

Chapter 2

Health

Key findings

- Life expectancy over the past 20 years has risen for both sexes—reaching 72 years for women and 68 years for men in 2010–2015. The gender gap tends to widen as life expectancy increases.
- Health conditions related to pregnancy and childbirth, combined with HIV/AIDS, are the leading cause of death among young women aged 15 to 29 in developing regions, mainly due to the heavy toll of these deaths in sub-Saharan Africa.
- Maternal health has improved considerably over the years, yet in Southern Asia and sub-Saharan Africa only half of pregnant women have adequate care during childbirth.
- Injuries top the list of causes of death among young men aged 15 to 29 in developing and developed regions, and among young women aged 15 to 29, in developed ones.
- The prevalence of tobacco smoking is higher among men than women in all regions.
- The prevalence of diabetes and obesity has increased for both sexes, and current levels of obesity are higher for women than for men.
- Breast and cervical cancers are the most common cancers affecting women.
- Men are at a higher risk than women of the same age of dying from cardiovascular disease, but more women than men die from the disease since they tend to live longer.

Introduction

Good health is a fundamental human right and a necessary precondition for individual and societal development. It is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.¹

The differences in the health of women and men everywhere are determined by three interrelated factors: development, biology and gender. Each of these factors contributes to distinct health trajectories for individuals throughout the life cycle.

Development, understood as the development of health systems, but also of improved access to water, sanitation and transportation infrastructure, provides the overall context for the burden of disease. While the shift in the composition of the global health burden towards non-communicable diseases has been achieved in developed regions, communicable diseases, along with maternal, nutritional and neonatal conditions, continue to take a heavy toll in some developing regions, particularly sub-Saharan Africa, Oceania

and Southern Asia. Universal health coverage, which refers to systems in which all people have access to adequate health care without financial hardship and in an equitable manner, has been instituted in only some developed countries.² Its prioritization in developing regions is likely to be based on each country's epidemiological conditions, demographics, economic resources and current state of the health system.³

Biology determines the health needs and vulnerabilities specific to women and men. It is one of the main factors behind men's increased risk for a number of health problems, their higher mortality (starting from day one and extending throughout their lives), and their shorter life expectancy. However, medical and technological improvements over several decades are extending the lives of both men and women. In the case of women, maternal and reproductive health needs are increasingly being addressed through improved health systems and the delivery of services.⁴ For example, complete cover-

¹ WHO, 1946.

² WHO and World Bank, 2014.

³ Boerma and others, 2014.

⁴ United Nations, 2014a.

Box 2.1**Gaps in gender statistics on health**

Many of the indicators used in health and disease monitoring programmes have internationally agreed definitions. However, not all countries collect or provide quality data disaggregated by sex and/or age.

Over the years, the availability and quality of many health indicators have improved, but large gaps remain—mostly related to data quality. Mortality indicators, for example, require good quality data (that is, data that are complete and accurate) on births and deaths by age, sex and cause. Such data are produced on a regular basis by most countries with well-functioning civil registration systems. Many countries, however, lack a civil registration system with national coverage. For example, 95 out of a total of 195 countries lack complete death registration, where "complete death registration" means that 90 per cent or more of all deaths are recorded. Almost half of those countries are in sub-Saharan Africa; the rest are in Asia, Latin America and other parts of Africa.^a Furthermore, complete civil registration systems do not always translate into reliable and timely vital statistics. According to the latest information available at the international level, only 46 countries are able to provide reliable death statistics by sex at least once for the period 2011–2014.^b

When reliable data from civil registration systems are not available, other sources such as population censuses or household surveys are used to estimate mortality statistics. However, these sources come with their own limitations. Mortality data obtained from censuses and surveys are infrequent and may suffer from sampling and enumeration errors. They are often subject to misreporting (for example, on age or cause of death) or underreporting (of births or deaths), which can lead to inconsistencies across data sources for the same country and period.^c

The International Classification of Diseases (ICD) is the standard classification used to monitor the incidence and prevalence of diseases and other

health problems, maintained by the World Health Organization (WHO). The current version, ICD-10, endorsed by the Forty-third World Health Assembly in May 1990, came into use by WHO member States starting in 1994.^d Although this internationally agreed system is used in more than 100 countries to report mortality by cause of death, issues of data coverage and quality are common, with wide variations among and within regions. A 2007 study^e showed that only 118 of 193 member countries, corresponding to 75 per cent of the world's population, reported cause-of-death data to WHO at least once over the period 1996–2005. Regional coverage was 100 per cent for Europe but only 6 per cent for Africa. Furthermore, out of 118 countries, only 31 of them, representing 13 per cent of the global population, produced high-quality data on causes of death.^f

Reliable data on maternal mortality are also difficult to obtain and usually have to be estimated because of the poor quality of national data.^g Even in developed countries with well-functioning civil registration systems, maternal deaths may be underreported for a number of reasons. These include: misclassification of the ICD coding and undetected or unreported pregnancy (more common in deaths in the early stages of pregnancy, the later postpartum period, or among either very young or old pregnant women). Such underreporting occurs even more frequently in countries with deficient civil registration systems and where data on maternal mortality come from surveys and population censuses.^h

While data availability has improved over the past 20 years, major gaps in health data remain.ⁱ At the core of efforts to address these gaps must be the strengthening of birth and death registration systems, including the production of reliable cause-of-death data. Also essential are the implementation of household surveys covering priority health areas, the disaggregation by sex in all health-related questions in surveys and censuses, and the integration of a gender perspective at all stages of the production of health statistics.^j

a Civil registration coverage file (maintained by the United Nations Statistics Division and updated in October 2014), United Nations, 2014b.

b Demographic Yearbook database, last accessed January 2015, United Nations, 2015a.

c See for example UNICEF, 2014a, regarding child mortality.

d WHO, 2014a.

e Mahapatra and others, 2007.

f In countries using a recent ICD revision, this means that more than 90 per cent of deaths are medically certified with a cause of death, and less than 10 per cent of deaths are coded to ill-defined categories.

g WHO, UNICEF, UNFPA, World Bank and the United Nations Population Division, 2014.

h *Ibid.*

i United Nations, 2006.

j United Nations, 2015b.

age of antenatal care services has been achieved in some regions, including developing regions. Other aspects of maternal health have also improved. Nevertheless, stark gaps remain among and within countries 20 years after the 1995 Beijing Platform for Action was adopted, including in access to skilled care and emergency services during childbirth. As a consequence, maternal

mortality is still unacceptably high in some developing regions.⁵

Gender inequality and gender norms and expectations continue to exert a strong influence on the health conditions affecting women and men. Practices such as early and forced marriage, to-

⁵ See relevant sections in this chapter.

gether with poor access to information and education, lack of decision-making power within the couple, and violence against women increase the exposure of adolescent girls and adult women to sexually transmitted infections, including HIV. They also play a role in early pregnancies and the risk of unsafe abortions, increasing the likelihood of maternal death and morbidity. Traditional gender expectations can also have a harmful effect on men. Men smoke tobacco and drink alcohol to a much greater extent than women. Together with unhealthy diets and inactivity, smoking and heavy drinking are among the most important behavioural health risk factors for non-communicable diseases.

This chapter aims to shed light on the different health trajectories of women and men in developed and developing regions. The first part of the chapter draws on key aspects of women's and men's health, including life expectancy, the global burden of disease and risk factors to health. The second part looks at the interplay of development, biology and gender as they relate to specific health conditions associated with major life stages: early childhood, adolescence and youth, reproductive years and older years.

A. Women's and men's health

1. Life expectancy at birth

Life expectancy has increased for both women and men over the past 20 years

Between 1990–1995 and 2010–2015, life expectancy at birth⁶ increased for both sexes. At the global level, women's life expectancy rose from 67.1 to 72.3 years, and from 62.5 to 67.8 years for men. Women tend to live longer than men and, in 2010–2015, women's life expectancy was higher than men's by 4.5 years, on average. However, large regional disparities are found. Women live 6 to 8 years longer than men in Latin America and the Caribbean, the developed regions, and the Caucasus and Central Asia, but only 2 to 3 years longer in sub-Saharan Africa and Eastern and Southern Asia.⁷

⁶ Life expectancy at birth is an indicator of the overall health status of a population. It is derived from age-specific mortality rates and denotes the average number of years a newborn child can expect to live given the current levels of mortality.

⁷ United Nations, 2013a.

The increase in life expectancy for women and men is observed in all regions and most countries, but the improvement has not followed the same pattern everywhere (figure 2.1). Advances in life expectancy stagnated in sub-Saharan Africa during the 1990s as a consequence of the HIV epidemic. Since HIV/AIDS hit women harder than men in that region,⁸ the gender gap in life expectancy decreased from 2.9 years in 1990–1995 to 1.7 years in 2000–2005. During that period, the effect was most striking in Southern Africa, where life expectancy at birth dropped from 66 to 54 years for women and from 59 to 51 years for men. More recently, the trend in life expectancy has reversed, mainly due to a slowdown in the spread of new HIV infections and greater access to and more efficient HIV treatment, together with other health improvements.⁹ Although women's life expectancy recovered more than men's, the gender gap of 2.4 years in 2010–2015 in sub-Saharan Africa has not yet reached the pre-AIDS-crisis level (figure 2.1).

The gender gap generally widens as life expectancy increases (figure 2.1). Sub-Saharan Africa has the narrowest gender gap (2.4 years in 2010–2015), a consequence of high mortality levels overall, the ongoing HIV epidemic and generally high maternal mortality.¹⁰ The region is also home to all 30 countries in the world with a life expectancy under 60 years. Sierra Leone has the lowest life expectancy at birth in the world, at 46 years for women and 45 years for men, followed by Botswana (47 years for women, 48 for men) and Swaziland (49 years for women, 50 for men). Botswana and Swaziland are also the countries where women in 2010–2015 were expected to die before men (women's life expectancy is 1.5 years less than men's in Botswana and 1.2 years less in Swaziland).

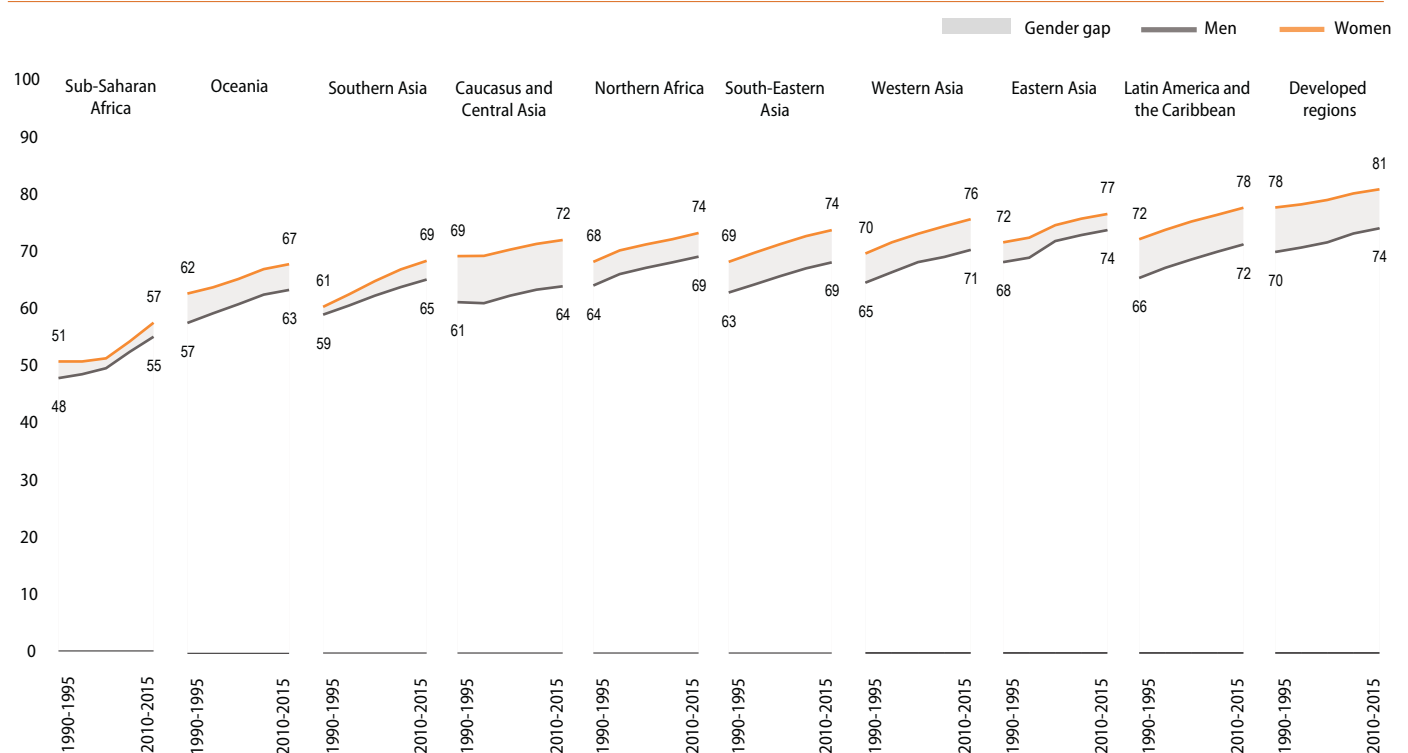
At the opposite end of the spectrum, the two regions with the highest female life expectancy also have some of the widest gender gaps. In developed regions, women have an average life expectancy of 81.1 years—6.8 years longer than men. In Latin America and the Caribbean, women have an average life expectancy of 77.9 years—6.4 years longer than men. In both regions, the gender gap has decreased slightly over

⁸ UNAIDS, 2013.

⁹ United Nations, 2013b.

¹⁰ WHO, UNICEF, UNFPA, World Bank and the United Nations Population Division, 2014.

Figure 2.1
Life expectancy at birth by region and sex, 1990–1995 to 2010–2015



Source: United Nations, World Population Prospects: The 2012 Revision (2013a).

Note: Includes estimates for 1990–1995 up to 2005–2010 and projections (medium fertility) for 2010–2015.

the last 20 years as a result of faster progress in extending the lives of men.

Countries in developed regions have some of the highest rates of life expectancy in the world (figure 2.2). Women in Japan, for example, can expect to live 86.9 years on average, longer than women in any other country. In 2010–2015, women in 41 countries had a life expectancy exceeding 80 years—up from 12 countries two decades ago.¹¹ For the first time, men in some countries (Australia, Iceland, Japan and Switzerland) can also expect to live 80 years or longer. Furthermore, in 38 countries, men's life expectancy exceeded 75 years in 2010–2015 (up from only five countries in 1990–1995). Almost all of the countries with the highest life expectancy can be found in developed regions (with the exception of Singapore).

The largest difference in life expectancy by sex is found in the Russian Federation, where women live on average 13 years longer than men (74 ver-

sus 61 years). The seven countries with a gender gap of 10 or more years are all countries of the former Soviet Union (Belarus, Estonia, Kazakhstan, Latvia, Lithuania, Russian Federation, and Ukraine). Drinking and smoking among men in these countries are key factors explaining this gap.¹² Similar factors are also associated with the high gender gap, of 8.1 years, in countries in the Caucasus and Central Asia.

Unusually small gender gaps in life expectancy for a given level of mortality are observed in Eastern and Southern Asia. This suggests unequal gender norms and discriminatory practices. Eastern Asia has the second narrowest gender gap among regions (2.8 years) in a context of high life expectancy at birth (the third highest for women and second highest for men among all regions). Over the past 20 years, the gender gap in life expectancy in Eastern Asia has diminished slightly as a result of a much steeper increase in life expectancy for men than women. A small gender gap (3.3 years) is also observed in Southern Asia, representing an improvement

¹¹ Based on 182 countries or areas with an estimated population of at least 100,000 in 2015 and that are part of the Millennium Development Goals country list.

¹² Leon, 2011.

from 20 years ago, when the difference in life expectancy between women and men was only one year (61 years for women and 60 years for men).

2. Mortality and causes of death

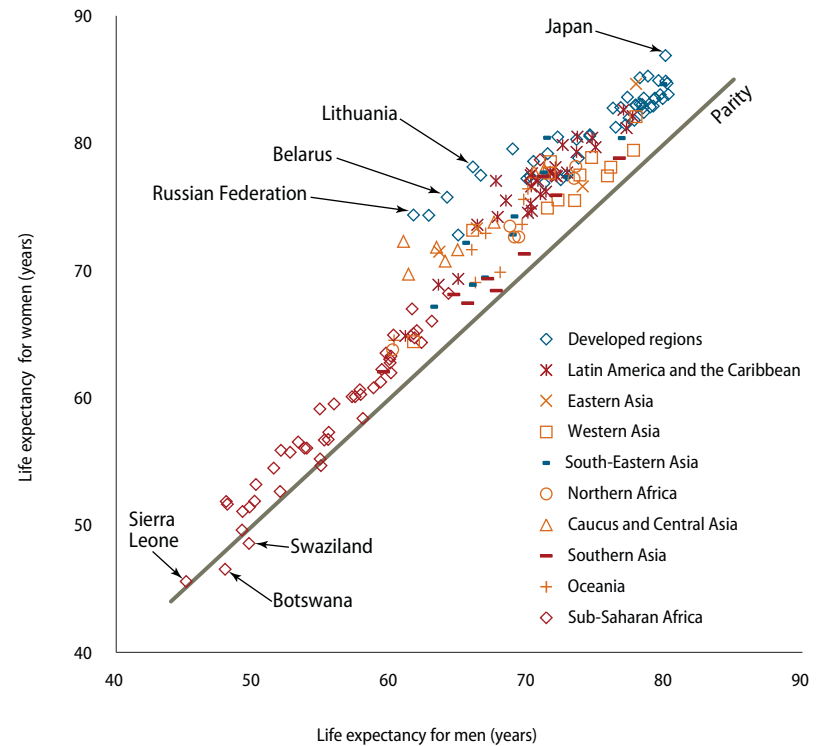
Globally, men have higher mortality rates than women across all age groups

The risk of dying shifts dramatically over the course of one's life (figure 2.3). It is very high in the first week and month after birth, then drops sharply, reaching a low point around age 5–10, before rising steadily into old age. Mortality rates also vary by region and by sex, and are higher for both women and men in developing regions. For both sexes combined, in developing regions, the mortality rate of children under 10 years of age is at least 10 times higher than in developed regions, and is about twice as high among adults.¹³

In general, men have a significantly higher risk of death than women at all ages in both developed and developing regions. Relatively high mortality levels in developing countries, due in large part to infectious diseases, tend to have an equalizing effect on gender differences. In contrast, differences in mortality rates between women and men are pronounced in developed regions, where infectious diseases play only a minor role as a cause of death.

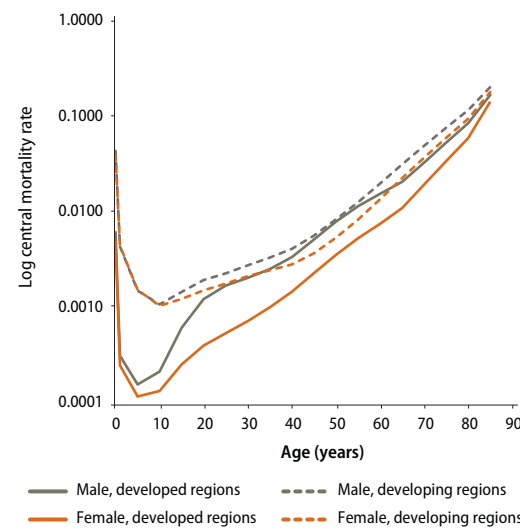
Causes of death also vary by age and sex, and the patterns observed across regions and countries are closely linked to the development of health systems and the epidemiological transition from communicable to non-communicable diseases. The ICD developed by WHO includes three major categories of causes of death: the first includes communicable diseases,¹⁴ but also maternal, neonatal and nutritional conditions;¹⁵ the other

Figure 2.2
Life expectancy at birth by sex, 2010–2015



Source: United Nations, World Population Prospects: The 2012 Revision (2013a).

Figure 2.3
Mortality rate over the life cycle by sex and region, 2010–2015



Source: United Nations, World Population Prospects: The 2012 Revision (2013a).

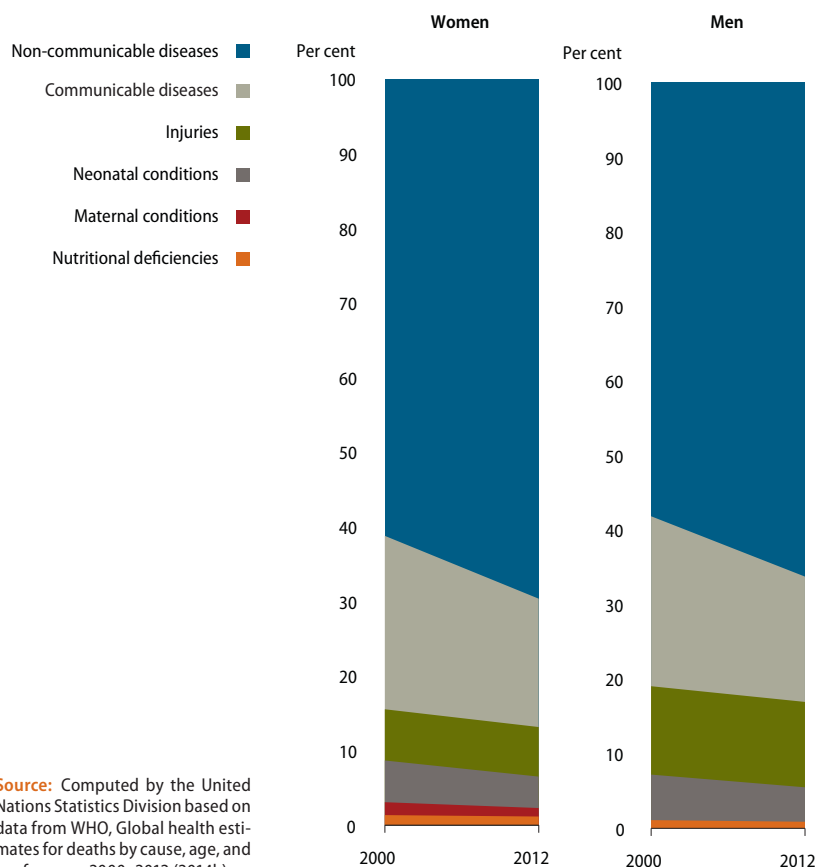
Note: UN Population Division regions.

¹³ United Nations, 2013a.

¹⁴ Communicable (or infectious) diseases are caused by micro-organisms, such as bacteria, viruses or parasites and can spread from person to person or animal to person. Lower respiratory infections, HIV/AIDS and diarrhoeal diseases are three of the most prominent communicable diseases. Leading risk factors for such diseases include unsafe water and sanitation, poor hygiene, unsafe sex, and inadequate health services (WHO, 2014a).

¹⁵ Maternal, neonatal and nutritional conditions are health conditions related to pregnancy and childbirth, the neonatal period or to nutritional deficiencies, respectively (WHO, 2014a).

Figure 2.4
Distribution of deaths by major categories of causes of death and by sex, world, 2000 and 2012



Source: Computed by the United Nations Statistics Division based on data from WHO, Global health estimates for deaths by cause, age, and sex for years 2000–2012 (2014b).

two categories are non-communicable diseases and injuries.¹⁶

Non-communicable diseases continue to increase their share among all causes of death

Figure 2.4 shows the percentage distribution of the major causes of death for women and men

¹⁶ Non-communicable diseases are diseases that are non-transmissible and often—but not always—of long duration and generally slow progression. The four main types of non-communicable diseases are cardiovascular diseases (such as heart attacks and stroke), cancer, chronic respiratory diseases (mostly chronic obstructed pulmonary disease and asthma) and diabetes. Most non-communicable diseases are strongly influenced by common and preventable risk factors such as tobacco use, physical inactivity, unhealthy diets and excessive use of alcohol. The third major category of causes of death is injuries. It includes unintentional injuries, such as those resulting from road accidents, falls, drowning and poisoning, along with intentional injuries, such as self-harm (suicide), interpersonal violence and collective violence (WHO, 2014a).

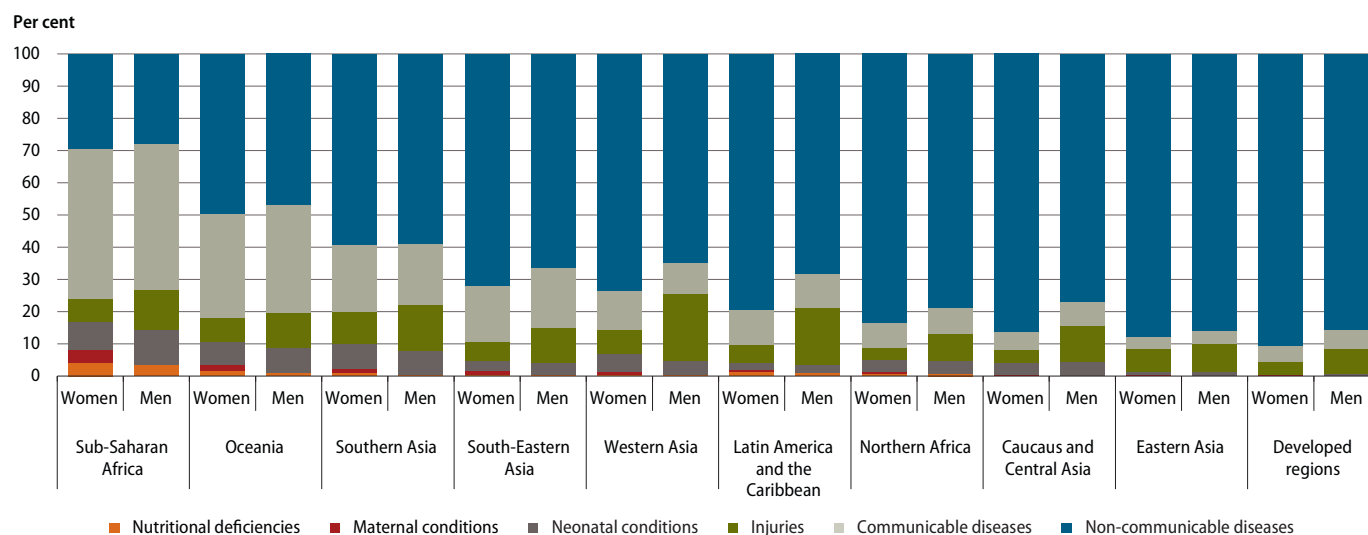
worldwide in 2000 and 2012. In 2012, non-communicable diseases were the leading cause of death, responsible for over 70 per cent of all female deaths and 66 per cent of all male deaths worldwide. Since 2000, the share of non-communicable diseases as a leading cause of death increased by eight percentage points for both women and men, mostly at the expense of communicable diseases, whose share decreased from 23 to 17 per cent. Currently, non-communicable diseases are the dominant cause of death in all regions except sub-Saharan Africa.

The change in the balance between communicable and non-communicable diseases reflects the continuing global trend of epidemiological and health transition. It is a consequence of changes in demographic age structures, patterns of disease and risk factors, and the development of health systems. An increase in the proportion of older persons increases the share of non-communicable diseases among all causes of death. Also, the risk factors associated with communicable diseases such as undernutrition, unsafe water and poor sanitation are decreasing in importance as a consequence of economic development, and improvements in basic infrastructure and in health systems.

Demographic changes and development progress also explain the decrease in the share of other less prominent—but mostly preventable—causes of death. The share of deaths caused by neonatal conditions decreased between 2000 and 2012 by around 25 per cent for both girls and boys, reaching around 5 per cent for boys and 4 per cent for girls. The share of deaths caused by maternal conditions decreased by 34 per cent, down to 1 per cent in total female deaths. The share of deaths caused by nutritional deficiencies declined by 20 per cent for the female population and 14 per cent for the male population.

The share of deaths caused by injuries, on the other hand, has remained mostly unchanged. Injuries are much more common among males than females. In 2012, for example, injuries caused twice as many deaths among boys and men (3.4 million, or 12 per cent of all deaths) than among girls and women (1.7 million, or 7 per cent of all deaths).

Figure 2.5
Distribution of deaths by major categories of causes of death, sex and region, 2012



Source: Computed by the United Nations Statistics Division based on data from WHO, Global health estimates for deaths by cause, age, and sex for years 2000–2012 (2014b).

Communicable diseases remain the most prevalent cause of death in sub-Saharan Africa

The distribution of causes of death varies by region (figure 2.5). Although communicable diseases account for only about one fifth of deaths globally, they are the leading cause of mortality in sub-Saharan Africa, accounting for almost half of all deaths. At the other extreme are developed regions, where the proportion of communicable diseases in all deaths is only 5 per cent for women and 6 per cent for men; non-communicable diseases, on the other hand, account for 90 per cent of all deaths in women and 85 per cent of all deaths in men.

Injuries are much more common among men than among women

Injuries are the cause of death with the widest disparities between women and men. The largest differences can be observed in Latin America, where the share of deaths due to injuries is three times higher for men than for women (18 per cent compared to 6 per cent), followed by Western Asia (21 per cent compared to 8 per cent) and the Caucasus and Central Asia (11 per cent compared to 4 per cent), where the share is almost three times higher for men than for women. The smallest differences are found in Eastern Asia, where the share is 8 per cent of male deaths and 7 per cent of female deaths. In Eastern Asia, the

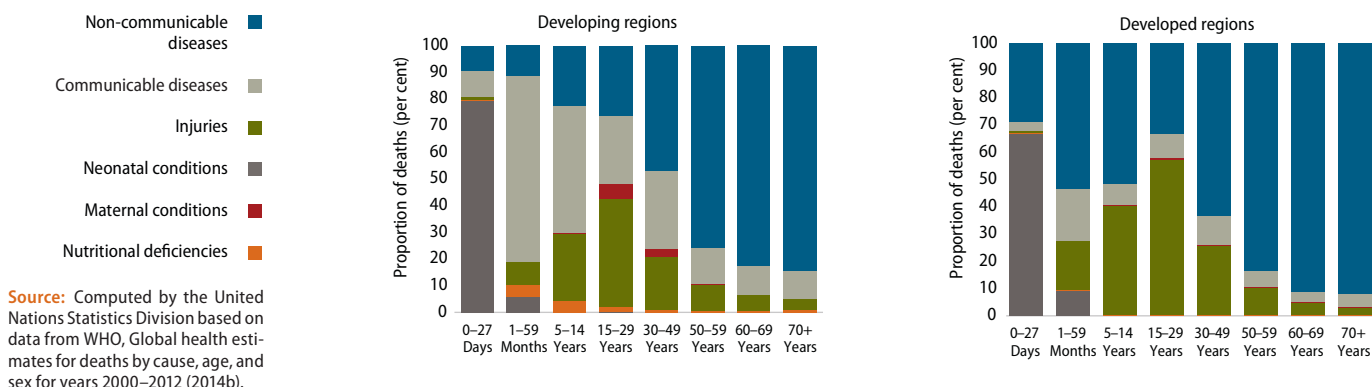
share of injuries among all male deaths is among the lowest, similar to the proportion observed in developed regions. In contrast, the share of injuries among all female deaths is high, mainly due to a higher share of self-harm, falls and road accidents than in other regions. The region with the highest share of injuries among all female deaths is Southern Asia (10 per cent). There, female mortality rates caused by self-harm and falls and their share in all female deaths are higher than in any other region.¹⁷

High levels of male deaths due to injuries are often associated with risk-taking behaviour that can be related to certain gender roles and expectations. On the other hand, the high levels of female deaths due to injuries, especially in countries in Southern and Eastern Asia, are most likely linked to violence against women and their disadvantaged position in society. For instance, a study in rural Bangladesh, where women experience much higher rates of violent death than men, showed that these deaths—particularly suicide—were associated with physical and mental abuse by husbands and relatives in the context of childlessness, rejection by future husband, or out-of-wedlock pregnancies among unmarried women. Social and economic hardship and abandonment were also associated with divorced and widowed women who died violently.¹⁸

¹⁷ WHO, 2014b.

¹⁸ Ahmeda, 2004.

Figure 2.6
Distribution of deaths by major categories of causes of death, age and region, 2012



Differences in causes of death over the life cycle between developing and developed regions remain prominent

Changes in causes of death over the life cycle are similar for both women and men. Differences between developing and developed regions, however, are stark (figure 2.6). The first month of life is unique in the sense that most deaths at that age in both regions have roots in prenatal or genetic conditions. In developing regions, most child deaths after the first four weeks are due to communicable diseases (70 per cent). Over the life course, in developing regions, communicable diseases become less and less important as a cause of death; in people aged 70 and over, they account for 10 per cent of all deaths. As these diseases become less important, non-communicable diseases become more prominent. The latter are responsible for 11 per cent of deaths in children between 1 month and 5 years of age in developing regions, but 84 per cent of deaths among persons aged 70 and over. A different pattern emerges when injuries are the cause of death. Injuries are most common as a cause of death among adolescents and young adults.

A somewhat similar picture is found in developed regions, although communicable diseases are much less prominent. Only 19 per cent of deaths between 1 month and 5 years of age are due to infectious diseases. In all older age groups (after age 5), the share of infectious diseases among all causes of death hardly exceeds 10 per cent. Maternal conditions and nutritional deficiencies as causes of death are negligible. Success in reducing communicable diseases through effective prevention and treatment in developed regions has led to other causes of death to account for an increased share in all deaths. In particular, non-

communicable diseases are currently responsible for 63 per cent of deaths in the 30 to 39 age group and for increasingly higher shares in older age groups (up to 92 per cent at age 70 and over).

3. Health risk factors

A health risk factor is anything that increases the likelihood of an individual developing a disease or injury. Risk factors can be demographic, social, economic, environmental, biological or behavioural in nature. In most cases, they are a combination of all of them.

The set of risk factors contributing most to the burden of disease is changing. At the same time, large differences divide developed and less developed regions. Risk factors such as undernutrition, unimproved water and sanitation facilities, poor hygiene, and indoor smoke from solid fuels remain highly relevant in countries from developing regions. The harmful use of alcohol and tobacco, poor diet and the lack of exercise contribute substantially to the burden of non-communicable diseases in developed regions, but their role is also increasing in developing regions. Across regions, unsafe sex remains the main risk factor for sexually transmitted infections, and HIV in particular, while gender norms, ideals of masculinity and power relations fuel a relatively high level of unintentional injuries and interpersonal violence.

This section addresses some of the most important risk factors for mortality and morbidity for women and men, namely: tobacco use, alcohol consumption, overweight and obesity, and diabetes. All of them are risk factors with huge importance at a time of continuing shift towards non-communicable diseases as the main causes

of death and are particularly relevant from a gender perspective. Additional risk factors such as physical inactivity and unsafe sex are discussed in a later section on the health of adolescents and youth. Environmental factors creating health risks, such as unimproved water and sanitation facilities and household air pollution, are discussed in the chapter on Environment.

Tobacco use

Tobacco use is the second leading risk factor (after high blood pressure) for non-communicable diseases, accounting for 9 per cent of global deaths due to such diseases.¹⁹ It kills nearly 6 million people each year, 1.5 million of whom are women.²⁰ Tobacco use is responsible for 22 per cent of all cancer deaths and 71 per cent of global lung cancer deaths,²¹ and is a major risk factor for chronic respiratory and cardiovascular diseases. In women, smoking is also associated with breast cancer.²²

Prevalence of tobacco smoking is higher among men than women in all regions, but large shares of women smoke in developed regions and in Oceania

Women are less likely than men to use tobacco. In 2011, 8 per cent of women 15 years and older worldwide were smokers compared to 36 per cent of men the same age²³ and this gender difference was visible in all regions of the world (figure 2.7). However, in a number of countries, smoking is a habit for a large share of the female population. The regions with the highest female prevalence of tobacco smoking are developed regions and Oceania. Countries with at least 30 per cent prevalence among women include Austria, Bulgaria, Chile, Croatia, Czech Republic, France, Greece and Kiribati.²⁴ In developed regions in particular, women smoke almost as much as men. For instance, only a 1- to 2-percentage-point difference separate the smoking prevalence between men and women in Australia, Austria, Iceland, New Zealand, Norway, Sweden and the United Kingdom.

¹⁹ WHO, 2011a.

²⁰ WHO, 2010a.

²¹ IARC and others, 2012; Eriksen and others, 2012.

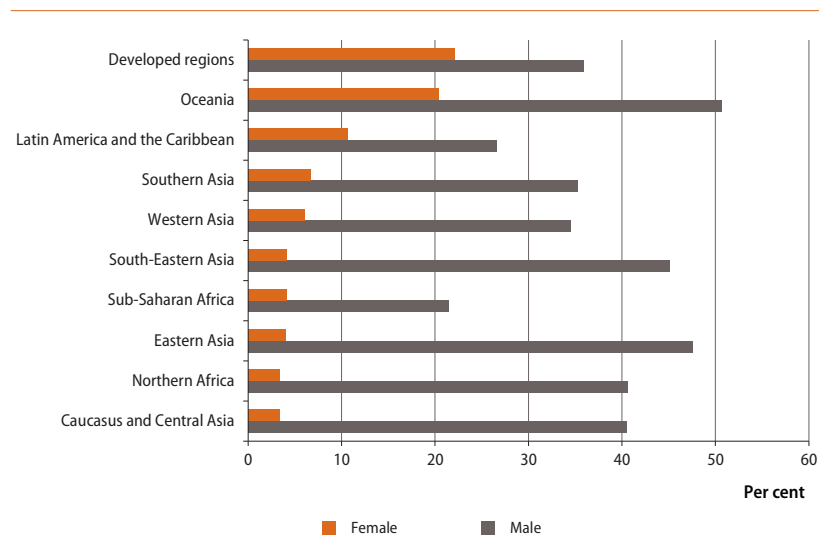
²² Reynolds, 2013; Gaudet and others, 2013.

²³ WHO, 2014c.

²⁴ WHO, 2013a.

Figure 2.7

Smoking prevalence among persons aged 15 or over, by sex and region, 2011



Source: Computed by the United Nations Statistics Division from WHO, WHO Report on the Global Tobacco Epidemic, 2013, Appendix X (2013a).

Note: The figure shows unweighted averages of age-standardized prevalence estimates for smoking among people 15 years and older in 2011. Smoking is defined as the use of any form of tobacco (including cigarettes, cigars and pipes and excluding smokeless tobacco) at the time of the survey, including daily and non-daily smoking. The average for Eastern Asia is based on two countries, China and Mongolia.

Smoking prevalence among men also varies among regions and countries. In Oceania, South-Eastern Asia, and Eastern Asia, 40 per cent or more of the male population over age 15 smoke. With the exception of Oceania, these regions also have the largest gender gap: smoking is widespread among men but uncommon among women. At the country level, the gender gap in smoking is 45 percentage points or more in Armenia, Bangladesh, China, Egypt, Georgia and Indonesia. Lower levels of tobacco use among men as well as women are generally found in countries in the Caribbean and sub-Saharan Africa.

In terms of male smoking, the gap between developed and developing regions has narrowed, due to a decrease in male smokers in developed countries and an increase in developing countries. The gap in tobacco use between women and men is also getting smaller. Nevertheless, the current epidemic of tobacco use involves both women and men as multinational tobacco companies continue to expand their focus on men in developing regions and women everywhere.²⁵

While most smokers are men, the majority of victims of second-hand smoke are children and women. For instance, in 2004, second-hand

²⁵ WHO, 2010b.

smoke was estimated to have caused about 600,000 premature deaths. Children represented more than a quarter (28 per cent) of such deaths and women about 64 per cent of adult deaths. Comprehensive smoke-free legislation covering 1.1 billion people in 2012 (16 per cent of the global population), is the most widely adopted measure to address second-hand smoking.²⁶

Alcohol consumption

Alcohol consumption is a health risk factor contributing to many different diseases, injuries and other health conditions. The detrimental effects of alcohol are based on three main mechanisms: toxic effects on organs and tissues; intoxication impairing cognitive and emotional functioning; and dependence leading to adverse social and economic effects. The alcohol-related impact on health and social outcomes is determined mainly by the amount consumed and the pattern of drinking (for example, “low-level daily consumption” versus “heavy drinking episodes”).²⁷

Harmful alcohol use causes approximately 3.3 million deaths each year. In 2012, 6 per cent of all deaths (8 per cent of deaths among males and 4 per cent among females) were attributed to alcohol consumption, including several forms of cancer, chronic liver disease, cardiovascular disease and alcohol-induced injuries.²⁸ For women, cardiovascular disease is the most common cause of death attributed to alcohol use, while for men, injuries and cardiovascular disease are most common. The differences between women and men are even larger when considering the burden of disease expressed in disability-adjusted life years (DALYs).²⁹ Estimates for 2012 show that the number of years of life lost due to premature death and disability related to alcohol use disorders (which combine the health effects of the

harmful use of alcohol and dependence) is three times higher for men than for women.³⁰ Nevertheless, alcohol consumption among women has additional implications. For example, women who drink during pregnancy may increase the risk of preventable health conditions in their newborn.

The sex differential in mortality and morbidity due to alcohol use can be explained by differences in the quantity consumed and in drinking patterns. In addition, factors such as women’s lower body weight, smaller capacity of the liver to metabolize alcohol, and a higher proportion of body fat contribute to higher blood alcohol concentrations in women than men for the same amount of alcohol intake.

Men are more likely than women to engage in drinking and heavy episodic drinking

Globally, an estimated 29 per cent of women and 48 per cent of men aged 15 and over are current drinkers³¹ (table 2.1). In all regions³² and across all age groups, the proportion of women who currently drink is lower than that of men. Women consistently drink less on average and engage less often in heavy episodic drinking than men. However, sex differences in the proportion of drinkers, the quantity consumed and the frequency of drinking vary significantly among regions. For instance, in 2010, those differences in consumption and drinking patterns were smaller in Europe, the Americas while relatively large in South-East Asia and Eastern Mediterranean regions (table 2.1).³³ In both South-East Asia and Western Pacific, men engage in heavy episodic drinking almost 11 and 7 times as much as women, respectively. In general, alcohol use among women has been increasing in tandem with economic development and the accompanying change in gender roles.

²⁶ *Ibid.*

²⁷ Rehm and others, 2010; WHO, 2014d.

²⁸ WHO, 2014d.

²⁹ Disability-adjusted life years (DALYs) measure the burden of disease, injury and death in a population. DALYs are calculated as the sum of years of life lost (YLL) due to premature death and the years lost due to disability (YLD) resulting from disease or injury. One DALY can be thought of as one lost year of healthy life. The sum of DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. (See: WHO, 2015. www.who.int/healthinfo/global_burden_disease/metrics_daly/en/ (accessed January 2015).

³⁰ WHO, 2014d.

³¹ This section is based on the WHO’s Global Status Report on Alcohol and Health, 2014d, unless otherwise noted. Current drinkers are defined as people who consumed an alcoholic drink in the past 12 months.

³² Throughout the section on alcohol consumption, country groupings are based on WHO regions (see: www.who.int/about/regions/en/).

³³ WHO regions.

Table 2.1

Proportion of current drinkers among adults (15+ years), total alcohol per capita consumption among drinkers, and prevalence of heavy episodic drinking among adult drinkers, by sex and by WHO region, 2010

WHO region	Proportion of current drinkers among adults (15+ years) (per cent)			Total alcohol per capita consumption among drinkers (15+ years) (litres)			Prevalence of heavy episodic drinking among adult drinkers (15+ years) (per cent)		
	Males	Females	Males/females	Males	Females	Males/females	Males	Females	Males/females
African region	40.2	19.6	2.1	22.4	13.2	1.7	20.3	8.3	2.4
Region of the Americas	70.7	52.8	1.3	18.0	8.0	2.3	29.4	12.3	2.4
Eastern Mediterranean region	7.4	3.3	2.2	14.0	4.8	2.9	2.0	0.5	3.7
European region	73.4	59.9	1.2	22.7	10.1	2.3	31.8	12.6	2.5
South-East Asia region	21.7	5.0	4.3	26.3	8.2	3.2	15.4	1.4	10.9
Western Pacific region	58.9	32.2	1.8	19.0	7.1	2.7	23.1	3.2	7.3
World	47.7	28.9	1.6	21.2	8.9	2.1	21.5	5.7	3.8

Source: WHO, Global Status Report on Alcohol and Health 2014 (2014d).

Note: Based on WHO regions (see: www.who.int/about/regions/en/). Current drinkers are defined as people who consumed an alcoholic drink in the past 12 months; heavy drinkers are defined as people who consumed 60 or more grams of pure alcohol (6+ standard drinks in most countries) on at least one single occasion at least monthly.

Overweight and obesity

Obesity prevalence is higher for women than men

Globally, almost 3 million deaths are related to excess bodyweight, a significant risk factor in mortality and morbidity due to cardiovascular diseases, diabetes and cancer (including breast cancer). Overweight and obesity lead, via metabolic pathways, to increased blood pressure, high cholesterol and triglycerides levels, and insulin resistance, which are themselves direct risk factors for several chronic diseases.³⁴ According to WHO, a person with a body mass index (known as BMI—a weight-for-height index) of 25 or more is considered overweight, and a person with a BMI of 30 or more is considered obese. WHO estimates that, globally in 2008, approximately 1.5 billion adults aged 20 and over were overweight, around one third of whom (500 million) were obese, with more women (300 million) being obese than men (200 million).³⁵ The age-standardized overweight prevalence was similar for adult women and men (35 per cent and 34 per cent, respectively), while the age-standardized obesity prevalence was higher among women than men (14 per cent and 10 per cent, respectively).

The 2008 age-standardized prevalence of obesity showed nearly a doubling of 1980 levels, when 5 per cent of men and 8 per cent of women were estimated to be obese. Not only did prevalence rates increase dramatically, but with increasing speed. Half of the increase in obesity prevalence between 1980 and 2008 happened in the first 20 years; the other half occurred in the subsequent eight years.³⁶ The rise in overweight and obesity prevalence was almost universal, although the pattern varied substantially among regions and countries and between women and men. Only a few countries showed no statistically significant increase in prevalence rates, and not a single country showed a significant decrease in overweight or obesity among the adult population.³⁷

At the regional level in 2008, the largest proportion of overweight adults (age 20 and over) was found in Western Asia and Northern Africa: 66 per cent of women in both regions; and 63 per cent and 53 per cent of men, respectively were overweight (figure 2.8). Among the overweight population in both regions, more than half of the women and around 30 to 40 per cent of the men were considered obese. Latin America and the Caribbean, Oceania, the Caucasus and Central Asia and the developed regions also had high prevalence rates for overweight and obesity,

³⁴ Finucane and others, 2011; WHO, 2011a; WHO, 2009a.

³⁵ Finucane and others, 2011.

³⁶ Stevens and others, 2012.

³⁷ *Ibid.*

with more than half of the adult female population being overweight and one in four obese. In those regions, the prevalence of overweight was higher among women than men, with the exception of the developed regions, where 50 per cent of women were overweight compared to 59 per cent of men. Both overweight and obesity prevalence were lowest in Southern Asia. There, 16 per cent of women and 13 per cent of men were considered overweight; prevalence rates for obesity were 4 per cent for women and 2 per cent for men.

Obesity has become a serious health problem for women in the Pacific Islands

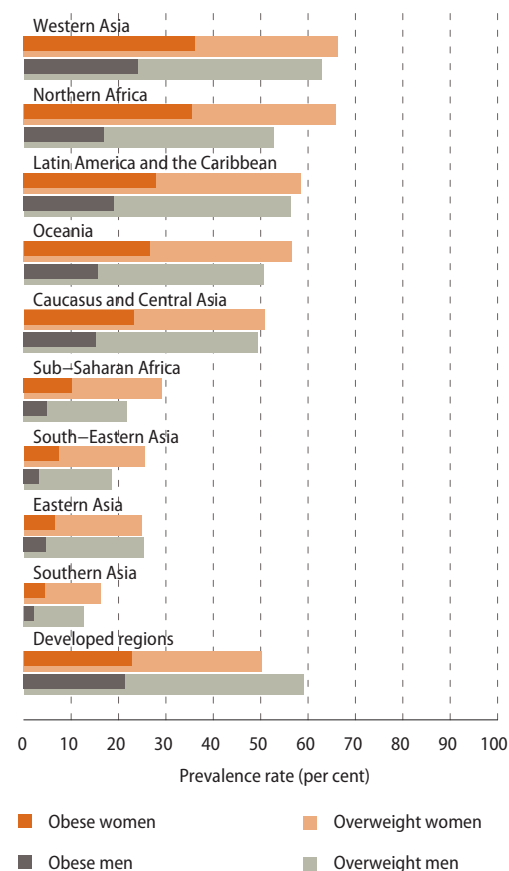
Country-specific data reveal a wide variation in obesity within regions. In Oceania, for example, regional estimates are dominated by Papua New Guinea, which represents about 75 per cent of the region's population. That country has relatively high overweight and obesity prevalence rates (50 per cent and 45 per cent overweight prevalence for women and men, respectively, and 20 per cent and 12 per cent obesity prevalence, respectively). The region also includes countries with the highest prevalence of obesity in the world: in descending order Tonga, Samoa, Kiribati and Micronesia, with obesity prevalence rates between 53 and 70 per cent for women and 31 and 49 per cent for men.

In Western Asia and Northern Africa, Egypt, Jordan, Kuwait, Libya, Saudi Arabia and the United Arab Emirates, also show very high rates of obesity among women—ranging from 41 to 52 per cent compared to 22 to 37 per cent for men. In Latin America and the Caribbean, the Bahamas, Barbados and Belize have estimates of female obesity above 40 per cent, while male obesity is lower, between 22 and 27 per cent.

Diabetes

Diabetes is a chronic disease that occurs when the body does not produce enough of the blood sugar-regulating hormone insulin, or when the body cannot effectively use the insulin it produces. Around 90 per cent of all diabetes cases globally are type 2 diabetes, largely resulting from an unhealthy diet, being overweight and physical inactivity. Type 2 diabetes is therefore generally preventable. It used to affect mainly middle-aged and older people, but is increasingly found in younger people and even children.

Figure 2.8
Prevalence of overweight (a body mass index of 25 or above) and obesity (a body mass index of 30 or above) for women and men 20 years and over, by region, 2008



Source: Computed by the United Nations Statistics Division based on data from WHO, Global health observatory, 2013b (data retrieved 23 Sept 2014).

Note: Weighted averages based on age-standardized estimates.

Type 1 diabetes is the result of an autoimmune process that usually starts in children and young adults.

Diabetes can also negatively affect maternal health. Untreated gestational diabetes or other diabetes during pregnancy can lead to a significantly larger baby (known as “macrosomia”), increasing the risk for complications such as obstructed labour that can threaten the life and health of both mother and newborn.³⁸ Furthermore, babies born to a mother with gestational diabetes have a higher lifetime risk of obesity and of developing diabetes themselves.³⁹

³⁸ NCD Alliance, 2011.

³⁹ IDF, 2013.

Globally, it is estimated that almost half of all diabetes cases go undiagnosed, which has serious health consequences. Undiagnosed diabetes is particularly common in some low-income countries in sub-Saharan Africa, with as many as 90 per cent of cases going undetected. Even in high-income countries, about one third of people with diabetes have not been diagnosed.⁴⁰ Over time, untreated diabetes leads to serious damage to the body's systems, especially the nerves and blood vessels.

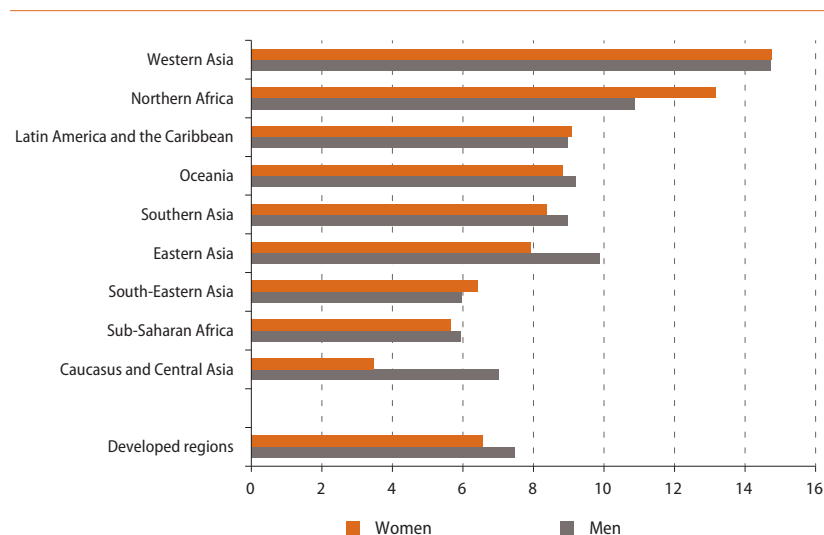
Globally, between 2000 and 2012, mortality and morbidity due to diabetes have increased, mainly due to lifestyle changes that encourage unhealthy diets and physical inactivity, and the resulting excess body weight. Globally, 44 per cent of the burden of diabetes can be attributed to overweight and obesity, another 27 per cent to physical inactivity.⁴¹

Worldwide in 2013, 8 per cent of adults (20 to 79 years), or 382 million people, were living with diabetes.⁴² Almost half of them (48 per cent) are between 40 and 59 years old. More than 80 per cent of the 184 million people with diabetes in this age group live in low- and middle-income countries.⁴³

In general, diabetes prevalence is highest in Western Asia (15 per cent for both women and men) and Northern Africa (figure 2.9). Among countries, the Federated States of Micronesia, Kiribati and Vanuatu stand out for having very high diabetes prevalence rates (women have prevalence rates of 36 per cent, 27 per cent and 25 per cent, and men 35 per cent, 31 per cent and 23 per cent, respectively).

Globally, little difference is found in diabetes prevalence among men and women. In 2013, slightly more men than women were living with diabetes (198 million men and 184 million women).⁴⁴ At the regional level, however, some gender differences were observed (figure 2.9). Prevalence rates were higher for women than men in Northern Africa, in particular (13 per cent versus 11 per cent). They were lower in the Caucasus and Central Asia (4 per cent for women

Figure 2.9
Prevalence of diabetes in adults aged 20 to 79 years by sex and region, 2013



Source: Computed by the United Nations Statistics Division based on data from the International Diabetes Federation (IDF), 2013, and communication with IDF in 2014.

Note: Undiagnosed cases of diabetes are taken into account in estimating the prevalence of diabetes. Weighted averages based on "comparative data" as provided by IDF.

versus 7 per cent for men) and in Eastern Asia (8 per cent for women versus 10 per cent for men).

In terms of mortality, about 1.5 million people died from diabetes in 2012. Overall, diabetes ranked eighth on the list of leading causes of mortality worldwide, compared to the tenth place ranking a dozen years earlier. There is very little difference between men and women in the total number of deaths due to diabetes.⁴⁵

B. A life-cycle perspective on health

1. Child health and survival

Nutrition, immunization and a supportive environment in early life are key determinants in the health and survival of children and their physical, cognitive and emotional development. Optimal development of children also encourages healthy habits in adolescence and reduces the burden of disease in adult life. The health and nutrition of girls, in particular, influence maternal health during the reproductive years and affect the survival and well-being of future generations.

⁴⁰ *Ibid.*

⁴¹ WHO, 2009a; WHO, 2011a.

⁴² Defined by WHO as having a fasting blood glucose level of at least 7.0 millimoles per liter or being on diabetes medication.

⁴³ IDF, 2013.

⁴⁴ *Ibid.*

⁴⁵ WHO, 2014b.

Mortality among children under age 5

Child survival improved in all regions

Tremendous progress has been achieved in reducing child mortality over the past two decades. The mortality rate for children under 5 years old dropped by more than half between 1990 and 2015—from 90 deaths per 1,000 live births to 43 in 2015.⁴⁶ The annual rate of reduction increased from 1.2 per cent in 1990–1995 to 4.0 per cent in 2005–2013. Globally, the number of children dying before their fifth birthday decreased from 12.7 million in 1990 to around 6 million in 2015.

Child survival improved in all regions, but wide disparities persist.⁴⁷ In 2013, under-5 mortality ranged from 6 deaths per 1,000 live births in developed regions to 92 per 1,000 in sub-Saharan Africa. Dramatic reductions in under-5 mortality have been achieved in Eastern Asia (a 76 per cent reduction), Latin America and the Caribbean and Northern Africa (a 67 per cent reduction in both regions). Sub-Saharan Africa, on the other hand, reduced its under-5 mortality by only 49 per cent. That region registered an increasing share of the global number of children dying before age 5, in part due to population growth. In 2013, half of all children who died before their fifth birthday lived in that region.

The youngest children account for the majority of children under age 5 who have died. Most deaths in children occur in the first year of life (infant mortality), with most of them occurring within the first four weeks (neonatal mortality).⁴⁸ Globally, the main causes of neonatal deaths are preterm birth complications (35 per cent), complications during labour and delivery (24 per cent) and sepsis (15 per cent). Together, these three causes account for almost three quarters of all neonatal deaths.⁴⁹

After the first month of life, the set of life-threatening diseases and conditions affecting children change. Worldwide, over two-thirds of all child deaths in 2012 were due to infectious and parasitic diseases (46 per cent) and respiratory infections (23 per cent). Unintentional injuries were the third broad cause of death (9 per cent).⁵⁰ The vast majority (99 per cent) of deaths between 1

month and 5 years of age occur in developing countries. Children in the developed regions face a very different set of diseases and health conditions. Comparatively, fewer child deaths in the developed regions are due to respiratory infections and infectious and parasitic diseases (19 per cent compared to 70 per cent in developing regions). Instead, other causes become more prominent: congenital anomalies (28 per cent) and unintentional injuries (16 per cent) are the two leading causes of death, responsible for almost half of all deaths in this age group.⁵¹

The share of neonatal deaths in under-5 mortality increased from 37 per cent in 1990 to 43 per cent in 2013, since the reduction in neonatal mortality between 1990 and 2013 was slower than the overall reduction of under-5 mortality.⁵² This can be explained by the fact that the reduction in under-5 mortality was mostly due to improvements in the prevention or cure of infectious diseases—namely pneumonia, diarrhoea, malaria and measles. These diseases tend to strike children who have outgrown the neonatal stage, subsequently giving neonatal deaths more weight in overall under-5 mortality.⁵³

Under-5 mortality is higher for boys than girls in all regions, except Southern Asia

Globally in 2013, under-5 mortality was estimated at 47 deaths per 1,000 live births for boys and 44 for girls, resulting in a sex ratio of 107 male deaths to 100 female deaths. The lower mortality rate for girls reflects the female advantage in survival, which begins in utero and continues after birth. Innate biological differences make boys weaker and more susceptible to disease and premature death. In the absence of gender-based discrimination, girls have lower mortality than boys and this biological advantage persists through life, leading to an overall higher female life expectancy at birth.

In almost all regions, boys under age 5 have a higher mortality than girls (figure 2.10). In sub-Saharan Africa, for example, 86 girls and 98 boys per 1,000 live births died in 2013, which translates into a male-to-female mortality ratio of 114. The only notable exception to the general pattern of higher male mortality in the under-5 age group is Southern Asia. There, the

⁴⁶ United Nations, 2015c.

⁴⁷ UNICEF, 2014a.

⁴⁸ UNICEF, 2014b.

⁴⁹ *Ibid.*

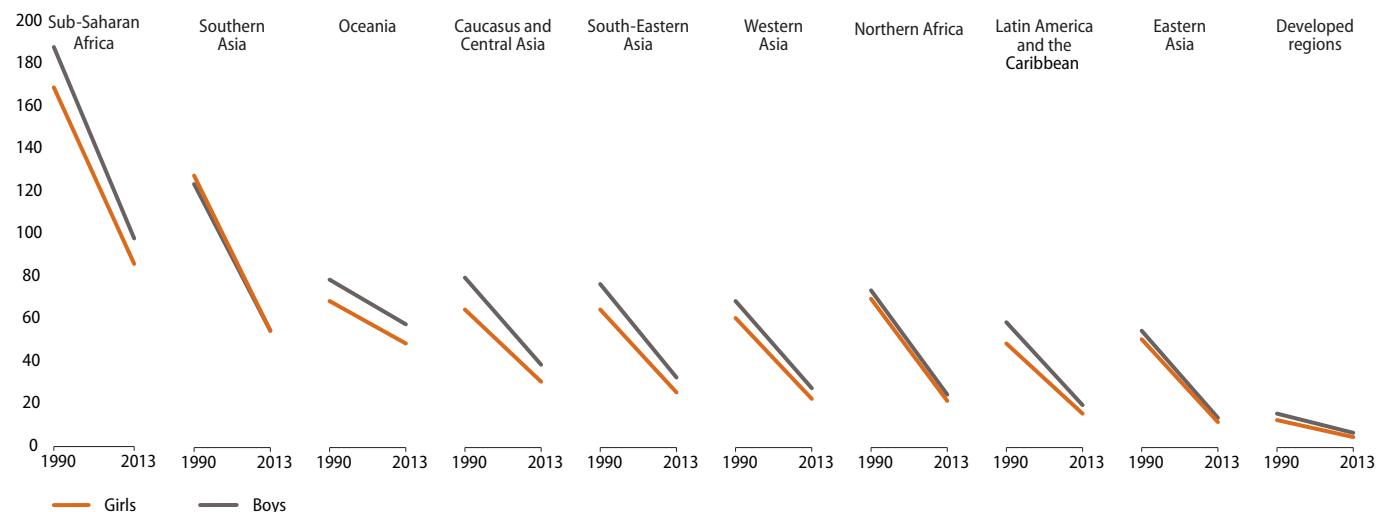
⁵⁰ WHO, 2014b.

⁵¹ *Ibid.*

⁵² Calculated by UNSD based on data from UNICEF, 2014a.

⁵³ UNICEF, 2013a.

Figure 2.10
Under-5 mortality rate (deaths per 1,000 live births) by sex, 1990 and 2013



Source: UNICEF, Levels and Trends in Child Mortality: Report 2014, (2014a).

difference reflects the disadvantage of girls, suggesting gender-related discriminatory practices. In 1990, Southern Asia had a sex ratio in under-5 mortality of 97 boys per 100 girls, and an overall under-5 mortality level of 126 deaths per 1,000 live births. In 2013, after the mortality level more than halved to 55 deaths per 1,000 live births, the sex ratio levelled out to 100.

Figure 2.11 shows under-5 mortality rates for girls and boys in 2013 for 195 countries and areas. Two lines are used to illustrate gender parity and potential gender discrimination. The grey dashed line shows parity in mortality between girls and boys—that is, when the mortality rate for girls is equal to that of boys. However, as boys have a greater biological vulnerability to disease and certain health conditions than girls, based on genetic, hormonal and immunological differences,⁵⁴ an expected sex ratio in the absence of any gender preferences or discrimination would have a value above 100, indicating higher male than female mortality among children under 5 years of age. An observed sex ratio of 100 or below is therefore assumed to be the result of discrimination against girls.

An expected sex ratio in the absence of gender discrimination is likely to vary with changes in the mortality level, since the degree of male vulnerability shifts with the magnitude and composition of the disease environment.⁵⁵ The

gray solid line in figure 2.11 shows the expected female mortality for different levels of observed male mortality under age 5 based on recent research by Alkema and others.^{56, 57} For those countries in which the sex ratio falls close to or below the parity line, it can be assumed that discrimination against girls exists. For countries in which the sex ratio falls below the gray line, some kind of discrimination against girls is likely.

The country with the lowest sex ratio in under-5 mortality is India, with a ratio of 93 (93 boys die before age 5 for 100 girls that die by that age). This is also the only country with an under-5 mortality sex ratio under 100 (more girls die than boys). India alone accounted for 21 per cent of all under-5 deaths in 2013. Thus, this low sex ratio in under-5 mortality is pulling down the average for Southern Asia as a whole and, indeed, the entire world (figure 2.11). Higher mortality among girls can be closely related to a general preference for sons in India, which is expressed in special treatment for boys in terms of parental investment in nutrition, vaccinations, access to health treatment and parental care in general.⁵⁸

⁵⁶ Alkema and others, 2014.

⁵⁷ The line is the result of an analysis based on all available country data on child mortality since 1950, regardless of whether those countries were characterized by discriminatory gender practices or not. In that regard, the line helps in identifying outliers from aggregated averages for a given level of under-5 mortality.

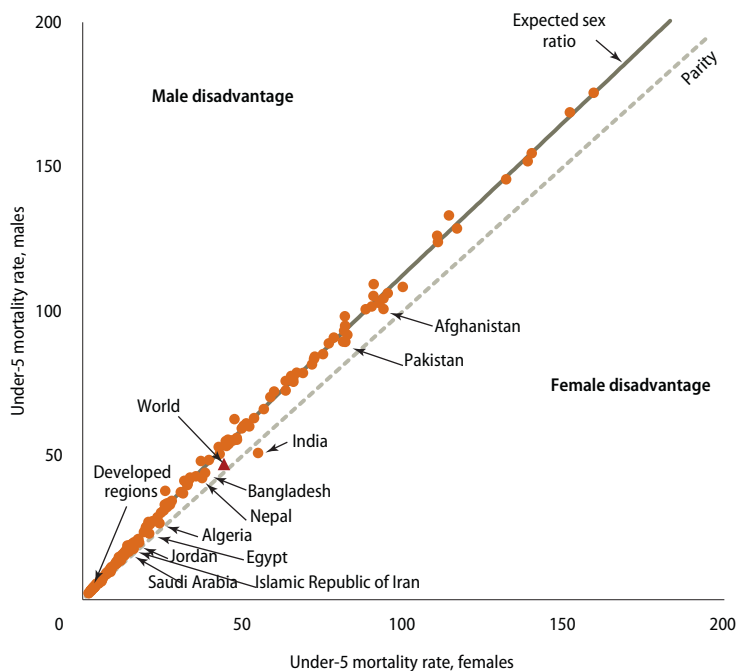
⁵⁸ See, for example: Pande, 2003; Oster, 2009.

⁵⁴ Austad, 2006.

⁵⁵ Preston, 2007; Drevenstedt, 2008; Sawyer, 2012.

The recent study on global sex ratios for under-5 mortality by Alkema and others⁵⁹ identified 10 countries with outlying under-5 mortality sex ratios for 2013, all of which had higher than expected female mortality (Afghanistan, Algeria,

Figure 2.11
Male and female under-5 mortality rates (deaths per 1,000 live births) for 195 countries, 2013



Source: Computed by the United Nations Statistics Division based on data from UNICEF, *Levels and Trends in Child Mortality: Report 2014* (2014a) and from Alkema and others (2014).

Bangladesh, Egypt, India, the Islamic Republic of Iran, Jordan, Nepal, Pakistan, Saudi Arabia).

Undernutrition

The nutritional status of children is the consequence of three interacting factors: food intake, health status, and parental and health care.⁶⁰ Nutritional deficiencies are the sixth leading cause of death in developing countries, and the immediate cause for 5 per cent of deaths among children (1 to 59 months old).⁶¹ Nutritional deficiencies weaken the immune system and increase the vulnerability of children to disease, particularly infectious diseases such as pneumonia, diarrhoea, malaria and measles. Globally, nearly

⁵⁹ Alkema and others, 2014; UNICEF, 2014a.

⁶⁰ UNICEF, 2013b.

⁶¹ WHO, 2014b.

half of all deaths among children under 5 are attributable to undernutrition.⁶² It is not only an immediate health threat, but also has long-term consequences. It hinders optimal health and growth and is known to lead to suboptimal brain development, which in turn influences cognitive ability and future performance.⁶³

Worldwide, 15 per cent of children are underweight.^{64, 65} The regions with the highest proportion of underweight children under 5 are South Asia (32 per cent) and sub-Saharan Africa (21 per cent). Boys are more likely to be underweight than girls. In almost half (58) of the 127 countries (across all regions) for which comparable data are available, the male-to-female sex ratio is higher than 115⁶⁶ (figure 2.12). Many of those countries are in sub-Saharan Africa. This skewed sex ratio, to the disadvantage of boys, reflects their higher biological vulnerability to disease rather than neglect, or preferential treatment for girls.⁶⁷ Exceptions to this pattern, such as the case of Bangladesh or India (figure 2.12), which shows higher underweight prevalence rates for girls, suggest discrimination towards girls.

While the concept of underweight combines aspects of both temporary and chronic undernutrition, stunting results from chronic undernutrition alone, particularly during the most critical periods of growth and development, starting before birth and lasting up to about 2 years of age. Stunted children⁶⁸ may appear normally proportioned, but they are too short for their age.

Globally, every fourth child under 5 years of age was stunted in 2013—amounting to about 164 million stunted children worldwide.⁶⁹ A high prevalence of chronic child undernutrition was observed in sub-Saharan Africa and South Asia, where 4 out of 10 children were stunted.

⁶² UNICEF, 2014b; Black and others, 2013.

⁶³ UNICEF, 2013b; Spears, 2012.

⁶⁴ A child is considered underweight if her or his weight for age is below minus two standard deviations from the median of the WHO Child Growth Standards.

⁶⁵ UNICEF, 2014c.

⁶⁶ A range between 85 and 115 in the sex ratio of underweight prevalence was treated as a window of 'gender parity' for sub-Saharan African countries. UNICEF, 2013b.

⁶⁷ United Nations, 1998.

⁶⁸ A child under 5 years old is considered stunted when her or his height-to-age ratio is below minus two standard deviations from the median WHO Child Growth Standards.

⁶⁹ UNICEF, 2014c.

Together, these two regions account for almost three quarters of all stunted children worldwide. Similar to the situation of underweight, boys are more likely to be stunted than girls. This is evident in 111 out of 128 countries with available data, 21 of which have a male-to-female sex ratio higher than 115.⁷⁰ Girls are more likely to be stunted in 14 countries, and in the remaining three the proportions are identical.⁷¹

Immunization

Immunization is a cost-effective public health strategy for preventing a number of potentially life-threatening childhood diseases such as diphtheria, measles, pertussis, pneumonia, polio, rotavirus diarrhoea, rubella and tetanus. It is estimated that, globally, immunizations prevent around 2 to 3 million deaths each year.⁷² Although considerable variations can be found in immunization coverage among boys and girls in some countries, no significant systematic bias has been observed. In some countries, immunization coverage for girls is higher, while in others, it is higher for boys.⁷³

2. Adolescents and young adults

Adolescence is a time of general good health, with low mortality rates. Nevertheless, many lifestyle choices made during this period have negative consequences later in life. It is estimated that at least 70 per cent of premature adult deaths result from behaviour that started or was reinforced during adolescence, such as unhealthy eating, alcohol and tobacco use, substance abuse, unsafe sex and lack of physical activity.⁷⁴ Adolescence is also the age when young women and men increasingly model their behaviour on adult gender roles. In some societies, adolescent girls are pressured into early marriage and childbearing and their access to information on health and their power to make their own decisions remain low. Adolescent boys often take up harmful habits and risky behaviours that are associated with images of masculinity. All of these factors can

⁷⁰ A range between 85 and 115 in the sex ratio of underweight prevalence was treated as a window of 'gender parity' for sub-Saharan African countries. UNICEF, 2013b.

⁷¹ UNICEF, 2013b.

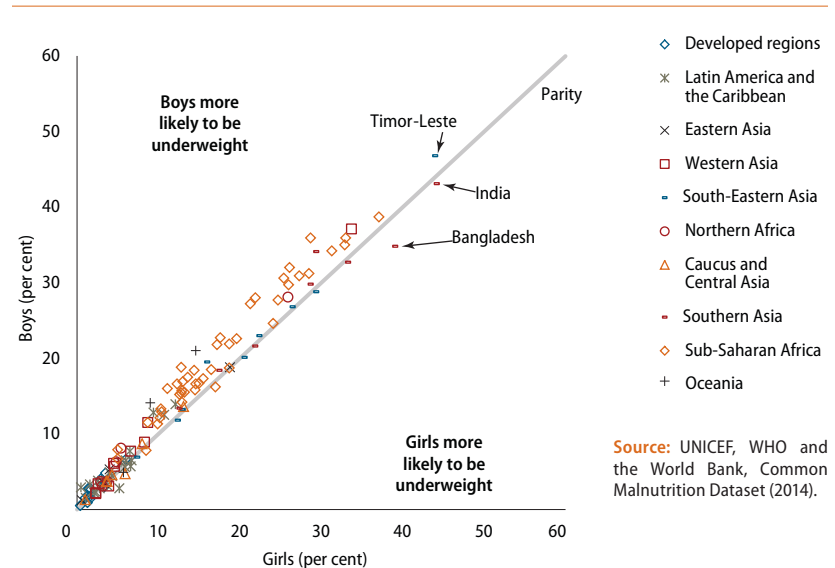
⁷² WHO, 2014e.

⁷³ Based on a review of immunization coverage (all vaccinations) for 62 countries with data for the period 2003 to 2012. Demographic and Health Surveys (DHS), 2014.

⁷⁴ Resnick and others, 2012.

Figure 2.12

Proportion of underweight among boys and girls under 5 years of age, 2000–2012 (latest available)



Source: UNICEF, WHO and the World Bank, Common Malnutrition Dataset (2014).

lead to separate health and survival trajectories for girls and boys.

Adolescent pregnancies and deaths due to maternal conditions

Complications during pregnancy and childbirth are the leading cause of death for women aged 15 to 29 in developing regions

The percentage of adolescents (aged 15 to 19) who have given birth has declined in the past two decades but remains high in a number of countries in Africa and in Latin America and the Caribbean (see Chapter 1 on Population and families). Early childbearing, particularly among girls under age 15, comes with health risks to both young mothers and their newborn. This is due in part to the fact that adolescents are not fully developed physically, as well as to the high rates of anaemia and undernutrition common in this age group. Many adolescent pregnancies are also unwanted pregnancies, leading to abortion, most often unsafe abortion, which carries a high risk of morbidity and mortality. In 2008, 15 per cent of all unsafe abortions in developing countries (excluding Eastern Asia) occurred among girls aged 15 to 19.⁷⁵

⁷⁵ Shah and Åhman, 2012.

Complications linked to pregnancy and child-birth are the leading cause of death for adolescents and young women (aged 15 to 29) worldwide (table 2.2). However, almost all maternal deaths (99 per cent) occur in developing countries.⁷⁶ In developed regions, mortality rates due to maternal conditions are 20 times lower than those of developing regions. In developed regions, other causes of death, such as self-harm and road injuries, top the list for mortality among 15- to 29-year-old women and men, although death rates for men are much higher.

Sexually transmitted infections, including HIV

Unsafe sex is a leading risk factor in the health of adolescents and youth, leading to sexually transmitted infections, including HIV. Among the challenges to preventing such infections are inadequate access to high-quality, youth-friendly sexual and reproductive health services and comprehensive sexuality education.⁷⁷

Women have a higher risk of contracting sexually transmitted infections, including HIV, than men, due to their greater physiological vulnerability. Other factors contributing to higher infection rates among women are: gender inequality, including violence against women and girls; unequal access to information, education and economic opportunities; the practice of early marriage, including to older partners; and a lack of negotiating power.

The number of new HIV infections is higher for young women than young men in sub-Saharan Africa

Although new HIV infections are decreasing globally, they remain concentrated among young people. In 2012, around 40 per cent of all new infections among adults aged 15 years and over occurred among young people aged 15 to 24.⁷⁸

Globally, the number of new HIV infections among women aged 15 to 24 is 50 per cent higher than among their male peers. This susceptibility to HIV infection is most acute in sub-Saharan Africa, home to 72 per cent of all new HIV infections among the young adult population (figure 2.13). In all sub-regions of sub-Saharan Africa, the number of new infections among young women in 2012 was around twice that of young men. In

⁷⁶ WHO, 2014b.

⁷⁷ UNAIDS, 2013.

⁷⁸ *Ibid.*

other regions of the world, more young men are infected than young women—a pattern specific to regions where HIV is predominantly transmitted through sex between men or intravenous drug use. In Latin America, Eastern Asia and developed regions, for example, the number of new infections among young men is twice that of young women.

HIV/AIDS is the second leading cause of mortality among women aged 15 to 29 globally; it ranks fourth among men the same age. This ranking is driven by developing regions and by sub-Saharan Africa in particular. In developing regions, death rates due to AIDS are 17 per 100,000 population for women and 13 per 100,000 for men. In developed regions the corresponding rates were much lower, at 2 and 4 per 100,000, respectively.⁷⁹

Condom use among young people (aged 15 to 24) with multiple sexual partners has increased in developing regions. However, it remains relatively low overall in many countries and is lower among women than men.^{80, 81} Comprehensive knowledge of HIV among young people also increased in most developing countries over the past 15 years, but the gains are only slight on average, and the level remains low, particularly among young women.⁸² In sub-Saharan Africa, only 30 per cent of young women and 37 per cent of young men have a comprehensive and correct knowledge of HIV and AIDS, representing an increase of less than 10 percentage points since 2000 for both groups.⁸³

Injuries

Taking risks and exploring boundaries are part of the biological and psychological development of adolescents.⁸⁴ Such behaviour can lead to health risks both in the short term and over the course of their lives. Road injuries are the single largest cause of death among young men aged 15 to 29 globally, followed by interpersonal violence and self-harm (table 2.2). These three causes of death are predominant among young men in both developed and developing regions. They

⁷⁹ WHO, 2014b.

⁸⁰ UNAIDS, 2013.

⁸¹ Based on available data for sub-Saharan African countries, there was a 19 percentage point gap in condom use between young women and young men in 2014. United Nations, 2015c.

⁸² United Nations, 2015c.

⁸³ *Ibid.*

⁸⁴ Blum and others, 2012; Patton and others, 2012; WHO, 2014f; Viner and others, 2012.

Table 2.2

Specific causes of death among young women and men (aged 15 to 29 years) by region, 2012 (top 10 sex-specific causes of death worldwide)

Women					Men				
World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)			World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)		
		World	Developed regions	Developing regions			World	Developed regions	Developing regions
1	Maternal conditions	17	1	20	1	Road injury	28	19	29
2	HIV/AIDS	15	2	17	2	Interpersonal violence	19	8	21
3	Self-harm	11	5	12	3	Self-harm	16	21	15
4	Road injury	8	6	8	4	HIV/AIDS	11	4	13
5	Diarrhoeal diseases	6	0	7	5	Drowning	6	4	7
6	Lower respiratory infections	5	1	6	6	Lower respiratory infections	6	2	7
7	Interpersonal violence	4	2	4	7	Collective violence and legal intervention	5	1	6
8	Tuberculosis	3	1	3	8	Ischaemic heart disease	5	3	5
9	Fire, heat and hot substances	3	0	3	9	Diarrhoeal diseases	4	0	4
10	Ischaemic heart disease	3	1	3	10	Meningitis	4	0	4

Source: Computed by the United Nations Statistics Division based on data from WHO, Global health estimates for deaths by cause, age, and sex for years 2000–2012 (2014b).

are also predominant among young women in developed regions, with some differences in the ranking. Self-harm is the number one cause of death for young men in developed regions.

Injuries are the leading cause of death among young men in developed and developing regions

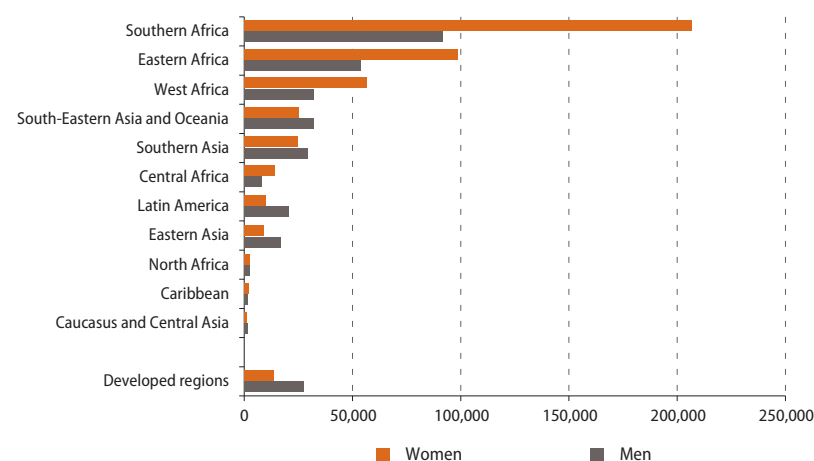
Young men are more likely than young women to die from both unintentional and intentional injuries (95 versus 36 deaths per 100,000 population aged 15 to 29, respectively, in 2012). Globally, this accounted for half of the deaths among young men between 15 and 29 years in 2012.⁸⁵ Traffic accidents are particularly lethal for young men in Latin America and the Caribbean, sub-Saharan Africa and South-Eastern Asia, where the corresponding death rates are 41, 37 and 34 deaths per 100,000. Latin America and the Caribbean and sub-Saharan Africa also stand out in terms of intentional injuries. Male death rates due to violence between individuals are the highest in these two regions, at 92 and 41 per 100,000, respectively. In Western Asia, male death rates due to collective violence and legal-intervention⁸⁶ are the highest, at 92 per 100,000.

⁸⁵ WHO, 2014b.

⁸⁶ Deaths due to collective violence refers to deaths occurring in the context of instrumental use of violence by people who identify themselves as members of a group against another group or set of individuals, in order to

Figure 2.13

Number of new infections among young women and men (aged 15 to 24 years), 2012



Source: United Nations Statistics Division and UN Women, Millennium Development Goals Gender Chart (2014).

achieve political, economic or social objectives. Various forms of collective violence have been recognized, including: (a) wars, terrorism and other violent political conflicts that occur within or between States; (b) state-perpetrated violence such as genocide, repression, disappearances, torture and other abuses of human rights; (c) organized violent crime such as banditry and gang warfare. Deaths due to legal intervention include deaths due to injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order or other legal action (WHO, 2002).

Mental health

An estimated one in four or five young people will suffer at least one mental disorder in a given year.⁸⁷ Exact numbers are difficult to ascertain due to the lack of available information, particularly in developing countries, and to methodological differences in underlying studies. Many mental health disorders begin in adolescence, but they are often detected only later in life. This can delay the specialized care that could improve an individual's quality of life and even forestall death.

Mental disorders contribute substantially to the mortality of young women and men and the associated disease burden at that age and later in life. Among young persons aged 15 to 29, the number of years lost due to premature mortality and disability (DALYs⁸⁸) associated with unipolar depressive disorders and anxiety disorders are higher for women than for men (15 years versus 9 years per 1,000 population for unipolar disorders, and 7 years versus 4 years per 1,000 for anxiety disorders). The number of DALYs are higher for young men than young women when it comes to alcohol use disorder and drug use (9 years versus 2 years per 1,000 population and 6 years versus 3 years per 1,000, respectively). However, they are similar with regard to schizophrenia and bipolar disorders (1 to 2 years per 1,000 population).⁸⁹

Suicide rates are lower for young women than young men in all regions except Southern Asia and Eastern Asia

In terms of mortality, self-harm (suicide) is the third leading single cause of death for both young women and young men (table 2.2). In 2012, almost 100,000 young women and over 140,000 young men between the ages of 15 and 29 committed suicide worldwide.⁹⁰ In developed regions, self-harm is the leading cause of death for young men and the second leading cause of death for young women. In most regions, suicide rates are much higher for men than for women, particularly in developed regions, the Caucasus and Central Asia, Latin America and the Caribbean and sub-Saharan Africa. Southern and Eastern Asia stand out as the only two regions in the world where suicide rates are slightly higher for young women than for young men. They are particularly high in Southern Asia, with

⁸⁷ Patel and others, 2007.

⁸⁸ For definition of DALYs, refer to section on alcohol consumption.

⁸⁹ WHO, 2014g.

⁹⁰ WHO, 2014b.

28 deaths per 100,000 female population (compared to 11 deaths per 100,000 female population worldwide and 12 in developing regions).

Substance abuse and physical inactivity

Many girls and boys take up smoking and drinking during adolescence, increasing the risk of developing non-communicable diseases later in life. As with adults, more adolescent boys currently drink than their female peers in every region. Adolescent boys (aged 15 to 19) engage in heavy drinking about three times more often than girls the same age (17 per cent compared to 6 per cent). The highest rates of heavy drinking among young people of both sexes are found in Europe, the Americas and Western Pacific regions.⁹¹

Smoking prevalence is as high or even higher for teenage girls than boys in some countries

Surveys conducted between 2008 and 2012 showed that in 21 countries around the world teenage girls⁹² were as likely to smoke, and in some countries more so than boys. Twelve of those 21 countries are in Europe. Among them, tobacco use was higher for girls than for boys by 8 percentage points in Spain, 7 points in Sweden, and 6 in the Czech Republic.⁹³

Girls aged 13 to 15 are less likely than boys of the same age to exercise physically in developing countries

Physical inactivity in childhood and adolescence is detrimental to health in both the short and long term, increasing the risk of developing non-communicable diseases earlier, and premature death.⁹⁴ Physical activity fosters healthier adolescent populations not only through the maintenance of healthy body weight, but also through improvements to psychological well-being, social development, educational performance, and reduced use of tobacco, alcohol and drugs.⁹⁵ Despite these benefits, many adolescents do not meet the physical activity levels recommended by WHO (figure 2.14). In the vast majority of the developing countries surveyed, girls exercised less than boys, implying a difference in opportunities and/or preferences of adolescents with regard to physical activity.

⁹¹ WHO, 2014d, WHO regions.

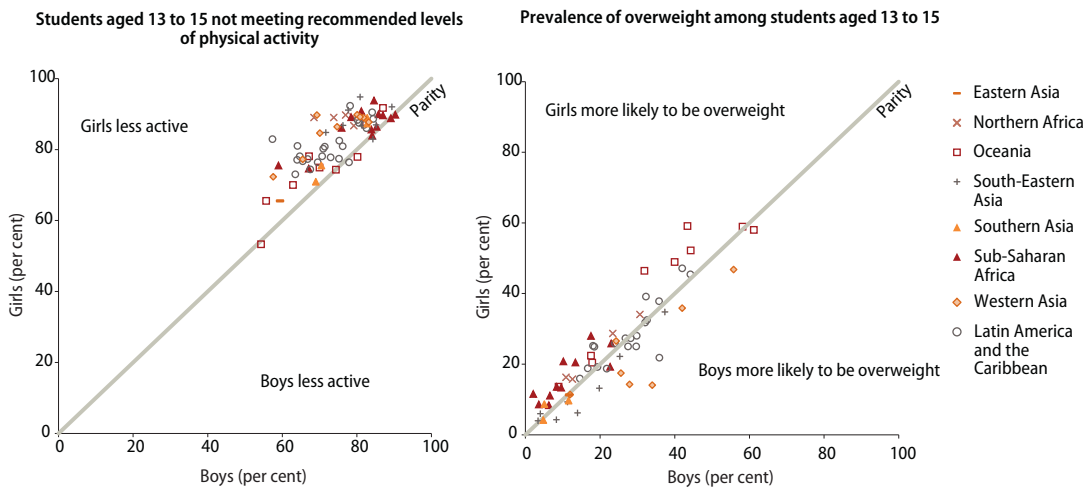
⁹² In most countries data refer to those 13 to 15 years old.

⁹³ WHO, 2013c.

⁹⁴ WHO, 2014h.

⁹⁵ WHO, 2014i.

Figure 2.14
Physical exercise and prevalence of overweight among adolescents aged 13 to 15 years, developing countries, 2003–2014 (latest available)



Source: Compiled by UNSD based on data from the Global School-based Student Health Surveys, 2003–2014 (WHO, 2014j).

Note: Each point represents data for one country. N = 62 for physical activity; 73 for prevalence of obesity. WHO recommends that children aged 5–17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. Overweight children have a BMI above 1 standard deviation from the median BMI for children of the same age and sex.

Physical inactivity and poor diet contribute to the increasing prevalence of overweight among children and adolescents.⁹⁶ Rates of overweight for female and male adolescents vary by region (figure 2.14). For both sexes, the highest rates of overweight are found in Oceania and the lowest in sub-Saharan Africa, Southern Asia and South-Eastern Asia. However, in terms of gender differences, Oceania and sub-Saharan Africa tend to have higher overweight rates among girls than boys, while overweight rates for boys tend to be higher than those of girls in Western and South-Eastern Asia.

3. Women's reproductive years

Women's reproductive years are bordered by puberty (and the onset of menstruation) and menopause, roughly covering ages 15 to 49. Globally, women's health status during this period is dominated by issues related to sexual and reproductive health. The leading female causes of death at the global level and in developing regions are HIV/AIDS and maternal conditions. In 2012, in developing regions, the female mortality rates for these two causes of death were 34 and 19 deaths per 100,000 female population aged 15 to 49 years, respectively (table 2.3). In developed regions, maternal conditions were not a leading cause of death (1 per 100,000 death rate), while HIV/AIDS was among the highest ranked causes of death (6 per 100,000), together with breast cancer, ischaemic heart disease and self-harm. Within the same

age group, men's causes of death are dominated by HIV/AIDS and road injuries in the developing regions and self-harm and ischaemic heart disease in the developed regions (table 2.3).

This section focuses on the key components of reproductive and maternal health, including access to contraceptive methods, prevention of unsafe abortions, access to prenatal care and skilled health care at delivery. Improvement in these key areas could save many of the almost 300,000 women who die each year from causes related to pregnancy and childbirth. The section concludes with issues related to HIV and AIDS.

Contraceptive use

Family planning is one of the most important aspects of reproductive health, since the use of modern contraceptive methods allows women to avoid unintended pregnancies. An unintended or unwanted pregnancy may be a pregnancy too early in life, too soon after a previous pregnancy, or after having reached the desired family size. Like any pregnancy, unwanted pregnancies carry the risk of disability or even death, but they also have added health risks due to abortion, particularly unsafe abortions. Unlike abortions carried out by skilled personnel in a medically safe environment, unsafe abortions have a very high risk of complications. Approximately half of all induced abortions globally are considered unsafe, according to the WHO definition (see following section).⁹⁷

⁹⁶ WHO, 2011a.

⁹⁷ Sedgh and others, 2012.

Table 2.3
Cause-specific mortality rates for women and men (aged 15 to 49 years) by region, 2012 (top 10 causes of death worldwide)

Women					Men				
World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)			World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)		
		World	Developed regions	Developing regions			World	Developed regions	Developing regions
1	HIV/AIDS	30	6	34	1	HIV/AIDS	31	13	34
2	Maternal conditions	16	1	19	2	Road injury	29	16	31
3	Self-harm	9	6	10	3	Ischaemic heart disease	19	23	18
4	Stroke	8	4	9	4	Interpersonal violence	17	8	19
5	Road injury	8	5	9	5	Self-harm	17	25	15
6	Ischaemic heart disease	8	6	8	6	Stroke	11	7	11
7	Breast cancer	7	7	7	7	Cirrhosis of the liver	10	11	10
8	Lower respiratory infections	6	2	7	8	Tuberculosis	9	5	10
9	Tuberculosis	6	1	7	9	Lower respiratory infections	8	3	9
10	Diarrhoeal diseases	6	0	7	10	Drowning	6	5	6

Source: Computed by the United Nations Statistics Division based on data from WHO, Global health estimates for deaths by cause, age, and sex for years 2000–2012 (2014b).

A recent study estimated that if all women wanting to avoid pregnancy used a modern contraceptive method, the number of unintended pregnancies would drop by 70 per cent and unsafe abortions by 74 per cent. Additionally, if contraceptive needs were met and all pregnant women received the basic standard of care recommended by WHO, the number of women dying from pregnancy-related causes would drop by two thirds, from 290,000 to 96,000.⁹⁸

Contraceptive use and the proportion of demand for family planning that is satisfied remain low in some regions, particularly in sub-Saharan Africa and Oceania

As of 2013, 84 per cent of the total demand for family planning (women wanting to delay or avoid pregnancy) among women in developing regions was being met.⁹⁹ This statistic reflects only women aged 15 to 49 who were married or in union.

The demand for family planning and the use of contraception (contraceptive prevalence) have increased over the years in almost all regions of the world, but wide disparities persist (figure 2.15). For instance, in sub-Saharan Africa, the proportion of women using any method of contraception doubled from 13 per cent to 27 per cent between 1990 and 2012. However, this still

represents only half of the total demand for family planning (51 per cent), leaving the remainder of women desirous of delaying or avoiding pregnancy with an unmet need for family planning. The level of unmet need in sub-Saharan Africa is the highest among all regions. The region has also the highest share of unsafe abortions¹⁰⁰ and highest level of maternal mortality.¹⁰¹

Developing countries in Oceania also have low levels of contraceptive prevalence (38 per cent) and a relatively high unmet need for family planning. Around 40 per cent of the women there who would like to delay or avoid pregnancies are not using any method of contraception.

At the other extreme, Eastern Asia has the highest contraceptive prevalence (84 per cent) and nearly all demand for family planning is satisfied. Contraceptive prevalence has also reached very high levels (73 per cent) in Latin America and the Caribbean, where unmet need is comparable to the levels observed in developed regions (around 10 per cent).

⁹⁸ Singh and others, 2014.

⁹⁹ United Nations, 2015c, Statistical Annex.

¹⁰⁰ Sedgh and others, 2012.

¹⁰¹ WHO, UNICEF, UNFPA, World Bank and the United Nations Population Division, 2014.

Induced abortions

While abortion rates have declined since 1995, the share of unsafe abortions among all abortions have increased

Globally, 44 million pregnancies were terminated by induced abortions in 2008. That number declined from 46 million in 1995 to 42 million in 2003, increasing again to 44 million in 2008 due to the growing population of women of reproductive age. The induced abortion rate fell from 35 abortions per 1,000 women aged 15 to 44 years in 1995 to 29 in 2003, declining only slightly afterwards to 28 in 2008 (table 2.4). Induced abortions occur in every region of the world at rates varying from about 20 to 30 abortions per 1,000 women aged 15 to 44 years (table 2.4). The exception is Eastern Europe, which had the highest abortion rate worldwide, at 43 abortions per 1,000 women in 2008.

About half of all abortions globally are considered unsafe,¹⁰² almost all of them occurring in developing regions (table 2.4), especially in Asia, Africa and Latin America and the Caribbean. Unlike abortions performed according to medical guidelines, unsafe abortions carry high health risks for women.¹⁰³ In 2008, for example, an estimated 22 million unsafe abortions led to more than 5 million complications, resulting in 47,000 deaths, mostly from heavy bleeding and infection.¹⁰⁴ While the total number of induced abortions has decreased since 1995, the share of unsafe abortions in total abortions worldwide increased from 44 per cent in 1995 to 49 per cent in 2008.

Abortion policies remain restrictive in many countries

In general, abortion policies are more restrictive in developing than in developed regions. In 2013, almost all countries (97 per cent) permitted abortion to save the life of a pregnant woman, with 31 per cent of all countries in developing regions allowing abortions only under this condition, compared to 6 per cent in developed regions. Six countries or areas did not permit abortion under any circumstance: Chile, the Dominican Republic, El Salvador, the Holy See, Malta and Nica-

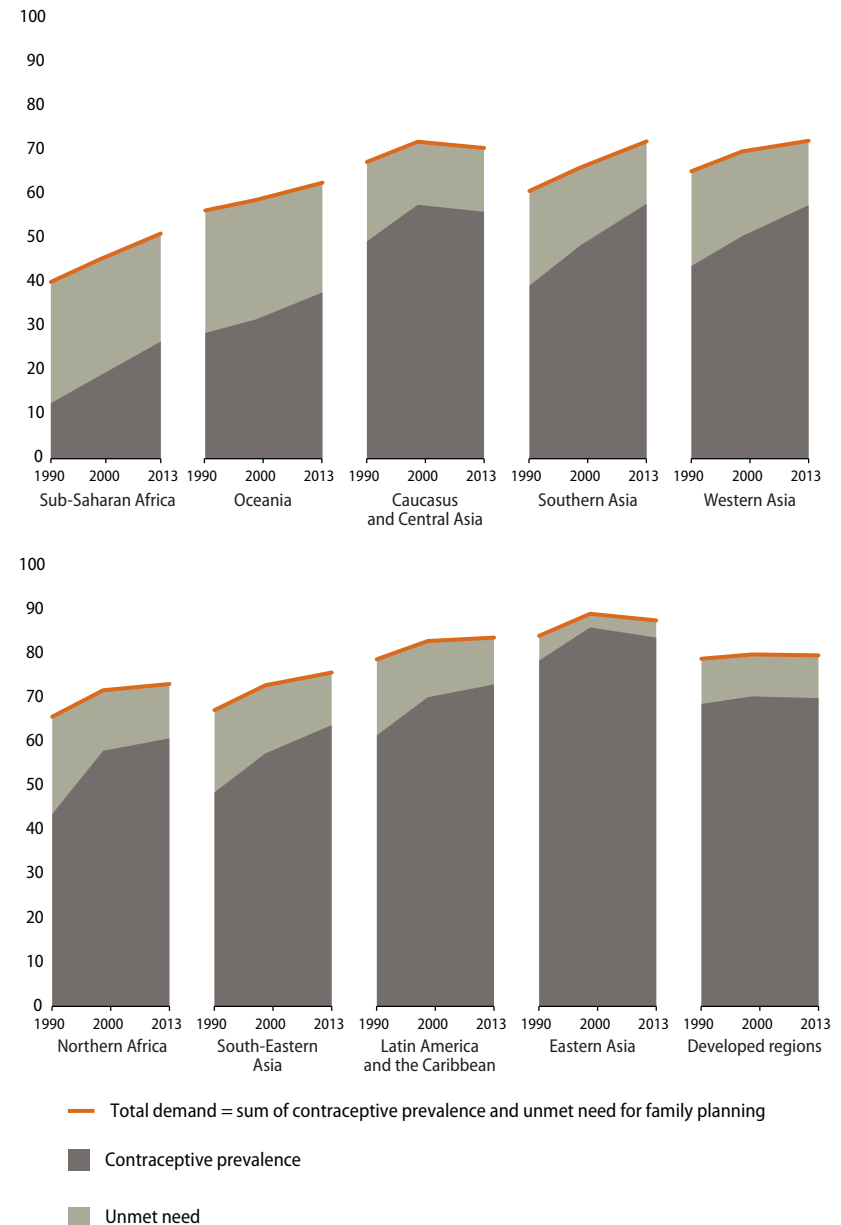
¹⁰² The WHO defines an unsafe abortion as a procedure for terminating an unintended pregnancy carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal standards, or both.

¹⁰³ WHO, 2011b; Sedgh and others, 2012.

¹⁰⁴ WHO, 2014k.

Figure 2.15

Total demand for family planning, contraceptive prevalence, and unmet need for family planning, 1990, 2000 and 2013 (percentage of women aged 15 to 49 years, married or in union)



Source: United Nations, The Millennium Development Goals Report 2015 (2015c). Statistical Annex.

ragua. The most liberal allowances for abortion, on request or for economic or social reasons, are found in about 80 per cent of developed countries, but only in about 20 per cent of developing countries.¹⁰⁵ Although 56 countries extended the legal grounds for permissible abortion between

¹⁰⁵ United Nations, 2014c.

Table 2.4
Number of abortions and abortion rate by region, 1995, 2003 and 2008

Region	Number of abortions (millions)				Abortion rate (per 1,000 women aged 15 to 44)			
	1995	2003	2008		1995	2003	2008	
			Total	Unsafe abortions			Total	Unsafe abortions
World	46	42	44	22	35	29	28	14
Developed regions	10	7	6	<1	39	25	24	1
Developing regions	36	35	38	21	34	29	29	16
Africa	5	6	6	6	33	29	29	28
Asia	27	26	27	11	33	29	28	11
Europe	8	4	4	<1	48	28	27	2
of which, Eastern Europe	6	3	3	<1	90	44	43	5
Latin America and the Caribbean	4	4	4	4	37	31	32	31
Northern America	2	2	1	—	22	21	19	—
Oceania	<1	<1	<1	—	21	18	17	2

Source: WHO, Information sheet: safe and unsafe induced abortions (2012a).

Note: Abortion rate is defined as the number of abortions per 1,000 women aged 15 to 44 years. UN Population Division regions. Developed regions include Europe, North America, Japan, Australia and New Zealand; all others are classified as developing. Asia and Oceania exclude Japan, Australia and New Zealand from the regions.

1996 and 2013, many others continue to impose restrictive measures and eight¹⁰⁶ have even tightened their abortion policies.¹⁰⁷

It is important to note that abortions take place regardless of their legal status. Nearly all of the estimated 22 million unsafe abortions in 2008 occurred in developing countries.¹⁰⁸ Countries with restrictive laws against abortion have more than four times as many unsafe abortions as countries with liberal abortion policies (27 versus 6 unsafe abortions per 1,000 women aged 15 to 44 years, respectively, in 2008). Countries with restrictive abortion laws also had maternal mortality rates that were three times higher than those with liberal abortion policies (223 versus 77 maternal deaths per 100,000 live births in 2013).¹⁰⁹

Antenatal and delivery care

Access to antenatal care has improved, with almost universal coverage in some regions

Antenatal care visits by trained health workers can result in health problems in pregnant women being detected and treated before they become perilous for both mother and unborn baby. They include the identification and management of obstetric complications such as

¹⁰⁶ Algeria, Belize, Congo, Dominican Republic, Iraq, Japan, Nicaragua, Papua New Guinea.

¹⁰⁷ United Nations, 2014d.

¹⁰⁸ WHO, 2012a and United Nations, 2014d.

¹⁰⁹ United Nations, 2014d, data refer to 2013.

pre-eclampsia, tetanus toxoid immunization, intermittent preventive treatment for malaria during pregnancy (IPTp), and identification and management of infections, including HIV, syphilis and other sexually transmitted infections. Significant improvements in access to antenatal care have been achieved (table 2.5). In 2014, 83 per cent of pregnant women in the developing regions had at least one antenatal care visit, an improvement of 19 percentage points since 1990. Some developing regions have reached almost universal antenatal care coverage. Latin America and the Caribbean, Eastern Asia and South-Eastern Asia all have antenatal care coverage of over 90 per cent. African countries, especially, have advanced. Between 1990 and 2014, coverage increased from 50 to 89 per cent in Northern Africa and from 68 to 80 per cent in sub-Saharan Africa. However, only little more than half of pregnant women in developing regions had the recommended minimum of four antenatal care visits.¹¹⁰ Furthermore, information on the quality of care is scarce.

Skilled delivery care improved everywhere but remains low in Southern Asia and sub-Saharan Africa

Assistance during delivery by skilled health personnel—a doctor, nurse or midwife—can prevent or manage most obstetric complications and thus reduce the risk of death or disability for both mother and child. Skilled health workers

¹¹⁰ United Nations, 2015c.

can either intervene directly or refer a patient to higher levels of maternal health services, including emergency obstetric care. It is estimated that around 15 per cent of all pregnant women will develop complications during childbirth,¹¹¹ often spontaneously without any previous existing conditions. In developing regions, the percentage of births attended by skilled health personnel was 70 per cent in 2014, an increase of 13 percentage points since 1990 (table 2.5). Some developing regions show almost universal coverage for skilled attendance at birth, such as Eastern Asia and the Caucasus and Central Asia, at 100 per cent and 96 per cent, respectively. However, in Southern Asia and sub-Saharan Africa, only every other pregnant woman gives birth with adequate care.

Maternal mortality

Maternal mortality has declined, yet high levels are still found in sub-Saharan Africa

Maternal mortality is a leading cause of death in women of reproductive age. In 2013, an estimated 289,000 women died during pregnancy, or the first 42 days after delivery (or termination of pregnancy) due to causes related to pregnancy or childbirth.¹¹² Maternal mortality shows extreme variations among regions.¹¹³ In 2013, the maternal mortality ratio was 16 deaths per 100,000 live births in developed regions versus 230 deaths per 100,000 live births in developing regions and peaked in sub-Saharan Africa with 510 deaths per 100,000 live births. Accordingly, the vast majority of maternal deaths occur in developing regions—286,000, of which almost two thirds occurred in sub-Saharan Africa, compared to 2,300 in developed regions. The lifetime risk of maternal death (the probability that a 15-year-old woman will die eventually from a maternal cause) is 1 in 3,700 in developed regions but 1 in 160 in developing regions. Women in countries such as Chad and Somalia face the highest lifetime risk of dying due to maternal conditions, at 1 in 15 and 1 in 18, respectively.

However, much progress has been made since 1990. The number of maternal deaths worldwide declined by 45 per cent between 1990 and 2013.

During that period, the maternal mortality ratio was reduced from 380 to 210 per 100,000 live births at the global level (from 430 to 230 deaths per 100,000 live births in developing regions). Yet, high levels of maternal mortality are still found in sub-Saharan Africa, similar to the levels found in Southern Asia 20 years ago (figure 2.16).

The wide variations in the maternal mortality ratio and lifetime risk suggest that most maternal deaths are preventable. The main conditions causing maternal death, including post-partum haemorrhage, sepsis, obstructed labour, complications of unsafe abortions and hypertensive disorders, can be managed when well-trained staff and adequate equipment are available to provide the necessary care, including emergency obstetric care.¹¹⁴ However, in developing countries, coverage by skilled birth attendance and of emergency obstetric care remain inadequate, preventing a more drastic decline in maternal mortality rates.¹¹⁵

Table 2.5
Women receiving antenatal care and deliveries attended by skilled health personnel by region, 1990 and 2014

	Percentage of pregnant women receiving antenatal care (at least one visit)		Percentage of births attended by skilled health personnel	
	1990	2014	1990	2014
Developing regions	64	83	57	70
Africa				
Northern Africa	50	89	47	90
Sub-Saharan Africa	68	80	43	52
Latin America and the Caribbean	75	97	81	92
Caribbean	84	95	..	..
Latin America	75	97	..	..
Asia				
Eastern Asia	70	95	94	100
Southern Asia	53	72	38	52
South-Eastern Asia	79	96	49	82
Western Asia	53	85	62	86
Caucasus and Central Asia	..	..	97	96
Oceania	..	..	..	..

Source: United Nations, The Millennium Development Goals Report 2015 (2015c).

¹¹¹ Hoque, 2011.

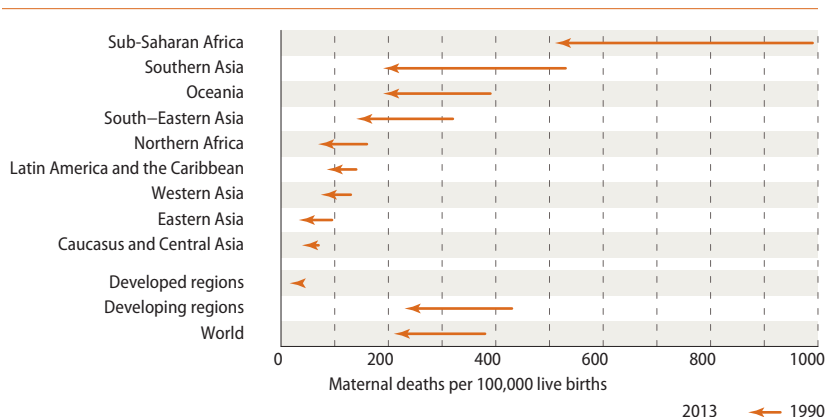
¹¹² WHO, UNICEF, UNFPA, World Bank and the United Nations Population Division, 2014.

¹¹³ See Statistical Annex available at <http://unstats.un.org/unsd/gender/worldswomen.html>.

¹¹⁴ WHO, 2014; UNFPA, 2014.

¹¹⁵ UNFPA, 2014.

Figure 2.16
Maternal mortality ratio by region, 1990 and 2013



Source: United Nations Millennium Development Goals Report 2015 (United Nations, 2015c), statistical annex.

HIV/AIDS

HIV/AIDS is the single largest cause of death worldwide for both women and men aged 15 to 49 years. In 2012, an estimated 540,000 women and 580,000 men in this age group died from AIDS.¹¹⁶ The death rates due to HIV/AIDS were 34 per 100,000 population for both women and men in developing regions. In developed regions, rates were higher for men, at 13 deaths per 100,000 population compared to women, at 6 per 100,000 (table 2.3). Recent data from the Joint United Nations Programme on HIV/AIDS (UNAIDS) also suggest that, in high-prevalence countries, HIV contributes significantly to pregnancy-related mortality, pointing to the urgent need to ensure that eligible women living with HIV receive full treatment and that these services are integrated into sexual and reproductive health care.¹¹⁷

In sub-Saharan Africa, women represent the majority of people living with HIV

In 2013, an estimated 35 million people globally were living with HIV. Of these individuals, 31.8 million were over the age of 15 and 3.2 million were under age 15.¹¹⁸ Globally, the numbers of women and men living with HIV are similar, but with large regional differences (figure 2.17). Nearly seventy per cent of those who are HIV-positive live in sub-Saharan Africa, and 59 per cent of that group are women. In the Caribbean, the sex distribution among HIV-positive indi-

¹¹⁶ WHO, 2014b.

¹¹⁷ UNAIDS, 2013.

¹¹⁸ UNAIDS, 2014a.

viduals is balanced, while in all other regions more men than women are HIV-positive. In these regions, the female share of those who are HIV-positive ranges from 22 per cent in Western and Central Europe and North America to 39 per cent in the Middle East and North Africa.

In general, females have a greater physiological susceptibility than males to contracting HIV. Gender inequality and specific gender norms can add to their risk. Violence against women, for example, is fuelling the HIV epidemic. Women who have experienced intimate partner violence are 50 per cent more likely to be living with HIV than those who have not.¹¹⁹ Moreover, fear of violence undermines the capacity of girls and women to negotiate safer sex and to seek HIV testing, reproductive health services or other health care.¹²⁰ Overall, services for women experiencing violence remain inadequate (see Chapter 6 on Violence against women).

Men are also harmed by unequal gender norms and expectations and prevailing concepts of masculinity. Men's sexual risk-taking can increase their chance of contracting HIV. They are also less likely to get tested for HIV in all regions as compared to women, who may be at an advantage since HIV testing is routinely offered in antenatal care settings.¹²¹ Men also tend to enter treatment at later stages of the infection and are more likely to abandon it.¹²²

Access to antiretroviral treatment has increased dramatically, yet it is far from universal

The number of adults living with HIV is increasing (figure 2.17), despite a decline in the number of new infections since the late 1990s.¹²³ The reason lies in the greater availability of therapy and improved medications that are keeping more HIV-positive people alive for longer periods of time. Since 2005, the number of people receiving antiretroviral treatment (ART) has increased sharply in most regions. As at June 2014, 13.6 million people living with HIV were receiving ART globally, among which 12.1 million living in the developing regions. Between 2012 and 2013 alone, the number of people receiving ART

¹¹⁹ UNAIDS, 2013.

¹²⁰ *Ibid.*

¹²¹ *Ibid.*

¹²² *Ibid.*

¹²³ UNAIDS, 2014a.

rose by 1.9 million in the developing regions, the largest annual increase ever (20 per cent).¹²⁴

Treatment coverage is higher for women than for men in most regions. For instance, in 2012, 73 per cent of eligible¹²⁵ women compared to 57 per cent of eligible men received antiretroviral treatment in low- and middle-income countries.¹²⁶

Antiretroviral coverage for the prevention of mother-to-child transmission of HIV has increased, and the number of new infections among children has declined.¹²⁷ In 2012, of the estimated 1.5 million pregnant women living with HIV in low- and middle-income countries, 62 per cent received antiretroviral treatment; the proportion in sub-Saharan Africa was 60 per cent, more than double the share only three years earlier.¹²⁸ In other regions, antiretroviral coverage for the prevention of mother-to-child transmission of HIV varied, from 90 per cent in Eastern and Central Europe and the Caribbean to less than 20 per cent in Asia and the Pacific, the Middle East and North Africa.¹²⁹

4. Older ages

Non-communicable diseases are the main cause of death and disability among those in their later years

Old age is usually characterized by an increasing and general impairment of physiological functioning, resulting in the growing risk of disease and death. This is the outcome of the life-long individual ageing process and the accumulated effects of exposure to external health risk factors during all life stages. For statistical purposes, and unless otherwise specified, the term “older persons” in this chapter refers to those aged 60 and over.

Many studies, especially in developed countries, show that older women report worse health than men, suffer from more diseases, have more limitations in daily living activities, have more mental health problems, and are physically weaker than men of the same age.¹³⁰ Despite their higher morbidity, women in this age group have lower mortality than men. Possible explanations for

¹²⁴ United Nations, 2015c.

¹²⁵ Eligible as defined in the 2010 WHO HIV treatment guidelines.

¹²⁶ UNAIDS, 2013.

¹²⁷ *Ibid.*

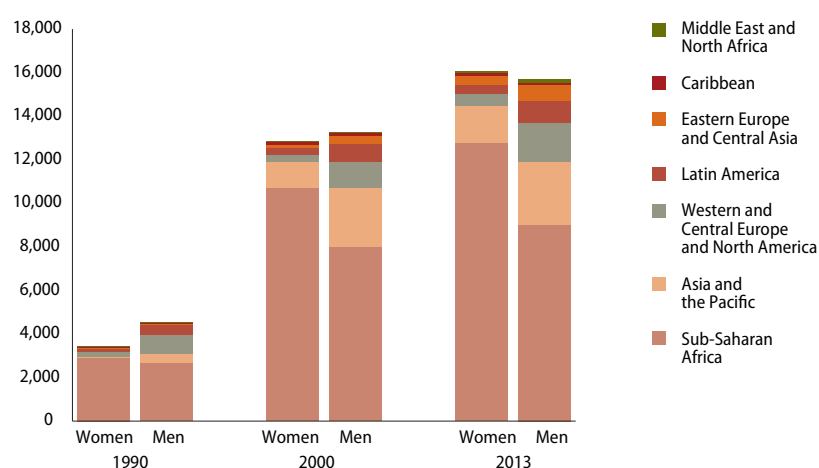
¹²⁸ UNAIDS, 2014b.

¹²⁹ *Ibid.*

¹³⁰ Oksuzyan and others, 2008; Collerton and others, 2009.

Figure 2.17

Estimated number of women and men (15+ years) living with HIV (thousands), 1990, 2000, 2013



Source: UNAIDS, The Gap Report, (2014a).

Note: Regions as listed in UNAIDS, 2014a.

this paradox are, among other reasons, genetic and immunological differences between men and women, and differences in health reporting and in access and use of health-care services.¹³¹

Over 85 per cent of all deaths among those aged 60 and over are caused by non-communicable diseases. Stroke and ischaemic heart disease (a disease of the blood vessels supplying the heart muscle) are, by a large margin, the most common causes of death in both older women and men, followed by all cancers combined and chronic obstructive pulmonary disease (table 2.6).¹³²

Cardiovascular disease

Cardiovascular disease kills more women than men, but the risk is higher for men than women

Stroke, ischaemic heart disease and other cardiovascular diseases have long been regarded as a male burden. Although men continue to have higher death rates due to cardiovascular disease than women in all regions of the world, in absolute numbers more women than men aged 60 and over die from these diseases globally (7.8 million women compared to 6.8 million men in 2012). This is mainly due to the increasing proportion of women in older age groups (70 and over), in which cardiovascular diseases cause most deaths.¹³³

¹³¹ Oksuzyan and others, 2009; Christensen, 2008.

¹³² WHO, 2014b.

¹³³ *Ibid.*

In 2012, death rates due to ischaemic heart disease for persons aged 60 and over were 802 per 100,000 population for men and 700 per 100,000 for women. Death rates were higher in developed regions compared to developing regions and higher for men than women in both regions. A different pattern emerged in death rates due to strokes: they were higher in developing than in developed regions, and women had higher death rates than men in developed regions (table 2.6).

Chronic obstructive pulmonary disease

Men are more likely than women to develop and die from chronic obstructive pulmonary disease

Chronic obstructive pulmonary disease (COPD) is a lung disease in which the airflow from the lung is blocked, making it hard to breathe. The disease is common among older persons and is usually irreversible and progressive. In 2012, death rates due to COPD for persons aged 60 and over were 278 per 100,000 population for women and 414 per 100,000 for men (table 2.6). Smoking—including passive exposure—is responsible for around 80 per cent of cases. Men have higher tobacco use than women and are more likely to develop COPD, but the increase in the number of women smokers could lead to an increase in incidence and prevalence of COPD among them.¹³⁴

Other important risk factors for the disease are household air pollution and occupational exposure to various dusts or chemicals. Household air pollution is mostly caused by the burning of solid fuels, which are typically used in sub-Saharan Africa and Southern and Eastern Asia for heating and cooking.¹³⁵ Women in general have higher exposure to this form of air pollution because of closer proximity and longer exposure during cooking and household work (see Chapter 7 on Environment).¹³⁶ Exposure to occupational pollution, as in some factories or mines, is more common among men than women.¹³⁷

Cancer

Although the majority of cancers start during middle adulthood, the disease usually takes its toll in terms of mortality in later years. Over 60

per cent of all cancer deaths occur after age 60.¹³⁸ Four of the 10 leading causes of death among men in this age group are cancers of different types—trachea, bronchus and lung cancers; stomach cancer; prostate cancer; and liver cancer. For women, two cancer types are included in this list—trachea, bronchus and lung cancers, and breast cancer (table 2.6).

Cancers (also called malignant neoplasms) are a group of diseases characterized by uncontrolled growth and spread of abnormal cells (metastasis). Cancers are a complex group of diseases and can have a variety of external causes usually modified by an individual's genetic make-up. An estimated 30 per cent of all cancer deaths are ultimately caused by five behavioural and dietary risks: high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use and alcohol consumption. Tobacco use alone is responsible for around 22 per cent of all cancer deaths and for about 71 per cent of global lung cancer deaths.¹³⁹

It is estimated that in 2012 there were over 14 million new cases of cancer, 8.2 million cancer deaths and 32.6 million people of all ages living with the disease.¹⁴⁰ Cancer incidence rates (the number of new cases per 100,000 population) and mortality rates (the number of deaths per 100,000 population) differ among regions and between women and men. For almost all forms of cancer (with the exception of cervical cancer), the age-standardized incidence rates in the developed regions are much higher than in the developing regions, while the age-standardized mortality rates are similar. In the developing regions, cancer detection usually occurs much later due to the lack of individual awareness, adequate primary care and widely available effective treatments.¹⁴¹

The global incidence rate for all cancers for men is 24 per cent higher than that for women, and the mortality rate 52 per cent higher (table 2.7). Although most forms of cancer can develop in both women and men, differences do exist: for women, the most common cancers are cancers of the breast, cervix, colon and lung; for men, cancers of the lung, prostate, colon, stomach and liver are predominant.

¹³⁴ Varkey, 2004.

¹³⁵ WHO, 2013b.

¹³⁶ Smith and others, 2014.

¹³⁷ Salvi and Barnes, 2012.

¹³⁸ WHO, 2014b.

¹³⁹ WHO, 2014m.

¹⁴⁰ IARC, 2014.

¹⁴¹ Global Task Force on Expanded Access to Cancer Care and Control in Developing Countries, 2011.

Table 2.6
Cause-specific mortality rates for women and men (aged 60 or over) by region, 2012 (top 10 causes of death worldwide)

Women					Men				
World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)			World rank	Cause of death	Cause-specific mortality rates (deaths per 100,000)		
		World	Developed regions	Developing regions			World	Developed regions	Developing regions
1	Stroke	703	491	825	1	Ischaemic heart disease	802	858	776
2	Ischaemic heart disease	700	737	678	2	Stroke	703	416	842
3	Chronic obstructive pulmonary disease	278	104	378	3	Chronic obstructive pulmonary disease	414	180	528
4	Lower respiratory infections	177	103	220	4	Trachea, bronchus, lung cancers	231	292	201
5	Diabetes mellitus	149	70	194	5	Lower respiratory infections	201	136	232
6	Hypertensive heart disease	129	104	144	6	Diabetes mellitus	135	76	163
7	Alzheimer's disease and other dementias	103	226	33	7	Hypertensive heart disease	107	79	121
8	Trachea, bronchus, lung cancers	88	110	76	8	Stomach cancer	95	78	103
9	Breast cancer	65	98	46	9	Prostate cancer	83	125	63
10	Kidney diseases	63	54	69	10	Liver cancer	82	54	96

Source: Computed by the United Nations Statistics Division based on data from WHO, Global health estimates for deaths by cause, age, and sex for years 2000–2012 (2014b).

Note: Mortality rates are not age-adjusted.

Breast cancer and cervical cancer are among the most common forms of cancer among women

Two of the most common cancers among women are related to their reproductive function: breast and cervical cancer.

In 2012, breast cancer accounted for 26 per cent of all new cancer cases (around 1.7 million worldwide) and 16 per cent of all cancer deaths (522,000 worldwide). Developing regions saw slightly more new cases of breast cancer (883,000) than the developed regions (794,000), but the incidence rate was 2.4 times higher in the latter.¹⁴² The higher incidence rate in the developed regions is partly due to higher detection rates. Lifestyle and risk factors also contribute. Low fertility, high alcohol consumption and obesity are important factors that increase the risk for breast cancer.¹⁴³

Cervical cancer is almost always caused by a virus—the human papillomavirus (HPV). HPV is the most common viral infection of the reproductive tract, and most sexually active women and men will be infected at least once during their lives—most likely at a young age. Cervical cancer can easily be treated or even avoided when discovered at an early stage. Furthermore, vac-

inations are available against some virus types that are responsible for around 70 per cent of all cervical cancers. Contrary to most other cancers, cervical cancer has much higher incidence and mortality rates in developing than in developed regions (table 2.7). This is due to the lack of sufficient cancer screening and vaccinations in many developing countries. Cervical cancer is also the second most common cancer in terms of new cases in developing regions.

For men, lung cancer is the most common type of cancer and is a leading cause of death in men over 60

For men, the most common cancers are cancers of the lung, prostate, colon, stomach and liver. Lung cancer is the most common cancer worldwide for men and for both sexes combined, with an estimated 1.8 million new cases in 2012. It has a relatively high fatality rate and is responsible for every fifth cancer death in the world. Age-adjusted incidence rates for men are 2.5 times higher than those for women. The highest incidence rates for men are in Central and Eastern Europe and Eastern Asia, and for women in North America and Northern Europe.¹⁴⁴ These gender and geographic patterns largely reflect historical exposure to tobacco smoke.

¹⁴² Ferlay and others, 2013.

¹⁴³ McPherson and others, 2000.

¹⁴⁴ IARC, 2014.

Table 2.7
Estimated age-adjusted incidence^a and mortality^b rates of top five^c cancers worldwide, women and men, by major regions, 2012

Women Cancer	World		Developing regions		Developed regions	
	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
Breast	43	13	31	12	74	15
Cervix uteri	14	7	16	8	10	3
Colorectum	14	7	10	6	24	9
Lung	14	11	11	10	20	14
Stomach	8	6	8	7	7	4
All cancers ^d	165	83	136	80	241	86
Men Cancer	World		Developing regions		Developed regions	
	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
Lung	34	30	30	27	45	37
Prostate	31	8	15	7	70	10
Colorectum	21	10	14	8	36	15
Stomach	17	13	18	14	16	9
Liver	15	14	18	17	9	7
All cancers ^d	205	126	163	120	309	138

a Number of new cases per year per 100,000 population (age-standardized).

b Number of deaths per year per 100,000 population (age-standardized).

c Top five cancers with highest mortality, sorted by incidence rate.

d Excluding non-melanoma skin cancer.

Source: Ferlay and others, 2013. GLOBOCAN 2012 v1.0, Cancer incidence and mortality worldwide: IARC CancerBase No. 11. <http://globocan.iarc.fr> (accessed November 2014).

Note: UN Population Division regions.

Cancer of the prostate is the second most common cancer among men globally, but with large geographical differences. In developed regions, it is the leading form of cancer in terms of new cases, with 50 per cent more cases in 2012 than lung cancer. The incidence rate in developed regions is almost five times higher than in developing regions—largely a consequence of higher-level diagnostic practices in developed countries.¹⁴⁵ Prostate cancer is mostly a cancer of old age, with the only other known risk factors being African ancestry and having a family history of the disease.

Dementia

Dementia is one of the major causes of disability in later life. It is a syndrome caused by degenerative changes in the brain leading to deterioration in memory, thinking, behaviour and the ability to perform everyday activities. The result is a loss of skills that enable one to live independently. Dementia is caused by a number of different underlying brain pathologies. Alzheimer's is the most common and is responsible for around 70 per cent of all dementia cases. Not much is known about risk factors except age itself, although evidence points to shared risk factors with cardiovascular disease. Smoking, obesity, diabetes, high

cholesterol and hypertension seem to increase the risk of dementia, while physical activity, a healthy diet, social activities and education seem to have a protective effect. Furthermore, genetic factors may increase the risk of dementia.¹⁴⁶

Women are more likely than men to be affected by dementia

The prevalence of dementia is less than 1 per 1,000 up to age 65,¹⁴⁷ but rises sharply afterwards, doubling with every subsequent five to seven years of age. At age 90 and over, an estimated 3 to 5 people out of 10 live with dementia.¹⁴⁸ Although research shows that the age-related prevalence of dementia has hardly changed over the past 30 to 40 years (at least in high-income countries),¹⁴⁹ the continuous ageing of the world population (see Chapter 1 on Population and families) will lead to a sharp increase in the number of people with dementia. In 2013, an estimated 44 million people globally were living with dementia, a number that is expected to double every 20 years, leading to 76 million cases by 2030, and 135 million by 2050.¹⁵⁰ Due to the changing population

¹⁴⁵ Center and others, 2012.

¹⁴⁶ Barnes and others, 2011; Alzheimer's Association, 2014.

¹⁴⁷ Vieira and others, 2013.

¹⁴⁸ Alzheimer's Disease International, 2009; Prince and others, 2013.

¹⁴⁹ Alzheimer's Disease International, 2009.

¹⁵⁰ Alzheimer's Disease International, 2013a.

structure, the vast majority (71 per cent) of people with dementia will live in countries currently classified as low- or middle-income.¹⁵¹

Dementia has important gender dimensions for two reasons. First, women are at a higher risk of dementia than men and represent the majority of older persons suffering from this condition. The prevalence rate for dementia is estimated to be between 23 and 41 per cent higher for women than for men. Also, the number of years lost globally due to premature death and disability related to Alzheimer's disease and other forms of dementia are higher for women than for men by 14 per cent in the 60 to 69 age group and by 38 per cent in the 70 and over age group. Women are more affected than men by the disease because of their greater longevity and the typically late onset of dementia. Dementia prevalence in the age group 85 and over—of which women represent 65 per cent in 2015¹⁵²—is estimated to range between 25 to 50 per cent.¹⁵³

Not only do more women than men suffer from dementia, they are also the majority of informal caregivers—mostly in their role as partners, daughters and daughters-in-law. Informal care is the rule in most low- and middle-income countries, where professional or institutional care is often not widely available. A recent literature review by Alzheimer's Disease International of 25 studies covering all major regions (and representing countries with 78 per cent of the global population with dementia) revealed that between 55 and 91 per cent of all informal caregivers of people with dementia were women (unweighted average of 76 per cent).¹⁵⁴ A survey in the United States conducted by the Alzheimer Association showed that the share of women among caregivers increased with the duration and amount of caregiving provided. The same study showed that women caregivers were seven times more likely than men to go from working full-time to working half-time and twice as likely to give up paid work entirely.¹⁵⁵ Taking care of a demented person not only has an economic impact, it also has adverse effects on the physical and mental health of caregivers due to the physical and emotional strain of caring for those ill with the disease.¹⁵⁶

The health of an ageing population

The proportion of older persons in the population is increasing worldwide as a consequence of declining fertility rates and increasing life expectancy (see Chapter 1 on Population and families). This phenomenon, known as “population ageing”, takes place in nearly all countries around the world.¹⁵⁷ Globally, the proportion of older people (aged 60 and over) has increased from 9 per cent in 1990 to 12 per cent in 2015, and is expected to increase further to 21 per cent by 2050.¹⁵⁸ As populations age, the prevalence of non-communicable diseases and the proportion of persons with disabilities increase. Forty-six per cent of all persons aged 60 and over have a moderate or severe disability compared to just 15 per cent of persons aged 15 to 49.¹⁵⁹ Several non-communicable diseases contribute the most to the burden of disease in terms of number of years lost due to disability per 1,000 persons (YLD) for both women and men. In addition to Alzheimer and dementia, they include hearing loss, musculoskeletal diseases (in particular, back and neck pain and osteoarthritis), COPD, unipolar depressive disorders, injuries due to falls, diabetes, vision loss and ischaemic heart disease.¹⁶⁰ Among these, the burden of disease due to unipolar depressive disorders, vision loss and osteoarthritis is higher for women than for men; the burden due to back and neck pain, hearing loss and injuries resulting from falls is higher for men than for women. Hyperplasia of the prostate also adds to the years of life lost due to disability in men.¹⁶¹

These conditions, which limit functional capacity and can cause chronic pain, are associated with increased dependency and restricted participation. They also create considerable demand for long-term care that often becomes the responsibility of the women in a household. For instance, a 2011 study on caregiving in 16 OECD countries¹⁶² showed that more than 1 in 10 adults aged 50 and over are involved in informal caregiving related to personal care or basic activities of daily living for persons with functional limitations. A larger number of caregivers—1 in 3 adults aged 50 and over—provide help with instrumental activities of daily living

¹⁵¹ *Ibid.*

¹⁵² United Nations, 2013a.

¹⁵³ Duthey, 2013.

¹⁵⁴ Alzheimer's Disease International, 2010.

¹⁵⁵ Alzheimer's Association, 2014.

¹⁵⁶ Alzheimer's Disease International, 2013b; Alzheimer's Association, 2014.

¹⁵⁷ United Nations, 2013c.

¹⁵⁸ United Nations, 2013a.

¹⁵⁹ WHO and World Bank, 2011.

¹⁶⁰ WHO, 2014b.

¹⁶¹ *Ibid.*

¹⁶² Colombo, 2011.

such as shopping and paperwork. About two thirds of them are women, but the sex distribution changes with age. Among caregivers aged 75 and over, men have similar or higher rates of caregiving than women in two thirds of countries. The study also showed that providing personal care can be demanding and may be incompatible with a full-time job when the time spent on care is more than just a few hours. Caregivers, particularly those providing longer hours of care activities, are less likely to be employed than non-caregivers. When they are employed, they tend to work shorter hours or have a temporary work contract. Furthermore, intensive caregiving can have a negative impact on mental health. In some countries, the detrimental effect is stronger for women than for men.¹⁶³

To improve the quality of life of older persons, more attention needs to be paid not only to managing disabilities but also to preventing them. The functional capacity of the body naturally declines with age, but the rate of decline is largely determined by external factors throughout the life course. The decline can accelerate due to unhealthy habits such as smoking or alcohol use, or slow down by healthy habits such as a wholesome diet and physical activity. Healthy behaviour in all life stages can increase life expectancy and delay the onset of chronic conditions and disability, compressing the time spent in ill health into a shorter period at the end of life.¹⁶⁴

¹⁶³ *Ibid.*

¹⁶⁴ WHO, 2007; WHO, 2009b; WHO, 2012b.