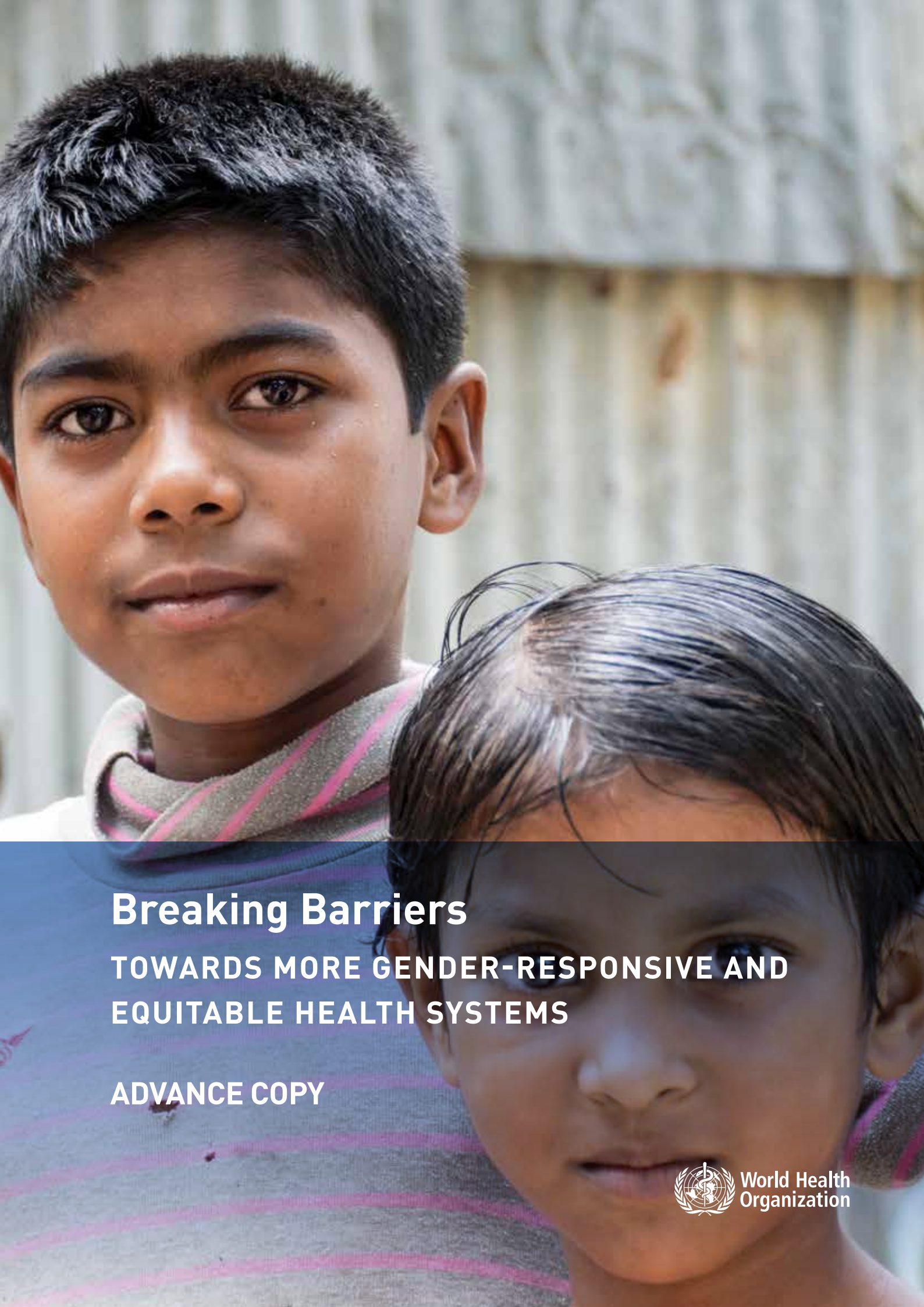




Breaking Barriers

**TOWARDS MORE GENDER-RESPONSIVE AND
EQUITABLE HEALTH SYSTEMS**

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**World Health
Organization**

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Numerical highlights

- Access to reproductive, maternal and child health services is improving, but many women and children are still not being reached. According to data from 98 national health surveys 2010–2017, an estimated 40% of women of reproductive age (ages 15–49) did not have four or more antenatal care visits during pregnancy, as recommended by WHO, and 38% of sexually active women in need of contraception were not using a modern method. Coverage was even lower among women living in poverty, in rural areas and with lower formal education.
- Women's social independence influences access to health services. Data from 42 Demographic and Health Surveys reveal that women's greater social independence within the household is associated with higher coverage of maternal and child health services. The difference is largest for antenatal care: 44% of women with low social independence had at least four antenatal care visits compared to 73% of women with higher social independence, a 29 percentage point difference.
- Noncommunicable diseases are the leading cause of death in women, accounting for 73% of all deaths in women. There are regional differences in mortality which reflect disparities in access to preventive services, diagnosis and treatment. For example, the breast cancer five-year survival rate is close to 90% in North America and below 60% in many low-income countries.
- Gender inequality and discriminatory laws and policies continue to impede access to HIV services especially for younger women. In eastern and southern Africa in 2018, women accounted for 83% of new HIV infections among 10–19 year olds. An alarming 7 in 10 young women (ages 15–19) in sub-Saharan Africa do not have comprehensive knowledge about HIV.
- Gender inequality is reflected in the delivery of health services. As well as typically being the primary – usually unpaid – caregivers in their household, women also make up 70% of health and social workers. But they are paid less than men and have fewer leadership and decision-making roles in the health sector.
- Gender affects men as well. They are more predisposed to certain health risks, often have poor access to health services and may be less willing to seek health care than women because of rigid gender norms and harmful notions of masculinity; global and national policies often fail to consider these gender-related health risks for men
- Noncommunicable diseases account for 70% of all deaths of men globally, cardiovascular diseases (CVD) and cancers accounting for 67% of the deaths. Tobacco and alcohol use are major risk factors for CVD and cancers, and globally their consumption is higher for men

than women. In 2016, among people over 15 years, 54% men and 32% women reported being current drinkers and 34% men and 6% women reported smoking tobacco daily.

- Men are less likely than women to access health services for HIV and tuberculosis. They are more likely to delay seeking care or to complete treatment, and thus have worse health outcomes. Men accounted for 70% of the new adult HIV infections in 2018 in all regions, except in sub-Saharan Africa, where they accounted for 41%. They also accounted for 64% of all tuberculosis cases in 2017. However, their treatment rates are low. Coverage of HIV antiretroviral therapy among men over 15 years was 55% in 2018, compared with 68% among women. As a result, men are more likely than women to die of AIDS-related causes and tuberculosis. And globally, they accounted for about 60% of the AIDS-related deaths among adults in 2018 and two-thirds of deaths among HIV-negative individuals with tuberculosis.

Policy highlights

- For universal health coverage, “leave no one behind” means that countries should prepare equitable and gender-responsive health systems that consider the interaction of gender with wider dimensions of inequality, such as wealth, ethnicity, education, geographic location and sociocultural factors and implement them within a human rights framework.
- Countries must consider the health inequities within and across groups and geographic areas, and learn how gender norms, unequal power relations and discrimination based on sexual and gender orientation impede access to health services. National health plans should consider equity and gender-related barriers. The opening times, staff composition and location of health facilities should be considered from an equity perspective, and services should be age and culturally appropriate.
- Multisectoral cooperation is essential for reducing health inequities since some factors influencing disease burdens and barriers to access lie outside the reach of the health sector. Multisectoral involvement and coordination should be integrated in national health plans. Engaging civil society organizations and the public in decision-making and feedback is essential.
- An equity, gender and human rights perspective in developing social health protection schemes is needed to address the differential risks experienced by people across the life course and to assist people in avoiding or coping with the financial costs of treating illnesses. Social health protection schemes should consider the health care needs of marginalized groups and incorporate mechanisms to remove the access barriers they face.
- Effective, equitable and cost-efficient services can be delivered only when based on evidence. Further research using mixed methods – and quantitative and qualitative data – is needed to understand the mechanisms behind gender and equity barriers, which can vary by setting and population group.
- Indicators for monitoring progress towards universal health coverage should enable monitoring progress for particular groups. At a minimum, indicators should be disaggregated by sex and age. Further disaggregation by ethnicity, migration status, wealth, education and geographic location is essential to identify and tailor interventions to reach groups living in situations of greatest vulnerability.

This report draws attention to gender as a powerful determinant of health care access and outcomes. By analysing universal health coverage (UHC) indicators from a gender perspective, including indicators disaggregated by sex, the report exposes how people’s gender intersects with their socioeconomic backgrounds and other aspects of their identities and circumstances to produce health inequities. It applies gender and equity perspectives to service coverage and financial protection, two key dimensions of UHC. It concentrates on the policies and services of health systems, while acknowledging

that breaking gender- and equity-related barriers requires a multisectoral approach. It shows how health systems and UHC policies, by increasing gender responsiveness, can improve equity. And it recommends ways to incorporate gender in the UHC framework for monitoring country progress (see the glossary for definitions of key gender-related terms).

Most countries have improved coverage of services for reproductive, maternal, newborn, and child health since 2000 but gains in coverage for noncommunicable disease have been far less pronounced. Coverage of reproductive, maternal, newborn and child health

services is lower among disadvantaged children and women.

Social, cultural, financial and legal barriers and structural gender inequalities create critical challenges for meeting women's health needs, especially their sexual and reproductive health needs. In many settings women have limited autonomy and decision-making power, even over their health care needs – and limited time to seek services because of their caring responsibilities (1). Furthermore, the opening times and location of services and how women are treated when receiving health services affect their and their children's use of health services (2).

Gender is an important determinant of health for men as well. Restrictive gender norms and harmful notions of masculinity, combined with aggressive marketing of harmful products and practices to men, can increase men's risk-taking and decrease their willingness to use health services. Addressing masculinities and the social determinants of men's health is relatively neglected in global and national health policies and hence, services and programmes fail to identify how best to reach men for their health needs, which further reduces their access.

Socioeconomic, geographic and cultural factors influence health care needs and access to services. In many countries people living in poverty, in rural areas and in informal urban settlements have limited access to health services, and their health outcomes are poor (1, 3). Transport costs are high because public transport is underdeveloped in rural areas and health facilities are distant (3). People with low incomes are more likely to be in informal seasonal and temporary employment without social health protection. They thus face higher direct and indirect costs when using health services, including loss of income that can lead to debt and impoverishment. Services in disadvantaged neighbourhoods, in rural areas and conflict settings are also more likely to be poorly resourced and poorly staffed and thus poor in quality (3).

Gender inequalities and gender norms and relations intersect with socioeconomic, geographic and cultural factors to magnify these barriers. Age, wealth, marital status, ethnicity, religion, caste, disability, education level and migration status can lead to stigma and discrimination and influence access to and use of health services.

People's health cannot be addressed in isolation – they are inextricably linked. For

example, premature mortality among men causes loss and grief for the family while also increasing the burden of care for family members – particularly women – and reduce household income, increasing the risk of impoverishment, especially for the vast majority of households not covered by social protection schemes.

Women's and children's distinct needs

Women have distinct needs for health services throughout their life and gender inequalities and discrimination often impede access to appropriate care for themselves and as well as for their children

Health policies need to consider the great variation in women and girls' health needs over their lives. Women of reproductive age may need short-term or acute interventions that could be provided in a primary health care setting, while older women are likely to suffer from multiple chronic conditions that may need more specialized and costly care.

Among women who do participate in the labour force, a large proportion of women work in the informal sector – in low-paid informal activities or domestic work or in unpaid family work. More than 740 million women work in informal employment (4). In Africa 90% of employed women work in informal employment (4). They are not covered by social health protection schemes and thus risk impoverishment from catastrophic health spending. Single or widowed women, women with unemployed husbands and women whose husbands' health insurance does not cover dependants also face greater financial barriers to accessing health services. Moreover, even where women are employed or earn an income, gender norms and power relations in the household can dictate that they have less control over how to spend the household income. This affects not only their own access to health care but often also their children's.

Health systems need to respond to these realities and to recognize the major role of women in delivering care and how this plays out in the health system. As well as typically being the primary – usually unpaid – caregivers in their household, women also make up 70% of health and social workers but are paid less than men (5). They also have fewer leadership roles, decreasing the likelihood that these realities will be taken into account in health system decision-making (5).

REPRODUCTIVE, MATERNAL, NEWBORN AND CHILD HEALTH

Access to reproductive, maternal and child health care services is improving, but many women and children are still not being reached

Sustainable Development Goal (SDG) target 3.7 calls for ensuring universal access to sexual and reproductive health care services, including family planning information and education, and the integration of reproductive health care into national strategies and programmes by 2030. Limited access to sexual and reproductive care is one reason for persistently high maternal mortality, particularly in sub-Saharan Africa, where 66% of maternal deaths occurred in 2017 (6).

Coverage estimates for reproductive, maternal and child health indicators are based on national health surveys conducted mainly in low- and middle-income countries between 2010 and 2017 (See Annex 1 for the list of countries). The analysis includes four reproductive, maternal, newborn and child health indicators in the UHC Index and improved sanitation. Improved sanitation is included as it is closely connected to women's gender roles and access to health care, as well as to child health outcomes (1, 7).

In 98 countries with data, 40% of women of reproductive age (ages 15–49) did not have four or more antenatal care visits during pregnancy, and 38% of sexually active women in need of contraceptives were not using modern methods (Figure 1). Africa had the lowest of all regions.

The composite coverage index (CCI) – a proxy for universal reproductive, maternal, newborn and child health services that summarizes eight interventions along the continuum of care (see Annex 1 for how the measure is calculated) – shows that coverage of key interventions is increasing in all World Health Organization (WHO) regions, based on 63 countries with data (see Figure 1).

Women and children living in poverty and in rural areas have low access to health services

Uptake of reproductive, maternal and child health services is higher in richer households than in poorer ones, based on 96 countries with data. Differences in coverage by household wealth are largest for antenatal care and improved sanitation (Figure 2). Rural areas have lower coverage for all services, and as with wealth, the difference is largest for antenatal care and improved sanitation.

For antenatal care and DTP (diphtheria, pertussis and tetanus) vaccination, there are marked differences across wealth quintiles in both rural and urban settings. In 5 countries in the Western Pacific Region the poorest fifth of the population in urban areas have lower demand for family planning satisfied by modern methods than the poorest fifth in rural areas (Figure 3). Similarly, rural–urban differences are observed in improved sanitation, while differences are smallest for family planning satisfied with modern methods.

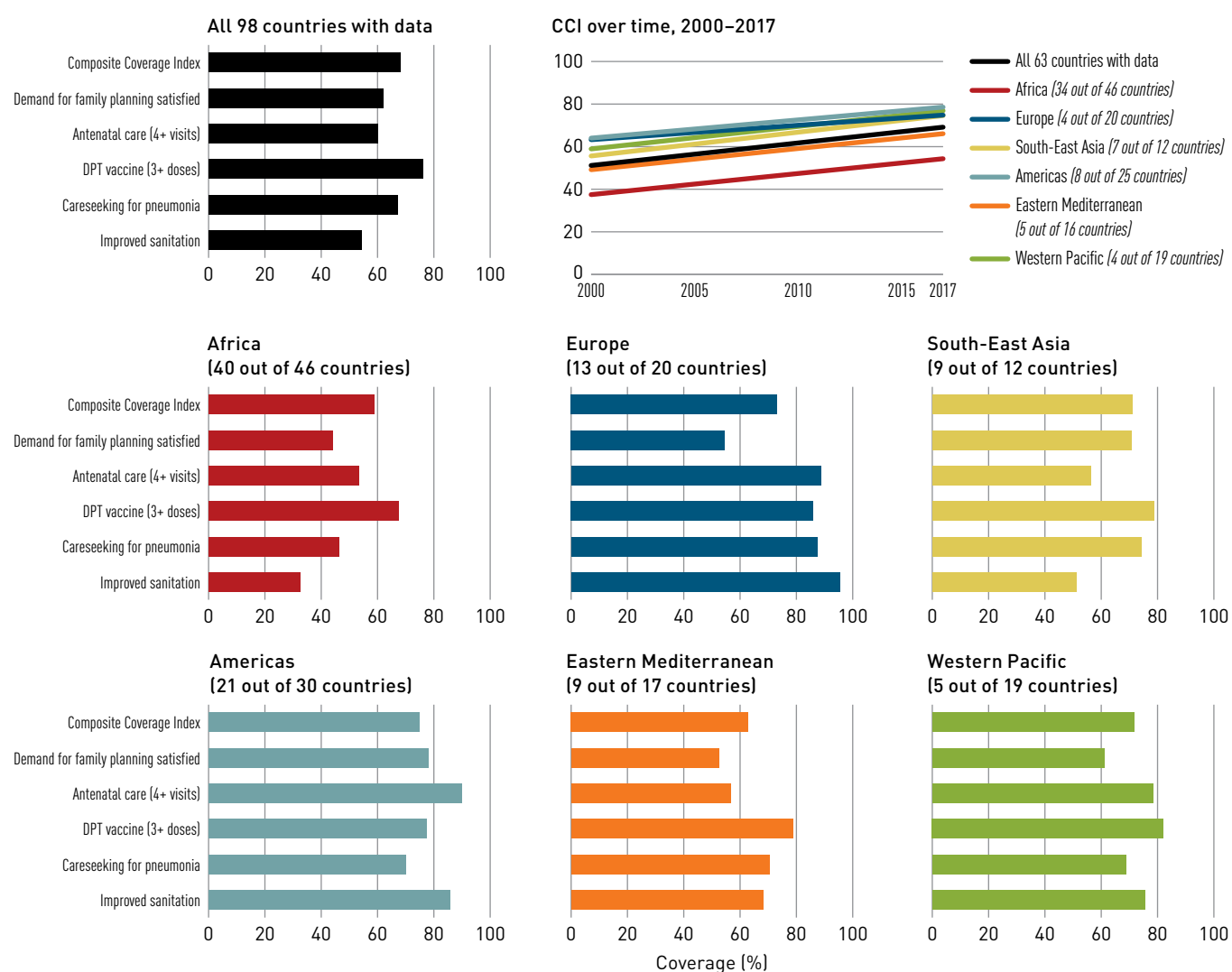
Transport costs and the loss of income involved in accessing health services are higher in rural areas, where fewer health facilities are available and transport infrastructure is poor. Rural and poorer areas are associated with greater supply-side constraints, such as shortages of health staff and medical supplies.

Wealth and education are highly correlated (9): people living in poverty or in rural areas are also more likely to be less formally educated, compounding barriers to accessing services. Having more formal education is associated with better health outcomes and access to health services, while having less formal education is associated with greater disease burden and lower access to services. In all regions access to maternal and child health services shows significant differences in coverage by women's education level. Women with no formal education have lower health service uptake than women with primary education and higher (Figure 4).

Women living in poverty and in rural areas are more likely to work in informal and irregular employment and to have limited or no social health protection

Because women living in poverty and working in informal employment have limited if any access to social health protection schemes, they may avoid accessing health services because of concerns that it will result in debt and impoverishment (2, 10). In many countries people with low incomes work largely in the informal sector – in subsistence farming, as small sellers or as daily wage earners and in seasonal employment, with no recourse to sick leave or paid leave to seek health care. Some 2 billion people – more than 60% of the world's employed – work in the informal sector, and 80% of them live in rural areas. Africa has the highest share of informal workers among all workers (86%), followed by Asia and the Pacific (68%) and the Arab States (68%) (4).

FIGURE 1 Africa has the lowest coverage of key reproductive, maternal and child health services of World Health Organization regions, and while coverage is increasing in all regions, Africa continues to lag



Note: The coverage analysis includes 98 countries with a Demographic and Health Survey or Multiple Indicator Cluster Survey, latest survey for each country, 2010–2017. Coverage is calculated as the averages of country values weighted by population. The trend analysis includes 203 surveys from 63 countries with at least two surveys with information on the composite coverage index from 2000 to 2017. Few countries are not part of WHO regions; they are included in the all country analysis but not in the regional analyses. Europe and Western Pacific are represented by only four countries and Americas by only eight countries in the trend analysis; these results need to be interpreted with caution.

Source: Demographic and Health Surveys or Multiple Indicator Cluster Surveys.

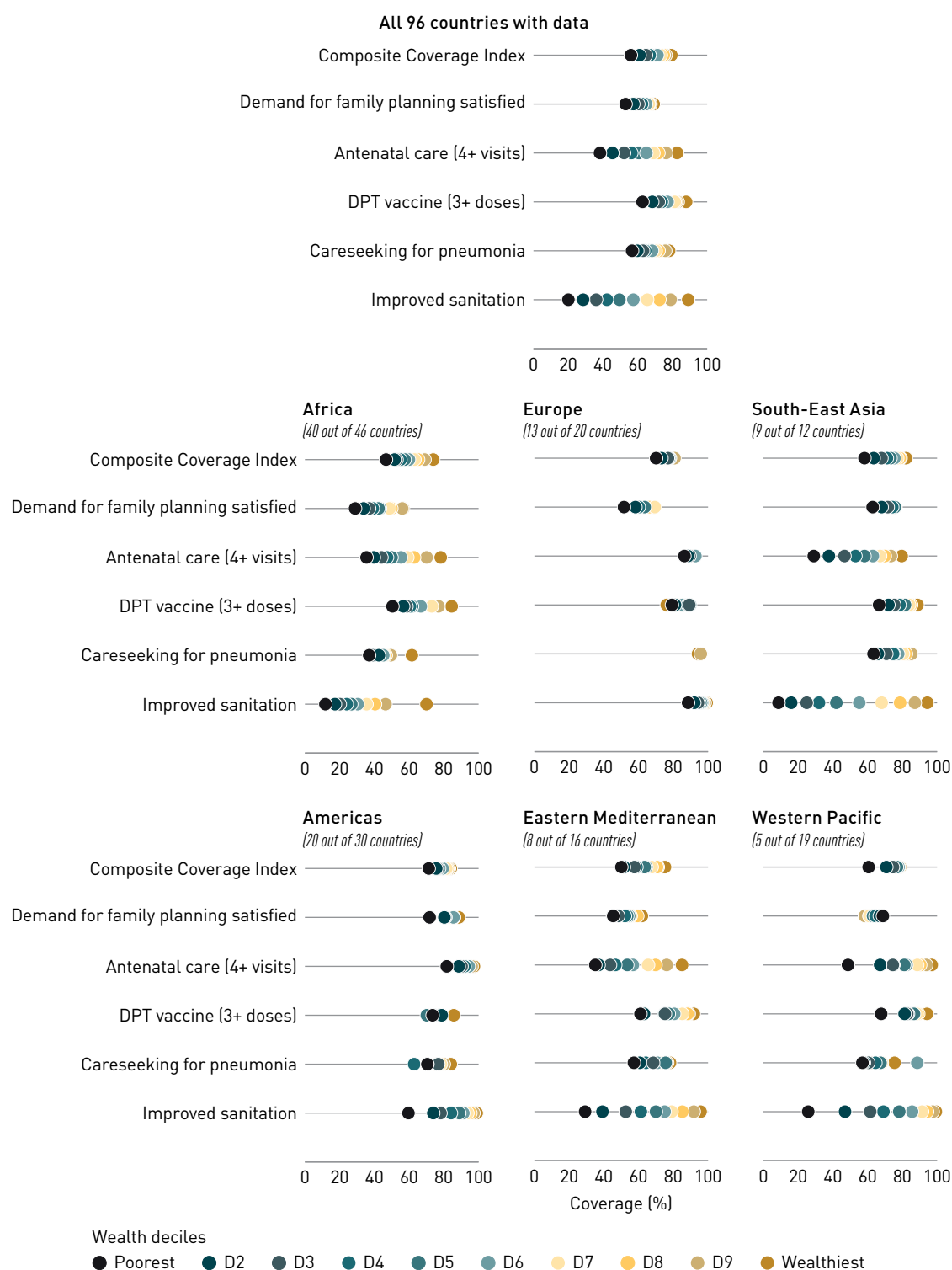
User fee exemptions for maternal and child health services have reduced financial barriers to some extent, but women and children continue to face other barriers

Many countries have abolished user fees for maternal and child health services, reducing some of the financial barriers to accessing health care. As seen in Figure 5, of 155 reporting countries, most have no user fees for maternal and child immunizations (97%), HIV testing and treatment (82%), antenatal care (80%), normal deliveries (71%), family planning (70%), caesarean sections (68%) or contraceptives for adolescents (65%). Fewer countries have exemptions for inpatient and outpatient care (66%–68%), HPV

vaccinations (34%) or infertility management (33%).

Although user fee exemptions have reduced the cost of care for users, women and children in many settings still face other barriers. Women in many low-income settings – especially adolescents (Box 1), migrants, and those from poorer households or of a minority ethnic group – cite fear of mistreatment, disrespect and abuse as reasons for avoiding health facilities (11). Women's agency and social independence can influence access to care (Box 2). Many women and girls in resource-constrained settings have limited access to safe and private washing facilities and culturally

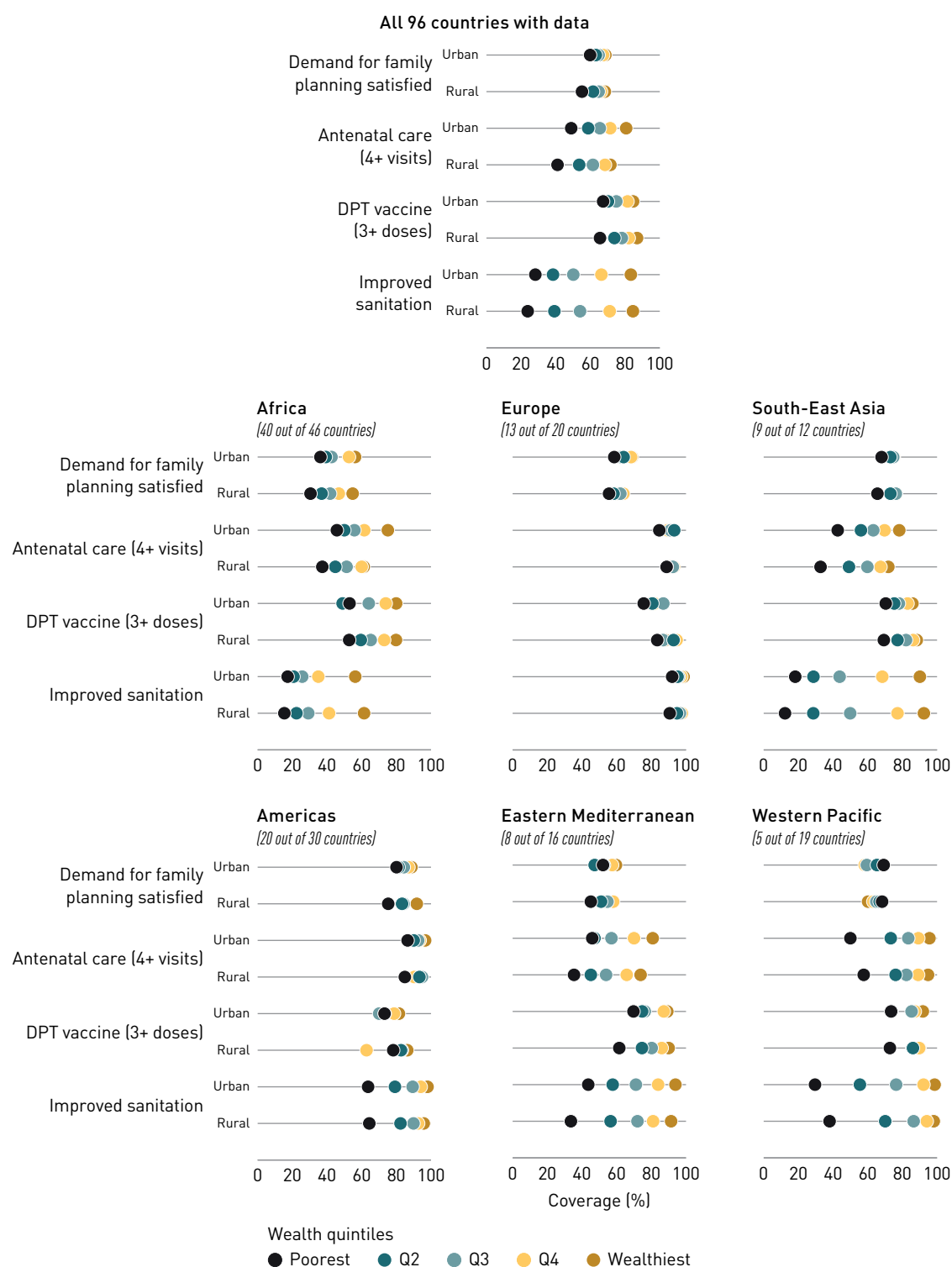
FIGURE 2 Use of reproductive, maternal and child health services is worse in poorer households than richer ones



Note: Includes 96 countries with a Demographic and Health Survey or Multiple Indicator Cluster Survey, latest survey for each country, 2010–2017, that included data on wealth. Coverage is calculated as the averages of country values weighted by population. Few countries are not part of WHO regions; they are included in the all country analysis but not in the regional analyses.

Source: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

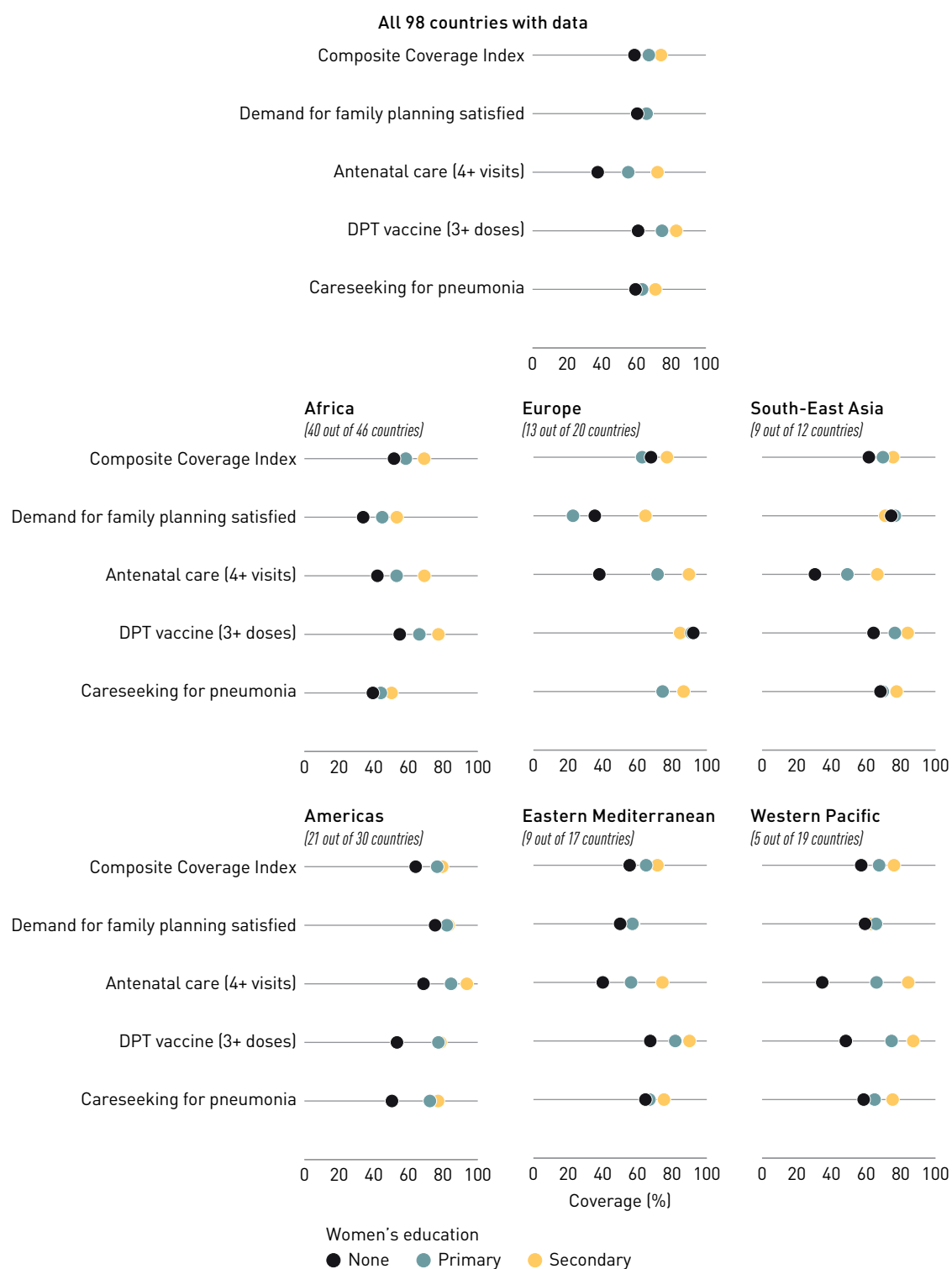
FIGURE 3 There are marked differences in use of reproductive, maternal and child health services across wealth quintiles in both rural and urban settings



Note: Includes 96 countries with a Demographic and Health Survey or Multiple Indicator Cluster Survey, latest survey for each country, 2010–2017, that included data on wealth and geographic location. Coverage is calculated as the averages of country values weighted by population. Few countries are not part of WHO regions; they are included in the all country analysis but not in the regional analyses. Rural and urban categorization follows Rutstein (8).

Source: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

FIGURE 4 Use of reproductive, maternal and child health services is lower for women with no formal education than for those with primary or higher education



Note: Includes 98 countries with a Demographic and Health Survey or Multiple Indicator Cluster Survey, latest survey for each country, 2010–2017. Coverage is calculated as the averages of country values weighted by population. Few countries are not part of WHO regions; they are included in the all country analysis but not in the regional analyses.

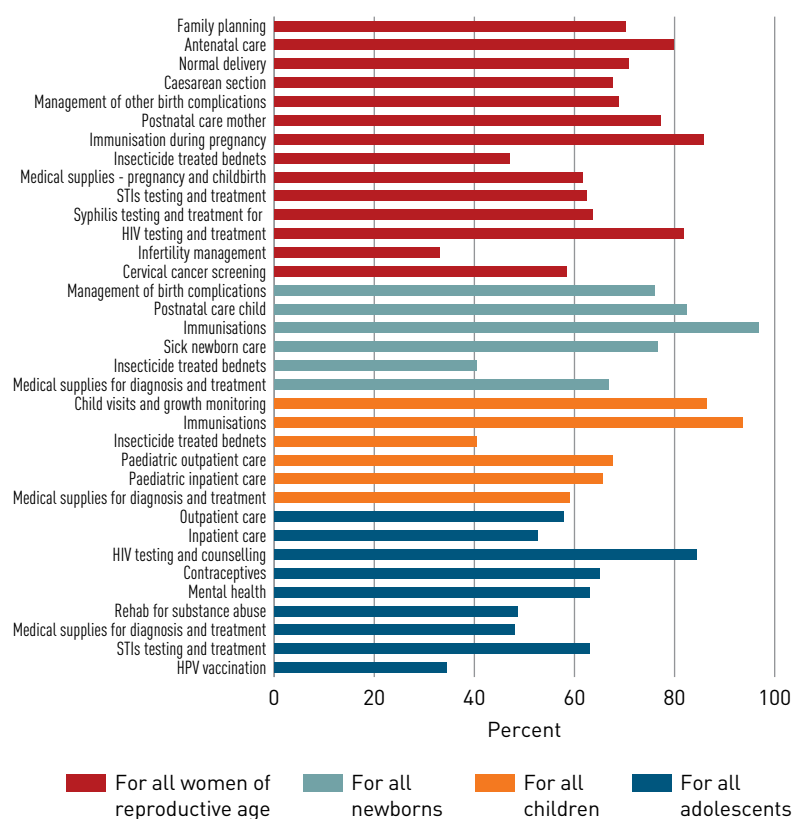
Source: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

appropriate menstrual hygiene products for dignified menstrual management (12). Lack of enough information about menstrual health and the stigma and discrimination associated with menstruation can result in many women and girls not receiving care for disorders related to menstruation, leaving them to suffer in silence (13). And women have limited time to seek services. On average, they do three times as much unpaid care and domestic work as men do, and when paid and unpaid work are combined, women work longer hours overall than men do (10, 14).

Legal and political factors may also affect women's access to health services. Many countries legally restrict access to abortion services: of 158 countries analysed, 18% do not allow or permit abortions to save the women's life, and only 32% of countries that permit abortions – most of them in Europe – do not require a justification (15). Even where abortions are legal, access depends on the availability of services, including aftercare, and on the views and attitudes of health care providers and families. Women who face barriers to accessing safe abortion services may resort to illegal, unsafe abortions. An estimated 8%–11% of maternal deaths worldwide are related to unsafe abortions (16), most of them in low- and middle-income countries, where 97% of unsafe abortions occur (17).

Lack of social health protection schemes, such as maternity benefits, create additional health risks and financial barriers for women Maternity protection benefits provide working mothers with income security and access to health care. Globally, 41% of childbearing women received maternity benefits, and but only 16% did in Africa (19). Even in countries with maternity protection policies, only 52% met the standard set by the International Labour Organization of having at least 14 weeks of paid leave (19). The lack of maternity benefits, especially among women in the informal sector, compels them to continue work very late into pregnancy and to return to work prematurely, exposing themselves and their children to increased health risks. Lack of maternity protection or short maternity leave can be a barrier to initiating and continuing breastfeeding exclusively for six months (20, 21). A lack of transferable paternity leave compounds this problem, worsening women's access to employment and decreasing women's pay relative to men, while also leaving women with disproportionate and unfair child care responsibilities.

FIGURE 5 Many countries offer user fee exemptions for maternal, child and adolescent health services at public facilities



Source: WHO Global Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey 2018–2019.

NONCOMMUNICABLE DISEASES

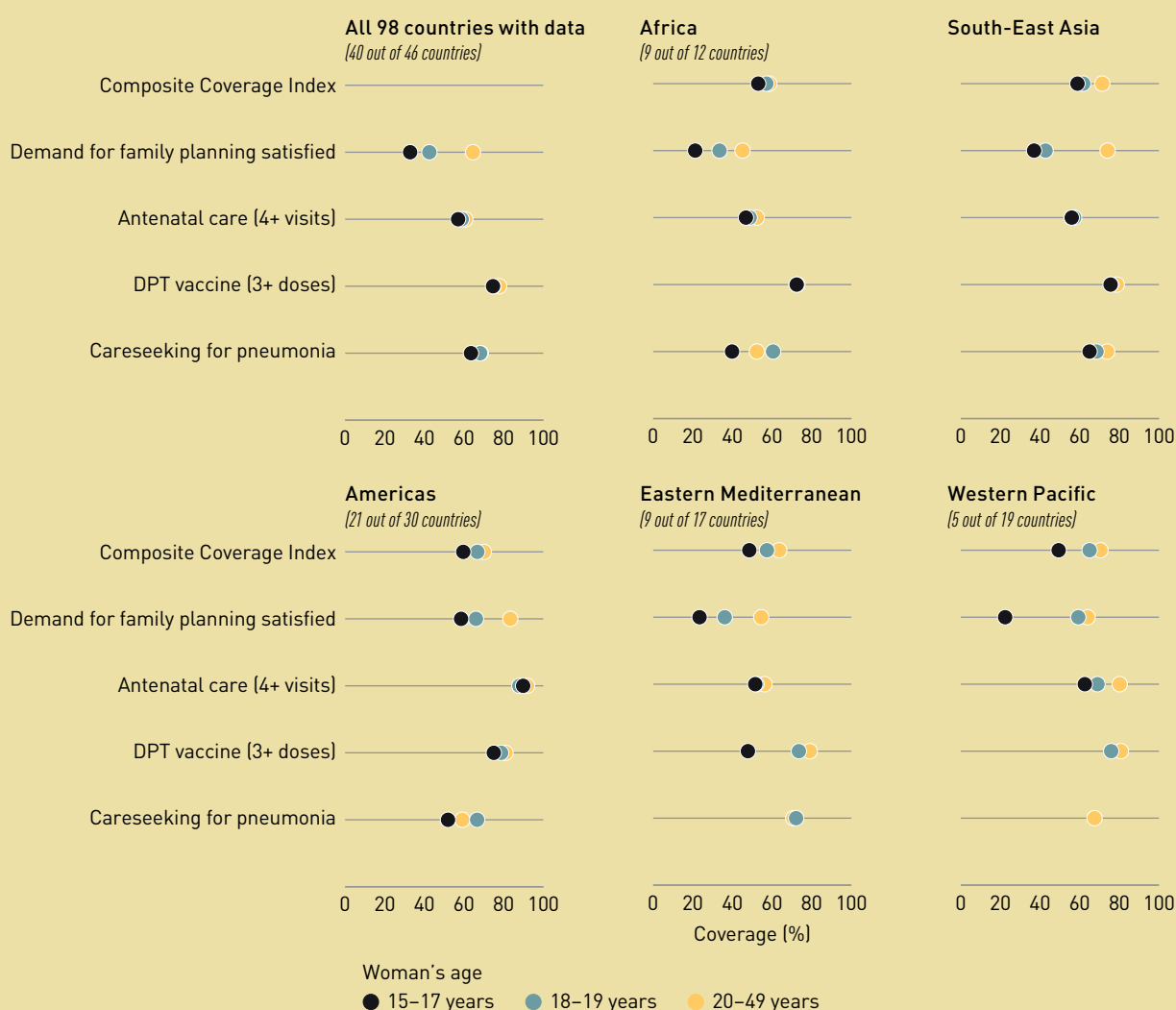
Cardiovascular diseases are a major cause of death among women, and women are less likely than men to be diagnosed and receive appropriate treatment

While reproductive and maternal health are important causes of morbidity and ill health affecting the quality of life for women in the reproductive age group, as women get older, noncommunicable diseases become the leading cause of death in women, accounting for 73% of all deaths (24). Cardiovascular diseases (CVDs) and cancers account for most deaths from noncommunicable diseases in women – 45% and 20%, respectively. In the past, CVDs have been considered a male disease, but CVDs affect as many women as men, though the disease develops 7–10 years later in women (25). Among older people, deaths from CVDs are more prevalent among women than men – 7.7 million women ages 60 and over died from CVDs in 2016 compared with 7.1 million men ages 60 and over. Women's longer life expectancy also contributes to their higher number of CVD deaths in older age. Women's mortality from CVDs is

BOX 1**Adolescent girls may face considerable gender-related barriers to comprehensive sexual and reproductive health services**

Adolescent girls (ages 15–19) have lower demand for family planning satisfied by modern contraceptives than do adult women (ages 20–49; box figure 1), with younger adolescents (ages 15–17) having the lowest coverage. In nine countries in the Eastern Mediterranean Region, children of adolescent mothers have lower DTP coverage than do children of adult mothers. Family planning demand is

estimated only for women in union because many countries do not collect information on contraceptive use by unpartnered women. Coverage is expected to be even lower among unmarried adolescents because they face additional barriers to access. Comprehensive sexuality and reproductive health services can enable adolescents to protect their health and advance gender equality (18).

BOX FIGURE 1 Young women have lower use of reproductive, maternal and child health services

Note: Includes 98 countries with a Demographic and Health Survey or Multiple Indicator Cluster Survey, latest survey for each country, 2010–2017. Coverage is calculated as the averages of country values weighted by population. Few countries are not part of WHO regions; they are included in the all country analysis but not in the regional analyses. Europe is excluded because of the small sample of women under age 20 who were asked about contraceptive use.

Source: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

Source: Demographic and Health Surveys.

1.7 times as high in low- and middle-income countries as in high-income countries (26).

Women manifest different, “atypical” symptoms for CVDs than the established symptoms experienced by men (27). The gender bias in clinical guidelines stems from the historic gender bias in CVD research. Women are under-represented in research on CVD, and sex- and gender-based analysis is seldom conducted. As such, clinical guidelines for women have been based on studies enrolling primarily men. This results in lack of evidence on CVD symptoms in women, lower awareness by female patients and poorer recognition by care providers, and thus delayed diagnosis, hospitalization and treatment – several studies in high-income countries show that women who present with cardiac arrest are less likely to undergo recommended treatment at hospitals, leading to higher in-hospital mortality rates for women with myocardial infarction (28, 29). A prospective study for selected high-, low- and middle-income countries shows that among people with previous CVDs (coronary heart disease or stroke), use of secondary preventive medications is lower among women than among men in all settings (30).

Large regional differences in cancer mortality reflect disparities in access to preventive services, early diagnosis and treatment

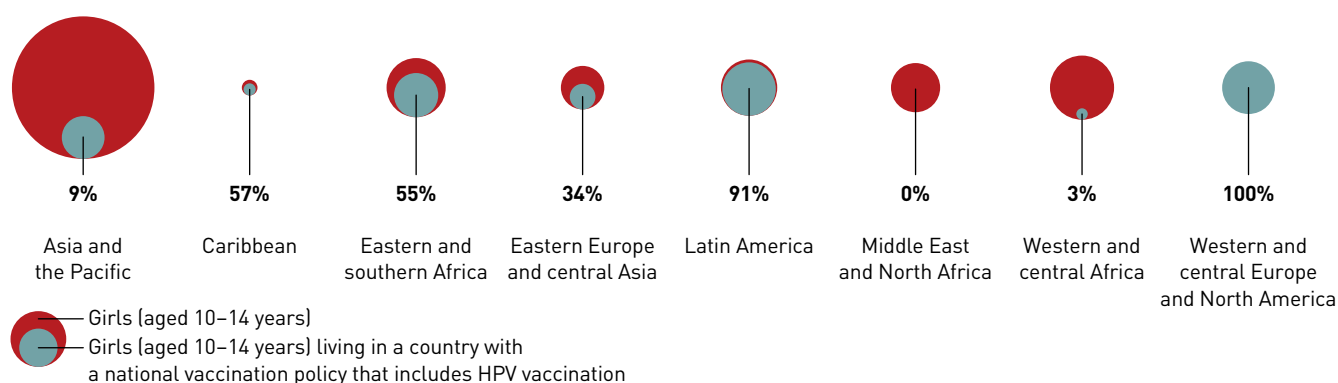
Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death in women (31). It is also the most common cancer for women in low-income countries, followed by cervical cancer. Asia and Africa accounted for 76% of new cervical cancer cases and 80% of deaths from cervical cancer in 2018 (32). Access to early diagnosis

and treatment affects the burden of cancer. For breast cancer the five-year survival rate is close to 90% in North America and below 60% in many low-income countries, reflecting differential access to diagnostic and therapeutic services (33). Within-country differences are also important and reveal the intersection of gender and other structural inequalities and discrimination. For example, in Australia indigenous women have a lower breast cancer survival rate than nonindigenous women (34). Similar data are lacking on cancer incidence, mortality and survival among indigenous women in low-income countries.

Both the incidence of and deaths from cervical cancer have decreased in high-income countries because of a series of interventions across the life course. These include vaccinating adolescents (ages 9–14) for human papillomavirus (HPV) before they are sexually active, screening and treating pre-cancer cervical lesions and managing invasive cervical cancer. There are three vaccines which can protect against HPV types 16 and 18 that cause 70% of cervical cancers and pre-cancerous cervical lesions (35). Most high-income countries have introduced the HPV vaccine in their routine immunization programmes for adolescent girls, but many low- and middle-income countries do not offer HPV vaccinations to adolescent girls (Figure 6). Providing HPV vaccinations and screening in low- and middle-income countries can reduce the incidence of and mortality from cervical cancer.

Gender affects the epidemiology and risk and protective factors for mental health conditions. Women have a higher lifetime prevalence of mood and anxiety disorders than do men and

FIGURE 6 Percentage of countries that include HPV vaccination in routine immunization plans to reduce the incidence of cervical cancer, by region



Source: UNAIDS Miles to go Report, 2018, p. 106 (36).

Note: Figure shows the percentage of girls (ages 10–14 years) living in a country with a national policy that includes HPV vaccination, by region, 2018.

a later onset of schizophrenia psychoses. Depression is more common and persistent in women (37) and is correlated with both, women's biology as well their stereotypical gender roles and lower status or power in relationships, higher burden of care work, as well as being subjected to violence (38). Globally in 2015, 5.1% of women have depression and 7.7% have anxiety disorders. The prevalence of depression is higher among older women ages 55–74 (7.5%), whereas the prevalence of anxiety disorders does not vary substantially by age (37). Similarly, women subjected to intimate partner violence and sexual violence also suffer from higher likelihood of depression, PTSD, anxiety and attempted suicide (41). While suicide deaths are higher in men, a nine-country study found that suicide attempts were consistently higher in women (39). In many settings women with mental health disorders and intellectual disabilities face mistreatment, abuse and coercion by health providers, including forced sterilizations, involuntary abortions and forced institutionalisation (40, 41).

Gender can influence the prevalence of physical inactivity, obesity and chronic stress among women, the risk factors of noncommunicable diseases.

Physical inactivity and obesity are among the risk factors for noncommunicable diseases. Starting in childhood girls are more sedentary than boys – a gap that persists through life. Among adolescents, 84% of girls and 78% of boys did not meet the WHO minimum requirements for physical activity (42). Among adults the prevalence rate is twice as high in high-income countries as in low-income countries (42). Physical inactivity is higher among women than men in all WHO regions except the Western Pacific Region and in nearly all countries, with 32% of women and 24% of men, 18 years and older, globally classified as insufficiently physically active in 2016 (42). Physical inactivity is associated with the increasing prevalence of obesity and overweight.

Lower levels of physical activity in women can be attributed partly to gender norms and are influenced by gender inequality. In childhood, boys are encouraged to be physically active more than girls are. In some settings discriminatory gender norms may restrict the mobility of girls and women or discourage them from playing some or even all sports. Gender inequality also results in limited time, resources and support for the physical

activity of girls and women. Physical and sexual threats to the safety of girls and women also discourage them from exercising (43).

Other gender-related factors, such as social acceptance, gender norms and relations, other cultural characteristics, education status and the country's economic status play important roles (44). For example, the greater burden of care responsibilities among women and the long hours and high-intensity of caregiving also increase the risk of chronic stress and mental ill-health, such as depression and anxiety, both associated with poor heart health. Gender-based violence and intersectional factors, such as ethnicity, religion, sexual orientation and gender identity, which amplify the experience of violence, discrimination and harassment, further increase the risk of noncommunicable diseases. Intimate partner violence or repeated exposure to sexual harassment, such as at the workplace, can result in chronic stress (45) (Box 3).

Socioeconomic position also influences the risk of noncommunicable diseases. In some settings women with low income and women from ethnic minorities are at a greater risk of exposure to second-hand smoke, with limited capacity to manage their exposure or to “live smoke free” (46). Women are also exposed to higher levels of household air pollution from the use of solid fuels in heating and cooking in low-income countries, increasing women's risk of stroke, heart disease and lung cancer (47).

Risk factors for CVD and cancers can affect women and men differently, also because of biological sex differences, which lead to differences in onset, symptoms, prognosis and outcomes. Women smokers with diabetes are twice as likely to develop coronary heart disease as men smokers with diabetes (48). Women with hypertension have a higher risk of heart attacks than men with hypertension (49). Women's lifetime risk for developing high blood pressure is also increased by pregnancy and hormonal contraceptives (50, 51).

INFECTIOUS DISEASES/HIV

Gender inequality and discriminatory laws and policies continue to impede access to sexual health and HIV services

HIV is the leading cause of death for women ages 30–49 worldwide and is among the top 10 causes of death among women ages 15–29 (26). In eastern and southern Africa in 2018 women and girls accounted for 83% of new HIV infections among 10–19 year olds (56). An

alarming 7 in 10 young women (ages 15–19) in sub-Saharan Africa do not have comprehensive knowledge about HIV (57), and condom use is lowest among women from poorer households and those without formal education (36).

While women, especially adolescents, have a greater biological susceptibility to HIV than men, gender inequality, violence, stigma, discrimination and poor access to HIV information and services fuel the HIV epidemic among women. These factors can result in women

having inadequate knowledge about HIV, engaging in transactional sex or being unable to negotiate safe sex.

Restrictive laws and policies, including criminalization of sex work and age of consent laws, discourage HIV health service uptake by women. The risk of acquiring HIV is 13 times higher for female sex workers than for other adult women (36). In 2017, 78 of 110 reporting countries had laws requiring people under age 18 to have parental consent to access HIV testing, 61 of 109 had laws requiring parental

BOX 3

Violence against women is a risk factor that affects a range of sexual and reproductive health, cardiovascular disease, HIV and mental health outcomes for women and girls

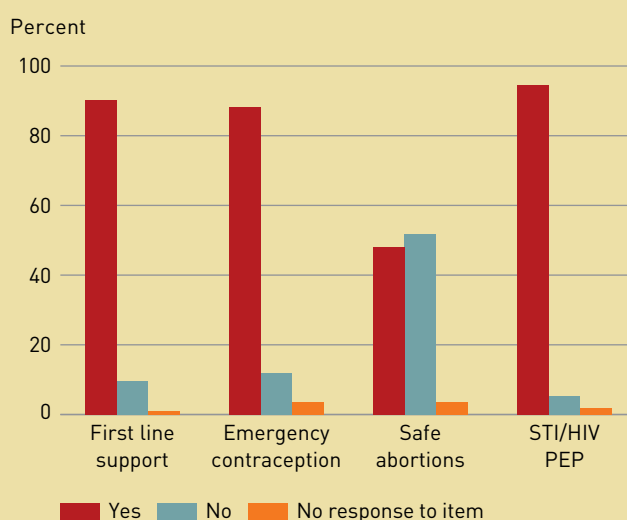
An estimated one in three women and adolescent girls experience physical or sexual violence by an intimate partner or non-partner sexual violence (52). Such violence starts early in the lives of women and girls, with 29% of adolescent girls (ages 15–19) experiencing intimate partner violence (52). Women who experience such violence are 4.5 times more likely to attempt suicide than other women; twice as likely to experience induced abortions, depression and alcohol use disorders; and 1.5 times more likely to get a sexually transmitted infection and, in some regions 1.5 times more likely to get HIV (52). They are also 16% more likely to have low birthweight babies and 43% more likely to suffer preterm births than women who do not experience intimate partner violence (52).

Most women who experience violence and female genital mutilation/cutting, do not report it and delay seeking care because of stigma, blame, fear and other barriers to seeking care. Even when they seek health services, they do not disclose violence as the underlying condition for which they are seeking care. However, since all women are likely to seek care at some point in their lives, especially sexual and reproductive health services, health services are a key entry point for identifying cases of violence and female genital mutilation/cutting and providing appropriate care.

Data are limited on service coverage including first-line/psychological support, treatment for presenting health conditions, basic psychosocial and mental health support and referrals for other services. However, some data are available for post-rape care (Box figure 1). WHO recommendations for post-rape care call for comprehensive care that includes first-line/psychological support, post-exposure prophylaxis for HIV and

sexually transmitted infections, emergency contraception and safe abortion to the full extent of the law. Of the 144 reporting countries, a large majority offer first-line support (90%), post-exposure prophylaxis (94.6%) and emergency contraceptives (88.2%). Safe abortion has the lowest coverage (48.2%). Although evidence on quality of care is limited, a few studies on female genital mutilation/cutting have found that health care providers receive little or no training on how to recognize and manage complications from the procedure or how to communicate effectively with patients and prevent female genital mutilation/cutting in the next generation (53–55).

BOX FIGURE 1 Proportion of countries reporting to have at least one service-delivery point that provides one or more elements of post-rape care ($n = 114$)



Source: UNAIDS National Composite Policy Index data 2016

consent for HIV treatment and 68 of 108 had laws requiring parental consent to access sexual and reproductive health services. Many countries prohibit condom promotion and distribution in schools and other venues where adolescents socialize. Of the 100 countries that reported a national plan or strategy related to condoms in 2017, only 26 reported that it included condom promotion in secondary schools (36). As a further consequence, women may fail to pursue the preventive care that they might have sought if their partners had known their HIV status or were being treated for it. Women living with HIV who have experienced intimate partner violence are also significantly less likely to start or adhere to antiretroviral therapy and have worse clinical outcomes than other women living with HIV (52).

Comprehensive interventions addressing both demand- and supply-side barriers, including financial and social support, can dramatically improve access to HIV-related health care in adolescents

Adolescents whose medical and nonmedical care needs are well supported have better HIV treatment outcomes. A study in South Africa (58) found that adherence to antiretroviral therapy treatment dramatically improved among adolescents who received comprehensive support: providing them cash to travel safely to clinics, going with them to clinics, ensuring that clinics are stocked with medications and ensuring that staff devote sufficient time to consultations and show kindness and concern towards their adolescent clients. Treatment adherence ranged from 3.3% when none of these support services were provided to 70% when all were provided. Unfortunately, this study did not present results by sex or gender, but it provides a good illustration of the importance of providing comprehensive medical and nonmedical support services, including supply- and demand-side improvements (Figure 7).

Men's greater health risks

Men are more predisposed to certain health risks, often have poor access to health services and may be less willing to seek health care than women because of rigid gender norms and harmful notions of masculinity; global and national policies often fail to consider these gender-related health risks for men

While men continue to benefit from a greater degree of socio-economic power and privilege than women by virtue of their gender, men

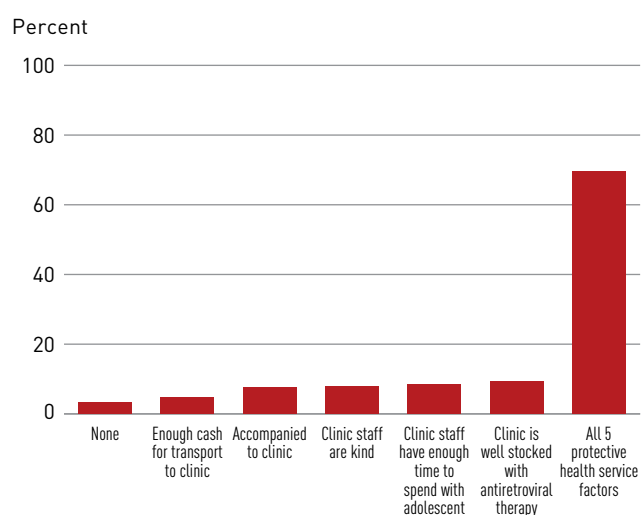
have higher mortality than women for 33 of the 40 leading causes of death (24). Some of this has to do with sex-based factors. However, in addition, restrictive gender norms including harmful notions of masculinity, combined with aggressive marketing of harmful products and practices to men, can increase men's risk-taking and decrease their willingness to engage with health services (59–61). The orientation of health systems towards maternal and child health services and gender stereotypes exclusively associating women with these services means that men have fewer entry points to health services, reducing their overall access.

Men have higher rates of mortality across the life course than women, resulting in a lower life expectancy (24). Men's health needs vary over their lifetime and are influenced by socioeconomic and behavioural factors. Young boys are more likely to be affected by infectious diseases such as malaria, HIV and TB, and the burden increases with age, while older men may suffer more from multiple chronic conditions (24). Segregation in the labour market exposes men to different and at times greater occupational health risks.

Modes of delivery of services are important to improving men's access to services. Combining services to reduce stigmatization or setting up clinics that serve only men can improve health access, utilization and outcomes. Men's participation in their partner's antenatal care can potentially familiarize men with health facilities, increase their entry

FIGURE 7 Supporting adolescents improves retention in HIV care

Predicted probabilities of full retention in care among adolescents (10–19 years old), Eastern Cape, South Africa, 2014–2015



Source: Cluver et al. 2018 (58).

points to health care and encourage them to use health care.

Gender norms related to masculinity interacts with social stratifiers to shape men and boy's health care needs and access to services. Men in rural areas with lower income and education and men who experience discrimination based on ethnicity, migrant status, sexual orientation or gender identity face greater difficulties in accessing health services. Men who work in the informal sector or who have temporary and irregular jobs have limited access to social health protection schemes and can face financial hardship because of high out-of-pocket health expenditures.

NONCOMMUNICABLE DISEASES

Tobacco and alcohol consumption are important risk factors in men, contributing to premature death and excessive illness

Tobacco and alcohol use are major risk factors for early death and disability among men (62). The alcohol and tobacco industries have historically targeted men, spending billions of dollars fostering the notion that smoking and drinking are markers of manliness (63, 64) – though they have also targeted women to increase their sales. Between 2000 and 2015 the number of smokers fell by 28.6 million globally. While the number of women who are current smokers fell in all regions, the decline

among men occurred almost exclusively in the Region of the Americas and the European Region, which have stronger tobacco control policies. This is reflected in the trends in deaths attributed to tobacco use – falling in the Americas and Europe, increasing in South-East Asia and the Eastern Mediterranean, and remaining low in Africa (65).

Alcohol consumption follows comparable patterns. More men drink alcohol than women. Globally, 54% men and 32% women reported being current drinkers in 2016 (66). Similarly, in all countries men drink more alcohol than women, both on heavier-drinking occasions and in the total volume of alcohol consumed. Women drink less than men in countries where the population drinking prevalence is low, while the difference between men and women is lowest in countries where the overall drinking prevalence is high (66). Alcohol consumption by men is also a risk factor for women's physical and mental health (67).

WHO has recommended several interventions to reduce consumption of tobacco and alcohol. Implementation has been slow but has been rising in many low- and middle-income countries. For example, 3.9 billion people in low- and middle-income countries – 61% of those living there – are now covered by at least one tobacco control programme (Figure 8) (68). Fewer countries have adopted recommendations to offer tobacco cessation services, conduct mass media campaigns and increase the price of tobacco, while more countries are implementing smoke-free public spaces, bans on tobacco advertisements and warning messages on tobacco packages.

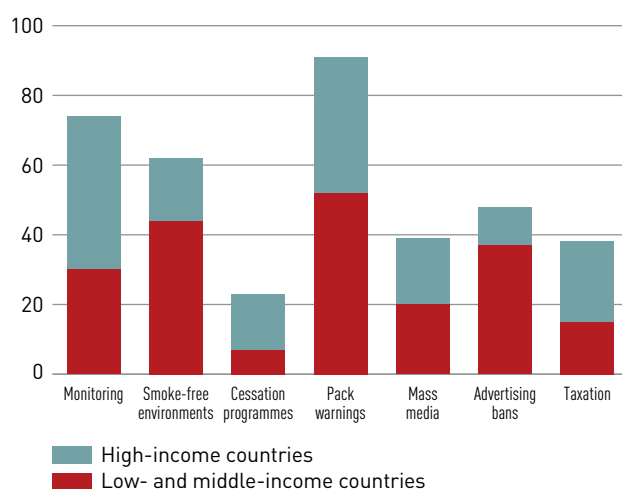
For the most cost-effective interventions for alcohol, the greatest progress has been made in pricing policies, while progress in advertising and availability of alcohol has been mixed (66). Although many of these interventions are at the population level, they can have different effects on men and women. A systematic review found that young men are more price sensitive than young women and therefore that price increases are more likely to reduce smoking uptake and the quantity of cigarettes consumed by young men (69).

Adolescent boys are particularly vulnerable to initiating unhealthy behaviours, increasing their risk of developing noncommunicable diseases later in life

Many unhealthy behaviours such as tobacco and alcohol consumption are adopted in adolescence. Smoking prevalence among boys ages 13–15 is 9%–10% in all countries except

FIGURE 8 Nearly two-thirds of countries – with 63% of the world's population – are implementing at least one WHO-recommended measure to control tobacco consumption

Number of countries implementing selected tobacco control policies at the highest level of achievement, 2018



Source: Cluver et al. 2018 (58).

in the Eastern Mediterranean Region, where it is 7% (65). School surveys show that alcohol use starts early, before the age of 15: 50%–70% of 15-year-old boys had consumed alcohol in the last 30 days before the survey in many countries in the European Region and the Region of the Americas. Prevalence was lower in many African countries that implemented the school surveys (10%–30%). Heavy-drinking occasions also peak during ages 15–24 (66). While smoking is prevalent mainly among boys, drinking is similarly prevalent among boys and girls, though girls tend to have fewer heavy-drinking occasions.

Noncommunicable diseases are a leading cause of death in men

Noncommunicable diseases account for 70% of all deaths in men globally, CVD and cancers accounting for 67% of the deaths (26). Nearly 24% of men over age 15 had high blood pressure in 2015, and 8.8% had high fasting blood glucose levels in 2014 (70, 71). Lung cancer is the most commonly diagnosed cancer and the leading cause of cancer death in men. It is followed by prostate cancer and colorectal cancer for incidence and liver cancer and stomach cancer for mortality (31).

Rigid gender norms and harmful ideals of masculinity increase the risk of CVD and cancers in men. Risk factors such as smoking and excessive drinking have been associated with masculine identities (60, 72). Men also experience more stress in settings where they are expected to be the sole breadwinner and in the workplace because of high demands or low control over their job (73). Unemployment or fear of unemployment may affect stress levels that in turn influence high blood pressure. As among girls, physical, sexual and emotional abuse among boys can elevate the risk of CVD when they become men (43). Access to diagnosis and treatment, along with exposure to risk factors, is affected by socioeconomic factors, including ethnicity and race (74). For example, Black men in the United States of America have one of the highest mortality rates from cancer (75).

Men's need for mental health services has been increasing, but men are less likely to access care, be diagnosed and receive treatment

The global age-standardized suicide rate in 2016 was estimated at 10.5 per 100,000 people. It was almost twice as high among men as among women (26), even though women are two to four times more likely to attempt suicide than men (76). Suicides rates are higher

for men in all regions and particularly high in Europe (21.2 per 100,000), South-East Asia (15.4) and Africa (16.6) (26). Several studies have found that despite having high rates of suicides, men are less likely to be diagnosed with internalizing disorders such as depression, in part because these conditions do not conform to traditional gender role stereotypes about men's emotionality (77). Gender bias in diagnosis and treatment for mental health conditions also influences men's access to appropriate services (78, 79).

INFECTIOUS DISEASES/HIV AND TUBERCULOSIS

Men with HIV tend to have fewer entry points into health services and to access care later, resulting in late diagnosis and poor health outcomes

Globally, the incidence of HIV infection declined from 0.38 per 1,000 uninfected population in 2005 to 0.24 in 2018 (36). Among the 1.6 million new HIV infections among adults in 2018, there were slightly more men (53%) than women. Men accounted for 70% of the new adult HIV infections in 2018 in all regions except in sub-Saharan Africa, where they accounted for 41%. Coverage of antiretroviral therapy among men ages 15 and older was low: 55% in 2018, compared with 68% among women. As a result, men are more likely than women to die of AIDS-related causes, and globally, they accounted for about 60% of the estimated 670,000 AIDS-related deaths among adults in 2018. The gender disparity in antiretroviral therapy coverage was greatest in western and central Africa, at 40% of men and 59% of women living with HIV. In the Middle East, North America and Latin America, antiretroviral therapy coverage was similar among men and women.

Although the percentages of people living with HIV who report being denied health-care services due to their HIV status are small, high levels of stigma and misconceptions about HIV persist in many countries. In Congo and Liberia, for example, a substantial proportion of people living with HIV say that a health-care professional has disclosed their HIV status to others without their consent, a breach of confidentiality that undermines confidence in HIV services. Key populations appear to face additional difficulties. In Côte d'Ivoire, for example, 22% of gay men and other men who have sex with men reported avoiding health-care services due to stigma and discrimination (36). In many settings self-testing for HIV has been found to overcome some barriers associated

with diagnosis because of convenience, ease of use and increased privacy (80). Self-testing could potentially improve testing rates among vulnerable populations and in settings where HIV is highly stigmatized. However, caution is required as there may be unintended consequences as a result of weaker linkages to care, including to pre- and post-test counselling.

Men are less likely than women to access health services for tuberculosis and more likely to delay seeking care and to have lower treatment completion rates and worse health outcomes

Globally, the tuberculosis (TB) burden is higher among men than women – men and boys accounted for 64% of TB cases in 2017 (81). In some countries the higher risk of TB among men is strongly associated with increased exposure to documented TB risk factors, such as cigarette smoking and alcohol use. Although men have higher prevalence rates, detection and reporting are lower for men in all WHO regions except Europe and the Americas (Figure 9) (81).

Men are less likely than women to access health services. Once they seek care and are diagnosed with TB, men have lower treatment

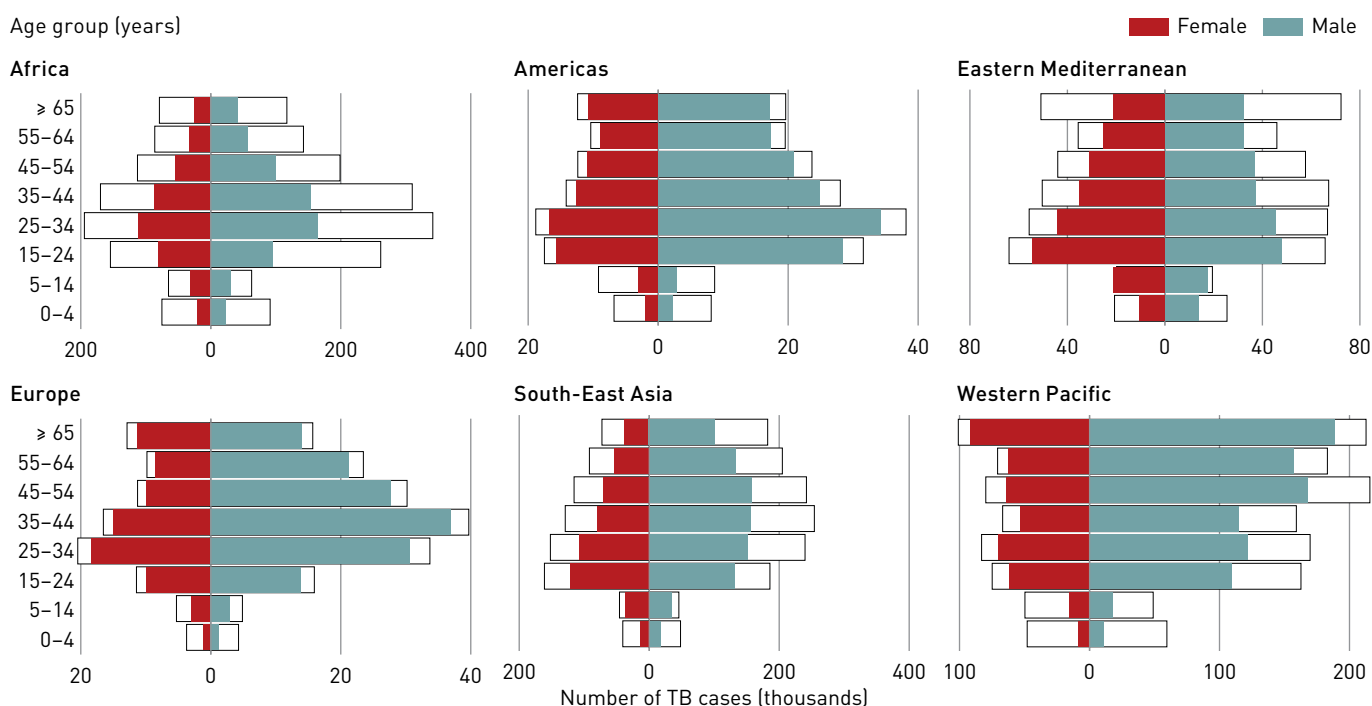
completion rates and worse health outcomes in some settings (82, 83). Men account for almost two-thirds of deaths among HIV-negative individuals with TB and for half of deaths among HIV-positive individuals with TB (84). Given the high burden of TB among men, decreasing the incidence of TB requires that programmes reach out to men with routine diagnostic and screening services and address the high prevalence of TB risk factors such as smoking and alcohol use.

Making health systems gender-responsive and equitable

In the 2030 Sustainable Development Agenda, UN Member States pledged to “leave no one behind.” For health systems that means that countries should prepare inclusive and gender-responsive national health strategies that consider wider dimensions of inequality, such as wealth, ethnicity, education, geographic location and sociocultural factors and implement them within a human rights framework (85). Countries must consider the inequities and disparities within and across groups and geographic areas in accessing health care, learn how gender norms and unequal power

FIGURE 9 Although TB prevalence is higher among men than women, men have lower detection and reporting rates in all WHO regions except Europe and the Americas

Regional estimates of TB incidence and case disaggregated by age and sex, 2017



Source: WHO Global Tuberculosis Report 2018 (81).

relations impede access and identify the key barriers to access for women, men, and lesbian, gay, bisexual, transgender and intersex populations (Box 4).

It is also important to consider how the health system is gender-equitable. A first step is to assess the central role of the health workforce in an equitable health system – not only in the supply and distribution of health workers, which influences access and equity, but also the gender composition of the health workforce, which can influence acceptability (Box 5). Transformative gender action in the health workforce is direct action towards making health systems more equitable.

Several factors contribute to the gender pay gap among health workers: different occupations for men and women (9.9%), different working hours for men and women (6.9%) and a remaining unexplainable gap of 11.2% for men and women in similar occupations with similar working hours.

DECENT WORK GAP

Men on average work more hours per week than women for most health sector occupations and regions. This likely reflects more part-time work for women. On average, women work 4.2 fewer hours per week than men among physicians, 3.5 fewer hours for nursing and midwifery, 3.7 fewer hours for dentists, 4.6 fewer hours for pharmacists and 3 fewer hours for personal care workers. In addition, for highly paid occupations, such as physicians, men are more frequently employed in the private sector (49%) than women are (39%). The opposite is true for low-paid jobs, such as personal care workers, where women are more frequently employed in the private sector (82%) than men (53%).

WHO's approach to ensure that no one is left behind calls for health policies that are built on fair laws that respect human rights and promote accountability (Box 6). Engaging civil society organizations and the public in decision-making and feedback can help to craft policies and services that are appropriate and reach the people most in need. Multisectoral support is essential for reducing health inequities since some factors influencing disease burdens and barriers to access lie outside the reach of the health sector. Multisectoral involvement and coordination should be integrated in national health plans and policies.

Health care delivery should be based on evidence that brings to light how gender and other socio-economic inequalities affect

health and health inequities and should be tailored first to equitably reach those left behind. Services should promote gender equality and be culturally and age appropriate. The opening times, staff composition and location of health facilities should be considered from an equity perspective. Everyone, including women, men and LGBTI populations, at every age including adolescence and old age, should feel welcome and be treated with respect and without discrimination. The impact on women of their role in providing paid and unpaid care needs to be recognized, and gender-transformative policies are needed to promote gender equality in health care provision.

A gender and equity perspective in developing social health protection schemes is needed to address the differential risks experienced by people across the life course and to assist people in avoiding or coping with the financial costs of treating illnesses. Social health protection schemes should consider the health care needs of marginalized groups and incorporate mechanisms to remove the access barriers they face, for example by covering the costs of care for these groups and by including informal sector workers in national social health protection schemes. A life-course perspective should be considered when designing essential service packages, especially services that have a higher risk of causing financial hardship and impoverishment.

Effective, equitable and cost-efficient services can be delivered only when based on evidence. Further research using mixed methods – household surveys and qualitative data – is needed to understand the mechanisms behind gender and equity barriers, which can vary by setting and population group. More research is needed to understand how gender norms influence men's risk behaviour and health seeking, and how discrimination affect the LGBTI population's risk behaviours and access to health services. Additionally, research is needed to understand how different social health protection schemes influence gender inequalities, norms and power relations and intra-household resource allocation.

Indicators for monitoring progress towards UHC should enable monitoring progress for particular groups. As a minimum, indicators should be disaggregated by sex and age. Further disaggregation by ethnicity, migration status, wealth, education and geographic location is essential to identify and tailor interventions to reach groups living in situations of greatest vulnerability. Indicators that are

BOX 4

Health care needs and service coverage of lesbian, gay, bisexual, transgender and intersex persons

Restrictive norms regarding sexuality and gender identities profoundly affect lesbian, gay, bisexual, transgender and intersex (LGBTI) populations, who face significant barriers to health services and discrimination and stigma.

There is little research and data on the health status, health needs and barriers faced by specific population groups because of sexual orientation and gender identity, including LGBTI persons. But limited evidence, mostly from the HIV field, reveals important health disparities between LGBTI populations and the heterosexual cis-gender populations. LGBTI individuals face multiple and unique barriers to health care, with degree and severity varying across subgroups. Health disparities are likely caused by marginalization, stigma and discrimination in society and health care systems, resulting in chronic stress, poorer mental and physical health, and reluctance to seek health services for fear of disrespect and discrimination or refusal of services (86, 87).

Most research on LGBTI populations has focused on sexual health and mainly on the transmission risks for HIV and other sexually transmitted illnesses (STI) among men who have sex with men and transgender women, who consistently report high HIV rates and problems of late diagnosis and treatment (88, 89). Men who have sex with men have 28 times greater risk of acquiring HIV than heterosexual men but have much less access to HIV services (36).

Lesbian women's sexual and reproductive health concerns and access to HIV/STI testing and prevention services have often been neglected due to the perception that they are a low risk group, even though women-to-women transmission of several STIs has been documented (90). Studies show a higher prevalence of mental health disorders, substance abuse, violence, self-harm and suicide ideation among lesbian, bisexual and gay persons compared with the heterosexual population (91). One aspect particularly critical for UHC is the non-recognition and, in many settings, criminalization of same-sex partnerships, which affect health insurance coverage. Currently, over one-third of UN member states criminalize private consensual sex between two

adults of the same sex, with only 23 countries having marriage equality (92).

Transgender persons – those whose assigned sex at birth differs from their current gender identity or expression – often are socially marginalized and face stigma, discrimination, exclusion and violence. They experience poorer health outcomes than cis-gender populations, including a high rate of mental health disorders, STIs and substance abuse (93). Transgender women are also 13 times more likely to acquire HIV than adults of reproductive age (36). Because of social exclusion and lack of employment and housing, many transgender people resort to sex work, which in turns increases their HIV risk. Moreover, criminalization and punitive laws against transgender people and sex workers violate their human rights and create further roadblocks and disincentives for them to access health care. Another reported human rights violation of transgender persons is forced sterilization (94). Transgender individuals suffer higher rates of myocardial infarction, partly as a result of elevated social stressors, health disparity and lower socioeconomic status as compared with the cis-gender population (95).

Intersex people include at least 40 different traits, most of which are genetically determined (96). They face distinct health challenges and human rights violation, including stigma, discrimination and abuse. One of the serious human rights violations is sex assignment interventions of infants at birth, most of which are considered medically unjustified and based on limited evidence of a positive impact (96, 97).

There is an urgent need for research to identify the true prevalence and incidence of health problems of sexual and gender diverse people. Research should not be limited to sexual health but should investigate the broader health needs and experiences of LGBTI populations. At the same time research must consider the safety and ethical concerns of sexual and gender diverse people, especially in countries where LGBTI populations are criminalized or highly stigmatized. Furthermore, the design and delivery of health services must ensure meaningful and respectful engagement with local LGBTI communities to respond effectively in a manner that is acceptable to the groups being served.

BOX 5

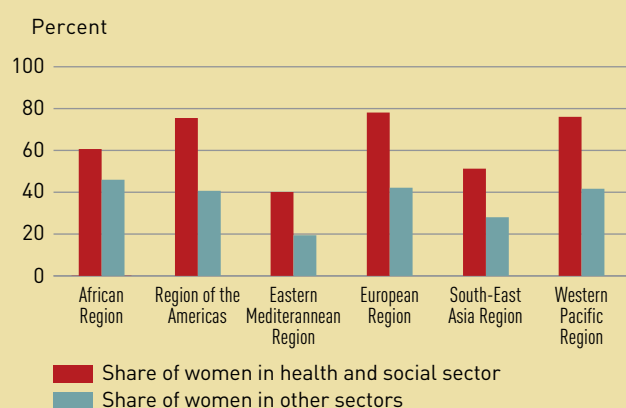
Gender equity in the health workforce

The health and social sector, with its 234 million workers, is one of the biggest and fastest growing employers of women. Women make up 70% of health and social care workers and contribute US\$3 trillion annually to global health, half in the form of unpaid care work (98).

A recent review of gender and equity in the health workforce highlighted four key areas that weaken health systems and slow progress towards UHC: occupational segregation and gender gaps in leadership,

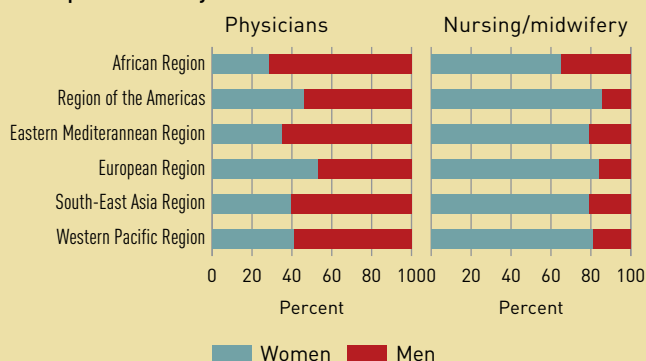
pay and decent work (Box figures 1–5) (5). Transformative gender policies can help address gender inequities in health systems and eliminate gender-based discrimination in earnings, remove barriers to access to full-time employment (such as lack of child care) and support access to professional development and leadership roles (99–101). Including women in leadership and decision-making roles will also support gender-responsive health systems that consider women's realities and contributions to the health systems.

BOX FIGURE 1 Across all regions, women are more represented in employment in the health sector than other sectors



Source: ILOSTAT 2019, International Labour Organization. Analysis of the latest year available for 163 countries from 2001 to 2018.

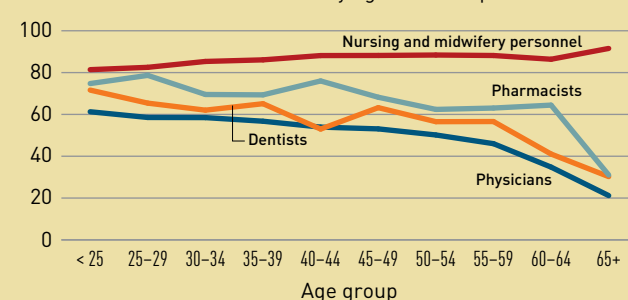
BOX FIGURE 2 In most countries, there is a higher proportion of male physicians, while the nursing and midwifery workforces are much more highly represented by women



Source: Boniol et al 2019. Analysis of latest year of data from National Health Workforce Accounts for 91 countries for physicians' data and 61 countries for nursing data.

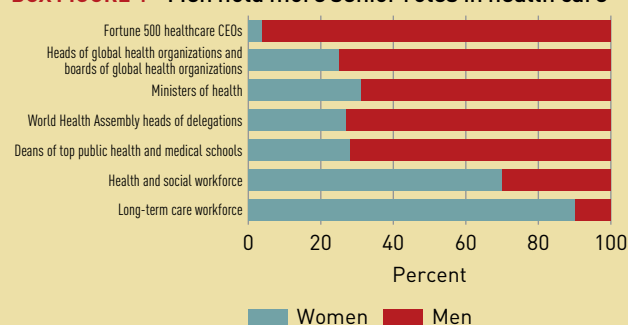
BOX FIGURE 3 For younger health workers, there are more women in the higher wage health occupations and slightly more males in nursing and midwifery

Share of women health workers by age and occupation (%)



Source: Boniol et al 2019. Analysis based on 57 countries from ILO Labour Force Surveys micro data.

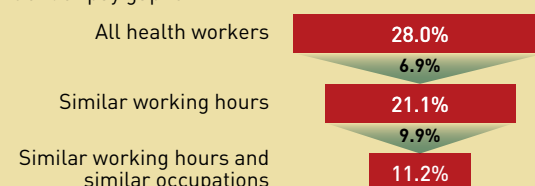
BOX FIGURE 4 Men hold more senior roles in health care



Source: Women in Global Health, 2018 (102).

BOX FIGURE 5 The overall gender pay gap for health workers is 28%

Gender pay gap for:



Source: Boniol et al 2019. Analysis based on Labour Force Survey data for 21 countries.

BOX 6

WHO's guidance on "Leaving No One Behind"

WHO's support to national authorities and their partners acknowledges that some population groups are more exposed to risk factors for ill-health but may have less access and benefit less from health services and financial protection, and therefore suffer greater rates of illness and death (103).

WHO has produced guidance on the pledge to leave no one behind that underscores its commitment to addressing health inequities and the social determinants of health, including gender inequality. Its four-component "Gender, Equity and Rights Programme Support Package" includes tools and methods for working with national health authorities and strengthening their capacities (104, 105).

The first component of the package focuses on tools to support equity analysis and to understand which groups are being left behind and why. The Health Equity Assessment Toolkit (HEAT) (106) supports countries in health inequality monitoring (http://who.int/gho/health_equity/). It includes a handbook and a manual on how to incorporate health inequality monitoring into health information systems and a software application to assess inequalities using existing database. This application also allows users to upload and work with their own data (HEAT Plus). Another tool is a guide to conducting barriers assessments, using quantitative and qualitative methods. It helps users identify demand- and supply-side barriers to health services for different population groups, such as adolescents) (107).

The second component refers to strengthening national health policies, strategies and plans, system governance and health systems functions for leaving no one behind. This means improving governance mechanisms in health sector planning to close coverage gaps, enhance financial protection, tackle health determinants, provide people-centred services and improve responsiveness to people's expressed needs. A checklist guides health policy makers review subnational health system strengthening in multiyear plans (108).

The third component focuses on strengthening health programmes. Innov8 uses inequality data to guide changes in health systems based on identifying subpopulations being missed, recognizing barriers, defining potential drivers of the barriers and prioritizing health system actions including intersectoral approaches and social participation (109, 110).

The fourth component concerns supporting WHO Country Offices and national authorities as leaders in leaving no one behind through comprehensive capacity building on gender, equity and human rights and guidance on normative tools and standards (111).

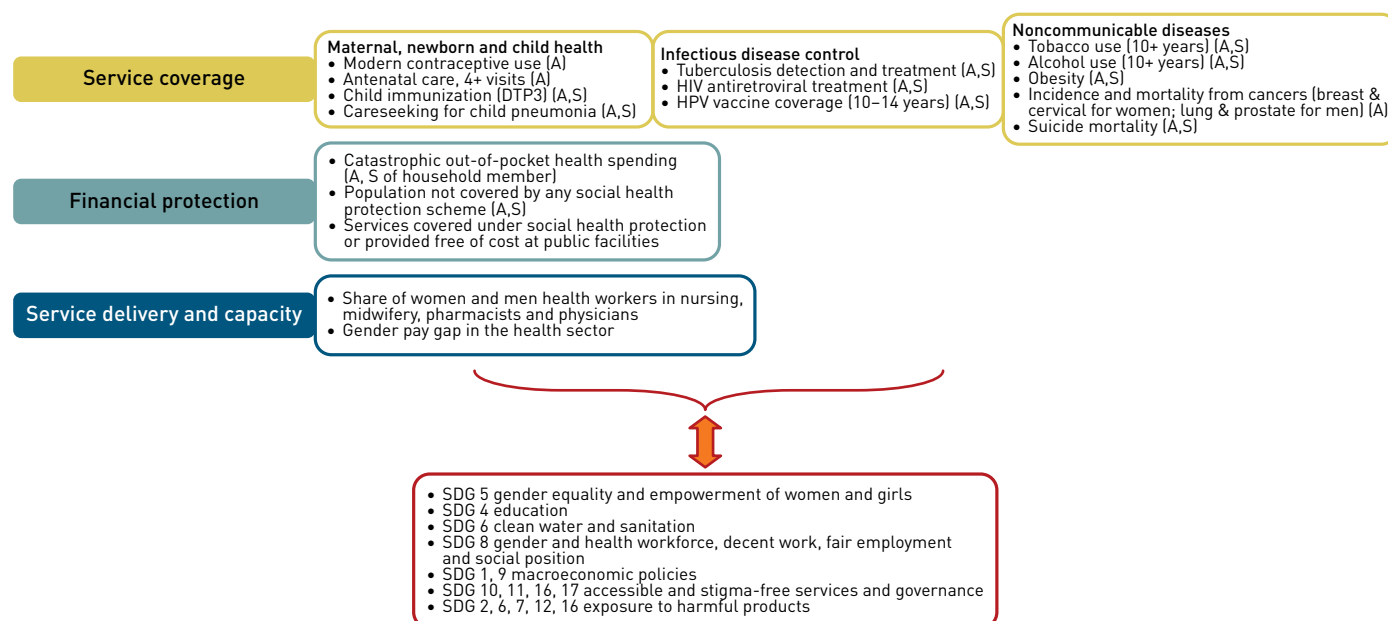
Additionally, WHO is contributing to operationalizing the pledge to leave no one behind through a step-by-step approach laid out in the forthcoming resource: "Leaving No One Behind: A UNSDG Operational Guide for UN Country Teams" (112). The handbook, currently being piloted, will feed into UN programming and policy support for Member States.

not disaggregated because of lack of data or methodology should be considered with caution. For example, a financial protection indicator that is not properly disaggregated can be misinterpreted if it fails to distinguish the case of individuals living in poverty who report no or very low health care spending because they have forgone health care from those whose spending is low because they are covered by social health protection. Further, monitoring indicators should be routinely collected by the health systems, ideally as part of the health management and information systems.

Figure 10 depicts a UHC monitoring framework that can help in unpacking inequities in health that are driven by gender inequality. It builds on SDG indicators included for monitoring service coverage (SDG 3.8.1) and financial

protection (SDG 3.8.2) and suggests additional indicators that are important from a gender perspective. To monitor gender equality and the impact of gender-transformative policies, other SDG indicators, especially SDG 5 on gender equality and empowerment of women and girls, need to be considered in conjunction with SDG 3.8.1 and SDG 3.8.2, as shown in the figure (113, 114).

While global monitoring of UHC is useful for comparing progress across regions and identifying lessons, gender and equity analyses require a more in-depth understanding of the country-specific context. To identify and monitor progress among the groups facing the most severe vulnerabilities, countries need to develop and analyse country-specific indicators.

FIGURE 10 Integrating gender in the universal health coverage monitoring framework

Note: A is age-disaggregated; S is sex-disaggregated.

Glossary

Sex refers to the biological and physiological characteristics, such as chromosomes, hormones, and anatomy, that distinguish males and females. While sex is often referred to as a binary category – male or female – there are other categories that do not fall under either of these categories, such as intersex.

Gender encompasses socially constructed well as by geographic, economic, and political environments.

Gender identity is a person's deeply felt internal and individual experience of gender (as male, female, a blend of both or neither), which may or may not correspond with the sex assigned at birth or the gender attributed to them by society. Gender identity includes the personal sense of the body (which may involve, if freely chosen, modification of appearance or function by medical, surgical or other means) and expressions of gender, including dress, speech and mannerisms.

Gender equality means equal opportunities for women and men to access and control social, economic and political resources, including equal and fair protection under the law. It means that the different behaviours, aspirations and needs of women and men are considered, valued and favoured equally and

norms, roles, behaviours, activities and attributes that a given society considers appropriate for individuals based on the sex assigned to them at birth. Individuals are socialized into a gender and are taught behaviours considered appropriate for women and men, including how to interact with others of the same or opposite sex. Gender roles are also affected by age, class, race, ethnicity and religion, as that there is no discrimination on the grounds of gender in the allocation of resources or benefits or in access to services.

Gender equity means fair treatment of men, women and gender-diverse individuals according to their respective needs so that they can benefit equally from rights and opportunities. This may require equal treatment or different treatment. Equity is often the means to ensure equality. **Gender equity in health** refers to a process of being fair to women, men and gender-diverse individuals with the objective of reducing unjust and avoidable inequality between women and men in health status, access to health services and their contributions to the health workforce.

Intersectionality is an approach to understanding and responding to the multiple social factors that intersect in dynamic ways to privilege or disadvantage (oppress) different people,

depending on their characteristics and contexts. It is used as a framework in health to improve health equity by identifying and addressing the social determinants, power relations and structural factors that drive health inequity.

Harmful masculinities refer to a set of descriptive, prescriptive and proscriptive notions associated with men and boys that often include

anti-femininity, achievement, adventure, risk, violence, and avoidance of the appearance of weakness. These cultural norms continuously connect men to the power and economic achievements that shape the hegemonic position of men. Harmful masculinities have been described as adverse to equality and inclusion, but also as harmful to men's health and well-being.

Note

1. For some countries, the reference period might change according to their immunization schedule.

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Statistical annex

ANNEX 1 Technical details for RMNCH coverage

Indicators

Composite coverage index (CCI) (115): weighted average of eight reproductive, maternal, newborn and child indicators: demand for family planning satisfied with modern methods (DFPSm); antenatal care (4+ visits; ANC4); skilled birth attendant (SBA); tuberculosis vaccine (BCG); diphtheria, tetanus, and pertussis vaccine (3+ doses, DPT3); measles vaccine (MSL); oral rehydration salts for children with diarrhoea (ORS); and careseeking for children with pneumonia symptoms (CPNM). It has different RMNCH indicators than the UHC Index. .

$$CCI = \frac{1}{8} \left(DFPSm + \frac{ANC4 + SBA}{2} + \frac{BCG + 2DPT3 + MSL}{4} + \frac{ORS + CPNM}{2} \right)$$

Demand for family planning satisfied (DFPSm): proportion of women married or in a union, aged 15–49 years in need of contraception that are using a modern contraceptive method (contraceptive pills, condoms (male and female), intrauterine device (IUD), sterilization (male and female), injectables, hormone implants, patches, diaphragms, spermicidal agents (foam/jelly), and emergency contraception).

- **Demand for family planning satisfied with short-acting reversible contraceptive (SARC) methods:** proportion of women married or in a union, aged 15–49 years in need of contraception that are using a short-acting reversible contraceptive method (pills, condoms (male and female), injectables, patches, diaphragms, spermicidal agents (foam/jelly), or emergency contraception).
- **Demand for family planning satisfied with long-acting reversible contraceptive (LARC) methods:** proportion of women married or in a union, aged 15–49 years in need of contraception that are using a long-acting reversible contraceptive method (intrauterine device (IUD) or hormone implants).
- **Demand for family planning satisfied with permanent contraceptive methods:** proportion of women married or in a union, aged 15–49 years in need of contraception that are using a permanent contraceptive method (male or female sterilization).

Antenatal care (4+ visits, ANC4): proportion of women aged 15–49 who attended at least four antenatal care visits with any health care provider in their last pregnancy.

Skilled birth attendant (SBA): proportion of children born in the last two years who were delivered by a skilled attendant.

Tuberculosis vaccine (BCG): proportion of children 12–23 months of age¹ who received BCG vaccine.

DTP vaccine (3+doses, DTP3): proportion of children 12–23 months of age¹ who received at least 3 doses of DPT (diphtheria, pertussis and tetanus) vaccine.

Measles vaccine (MLS): proportion of children 12–23 months of age who received measles vaccine.

Oral rehydration salts for children with diarrhoea (ORS): Proportion of children under 5 years of age with diarrhoea in the last 2 weeks who received oral rehydration salts.

Careseeking for pneumonia (CPNM): proportion of children under 5 years of age with suspected pneumonia in the last 2 weeks who were taken to an appropriate health provider.

Improved sanitation: proportion of households members with improved sanitation available (improved sources of sanitation: flush or pour-flush to a piped sewer system, a septic tank or a pit latrine; ventilated improved pit latrine (VIP); pit latrine with slab; composting toilet given the facility is not shared).

Place of residence: rural and urban area of residence, as defined by each country.

Wealth quintiles: based on asset ownership, characteristics of the household and the head of the household, the wealth index is calculated for each household through principal components analysis. The households are then divided into quintiles (Q), where Q1 represents the poorest 20% of households and Q5 the richest 20% in each country.

Wealth deciles: based on the same wealth index as the wealth quintiles. The households are then divided into deciles (D), where D1 represents the poorest 10% of households and D10 the richest 10% in each country.

Women's empowerment – social independence domain: empowerment level based on the Survey-based Women's emPOWERment (SWPER) Index (23) among married women aged 15–49 years. The SWPER was developed based on 14 variables, allowing the assessment of three empowerment domains: social independence, attitude to violence and decision-making. The social independence domain is mainly based on six variables – frequency of reading newspapers and magazines, woman's education (number of years completed), age at first childbirth, age at first cohabitation, age difference with partner (wife's age minus husband's age) and education difference (wife's years of schooling minus husband's). For women that did not have any child by the time of the survey, age at first childbirth was imputed according to the SWPER methodology (23). The index is calculated for each woman and then categorized into quintiles of empowerment, where Q1 represents the 20% least empowered women and Q5 the 20% most empowered in each country.

Methods for the trend analyses

All countries with two or more surveys since 2000 with an estimate for the Composite Coverage Index (CCI), both at country and wealth

quintile levels were included in the trend analyses. In total, 63 countries were studied (see Table A3.1.1 for the country list). Given that previous analyses seldom presented evidence for non-linear change of coverage over time, the average absolute annual change (AAAC) was estimated for each country. AAAC can be interpreted as the average change over time in intervention coverage, in percentage points. For example, a country with an estimated AAAC of 1.2 percentage points for the CCI presented an average increase of 1.2 percentage points every year. Therefore, over a period of 10 years, this country would have presented an increase of 12 percentage points for the CCI. For each country, variance-weighted least squares model was fitted using the estimates for each available survey as the outcome, along with their standard errors. The predictor in this model is the survey year. The resulting slope parameter is the estimate of AAAC that takes into account the variability of each survey coverage estimate. To obtain an overall and regional level estimates of AAAC for each indicator, a weighted average of the AAAC for all the countries together and for the countries in each world region separately was calculated using the country population as weights.

TABLE A1 List of the surveys analysed in both the current status and the trend analyses with the population of each country (according to the World Bank), which was used to weight the estimates by WHO regions and the overall estimates for all countries

Country	ISO code	WHO region	Total population (World Bank)	Current status analyses	Trend analyses
				Latest survey 2010–2017	Number of surveys with 2+ CCI estimates 2000–2017
Algeria	DZA	Africa	38,000,000	2012	NA
Angola	AGO	Africa	28,000,000	2015	NA
Benin	BEN	Africa	10,000,000	2014	4
Burkina Faso	BFA	Africa	16,000,000	2010	2
Burundi	BDI	Africa	11,000,000	2016	2
Cameroon	CMR	Africa	22,000,000	2014	3
Central African Republic	CAF	Africa	4,400,000	2010	NA
Chad	TCD	Africa	14,000,000	2014	3
Comoros	COM	Africa	723,868	2012	NA
Congo	COG	Africa	4,900,000	2014	3
Côte d'Ivoire	CIV	Africa	24,000,000	2016	2
Congo DR	COD	Africa	71,000,000	2013	3
Eswatini	SWZ	Africa	1,300,000	2014	3
Ethiopia	ETH	Africa	100,000,000	2016	4
Gabon	GAB	Africa	1,800,000	2012	2
Gambia	GMB	Africa	1,900,000	2013	2
Ghana	GHA	Africa	27,000,000	2014	4
Guinea	GIN	Africa	12,000,000	2016	2
Guinea-Bissau	GNB	Africa	1,700,000	2014	NA
Kenya	KEN	Africa	46,000,000	2014	3
Lesotho	LSO	Africa	2,100,000	2014	3
Liberia	LBR	Africa	4,300,000	2013	2
Madagascar	MDG	Africa	—	NA	2
Malawi	MWI	Africa	18,000,000	2015	5
Mali	MLI	Africa	17,000,000	2015	5
Mauritania	MRT	Africa	4,200,000	2015	2
Mozambique	MOZ	Africa	28,000,000	2015	3
Namibia	NAM	Africa	2,300,000	2013	3
Niger	NER	Africa	18,000,000	2012	2
Nigeria	NGA	Africa	190,000,000	2016	6
Rwanda	RWA	Africa	11,000,000	2014	4
Sao Tome and Principe	STP	Africa	191,266	2014	2
Senegal	SEN	Africa	16,000,000	2017	7
Sierra Leone	SLE	Africa	6,900,000	2013	3
South Africa	ZAF	Africa	56,000,000	2016	NA
South Sudan	SSD	Africa	10,000,000	2010	NA
Togo	TGO	Africa	7,000,000	2013	2
Uganda	UGA	Africa	41,000,000	2016	4
Tanzania	TZA	Africa	54,000,000	2015	3
Zambia	ZMB	Africa	15,000,000	2013	3
Zimbabwe	ZWE	Africa	16,000,000	2015	4
Total		Africa		40 countries	34 countries

Country	ISO code	WHO region	Total population (World Bank)	Current status analyses	Trend analyses
				Latest survey 2010–2017	Number of surveys with 2+ CCI estimates 2000–2017
Argentina	ARG	Americas	42,000,000	2011	NA
Barbados	BRB	Americas	281,585	2012	NA
Belize	BLZ	Americas	359,288	2015	2
Bolivia	BOL	Americas	—	NA	2
Colombia	COL	Americas	48,000,000	2015	3
Costa Rica	CRI	Americas	4,600,000	2011	NA
Cuba	CUB	Americas	11,000,000	2014	NA
Dominican Republic	DOM	Americas	10,000,000	2014	4
El Salvador	SLV	Americas	6,300,000	2014	NA
Guatemala	GTM	Americas	16,000,000	2014	NA
Guyana	GUY	Americas	763,393	2014	2
Haiti	HTI	Americas	11,000,000	2016	4
Honduras	HND	Americas	8,400,000	2011	2
Jamaica	JAM	Americas	2,800,000	2011	NA
Mexico	MEX	Americas	130,000,000	2015	NA
Panama	PAN	Americas	3,800,000	2013	NA
Paraguay	PRY	Americas	6,700,000	2016	NA
Peru	PER	Americas	32,000,000	2016	14
Saint Lucia	LCA	Americas	174,835	2012	NA
Suriname	SUR	Americas	526,103	2010	NA
Trinidad and Tobago	TTO	Americas	1,300,000	2011	NA
Uruguay	URY	Americas	3,400,000	2012	NA
Total		Americas		21 countries	8 countries
Afghanistan	AFG	Eastern Mediterranean	34,000,000	2015	NA
Egypt	EGY	Eastern Mediterranean	92,000,000	2014	4
Iraq	IRQ	Eastern Mediterranean	32,000,000	2011	2
Jordan	JOR	Eastern Mediterranean	9,700,000	2017	4
Pakistan	PAK	Eastern Mediterranean	200,000,000	2017	3
Qatar	QAT	Eastern Mediterranean	2,100,000	2012	NA
Sudan	SDN	Eastern Mediterranean	38,000,000	2014	2
Tunisia	TUN	Eastern Mediterranean	11,000,000	2011	NA
Yemen	YEM	Eastern Mediterranean	26,000,000	2013	NA
Total		Eastern Mediterranean		9 countries	5 countries

Country	ISO code	WHO region	Total population (World Bank)	Current status analyses	Trend analyses
				Latest survey 2010–2017	Number of surveys with 2+ CCI estimates 2000–2017
Albania	ALB	Europe	2,900,000	2017	NA
Armenia	ARM	Europe	2,900,000	2015	4
Belarus	BLR	Europe	9,500,000	2012	NA
Bosnia and Herzegovina	BIH	Europe	3,700,000	2011	NA
Kazakhstan	KAZ	Europe	18,000,000	2015	NA
Kyrgyzstan	KGZ	Europe	5,800,000	2014	2
Montenegro	MNE	Europe	621,207	2013	NA
Republic of Moldova	MDA	Europe	3,600,000	2012	2
Republic of North Macedonia	MKD	Europe	2,100,000	2011	NA
Serbia	SRB	Europe	7,100,000	2014	NA
Tajikistan	TJK	Europe	8,900,000	2017	2
Turkmenistan	TKM	Europe	5,600,000	2015	NA
Ukraine	UKR	Europe	46,000,000	2012	NA
Total		Europe		13 countries	4 countries
Bangladesh	BGD	South-East Asia	160,000,000	2014	5
Bhutan	BTN	South-East Asia	727,641	2010	NA
India	IND	South-East Asia	1300,000,000	2015	3
Indonesia	IDN	South-East Asia	250,000,000	2012	3
Maldives	MDV	South-East Asia	427,756	2016	2
Myanmar	MMR	South-East Asia	52,000,000	2015	NA
Nepal	NPL	South-East Asia	29,000,000	2016	6
Thailand	THA	South-East Asia	69,000,000	2015	2
Timor-Leste	TLS	South-East Asia	1,300,000	2016	2
Total		South-East Asia		9 countries	7 countries
Cambodia	KHM	Western Pacific	15,000,000	2014	4
Lao	LAO	Western Pacific	6,300,000	2011	NA
Mongolia	MNG	Western Pacific	2,900,000	2013	2
Philippines	PHL	Western Pacific	100,000,000	2017	4
Viet Nam	VNM	Western Pacific	91,000,000	2013	3
Total		Western Pacific		5 countries	4 countries
West Bank and Gaza Strip	PSE	NA	4,300,000	2014	2
Total		NA		1 country	1 country
Total		Global		98 countries	203 surveys from 63 countries

Note: West Bank and Gaza Strip is not officially in any WHO region, so it was not included in the regional estimates, but it was included in the overall estimates for all countries both in the current status and the trend analyses.

