World Mortality Report

United Nations

[highlights]

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Department of Economic and Social Affairs

World Mortality Report 2015

Highlights

United Nations
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World Mortality Report 2015: Key trends

- There has been substantial global progress in life expectancy at birth since the 1950s, albeit with the persistence of significant differences across and within regions.
- From 1950 to 2015, the number of years that a newborn is expected to live, on average, increased worldwide by 24 years, or by about 3.6 years per decade.
- Under-five (or child) mortality rates have declined at the remarkable pace of nearly 3 per cent per year between 1990 and 2015. Child mortality rates are currently about 45 per cent lower than in 1990-1995. However, progress has been uneven: an increasing proportion of child deaths occur in sub-Saharan Africa and Southern Asia.
- Further reductions in under-five mortality will be necessary to achieve the Sustainable Development Goals (SDGs) by 2030, accelerating the progress registered during the Millennium Development Goals (MDGs) period. In particular, new policies to reduce socio-economic inequalities and to improve the living conditions of the most disadvantaged will be needed.
- Within countries, household wealth is closely associated with the survival prospects of children under five years of age. Differences in survival by household wealth remain even after accounting for other factors such as: age of mother at the birth of the child, length of the mother's previous birth interval, birth order and sex of the child.
- Across the globe, the association between household wealth and child mortality tends to be strongest amongst children who are one to four years old, but is also significant during the first year of life.
- Asia and Latin America and the Caribbean are the regions where the association between household wealth and the risk of child death is most pronounced.
- Aside from household wealth, mother's education is known to have a significant and independent effect on child survival.
- Mortality amongst young and middle-aged adults is increasingly preventable by changing risk behaviours and seeking timely medical assistance. Globally, the probability of dying between ages 15 and 60 decreased by 60 per cent between 1950 and 2015, or by about 9 per cent per decade.
- Adult mortality, like child mortality, is closely linked to the level of development.
- Mortality at older adult ages has also been improving significantly. Life expectancy at age 60 has been increasing steadily since the 1950s, by about one year per decade.
- Adult mortality is typically higher for men than for women in all regions of the world, and across all levels of development. Accordingly, life expectancy at birth for women is almost always higher than for men.

Introduction

The global increase of living standards, the improvement in health status and the consequent reduction in mortality over the last six and a half decades, are among the most notable achievements of development. Central to this transformation has been the epidemiological transition from predominantly infectious causes of death to a predominance of deaths due to chronic and degenerative diseases. The epidemiological transition also entailed a shift in the age pattern of mortality, from one in which childhood diseases and deaths were common to a situation where disease and mortality are highly concentrated at older ages. The driving force in this transition is socioeconomic development accompanied by investments in public health and education.

This report analyses trends in mortality worldwide based on the *2015 Revision* of the *World Population Prospects* (United Nations, 2015). Globally, it is estimated that life expectancy at birth rose from 46.8 years in the years between 1950 and 1955 to 70.5 years in the period from 2010 to 2015. The proportion of the world's population living in countries where life expectancy was below 50 years fell from 57.7 per cent in the early 1950s to 0.1 per cent (only 3 countries or areas) in 2010-2015. Conversely, the share of the world's population living in countries with life expectancy of 70 years or higher rose from 1 per cent to more than 55 per cent during the same period, while the probability of dying in early childhood—that is, the number of deaths below age five per 1,000 live births—fell from nearly 215 to 50 per 1,000 live births.

Despite this impressive global progress, large disparities remain in the levels of mortality observed across countries and regions. These differentials result from uneven progress in public health and development, and reflect inequalities in access to food, safe drinking water, sanitation, medical care and other basic human needs. They also reflect different risk factors, behavioural choices and societal contexts that affect the survival of individuals. The reduction of mortality, particularly child and maternal mortality, has been a core target of the internationally agreed development goals, such as those contained in the Programme of Action of the International Conference on Population and Development, the United Nations Millennium Declaration and the 2030 Agenda for Sustainable Development (United Nations, 2015a). Accurate estimates of mortality are crucial for assessing progress towards these goals and the health of populations more generally.

This publication presents the highlights of the *World Mortality Report 2015* (United Nations, 2015b). The first section summarizes the patterns, levels and trends in mortality at the national, regional and global level during 1950-2015, drawing from the latest demographic estimates for the world, major geographic regions and development groups, and for the 201 countries or areas with 90,000 inhabitants or more in 2015, as published in the *World Population Prospects: the 2015 Revision* (United Nations, 2015c). It focuses mostly on the years from 1990 to 2015, the period used for assessing progress toward the Millennium Development Goals (MDGs).

The goal of reducing mortality at the national level as envisioned in the MDGs or new Sustainable Development Goals (SDGs) requires attention to existing inequalities in survival, especially for those in the most vulnerable situations. Hence, the second section of this report focuses on inequalities in child survival and on how they constrain further improvements in average levels of child survival. This section examines the disparities in early childhood mor-

tality in 50 low- or middle-income countries (LMICs), using data from Demographic and Health Surveys (DHS) conducted between 2005 and 2013. The third section discusses the policies and programmes that are needed in order to achieve this degree of reduction in child mortality. Annex table 1 provides data on summary indicators of mortality and life expectancy for infants, children, adults and older persons from 1950 to 2015, and annex table 2 provides a list of countries for which the most recent DHS surveys were conducted between 2005 and 2013, including the number of children analysed in each survey.

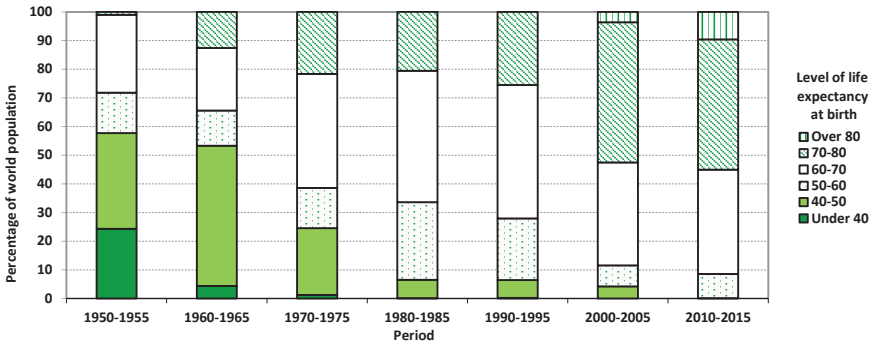
Global levels and trends in mortality

Widespread and substantial increases in life expectancy at birth

Globally, the number of years that a newborn is expected to live, given the prevailing risks of mortality, increased by 24 years from 1950 to 2015, which represents a rise of about 3.6 years per decade over the past 65 years. Between 2010 and 2015, 55.1 per cent of the world's population lived in countries with a life expectancy at birth above 70 years, and 9.6 per cent lived in countries where the life expectancy was 80 years or more. In the years from 1950 to 1955, only a few countries had a level of life expectancy greater than 70 years, and only 1.0 per cent of the world's population lived in such countries. At that time, 71.9 per cent of the world's population lived in countries where the life expectancy at birth was less than 60 years (figure 1). The reductions of mortality since the middle of the twentieth century have been so substantial that the proportion of the population living in countries with a life expectancy below 60 years had decreased to only 8.5 per cent for the period between 2010 and 2015.

Figure 1.

Distribution of the world's population by the level of life expectancy at birth for a person's country or area of residence, from 1950-1955 to 2010-2015



Since 1950, all regions of the world have seen substantial increases in life expectancy at birth (figure 2). The world as a whole gained 23.7 years of life expectancy since the early 1950s (table 1), reaching a level of 70.5 years in the years from 2010 to 2015. During this same period, the less developed regions gained 27.2 years of life expectancy, double the gain in the more developed regions, due in substantial part to large reductions in child mortality, which in the developed regions had already occurred by 1950.

Levels and improvements in life expectancy have varied greatly across the less developed regions. Asia and Latin America and the Caribbean experienced steady increases

in life expectancy at birth throughout the second half of the twentieth century (figure 2). Latin America and the Caribbean had the highest level of life expectancy among large developing regions throughout this period, rising from 51.2 years in 1950-1955 to 74.5 years in 2010-2015 (table 1). But the largest increase in life expectancy among regions occurred in Asia, rising from 42.1 years in 1950-1955 to 71.6 years in 2010-2015. In Africa, life expectancy increased from the 1950s until the early 1980s, but this progress slowed down during the late 1980s and all through the 1990s, mainly because of the HIV/AIDS epidemic. There have been indications in more recent years that the worst part of the epidemic has passed, with the estimated level of life expectancy at birth for the continent reaching 59.4 years for the period between 2010 and 2015.

Table 1.

Life expectancy at birth by development group and region, 1950-1955 and 2005-2015

	Life expectancy at birth (years)			
	1950-1955	2010-2015	Absolute change	Percentage change
World	46.8	70.5	23.7	50.6
More developed regions	64.7	78.3	13.6	21.1
Less developed regions	41.5	68.8	27.2	65.6
Least developed countries	36.1	62.2	26.0	72.0
Other less developed countries	42.3	70.2	27.9	65.8
Africa	37.3	59.5	22.2	59.4
Asia	42.1	71.6	29.5	70.0
Europe	63.6	77.0	13.4	21.1
Latin America and the Caribbean	51.2	74.5	23.3	45.6
Northern America	68.6	79.2	10.6	15.4
Oceania	60.4	77.5	17.0	28.2

In all development groups and regions, women live longer than men. Worldwide, women lived, on average, 4.5 years longer than men in the period between 2010 and 2015 (figure 3). This "female advantage" means that life expectancy for women globally was 6.5 per cent higher than for men. The female advantage was largest in the more developed regions, where women lived 6.4 years (or 8.5 per cent) longer than men in 2010-2015. In the less developed regions, women's life expectancy was 3.7 years (or 5.6 per cent) higher than men's in the same period. The difference by sex is the smallest in the least developed countries, at 2.9 years (or 4.7 per cent) greater for women compared to men. In nearly all regions, the female advantage in life expectancy has grown since 1950-1955. This change has been larger in the less developed regions, where the difference was 1.9 years in 1950-1955, and 3.7 years in 2010-2015. The relatively small female advantage in Africa in 2010-2015 is mainly a consequence of the differential impact of the HIV/AIDS epidemic on mortality levels by sex, with HIV prevalence estimated to be higher among women than among men. In the more developed regions, the female advantage is larger in Europe (7.4 years or 11.3 per cent) than in Northern America (4.7 years or 6.1 per cent) and Oceania, which includes Australia-New Zealand.

Figure 2

Life expectancy at birth by development group and region, 1950-2015

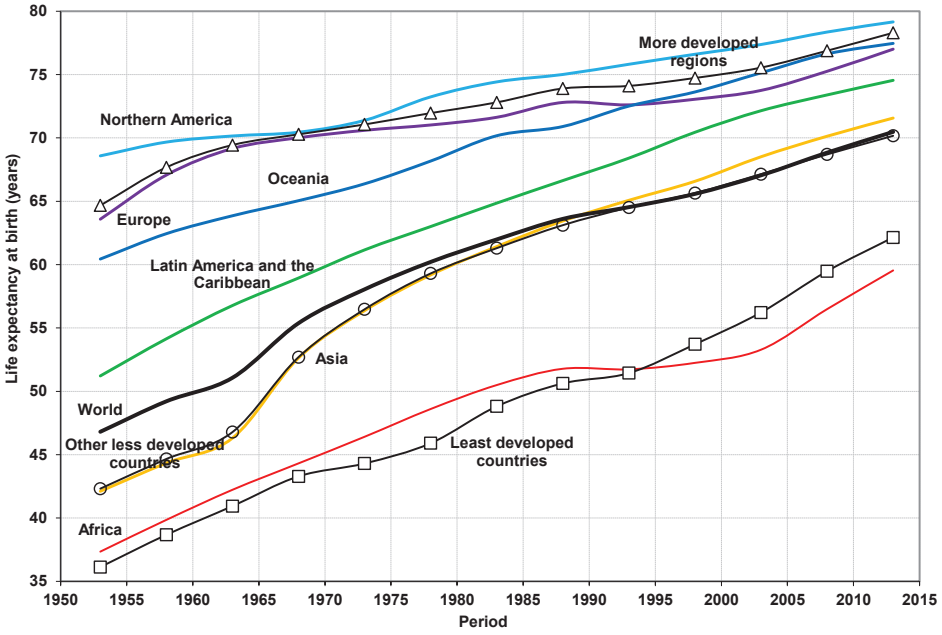
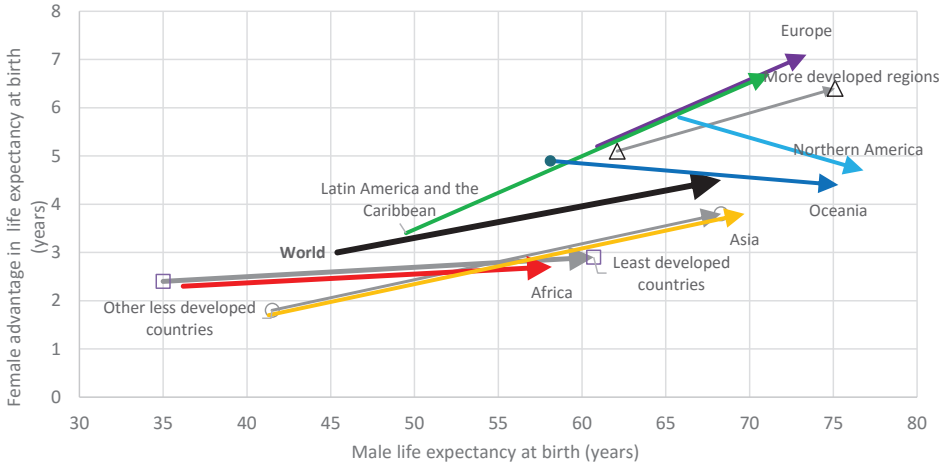


Figure 3.

Female advantage in life expectancy at birth* by level of male life expectancy by region (arrows depict change from 1950 to 2015)



*Female life expectancy at birth minus male life expectancy at birth.

Rapid reductions in under-five mortality

The global progress in child survival since 1990 has been substantial. The child mortality rate, also known as the "under-five mortality rate"[1] declined at a remarkable pace of about 3 per cent per year between 1990 and 2015. Despite this significant improvement, the ambitious target of a two thirds reduction between 1990 and 2015, as contained in Millennium Development Goal 4, was not achieved at the global scale (United Nations IGME, 2015).

Worldwide, the under-five mortality rate fell by 45 per cent between 1990-1995 and 2010-2015, dropping from 91 to 50 deaths per 1,000 live births. In 2010-2015, the under-five mortality rate in the less developed regions was 54 per 1,000, more than nine times as high as in the more developed regions, where it stood at 6 per 1,000 live births. During 2010-2015, the least developed countries had a higher level of under-five mortality, 86 per 1,000 live births. Among other countries of the less developed regions, the risk of dying before age five was 45 per 1,000 live births, slightly more than half the level of the least developed countries. Within the less developed regions, Asia has experienced the most rapid reduction in child mortality, which fell by around 53 per cent between 1990-1995 and 2010-2015. The pace of decline in under-five mortality was slower, just under 32 per cent, in Oceania. Africa experienced an intermediate pace of decline, with the under-five mortality rate falling by 46 per cent between 1990-1995 and 2010-2015.

Uneven reductions in preventable adult mortality between ages 15 and 60 years

Mortality affecting young and middle-aged adults (that is, persons from ages 15 to 59 years) is becoming increasingly preventable through changes in risk behaviours (for example, reductions in tobacco use) or through medical interventions (for example, early detection and treatment of cervical cancer and cardiovascular disease). In 1950-1955, no country had a probability of dying between exact ages 15 and 60 years (also called the "adult mortality rate" or, less formally, "adult mortality") that was lower than 100 per 1,000 alive at age 15. In 2010-2015, 35 per cent of the global adult age population lived in countries with adult mortality lower than 100 per 1,000. At the other end of the spectrum, in 1950-1955, 45 per cent of the world's population aged 15-59 years lived in countries where adult mortality was 450 per 1,000 or higher. In 2010-2015, the number of persons in this age group who were living in countries with adult mortality higher than 450 was merely 0.2 per cent of the total global population.

Adult mortality, like child mortality, is highly correlated with the level of development. In the less developed regions the risk of dying between ages 15 and 60 has been higher than in the more developed regions. In 2010-2015, the probability that a 15-year-old in the less developed regions dies before age 60 was 161 per 1,000, which is 30 per cent higher than in the more developed regions, where the risk of dying between ages 15 and 60 was 112 per 1,000. The least developed countries are particularly disadvantaged in terms of adult survival, where 240 per 1,000, or 24 per cent, of 15-year-olds die before age 60.

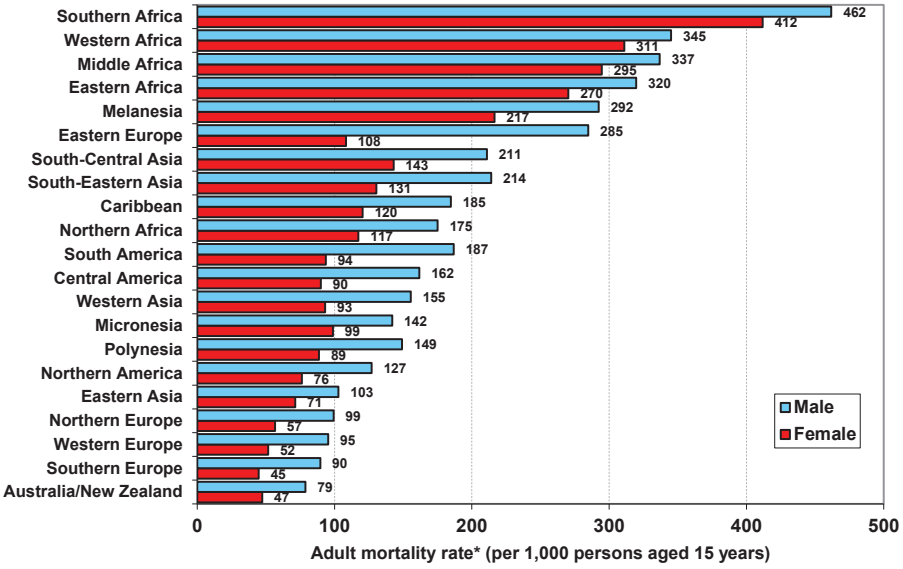
Adult mortality is higher for men than for women in all regions of the world. The magnitude of the difference in adult mortality by sex varies considerably across regions (figure 4). Australia and New Zealand, Northern, Southern and Western Europe, Eastern Asia and Northern America are the regions with the lowest levels of adult mortality. Nevertheless, within the more developed regions, males in Eastern Europe have exceptionally high adult mortality, at the level of 285 per 1,000. As a consequence, Eastern Europe has the largest sex differential in adult mortality of any world region, with a male-to-female

[1] Measured as the number of deaths to children under the age of 5 years per 1,000 live births.

ratio of 2.6. Southern Europe is the only other region with a male-to-female ratio above 2. Unlike Eastern Europe, where the high ratio resulted from exceptionally high male mortality, Southern Europe's high ratio was attributable mainly to exceptionally low female mortality.

Figure 4.

Adult mortality rate* by sex and region, 2010-2015



*Conditional probability of dying between exact ages 15 to 60 years, sorted by the level of mortality for both sexes combined.

At the opposite end of the spectrum, the highest levels of adult mortality for both men and women are found in the four regions of sub-Saharan Africa: Eastern, Middle, Southern and Western Africa. Amongst the regions of the world, the highest levels of adult mortality are found in Southern Africa, where 462 out of 1,000 men and 412 out of 1,000 women were expected to die between the ages of 15 and 60 years given the age-specific mortality risks observed in 2010-2015. Southern Africa has been heavily affected by the HIV/AIDS epidemic, which continues to contribute to these relatively high risks of adult mortality.

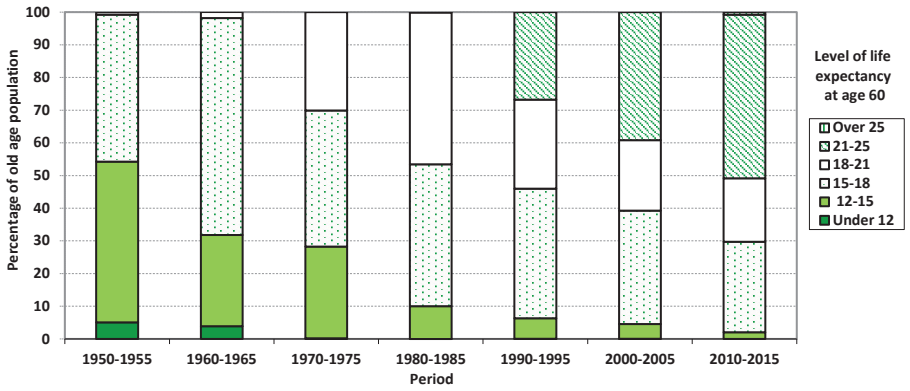
Increases in life expectancy at age 60 years

The expected number of remaining years of life after age 60 has increased steadily since the 1950s, at a pace of roughly one year per decade. Given the mortality rates prevailing worldwide in the period between 2010 and 2015, a person aged 60 years could expect to live another 20.2 years, compared to 14 years in the years from 1950 to 1955. This trend in life expectancy at age 60 is even more impressive when considering the size of the populations involved. In 1950-1955, 54.2 per cent of older persons (aged 60 years or over) lived in countries where the remaining life expectancy at age 60 was less than 15 years. In 2010-2015 that fraction had been reduced to only 2.1 per cent of the population of older persons. Conversely, before the period 2005-2010, no country had a life expectancy at age 60 that was higher than 25 years. In 2005-2010, Japan became the first country to cross that threshold, and by 2010-2015, about 0.8 per cent of the global population aged 60 years or

older was living in seven countries or areas where life expectancy at age 60 exceeded 25 years: Japan, Hong Kong, Special Administrative Region (SAR) of China, Chile, France, Italy, Singapore and Switzerland. Changes from 1950-1955 to 2010-2015 in the distribution of the world's older population by the level of remaining life expectancy at age 60 are depicted in figure 5.

Figure 5

Distribution of the global population aged 60 years or over by level of life expectancy at age 60 years in a person's country or area of residence, from 1950-1955 to 2010-2015



Overall, living in countries or areas with high levels of life expectancy at age 60 is becoming increasingly common. Whereas living in a location with a life expectancy at age 60 of 21 years or more was extremely rare in the 1950s, this situation had become a reality for the majority of the older persons in the world by 2010-2015.

Differences by sex or location in mortality above age 60 follow a pattern that is similar to the differences observed at younger ages. On average, women at older ages outlive their male counterparts in all regions of the world. Worldwide in 2010-2015, a 60-year-old woman was expected to live, on average, 2.8 years longer than a 60-year-old man. In the less developed regions, life expectancy at age 60 in 2010-2015 was 18.9 years, compared to 22.8 years in the more developed regions. Older persons in the least developed countries are the most disadvantaged in terms of survival, with 60-year-olds expected to live an average of 17.3 additional years. In Africa, survival prospects at older ages lag behind those of other regions: with a life expectancy at age 60 of 16.7 years, 60-year olds in Africa have 7 fewer years of life remaining relative to their peers in Oceania, where the life expectancy at age 60 of 23.7 years is the highest worldwide.

Socio-economic determinants of inequalities in infant and early childhood mortality

Considerable progress has been made in child survival during the last several decades. For example, a child born in Africa or in Southern Asia in 2015 was about 25 per cent more likely to celebrate his or her fifth birthday than a child born in those two regions in 1960. Despite this substantial progress, an increasing proportion of child deaths worldwide are occurring today in sub-Saharan Africa and Southern Asia, due both to higher levels of child mortality and to faster rates of population growth in these two regions than elsewhere.

Millennium Development Goal 4 set a target of reducing under-five mortality globally by two thirds between 1990 and 2015. More recently, target 3.2 of the Sustainable Development Goals (SDGs) aims to reduce under-five mortality to no more than 25 deaths per 1,000 live births by 2030. Because of the large differences in child mortality between and within countries, overall reductions in child mortality of the magnitude envisaged in the SDGs will require designing and implementing policies to address inequalities in the health environment and living conditions of children, especially those belonging to the most disadvantaged population groups. To maximize the effectiveness of such policies, it is important to understand the causes of existing inequalities in child health and survival, identifying critical factors of success for the policies applied to date and devising better strategies for reducing inequalities in the future.

Several factors may contribute to inequalities in child survival. As regards to the major causes of death, it is estimated that more than half of under-five deaths in the world are attributable to a very small number of causes or conditions, namely, pneumonia, diarrhoea, malaria, measles and HIV/AIDS (UNICEF, 2015). Mosley and Chen (1984), in their framework on the determinants of child heath, provided a distinction between the "proximate" and the "underlying" determinants of health. The former affect children's health directly (for example, feeding practices, preventive activities, care during pregnancy and childbirth), while the latter do so indirectly, through their impact on the proximate determinants (for example, mother's education and knowledge, household income, access to health facilities). The next section reports on the findings of a recent cross-country study of socioeconomic differences in child mortality (Gaigbe-Togbe, 2015), which examines the association between key determinants of children's health and observed levels of mortality using information from the Demographic and Health Surveys for 50 low- and middle-income countries (LMICs).

Children from the richest households are more likely to survive through the first five years of life than their counterparts from the poorest households

Figure 6 presents relative levels of under-five mortality for groups of households classified according to a composite measure of household wealth. Within each wealth category, the figure presents the population-weighted average relative level of child mortality compared to the poorest category across 50 low- and middle-income countries.

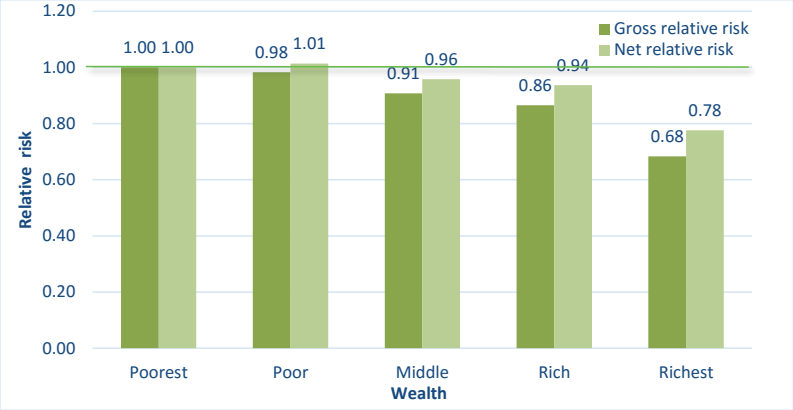
The figure distinguishes between "gross" and "net" differentials. Gross differentials are based on observed death rates, derived using available data and direct calculation methods. Net differentials are based on adjusted estimates of the under-five mortality rate, where the adjustment consists of applying statistical controls for other factors potentially contributing to the gross differentials separately from household wealth. In addition to household wealth, variables such as age of mother at the birth of the child, length of the mother's previous birth interval, birth order and sex of the child were used as statistical controls.

Household wealth plays a curcial role in global pattern of survival of children under age five

Data from the 50 Demographic and Health Survey (DHS) were pooled to create the data set used for the analysis described here (see Annex table 2). The results suggest that household wealth may have substantial effects on child survival at the global level. In general, the probability of child survival tends to be higher at higher levels of household wealth. Children from households in the richest quintile have the lowest risk of death, and both the gross and the net relative risks of dying tend to decrease from the poorest to the richest quintile.

Figure 6.

Gross and net relative risks of dying before age five years (0-59 months) by household wealth, all 50 countries



Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.
* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (poorest quintile).

The gross relative risk of dying for a child from the richest quintile is 68 per cent of that for a child from the poorest quintile. When the effects of other potential intervening factors are controlled using statistical methods, the relative risk of dying for a child from the richest household becomes 78 per cent of that for a child from a poorest household. The gross relative risk of dying for a child from a middle-income household is 91 per cent of that for a child from the poorest household, whereas the net relative risk of the same child is 96 per cent. Thus, in both cases the differential becomes smaller but does not disappear when accounting for the association between other potential causal factors and levels of child mortality. This finding is consistent with the conclusion that household wealth has a substantial causal impact on levels of child mortality and may account for a large portion of the observed differentials.

As pointed out in Mosley's framework, among the health-promoting effects of most proximate determinants, income is positively associated with energy intake, the likelihood of a pregnant woman receiving antenatal care, and the likelihood of delivery taking place away from home. In addition, children from poor households, who are more likely to be exposed to such diseases as pneumonia and malaria, are less likely to receive proper medical attention than children from better-off households (Victoria and others, 2003).

The association between household wealth and the survival of infants is statistically significant. At the global level, the net relative mortality risk of a child from the richest quintileis 81 per cent that for a child from the poorest quintile (figure 7). As observed before for the whole age range of 0-4 years (0-59 months), the net relative risk of infant mortality diminishes steadily with the level of household wealth. The relative mortality risks are 96 per cent for infants from the middle quintile and 94 per cent for infants from the rich quintile, compared to children from the poorest quintile.

Figure 7.

Net relative risk of dying in infancy (0-11 months) by household wealth, all 50 countries

Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.

* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (poorest quintile).

The impact of household wealth on child mortality is most pronounced after the first year

At the global level, the association between household wealth and child mortality is stronger after the first year of life. Figure 8 shows that the relative risk of dying between the first year of life and the fifth birthday for a child in a household in the richest quintile is 66 per cent that for a child of the same age group in a household in the poorest quintile. In contrast to the result observed in infancy, where the net relative risk declined steadily from the poorest to the richest quintile, in this case (for children between 1 and 4 years of age) the risk increases slightly for the poor quintile before resuming a steady decline from the middle quintile to the richest quintile. As pointed out earlier, this finding is consistent with the conclusion that household wealth has a substantial causal impact on levels of mortality, after the first year of life and may account for a large portion of the observed differentials. act on levels of mortality, after the first year of life and may account for a large portion of the observed differentials.

For children in this age group, the association between household wealth and child survival is found to be present in all the regions studied, namely, Africa, Asia and Latin America and the Caribbean. The larger association between household wealth and survival in the age group 12-59 months as compared to infants is observed in all regions. The reasons for this finding in Africa and Latin America and the Caribbean are not clear, although it is possible that the differentials in nutritional status and access to health services across wealth categories may become most pronounced after infancy in these regions. Longitudinal cohort analyses based on the INDEPTH network of demographic and health surveillance sites (www.indepth-network.org) show an association between socio-economic status and under-five mortality (Mwageni and others, 2011), but this association does not hold when other factors are taken into consideration (Debpuur and others, 2011).

Figure 8.

Net relative risk of dying at ages 1-4 years (12-59 months) by household wealth, all 50 countries

Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.

* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (poorest quintile).

The impact of household wealth is more marked in Asia and Latin America

The association between household wealth and the risk of child mortality is most pronounced in Asia and Latin America and the Caribbean, and is weaker in Africa. Figure 9 presents the measured effect of household wealth on child mortality (ages 0-4 years or 0-59 months) for the three regions included in the analysis. The net relative risk of dying before reaching the fifth birthday for a child born in Africa from the richest household is 89 per cent that for a child from the poorest household in the region. In contrast, the net relative risk of dying of a child born in Asia from the richest household is only 52 per cent that for a child from the poorest household. In Latin America and the Caribbean, the association between household wealth and child survival is comparable to that of Asia, with a child from the richest quintile having a relative risk of only 70 per cent that for a child from the poorest quintile. Of the three regions, Africa is the region where the association between household wealth and child survival seems to be the lowest. This finding is consistent with the conclusion that household wealth has a substantial causal impact on levels of child mortality and may account for a large portion of the observed differentials.

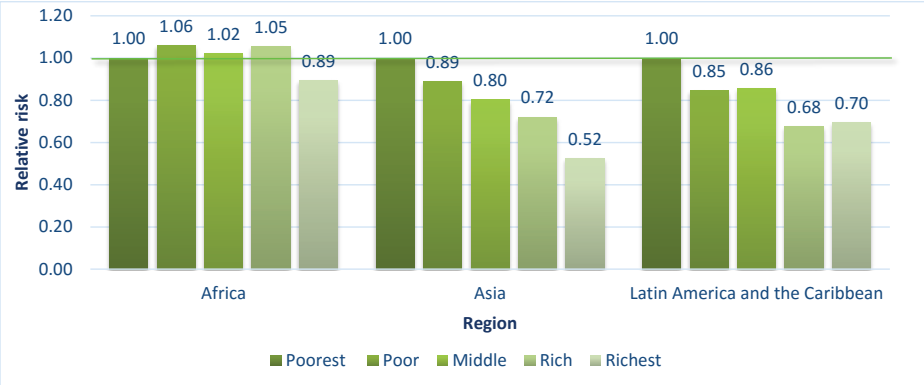
Mother's education contributes significantly to increase child survival globally (all 50 countries)

Independently of the level of household wealth, mother's education has a positive effect on child survival. The knowledge and practices that could save the lives of children tend to be more prevalent among women with a level of education higher than primary. Such practices include better hygiene, following the instructions given by the medical personnel when their children become sick, assessing the ill-health status of their children and following the recommended vaccination schedule (Desai and Alva, 1998; Abuya and other, 2012; Fuchs and others, 2010; Hajizadeh and others, 2014). The net relative risk of child mortality for a child whose mother has a tertiary level of education is 29 per cent of that for a child whose mother has less than primary education (figure 10).

The statistical control of mother's education reduces the measured effect of household wealth, confirming that part of the effect of household wealth on child survival plays through that of mother's education (Fuchs and others, 2010).

Figure 9.

Net relative risk of dying before age five years (0-59 months) by region, (Africa, Asia and Latin America and the Caribbean) and household wealth



Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.

* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (poorest quintile).

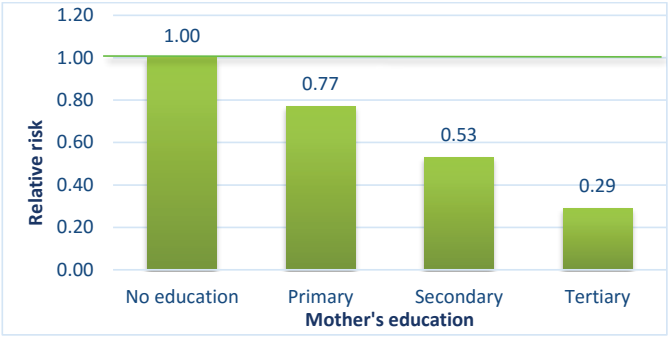
Differential impact of household wealth on child survival by place of residence (urban versus rural)

The association between household wealth and child survival tends to be more pronounced in rural areas than in urban areas. The net relative mortality risk of a child from the richest quintile in rural areas is 79 per cent of that for a child from the poorest quintile. In contrast, the net relative mortality risk of a child from the richest quintile in urban areas is similar to that of a child from the poorest quintile (figure 11). The availability of services for the large majority of households in urban areas reduces the magnitude of the impact of household wealth. For example, better water supply and sanitation are more available in the majority of households in urban areas than in rural areas. A number of studies have demonstrated that water supply and sanitation are important determinants of early childhood mortality (Merrick, 1976; Fayehun, 2010; Gaigbe-Togbe, 1994; Osita and others, 2014). Also, as noted above, water supply and sanitation are important factors included in the construction of the wealth index.

The availability of electricity and piped water in the household in rural areas in low- and middle-income countries, however, is less common and this could compound the differences across households of different wealth categories. Some studies have also found that there are significant socioeconomic differences in apparent homogeneously poor rural areas and that the main difference between the more and less poor in health is not in the likelihood of becoming ill but in the access to adequate treatment once ill (Gwatkin, 2003; WHO, 2009).

Figure 10.

Net relative risk of dying before age five years (0-59 months) by mother's education, all 50 countries

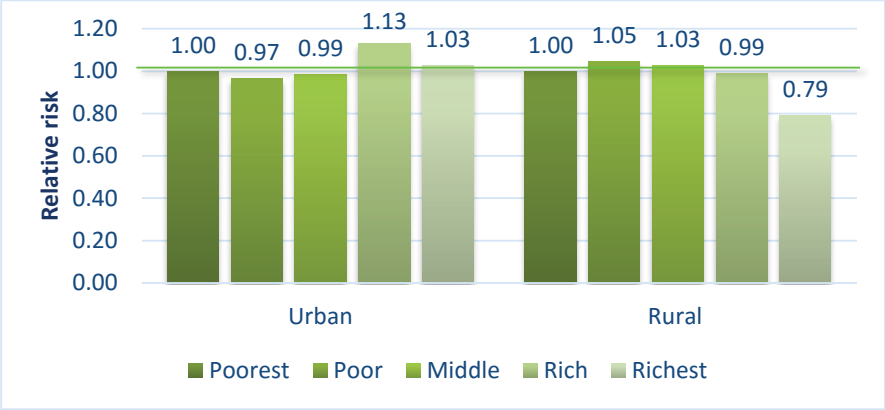


Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.

* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (No education).

Figure 11.

Net relative risk of dying before age five years (0-59 months) by place of residence (urban versus rural), and household wealth, all 50 countries



Source: Gaigbe-Togbe (2015). The country data are from the most recent DHS surveys conducted in 2005-2013 and are weighted by the 2005 population size of each of the 50 countries in a multivariate regression.

* Relative risk is the ratio of the risk of dying in the category under study compared with that in the reference category (poorest quintile).

Policy implications of the Sustainable Development Goals (SDGs) for population health

"Health is central to development: it is a precondition for, a contributor to, as well as an indicator and an outcome of progress in sustainable development" (WHO, 2012). Over the last several decades, there has been considerable progress worldwide in improving various factors that influence population health, including nutrition, access to safe water, improved sanitation and the general standard of living. The Millennium Development Goals (MDGs) emphasized key aspects of the health and mortality of populations, including maternal and child health (goals 4 and 5) as well as HIV/AIDS, tuberculosis and malaria (goal 6).

It is difficult to know for certain whether the MDGs merely drew attention to the progress being made in these areas or whether the Goals helped to fuel an acceleration of that progress. In either case, the remarkable achievements of the MDGs era must be sustained and reinforced if the world is to achieve the new and more ambitious objectives of the Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in September 2015 (United Nations, 2015a).

The SDGs call for the following achievements by 2030:

- Reduce the global maternal mortality ratio to less than 70 per 100,000 live births (target 3.1);
- End preventable deaths of newborns and children under five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-five mortality to at least as low as 25 per 1,000 live births (target 3.2);
- End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases (target 3.3);
- Reduce by a third, premature mortality from non-communicable diseases (NCDs) through prevention and treatment and promote mental health and well-being (target 3.4).

Improving health services and providing cost-effective and high-impact interventions that address the needs of women and newborns across the continuum of care, with an emphasis on care around the time of birth, remain critical as means of saving lives.

Pneumonia, diarrhoea and malaria remain the leading causes of death among children under age five. Forty-five per cent of under-five deaths occur in the first month of life, or neonatal period, when deaths are dominated by pregnancy-related factors, including preterm and intrapartum complications (ranging between 48 and 61 per cent of neonatal deaths across regions) and infections like sepsis, meningitis and pneumonia (between 7 and 24 per cent). During the second through twelfth months of life, or post-neonatal period, deaths from the leading infectious diseases (for example, pneumonia, diarrhoea, malaria, meningitis, AIDS,

measles) still account for nearly 70 per cent of the total in sub-Saharan Africa (Liu, 2014).

Yet many of these deaths are easily preventable through simple, cost-effective interventions administered before, during and immediately after birth (The Partnership for Maternal, Newborn and Child Health, 2011). Too many mothers and newborns still miss out on key interventions that can save their lives. Globally, only around half of all pregnant women receive the recommended minimum of four antenatal care visits. In 2014, about 29 per cent of births were delivered without the help of a skilled health care provider. High-quality care for pregnant women and newborns is often lacking, even for babies and mothers who have some contact with the health system (UNICEF, 2015).

As this report has highlighted, socio-economic inequalities are closely associated with observed levels of child health and mortality. The strong association between mortality and various measures of socio-economic status (as measured by household wealth and mother's education) remains even after other potential causal factors are taken into account. Those factors include mother's age, urban/rural residence and key characteristics of the child, such as sex, birth order, length of previous birth interval. Therefore, health policies that focus on reducing inequalities, as proposed by the United Nations Children Fund (UNICEF), seem more likely to yield large returns on the investments being made by countries, averting more child and maternal deaths than policies focused on improving overall levels of health and mortality without attention to the role of inequalities. While it is important to invest globally in maternal, adolescent and child health (Every Woman Every Child, 2015), it is critical that these efforts target the most economically vulnerable children and their families.

The 2008 World Health Report identified raising the visibility of health inequities in public awareness and policy debates as a crucial step towards a strengthened emphasis on health equity within primary health care (WHO, 2008). Because malnutrition, ill health and the overall burden of disease are typically concentrated in the most disadvantaged populations, providing children in such settings with essential services can help to reduce disparities within countries and accelerate progress towards the achievement of health-related development goals (UNICEF, 2010; Carrera and others, 2012). Ensuring equal access to health care services can improve maternal and child survival in settings where health facilities are far removed from the dwellings where people reside (Mulholland and others, 2008) and for subpopulations that remain at high risk of death from preventable conditions (WHO, 2015a).

Achievement of the health-related SDGs will require a holistic approach as part of an integrated development agenda. Progress toward the health objectives (SDG 3) must be supported by progress in other domains, for example, by improving living conditions (SDGs 1, 2), expanding access to education (SDG4), empowering women and girls (SDG 5), increasing opportunities for employment and decent work (SDG 8), building sustainable cities (SDG 11) and promoting peaceful and inclusive societies (SDG 16) (United Nations, 2013).

In particular, progress toward the health-related targets will require a special emphasis on promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status (SDG target 10.2). Persons with disabilities, for example, face higher risks of mortality than the rest of the population, especially in situations of disaster or crisis, when the mortality rate for those with disabilities can be as much two to four times higher than for their peers without

disabilities. The Sendai Framework for Disaster Risk Reduction 2015-2030 includes persons with disabilities as beneficiaries and as agents of change. Implementation of the Framework should be integrated into the efforts to reduce the elevated mortality risks of persons with disabilities.

Similarly, achieving further reductions in mortality due to non-communicable diseases (NCDs), including for the more developed regions, will require an integrated approach taking into account demographic factors, such as population ageing and rapid urbanization, as well as behavioural factors, such as smoking, inactivity and unhealthy diets, and the forces driving them, including the marketing of consumer goods. Given that population ageing will be the dominant demographic trend globally over the next several decades, more and more countries will need to scale up a range of cost-effective prevention and treatment options for NCDs, both at the individual and collective levels (WHO, 2015b).

The United Nations Political Declaration on NCDs, adopted by the General Assembly in 2011, and the United Nations Outcome Document on NCDs, adopted by the Assembly in 2014, include a road map of commitments made by governments. The Global Action Plan for the Prevention and Control of NCDs 2013-2020 (WHA Resolution A66/9), endorsed by the World Health Assembly in May 2013, provides a non-exhaustive menu of policy options and cost-effective interventions, focusing on the four categories of non-communicable disease that make the largest contributions to morbidity and mortality—cardiovascular disease, cancer, chronic respiratory disease and diabetes—and includes voluntary targets focusing on risk factors, such as tobacco use, high blood pressure, high salt intake, obesity and physical inactivity, and on access to essential medicines, technologies, drug therapy and counselling.

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Annex table 1

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
WORLD	**47**	**70**	**91**	**50**	**142**	**36**	**182**	**122**	**20**
More developed regions [a]	65	78	13	6	60	5	152	72	23
Less developed regions [b]	42	69	100	54	161	39	188	133	19
Least developed countries [c]	36	62	172	86	203	57	263	217	17
Other less developed countries [d]	42	70	83	45	155	33	178	121	19
Less developed regions, excluding China	41	67	112	61	177	44	223	156	19
High-income countries [e]	64	79	15	7	62	6	139	68	23
Middle-income countries [e]	42	70	89	48	158	35	185	126	19
Upper-middle-income countries [e]	45	74	53	24	135	19	139	91	20
Lower-middle-income countries [e]	40	66	113	60	183	44	231	160	18
Low-income countries [e]	35	60	186	91	195	60	295	247	17
Sub-Saharan Africa [f]	36	57	184	99	183	64	346	303	16
AFRICA	**37**	**60**	**167**	**90**	**187**	**59**	**308**	**263**	**17**
Eastern Africa	37	61	183	79	180	53	320	270	18
Burundi	39	56	203	123	167	78	336	277	16
Comoros	39	63	114	78	193	58	260	210	16
Djibouti	41	62	120	83	154	55	281	235	17
Eritrea	36	63	130	60	200	46	307	238	15
Ethiopia	34	63	191	74	200	50	267	216	18
Kenya	42	61	109	78	147	52	309	271	18
Madagascar	36	65	152	55	183	37	257	208	17
Malawi	36	61	215	77	198	60	316	291	19
Mauritius [1]	50	74	21	14	103	12	198	97	20
Mayotte	47	79	17	5	142	4	144	56	23
Mozambique	31	55	229	99	220	64	433	380	17
Réunion	48	80	17	5	142	4	144	56	24
Rwanda	40	63	466	73	161	49	326	185	18
Seychelles	58	73	15	13	85	10	243	94	19
Somalia	34	55	222	131	200	79	350	291	16
South Sudan	28	55	220	122	249	78	357	329	16
Uganda	40	57	175	93	161	61	373	317	17
United Republic of Tanzania [2]	41	64	165	51	153	37	298	253	19
Zambia	42	59	182	83	148	55	345	297	18
Zimbabwe	49	55	81	72	115	48	477	450	18
Middle Africa	37	56	188	126	183	79	337	295	16
Angola	30	52	253	156	231	96	377	328	16
Cameroon	39	55	144	115	170	74	379	353	16

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
Central African Republic	33	50	182	151	204	93	446	412	16
Chad	36	51	199	155	186	96	392	351	16
Congo	43	61	125	75	142	51	299	260	18
Democratic Republic of the Congo	39	58	182	115	167	73	297	248	17
Equatorial Guinea	34	57	184	109	197	70	329	287	17
Gabon	37	64	91	62	180	43	255	263	18
Sao Tome and Principe	46	66	87	63	125	44	221	168	18
Northern Africa	42	70	82	40	201	30	175	117	19
Algeria	43	74	60	36	163	30	138	87	22
Egypt	41	71	80	24	249	19	193	117	17
Libya	37	71	39	29	254	24	176	101	18
Morocco	46	74	68	32	151	26	108	91	19
Sudan	45	63	130	82	135	53	259	202	18
Tunisia	39	75	41	20	232	19	129	75	19
Western Sahara	36	68	106	46	217	37	206	154	17
Southern Africa	45	57	66	52	117	40	462	412	16
Botswana	48	64	73	40	135	32	346	260	17
Lesotho	42	50	94	82	169	60	580	593	15
Namibia	42	64	81	42	172	34	330	247	17
South Africa	45	57	63	51	110	38	463	412	16
Swaziland	41	49	95	92	174	65	557	584	16
Western Africa [3]	34	55	202	111	201	71	345	311	14
Benin	34	59	168	108	210	69	275	228	16
Burkina Faso	31	58	204	108	228	67	287	257	15
Cabo Verde	48	73	54	24	132	20	143	102	19
Côte d'Ivoire	32	51	149	105	268	73	430	396	14
Gambia	30	60	156	83	156	47	297	243	15
Ghana	42	61	114	78	147	51	274	236	16
Guinea	33	58	216	101	207	59	294	270	15
Guinea-Bissau	36	55	204	152	180	92	310	257	15
Liberia	33	60	234	85	224	61	277	239	15
Mali	27	57	246	122	242	84	268	272	15
Mauritania	39	63	123	90	148	67	231	186	16
Niger	35	61	293	104	162	60	246	211	16
Nigeria	34	52	213	122	201	76	383	352	14
Senegal	35	66	138	54	128	44	233	168	17
Sierra Leone	29	50	273	134	237	94	413	407	13
Togo	35	59	142	86	186	50	298	266	15
ASIA	**42**	**72**	**83**	**39**	**157**	**31**	**163**	**108**	**19**
Eastern Asia	45	77	46	13	123	11	103	71	21
China [4]	43	75	50	14	129	12	102	74	19
China, Hong Kong SAR [5]	63	84	7	3	62	2	66	34	26
China, Macao SAR [6]	61	80	14	5	66	4	80	41	23
Dem. People's Republic of Korea	38	70	56	28	123	22	183	111	17
Japan	62	83	6	3	50	2	77	40	26

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
Mongolia	43	69	91	32	183	26	304	135	18
Republic of Korea	48	81	13	4	138	3	97	39	24
Other non-specified areas	58	79	8	5	79	4	137	58	23
South-Central Asia [7]	37	68	115	55	194	44	211	143	18
Central Asia	55	68	77	42	127	34	263	131	18
Kazakhstan	55	69	61	17	110	14	306	127	17
Kyrgyzstan	53	70	72	23	140	20	254	113	18
Tajikistan	53	69	115	51	160	40	209	120	18
Turkmenistan	51	65	96	60	150	47	300	155	17
Uzbekistan	56	68	72	53	125	44	239	135	18
Southern Asia	37	68	116	56	197	44	209	143	18
Afghanistan	29	60	163	99	281	71	289	245	16
Bangladesh	41	71	129	41	221	33	157	113	19
Bhutan	30	69	125	37	269	30	216	226	20
India	37	67	116	53	186	41	223	151	18
Iran (Islamic Republic of)	41	75	50	17	220	15	108	66	19
Maldives	34	76	82	11	269	9	87	61	19
Nepal	34	69	124	40	229	32	185	147	17
Pakistan	37	66	132	87	256	70	181	146	18
Sri Lanka	55	75	26	10	89	8	205	77	20
South-Eastern Asia	46	70	63	30	157	24	214	131	18
Brunei Darussalam	58	78	16	5	81	4	90	56	21
Cambodia	40	68	119	35	143	30	218	155	17
Indonesia	43	69	73	30	193	25	210	152	17
Lao People's Democratic Republic	41	66	137	60	177	47	227	186	17
Malaysia [8]	55	74	16	8	102	7	172	83	19
Myanmar	36	66	101	60	214	46	233	177	17
Philippines	55	68	48	30	97	23	276	148	17
Singapore	60	83	6	2	61	2	74	41	25
Thailand	51	74	31	13	128	11	211	108	21
Timor-Leste	30	68	174	56	265	44	181	134	17
Viet Nam	54	76	46	24	104	19	189	69	22
Western Asia	44	73	62	31	192	24	155	93	20
Armenia	63	74	53	16	83	13	173	72	20
Azerbaijan [9]	58	71	100	47	120	40	179	88	18
Bahrain	43	76	19	9	173	7	77	61	19
Cyprus [10]	67	80	11	5	65	4	74	36	22
Georgia [11]	61	75	49	16	80	14	174	66	20
Iraq	38	69	48	38	225	32	200	136	17
Israel	69	82	10	4	39	3	74	41	25
Jordan	46	74	34	20	147	17	131	96	19
Kuwait	53	74	16	11	124	9	99	60	18
Lebanon	60	79	30	11	68	9	76	53	22
Oman	36	76	40	9	211	7	116	73	21
Qatar	55	78	18	8	106	6	78	49	21

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
Saudi Arabia	42	74	39	17	202	15	96	82	19
State of Palestine [12]	47	73	41	24	140	21	146	102	18
Syrian Arab Republic	49	70	32	21	141	18	290	89	19
Turkey	41	75	73	19	218	13	147	76	21
United Arab Emirates	44	77	19	7	181	6	84	59	20
Yemen	35	64	119	73	251	54	249	206	16
EUROPE	**64**	**77**	**15**	**6**	**72**	**5**	**176**	**75**	**22**
Eastern Europe	60	72	23	9	90	8	285	108	19
Belarus	61	71	18	5	96	4	319	108	18
Bulgaria	62	74	19	11	92	9	193	86	19
Czech Republic	66	78	11	3	46	2	120	56	22
Hungary	64	75	15	6	72	5	210	96	20
Poland	61	77	18	5	79	5	172	67	22
Republic of Moldova [13]	59	71	35	13	81	11	246	102	17
Romania	61	74	29	13	91	10	199	80	20
Russian Federation	59	70	26	10	101	8	341	128	18
Slovakia	64	76	14	6	74	5	172	67	20
Ukraine [14]	62	71	21	11	79	9	299	114	18
Northern Europe [15]	69	80	9	5	34	4	99	57	23
Channel Islands [16]	69	80	16	9	32	8	66	44	23
Denmark	71	80	8	4	28	3	92	57	23
Estonia	62	77	20	4	85	3	193	68	21
Finland [17]	66	81	6	3	34	2	110	52	24
Iceland	72	82	6	3	21	2	64	38	24
Ireland	67	81	8	4	41	3	84	51	23
Latvia	62	74	21	8	77	6	243	87	20
Lithuania	61	73	20	5	108	4	264	92	19
Norway [18]	73	81	7	3	22	3	77	47	24
Sweden	72	82	6	3	20	3	67	44	24
United Kingdom	69	80	8	5	29	4	90	57	24
Southern Europe [19]	63	81	12	4	78	4	90	45	24
Albania	55	77	37	16	145	14	89	52	21
Bosnia and Herzegovina	54	76	22	9	189	8	133	68	20
Croatia	61	77	12	5	96	4	138	58	21
Greece	66	81	9	4	46	3	105	46	24
Italy	66	83	9	3	60	2	70	39	25
Malta	66	80	11	6	51	5	73	42	23
Montenegro	60	76	20	8	120	4	133	74	20
Portugal	60	81	12	4	93	3	113	48	24
Serbia [20]	59	75	20	12	118	10	155	81	19
Slovenia	66	80	9	3	23	3	106	49	23
Spain [21]	64	82	8	4	65	3	82	39	25
TFYR Macedonia [22]	55	75	29	11	136	10	137	73	19
Western Europe [23]	68	81	8	4	44	3	95	52	24
Austria	66	81	9	4	55	3	89	45	24

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
Belgium	68	81	9	4	46	3	99	58	24
France	67	82	8	4	46	3	110	53	25
Germany	68	81	8	4	46	3	94	51	24
Luxembourg	66	81	9	2	43	2	85	49	24
Netherlands	72	81	8	4	23	3	67	53	24
Switzerland	69	83	7	4	29	4	67	40	25
LATIN AMERICA AND THE CARIBBEAN	**51**	**75**	**49**	**26**	**127**	**20**	**180**	**95**	**22**
Caribbean [24]	52	72	62	39	125	27	185	120	22
Antigua and Barbuda	59	76	23	11	93	9	158	111	21
Aruba	60	75	22	17	69	15	120	75	20
Bahamas	60	75	23	13	71	9	204	122	22
Barbados	57	75	20	11	86	10	129	77	20
Cuba	59	79	14	7	81	5	113	73	23
Curaçao	61	78	17	12	66	10	142	68	23
Dominican Republic	46	73	55	28	153	25	209	123	22
Grenada	56	73	24	13	108	10	189	101	19
Guadeloupe [25]	53	81	16	6	81	6	128	51	25
Haiti	37	62	127	77	222	47	283	222	18
Jamaica	59	75	27	18	90	15	168	103	22
Martinique	56	81	17	7	81	6	101	46	25
Puerto Rico	64	79	14	7	63	6	148	56	24
Saint Lucia	53	75	24	15	148	11	171	112	21
Saint Vincent and the Grenadines	51	73	28	21	122	17	184	132	20
Trinidad and Tobago	58	70	34	31	83	25	219	126	18
United States Virgin Islands	59	80	18	11	58	9	81	51	23
Central America	49	76	46	25	127	19	162	90	23
Belize	56	70	37	17	100	14	227	136	17
Costa Rica	56	79	18	11	103	9	119	62	24
El Salvador	44	73	53	20	150	17	272	108	21
Guatemala	42	71	74	32	141	23	241	132	21
Honduras	42	73	60	40	169	28	177	124	22
Mexico	51	76	40	23	121	19	147	83	23
Nicaragua	42	74	62	24	172	20	200	110	22
Panama	57	77	33	20	86	15	156	82	24
South America [26]	52	74	49	25	127	19	187	94	22
Argentina	63	76	28	16	64	14	158	77	21
Bolivia (Plurinational State of)	40	68	138	72	173	43	224	162	21
Brazil	51	74	50	24	137	20	200	97	21
Chile	54	81	25	12	130	7	101	46	25
Colombia	51	74	38	25	123	18	196	92	21
Ecuador	49	76	55	25	138	21	169	90	23
French Guiana	53	79	24	11	103	10	89	43	22
Guyana	59	66	58	41	72	33	252	176	16
Paraguay	63	73	55	35	73	29	168	128	21
Peru	44	74	77	29	159	19	159	99	21

Country or area	Life expectancy at birth (years)		Under-five mortality (per 1,000 live births)		Infant mortality rate (per 1,000 live births)		15-60 adult mortality (per 1,000 alive at age 15)		Life expectancy at age 60 (years)
							Males	Females	
	1950-55	2010-15	1990-95	2010-15	1950-55	2010-15	2010-15	2010-15	2010-15
Suriname	56	71	45	23	78	17	225	124	19
Uruguay	66	77	23	15	57	13	140	78	22
Venezuela (Bolivarian Republic of)	55	74	29	16	108	14	199	93	21
NORTHERN AMERICA [27]	**69**	**79**	**10**	**7**	**31**	**6**	**127**	**76**	**23**
Canada	69	82	8	5	39	5	80	51	25
United States of America	69	79	11	7	30	6	132	79	23
OCEANIA	**60**	**77**	**38**	**26**	**60**	**20**	**123**	**83**	**24**
Australia/New Zealand	69	82	8	5	24	4	79	47	25
Australia [28]	69	82	8	5	24	4	78	46	25
New Zealand	70	82	9	5	27	4	81	53	25
Melanesia	37	64	85	56	143	44	292	217	16
Fiji	52	70	35	20	64	16	239	143	17
New Caledonia	51	76	29	15	117	13	112	63	20
Papua New Guinea	35	62	92	62	158	48	319	243	15
Solomon Islands	45	68	109	47	146	38	203	162	17
Vanuatu	42	71	68	28	170	24	161	113	18
Micronesia [29]	53	73	54	34	103	28	142	99	20
Guam	57	79	25	11	83	10	85	50	22
Kiribati	46	66	87	60	143	47	244	163	17
Micronesia (Fed. States of)	55	69	54	40	97	33	181	154	17
Polynesia [30]	50	74	33	18	98	16	149	89	20
French Polynesia	49	76	20	8	130	7	135	79	20
Samoa	46	73	45	23	107	20	166	97	19
Tonga	59	73	32	24	59	20	171	105	19

Notes

*) Countries or areas listed individually are only those with 90,000 inhabitants or more in 2015; the rest are included in the aggregates but are not listed separately.

a) More developed regions comprise Europe, Northern America, Australia/New Zealand and Japan.

b) Less developed regions comprise all regions of Africa, Asia (except Japan), Latin America and the Caribbean plus Melanesia, Micronesia and Polynesia.

c) The group of least developed countries, as defined by the United Nations General Assembly in its resolutions (59/209, 59/210, 60/33, 62/97, 64/L.55, 67/L.43, 64/295) included 48 countries in January 2014: 34 in Africa, 9 in Asia, 4 in Oceania and one in Latin America and the Caribbean.

d) Other less developed countries comprise the less developed regions excluding the least developed countries.

e) The country classification by income level is based on 2014 GNI per capita from the World Bank.

f) Sub-Saharan Africa refers to all of Africa except Northern Africa.

1 Including Agalega, Rodrigues and Saint Brandon.

2 Including Zanzibar.

3 Including Saint Helena, Ascension, and Tristan da Cunha.

4 For statistical purposes, the data for China do not include Hong Kong and Macao, Special Administrative Regions (SAR) of China, and Taiwan Province of China.

5 As of 1 July 1997, Hong Kong became a Special Administrative Region (SAR) of China.

6 As of 20 December 1999, Macao became a Special Administrative Region (SAR) of China.

7 The regions Southern Asia and Central Asia are combined into South-Central Asia.

8 Including Sabah and Sarawak.

9 Including Nagorno-Karabakh.

10 Refers to the whole country

11 Including Abkhazia and South Ossetia.

12 Including East Jerusalem.

13 Including Transnistria.

14 Including Crimea

15 Including Faeroe Islands, and Isle of Man.

16 Refers to Guernsey, and Jersey.

17 Including Åland Islands.

18 Including Svalbard and Jan Mayen Islands.

19 Including Andorra, Gibraltar, Holy See, and San Marino.

20 Including Kosovo.

21 Including Canary Islands, Ceuta and Melilla.

22 The former Yugoslav Republic of Macedonia.

23 Including Liechtenstein, and Monaco.

24 Including Anguilla, British Virgin Islands, Caribbean Netherlands, Cayman Islands, Dominica, Montserrat, Saint Kitts and Nevis, Sint Maarten (Dutch part) and Turks and Caicos Islands.

25 Including Saint-Barthélemy and Saint-Martin (French part).

26 Including Falkland Islands (Malvinas).

27 Including Bermuda, Greenland, and Saint Pierre and Miquelon.

28 Including Christmas Island, Cocos (Keeling) Islands and Norfolk Island.

29 Including Marshall Islands, Nauru, Northern Mariana Islands, and Palau.

30 Including American Samoa, Cook Islands, Niue, Pitcairn, Tokelau, Tuvalu, and Wallis and Futuna Islands.

Annex table 2

List of countries with the most recent DHS survey conducted in 2005-2013 and the number of children analysed in each survey

Country	Region	Survey	Number of children
Angola	Africa	2010 MIS	3,194
Armenia	Asia	2010 DHS	646
Azerbaijan	Asia	2006 DHS	905
Bangladesh	Asia	2011 DHS	3,250
Benin	Africa	2011 DHS	5,284
Bolivia	Latin America and the Caribbean	2008 DHS	3,396
Burkina Faso	Africa	2010 DHS	6,068
Cambodia	Asia	2010 DHS	3,184
Cameroon	Africa	2011 DHS	4,955
Colombia	Latin America and the Caribbean	2010 DHS	6,785
Comoros	Africa	2012 DHS	1,292
Congo	Africa	2011 DHS	3,937
Dominican Republic	Latin America and the Caribbean	2013 DHS	1,445
Egypt	Africa	2008 DHS	4,670
Ethiopia	Africa	2010-2011 DHS	4,313
Gabon	Africa	2012 DHS	2,591
Guinea	Africa	2012 DHS	2,872
Haiti	Latin America and the Caribbean	2012 DHS	2,948
India	Asia	2005 DHS	19,440
Indonesia	Asia	2012 DHS	7,164
Jordan	Asia	2012 DHS	3,916
Kenya	Africa	2008-2009 DHS	2,413
Kyrgyzstan	Asia	2012 DHS	1,860
Lesotho	Africa	2009-2010 DHS	1,688
Liberia	Africa	2013 DHS	3,137
Madagascar	Africa	2011DHS	6,248
Malawi	Africa	2010 DHS	7,907
Maldives	Asia	2009 DHS	1,690
Mali	Africa	2012 DHS	4,062
Morocco	Africa	2003-2004 DHS	2,329
Mozambique	Africa	2011 DHS	4,604
Namibia	Africa	2013 DHS	2,071
Nepal	Asia	2011 DHS	1,968
Niger	Africa	2012 DHS	4,943

Country	Region	Survey	Number of children
Nigeria	Africa	2013 DHS	12,784
Pakistan	Asia	2012-2013 DHS	4,232
Peru	Latin America and the Caribbean	2012 DHS	3,654
Philippines	Asia	2013 DHS	2,856
Rwanda	Africa	2010 DHS	3,220
São Tomé and Príncipe	Africa	2008-2009 DHS	792
Senegal	Africa	2010 DHS	4,998
Sierra Leone	Africa	2013 DHS	4,629
Swaziland	Africa	2006 DHS	1,131
Tajikistan	Asia	2011 DHS	2,013
Timor-Leste	Asia	2009 DHS	3,771
Turkey	Asia	2003 DHS	1,659
Uganda	Africa	2011 DHS	3,104
United Republic of Tanzania	Africa	2010 DHS	3,230
Zambia	Africa	2007 DHS	2,638
Zimbabwe	Africa	2010DHS	5,246

Accurate, consistent and timely data on global trends in child, adult and old-age mortality are critical for assessing past and recent progress of regions and countries with respect to health, morbidity and well-being and for setting policy priorities to further improve child survival, reduce premature adult mortality and increase longevity at older ages. This publication presents the highlights of the *World Mortality Report 2015*, which summarizes levels and trends in mortality drawn from the latest United Nations estimates, as published in *World Population Prospects: the 2015 Revision*. The present *Highlights* focuses on the period from 1990 to 2015, the implementation period identified for the Millennium Development Goals, and reviews in particular how further improvements in child survival can be achieved by addressing key determinants of inequalities in infant and early childhood mortality in selected lower- and middle-income countries.

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