

Committing to Child Survival: A Promise Renewed



Progress Report 2012



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Foreword Anthony Lake, Executive Director, UNICEF



The story of child survival over the past two decades is one of significant progress and unfinished business.

There is much to celebrate. More children now survive their fifth birthday than ever before - the global number of underfive deaths has fallen from around 12 million in 1990 to an estimated 6.9 million in 2011. All regions have shown steady reductions in under-five mortality over the past two decades. In the last decade alone, progress on reducing child deaths has acceler-

ated, with the annual rate of decline in the global under-five mortality rate rising from 1.8% in 1990-2000 to 3.2% in 2000-2011.

The gains have been broad, with marked falls in diverse countries. Between 1990 and 2011, nine low-income countries - Bangladesh, Cambodia, Ethiopia, Liberia, Madagascar, Malawi, Nepal, Niger and Rwanda - reduced their under-five mortality rate by 60% or more. Nineteen middle-income countries, among them Brazil, China, Mexico and Turkey, and 10 high-income countries, including Estonia, Oman, Portugal and Saudi Arabia, are also making great progress, reducing under-five mortality by two-thirds or more over the same period.

Our advances to date stem directly from the collective commitment, energy and efforts of governments, donors, non-governmental organizations, UN agencies, scientists, practitioners, communities, families and individuals. Measles deaths have plummeted. Polio, though stubbornly resistant thus far to elimination, has fallen to historically low levels. Routine immunization has increased almost everywhere. Among the most striking advances has been the progress in combatting AIDS. Thanks to the application of new treatments, better prevention and sustained funding, rates of new HIV infections - and HIV-associated deaths among children - have fallen substantially.

But any satisfaction at these gains is tempered by the unfinished business that remains. The fact remains that, on average, around 19,000 children still die every day from largely preventable causes. With necessary vaccines, adequate nutrition and basic medical and maternal care, most of these young lives could be saved.

Nor can we evade the great divides and disparities that persist among regions and within countries. The economically poorest regions, least developed countries, most fragile nations, and most disadvantaged and marginalized populations continue to bear the heaviest burden of child deaths. More than four-fifths of all under-five deaths in 2011 occurred in sub-Saharan Africa and South Asia. Given the prospect that these regions, especially sub-Saharan Africa, will account for the bulk of the world's births in the next years, we must give new impetus to the global momentum to reduce under-five deaths.

This is the potential of Committing to Child Survival: A Promise Renewed, a global effort to accelerate action on maternal, newborn and child survival. In June 2012, the Governments of Ethiopia, India and the United States - together with UNICEF - brought together more than 700 partners from the public, private and civil society sectors for the Child Survival Call to Action. What emerged from the Call to Action was a rejuvenated global movement for child survival, with partners pledging to work together across technical sectors with greater focus, energy and determination. Since June, more than 110 governments have signed a pledge vowing to redouble efforts to accelerate declines in child mortality; 174 civil society organizations, 91 faith-based organizations, and 290 faith leaders from 52 countries have signed their own pledges of support.

Under the banner of A Promise Renewed, a potent global movement, led by governments, is mobilizing to scale up action on three fronts: sharpening evidence-based country plans and setting measurable benchmarks; strengthening accountability for maternal, newborn and child survival; and mobilizing broad-based social support for the principle that no child should die from preventable causes. Concerted action in these three areas will hasten declines in child and maternal mortality, enabling more countries to achieve MDGs 4 and 5 by 2015 and sustain the momentum well into the future.

As the message of this report makes clear, countries can achieve rapid declines in child mortality, with determined action by governments and supportive partners. Our progress over the last two decades has taught us that sound strategies, adequate resources and, above all, political will, can make a critical difference to the lives of millions of young children.

By pledging to work together to support the goals of A Promise Renewed, we can fulfill the promise the world made to children in MDGs 4 and 5: to give every child the best possible start in life. Join us.



Overview

BACKGROUND

To advance *Every Woman Every Child*, a strategy launched by United Nations Secretary-General Ban Ki-moon, UNICEF and other UN organizations are joining partners from the public, private and civil society sectors in a global movement to accelerate reductions in preventable maternal, newborn and child deaths.

The Child Survival Call to Action was convened in June 2012 by the Governments of Ethiopia, India and the United States, together with UNICEF, to examine ways to spur progress on child survival. A modelling exercise presented at this event demonstrated that all countries can lower child mortality rates to 20 or fewer deaths per 1,000 live births by 2035 – an important milestone towards the ultimate aim of ending preventable child deaths.

Partners emerged from the Call to Action with a revitalized commitment to child survival under the banner of *A Promise Renewed*. Since June, more than 100 governments and many civil society and private sector organizations have signed a pledge to redouble their efforts, and many more are expected to follow suit in the days and months to come. This global movement will focus on learning from and building on the many successes made in reducing child deaths in numerous countries over the past two decades. More details on *A Promise Renewed* are available at <www.apromiserenewed.org>.

PRIORITY ACTIONS

To meet the goals of *A Promise Renewed*, our efforts must focus on scaling up essential interventions through the following three priority actions:

Evidence-based country plans: Governments will lead the effort by setting and sharpening their national action plans, assigning costs to strategies and monitoring five-year milestones. Development partners can support the national targets by pledging to align their assistance with government-led action plans. Privatesector partners can spur innovation and identify new resources for child survival. And, through action and advocacy, civil society can support the communities and families whose decisions profoundly influence prospects for maternal and child survival.

Transparency and mutual accountability: Governments and partners will work together to report progress and to promote accountability for the global commitments made on behalf of children. UNICEF and partners will collect and disseminate data on each country's progress. A global monitoring template, based on the indicators developed by the UN Commission on Information and Accountability for Women's and Children's Health, has been

developed for countries to adapt to their own priorities. National governments and local partners are encouraged to take the lead in applying the template to national monitoring efforts.

Global communication and social mobilization: Governments and partners will mobilize broad-based social and political support for the goal of ending preventable child deaths. As part of this effort, the search for small-scale innovations that demonstrate strong potential for large-scale results will be intensified. Once identified, local innovations will be tested, made public, and taken to scale. By harnessing the power of mobile technology, civil society and the private sector can encourage private citizens, especially women and young people, to participate in the search for innovative approaches to maternal and child survival.

ANNUAL REPORTS

In support of *A Promise Renewed*, UNICEF is publishing yearly reports on child survival to stimulate public dialogue and help sustain political commitment. This year's report, released in conjunction with the annual review of the child mortality estimates of the UN Inter-Agency Group on Mortality Estimation, presents:

- Trends and levels in under-five mortality over the past two decades.
- Causes of and interventions against child deaths.
- Brief examples of countries that have made radical reductions in child deaths over the past two decades.
- A summary of the strategies for meeting the goals of A Promised Renewed.
- Statistical tables of child mortality and causes of under-five deaths by country and UNICEF regional classification.

The analysis presented in this report provides a strong case for proceeding with optimism. The necessary interventions and knowhow are available to drastically reduce child deaths in the next two decades. The time has come to recommit to child survival and renew the promise.



Chapter 1: Levels and trends in child mortality

Chapter 1: Levels and trends in child mortality

- The number of under-five deaths worldwide has decreased from nearly 12 million in 1990 to less than 7 million in 2011.
- The rate of decline in under-five mortality has drastically accelerated in the last decade – from 1.8% per year during the 1990s to 3.2% per year between 2000 and 2011.
- Under-five deaths are increasingly concentrated in sub-Saharan Africa and South Asia. In 2011, 82% of under-five deaths occurred in these two regions, up from 68% in 1990.

All regional aggregates refer to UNICEF's regional classification.

The progress

Much of the news on child survival is heartening. Reductions in under-five mortality rates, combined with declining fertility rates in many regions and countries, have diminished the burden (number) of under-five deaths from nearly 12 million in 1990 to an estimated 6.9 million in 2011 (*Figure 1*). About 14,000 fewer children die each day than did two decades ago — a testimony to the sustained efforts and commitment to child survival by many, including governments and donors, non-governmental organizations and agencies, the private sector, communities, families and individuals.

Mortality rates among children under 5 years of age fell globally by 41% between 1990 — the base year for the Millennium Development Goals (MDGs) — and 2011, lowering the global rate from 87 deaths per 1,000 live births to 51 (*Figure 2*). Importantly, the bulk of the progress in the past two decades has taken place since the MDGs were set in the year 2000, with the global rate of decline in under-five mortality accelerating to 3.2% annually in 2000-2011, compared with 1.8% for the 1990-2000 period.¹

REGIONAL PROGRESS

rates since 1990

The most pronounced falls in under-five mortality rates have occurred in four regions: Latin America and the Caribbean; East Asia and the Pacific; Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS); and the Middle East and North Africa.² All have more than halved their regional rates of under-five mortality since 1990. The corresponding decline for South Asia was 48%, which in absolute terms translates into around 2 million fewer under-five deaths in 2011 than in 1990 — by far the highest absolute reduction among all regions (*Figure 3*).

All regions have experienced marked declines in under-five mortality

Sub-Saharan Africa, though lagging behind the other regions, has also registered a 39% decline in the under-five mortality rate. Moreover, the region has seen a doubling in its annual rate of reduction to 3.1% during 2000-2011, up from 1.5% during 1990-2000. In particular, there has been a dramatic acceleration in the rate of decline in Eastern and Southern Africa, which coincided with a substantial scale-up of effective interventions to combat major diseases and conditions, most notably HIV, but also measles and malaria.

NATIONAL PROGRESS

Many countries have witnessed marked falls in mortality during the last two decades - including some with very high rates of mortality in 1990. Four - Lao People's Democratic Republic, Timor-Leste, Liberia and Bangladesh — achieved a reduction of at least two-thirds over the period (Figure 5). Over the past decade, momentum on lowering under-five deaths has strengthened in many high-mortality countries: 45 out of 66 such countries have accelerated their rates of reduction compared with the previous decade. Eight of the top 10 highmortality countries with the highest increases in the annual rate of reduction between 1990-2000 and 2000-2011 are in Eastern and Southern Africa (Figure 4).

Among high-mortality countries, most of the sharpest accelerations in reducing under-five mortality have occurred in sub-Saharan Africa

Top 10 high-mortality countries* with the sharpest increases in the annual rate of reduction in under-five mortality rate

| Country | Annual rate of reduction (%)" | | | | | | | |
|--|---|---|----------------------|--|--|--|--|--|
| | 1990-2000 | 2000-2011 | | | | | | |
| Rwanda | -1.6 | 11.1 | | | | | | |
| Cambodia | -2.9 | 4.1 | | | | | | |
| Zimbabwe | 1.4 | 7.9 | | | | | | |
| Senegal | 0.4 | 6.4 | | | | | | |
| South Africa | -1.7 | 4.2 | | | | | | |
| Lesotho | -2.9 | 2.8 | | | | | | |
| Kenya | -1.5 | 4.0 | | | | | | |
| Namibia | -0.1 | 5.2 | | | | | | |
| Swaziland | -3.2 | 0.9 | | | | | | |
| United Republic of | 2.2 | 5.7 | | | | | | |
| Tanzania | | | | | | | | |
| *Countries with an under-five mortality rate of 4 **A negative value indicates an increase in the | 0 or more deaths per 1,0 under-five mortality rate o | 00 live births in 2011. over the period. | Source: GME 2012. | | | | | |

*Countries with an under-five mortality rate of 40 or more deaths per 1,000 live births in 2011. **A negative value indicates an increase in the under-five mortality rate over the period

SOURCES OF PROGRESS

FI<u>G. 4</u>

Global progress in child survival has been the product of multiple factors, including effective interventions in many sectors and more supportive environments for their delivery, access and use in many countries. The progress is attributable not to improvements in just one or two areas, but rather to a broad confluence of gains - in medical technology, development programming, new ways of delivering health services, strategies to overcome bottlenecks and innovation in household survey data analysis, along with improvements in education, child protection, respect for human rights and economic gains in developing countries. Underpinning all of these has been the resolute determination of many development actors and members of the international community to save children's lives.

The challenge

There are worrying caveats to this progress. At 2.5%, the annual rate of reduction in under-five mortality is insufficient to meet the MDG 4 target. Almost 19,000 children under 5 still die each day, amounting to roughly 1.2 million under-five deaths from mostly preventable causes every two months. Despite all we have learned about saving children's lives, our efforts still do not reach millions.

A CONCENTRATED BURDEN

Even as the global and regional rates of under-five mortality have fallen, the burden of child deaths has become alarmingly concentrated in the world's poorest regions and countries. A look at how the burden of under-five deaths is distributed among regions reveals an increasing concentration of mortality in sub-Saharan Africa and South Asia; in 2011, more than four-fifths of all global under-five deaths occured in these two regions alone (*Figure 6*). Sub-Saharan Africa accounted for almost half (49%) of the global total in 2011. Despite rapid gains in reducing under-five mortality, South Asia's share of global under-five deaths remains second highest, at 33% in 2011. In contrast, the rest of the world's regions have seen their share fall from 32% in 1990 to 18% two decades later.

The highest regional rate of under-five mortality is found in sub-Saharan Africa, where, on average, 1 in 9 children dies before age 5. In some countries, the total number of under-five deaths has increased: Democratic Republic of the Congo, Chad, Somalia, Mali, Cameroon and Burkina Faso have experienced rises in their national burden of under-five deaths by 10,000 or more for 2011 as compared to 1990, due to a combination of population growth and insufficient decline of under-five mortality.

The outlook for child mortality in sub-Saharan Africa is made more uncertain by expected demographic changes: Of the world's regions, it is the only one where the number of births and the under-five population are set to substantially increase this century. If current trends persist, by midcentury, 1 in 3 children in the world will be born in sub-Saharan Africa, and its under-five population will grow rapidly (*Figure 7*).³

The under-five population in sub-Saharan Africa will rise quickly over the coming decades

GAPS IN PROGRESS

The growing breach between the rest of the world and sub-Saharan Africa and South Asia underscores the inequities that remain in child survival. In 2011, about half of global under-five deaths occurred in just five countries: India, Nigeria, the Democratic Republic of the Congo, Pakistan and China. Four of these (all but the Democratic Republic of the Congo) are populous middle-income countries. India and Nigeria together accounted for more than one-third of the total number of under-five deaths worldwide (*Figure 8*). Across regions, the least developed countries consistently have higher rates of under-five mortality than more affluent countries.

Furthermore, in recent years, emerging evidence has shown alarming disparities in under-five mortality at the subnational level in many countries. UNICEF analysis of international household survey data shows that children born into the poorest quintile (fifth) of households are almost twice as likely to die before age 5 as their counterparts in the wealthiest quintile. Poverty is not the only divider, however. Children are also at greater risk of dying before age 5 if they are born in rural areas, among the poor, or to a mother denied basic education (*Figure 9*). At the macro level, violence and political fragility (weakened capacity to sustain core state functions) also contribute to higher rates of under-five mortality. Eight of the 10 countries with the world's highest under-five mortality rates are either affected markedly by conflict or violence, or are in fragile situations.

Calculation is based on 39 countries with most recent Demographic and Health Surveys (DHS) conducted after 2005 with further analyses by UNICEF for under-five mortality rates by wealth quintile, 40 countries for rates by mother's education and 45 countries for rates by residence. The average was calculated based on weighted under-five mortality rates. Number of births was used as the weight. The country-specific estimates obtained from DHS refer to a ten-year period prior to the survey. Because levels or trends may have changed since then, caution should be used in interpreting these results.

Countries with low or very low child mortality

Much of the discourse around child survival is related to high-mortality countries or regions, and rightly so. But the challenge of *A Promise Renewed* also encompasses those countries that have managed to reduce their rates and burden of child mortality to low, or even very low, levels. The UN Inter-agency Group for Child Mortality Estimation (IGME) reports annually on 195 countries; 98 of these countries posted an under-five mortality rate of less than 20 per 1,000 live deaths in 2011. This contrasts with just 53 such countries in 1990. Understanding how countries can lower the under-five mortality rate to 20 per 1,000 live births can provide a beacon for those countries still suffering from higher rates of child mortality, as well spurring all nations, low and high mortality alike, to do their utmost for children's survival.

LOW MORTALITY LEVELS

For the purposes of this report, low-mortality countries are defined as those with under-five mortality of 10-20 deaths per 1,000 live births in 2011; very-low-mortality countries have rates below 10 per 1,000 live births. Many of the 41 countries in the lowmortality category are commonly thought of as middle-income, and the majority only reached this threshold in the current millennium. Populous members of this group include Brazil, China, Mexico, the Russian Federation and Turkey, among others.

Although countries in this group have achieved low rates of under-five mortality, the group's share of the global burden of under-five deaths is still significant, numbering around 459,000 in 2011, about 7% of the global total; China accounts for more than half of these deaths.

As a group, the low-mortality countries have demonstrated continued progress in recent years, with an annual rate of reduction of 5.6% in the past two decades. This has resulted in a near-70% reduction in their overall under-five mortality from 47 deaths per 1,000 live births in 1990 to 15 in 2011. Twenty-two of the 41 low-mortality countries have more than halved their mortality rates since 1990 (see *Figure 10 for top countries*).

VERY LOW MORTALITY LEVELS

By 2011, 57 countries had managed to lower their national under-five mortality rate below 10 per 1,000 live births. The burden of under-five deaths in very-low-mortality countries stood at around 83,000 in 2011, representing just over 1% of the global total; the United States accounted for nearly 40% of the under-five deaths in very-low-mortality countries in 2011. This group includes mostly high-income countries in Europe and North America, joined by a small number of high-income and middle-income countries in EastAsia and South America. The Nordic countries — Denmark, Iceland, Finland, Norway and Sweden — and the Netherlands were the earliest to attain under-five mortality rates below 20 per 1,000 live births. Sweden achieved

Levels and trends in child mortality

this landmark first, in 1959; the other four, along with the Netherlands, had all achieved this level by 1966. Next were France, Japan and Switzerland, all in 1968, followed by Australia, Canada, Luxembourg, New Zealand and the United Kingdom in 1972, and Belgium, Singapore and the United States in 1974. Oman was the last country to reach this threshold, in 2002. *Figure 11* shows the 10 countries with the lowest under-five mortality rates.

Very-low-mortality countries have generally achieved substantial progress in reducing under-five mortality from 1990 to 2011. Notable examples include Oman, with an 82% reduction during this period; Estonia, also with 82%; Saudi Arabia, with 78%; Portugal, with 77%; and Serbia, with 75%. These successes challenge the long-held conventional wisdom that, as under-five mortality rates fall, the pace of decline is likely to slow as it becomes harder to make similar percentage gains on a lower base. From 1990 to 2011, very-low-mortality countries posted an annual rate of reduction of 3.7%, compared to just 2.5% globally.

The world's lowest under-five mortality rates are in Singapore, the Nordic countries, small European countries and Japan FIG. 1

Ten countries with the lowest under-five mortality rates in 2011 (excluding countries with total population of less than 500,000)

| Country | U5MR in 2011 | |
|------------|--------------|----------|
| Singapore | 2.6 | |
| Slovenia | 2.8 | |
| Sweden | 2.8 | 12. |
| Finland | 2.9 | ME 20 |
| Cyprus | 3.1 | d on IG |
| Norway | 3.1 | based |
| Luxembourg | 3.2 | inalysis |
| Japan | 3.4 | ICEF a |
| Portugal | 3.4 | ce: UN |
| Denmark | 3.7 | Sour |

The promise

The duality between the demonstrated advances in reducing underfive deaths since 1990, and the major gaps that remain, poses two linked challenges for the global child survival movement. The first is to do all we can to save children's lives, working at the global, national and subnational levels, in the remaining years until the 2015 MDG deadline. The second is to leverage the MDGs as a driving force, with 2015 as a stepping stone, to sustain sharp reductions in under-five deaths during the following two decades and provide universal access to essential health and nutrition services for the world's children. That is the promise renewed.

A diverse group of countries, including Oman, Estonia, Turkey, Saudi Arabia, Portugal, Peru and Egypt, among others, have been able to sustain high annual rates of reduction in under-five mortality over two decades. Others, such as Rwanda, Cambodia, Zimbabwe and Senegal, have succeeded in substantially accelerating their rates of reduction in mortality during the last decade. These facts underlie the promise of sharper progress in child survival in the future. The varied circumstances of these countries suggest that it is possible to lower child mortality at an accelerated pace over long periods, even from high base rates, when concerted action, sound strategies, adequate resources and resolute political commitment are consistently applied in support of child and maternal survival and human and gender rights.

Under-five mortality rate league table 2011

| Sub-Saharan Africa | | | Middle East & Nor | th Afri | ca | Asia &Pacific | | | | |
|----------------------------------|------|--------------|--------------------------------|---------|--------------|---------------------------------------|------|--------------|--|--|
| Countries and territories | U5MR | U5MR rank | Countries and territories | U5MR | U5MR rank | Countries and territories | U5MR | U5MR rank | | |
| Sierra Leone | 185 | 1 | Djibouti | 90 | 26 | Afghanistan | 101 | 23 | | |
| Somalia | 180 | 2 | Sudan | 86 | 29 | Pakistan | 72 | 39 | | |
| Mali | 176 | 3 | Yemen | 77 | 36 | Myanmar | 62 | 47 | | |
| Chad | 169 | 4 | Iraq | 38 | 67 | India | 61 | 49 | | |
| Democratic Republic of the Congo | 168 | 5 | Morocco | 33 | 69 | Papua New Guinea | 58 | 50 | | |
| Central African Republic | 164 | 6 | Algeria | 30 | 74 | Bhutan | 54 | 51 | | |
| Guinea-Bissau | 161 | 7 | Iran (Islamic Republic of) | 25 | 83 | Timor-Leste | 54 | 51 | | |
| Angola | 158 | 8 | Occupied Palestinian Territory | 22 | 87 | Nepal | 48 | 57 | | |
| Burkina Faso | 146 | 9 | Egypt | 21 | 91 | Kiribati | 47 | 58 | | |
| Burundi | 139 | 10 | Jordan | 21 | 91 | Bangladesh | 46 | 60 | | |
| Cameroon | 127 | 11 | Libya | 16 | 107 | Cambodia | 43 | 62 | | |
| Guinea | 126 | 12 | Tunisia | 16 | 107 | Lao People's Democratic Republic | 42 | 63 | | |
| Niger | 125 | 13 | Syrian Arab Republic | 15 | 115 | Micronesia (Federated States of) | 42 | 63 | | |
| Nigeria | 124 | 14 | Kuwait | 11 | 133 | Nauru | 40 | 66 | | |
| South Sudan | 121 | 15 | Bahrain | 10 | 135 | Democratic People's Republic of Korea | 33 | 69 | | |
| Equatorial Guinea | 118 | 16 | Lebanon | 9 | 141 | Indonesia | 32 | 71 | | |
| Côte d'Ivoire | 115 | 17 | Oman | 9 | 141 | Mongolia | 31 | 72 | | |
| Mauritania | 112 | 18 | Saudi Arabia | 9 | 141 | Tuvalu | 30 | 74 | | |
| Тодо | 110 | 19 | Qatar | 8 | 145 | Marshall Islands | 26 | 80 | | |
| Benin | 106 | 20 | United Arab Emirates | 7 | 151 | Philippines | 25 | 83 | | |
| Swaziland | 104 | 21 | Israel | 4 | 169 | Solomon Islands | 22 | 87 | | |
| Mozambigue | 103 | 22 | | | | Viet Nam | 22 | 87 | | |
| Gambia | 101 | 23 | | | | Niue | 21 | 91 | | |
| Congo | 99 | 25 | | | | Palau | 19 | 100 | | |
| Uganda | 90 | 26 | | | | Samoa | 19 | 100 | | |
| Sao Tome and Principe | 89 | 28 | | | | Fiji | 16 | 107 | | |
| Lesotho | 86 | 29 | | | | China | 15 | 115 | | |
| Malawi | 83 | 31 | | | | Tonga | 15 | 115 | | |
| Zambia | 83 | 31 | | | | Vanuatu | 13 | 125 | | |
| Comoros | 79 | 33 | | | | Sri Lanka | 12 | 128 | | |
| Ghana | 78 | 34 | | | | Thailand | 12 | 128 | | |
| Liberia | 78 | 34 | | | | Maldives | 11 | 133 | | |
| Ethiopia | 77 | 36 | | | | Cook Islands | 10 | 135 | | |
| Kenya | 73 | 38 | | | | Brunei Darussalam | 7 | 151 | | |
| Eritrea | 68 | 41 | | | | Malaysia | 7 | 151 | | |
| United Republic of Tanzania | 68 | 41 | | | | New Zealand | 6 | 157 | | |
| Zimbabwe | 67 | 43 | | | | Australia | 5 | 165 | | |
| Gabon | 66 | 44 | | | | Republic of Korea | 5 | 165 | | |
| Senegal | 65 | 45 | | | | Japan | 3 | 184 | | |
| Madagascar | 62 | 47 | | | | Singapore | 3 | 184 | | |
| Rwanda | 54 | 51 | | | | - Orres | | | | |
| South Africa | 47 | 58 | | | | | | | | |
| Namibia | 42 | 63 | | | | | | | | |
| Botswana | 26 | 80 | | | | | | | | |
| Cape Verde | 21 | 91 | | | | | | | | |
| Mauritius | 15 | 115 | | | | | | | | |
| Seychelles | 14 | 122 | | | | | | | | |

DEFINITIONS OF INDICATORS

U5MR: Under-five mortality rate: Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births. U5MR Rank: Country rank in descending order of U5MR. Source: IGME 2012.

Under-five mortality rate league table 2011

© UNICEF/N

| Americas | | | Europe & Central Asia | | | | | |
|------------------------------------|------|--------------|---|--------|--------------|--|--|--|
| Countries and territories | U5MR | U5MR rank | Countries and territories | U5MR | U5MR rank | | | |
| Haiti | 70 | 40 | Tajikistan | 63 | 46 | | | |
| Bolivia (Plurinational State of) | 51 | 55 | Turkmenistan | 53 | 54 | | | |
| Guyana | 36 | 68 | Uzbekistan | 49 | 56 | | | |
| Guatemala | 30 | 74 | Azerbaijan | 45 | 61 | | | |
| Suriname | 30 | 74 | Kyrgyzstan | 31 | 72 | | | |
| Trinidad and Tobago | 28 | 78 | Kazakhstan | 28 | 78 | | | |
| Nicaragua | 26 | 80 | Georgia | 21 | 91 | | | |
| Dominican Republic | 25 | 83 | Armenia | 18 | 102 | | | |
| Ecuador | 23 | 86 | Republic of Moldova | 16 | 107 | | | |
| Paraguay | 22 | 87 | Turkey | 15 | 115 | | | |
| Honduras | 21 | 91 | Albania | 14 | 122 | | | |
| Saint Vincent and the Grenadines | 21 | 91 | Romania | 13 | 125 | | | |
| Barbados | 20 | 98 | Bulgaria | 12 | 128 | | | |
| Panama | 20 | 98 | Russian Federation | 12 | 128 | | | |
| Colombia | 18 | 102 | The former Yugoslav Republic of Macedonia | 10 | 135 | | | |
| Jamaica | 18 | 102 | Ukraine | 10 | 135 | | | |
| Peru | 18 | 102 | Bosnia and Herzegovina | 8 | 145 | | | |
| Belize | 17 | 106 | Latvia | 8 | 145 | | | |
| Bahamas | 16 | 107 | Slovakia | 8 | 145 | | | |
| Brazil | 16 | 107 | Montenegro | 7 | 151 | | | |
| Mexico | 16 | 107 | Serbia | 7 | 151 | | | |
| Saint Lucia | 16 | 107 | Belarus | 6 | 157 | | | |
| FI Salvador | 15 | 115 | Hungary | 6 | 157 | | | |
| Venezuela (Bolivarian Republic of) | 15 | 115 | lithuania | 6 | 157 | | | |
| Argentina | 14 | 122 | Malta | 6 | 157 | | | |
| Grenada | 13 | 125 | Poland | 6 | 157 | | | |
| Dominica | 10 | 123 | Croatia | 5 | 165 | | | |
| Costa Rica | 10 | 135 | United Kingdom | 5 | 165 | | | |
| | 10 | 135 | Austria | 4 | 160 | | | |
| Chile | 0 | 1/1 | Relation | 4 | 160 | | | |
| Antigua and Barbuda | 9 | 1/5 | Czech Benublic | | 160 | | | |
| | 0 | 1/5 | Denmark | 4 | 160 | | | |
| Saint Kitts and Nevis | 7 | 151 | Estonia | 4 | 160 | | | |
| Canada | 6 | 157 | France | | 160 | | | |
| Cuba | 6 | 157 | Germany | - | 160 | | | |
| Cuba | U | 157 | Greece | | 160 | | | |
| | | | Ireland | 4 | 169 | | | |
| | | | | - | 160 | | | |
| | | | Monaco | - | 160 | | | |
| | | | Netherlands | 4 | 169 | | | |
| | | | Spain | 4 | 160 | | | |
| | | | Switzorland | - | 160 | | | |
| | | | Andorra | - - | 103 | | | |
| | | | Alluolla | 3 2 | 104 | | | |
| | | | Sipland | 5 | 104 | | | |
| | | | leeland | 5 | 104 | | | |
| | | | Luvembourg | 2 | 104 | | | |
| | | | Norway | 2 | 18/ | | | |
| | | | Portugal | 5 | 104 | | | |
| | | | Slovenia | ວ ວ | 104 197 | | | |
| | | | Sweden | 5 | 104 | | | |
| | | | San Marina | 3 | 104 | | | |
| | | | | 2 | 190 | | | |
| | | | | - | - | | | |
| | | | Liechtenstein | - | - | | | |

Chapter 2: Leading causes of child deaths

Chapter 2: Leading causes of child deaths

- Four in 10 under-five deaths occur during the first month of life. Among children who survive past the first month, pneumonia, diarrhoea and malaria are the leading killers.
- Globally, infectious diseases account for almost two-thirds of under-five deaths.
- Many of these deaths occur in children already weakened by undernutrition; worldwide, more than one-third of all under-five deaths are attributable to this condition.

The estimates on cause of death in this report were derived from the work of the Child Health Epidemiology Reference Group (CHERG) pertaining to cause of death in 2010 and the work of the IGME pertaining to all-cause child deaths in 2011. The numbers of deaths by cause have been updated by applying the percentage breakdown by cause provided by 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.

Overview

Understanding the causes of child mortality provides important public health insights. Of the 6.9 million deaths in children under 5 that occurred in 2011,⁴ almost two-thirds (64%) were caused by infectious diseases and conditions such as pneumonia, diarrhoea, malaria, meningitis, tetanus, HIV and measles. Around 40% of all under-five deaths occurred in the neonatal period (within the first 28 days of life), the majority from preterm birth complications and intrapartum-related complications (complications during delivery). Globally, more than one-third of under-five deaths are attributable to undernutrition (*Figure 12*).

Worldwide, the leading causes of death among children under 5 include pneumonia (18% of all under-five deaths), preterm birth complications (14%), diarrhoea (11%), intrapartum-related complications (9%), malaria (7%), and neonatal sepsis, meningitis and tetanus (6%). Cross-country comparisons show a wide variation among countries in the proportions of under-five deaths attributable to specific causes. Such variations indicate that optimal programmatic approaches for child survival will differ from country to country.

INFECTIOUS DISEASES

Infectious diseases are characteristically diseases of the poor and vulnerable who lack access to basic prevention and treatment interventions. Taken as such, the proportion of deaths due to infectious diseases is a marker of equity. For example, in countries with very high mortality (those with under-five mortality rates of at least 100 deaths per 1,000 live births), approximately half of child deaths are due to infectious diseases. These deaths are largely preventable.

On the other hand, in very-low-mortality countries (those with under-five mortality rates of less than 10 per 1,000 live births), there are almost no under-five deaths from infectious diseases (*Figure 13*). Such countries show a large proportion of deaths from neonatal causes, many of which can be also prevented, as well as from other causes such as injuries.

Very-high-mortality countries are those with a U5MR of at least 100 deaths per 1,000 live births in 2011. Very-low-mortality countries are those with a U5MR of less than 10 per 1,000 live births. Pneumonia and diarrhoea include neonatal period. "Excludes neumonia and diarrhoea during the neonatal period.

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

Number of global under-five deaths (in thousands) from pneumonia, diarrhoea, malaria, measles and AIDS, in 2000 and 2011

The numbers of under-five deaths by cause have been calculated by applying the percentage breakdown by cause provided by CHERG to the estimates of number of under-five deaths provided by IGME. See note in text concerning fall in measles deaths. The evidence suggests many of the major declines in under-five deaths in all regions were related to expanded efforts against infectious diseases (*Figure 14*). The largest percentage fall — more than three-quarters — has been recorded in measles⁵ thanks in large part to enhanced global and national vaccination programmes. (Refer to the following sections of this report for discussion of progress in fighting pneumonia, diarrhoea, malaria and HIV and AIDS.)

Just as the global burden of under-five child deaths from all causes has become concentrated in a small number of countries, so also has the burden of deaths from specific causes, notably preventable ones. More than half of under-five deaths caused by pneumonia or diarrhoea occur in just four countries: India, Nigeria, the Democratic Republic of the Congo and Pakistan.⁶ Nigeria bears nearly 30% of the global burden of under-five malaria deaths and about 20% of the global burden of under-five HIV-associated deaths.⁷ Countries with high burdens of child deaths and high proportions of deaths from infectious diseases require support to successfully combat these preventable killers.

INJURIES

Injuries are a leading cause of child deaths in some countries. In a number of countries, injuries account for at least 10% of under-five deaths.⁸ Although children living in countries that are in fragile situations are particularly vulnerable, it is notable that injury is an important cause of death in low- and very-low-mortality countries — including the United States, where close to 1 in 5 under-five deaths is from injury.⁹ As with neonatal causes of death, injuries become an increasingly large proportion of child deaths as mortality rates decline.

Challenges in monitoring child mortality

Reliable data on child survival are still very sparse. Only about 60 countries have complete vital registration systems that allow for systematic monitoring of causes and levels of child mortality. The majority of countries instead rely on other data sources, primarily household surveys such as Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), to estimate levels and trends in under-five mortality. Furthermore, it is estimated that less than 3% of the causes of under-five deaths globally are medically certified, meaning that modelling often must be used to provide estimates of causes of death.

Greater investment is needed to strengthen vital registration systems to close these gaps in knowledge. For the foreseeable future, however, most countries will still rely on household surveys as their primary source of information on child mortality. Continued support and funding for these surveys represents the most cost-effective way to provide estimates of child mortality.

Pneumonia is the leading killer of children under 5, causing 18% of all child deaths worldwide — a loss of roughly 1.3 million lives in 2011^a (*Figure 15*). Most of these deaths occur in sub-Saharan Africa and South Asia.

Pneumonia is a 'disease of poverty': It is closely associated with factors such as poor home environments, undernutrition and lack of access to health services. Deaths are largely preventable through optimal breastfeeding practices and adequate nutrition, vaccinations, handwashing with soap and water, safe drinking water and basic sanitation, among other measures.

Efforts to tackle childhood pneumonia have had mixed results, with both impressive successes and lost opportunities. Globally, major progress has been made in providing access to improve drinking water sources and promoting exclusive breastfeeding in the first six months of life (see 'Undernutrition', p. 21). New vaccines against major causes of pneumonia have become available; most low-income countries have introduced the *Haemophilus influenzae* type b (Hib) vaccine — a success in efforts to reduce inequities in immunization (*Figure 16*). Pneumococcal conjugate vaccines (PCV) are also increasingly available, but gaps in vaccine uptake within countries could greatly reduce impact.

Since 2000, some progress has been made in appropriate care-seeking (a critical factor in survival of children with pneumonia); in regions with available estimates, these gains have mostly occurred among rural populations (*Figure 17*).

Although the majority of children with symptoms are taken to an appropriate provider, less than one-third of children with suspected pneumonia use antibiotics.^b It should be noted, however, that treatment data have limitations and are difficult to interpret.

Prioritizing the poorest saves more lives. A clear illustration is provided by modelled estimates for Bangladesh: These indicate that roughly seven times as many children's lives could be saved in the poorest households, compared to the richest ones, by scaling up key pneumonia interventions to near-universal levels (around 90% coverage) (*Figure 18*).

Prioritize the poorest, save more lives

Predicted number of pneumonia deaths averted among children under age 5 if nearuniversal coverage (90%) of key pneumonia interventions is achieved among the poorest and richest 20% of households in Bangladesh

11% of global under-five deaths are caused by diarrhoeal diseases Diarrhoea deaths among children under 5, global, 2010

Diarrhoea is still a major killer of children under 5, although its toll has dropped by a third over the past decade, from 1.2 million deaths in 2000 to 0.7 million in 2011.^a Diarrhoeal diseases now cause about 11% of child deaths worldwide (*Figure 19*). Nine-tenths of these deaths occur in sub-Saharan Africa and South Asia.

Like pneumonia, diarrhoea is closely associated with poor home environments, undernutrition and lack of access to basic health services. Deaths are largely preventable through optimal breastfeeding practices (non-breastfed children are 11 times more likely to die of diarrhoeal disease than exclusively breastfed children),^b adequate nutrition, vaccinations (including for rotavirus), handwashing with soap, and safe drinking water and basic sanitation, among other measures. Open defecation, which is still practised by around 1.1 billion people worldwide, remains a major contributing factor to diarrhoeal disease (*Figure 20*).

Effective treatment of diarrhoeal disease rests on three key interventions: administration of oral rehydration salt (ORS) solutions to prevent life-threatening dehydration; continued feeding; and zinc supplementation. ORS is the 'gold standard' for rehydration therapy; a formulation developed in the early 2000s (low-osmolarity ORS) has improved overall outcomes. Continued feeding supports fluid absorption and nutritional status. Zinc, a recently added component of standard diarrhoeal treatments, reduces the duration and severity of illness.

These inexpensive life-saving treatments remain inaccessible for the vast majority of children in the poorest countries, and those in the poorest groups within countries. Even more worrisome is the lack of any real progress in expanding treatment coverage since 2000. Globally, less than one-third of children with diarrhoea receive ORS (*Figure* 21). Zinc use is also low (*Figure 22*).

Recent data suggest low zinc use in treating diarrhoea

Percentage of children under 5 with diarrhoea receiving zinc treatment, countries with household survey data from 2010 or later

FIG. 22

| % | |
|----|----------------------------------|
| 1 | |
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| <1 | 12. |
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Malaria is among the biggest killers of children under 5, accounting for 7% of child deaths worldwide - a loss of roughly 0.5 million lives in 2011^a (Figure 23). Nearly all of these deaths occur sub-Saharan Africa. in Nevertheless, the last decade has seen substantial gains in combating malaria transmission and reducing deaths.

Global financing for malaria control has risen substantially over the past decade, thanks in large part to efforts by the Global Fund to Fight AIDS, Malaria and Tuberculosis; the US President's Malaria Initiative; and the World Bank Malaria Booster Program.

Today, about half of all African households own at least one insecticide-treated mosquito net (ITN) – a major improvement over the dismally low availability in 2000. The proportion of children under 5 in Africa that sleep under ITNs has risen from 2% in 2000 to 38% in 2010,^b with some countries attaining levels of over 60% (*Figure* 24). Recent studies confirm that the best way to further increase use of ITNs is simply to provide more of them: Even in households that already own at least one net, children still may not sleep under a net because not enough nets are available for all family members.^c

In 2010, the World Health Organization (WHO) instituted a major shift in malaria treatment procedures by recommending diagnostic testing of all suspected cases before starting anti-malarial treatment^d (the previous recommendation had been to presumptively treat all febrile children in malaria-endemic areas). Test-based malaria case management has great potential to improve malaria case detection,

The use of tests to diagnose malaria is still low, and far lower in many high-risk rural areas

as well as treatment of other causes of fever, such as pneumonia. National health systems are now building up diagnostic capacities, but test use is still low and is unduly concentrated in urban areas (*Figure 25*). Diagnosis and treatment must prioritize children who are at greatest risk of malaria — often those in rural areas.

Neonatal deaths

About 40% of all under-five deaths are neonatal, occurring during the first 28 days of life; in 2011 this amounted to 3 million deaths worldwide^a (Figure 26). The heaviest burdens are in South Asia and sub-Saharan Africa, which have both the highest neonatal mortality rates among regions and the largest numbers of annual births.

The majority of neonatal deaths result from complications related to preterm birth (before 37 completed weeks of gestation) or from complications during birth. Many mothers in the world's poorest countries deliver their babies at home rather than in a health facility; both they and

their babies are therefore at greater risk if complications occur. Coverage of institutional deliveries averages only 60% worldwide.^b Another significant cause of neonatal death is infection, including sepsis, meningitis, tetanus, pneumonia and diarrhoea.

Low birthweight (less than 2,500 grams), caused by preterm birth and/or fetal growth restriction, greatly increases children's risk of dying during their early months and years (Figure 27). Those who survive may have impaired immune function, increased risk of disease, and are likely to have cognitive disabilities and to remain undernourished throughout their lives. Low birthweight stems primarily from poor maternal health and nutrition, either before conception or during pregnancy.

Postnatal care visits from a skilled health worker can be very effective in encouraging proper care to prevent neonatal deaths. According to WHO postnatal-care guidelines, such care includes "early and exclusive breastfeeding, keeping the baby warm, increasing handwashing and providing hygienic umbilical cord and skin care, identifying conditions requiring additional care and counselling on when to take a newborn to a health facility"^c (Figure 28). Community health workers can play a critical role in providing care to families who do not have easy access to a health facility.d

A growing body of evidence confirms the significant impact of early initiation of breastfeeding, preferably within the first hour after birth, in reducing overall neonatal mortality. It does so by preventing hypothermia and strengthening the baby's immune system through colostrum (the mother's milk during the first days after birth). It also helps establish the bond between mother and mother and child.^e Much more must be done to promote this practice: In most regions of the world, fewer than half of all newborns are put to the breast within one hour of birth.^f

| A broad range of | interventions can reduce neonatal mortality | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| Key interventions | for reducing neonatal morbidity and mortality* FIG. 28 | | | | | | | |
| STAGE | INTERVENTION | | | | | | | |
| Preconception | Folic acid supplementation | | | | | | | |
| | Family planning | | | | | | | |
| | Prevention and management of sexually transmitted infections including HIV | | | | | | | |
| Antenatal | Syphilis screening and treatment | | | | | | | |
| | Pre-eclampsia and eclampsia prevention | | | | | | | |
| | Tetanus toxoid immunization | | | | | | | |
| | Intermittent preventive treatment for malaria | | | | | | | |
| | Detection and treatment of asymptomatic bacterium | | | | | | | |
| Intrapartum | Antibiotics for preterm rupture of membranes | | | | | | | |
| (birth) | Corticosteroids for preterm labour | | | | | | | |
| | Detection and management of breech | | | | | | | |
| | Labour surveillance for early diagnosis of complications | | | | | | | |
| | Clean delivery practices | | | | | | | |
| Postnatal | Resuscitation of newborn baby | | | | | | | |
| | Breastfeeding | | | | | | | |
| | Prevention and management of hypothermia | | | | | | | |
| | Kangaroo mother care (for infants with low birthweights) initiation in health facilities | | | | | | | |
| | Community-based case management of pneumonia | | | | | | | |
| *Based on Darmstadt, G. save?', The Lancet, vol. 3 updates from http://www. | L. et al., 'Evidence-based, Cost-effective Interventions: How many newborns can we 65, no. 9463, 12 March 2005, pp. 977-988 (accessed from www.childinfo.org) with vho.int/pmnch/topics/part_publications/essential_interventions_18_01_2012.pdf. | | | | | | | |

Undernutrition

COMMITTING TO CHILD SURVIVAL

Globally, more than one-third of under-five deaths are attributable to undernutrition.^a Children weakened by undernutrition are more likely to die from common childhood illnesses such as pneumonia, diarrhoea, malaria, and measles, as well as from AIDS (if they are HIV-positive). Primary causes of undernutrition include a lack of quality food; poor infant and young child feeding and care practices, such as sub-optimal breastfeeding; deficiencies of micronutrients such as zinc, vitamin A or iodine; and repeated bouts of infectious disease, often exacerbated by intestinal parasites.

Because of chronic undernutrition, a quarter of the world's children under 5 – about 165 million children – are stunted^b (i.e., have low height for their age). Stunting inflicts largely irreversible physical and mental damage. Stunting rates have declined in all regions, with the greatest declines in East Asia and the Pacific and South Asia in recent decades (*Figure 29*).

Stunting prevalence is routinely highest in the poorest households, but other aspects of the relationship between stunting and household wealth can vary (*Figure 30*). Country-specific analysis of disparities is needed to identify and target interventions for the most vulnerable populations.

Around 8% of the world's children under 5 – an estimated 51 million children – suffer from wasting^c (i.e., low weight for their height) as a result of acute undernutrition. Children who suffer from wasting face a markedly increased risk of death. Countries with higher than 10% prevalence of wasting are considered to be experiencing a public health emergency; immediate intervention is required in the form of emergency feeding programmes.

Simple, inexpensive solutions applied during the critical window of opportunity — while the mother is pregnant and during the child's first two years — can prevent undernutrition, decrease mortality, support growth and promote child health and well-being. These solutions include:

- Early initiation of breastfeeding: Initiating breastfeeding within the first hour after birth can reduce neonatal mortality by up to 20%.^d More than half of the world's newborns are not breastfed within an hour of birth.^e
- Exclusive breastfeeding: Globally, less than 40% of children under six months old are exclusively breastfed (Figure 31). A non-breastfed child is 14 times more likely to die of all causes in the first six months of life than an exclusively breastfed child.^f Increasing rates of early initiation of breastfeeding and exclusive breastfeeding is critical for improving child survival and development.
- Continued breastfeeding: In developing regions, 3 in 4 children continue breastfeeding through the first year of life, but only one in two children (56%) continue until age 2.^g
- Complementary feeding: Appropriate complementary feeding during the first two years of life is an essential aspect of improved feeding practices, which together represent the most effective nutrition intervention for preventing and reducing stunting, and for supporting child survival and health generally.
- Micronutrients: Vitamin and mineral deficiencies impact a child's health and chance of survival. Some research indicates that vitamin A supplementation reduces mortality from all causes among children aged 6-59 months.^h One child in three in this age cohort does not receive two annual doses of vitamin A and is not fully protected against vitamin A deficiency.ⁱ

HIV and AIDS

An estimated 3.4 million children* under 15 years old were living with HIV in 2011, 91% of them in sub-Saharan Africa. About 230,000** of these children subsequently died that year of HIV-associated causes.^a Access to antiretroviral therapy (ART) is still low in most countries. Only about 28% of children in need of ART received it in 2011, in contrast to the 57%[†] coverage among adults needing the medications.^b However, progress in access to treatment has been made in all regions. Without treatment, 50% of infected children die before the age of 2.^c In countries with high HIV prevalence in sub-Saharan Africa, HIV-associated mortality in 2010 among children under 5 ranged from 10% in Mozambique and Zambia to 28% in South Africa (*Figure 32*).^d

In high-income countries, universal access to prevention of motherto-child transmission of HIV (PMTCT) services has cut rates of transmission to about 2%.^e But in low- and middle-income countries, only 57% of an estimated 1.5 million[‡] pregnant women living with HIV in 2011 received the antiretrovirals needed to prevent HIV transmission to their babies, and similarly low proportions received the ART necessary for their own health.^f Nonetheless progress is being made in nearly every country (*Figure 33*).

*Data range: 3.1 million-3.9 million

**Data range: 200,000-370,000 †Data range: 53%-60%

Data range: 1.3 million-1.6 million

To accelerate progress, a 'Global Plan towards the elimination of new HIV infections in children by 2015 and keeping their mothers alive'^g was launched in June 2011 at the UN Special Session on HIV/AIDS. The Plan involves all countries, but prioritizes 22 countries that are home to nearly 90% of pregnant women living with HIV. The Plan sets two ambitious targets for 2015, both from a 2009 baseline: reduce the number of children newly infected with HIV by 90%; and reduce the number of HIV-associated deaths among women during pregnancy, childbirth and the six weeks that follow by 50%.

There is growing momentum behind a concerted scale-up of coverage of PMTCT and paediatric HIV care and treatment services, although progress is hampered by weak health systems in heavily affected countries. New and emerging technologies are improving diagnosis and treatment of infants and young children. However, simplification of treatment regimens and medicines is needed, as are programmatic innovations for identifying HIV-infected children and retaining them on ART care and treatment. Other urgent priorities include community mobilization and support for HIV-positive women and their children, and better integration of PMTCT services into stronger systems of maternal, newborn and child health care.

Substantial progress has been made in extending antiretroviral medicines to prevent mother-to-child transmission of HIV

Coverage of most effective antiretroviral medicine for preventing mother-to-child transmission of HIV during pregnancy and delivery, PMTCT priority countries, 2009 and 2011

CHILD MARRIAGE AND EARLY CHILDBEARING

Child marriage and early childbearing can have significant harmful effects on the survival and well-being of both children and mothers. Globally, almost 400 million women aged 20-49 (or 41% of the total population of women of this age) were married or entered into union while they were children (i.e., at less than 18 years old). Although the proportion of child brides has generally decreased over the last 30 years, in some regions child marriage remains common, even among the youngest generations, particularly in rural areas and among the poorest. Among young women worldwide aged 20-24, around 1 in 3 (or 70 million) were married as children, and around 11% (or 23 million) entered into marriage or union before they reached 15 years of age^a (*Figure 34*).

Child marriage increases health risks both for the girl and for her children. Child brides are often less able to negotiate sexual relationships or contraceptive use, and are therefore at greater risk for unintended and frequent pregnancies and for sexually transmitted infections.^b Early marriage frequently leads to early childbearing, as marriage often marks the time in a women's life when it becomes socially acceptable, or even expected, to have children. For instance, in Niger, three-quarters of young women aged 20-24 were married as children; half of them gave birth to their first child before turning 18.^c Pregnancy during adolescence undermines a girl's development by stopping her growth^d and increases the likelihood of complications or even death during delivery, for both the mother and child.

Maternal deaths related to pregnancy and childbirth are an important component of mortality for girls aged 15-19 worldwide, accounting for some 50,000 deaths each year.^e Stillbirths and death are 50% more likely for babies born to mothers younger than 20 than for babies born to mothers aged 20-29.^f Children born to mothers with early age at first birth are significantly more likely to suffer from stunting, wasting or underweight conditions, and also have increased incidence of low birthweight.^g

MOTHERS' EDUCATION

Low levels of maternal education are associated with higher rates of child mortality. Research indicates that more than half of recent reductions in child deaths are linked to gains in women's educational attainment,^h and that education levels of women in the mother's community also strongly affect child mortality.ⁱ Even slight improvements in maternal educational status confer a survival benefit on children,^j and more extensive education confers a correspondingly greater benefit, with some research suggesting that mortality rates of children whose mothers have at least seven years of education are up to 58% lower than rates among children whose mothers have no education.^k

Possible mechanisms for this improvement include the impact of economic benefits conferred by education on the mother, in the form of improvements in housing, sanitation and health care;¹ changes in use of antenatal and preventive health care;^m and improved immunization status of children whose mothers have higher educational attainment.ⁿ The greatest benefits for child survival are obtained when girls' and women's education programmes are undertaken together with poverty-reduction efforts.^o

WATER, SANITATION AND HYGIENE

Unsafe drinking water and poor or absent sanitation services are very significant contributors to child mortality, primarily through diarrhoeal disease, but also through other infectious diseases such as pneumonia and cholera. Almost 90% of diarrhoeal deaths globally are attributed to unsafe water, poor sanitation or inadequate hygiene.^p Evidence suggests that unsafe water may also raise the incidence of stunting among children through the effects of repeated episodes of diarrhoeal diseases and contaminants, since their immune systems are still developing and they have a lower body mass than adults.

Global progress in water and sanitation has been noteworthy. Since 1990, more than 2 billion people have received access to improved drinking water sources, while about 1.8 billion have gained access to improved sanitation." But an estimated 2.5 billion people still lack access to improved sanitation - more than half of them in India or China - while over 780 million are not using improved drinking water sources.^s Among regions, sub-Saharan Africa has the lowest coverage of improved drinking water sources. Large disparities in access to both improved drinking water sources and improved sanitation exist across countries, wealth guintiles within countries and urban and rural populations. Open defecation is still practised by an estimated 1.1 billion people, mainly in rural areas in South Asia and sub-Saharan Africa;^telimination of this practice is an essential step towards reducing child mortality from disease. Growing global recognition of the right to water (for personal and domestic use) and to sanitation will have increasingly important implications for programmes that have the potential to significantly reduce child mortality.

MATERNAL MORTALITY: AN IMPORTANT CONTRIBUTING FACTOR IN CHILD DEATHS

The link between child mortality and maternal mortality is indelible. Evidence shows that infants whose mothers die within the first six weeks of their lives are more likely to die before reaching age 2 than infants whose mothers survive.^a In addition, for every woman who dies in pregnancy or childbirth, 20 others endure injury, infection, disease and disabilities, such as obstetric fistula, which can cause life-long suffering.^b Sometimes these disabilities are so severe that women are effectively removed from family life and prevented from playing a major role in supporting their children's health.

Women face considerable risks during pregnancy and childbirth, which are exacerbated by conditions of poverty and deprivation. An estimated 287,000 maternal deaths occurred in 2010. The vast majority of these deaths occurred in sub-Saharan Africa (with over half of these deaths) and South Asia (with more than a quarter).[°] The latest available estimates indicate that there has been substantial global progress in reducing maternal mortality since 1990, with the world's maternal mortality rate falling by around half between 1990 and 2010; most regions have seen marked declines over this period (*Figure 35*). But too many women are still dying – and millions suffering from illness and injury – from causes related to pregnancy, childbirth and the postnatal period.

Just as the bulk of under-five deaths in high-mortality countries are preventable, so also are most maternal deaths in these countries. The lifetime risk of maternal mortality (the probability that a woman will die from complications of pregnancy and childbirth over her lifetime), is 1 in 39 in sub-Saharan Africa, compared with a lifetime risk of 1 in 4,700 in wealthy countries.^d This stark contrast reflects a massive inequality in access to essential pre- and postnatal health care, as well as delivery care.

Haemorrhage remains the leading cause of maternal death, followed by hypertension and other indirect causes (*Figure 36*). However, the available data are sparse and inconsistent. The majority of countries (particularly poorer countries) lack complete vital registration systems with good cause-of-death attribution. In order to understand causes of, and trends in, maternal mortality, information is needed on the cause of death, pregnancy status, and the time of death in relation to the pregnancy. In many countries this information is missing, misclassified or underreported for a variety of reasons, among which are births at home instead of in health facilities, and incomplete registration systems.

The disparity in maternal mortality ratios is certainly among the greatest health-related inequities in the world. The provision of adequate nutrition for women and the creation of a safe environment for pregnancy and childbirth — including the attendance of a skilled health professional during delivery — should be top priorities for policymakers, health experts and practitioners. While significant progress has been made, much more needs to be done to protect the lives of mothers and their children, and to allow families to experience what is supposed to be one of the most important and joyous moments in life.

Chapter 3: Getting to '20 by 2035': Strategies for accelerating progress on child survival

Chapter 3: Getting to '20 by 2035': Strategies for accelerating progress on child survival

The unfinished business of child survival remains substantial. But, as this report has demonstrated, extraordinary progress is possible in reducing under-five deaths in all regions and mortality settings. Many countries have managed to sustain high rates of reduction over more than two decades; indeed, more than half have already reached low-mortality status. For some very-high-mortality countries, the challenge involved in reaching a mortality rate of 20 or fewer under-five deaths per 1,000 live births is immense, but projections by UNICEF have shown that it is not insurmountable (*Figure 37*). The following pages show eight examples of countries that have sustained significant reductions in under-five mortality rates over the past two decades.

Fresh thinking and new strategies are required to ensure that the goal is met at the global level and in all countries. Around half of the world's countries have already achieved the 2035 target; for them, the challenge of *A Promise Renewed* is to sustain and further deepen gains by directing efforts towards subnational populations that are still missing out on essential interventions.

For the other half, the task will be more demanding, depending in large part on their current rates and burden of under-five mortality. Particularly for those nations whose national rates of mortality are classified as high (40 deaths per 1,000 live births or greater), redoubled efforts in all areas are required, with equitybased targeting complemented by ample investment in strengthening health systems and building up a supportive environment for children. Special attention, strategies and investment will need to be applied in countries with the highest rates and burdens — those whose mortality rates currently exceed 100 per 1,000 live births, many of which are in West and Central Africa, and most of which are either fragile states or conflict-affected.

The partners of *A Promise Renewed* have jointly committed to five crucial shifts in planning and action.

1. CONCENTRATE RESOURCES ON COUNTRIES AND REGIONS WITH THE MOST CHILD DEATHS: The increasing concentration of under-five deaths — among regions, in sub-Saharan Africa and South Asia; among countries, in low-income and large lowermiddle-income countries; and within countries, by household wealth and geographic location, among other factors — has several important implications for global efforts in support of *A Promise Renewed* over the next two and a half decades.

First, child survival efforts must become even more firmly focused on sub-Saharan Africa, South Asia, fragile states and the least developed countries, which are dominated by countries from these two regions. Since these regions and country groups also bear the largest burdens of childhood diseases, targeting health resources to them has the potential to yield substantial returns. The potential is demonstrated by successes in the area of measles immunization, which has produced the stunning result of lowering global measles deaths by more than three-quarters in the last decade.¹⁰

| Construction of the Constr | Figure 37 illustrates the mortality rate reductions needed by individual countries to achieve an under-five mortality rate of 20 deaths per 1,000 live births by the year 2035. Each bubble represents a country. The size of the bubble represents the number of under-five deaths in 2011. The color of the bubble represents national income levels: green is low income; blue is lower-middle-income; orange is upper-middle-income. The horizontal axis shows the observed rate of reduction in under-five mortality, per year over 2000-2011. The vertical axis shows the required rate of reduction per year from 2011 to 2035 to reach an under-five mortality rate of 20 under-five deaths per 1,000 live births. Countries above the diagonal line need faster rates of reduction (i.e., accelerated progress) in order to achieve the target. Countries below the diagonal line will be able to achieve the target at their current rates of reduction. Countries that already have an under-five mortality rate below 20 in 2011 are not shown on the graph since they have already achieved the target. |
|--|--|
|--|--|

Country examples

These eight diverse countries — representing various stages of economic and social development, and all regions of the world, and presented here in descending mortality rank order — demonstrate that sustained reductions in child mortality are possible over long periods of time. Such progress will be needed to achieve the goals of *Committing to Child Survival: A Promise Renewed.*

Since the end of Mozambique's 16-year civil war in 1992, significant social and economic progress has been made; Mozambique is currently one of the fastest-growing economies in the world. Reductions in child mortality over the last 20 years have been accompanied by significant reforms in the health sector, including improvements in institutional coordination. Major advances have occurred in malaria prevention and control, immunization and, lately, the community health workers programme.

The end of civil war in 2003 allowed reconstruction of Liberia's badly damaged health system to begin. This in turn has permitted much improved access to basic services, including among others HIV testing, PMTCT interventions and malaria treatment and prevention. Perhaps the greatest positive impact in reducing child mortality has resulted from immunization, which continued even during the war and which has been expanded through community outreach programmes.

In Bangladesh, expansion of childhood immunization, oral rehydration therapy and nationwide vitamin A supplementation have been important drivers of mortality reductions — reflected in notable declines in deaths from acute respiratory infections, diarrhoeal diseases and measles. An expanded cadre of community health workers, together with behaviour change programmes, have enhanced quality and use of health facilities and increased breastfeeding rates. Women's empowerment, maternal education and poverty reduction strategies have been key contributing factors.

Mongolia's government successfully maintained its policy commitment to equitable provision of health services through the economic transition of the early 1990s. Community health interventions supported by local authorities and involving family members have contributed to reducing child mortality. Other constructive factors included a shift towards greater emphasis on primary health care as well as the development of compulsory health insurance, with financial support for vulnerable groups, including children.

| | COMMITTING TO CHILD SURVIVAL |
|--------------|------------------------------|
| `)(′ | A PROMISE RENEWED |
| | |

In Brazil, community health programmes and family health strategies were established in the 1990s to deliver primary health care through community health workers, doctors and nurses. These helped greatly expand access to health services, reduced inequities in coverage and cut child mortality. Other important factors in preventing child deaths have included improvements in sanitation, maternal education, breastfeed-ing and immunization coverage, and growth in vulnerable families' incomes, in part due to cash transfer programmes.

Oman has made major inroads in fighting communicable diseases, including eradication of polio and measles within its borders. Vaccination rates for major diseases approach 99%, and immunization in general has greatly reduced children's chances of contracting serious illnesses. Other factors contributing to improved child survival include better urban infrastructure, expanded access to clean drinking water, improved educational levels, high levels of social development and a strong commitment to equity.

Having recovered from the conflict and economic disruptions that marked the early 1990s, Serbia has sustained significant reductions in child as well as maternal mortality over two decades. Strong commitment to improving the quality of child health care services, wide coverage of ante- and post-natal care, high vaccination rates among children and improved home management and treatment of pneumonia and diarrhoea were the main contributing factors in these achievements.

Recent improvements in child survival have resulted mainly from decreases in neonatal mortality. These were associated with increases in human, material and financial resources devoted to health care, as well as a general improvement in the country's social and economic conditions. Government reforms, including establishment of a universal health-care system, were made in 2002 to improve the efficiency and effectiveness of health spending. Portugal allocates a substantial proportion of its GDP to health.

Chapter 3: Getting to '20 by 2035': Strategies for accelerating progress on child survival

2. INCREASE EFFORTS AMONG HIGH-BURDEN POPULATIONS:

Second, the discourse and debate on reaching the unreached in child survival must be intensified in populous, often middleincome countries with pockets of high child mortality. In several of these countries, including India and Nigeria, rapid economic growth and strong inflows of trade and investment in recent years have failed to bring about a corresponding reduction of inequities in under-five mortality. Disaggregated data on child survival and health and development in these countries shows clearly the wide differentials in health status, access to and use of essential services, and health risks among subnational socioeconomic groups and geographic areas.

| Ending preventable child | deaths requires a new way of 'doing business' |
|--|--|
| Evidence points to five str progress in countries and | FIG. 38 provide accelerate globally |
| 1 Geography | • Increase efforts in the countries and regions where most under-five deaths occur, prioritizing budgets and committing to action plans to end preventable child deaths. |
| 2 High-burden populations | Refocus country health systems on scaling- up access for underserved populations, e.g., rural and urban low-income groups |
| 3 High-impact solutions | Target the biggest opportunities for impact, e.g., neonatal conditions Scale and sustain demand and supply of highest impact, evidence-based solutions Invest in innovation to accelerate results |
| 4 Supportive environment | Educate girls and women Empower women to make decisions Enact smart policy for inclusive economic growth Address environmental factors, such as sanitation and hygiene |
| 5 Mutual accountability | Create transparency and mutual account- ability for results from global to local levels Unify child survival voices through shared goals and common metrics Invest in systems to capture data, monitor and evaluate progress and share knowledge Share regular updates to reflect the current state of knowledge and progress |

Children dying in these populous countries are also often dying of largely preventable causes, such as infectious diseases and lack of basic and maternal health care. Greater attention must be devoted to reaching the poorest and most geographically isolated households with essential services in all countries. The statistical evidence clearly shows that these groups have the highest burden of under-five deaths — and therefore the greatest potential for child survival gains (see *Figure* 9). Efforts must therefore refocus country health systems on scaling up access for underserved populations.

3. FOCUS ON HIGH-IMPACT SOLUTIONS: Across the world, many children from the poorest and most marginalized groups within countries are still dying of diseases such as pneumonia, diarrhoea and malaria, which are easily preventable through access to quality health services — a fact borne out by the low rates of such deaths among wealthier and more mainstream groups that have the appropriate access.

Effective interventions exist to address all of the main causes of child deaths. Enhancing access to and use of life-saving commodities is essential, as is investing in neonatal and maternal health care and nutrition. And although many initiatives are being undertaken to expand vital services, there are still simply not enough countries paying close attention to and investing in these solutions. Those that do, in all mortality settings, stand to reap the benefits of radical reductions in under-five mortality rates.

4. CREATE A SUPPORTIVE ENVIRONMENT FOR CHILD SURVIVAL:

In addition to medical and nutritional factors, there are many other considerations that influence a child's risk of dying before age 5. Poverty, geographic isolation, educational disadvantage, child protection violations and gender exclusion are all key factors that exacerbate the risk of under-five death. Addressing these underlying causes has become a more pressing issue than ever before. Investment in non-health development, notably education, infrastructure, water and sanitation, and income- and employmentgeneration are now seen as vital components of a comprehensive plan to reduce under-five deaths.

5. SUSTAIN MUTUAL ACCOUNTABILITY: It is critical that the challenge of reducing under-five deaths is taken up in the right way, for amid all of the complexities lies an enormous opportunity. That means, however, taking bold steps that prioritize both efficiency and mutual accountability, and harness the growing consensus that economic and social progress should be equitable. As outlined in the 'Overview' (p. 5), each and every partner has a particular and important role to play in *A Promise Renewed*. Common to all, however, is the imperative of taking shared responsibility

Chapter 3: Getting to '20 by 2035': Strategies for accelerating progress on child survival

for the goal of radically reducing under-five deaths in the next two decades, and embedding these efforts within their current and future strategies and operations.

Committing to A Promise Renewed will have striking implications for national policies and programmes in many developing countries, and for the work of UN country teams, and will challenge us all to change the way we do business. Meeting this challenge is within our grasp: The analysis presented at the Child Survival Call to Action Forum provides a strong case for proceeding with optimism.

We now face a stark choice: more of the same strategies, with the likelihood of further moderate gains but only a modest narrowing of the gaps; or a refocus on radically reducing child deaths not only to accelerate progress but to contribute to the development of a more just and equitable world — one that is truly fit for all children.

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Tables: Country and regional estimates of child mortality and causes of under-five deaths 10

| | Under-5 mortality rank | Und V (deaths | | | Inder-5 mortality rate aths per 1,000 live births) | | | Number of under-5 deaths (thousands) | | Infant mor- tality 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 territories | 2011 | 1990 | 2000 | 2011 | Decline (%) 1990-2011 | Annual rate of reduction(%) 1990-2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | |
| SUB-SAHARAN AFRICA | | | | | | | | | | | | | | | | | |
| Angola | 8 | 243 | 199 | 158 | 35 | 2.1 | 123 | 120 | 144 | 96 | 74 | 72 | 53 | 43 | 29 | 35 | |
| Benin | 20 | 1// | 140 | 106 | 40 | 2.4 | 37 | 36 | 107 | 68 | 23 | 24 | 40 | 31 | 9 | 11 | |
| Botswana | 80 | 53 | 81 | 26 | 51 | 3.4 | 2 | 1 | 41 | 20 | 2 | 1 | 21 | 11 | 1 | 1 | |
| Burkina Faso | 9 | 208 | 182 | 146 | 30 | 1./ | 87 | 101 | 105 | 82 | 44 | 5/ | 41 | 34 | 18 | 25 | |
| Burundi | 10 | 183 | 105 | 139 | 24 | 1.3 | 45 | 39 | 110 | 80 70 | 21 | 24 | 50 | 43 | 13 | 12 | |
| Cameroon | 11 | 145 | 140 | 127 | 12 | 0.6 | 1 | 88 | 90 | 19 | 44 | 55 | 30 | 33 | 19 | 24 | |
| Cape verde | 91 | 100 | 39 | 21 | 63 | 4.8 | 20 | 0 | 45 | 10 | 12 | 10 | 21 | 10 | 0 | 0 | |
| Central African Republic | 6 | 109 | 100 | 104 | 3 | 0.2 | 20 | 20 | 112 | 108 | 13 | 10 | 40 | 40 | 12 | 1 | |
| Chad | 4 | 208 | 109 | 70 | 19 | 1.0 | 22 | 19 | 113 | 97 50 | 30 | 40 | 47 | 4Z | 13 | 22 | |
| Contro | 33 | 110 | 100 | 00 | 17 | 2.0 | 10 | 11 | 75 | 64 | 7 | 2 | 25 | 3Z 20 | 2 | 5 | |
| Collgo | 20 | 151 | 109 | 99 115 | 24 | 0.9 | 76 | 75 | 104 | 04 | 52 | 52 | 30 | JZ //1 | 25 | - 0 - 00 | |
| Democratic Republic | - 17 | 101 | 104 | 100 | 24 | 1.5 | 10 | 10 | 104 | 01 | 52 | 007 | 47 | 41 | 20 | 20 | |
| of the Congo | 5 | 181 | 181 | 168 | 8 | 0.4 | 312 | 465 | 117 | 111 | 206 | 307 | 49 | 47 | 91 | 137 | |
| Equatorial Guinea | 16 | 190 | 152 | 118 | 38 | 2.3 | 3 | 3 | 118 | 80 | 2 | 2 | 47 | 37 | 1 | 1 | |
| Eritrea | 41 | 138 | 98 | 68 | 51 | 3.4 | 17 | 13 | 86 | 46 | 11 | 9 | 32 | 22 | 4 | 4 | |
| Ethiopia | 36 | 198 | 139 | 77 | 61 | 4.5 | 433 | 194 | 118 | 52 | 264 | 129 | 52 | 31 | 122 | 82 | |
| Gabon | 44 | 94 | 82 | 66 | 31 | 1.7 | 3 | 3 | 69 | 49 | 2 | 2 | 32 | 25 | 1 | 1 | |
| Gambia | 23 | 165 | 130 | 101 | 39 | 2.3 | 7 | 6 | 78 | 58 | 3 | 4 | 44 | 34 | 2 | 2 | |
| Ghana | 34 | 121 | 99 | 78 | 36 | 2.1 | 67 | 60 | 76 | 52 | 43 | 40 | 38 | 30 | 22 | 23 | |
| Guinea | 12 | 228 | 175 | 126 | 45 | 2.8 | 58 | 48 | 135 | 79 | 35 | 30 | 53 | 39 | 15 | 15 | |
| Guinea-Bissau | 7 | 210 | 186 | 161 | 24 | 1.3 | 9 | 9 | 125 | 98 | 5 | 5 | 50 | 44 | 2 | 3 | |
| Kenya | 38 | 98 | 113 | 73 | 26 | 1.4 | 95 | 107 | 64 | 48 | 62 | 72 | 33 | 27 | 32 | 42 | |
| Lesotho | 29 | 88 | 117 | 86 | 2 | 0.1 | 5 | 5 | 71 | 63 | 4 | 4 | 45 | 39 | 3 | 2 | |
| Liberia | 34 | 241 | 164 | 78 | 68 | 5.4 | 22 | 12 | 161 | 58 | 15 | 9 | 49 | 27 | 5 | 4 | |
| Madagascar | 47 | 161 | 104 | 62 | 62 | 4.6 | 79 | 45 | 98 | 43 | 51 | 31 | 40 | 23 | 20 | 17 | |
| Malawi | 31 | 227 | 164 | 83 | 64 | 4.8 | 94 | 52 | 134 | 53 | 56 | 34 | 48 | 27 | 21 | 18 | |
| Mali | 3 | 257 | 214 | 176 | 32 | 1.8 | 103 | 121 | 132 | 98 | 53 | 68 | 58 | 49 | 25 | 36 | |
| Mauritania | 18 | 125 | 118 | 112 | 10 | 0.5 | 10 | 13 | 81 | 76 | 6 | 9 | 43 | 40 | 3 | 5 | |
| Mauritius | 115 | 24 | 19 | 15 | 37 | 2.2 | 1 | 0 | 21 | 13 | 1 | 0 | 16 | 9 | 0 | 0 | |
| Mozambique | 22 | 226 | 172 | 103 | 54 | 3.7 | 128 | 86 | 151 | 72 | 84 | 59 | 53 | 34 | 32 | 30 | |
| Namibia | 63 | /3 | /4 | 42 | 43 | 2.7 | 4 | 2 | 49 | 30 | 3 | 2 | 29 | 18 | 2 | 1 | |
| Niger | 13 | 314 | 216 | 125 | 60 | 4.4 | 125 | 89 | 133 | 66 | 53 | 49 | 49 | 32 | 21 | 25 | |
| Nigeria | 14 | 214 | 188 | 124 | 42 | 2.6 | 8/6 | /56 | 127 | /8 | 519 | 480 | 51 | 39 | 220 | 254 | |
| Rwanda | 51 | 156 | 183 | 54 | 65 | 5.1 | 50 | 23 | 95 | 38 | 31 | 1/ | 39 | 21 | 12 | 9 | |
| Sao Tome and Principe | 28 | 96 | 93 | 89 | 8 | 0.4 | 0 | 0 | 62 | 58 | 0 | 0 | 31 | 29 | 0 | 0 | |
| Senegal | 45 | 136 | 130 | 65 | 52 | 3.5 | 41 | 30 | 69 | 47 | 21 | 22 | 40 | 26 | 13 | 12 | |
| Seychelles | 122 | 1/ | 14 | 14 | 1/ | 0.9 | 0 | 0 | 14 | 12 | 0 | 0 | 10 | 9 | 0 | 0 | |
| Sierra Leone | 1 | 267 | 241 | 185 | 31 | 1./ | 43 | 42 | 158 | 119 | 25 | 27 | 58 | 49 | 10 | 11 | |
| Somalia | 2 | 180 | 180 | 180 | 0 | 0.0 | 52 | /1 | 108 | 108 | 33 | 43 | 50 | 50 | 15 | 21 | |
| South Africa | 58 | 62 | /4 | 4/ | 25 | 1.4 | 67 | 47 | 48 | 35 | 51 | 35 | 26 | 19 | 28 | 20 | |
| South Sudan | 15 | 217 | 165 | 121 | 45 | 2.8 | 54 | 43 | 129 | /6 | 32 | 28 | 51 | 38 | 13 | 13 | |
| Swaziland | 21 | 83 | 114 | 104 | -24 | -1.0 | 3 | 4 | 61 | 69 | 2 | 2 | 32 | 35 | | 1 | |
| logo | 19 | 14/ | 128 | 110 | 25 | 1.4 | 22 | 21 | 85 | /3 | 13 | 14 | 42 | 36 | 6 | 1 | |
| Uganda | 26 | 1/8 | 141 | 90 | 49 | 3.3 | 146 | 131 | 106 | 58 | 89 | 86 | 39 | 28 | 35 | 43 | |
| United Republic of Tanzania | 41 | 158 | 126 | 68 | 5/ | 4.0 | 169 | 122 | 97 | 45 | 105 | 83 | 41 | 25 | 4/ | 48 | |
| Zambia | 31 | 193 | 154 | 83 | 5/ | 4.0 | 64 | 46 | 114 | 53 | 38 | 30 | 43 | 27 | 15 | 1/ | |
| Zimbabwe | 43 | /9 | 106 | 67 | 15 | 0.8 | 30 | 24 | 53 | 43 | 20 | 16 | 32 | 30 | 12 | 11 | |

DEFINITIONS OF INDICATORS Under-five mortality rate: 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. - Not available * Includes all neonatal causes except neonatal pneumonia and diarrhoea. Source: Mortality rates and number of deaths, IGME 2012; cause of death, CHERG 2012.

Sex-specific under-5 mortality rate (deaths per 1,000 live births)

Deaths among children under 5 years of age due to: $\binom{9}{2}$

| (นะสม | is per 1, | 000 1100 | biruisj | | | | | | | (70) | | | |
|-------|-----------|----------|---------|---------------------|-----------|-----------|---------|------|---------|----------|--------|-------|-----------------------------|
| 19 | 90 | 20 |)11 | | 2010 | | | | | | | | |
| Male | Female | Male | Female | Neonatal causes* | Pneumonia | Diarrhoea | Malaria | AIDS | Measles | Injuries | Others | Total | Countries and territories |
| | | | | | | | | | | | | | SUB-SAHARAN AFRICA |
| 254 | 232 | 165 | 150 | 24 | 17 | 15 | 10 | 2 | 0 | 4 | 28 | 100 | Angola |
| 183 | 171 | 109 | 103 | 23 | 17 | 10 | 23 | 1 | 0 | 3 | 22 | 100 | Benin |
| 57 | 49 | 28 | 24 | 37 | 13 | 6 | 0 | 15 | 0 | 4 | 24 | 100 | Botswana |
| 215 | 202 | 151 | 142 | 17 | 18 | 12 | 24 | 1 | 3 | 3 | 23 | 100 | Burkina Faso |
| 190 | 175 | 145 | 133 | 29 | 19 | 15 | 4 | 6 | 0 | 5 | 23 | 100 | Burundi |
| 154 | 137 | 135 | 120 | 23 | 15 | 13 | 16 | 5 | 0 | 3 | 24 | 100 | Cameroon |
| 62 | 54 | 23 | 20 | 38 | 19 | 8 | 0 | 0 | 0 | 4 | 31 | 100 | Cape Verde |
| 175 | 163 | 170 | 157 | 24 | 16 | 11 | 26 | 3 | 0 | 3 | 17 | 100 | Central African Republic |
| 219 | 198 | 177 | 160 | 22 | 19 | 14 | 20 | 3 | 0 | 3 | 19 | 100 | Chad |
| 130 | 113 | 85 | 74 | 32 | 18 | 9 | 14 | 0 | 0 | 4 | 23 | 100 | Comoros |
| 124 | 113 | 103 | 94 | 26 | 14 | 7 | 26 | 5 | 0 | 3 | 19 | 100 | Congo |
| 164 | 138 | 125 | 105 | 28 | 15 | 9 | 25 | 3 | 0 | 3 | 17 | 100 | Côte d'Ivoire |
| 192 | 171 | 178 | 158 | 24 | 19 | 13 | 18 | 1 | 0 | 3 | 23 | 100 | Democratic Republic |
| 199 | 180 | 124 | 112 | 27 | 14 | 7 | 21 | 8 | 0 | 2 | 21 | 100 | Equatorial Guinea |
| 151 | 125 | 74 | 61 | 29 | 19 | 11 | 1 | 2 | 2 | 8 | 27 | 100 | Eritrea |
| 212 | 184 | 82 | 72 | 30 | 21 | 14 | 2 | 2 | 4 | 6 | 23 | 100 | Ethiopia |
| 103 | 86 | 72 | 59 | 33 | 11 | 7 | 15 | 8 | 3 | 3 | 20 | 100 | Gabon |
| 175 | 154 | 107 | 94 | 29 | 15 | 9 | 20 | 3 | 0 | 3 | 20 | 100 | Gambia |
| 128 | 114 | 83 | 72 | 35 | 13 | 7 | 18 | 3 | 1 | 4 | 19 | 100 | Ghana |
| 232 | 224 | 128 | 123 | 26 | 16 | 10 | 27 | 1 | 0 | 3 | 17 | 100 | Guinea |
| 227 | 193 | 174 | 147 | 24 | 18 | 12 | 18 | 3 | 0 | 3 | 21 | 100 | Guinea-Bissau |
| 104 | 92 | 78 | 67 | 33 | 17 | 9 | 3 | 7 | 0 | 5 | 26 | 100 | Kenva |
| 95 | 80 | 93 | 79 | 40 | 12 | 7 | 0 | 18 | 1 | 4 | 18 | 100 | Lesotho |
| 255 | 227 | 83 | 74 | 28 | 14 | 9 | 18 | 2 | 10 | 3 | 17 | 100 | Liberia |
| 171 | 152 | 65 | 58 | 34 | 18 | 10 | 6 | 0 | 1 | 7 | 23 | 100 | Madagascar |
| 235 | 219 | 87 | 79 | 28 | 14 | 7 | 13 | 13 | 2 | 4 | 19 | 100 | Malawi |
| 267 | 248 | 182 | 169 | 21 | 20 | 14 | 16 | 0 | 3 | 3 | 22 | 100 | Mali |
| 134 | 115 | 120 | 104 | 30 | 17 | 11 | 6 | 0 | 7 | 4 | 24 | 100 | Mauritania |
| 27 | 21 | 16 | 14 | 62 | 9 | 0 | 0 | 1 | 0 | 6 | 22 | 100 | Mauritius |
| 233 | 218 | 107 | 99 | 25 | 15 | 9 | 19 | 10 | 1 | 3 | 17 | 100 | Mozambique |
| 78 | 67 | 45 | 38 | 38 | 12 | 5 | 0 | 14 | 4 | 5 | 22 | 100 | Namibia |
| 320 | 307 | 127 | 122 | 20 | 22 | 14 | 15 | 1 | 0 | 4 | 23 | 100 | Niger |
| 222 | 205 | 129 | 119 | 26 | 17 | 11 | 20 | 4 | 1 | 3 | 18 | 100 | Nigeria |
| 165 | 148 | 57 | 51 | 31 | 20 | 12 | 2 | 2 | 0 | 6 | 28 | 100 | Rwanda |
| 99 | 93 | 92 | 86 | 29 | 18 | 11 | 4 | 0 | 1 | 5 | 32 | 100 | Sao Tome and Principe |
| 143 | 129 | 69 | 60 | 32 | 16 | 9 | 14 | 1 | 2 | 4 | 21 | 100 | Senegal |
| 18 | 15 | 15 | 13 | 59 | 7 | 1 | 0 | 0 | 0 | 4 | 30 | 100 | Seychelles |
| 280 | 253 | 194 | 176 | 23 | 17 | 12 | 23 | 1 | 0 | 3 | 21 | 100 | Sierra Leone |
| 190 | 170 | 190 | 170 | 27 | 25 | 16 | 7 | 1 | 0 | 3 | 21 | 100 | Somalia |
| 66 | 58 | 50 | 44 | 29 | 11 | 5 | 0 | 28 | 1 | 4 | 22 | 100 | South Africa |
| 220 | 215 | 122 | 119 | 33 | 19 | 12 | 3 | 2 | 1 | 5 | 25 | 100 | South Sudan |
| 91 | 76 | 113 | 94 | 27 | 14 | 7 | 0 | 23 | 0 | 5 | 24 | 100 | Swaziland |
| 158 | 136 | 118 | 102 | 28 | 16 | 10 | 18 | 3 | 0 | 4 | 21 | 100 | Тодо |
| 192 | 164 | 97 | 83 | 26 | 17 | 10 | 13 | 7 | 0 | 5 | 22 | 100 | Uganda |
| 163 | 152 | 70 | 65 | 34 | 15 | 9 | 11 | 5 | 1 | 5 | 21 | 100 | United Republic of Tanzania |
| 200 | 186 | 86 | 80 | 27 | 14 | 9 | 13 | 10 | 4 | 4 | 19 | 100 | Zambia |
| 86 | 72 | 73 | 61 | 32 | 11 | 8 | 8 | 20 | 1 | 3 | 16 | 100 | Zimbabwe |
| | | . • | | | | - | - | - | | | | | |

| | Under-5 mortality rank | Under-5 n (deaths per 1 | | | mortality rate 1,000 live bii | Number of under-5 deaths (thousands) | | Infant mor- tality 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 territories | 2011 | 1990 | 2000 | 2011 | Decline (%) | Annual rate of reduction (%) 1990-2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 |
| MIDDLE EAST | 2011 | 1000 | 2000 | 2011 | 1000 2011 | 1000 2011 | 1000 | 2011 | 1000 | 2011 | | 2011 | 1000 | 2011 | 1000 | 2011 |
| Algeria | 74 | 66 | 46 | 30 | 55 | 38 | 52 | 21 | 54 | 26 | 42 | 18 | 29 | 17 | 23 | 12 |
| Rahrain | 135 | 21 | 12 | 10 | 51 | 3.4 | 0 | 0 | 18 | 9 | 0 | 0 | 7 | 4 | 0 | 0 |
| Diibouti | 26 | 122 | 106 | 90 | 26 | 1.5 | 3 | 2 | 9/ | 72 | 2 | 2 | 30 | 33 | 1 | 1 |
| Edvot | 20 | 86 | 100 | 21 | 75 | 67 | 158 | 40 | 63 | 18 | 117 | 2/ | 20 | 7 | 36 | 1/ |
| Egypt | 91 | 61 | 44 | 21 | 50 | 0.7 | 1150 | 40 | 47 | 21 | 07 | 24 | 20 | 14 | 10 | 14 |
| | 67 | 46 | 44 | 20 | 10 | 4.5 | 20 | 40 | 47 | 21 | 24 | 20 | 21 | 20 | 40 | 17 |
| lidy | 160 | 40 | 43 | 30 | 62 | 0.9 | 30 | 42 | 10 | 31 | 24 | 30 | 23 | 20 | 10 | 23 |
| Isidei | 109 | 12 | 1 | 4 | 03 | 4.7 | I F | ا د | 10 | 4 | | ا د | 10 | 10 | | 0 |
| Jordan | 91 | 37 | 10 | Z I | 44 | 2.1 | C | ں ۱ | 31 | 10 | 4 | ں ۱ | 19 | 12 | 2 | 2 |
| Nuwali | 133 | 11 | 10 | 0 | | 2.1 | | 1 | 14 | 9 | | 1 | 10 | 5 | 1 | 0 |
| Lebanon | 141 | 33 | 19 | 9 | 12 | 0.0 | 2 | 1 | 21 | 10 | 2 | 1 | 10 | 5 10 | | 0 |
| Libya | 107 | 44 | 21 | 01 | 03 | 4.8 | 5 | 2 | 33 | 13 | 3 | 2 40 | 21 | 10 | 2 | 10 |
| Morocco | 69 | 81 | 53 | 33 | 60 | 4.3 | 57 | 21 | 64 | 28 | 44 | 18 | 35 | 19 | 25 | 12 |
| Occupied Palestinian Territory | 8/ | 43 | 30 | 22 | 49 | 3.2 | 4 | 3 | 30 | 20 | 3 | 3 | 22 | 13 | 2 | 2 |
| Oman | 141 | 48 | 22 | 9 | 82 | 8.1 | 3 | 0 | 30 | (| 3 | 0 | 21 | 5 | 2 | 0 |
| Qatar | 145 | 20 | 13 | ð | 62 | 4.0 | 0 | 0 | 17 | 6 | 0 | 0 | 10 | 4 | 0 | |
| Saudi Arabia | 141 | 43 | 21 | 9 | 78 | 7.3 | 23 | 6 | 34 | 8 | 19 | 5 | 20 | 5 | 11 | 3 |
| Sudan | 29 | 123 | 104 | 86 | 30 | 1./ | 96 | 95 | 11 | 57 | 61 | 63 | 38 | 31 | 32 | 35 |
| Syrian Arab Republic | 115 | 36 | 23 | 15 | 58 | 4.1 | 16 | (| 30 | 13 | 13 | 6 | 18 | 9 | 8 | 4 |
| Tunisia | 107 | 51 | 30 | 16 | 68 | 5.5 | 12 | 3 | 40 | 14 | 9 | 3 | 23 | 10 | 5 | 2 |
| United Arab Emirates | 151 | 22 | 12 | / | /0 | 5.8 | 1 | 1 | 19 | 6 | 1 | 1 | 12 | 4 | 1 | 0 |
| Yemen ASIA & PACIFIC | 36 | 126 | 99 | 77 | 39 | 2.4 | 73 | 70 | 89 | 57 | 52 | 53 | 43 | 32 | 27 | 30 |
| Afghanistan | 22 | 102 | 136 | 101 | 17 | 21 | 117 | 128 | 120 | 73 | 80 | 0/ | 51 | 36 | 38 | 51 |
| Augnanistan | 165 | 132 | 6 | 5 | 51 | 3.1 | 2 | 120 | 123 | 13 | 2 | 1 | 5 | 30 | 1 | 1 |
| Rusualla | 60 | 120 | Q/ | 16 | 67 | 5.4 | 500 | 13/ | 07 | 37 | 251 | 105 | 52 | 26 | 105 | 80 |
| Daligiaucoli | 51 | 139 | 80 | 40 54 | 61 | 1.5 | 303 | 104 | 06 | 12 | 201 | 105 | 11 | 20 | 135 | 00 |
| Brunoi Daruccalam | 151 | 12 | 10 | 7 | /1 | 2.6 | 0 | 0 | 30 | 6 | 0 | 0 | 7 | 23 | 0 | 0 |
| Cambodia | 62 | 117 | 102 | /3 | 64 | 1.8 | 37 | 13 | 85 | 36 | 23 | 11 | 37 | 10 | 15 | 6 |
| China | 115 | 49 | 35 | 15 | 70 | 5.8 | 1 296 | 249 | 39 | 13 | 1 036 | 215 | 23 | 9 | 555 | 143 |
| Cook Islands | 135 | 19 | 17 | 10 | 50 | 3.3 | 0 | 245 | 16 | 8 | 1,000 | 215 | 9 | 5 | 000 | 0 |
| Democratic People's | 60 | 15 | 58 | 33 | 26 | 1.4 | 16 | 12 | 23 | 26 | 10 | Q | 22 | 18 | 0 | 6 |
| Republic of Korea | 107 | 30 | 22 | 16 | 15 | 2.8 | 1 | 0 | 25 | 1/ | 0 | 0 | 13 | 8 | 0 | 0 |
| FIJI India | 107 | 11/ | 22 | 61 | 45 | 2.0 | 3 061 | 1 655 | 2J Q1 | 14 | 2 174 | 1 273 | 13 | 30 | 1 288 | 876 |
| Indonocio | 43 71 | 82 | 53 | 30 | 61 | 1.5 | 386 | 1,000 | 54 | 25 | 2,174 | 1,273 | 20 | 15 | 1/0 | 66 |
| lanan | 18/ | 6 | 5 | 3 | 17 | 3.0 | 8 | 104 | 5 | 20 | 5 | 3 | 23 | 1 | 3 | 1 |
| Kirihati | 58 | 88 | 65 | 47 | 46 | 29 | 0 | т 0 | 64 | 38 | 0 | 0 | 28 | 19 | 0 | 0 |
| Lao People's | 63 | 1/8 | 81 | 12 | 72 | 6.0 | 25 | 6 | 102 | 3/ | 17 | 5 | 38 | 18 | 7 | 2 |
| Democratic Republic | 151 | 140 | 11 | 42 7 | 62 | 0.0 | 20 | 0 | 102 | 6 | 7 | 2 | 0 | 2 | 1 | 2 |
| Maldivaa | 101 | 105 | 52 | 11 | 02 | 4.0 | 9 | 4 | 76 | 0 | 1 | 0 | 26 | 7 | 4 | 2 |
| Marchall Islanda | 133 | 52 | 20 | 26 | 50 | 10.9 | 0 | 0 | 10 | 3 | 0 | 0 | 10 | 10 | 0 | 0 |
| Micronesia | 00 | 52 | 30 | 20 | 00 | 5.5 | 0 | 0 | 41 | 24 | 0 | 0 | 19 | 12 | 0 | 0 |
| (Federated States of) | 63 | 00 | 49 | 42 | 20 | 1.5 | 0 | 0 | 44 | 34 | 0 | 0 | 22 | 17 | 0 | 0 |
| Mongolia | 72 | 107 | 63 | 31 | /1 | 5.9 | 8 | 2 | 76 | 26 | 6 | 2 | 27 | 12 | 2 | 1 |
| wyanmar | 47 | 107 | 84 | 62 | 42 | 2.6 | 115 | 53 | 11 | 48 | 82 | 40 | 42 | 30 | 44 | 25 |
| Nauru | 66 | 40 | 40 | 40 | 0 | 0.0 | 0 | 0 | 32 | 32 | 0 | 0 | 22 | 22 | 0 | 0 |
| Nepal | 57 | 135 | 83 | 48 | 64 | 4.9 | 94 | 34 | 94 | 39 | 66 | 27 | 51 | 27 | 37 | 20 |
| New Zealand | 157 | 11 | 7 | 6 21 | 4/ | 3.0 | 1 | 0 | 9 | 19 | | 0 | 4 | 3 | 0 | 0 |
| Dakistan | 20 | 14 | 29 | 70 | /1 | -1.9 | 544 | 350 | 05 | 50 | 106 | 202 | 1 | 26 | 210 | 160 |
| r anistaii Dalau | 39 100 | 22 | 90 25 | 10 | 41 | 2.0 | 044 | 002 | 90 | 11 | 420 | 290 | 49 | 00 | 210 | 109 |
| Panua New Guinco | 100 | 22 | 20 70 | 59 | 42 | 2.0 | 12 | 10 | 61 | 14 | 0 | 0 | 20 | 22 | 1 | 5 |
| Philippines | 83 | 57 | 39 | 25 | 55 | 3.8 | 115 | 57 | 40 | +3 20 | 82 | 9 45 | 29 | 12 | 45 | 29 |

Sex-specific under-5 mortality rate (deaths per 1,000 live births)

Deaths among children under 5 years of age due to: (%)

| (uou | | 000 1110 | Sil cito) | | | | | | | (,,,) | | | |
|------|--------|------------|-----------|---------------------|-----------|-----------|---------|------|---------|----------|--------|-------|----------------------------------|
| 10 | 990 | 2(|)11 | | | | | 2010 | | | | | |
| Male | Female | Male | Female | Neonatal causes* | Pneumonia | Diarrhoea | Malaria | AIDS | Measles | Iniuries | Others | Total | Countries and territories |
| maio | remute | Male | Temale | Cuuses | Theumoniu | Diamoca | malana | Aibo | measies | injunes | Oulois | Total | MIDDLE EAST & NORTH AFRICA |
| 70 | 62 | 32 | 28 | 45 | 12 | 5 | 0 | 0 | 11 | 5 | 22 | 100 | Algeria |
| 21 | 20 | 10 | 10 | 42 | 2 | 0 | 0 | 0 | 0 | 6 | 50 | 100 | Bahrain |
| 129 | 114 | 95 | 84 | 30 | 20 | 11 | 1 | 4 | 1 | 4 | 29 | 100 | Djibouti |
| 86 | 86 | 22 | 20 | 43 | 11 | 7 | 0 | 0 | 0 | 2 | 37 | 100 | Egypt |
| 62 | 60 | 25 | 25 | 49 | 13 | 4 | 0 | 0 | 0 | 6 | 28 | 100 | Iran (Islamic Republic of) |
| 50 | 42 | 41 | 35 | 47 | 18 | 6 | 0 | 0 | 0 | 6 | 24 | 100 | Iraq |
| 12 | 11 | 5 | 4 | 50 | 2 | 0 | 0 | 0 | 0 | 4 | 44 | 100 | Israel |
| 37 | 36 | 22 | 19 | 54 | 8 | 4 | 0 | 0 | 0 | 7 | 28 | 100 | Jordan |
| 18 | 15 | 12 | 10 | 43 | 6 | 1 | 0 | 0 | 0 | 10 | 39 | 100 | Kuwait |
| 34 | 32 | 10 | 9 | 50 | 8 | 4 | 0 | 1 | 0 | 7 | 31 | 100 | Lebanon |
| 46 | 42 | 17 | 16 | 59 | 3 | 1 | 0 | 0 | 0 | 28 | 9 | 100 | Libya |
| 86 | 77 | 35 | 30 | 47 | 15 | 6 | 0 | 0 | 0 | 6 | 25 | 100 | Morocco |
| 46 | 41 | 23 | 21 | - | - | - | - | - | - | - | - | - | Occupied Palestinian Territory |
| 49 | 46 | 9 | 8 | 49 | 5 | 1 | 0 | 0 | 0 | 8 | 36 | 100 | Oman |
| 22 | 19 | 8 | 7 | 57 | 2 | 0 | 0 | 0 | 1 | 4 | 35 | 100 | Qatar |
| 46 | 39 | 10 | 8 | 49 | 7 | 2 | 0 | 0 | 0 | 11 | 31 | 100 | Saudi Arabia |
| 129 | 116 | 91 | 81 | 33 | 19 | 12 | 3 | 2 | 1 | 5 | 25 | 100 | Sudan |
| 39 | 33 | 16 | 14 | 53 | 8 | 7 | 0 | 0 | 0 | 4 | 27 | 100 | Syrian Arab Republic |
| 55 | 47 | 18 | 15 | 55 | 7 | 3 | 0 | 0 | 0 | 7 | 28 | 100 | Tunisia |
| 24 | 20 | 7 | 6 | 60 | 2 | 0 | 0 | 0 | 0 | 4 | 34 | 100 | United Arab Emirates |
| 131 | 121 | 80 | 73 | 36 | 22 | 11 | 1 | 0 | 0 | 6 | 24 | 100 | Yemen |
| | | | | | | | | | | | | | ASIA & PACIFIC |
| 196 | 188 | 103 | 99 | 27 | 25 | 16 | 0 | 0 | 2 | 5 | 25 | 100 | Afghanistan |
| 10 | 8 | 5 | 4 | 57 | 3 | 0 | 0 | 0 | 0 | 8 | 32 | 100 | Australia |
| 140 | 138 | 48 | 44 | 56 | 14 | 6 | 1 | 0 | 1 | 6 | 17 | 100 | Bangladesh |
| 147 | 130 | 57 | 50 | 41 | 20 | 7 | 0 | 0 | 1 | 5 | 25 | 100 | Bhutan |
| 14 | 11 | 8 | 7 | 54 | 5 | 0 | 0 | 0 | 0 | 11 | 29 | 100 | Brunei Darussalam |
| 125 | 108 | 47 | 37 | 40 | 16 | 8 | 2 | 1 | 0 | 7 | 25 | 100 | Cambodia |
| 50 | 48 | 15 | 14 | 54 | 17 | 3 | 0 | 0 | 0 | 8 | 17 | 100 | China |
| 22 | 17 | 11 | 8 | 49 | 5 | 1 | 0 | 0 | 0 | 13 | 31 | 100 | Cook Islands |
| 47 | 43 | 35 | 32 | 50 | 15 | 5 | 0 | 0 | 0 | 6 | 23 | 100 | Democratic People's |
| 32 | 27 | 18 | 15 | 44 | 10 | 4 | 0 | 0 | 0 | 12 | 29 | 100 | Fili |
| 110 | 119 | 59 | 64 | 42 | 24 | 13 | 0 | 0 | 3 | 3 | 14 | 100 | India |
| 88 | 75 | 34 | 29 | 46 | 14 | 5 | 2 | 0 | 5 | 6 | 22 | 100 | Indonesia |
| 7 | 6 | 4 | 3 | 36 | 6 | 2 | 0 | 0 | 0 | 9 | 47 | 100 | Japan |
| 92 | 83 | 50 | 45 | 36 | 20 | 9 | 0 | 0 | 0 | 8 | 28 | 100 | Kiribati |
| 156 | 139 | 44 | 39 | 37 | 19 | 10 | 1 | 1 | 0 | 8 | 24 | 100 | Lao People's Democratic Republic |
| 19 | 16 | 7 | 6 | 53 | 6 | 2 | 0 | 0 | 0 | 4 | 35 | 100 | Malavsia |
| 110 | 101 | 12 | 10 | 57 | 11 | 3 | 0 | 0 | 0 | 6 | 23 | 100 | Maldives |
| 57 | 46 | 29 | 23 | 38 | 19 | 6 | 0 | 0 | 0 | 9 | 28 | 100 | Marshall Islands |
| 64 | 48 | 47 | 36 | 35 | 20 | 6 | 0 | 0 | 1 | 7 | 31 | 100 | Micronesia |
| 121 | 01 | 35 | 26 | 31 | 15 | 7 | 0 | 0 | 1 | 0 | 36 | 100 | (Federated States of) |
| 110 | 90 | 60 | 56 | 15 | 17 | 2 | 1 | 1 | 1 | 5 | 23 | 100 | Myanmar |
| 56 | 24 | 56 | 24 | 46 | 17 | 7 | 0 | 0 | 0 | 5 | 25 | 100 | Nauru |
| 137 | 133 | <u>4</u> 9 | 47 | 55 | 16 | 6 | 0 | 0 | 0 | 5 | 17 | 100 | Nepal |
| 12 | 10 | -5 | 5 | 43 | 8 | 0 | 0 | 0 | 0 | 15 | 34 | 100 | New Zealand |
| 14 | 14 | 21 | 21 | - | - | - | - | - | - | - | - | - | Nine |
| 126 | 118 | 76 | 68 | 41 | 19 | 11 | 0 | 0 | 1 | 5 | 23 | 100 | Pakistan |
| 40 | 24 | 23 | 14 | 48 | 6 | 2 | 0 | 0 | 3 | 20 | 21 | 100 | Palau |
| 92 | 84 | 60 | 55 | 35 | 17 | 8 | 10 | 2 | 0 | 6 | 21 | 100 | Papua New Guinea |
| 63 | 51 | 29 | 22 | 46 | 16 | 6 | 0 | 0 | 0 | 8 | 24 | 100 | Philippines |
| | • 1 | _0 | | | | • | • | - | • | - | | | |

| | Under-5 mortality rank | | Under-5 mortality rate (deaths per 1,000 live births) | | | Number of under-5 deaths (thousands) | | Infant mor- tality 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 (%) | Annual rate of reduction (%) | 1000 | | | | | | 1000 | | | |
| | 2011 | 1990 | 2000 | 2011 | 1990-2011 | 1990-2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 |
| Republic of Korea | 165 | 8 | 0 | 5 | 30 | 2.1 | 4 | 3 | 6 | 4 | 4 | 2 | 3 | 2 | 2 | 1 |
| Samoa | 100 | 30 | 23 | 19 | 3/ | 2.2 | 0 | 0 | 25 | 16 | 0 | 0 | 11 | 8 | 0 | 0 |
| Singapore | 184 | 8 | 4 | 3 | 65 | 5.0 | 0 | 0 | 6 | 2 | 0 | 0 | 4 | 1 | 0 | 0 |
| Solomon Islands | 87 | 42 | 31 | 22 | 48 | 3.1 | 0 | 0 | 34 | 18 | 0 | 0 | 1/ | 11 | 0 | 0 |
| Sri Lanka | 128 | 29 | 19 | 12 | 58 | 4.1 | 10 | 5 | 24 | 11 | 8 | 4 | 16 | 8 | 6 | 3 |
| Thailand | 128 | 35 | 19 | 12 | 65 | 5.0 | 38 | 10 | 29 | 11 | 31 | 9 | 18 | 8 | 20 | 6 |
| Timor-Leste | 51 | 180 | 109 | 54 | 70 | 5.7 | 5 | 2 | 135 | 46 | 4 | 2 | 48 | 24 | 2 | 1 |
| Tonga | 115 | 25 | 20 | 15 | 37 | 2.2 | 0 | 0 | 21 | 13 | 0 | 0 | 12 | 8 | 0 | 0 |
| Tuvalu | 74 | 58 | 43 | 30 | 48 | 3.1 | 0 | 0 | 45 | 25 | 0 | 0 | 22 | 14 | 0 | 0 |
| Vanuatu | 125 | 39 | 23 | 13 | 66 | 5.1 | 0 | 0 | 31 | 11 | 0 | 0 | 16 | 7 | 0 | 0 |
| Viet Nam | 87 | 50 | 34 | 22 | 57 | 4.0 | 96 | 32 | 36 | 17 | 69 | 25 | 22 | 12 | 45 | 17 |
| AMERICAS | | | | | | | | | | | | | | | | |
| Antigua and Barbuda | 145 | 27 | 15 | 8 | 72 | 6.0 | 0 | 0 | 23 | 6 | 0 | 0 | 13 | 4 | 0 | 0 |
| Argentina | 122 | 28 | 20 | 14 | 49 | 3.2 | 20 | 10 | 24 | 13 | 18 | 9 | 10 | ð 7 | 11 | 5 |
| Bahamas | 107 | 22 | 17 | 16 | 26 | 1.4 | 0 | 0 | 18 | 14 | | 0 | 9 | 1 | 0 | 0 |
| Barbados | 98 | 18 | 1/ | 20 | -10 | -0.5 | 0 | 0 | 16 | 18 | 0 | 0 | 9 | 10 | 0 | 0 |
| Belize | 106 | 44 | 26 | 1/ | 62 | 4.5 | 0 | 0 | 35 | 15 | 0 | 0 | 18 | 8 | 0 | 0 |
| Bolivia (Plurinational State of) | 55 | 120 | 81 | 51 | 58 | 4.1 | 28 | 13 | 83 | 39 | 19 | 10 | 37 | 22 | 9 | 6 |
| Brazil | 107 | 58 | 36 | 16 | 73 | 6.3 | 205 | 44 | 49 | 14 | 170 | 39 | 27 | 10 | 97 | 29 |
| Canada | 157 | 8 | 6 | 6 | 33 | 1.9 | 3 | 2 | 1 | 5 | 3 | 2 | 4 | 4 | 2 | 1 |
| Chile | 141 | 19 | 11 | 9 | 53 | 3.6 | 6 | 2 | 16 | 8 | 5 | 2 | 9 | 5 | 3 | 1 |
| Colombia | 102 | 34 | 25 | 18 | 48 | 3.2 | 31 | 16 | 28 | 15 | 25 | 14 | 19 | 11 | 17 | 10 |
| Costa Rica | 135 | 17 | 13 | 10 | 41 | 2.5 | 1 | 1 | 15 | 9 | 1 | 1 | 10 | 6 | 1 | 0 |
| Cuba | 157 | 13 | 9 | 6 | 56 | 4.0 | 2 | 1 | 11 | 5 | 2 | 0 | 7 | 3 | 1 | 0 |
| Dominica | 128 | 17 | 15 | 12 | 32 | 1.8 | 0 | 0 | 14 | 11 | 0 | 0 | 12 | 8 | 0 | 0 |
| Dominican Republic | 83 | 58 | 39 | 25 | 58 | 4.1 | 12 | 5 | 45 | 21 | 9 | 4 | 26 | 14 | 6 | 3 |
| Ecuador | 86 | 52 | 34 | 23 | 56 | 4.0 | 15 | 7 | 41 | 20 | 12 | 6 | 19 | 10 | 6 | 3 |
| El Salvador | 115 | 60 | 34 | 15 | /5 | 6.6 | 10 | 2 | 4/ | 13 | 8 | 2 | 18 | 6 | 3 | 1 |
| Grenada | 125 | 21 | 16 | 13 | 39 | 2.4 | 0 | 0 | 1/ | 10 | 0 | 0 | 10 | / | 0 | 0 |
| Guatemala | 74 | 78 | 48 | 30 | 61 | 4.5 | 26 | 14 | 56 | 24 | 18 | 11 | 28 | 15 | 10 | 7 |
| Guyana | 68 | 63 | 49 | 36 | 43 | 2.7 | 1 | 0 | 48 | 29 | 1 | 0 | 29 | 20 | 1 | 0 |
| Haiti | 40 | 143 | 102 | 70 | 51 | 3.4 | 36 | 19 | 99 | 53 | 24 | 14 | 37 | 25 | 10 | 7 |
| Honduras | 91 | 55 | 35 | 21 | 61 | 4.5 | 10 | 4 | 43 | 18 | 8 | 4 | 22 | 11 | 4 | 2 |
| Jamaica | 102 | 35 | 26 | 18 | 4/ | 3.0 | 2 | 1 | 28 | 16 | 2 | 1 | 19 | 11 | 1 | 1 |
| Mexico | 107 | 49 | 29 | 16 | 68 | 5.4 | 116 | 34 | 38 | 13 | 91 | 29 | 1/ | 1 | 41 | 15 |
| Nicaragua | 80 | 66 | 42 | 26 | 61 | 4.5 | 10 | 4 | 50 | 22 | 1 | 3 | 25 | 13 | 4 | 2 |
| Panama | 98 | 33 | 26 | 20 | 41 | 2.5 | 2 | 1 | 26 | 17 | 2 | 1 | 14 | 9 | 1 | 1 |
| Paraguay | 8/ | 53 | 35 | 22 | 5/ | 4.1 | 1 | 3 | 41 | 19 | 6 | 3 | 24 | 13 | 3 | 2 |
| Peru Ostat Killa sast Na is | 102 | 75 | 39 | 18 | 70 | 0.8 | 49 | 11 | 54 | 14 | 35 | 8 | 20 | 9 | 17 | 5 |
| Saint Kitts and Nevis | 151 | 28 | 10 | 1 | 74 | 0.4 | 0 | 0 | 22 | 0 | 0 | 0 | 17 | 5 | 0 | 0 |
| Saint Lucia Saint Vincent | 107 | 23 | 18 | 16 | 31 | 1.7 | 0 | 0 | 18 | 14 | 0 | 0 | 13 | 9 | 0 | 0 |
| and the Grenadines | 91 | 27 | 22 | 21 | 21 | 1.1 | 0 | 0 | 21 | 20 | 0 | 0 | 16 | 13 | 0 | 0 |
| Suriname | 74 | 52 | 40 | 30 | 43 | 2.7 | 0 | 0 | 44 | 26 | 0 | 0 | 24 | 16 | 0 | 0 |
| Trinidad and Tobago | 78 | 37 | 32 | 28 | 25 | 1.4 | 1 | 1 | 32 | 25 | 1 | 0 | 23 | 18 | 1 | 0 |
| United States | 145 | 11 | 9 | 8 | 34 | 2.0 | 44 | 32 | 9 | 6 | 37 | 27 | 6 | 4 | 22 | 18 |
| Uruguay Venezuela | 135 | 23 | 17 | 10 | 55 | 3.8 | 1 | 1 | 20 | 9 | 1 | 0 | 11 | 5 | 1 | 0 |
| (Bolivarian Republic of) EUROPE & CENTRAL ASIA | 115 | 31 | 22 | 15 | 51 | 3.4 | 18 | 9 | 26 | 13 | 15 | 8 | 15 | 8 | 9 | 5 |
| Albania | 122 | 41 | 26 | 14 | 65 | 5.0 | 3 | 1 | 36 | 13 | 3 | 1 | 17 | 7 | 1 | 0 |
| Andorra | 184 | 8 | 5 | 3 | 60 | 4.4 | 0 | 0 | 7 | 3 | 0 | 0 | 3 | 1 | 0 | 0 |
| Armenia | 102 | 47 | 30 | 18 | 63 | 4.7 | 4 | 1 | 40 | 16 | 3 | 1 | 23 | 11 | 2 | 1 |
| Austria | 169 | 9 | 6 | 4 | 55 | 3.8 | 1 | 0 | 8 | 4 | 1 | 0 | 4 | 3 | 0 | 0 |

Sex-specific under-5 mortality rate (deaths per 1,000 live births)

Deaths among children under 5 years of age due to: (%)

| lacar | | 000 1110 | on anoy | | | | | | | (/0) | | | |
|----------|-----------|----------|---------|---------------------|-----------|-----------|---------|------|---------|----------|----------|-------|---------------------------------------|
| 19 | 990 | 20 |)11 | | | | | | | | | | |
| Male | Female | Male | Female | Neonatal causes* | Pneumonia | Diarrhoea | Malaria | AIDS | Measles | Iniuries | Others | Total | Countries and territories |
| 8 | 7 | 5 | 4 | 39 | 2 | 0 | 0 | 0 | 0 | 13 | 46 | 100 | Republic of Korea |
| 33 | 26 | 21 | 16 | 41 | 8 | 3 | 0 | 0 | 0 | 10 | 38 | 100 | Samoa |
| 8 | 7 | 3 | 2 | 44 | 7 | 1 | 0 | 0 | 0 | 4 | 44 | 100 | Singapore |
| 41 | 43 | 21 | 22 | 41 | 16 | 5 | 10 | 0 | 0 | 8 | 20 | 100 | Solomon Islands |
| 31 | 27 | 13 | 11 | 60 | 7 | 3 | 0 | 0 | 0 | 6 | 24 | 100 | Sri Lanka |
| 39 | 31 | 13 | 11 | 58 | 9 | 3 | 0 | 1 | 0 | 4 | 24 | 100 | Thailand |
| 190 | 169 | 57 | 51 | 40 | 20 | 8 | 4 | 0 | 0 | 6 | 22 | 100 | Timor-Leste |
| 28 | 21 | 18 | 13 | 48 | 9 | 3 | 0 | 0 | 0 | 7 | 33 | 100 | Tonga |
| 63 | 52 | 33 | 27 | 42 | 9 | 1 | 0 | 0 | 0 | 22 | 25 | 100 | Tuvalu |
| 41 | 36 | 14 | 12 | 45 | 9 | 3 | 19 | 0 | 0 | 5 | 18 | 100 | Vanuatu |
| 57 | 43 | 25 | 19 | 49 | 12 | 10 | 0 | 1 | 5 | 3 | 20 | 100 | Viet Nam |
| - | - | | | | | | | | | | | | AMERICAS |
| 30 | 23 | Q | 7 | 64 | 0 | 0 | 0 | 0 | 0 | 12 | 24 | 100 | Antigua and Barbuda |
| 31 | 25 | 16 | 13 | 51 | 10 | 2 | 0 | 0 | 0 | 7 | 24 | 100 | Anugua anu barbuua |
| 23 | 20 | 10 | 15 | 32 | 27 | 0 | 0 | 0 | 0 | 8 | 33 | 100 | Rahamac |
| 20 | 16 | 22 | 18 | 16 | 7 | 0 | 0 | 0 | 0 | 0 | 17 | 100 | Barbados |
| 10 | 30 | 10 | 15 | 40 | 7 | 10 | 0 | 0 | 0 | 12 | +1 22 | 100 | Baliza |
| 107 | 112 | 5/ | 19 | 40 | 15 | 0 | 0 | 0 | 0 | 6 | 22 | 100 | Polizia (Divinational State of |
| 6/ | 52 | 17 | 1/ | 64 | 7 | 3 | 0 | 0 | 0 | 0 | 20 | 100 | Bolivia (Fluinational State of) |
| 04 | 7 | 6 | 5 | 60 | 1 | 0 | 0 | 0 | 0 | 4 | 3/ | 100 | Canada |
| 9 21 | 17 | 10 | 2 | 52 | 7 | 1 | 0 | 0 | 0 | 2 | 32 | 100 | Chilo |
| 21 | 21 | 20 | 16 | 60 | 10 | 1 | 0 | 0 | 0 | 6 | 21 | 100 | Colombia |
| 10 | 15 | 20 | 0 | 61 | 10 | 4 | 0 | 0 | 0 | 0 | 21 | 100 | Colonibia Costo Rico |
| 15 | 10 | 6 | 5 | 45 | 11 | 2 | 0 | 0 | 0 | 4 | 25 | 100 | Custa Rica |
| 10 | 12 | 12 | 11 | 40 | 2 | 2 | 0 | 0 | 0 | 0 | 20 | 100 | Cuba |
| 62 | 54 | 27 | 23 | 53 | 11 | 1 | 0 | 2 | 0 | 5 | 20 | 100 | Dominica Dominican Depublic |
| 56 | /0 | 21 | 20 | 47 | 10 | 4 | 0 | 1 | 0 | 0 | 24 | 100 | Foundar |
| 65 | 49 55 | 17 | 1/ | 35 | 10 | 5 | 0 | 1 | 0 | 11 | 34 | 100 | ELSalvador |
| 22 | 20 | 12 | 19 | 18 | 0 | 0 | 0 | 4 | 0 | 0 | 52 | 100 | Cropodo |
| 82 | 20 | 22 | 28 | 40 | 15 | 7 | 0 | 2 | 0 | 0 | 22 | 100 | Giellaud |
| 70 | 74 55 | 10 | 20 | 7/ | 15 | 2 | 7 | 1 | 0 | 2 | 23 | 100 | Guatemala |
| 152 | 13/ | 7/ | 52 | 14 | 10 | 7 | 0 | 1 | 0 | 55 | 12 | 100 | Guyana |
| 58 | 52 | 74 22 | 20 | 14 | 10 | 5 | 0 | 2 | 0 | 3 | 33 | 100 | Halu |
| 30 | 20 | 23 | 16 | 3/ | 12 | 1 | 0 | 2 | 0 | 12 | 33 | 100 | Iomeice |
| 53 | 29 | 17 | 14 | 12 | 10 | 4 | 0 | 0 | 0 | 1Z Q | 33 | 100 | Jamaica |
| 70 | 60 | 20 | 22 | 42 | 14 | 4 | 0 | 0 | 0 | 0 | 21 | 100 | Niceregue |
| 36 | 21 | 29 | 18 | 42 | 0 | 11 | 0 | 0 | 0 | 4 | 30 | 100 | Danama |
| 57 | /12 | 21 | 20 | 5/ | 9 11 | 5 | 0 | 0 | 0 | 5 | 24 | 100 | |
| 70 | 40 71 | 20 | 17 | 16 | 10 | 1 | 0 | 1 | 0 | 0 | 24 | 100 | Paru |
| 22 | / I 25 | 20 Q | 6 | 40 82 | 0 | 4 | 0 | 0 | 0 | 9 | 11 | 100 | Coint Kitte and Novie |
| 3Z 25 | 20 | 17 | 1/ | 56 | 0 | 2 | 0 | 0 | 0 | 0 | /1 | 100 | Saint Lucia |
| 20 | 20 | 17 | 14 | 50 | 0 | 3 | 0 | 0 | 0 | 0 | 41 | 100 | Saint Lucia Saint Vincent |
| 29 | 24 | 23 | 19 | 5/ | 2 | 0 | 0 | 0 | 0 | 21 | 21 | 100 | and the Grenadines |
| 57 | 46 | 33 | 26 | 48 | 9 | 3 | 0 | 2 | 0 | 7 | 31 | 100 | Suriname |
| 41 | 33 | 31 | 24 | 64 | 7 | 0 | 0 | 3 | 0 | 5 | 22 | 100 | Trinidad and Tobago |
| 13 | 10 | 8 | 7 | 56 | 2 | 0 | 0 | 0 | 0 | 19 | 23 | 100 | United States |
| 26 | 21 | 11 | 9 | 50 | 11 | 2 | 0 | 0 | 0 | 7 | 30 | 100 | Uruguay |
| 34 | 28 | 17 | 13 | 52 | 10 | 7 | 0 | 0 | 0 | 9 | 21 | 100 | venezuela (Bolivarian Republic of) |
| | | | | | | | | | | | | | EUROPE & CENTRAL ASIA |
| 43 | 39 | 15 | 14 | 47 | 11 | 1 | 0 | 0 | 0 | 10 | 30 | 100 | Albania |
| 9 | 8 | 4 | 3 | 25 | 4 | 0 | 0 | 0 | 0 | 11 | 60 | 100 | Andorra |
| 51 | 43 | 19 | 15 | 58 | 11 | 1 | 0 | 0 | 0 | 9 | 21 | 100 | Armenia |
| 11 | 8 | 5 | 4 | 58 | 2 | 0 | 0 | 0 | 0 | 4 | 36 | 100 | Austria |
| | | | | | | | | | | | | | |

| | Under-5 mortality rank | Under-5 mortality rate (deaths per 1,000 live births) | | e rths) | Number of under-5 deaths (thousands) | | Infant mor- tality rate (deaths per 1,000 live births) | | Number of infant deaths (thousands) | | Neo morta (deat 1,00 bir | natal lity rate hs per 0 live ths) | Number of neonatal deaths (thousands) | | | |
|--|------------------------------|--|------|------------|---|--|--|------|--|------|--------------------------------------|--|--|------|------|------|
| Countries and territories | 2011 | 1990 | 2000 | 2011 | Decline (%) 1990-2011 | Annual rate of reduction (%) 1990-2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 |
| Azerbaijan | 61 | 95 | 69 | 45 | 53 | 3.6 | 19 | 8 | 75 | 39 | 16 | 7 | 31 | 19 | 6 | 4 |
| Belarus | 157 | 17 | 14 | 6 | 67 | 5.3 | 3 | 1 | 14 | 4 | 2 | 0 | 8 | 3 | 1 | 0 |
| Belgium | 169 | 10 | 6 | 4 | 57 | 4.0 | 1 | 1 | 9 | 4 | 1 | 0 | 5 | 2 | 1 | 0 |
| Bosnia and Herzegovina | 145 | 19 | 10 | 8 | 59 | 4.3 | 1 | 0 | 17 | 7 | 1 | 0 | 12 | 5 | 1 | 0 |
| Bulgaria | 128 | 22 | 21 | 12 | 45 | 2.9 | 3 | 1 | 19 | 11 | 2 | 1 | 12 | 7 | 1 | 0 |
| Croatia | 165 | 13 | 8 | 5 | 60 | 4.4 | 1 | 0 | 11 | 4 | 1 | 0 | 9 | 3 | 0 | 0 |
| Cyprus | 184 | 11 | 7 | 3 | 72 | 6.0 | 0 | 0 | 10 | 3 | 0 | 0 | 5 | 1 | 0 | 0 |
| Czech Republic | 169 | 14 | 7 | 4 | 73 | 6.2 | 2 | 0 | 13 | 3 | 2 | 0 | 10 | 2 | 1 | 0 |
| Denmark | 169 | 9 | 6 | 4 | 57 | 4.1 | 1 | 0 | 7 | 3 | 0 | 0 | 4 | 2 | 0 | 0 |
| Estonia | 169 | 20 | 11 | 4 | 82 | 8.1 | 0 | 0 | 16 | 3 | 0 | 0 | 12 | 2 | 0 | 0 |
| Finland | 184 | 7 | 4 | 3 | 57 | 4.0 | 0 | 0 | 6 | 2 | 0 | 0 | 4 | 2 | 0 | 0 |
| France | 169 | 9 | 5 | 4 | 53 | 3.6 | 6 | 3 | 7 | 3 | 5 | 3 | 3 | 2 | 3 | 2 |
| Georgia | 91 | 47 | 33 | 21 | 56 | 3.9 | 4 | 1 | 40 | 18 | 4 | 1 | 27 | 15 | 2 | 1 |
| Germany | 169 | 9 | 5 | 4 | 53 | 3.6 | 7 | 3 | 7 | 3 | 6 | 2 | 4 | 2 | 3 | 2 |
| Greece | 169 | 13 | 8 | 4 | 65 | 5.0 | 1 | 1 | 12 | 4 | 1 | 0 | 9 | 3 | 1 | 0 |
| Holy See | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hungary | 157 | 19 | 11 | 6 | 66 | 5.2 | 3 | 1 | 17 | 5 | 2 | 1 | 13 | 4 | 2 | 0 |
| Iceland | 184 | 6 | 4 | 3 | 60 | 4.4 | 0 | 0 | 5 | 2 | 0 | 0 | 3 | 1 | 0 | 0 |
| Ireland | 169 | 9 | 7 | 4 | 56 | 3.9 | 0 | 0 | 8 | 3 | 0 | 0 | 5 | 2 | 0 | 0 |
| Italy | 169 | 10 | 6 | 4 | 62 | 4.6 | 5 | 2 | 8 | 3 | 5 | 2 | 6 | 2 | 3 | 1 |
| Kazakhstan | 78 | 57 | 42 | 28 | 50 | 3.3 | 23 | 11 | 48 | 25 | 19 | 9 | 24 | 14 | 9 | 5 |
| Kyrgyzstan | 72 | 70 | 47 | 31 | 56 | 4.0 | 10 | 4 | 58 | 27 | 8 | 4 | 28 | 16 | 4 | 2 |
| Latvia | 145 | 21 | 17 | 8 | 60 | 4.3 | 1 | 0 | 17 | 7 | 1 | 0 | 13 | 5 | 0 | 0 |
| Liechtenstein | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Lithuania | 157 | 17 | 12 | 6 | 67 | 5.3 | 1 | 0 | 14 | 5 | 1 | 0 | 10 | 3 | 1 | 0 |
| Luxembourg | 184 | 8 | 5 | 3 | 62 | 4.6 | 0 | 0 | 7 | 2 | 0 | 0 | 4 | 2 | 0 | 0 |
| Malta | 157 | 11 | 8 | 6 | 48 | 3.1 | 0 | 0 | 10 | 5 | 0 | 0 | 7 | 4 | 0 | 0 |
| Monaco | 169 | 8 | 5 | 4 | 50 | 3.3 | 0 | 0 | 6 | 3 | 0 | 0 | 4 | 2 | 0 | 0 |
| Montenegro | 151 | 18 | 13 | 7 | 59 | 4.3 | 0 | 0 | 16 | 7 | 0 | 0 | 11 | 5 | 0 | 0 |
| Netherlands | 169 | 8 | 6 | 4 | 52 | 3.5 | 2 | 1 | 7 | 3 | 1 | 1 | 5 | 3 | 1 | 0 |
| Norway | 184 | 8 | 5 | 3 | 63 | 4.7 | 0 | 0 | 7 | 3 | 0 | 0 | 4 | 2 | 0 | 0 |
| Poland | 157 | 17 | 10 | 6 | 66 | 5.2 | 9 | 2 | 15 | 5 | 8 | 2 | 11 | 4 | 6 | 1 |
| Portugal | 184 | 15 | 7 | 3 | 77 | 6.9 | 2 | 0 | 11 | 3 | 1 | 0 | 7 | 2 | 1 | 0 |
| Republic of Moldova | 107 | 35 | 24 | 16 | 54 | 3.7 | 3 | 1 | 29 | 14 | 2 | 1 | 15 | 8 | 1 | 0 |
| Romania | 125 | 37 | 27 | 13 | 67 | 5.2 | 15 | 3 | 31 | 11 | 13 | 2 | 17 | 8 | 5 | 2 |
| Russian Federation | 128 | 27 | 21 | 12 | 56 | 4.0 | 62 | 20 | 23 | 10 | 51 | 17 | 13 | 7 | 26 | 11 |
| San Marino | 195 | 12 | 5 | 2 | 85 | 9.0 | 0 | 0 | 11 | 2 | 0 | 0 | 5 | 1 | 0 | 0 |
| Serbia | 151 | 29 | 13 | 7 | 75 | 6.6 | 4 | 1 | 25 | 6 | 3 | 1 | 15 | 4 | 2 | 0 |
| Slovakia | 145 | 18 | 12 | 8 | 56 | 3.9 | 1 | 0 | 16 | 7 | 1 | 0 | 12 | 4 | 1 | 0 |
| Slovenia | 184 | 10 | 5 | 3 | 73 | 6.2 | 0 | 0 | 9 | 2 | 0 | 0 | 5 | 2 | 0 | 0 |
| Spain | 169 | 11 | 7 | 4 | 61 | 4.5 | 4 | 2 | 9 | 4 | 4 | 2 | 7 | 3 | 3 | 1 |
| Sweden | 184 | 7 | 4 | 3 | 58 | 4.2 | 1 | 0 | 6 | 2 | 1 | 0 | 3 | 2 | 0 | 0 |
| Switzerland | 169 | 8 | 6 | 4 | 46 | 2.9 | 1 | 0 | 7 | 4 | 0 | 0 | 4 | 3 | 0 | 0 |
| Tajikistan | 46 | 114 | 95 | 63 | 45 | 2.8 | 25 | 12 | 89 | 53 | 19 | 10 | 35 | 25 | 7 | 5 |
| The former Yugoslav Republic of Macedonia | 135 | 38 | 16 | 10 | 74 | 6.5 | 1 | 0 | 34 | 9 | 1 | 0 | 17 | 6 | 1 | 0 |
| Turkey | 115 | 72 | 35 | 15 | 79 | 7.4 | 96 | 20 | 60 | 12 | 78 | 15 | 29 | 9 | 41 | 12 |
| Turkmenistan | 54 | 94 | 71 | 53 | 44 | 2.8 | 12 | 5 | 75 | 45 | 10 | 5 | 31 | 22 | 4 | 2 |
| Ukraine | 135 | 19 | 19 | 10 | 48 | 3.1 | 14 | 5 | 17 | 9 | 12 | 5 | 9 | 5 | 6 | 2 |
| United Kingdom | 165 | 9 | 7 | 5 | 45 | 2.8 | 7 | 4 | 8 | 4 | 6 | 4 | 5 | 3 | 4 | 2 |
| Uzbekistan | 56 | 75 | 61 | 49 | 35 | 2.1 | 55 | 30 | 62 | 42 | 45 | 25 | 20 | 15 | 14 | 9 |

Sex-specific under-5 mortality rate (deaths per 1,000 live births)

Deaths among children under 5 years of age due to: (%)

| 19 | 990 | 2 | 011 | Neonatal | | | | 2010 | | | | | |
|------|-----------|---------|--------|----------|-----------|-----------|---------|------|---------|----------|--------|-------|------------------------------------|
| Male | Female | Male | Female | causes* | Pneumonia | Diarrhoea | Malaria | AIDS | Measles | Injuries | Others | Total | Countries and territories |
| 100 | 00 4 E | 47 | 43 | 38 | 17 | 0 | 0 | 0 | 0 | 0 | 31 | 100 | Azerbaijan |
| 20 | 15 | 0 | C A | 42 | 9 | 1 | 0 | 0 | 0 | / | 42 | 100 | Belarus |
| 01 | 9 | 5 | 4 | 54 | 0 | 1 | 0 | 0 | 1 | 0 | 30 | 100 | Beigium Beegia and Harra faving |
| 21 | 01 | 40 | 1 | 00 | 9 | 1 | 0 | 0 | 1 | 5 | 29 | 100 | Boshia and Herzegovina |
| 20 | 20 | 13 | | 40 | 24 | 1 | 0 | 0 | 0 | 4 | 24 | 100 | Bulgana |
| 14 | 10 | 0 | 2 | 59 | 3 | 0 | 0 | 0 | 0 | 0 | 32 | 100 | Croatia |
| 12 | 10 | 3 | 3 | 44 50 | 5 | 0 | 0 | 0 | 0 | 0 | 40 | 100 | Cyprus |
| 10 | 12 | 4 | 4 | 50 | 5 | 0 | 0 | 0 | 0 | 7 | 37 | 100 | |
| 10 | 0 | 4 | 3 | 10 | 2 | 0 | 0 | 0 | 0 | 10 | 29 | 100 | Denmark |
| 23 | 17 | 4 | 3 | 40 | 3 | 0 | 0 | 2 | 0 | 18 | 32 | 100 | Estonia |
| 1 | 6 | 3 | 3 | 55 | 4 | 0 | 0 | 0 | 0 | 3 | 39 | 100 | Finland |
| 10 | 8 | 5 | 4 | 54 | 2 | 1 | 0 | 0 | 0 | 0 | 37 | 100 | France |
| 52 | 42 | 23 | 18 | 61 | 11 | 1 | 0 | 0 | 0 | 1 | 20 | 100 | Georgia |
| 10 | 1 | 4 | 4 | 55 | 2 | 0 | 0 | 0 | 0 | 6 | 36 | 100 | Germany |
| 14 | 12 | 5 | 4 | 52 | / | 0 | 0 | 0 | 0 | 8 | 33 | 100 | Greece |
| - | - | - | - | - | - | - | - | - | - | - | - | - | Holy See |
| 21 | 1/ | 1 | 6 | 56 | 4 | 0 | 0 | 0 | 0 | 3 | 37 | 100 | Hungary |
| 1 | 6 | 3 | 2 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 100 | Iceland |
| 10 | 8 | 4 | 4 | 50 | 1 | 0 | 0 | 0 | 0 | (| 42 | 100 | Ireland |
| 11 | 9 | 4 | 3 | 58 | 1 | 0 | 0 | 0 | 0 | 4 | 36 | 100 | Italy |
| 64 | 50 | 32 | 24 | 44 | 13 | 6 | 0 | 0 | 0 | 7 | 31 | 100 | Kazakhstan |
| 77 | 63 | 34 | 28 | 43 | 14 | 6 | 0 | 0 | 0 | 7 | 29 | 100 | Kyrgyzstan |
| 23 | 18 | 9 | 8 | 50 | 9 | 0 | 0 | 0 | 0 | 6 | 34 | 100 | Latvia |
| - | - | - | - | - | - | - | - | - | - | - | - | - | Liechtenstein |
| 19 | 15 | 6 | 5 | 46 | 9 | 1 | 0 | 0 | 0 | 13 | 31 | 100 | Lithuania |
| 9 | 7 | 3 | 3 | 44 | 0 | 0 | 0 | 0 | 0 | 28 | 28 | 100 | Luxembourg |
| 13 | 10 | 7 | 5 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 100 | Malta |
| 9 | 7 | 4 | 3 | 50 | 4 | 0 | 0 | 0 | 0 | 7 | 40 | 100 | Monaco |
| 19 | 16 | 8 | 7 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 100 | Montenegro |
| 9 | 7 | 4 | 4 | 67 | 3 | 0 | 0 | 0 | 0 | 4 | 27 | 100 | Netherlands |
| 9 | 7 | 3 | 3 | 55 | 1 | 0 | 0 | 0 | 0 | 2 | 41 | 100 | Norway |
| 19 | 15 | 6 | 5 | 56 | 5 | 0 | 0 | 0 | 0 | 4 | 34 | 100 | Poland |
| 16 | 13 | 4 | 3 | 53 | 1 | 0 | 0 | 0 | 0 | 8 | 38 | 100 | Portugal |
| 39 | 30 | 17 | 15 | 35 | 21 | 0 | 0 | 0 | 0 | 13 | 31 | 100 | Republic of Moldova |
| 41 | 33 | 14 | 11 | 49 | 29 | 0 | 0 | 0 | 0 | 6 | 15 | 100 | Romania |
| 31 | 23 | 13 | 10 | 50 | 8 | 1 | 0 | 9 | 0 | 6 | 26 | 100 | Russian Federation |
| 12 | 12 | 2 | 2 | - | - | - | - | - | - | - | - | - | San Marino |
| 30 | 27 | 8 | 6 | 63 | 4 | 0 | 0 | 0 | 0 | 4 | 29 | 100 | Serbia |
| 20 | 15 | 9 | 7 | 50 | 8 | 1 | 0 | 0 | 0 | 6 | 35 | 100 | Slovakia |
| 12 | 9 | 3 | 3 | 54 | 3 | 3 | 0 | 0 | 0 | 8 | 33 | 100 | Slovenia |
| 12 | 10 | 5 | 4 | 53 | 3 | 1 | 0 | 0 | 0 | 5 | 38 | 100 | Spain |
| 7 | 6 | 3 | 3 | 52 | 3 | 0 | 0 | 0 | 0 | 2 | 42 | 100 | Sweden |
| 9 | 7 | 5 | 4 | 67 | 1 | 0 | 0 | 0 | 0 | 5 | 27 | 100 | Switzerland |
| 122 | 106 | 70 | 56 | 38 | 17 | 9 | 0 | 0 | 0 | 6 | 30 | 100 | Tajikistan |
| 39 | 36 | 11 | 9 | 61 | 5 | 3 | 0 | 0 | 0 | 3 | 29 | 100 | The former Yugoslav |
| 76 | 68 | 16 | 1/ | 54 | 11 | 1 | 0 | 0 | 0 | 1 | 30 | 100 | Republic of Macedonia |
| 102 | 88 | 57 | 14 | /0 | 16 | Q | 0 | 0 | 0 | 4 | 31 | 100 | Turkmonistan |
| 103 | 17 | 11 | 40 | 40 | 10 | 0 | 0 | 1 | 0 | 0 | 36 | 100 | |
| 10 | 0 | 6 | 9 | 40 | 12 | 2 | 0 | 0 | 0 | 9 | 30 | 100 | United Kingdom |
| 10 | ŏ | б ГГ | 5 | 55 | 4 | 0 | 0 | 0 | 0 | 4 | 37 | 100 | United Kingdom |
| 82 | бQ | 55 | 42 | 40 | 15 | 1 | 0 | U | U | 0 | 32 | 100 | Uzbekistan |

| | | l (dea | Inder-5 oths per | mortality rate 1,000 live bir | ths) | Number of under-5 deaths (thousands) | | Infant mor- tality rate (deaths per 1,000 live births) | | Number of infant deaths (thousands) | | Neonatal mortality rate (deaths per 1,000 live births) | | Numi neoi dea (thou: | ber of natal aths sands) |
|----------------------------|--|-----------|---------------------|----------------------------------|------|---|-------|--|------|--|-------|--|------|-------------------------------|-----------------------------------|
| Region | Decline (%) Annual rate of reduction (%) 1990 2000 2011 1990-2011 19 | | | | | | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 | 1990 | 2011 |
| Sub-Saharan Africa | 178 | 154 | 109 | 39 | 2.3 | 3,821 | 3,370 | 107 | 69 | 2,318 | 2,170 | 45 | 34 | 1,018 | 1,122 |
| Eastern & Southern Africa | 162 | 135 | 84 | 48 | 3.1 | 1,664 | 1,177 | 100 | 55 | 1,041 | 779 | 43 | 29 | 456 | 429 |
| West & Central Africa | 197 | 175 | 132 | 33 | 1.9 | 2,058 | 2,096 | 116 | 83 | 1,214 | 1,327 | 48 | 39 | 530 | 658 |
| Middle East & North Africa | 72 | 52 | 36 | 50 | 3.3 | 656 | 351 | 54 | 28 | 486 | 274 | 27 | 16 | 244 | 158 |
| South Asia | 119 | 89 | 62 | 48 | 3.1 | 4,340 | 2,309 | 85 | 48 | 3,109 | 1,796 | 48 | 32 | 1,784 | 1,199 |
| East Asia & Pacific | 55 | 39 | 20 | 63 | 4.7 | 2,164 | 590 | 41 | 17 | 1,631 | 484 | 24 | 11 | 895 | 312 |
| Latin America & Caribbean | 53 | 34 | 19 | 64 | 4.8 | 610 | 203 | 42 | 16 | 481 | 170 | 22 | 10 | 256 | 107 |
| CEE/CIS | 48 | 35 | 21 | 56 | 3.9 | 358 | 125 | 40 | 18 | 295 | 105 | 19 | 10 | 136 | 57 |
| World | 87 | 73 | 51 | 41 | 2.5 | 11,968 | 6,914 | 61 | 37 | 8,354 | 4,989 | 32 | 22 | 4,362 | 2,955 |

Regional estimates of child mortality and causes of under-five deaths (continued)

| | u (deat | Sex-s nder-5 m ths per 1, | pecific ortality 000 live | rate e births) | | Deaths among children under 5 years of age due to: (%) | | | | | | | | | |
|----------------------------|------------|---------------------------------|---------------------------------|-------------------|----------|---|-----------|---------|------|---------|----------|--------|-------|--|--|
| | 1 | 990 | 2 | 011 | Neonatal | 2010 | | | | | | | | | |
| Region | Male | Female | Male | Female | causes* | Pneumonia | Diarrhoea | Malaria | AIDS | Measles | Injuries | Others | Total | | |
| Sub-Saharan Africa | 186 | 168 | 114 | 103 | 26 | 17 | 12 | 15 | 4 | 1 | 4 | 21 | 100 | | |
| Eastern & Southern Africa | 171 | 153 | 89 | 79 | 29 | 17 | 11 | 8 | 7 | 1 | 5 | 22 | 100 | | |
| West & Central Africa | 206 | 188 | 138 | 126 | 25 | 17 | 12 | 19 | 2 | 1 | 3 | 20 | 100 | | |
| Middle East & North Africa | 75 | 70 | 38 | 34 | 40 | 16 | 9 | 1 | 1 | 1 | 5 | 26 | 100 | | |
| South Asia | 116 | 122 | 61 | 63 | 42 | 22 | 12 | 0 | 0 | 2 | 4 | 17 | 100 | | |
| East Asia & Pacific | 57 | 52 | 21 | 19 | 49 | 16 | 5 | 1 | 0 | 1 | 7 | 20 | 100 | | |
| Latin America & Caribbean | 57 | 48 | 21 | 17 | 45 | 10 | 5 | 0 | 1 | 0 | 15 | 24 | 100 | | |
| CEE/CIS | 52 | 43 | 23 | 19 | 45 | 14 | 5 | 0 | 1 | 0 | 6 | 30 | 100 | | |
| World | 89 | 85 | 53 | 50 | 35 | 18 | 11 | 7 | 2 | 1 | 5 | 20 | 100 | | |

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/

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