14	48	3.0	20	10	24	13	18	9	16	8	12	5
Armenia	112	49	30	16	67	5.0	4	1	42	15	3	1	24	10	2	0
Australia	161	9	6	5	47	2.9	2	2	8	4	2	1	5	3	1	1
Austria	170	10	6	4	58	3.9	1	0	8	3	1	0	5	2	0	0
Azerbaijan	68	93	72	35	62	4.4	19	6	74	31	15	5	29	15	6	3
Bahamas	109	23	17	17	27	1.4	0	0	20	14	0	0	10	8	0	0
Bahrain	136	23	13	10	59	4.0	0	0	20	8	0	0	8	4	0	0
Bangladesh	60	144	88	41	72	5.7	531	127	100	33	365	102	54	24	200	76
Barbados	100	18	18	18	-5	-0.2	0	0	16	17	0	0	9	10	0	0
Belarus	161	17	14	5	69	5.3	3	1	14	4	2	0	7	3	1	0
Belgium	170	10	6	4	58	3.9	1	1	8	3	1	0	5	2	1	0
Belize	100	43	25	18	58	3.9	0	0	35	16	0	0	17	9	0	0
Benin	22	181	147	90	50	3.2	39	32	109	59	24	21	41	28	9	10
Bhutan	57	131	80	45	66	4.9	3	1	92	36	2	1	42	21	1	0
Bolivia (Plurinational State of)	60	123	78	41	66	5.0	29	11	85	33	20	9	38	19	9	5
Bosnia and Herzegovina	150	18	10	7	64	4.6	1	0	16	6	1	0	11	4	1	0
Botswana	52	48	85	53	-11	-0.5	2	3	38	41	2	2	25	29	1	1
Brazil	120	62	33	14	77	6.6	219	42	52	13	180	37	28	9	98	27
Brunei Darussalam	147	12	10	8	35	2.0	0	0	9	7	0	0	7	4	0	0
Bulgaria	129	22	21	12	45	2.7	3	1	18	11	2	1	12	7	1	0
Burkina Faso	14	202	186	102	49	3.1	79	66	102	66	40	43	40	28	16	18
Burundi	12	164	150	104	36	2.1	43	43	100	67	27	29	46	36	12	15
Cambodia	62	116	111	40	66	4.9	40	14	85	34	28	12	37	18	12	7
Cameroon	21	135	150	95	30	1.6	69	74	84	61	43	48	35	28	18	22
Canada	161	8	6	5	36	2.0	3	2	7	5	3	2	4	4	2	1
Cape Verde	88	62	38	22	64	4.6	1	0	47	19	1	0	21	10	0	0
Central African Republic	6	171	164	129	25	1.3	20	19	113	91	13	14	47	41	5	6
Chad	3	209	189	150	28	1.5	59	82	114	89	32	50	47	40	13	22
Chile	141	19	11	9	52	3.4	6	2	16	8	5	2	8	5	3	1
China	120	54	37	14	74	6.1	1,647	258	42	12	1,315	224	25	9	760	157
Colombia	100	35	25	18	50	3.1	31	16	29	15	26	14	20	11	17	10
Comoros	30	124	99	78	37	2.1	2	2	87	58	1	1	41	31	1	1
Congo	19	100	118	96	4	0.2	9	15	65	62	6	10	33	32	3	5
Cook Islands	132	25	17	11	57	3.9	0	0	21	9	0	0	12	6	0	0
Costa Rica	136	17	13	10	41	2.4	1	1	14	9	1	1	9	7	1	0
Côte d'Ivoire	11	152	145	108	29	1.6	73	75	104	76	51	54	48	40	23	29
Croatia	161	13	8	5	64	4.6	1	0	11	4	1	0	8	3	0	0
Cuba	157	13	8	6	58	4.0	2	1	11	4	2	0	7	3	1	0
Cyprus	185	11	7	3	71	5.7	0	0	10	3	0	0	5	2	0	0
Czech Republic	170	15	7	4	74	6.1	2	0	13	3	2	0	9	2	1	0
Democratic People's Republic of Korea	77	44	60	29	34	1.9	16	10	33	23	12	8	21	16	7	5

DEFINITIONS OF INDICATORS

Under-five mortality rate (U5MR) — Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births.

Infant mortality rate — Probability of dying between birth and exactly 1 year of age, expressed per 1,000 live births.

Neonatal mortality rate — Probability of dying in the first month of life, expressed per 1,000 live births.

Country estimates of child mortality and causes of under-five deaths

Sex-specific under-five mortality rate (deaths per 1,000 live births)				Share of neonatal deaths in under-five deaths (%)		Deaths among children under 5 years of age due to: (%)										Country and areas
1990		2012		1990	2012	2012										
Male	Female	Male	Female			Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total		
180	172	102	95	29	36	21	12	0	0	7	5	32	22	100	Afghanistan	
46	39	18	15	41	49	11	1	0	0	0	10	47	32	100	Albania	
54	45	22	18	46	59	13	4	0	1	0	6	53	23	100	Algeria	
9	8	4	3	25	50	3	0	0	0	0	6	49	41	100	Andorra	
223	203	171	156	25	28	18	15	10	1	0	4	25	28	100	Angola	
26	21	11	9	48	53	0	0	0	0	0	16	53	31	100	Antigua and Barbuda	
31	24	16	13	57	53	9	2	0	0	0	7	51	31	100	Argentina	
54	44	18	15	48	61	11	1	0	0	0	8	57	23	100	Armenia	
10	8	5	4	51	57	3	0	0	0	0	8	57	32	100	Australia	
11	8	4	4	47	60	2	0	0	0	0	5	59	34	100	Austria	
100	85	38	32	31	43	16	7	0	0	0	7	39	31	100	Azerbaijan	
25	21	18	16	42	46	27	0	0	0	0	7	36	30	100	Bahamas	
24	22	10	9	34	38	2	0	0	0	0	6	38	54	100	Bahrain	
146	141	44	38	38	60	13	5	1	0	0	6	57	18	100	Bangladesh	
19	16	20	17	51	52	6	0	0	0	0	0	52	42	100	Barbados	
19	14	6	5	44	48	7	0	0	0	0	7	45	40	100	Belarus	
11	9	5	4	46	57	1	1	0	0	0	8	56	34	100	Belgium	
47	39	20	16	39	47	7	10	0	0	0	13	47	23	100	Belize	
187	173	93	85	23	31	17	9	22	1	1	4	26	22	100	Benin	
137	125	49	40	33	48	19	6	0	0	0	6	43	26	100	Bhutan	
130	117	45	38	31	46	14	8	0	0	0	6	43	28	100	Bolivia (Plurinational State of)	
20	16	7	6	60	64	9	0	0	0	0	5	59	26	100	Bosnia and Herzegovina	
52	44	58	49	53	54	11	4	0	5	0	6	50	23	100	Botswana	
68	56	16	13	45	64	7	3	0	0	0	5	62	22	100	Brazil	
13	11	9	7	54	54	5	0	0	0	0	9	52	34	100	Brunei Darussalam	
25	19	13	11	54	55	23	1	0	0	0	4	50	22	100	Bulgaria	
209	193	108	97	20	27	17	10	19	1	6	3	22	22	100	Burkina Faso	
173	154	111	98	28	35	20	14	3	1	0	5	33	25	100	Burundi	
124	109	44	35	30	47	15	6	1	0	0	8	44	25	100	Cambodia	
142	127	101	89	26	30	16	12	15	3	0	4	27	24	100	Cameroon	
9	7	6	5	53	66	2	0	0	0	0	5	64	28	100	Canada	
66	57	25	20	35	45	15	7	1	4	0	3	42	28	100	Cape Verde	
178	164	135	122	28	32	15	10	23	3	2	3	28	16	100	Central African Republic	
218	199	157	142	23	27	18	12	18	2	6	3	24	17	100	Chad	
21	17	10	8	44	58	6	1	0	0	0	7	57	29	100	Chile	
56	52	15	13	46	61	16	3	0	0	0	11	55	15	100	China	
39	31	20	16	56	64	9	4	0	0	0	6	61	20	100	Colombia	
131	117	83	72	32	40	17	8	13	1	0	4	34	23	100	Comoros	
106	94	101	91	33	34	15	8	25	3	0	3	27	19	100	Congo	
28	22	12	9	46	50	3	1	0	0	0	9	49	38	100	Cook Islands	
19	15	11	9	54	67	3	1	0	0	0	4	66	26	100	Costa Rica	
163	140	116	99	32	38	15	8	23	2	0	3	32	16	100	Côte d'Ivoire	
14	11	5	4	65	66	3	0	0	0	0	7	63	27	100	Croatia	
15	11	6	5	53	47	11	2	0	0	0	9	40	38	100	Cuba	
12	10	4	3	47	48	3	0	0	0	0	5	48	44	100	Cyprus	
17	13	4	3	65	58	5	1	0	0	0	7	55	32	100	Czech Republic	
47	40	32	26	46	54	14	5	0	0	0	6	52	23	100	Democratic People's Republic of Korea	

— Not available.

* Excludes pneumonia, diarrhoea, malaria, AIDS, measles and injuries occurring during the neonatal period.

Numbers and percentages are rounded and therefore may not sum to totals. All calculations are based on unrounded numbers.

Source: Mortality rates and number of deaths, IGME 2013; cause of death, drawing on provisional analyses by WHO and CHERG 2013. References: Global, Regional, and National Causes of Child Mortality: An updated systematic analysis for 2010 with time trends since 2000', The Lancet, vol. 379, no. 9832, 9 June 2012, pp. 2151-2161. WHO technical paper available at <http://www.who.int/healthinfo/statistics/ChildCOD_method.pdf>.

Country estimates of child mortality and causes of under-five deaths

	Under-five mortality rank	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
Countries and areas	2012	1990	2000	2012	Decline (%) 1990–2012	Annual rate of reduction (%) 1990–2012	1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Democratic Republic of the Congo	5	171	171	146	15	0.7	267	391	112	100	178	271	47	44	75	118
Denmark	170	9	6	4	59	4.0	1	0	7	3	0	0	5	3	0	0
Djibouti	28	119	108	81	32	1.8	3	2	93	66	3	2	40	31	1	1
Dominica	125	17	16	13	27	1.4	0	0	14	12	0	0	12	9	0	0
Dominican Republic	79	60	40	27	55	3.6	13	6	46	23	10	5	27	15	6	3
Ecuador	83	56	34	23	58	4.0	17	8	44	20	13	6	20	10	6	3
Egypt	91	86	45	21	75	6.4	155	40	63	18	114	35	33	12	59	23
El Salvador	112	59	32	16	73	6.0	10	2	46	14	8	2	17	6	3	1
Equatorial Guinea	16	182	143	100	45	2.7	3	3	123	72	2	2	47	34	1	1
Eritrea	55	150	89	52	65	4.8	21	11	92	37	13	8	35	18	5	4
Estonia	170	20	11	4	82	7.9	0	0	17	3	0	0	11	2	0	0
Ethiopia	40	204	146	68	67	5.0	444	205	121	47	267	140	54	29	120	88
Fiji	88	31	24	22	27	1.4	1	0	26	19	1	0	13	10	0	0
Finland	185	7	4	3	57	3.8	0	0	6	2	0	0	4	2	0	0
France	170	9	5	4	54	3.6	6	3	7	3	5	3	4	2	2	2
Gabon	42	92	86	62	33	1.8	3	3	60	42	2	2	33	25	1	1
Gambia	33	170	116	73	57	3.8	7	5	80	49	3	4	46	28	2	2
Georgia	95	35	34	20	43	2.5	3	1	30	18	3	1	23	15	2	1
Germany	170	9	5	4	52	3.3	7	3	7	3	6	2	4	2	3	2
Ghana	36	128	103	72	44	2.6	70	56	80	49	44	38	40	28	22	22
Greece	161	13	8	5	62	4.4	1	1	11	4	1	0	9	3	1	0
Grenada	120	22	16	14	39	2.2	0	0	18	11	0	0	10	7	0	0
Guatemala	71	80	51	32	60	4.2	27	15	60	27	20	12	29	15	10	7
Guinea	15	241	171	101	58	3.9	64	41	142	65	38	27	54	34	14	14
Guinea-Bissau	6	206	174	129	37	2.1	9	8	122	81	5	5	58	46	2	3
Guyana	68	60	46	35	41	2.4	1	1	46	29	1	0	28	19	1	0
Haiti	31	144	105	76	48	2.9	36	20	100	57	25	15	37	25	9	7
Holy See	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Honduras	83	59	38	23	61	4.3	11	5	46	19	8	4	23	12	4	2
Hungary	157	19	11	6	67	5.1	3	1	17	5	3	1	13	4	2	0
Iceland	194	6	4	2	64	4.7	0	0	5	2	0	0	3	1	0	0
India	49	126	92	56	55	3.6	3,325	1,414	88	44	2,333	1,097	51	31	1,354	779
Indonesia	72	84	52	31	63	4.5	385	152	62	26	279	125	30	15	134	72
Iran (Islamic Republic of)	100	56	35	18	69	5.3	107	26	44	15	82	23	26	11	49	16
Iraq	70	53	45	34	35	2.0	35	35	42	28	28	29	26	19	17	19
Ireland	170	9	7	4	57	3.8	0	0	8	3	0	0	5	2	0	0
Israel	170	12	7	4	64	4.6	1	1	10	3	1	1	6	2	1	0
Italy	170	10	6	4	61	4.3	5	2	8	3	5	2	6	2	4	1
Jamaica	109	30	23	17	44	2.6	2	1	25	14	1	1	17	11	1	1
Japan	185	6	5	3	52	3.4	8	3	5	2	5	2	3	1	3	1
Jordan	97	37	28	19	48	3.0	4	4	30	16	3	3	19	12	2	2
Kazakhstan	97	54	44	19	65	4.8	21	6	46	17	18	6	23	10	9	3
Kenya	33	98	110	73	26	1.4	96	108	64	49	62	72	33	27	32	40
Kiribati	43	94	71	60	36	2.1	0	0	68	46	0	0	29	22	0	0
Kuwait	132	16	13	11	33	1.8	1	1	14	10	1	1	9	6	0	0
Kyrgyzstan	79	71	50	27	62	4.4	10	4	58	24	8	4	29	14	4	2
Lao People's Democratic Republic	36	163	120	72	56	3.7	29	14	112	54	20	10	44	27	8	5
Latvia	141	20	17	9	57	3.9	1	0	17	8	1	0	13	5	1	0
Lebanon	141	33	20	9	72	5.7	2	1	27	8	2	0	16	5	1	0
Lesotho	16	85	114	100	-18	-0.7	5	6	68	74	4	4	45	45	2	3

Country estimates of child mortality and causes of under-five deaths

Sex-specific under-five mortality rate (deaths per 1,000 live births)				Share of neonatal deaths in under-five deaths (%)		Deaths among children under 5 years of age due to: (%)										Country and areas
1990		2012				2012										
Male	Female	Male	Female	1990	2012	Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total		
179	163	154	137	28	30	18	12	16	1	0	3	25	23	100	Democratic Republic of the Congo	
10	8	4	3	52	70	2	0	0	0	0	5	69	23	100	Denmark	
126	112	86	75	35	39	20	10	0	2	2	4	31	31	100	Djibouti	
19	16	14	12	68	77	3	0	0	0	0	0	77	20	100	Dominica	
64	55	30	24	44	55	12	4	0	1	0	6	51	26	100	Dominican Republic	
61	50	26	20	36	44	11	4	0	0	0	10	43	32	100	Ecuador	
86	85	22	20	38	56	7	4	0	0	0	3	56	30	100	Egypt	
64	54	18	14	29	40	12	6	0	2	0	7	38	35	100	El Salvador	
190	174	106	94	27	34	14	7	16	7	3	2	30	21	100	Equatorial Guinea	
161	139	57	47	24	36	19	10	1	1	2	7	34	26	100	Eritrea	
23	18	4	3	56	45	3	0	0	2	0	20	42	33	100	Estonia	
217	190	74	62	27	43	20	10	1	2	0	6	39	21	100	Ethiopia	
34	27	25	20	41	44	10	4	0	0	0	11	43	31	100	Fiji	
7	6	3	3	59	55	4	0	0	0	0	3	53	40	100	Finland	
10	8	5	4	40	56	2	1	0	0	0	6	56	35	100	France	
99	86	67	57	37	41	12	7	15	2	3	3	37	21	100	Gabon	
177	162	78	68	28	40	15	8	19	1	0	3	34	19	100	Gambia	
39	30	22	17	66	74	9	1	0	0	0	6	69	15	100	Georgia	
10	7	5	4	43	59	2	0	0	0	0	6	58	34	100	Germany	
135	121	77	66	32	40	13	7	19	1	0	4	36	19	100	Ghana	
14	11	5	4	71	62	6	0	0	0	0	6	62	26	100	Greece	
24	20	15	12	45	48	0	0	0	0	0	0	48	52	100	Grenada	
85	75	35	29	36	48	15	6	0	1	0	9	45	23	100	Guatemala	
248	233	106	96	23	34	16	9	25	2	1	3	29	16	100	Guinea	
220	191	139	119	28	36	16	11	18	4	0	3	31	18	100	Guinea-Bissau	
67	53	40	31	49	54	6	7	6	2	0	6	52	22	100	Guyana	
152	135	82	69	25	34	22	11	0	1	0	7	31	28	100	Haiti	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Holy See	
64	54	26	20	39	50	14	7	0	1	0	4	47	27	100	Honduras	
21	17	7	6	67	58	4	0	0	0	0	4	56	36	100	Hungary	
7	6	3	2	50	45	0	0	0	0	0	0	45	55	100	Iceland	
121	130	54	59	41	55	21	10	1	0	3	4	43	19	100	India	
90	77	35	27	35	48	14	5	1	1	4	7	45	23	100	Indonesia	
57	56	19	17	46	62	12	3	0	0	0	5	58	21	100	Iran (Islamic Republic of)	
57	49	38	31	50	56	17	5	0	0	0	5	49	23	100	Iraq	
10	8	4	4	54	58	1	0	0	0	0	6	57	35	100	Ireland	
12	11	5	4	53	50	2	0	0	0	0	4	50	44	100	Israel	
11	9	4	4	64	60	1	0	0	0	0	4	60	34	100	Italy	
34	26	19	15	56	64	9	2	0	1	0	7	60	21	100	Jamaica	
7	6	3	3	39	37	6	2	0	0	0	10	36	47	100	Japan	
38	35	20	18	52	61	7	3	0	0	0	8	60	21	100	Jordan	
61	47	22	16	42	54	12	4	0	0	0	7	50	27	100	Kazakhstan	
104	93	78	68	34	37	16	9	2	4	0	6	35	26	100	Kenya	
100	88	65	55	31	36	20	9	0	0	0	9	31	31	100	Kiribati	
18	15	12	10	54	51	5	1	0	0	0	8	50	37	100	Kuwait	
77	64	30	23	41	54	13	5	0	0	0	8	49	25	100	Kyrgyzstan	
170	155	77	66	27	38	19	9	0	0	0	10	36	26	100	Lao People's Democratic Republic	
23	18	9	8	62	61	10	0	0	0	0	6	52	32	100	Latvia	
34	31	10	9	48	59	4	1	0	1	0	4	58	32	100	Lebanon	
91	78	107	92	53	46	11	6	0	19	0	3	43	16	100	Lesotho	

Numbers and percentages are rounded and therefore may not sum to totals. All calculations are based on unrounded numbers.

Country estimates of child mortality and causes of under-five deaths

	Under-five mortality rank	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
					Annual rate of reduction (%)											
Countries and areas	2012	1990	2000	2012	Decline (%) 1990–2012	1990–2012	1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Liberia	32	248	176	75	70	5.4	23	11	165	56	15	8	51	27	5	4
Libya	116	43	28	15	64	4.7	5	2	37	13	4	2	21	9	2	1
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lithuania	161	17	12	5	68	5.1	1	0	14	4	1	0	9	2	1	0
Luxembourg	194	9	5	2	75	6.2	0	0	7	2	0	0	4	1	0	0
Madagascar	46	159	109	58	63	4.6	80	44	97	41	52	31	40	22	21	17
Malawi	38	244	174	71	71	5.6	103	43	143	46	60	28	50	24	21	15
Malaysia	141	17	10	9	49	3.0	8	4	14	7	7	4	8	5	4	2
Maldives	132	94	45	11	89	10.0	1	0	68	9	1	0	34	6	0	0
Mali	8	253	220	128	49	3.1	91	83	130	80	46	53	59	42	21	28
Malta	150	11	8	7	40	2.3	0	0	10	6	0	0	7	5	0	0
Marshall Islands	66	49	41	38	23	1.2	0	0	39	31	0	0	19	16	0	0
Mauritania	27	128	111	84	34	1.9	10	11	82	65	7	8	43	34	3	4
Mauritius	116	23	19	15	34	1.9	0	0	20	13	0	0	16	9	0	0
Mexico	112	46	25	16	65	4.8	112	37	37	14	89	32	16	7	40	16
Micronesia (Federated States of)	64	55	54	39	30	1.6	0	0	43	31	0	0	21	16	0	0
Monaco	170	8	5	4	51	3.3	0	0	6	3	0	0	4	2	0	0
Mongolia	78	107	63	28	74	6.2	8	2	76	23	6	2	25	10	2	1
Montenegro	157	17	14	6	65	4.8	0	0	15	6	0	0	11	4	0	0
Morocco	72	80	50	31	61	4.3	56	23	63	27	44	20	35	18	24	13
Mozambique	22	233	166	90	61	4.3	132	84	155	63	87	59	54	30	30	28
Myanmar	55	106	79	52	51	3.2	117	48	76	41	81	38	41	26	44	24
Namibia	64	73	73	39	47	2.9	4	2	49	28	3	2	29	18	2	1
Nauru	67	58	42	37	36	2.0	0	0	45	30	0	0	28	21	0	0
Nepal	59	142	82	42	71	5.6	95	24	99	34	66	19	53	24	36	14
Netherlands	170	8	6	4	51	3.2	2	1	7	3	1	1	5	3	1	0
New Zealand	157	11	7	6	49	3.1	1	0	9	5	1	0	4	3	0	0
Nicaragua	82	66	40	24	63	4.5	10	3	50	21	7	3	25	12	4	2
Niger	10	326	227	114	65	4.8	129	91	137	63	54	52	48	28	19	23
Nigeria	9	213	188	124	42	2.5	849	827	126	78	502	528	52	39	207	267
Niue	81	14	23	25	-81	-2.7	0	0	12	21	0	0	7	12	0	0
Norway	185	9	5	3	68	5.2	1	0	7	2	0	0	4	2	0	0
Oman	129	39	17	12	70	5.5	3	1	32	10	2	1	18	7	1	1
Pakistan	26	138	112	86	38	2.2	619	409	106	69	479	330	56	42	253	202
Palau	91	34	28	21	39	2.2	0	0	30	15	0	0	15	10	0	0
Panama	97	32	26	19	42	2.4	2	1	26	16	2	1	13	9	1	1
Papua New Guinea	41	89	79	63	29	1.6	12	13	65	48	9	10	30	24	4	5
Paraguay	88	46	33	22	52	3.3	6	3	36	19	5	3	22	12	3	2
Peru	100	79	40	18	77	6.7	51	11	56	14	37	8	28	9	18	6
Philippines	75	59	40	30	49	3.1	119	69	41	24	85	54	23	14	47	32
Poland	161	17	9	5	71	5.7	9	2	15	4	8	2	11	3	6	1
Portugal	170	15	7	4	76	6.4	2	0	12	3	1	0	7	2	1	0
Qatar	150	21	12	7	64	4.7	0	0	18	6	0	0	10	4	0	0
Republic of Korea	170	7	6	4	46	2.8	4	2	6	3	3	2	3	2	2	1
Republic of Moldova	100	32	30	18	45	2.7	3	1	27	15	2	1	14	9	1	0
Romania	129	38	27	12	68	5.1	16	3	31	11	14	2	18	8	8	2
Russian Federation	136	26	23	10	61	4.2	59	17	22	9	49	15	14	6	32	9
Rwanda	50	151	182	55	64	4.6	49	24	92	39	30	17	38	21	13	9
Saint Kitts and Nevis	141	29	18	9	68	5.2	0	0	23	7	0	0	18	7	0	0
Saint Lucia	100	22	18	18	22	1.1	0	0	18	15	0	0	13	10	0	0

Country estimates of child mortality and causes of under-five deaths

Sex-specific under-five mortality rate (deaths per 1,000 live births)				Share of neonatal deaths in under-five deaths (%)		Deaths among children under 5 years of age due to: (%)										Country and areas
1990		2012		1990	2012	2012										
Male	Female	Male	Female			Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total		
260	235	80	69	20	36	14	7	17	1	9	4	32	16	100	Liberia	
47	39	17	14	48	61	6	2	0	0	0	9	61	23	100	Libya	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Liechtenstein	
19	15	6	5	56	39	10	1	0	0	0	17	37	35	100	Lithuania	
10	8	2	2	50	36	0	0	0	0	0	32	36	32	100	Luxembourg	
166	151	62	54	27	38	17	10	6	1	0	7	36	23	100	Madagascar	
254	234	76	66	21	34	14	6	13	12	0	4	31	19	100	Malawi	
18	15	9	8	49	53	5	1	0	1	0	6	51	35	100	Malaysia	
100	88	12	9	36	60	7	2	0	0	0	3	58	30	100	Maldives	
262	244	134	122	23	33	19	12	17	1	2	3	27	20	100	Mali	
12	10	7	6	66	68	0	0	0	0	0	0	68	32	100	Malta	
54	44	42	33	39	40	18	6	0	0	0	9	34	32	100	Marshall Islands	
137	118	92	76	34	40	16	10	6	0	4	4	36	23	100	Mauritania	
26	20	17	13	68	61	9	0	0	1	0	8	56	25	100	Mauritius	
50	42	18	15	35	44	12	4	0	0	0	9	42	33	100	Mexico	
60	51	42	35	37	42	20	6	0	0	0	7	35	31	100	Micronesia (Federated States of)	
9	7	4	4	50	100	1	0	0	0	0	1	98	0	100	Monaco	
122	91	33	22	23	36	14	6	0	0	1	9	33	36	100	Mongolia	
18	16	6	6	62	65	0	0	0	0	0	0	65	35	100	Montenegro	
85	75	34	28	43	59	14	5	0	0	0	6	53	22	100	Morocco	
241	223	94	85	23	34	16	8	19	6	0	4	29	18	100	Mozambique	
114	99	58	47	38	51	16	6	2	0	2	5	48	21	100	Myanmar	
78	68	43	35	41	47	12	5	0	9	2	6	44	22	100	Namibia	
63	53	41	33	45	50	17	7	0	0	1	5	42	28	100	Nauru	
143	141	44	39	38	57	14	7	0	0	0	7	55	18	100	Nepal	
9	7	5	4	58	68	3	0	0	0	0	4	67	26	100	Netherlands	
13	10	6	5	40	49	8	0	0	0	0	17	43	32	100	New Zealand	
71	61	27	22	37	49	16	8	0	1	0	4	46	25	100	Nicaragua	
330	322	117	110	14	26	20	13	17	0	0	5	23	23	100	Niger	
222	203	129	118	24	32	17	11	17	3	0	3	29	20	100	Nigeria	
15	12	28	22	0	0	11	3	0	0	0	23	0	63	100	Niue	
10	8	3	3	50	61	1	0	0	0	0	3	60	36	100	Norway	
43	36	13	10	47	59	5	1	0	0	0	4	58	31	100	Oman	
141	136	90	82	41	50	18	9	0	0	0	5	45	22	100	Pakistan	
38	30	23	19	40	40	9	2	0	0	3	18	39	28	100	Palau	
35	28	21	16	41	46	9	11	0	0	0	6	43	29	100	Panama	
95	83	68	58	34	39	17	8	8	1	0	7	36	24	100	Papua New Guinea	
49	42	24	20	47	56	12	5	0	0	0	5	54	25	100	Paraguay	
84	75	20	16	35	51	11	4	0	1	0	7	48	30	100	Peru	
64	53	33	26	39	47	15	5	0	0	0	9	45	25	100	Philippines	
20	15	5	5	64	58	5	0	0	0	0	4	57	33	100	Poland	
16	13	4	3	46	49	3	0	0	0	0	8	47	42	100	Portugal	
22	19	8	7	47	54	3	0	0	0	0	7	53	36	100	Qatar	
7	7	4	4	42	43	3	1	0	0	0	11	41	43	100	Republic of Korea	
36	28	20	16	43	49	21	0	0	0	0	12	40	27	100	Republic of Moldova	
42	34	14	11	49	62	27	0	0	0	0	7	53	13	100	Romania	
30	22	12	9	54	53	8	1	0	1	0	9	50	31	100	Russian Federation	
159	143	59	51	25	39	18	8	2	1	0	8	36	27	100	Rwanda	
32	26	10	8	62	78	0	0	0	0	0	7	78	15	100	Saint Kitts and Nevis	
25	20	19	16	57	60	6	1	0	0	0	6	58	28	100	Saint Lucia	

Country estimates of child mortality and causes of under-five deaths

	Under-five mortality rank	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
					Annual rate of reduction (%)											
Countries and areas	2012	1990	2000	2012	Decline (%) 1990–2012	1990–2012	1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Saint Vincent and the Grenadines	83	25	22	23	5	0.2	0	0	21	21	0	0	15	15	0	0
Samoa	100	30	22	18	41	2.4	0	0	25	15	0	0	11	7	0	0
San Marino	185	11	6	3	70	5.4	0	0	10	3	0	0	5	1	0	0
Sao Tome and Principe	52	104	87	53	49	3.0	0	0	67	38	0	0	31	20	0	0
Saudi Arabia	141	47	22	9	82	7.7	26	5	37	7	20	4	21	5	12	3
Senegal	43	142	139	60	58	3.9	44	30	71	45	22	23	41	24	13	12
Serbia	150	28	13	7	77	6.6	4	1	24	6	4	1	17	4	3	0
Seychelles	125	17	14	13	21	1.1	0	0	14	11	0	0	10	8	0	0
Sierra Leone	1	257	234	182	29	1.6	44	39	153	117	26	25	59	50	10	10
Singapore	185	8	4	3	62	4.4	0	0	6	2	0	0	4	1	0	0
Slovakia	147	18	12	8	58	3.9	1	0	16	6	1	0	12	4	1	0
Slovenia	185	10	6	3	70	5.5	0	0	9	3	0	0	6	2	0	0
Solomon Islands	72	39	35	31	19	1.0	0	1	31	26	0	0	16	14	0	0
Somalia	4	177	171	147	17	0.8	50	65	107	91	31	40	50	46	15	20
South Africa	57	61	74	45	27	1.4	65	50	47	33	50	37	21	15	22	17
South Sudan	12	251	181	104	59	4.0	66	40	149	67	40	26	57	36	15	14
Spain	161	11	7	5	59	4.1	5	2	9	4	4	2	7	3	3	1
Sri Lanka	136	21	17	10	55	3.6	7	4	18	8	6	3	13	6	4	2
State of Palestine	83	43	30	23	47	2.9	4	3	35	19	3	2	21	13	2	2
Sudan	33	128	106	73	43	2.6	101	89	80	49	64	60	40	29	32	35
Suriname	91	51	33	21	59	4.0	0	0	43	19	0	0	23	12	0	0
Swaziland	29	71	121	80	-12	-0.5	3	3	54	56	2	2	29	30	1	1
Sweden	185	7	4	3	58	3.9	1	0	6	2	1	0	4	2	0	0
Switzerland	170	8	6	4	48	2.9	1	0	7	4	1	0	4	3	0	0
Syrian Arab Republic	116	38	24	15	60	4.1	17	8	31	12	14	7	18	9	8	5
Tajikistan	46	105	91	58	44	2.7	23	15	82	49	18	13	33	23	7	6
Thailand	125	38	23	13	65	4.8	42	9	31	11	34	8	19	8	21	6
The former Yugoslav Republic of Macedonia	150	37	16	7	80	7.3	1	0	33	7	1	0	17	6	1	0
Timor-Leste	48	171	106	57	67	5.0	5	2	129	48	3	2	47	24	1	1
Togo	19	143	122	96	33	1.8	22	22	89	62	14	15	41	33	6	8
Tonga	125	23	18	13	44	2.6	0	0	20	11	0	0	11	7	0	0
Trinidad and Tobago	91	33	28	21	38	2.1	1	0	29	18	1	0	22	15	0	0
Tunisia	112	51	30	16	69	5.3	11	3	40	14	9	3	24	10	5	2
Turkey	120	74	37	14	81	7.5	102	18	55	12	76	16	30	9	41	11
Turkmenistan	52	90	79	53	42	2.4	12	6	72	45	10	5	31	22	4	2
Tuvalu	75	58	42	30	48	3.0	0	0	45	25	0	0	22	13	0	0
Uganda	39	178	147	69	61	4.3	145	103	107	45	89	69	39	23	32	35
Ukraine	132	20	19	11	45	2.8	14	6	17	9	12	5	9	5	6	3
United Arab Emirates	147	17	11	8	50	3.2	1	1	14	7	1	1	10	5	0	1
United Kingdom	161	9	7	5	48	3.0	7	4	8	4	6	3	5	3	4	2
United Republic of Tanzania	51	166	132	54	68	5.1	179	98	101	38	110	69	43	21	47	39
United States	150	11	8	7	37	2.1	44	29	9	6	37	25	6	4	22	17
Uruguay	150	23	16	7	69	5.3	1	0	20	6	1	0	11	4	1	0
Uzbekistan	62	74	61	40	46	2.8	54	25	61	34	45	22	21	14	15	9
Vanuatu	100	35	24	18	48	3.0	0	0	29	15	0	0	15	9	0	0
Venezuela (Bolivarian Republic of)	116	30	21	15	48	3.0	17	9	25	13	14	8	15	9	8	5
Viet Nam	83	51	32	23	54	3.6	99	33	36	18	72	26	22	12	44	17
Yemen	43	125	97	60	52	3.3	71	43	88	46	50	34	42	27	24	20
Zambia	25	192	169	89	54	3.5	63	50	114	56	38	33	44	29	14	17
Zimbabwe	22	74	102	90	-21	-0.9	28	39	50	56	18	24	31	39	11	17

Country estimates of child mortality and causes of under-five deaths

Sex-specific under-five mortality rate (deaths per 1,000 live births)				Share of neonatal deaths in under-five deaths (%)		Deaths among children under 5 years of age due to: (%)										
1990		2012				2012										Country and areas
Male	Female	Male	Female	1990	2012	Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total		
27	23	25	21	62	61	2	0	0	0	0	19	59	19	100	Saint Vincent and the Grenadines	
33	28	19	16	37	40	11	4	0	0	0	7	39	40	100	Samoa	
12	10	4	3	33	0	3	0	0	0	0	8	0	89	100	San Marino	
110	98	58	49	28	38	16	9	10	1	1	4	33	27	100	Sao Tome and Principe	
50	43	9	8	45	60	4	1	0	0	0	4	59	32	100	Saudi Arabia	
148	135	65	55	30	42	15	7	15	1	1	5	37	19	100	Senegal	
30	26	7	6	61	62	4	0	0	0	0	4	60	31	100	Serbia	
18	15	14	12	63	63	5	1	0	0	0	9	62	23	100	Seychelles	
269	246	190	173	22	27	19	14	15	0	0	3	23	24	100	Sierra Leone	
8	7	3	3	48	42	7	1	0	0	0	4	42	46	100	Singapore	
20	16	8	7	68	52	8	0	0	0	0	6	51	34	100	Slovakia	
11	9	3	3	54	59	2	2	0	0	0	7	59	30	100	Slovenia	
42	35	34	28	43	44	16	5	5	0	0	10	39	24	100	Solomon Islands	
185	169	154	141	29	31	21	14	6	0	11	3	26	18	100	Somalia	
67	55	49	40	34	34	13	6	0	17	0	5	31	28	100	South Africa	
262	241	109	98	23	35	18	11	3	3	0	6	32	26	100	South Sudan	
12	10	5	4	61	60	2	1	0	0	0	5	59	33	100	Spain	
23	20	10	9	58	64	5	2	0	0	0	4	63	26	100	Sri Lanka	
45	40	24	21	49	57	—	—	—	—	—	—	—	—	—	State of Palestine	
136	120	79	67	32	39	18	11	3	1	1	6	37	25	100	Sudan	
56	45	23	18	44	56	7	3	0	3	0	7	55	26	100	Suriname	
76	66	85	75	42	37	14	7	0	15	0	4	35	25	100	Swaziland	
8	6	3	3	55	55	3	0	0	0	0	2	55	40	100	Sweden	
9	7	5	4	46	75	1	0	0	0	0	4	75	21	100	Switzerland	
41	34	17	14	47	56	6	6	0	0	0	9	56	22	100	Syrian Arab Republic	
113	96	64	52	32	40	17	7	0	0	0	7	36	32	100	Tajikistan	
43	33	15	11	50	61	8	2	0	1	0	5	58	26	100	Thailand	
39	35	8	7	47	81	5	0	0	0	8	2	77	8	100	The former Yugoslav Republic of Macedonia	
179	162	62	52	27	44	20	7	2	0	1	7	41	23	100	Timor-Leste	
152	135	102	89	29	35	15	9	21	1	0	3	30	19	100	Togo	
25	20	14	11	47	51	8	2	0	0	0	7	50	32	100	Tonga	
36	30	23	19	62	71	7	0	0	2	0	5	67	19	100	Trinidad and Tobago	
54	48	17	15	45	59	6	2	0	0	0	5	59	28	100	Tunisia	
78	70	16	13	40	60	10	1	0	0	0	4	57	29	100	Turkey	
101	79	60	45	34	41	15	7	0	0	0	6	38	34	100	Turkmenistan	
61	54	33	27	33	50	8	2	0	0	0	13	49	29	100	Tuvalu	
190	166	75	62	22	33	15	9	12	7	0	5	31	21	100	Uganda	
22	17	12	9	43	47	10	3	0	1	0	8	44	35	100	Ukraine	
19	15	9	8	57	60	2	0	0	0	0	6	60	31	100	United Arab Emirates	
11	8	5	4	51	63	4	0	0	0	0	3	61	32	100	United Kingdom	
173	159	58	50	26	40	14	7	9	6	1	5	38	20	100	United Republic of Tanzania	
13	10	8	6	51	58	2	0	0	0	0	22	53	22	100	United States	
26	21	8	7	48	54	10	2	0	0	0	7	52	29	100	Uruguay	
82	65	45	34	28	34	16	8	0	0	0	8	31	37	100	Uzbekistan	
38	31	20	16	43	49	13	6	4	0	0	3	44	30	100	Vanuatu	
33	26	17	13	50	56	10	7	0	0	0	9	52	21	100	Venezuela (Bolivarian Republic of)	
56	45	26	20	44	53	12	8	0	1	0	4	51	25	100	Viet Nam	
130	119	64	56	34	45	20	10	1	0	0	6	40	23	100	Yemen	
201	183	94	83	23	34	14	8	16	6	4	4	32	18	100	Zambia	
80	68	96	83	42	44	11	6	11	9	0	4	41	17	100	Zimbabwe	

Regional Estimates of child mortality and causes of under-five deaths

Region	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
	1990	2000	2012	Decline (%) 1990–2012	Annual rate of reduction (%) 1990–2012	1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Sub-Saharan Africa	177	155	98	45	2.7	3,772	3,245	107	64	2,285	2,146	45	32	968	1,090
Eastern & Southern Africa	163	139	77	53	3.4	1,686	1,170	101	51	1,050	785	43	28	444	424
West & Central Africa	195	174	118	39	2.3	1,982	1,985	115	76	1,169	1,300	48	37	491	631
Middle East & North Africa	71	50	30	58	3.9	643	306	53	24	478	242	29	15	260	155
South Asia	129	94	60	54	3.5	4,677	2,082	92	47	3,318	1,626	51	32	1,876	1,111
East Asia & Pacific	58	41	20	65	4.8	2,532	632	44	17	1,955	527	25	11	1,091	338
Latin America & Caribbean	54	32	19	65	4.7	627	206	43	16	496	174	22	10	255	106
CEE/CIS	47	36	19	60	4.2	357	112	38	16	288	97	19	9	146	53
World	90	75	48	47	2.9	12,621	6,553	63	35	8,851	4,801	33	21	4,625	2,852

	Sex-specific under-five mortality rate (deaths per 1,000 live births)				Share of neonatal deaths in under-five deaths (%)		Deaths among children under 5 years of age due to: (%) 2012								
	1990		2012		1990	2012	Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total
Sub-Saharan Africa	186	168	103	92	26	34	17	11	14	3	1	4	30	21	100
Eastern & Southern Africa	172	154	82	71	26	36	17	10	7	5	1	5	33	22	100
West & Central Africa	204	186	124	112	25	32	17	11	18	2	1	3	28	21	100
Middle East & North Africa	74	68	32	28	40	51	14	7	1	0	0	5	47	25	100
South Asia	127	132	59	60	40	53	20	9	0	0	3	4	44	19	100
East Asia & Pacific	61	55	22	19	43	53	15	4	1	0	1	8	50	20	100
Latin America & Caribbean	58	49	21	17	41	51	12	5	0	1	0	7	49	27	100
CEE/CIS	52	42	21	17	41	47	13	4	0	0	0	7	44	31	100
World	92	87	50	46	37	44	17	9	7	2	1	5	38	21	100

Estimates of child mortality and causes of under-five deaths by income

	Under-five mortality rate (deaths per 1,000 live births)					Number of under-five deaths (thousands)		Infant mortality rate (deaths per 1,000 live births)		Number of infant deaths (thousands)		Neonatal mortality rate (deaths per 1,000 live births)		Number of neonatal deaths (thousands)	
				Decline (%) 1990–2012	Annual rate of reduction (%) 1990–2012										
Income level	1990	2000	2012			1990	2012	1990	2012	1990	2012	1990	2012	1990	2012
Low income	166	134	82	51	3.2	3,252	2,166	104	56	2,045	1,486	47	30	920	788
Middle income	87	71	45	48	3.0	9,148	4,294	62	34	6,625	3,237	34	21	3,592	2,012
Lower middle income	118	93	61	48	3.0	6,386	3,541	82	46	4,440	2,631	44	28	2,371	1,631
Upper middle income	54	38	20	63	4.5	2,763	754	42	16	2,185	606	24	10	1,221	381
High income	15	10	6	57	3.9	221	93	12	5	182	78	7	4	112	52
World	90	75	48	47	2.9	12,621	6,553	63	35	8,851	4,801	33	21	4,625	2,852
	Sex-specific under-five mortality rate (deaths per 1,000 live births)			Share of neonatal deaths in under-five deaths (%)	Deaths among children under 5 years of age due to: (%) 2012										
Income Level	1990 Male Female		2012 Male Female		1990	2012	Pneumonia	Diarrhoea	Malaria	AIDS	Measles	Injuries	Neonatal causes*	Others	Total
Low income	173	158	87	77	28	36	17	10	10	2	1	5	33	21	100
Middle income	89	85	46	44	39	47	18	9	5	1	1	5	40	21	100
Lower middle income	119	117	63	60	37	46	18	9	6	1	2	4	39	20	100
Upper middle income	57	51	22	19	44	51	14	6	2	2	0	7	46	23	100
High income	16	13	7	6	51	56	4	1	0	0	0	11	53	29	100
World	92	87	50	46	37	44	17	9	7	2	1	5	38	21	100



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