



Literature Review of Health Services and Trends in Health Expenditure and Health Outcomes in Ethiopia

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Overview

This report sets out background information on health and well-being in Ethiopia to support research conducted as part of the Young Lives Qualitative Longitudinal Research programme, ‘Health and Wellbeing in Times of Crises in Ethiopia’ (‘Qual 6’), and is organised into two sections:

Section 1: Provides a literature review of health services and health outcomes in Ethiopia, including primary health care, maternal and child health (MCH), sexual and reproductive health (SRH), harmful traditional practices including child marriage and female genital mutilation/cutting (FGM/C), and the impact of armed conflict on health care.

Section 2: Provides an analysis of health expenditure and key health outcomes in Ethiopia, including trends in maternal and child health, malnutrition, fertility rates, maternal mortality, FGM/C and violence against women.

All sources are listed in the References section at the end of the report. The analysis in Section 2 draws primarily on data from the Ethiopian Demographic and Health Surveys (EDHS), the Ethiopian Ministry of Health, the Ministry of Finance and UNICEF.

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Section 1: Literature Review of Health Services and Health Outcomes in Ethiopia

Overview

Ethiopia achieved significant public health gains from the early 1990s to the early 2020s (when the last nationally representative data were collected), particularly in expanding primary and maternal healthcare, increasing contraceptive use, and reducing harmful traditional practices such as child marriage and FGM/C. However, progress has been uneven and marked by deep inequalities, with those from rural areas and less educated backgrounds often left behind. Key challenges remain in service quality, healthcare financing, and addressing the specific needs of adolescents and young adults. Recent armed conflicts, especially in the Tigray and Amhara regions, have caused a catastrophic collapse of healthcare systems, reversing years of progress and inflicting severe physical and psychological trauma on the population.

1.1 Primary Health Care

In 1993, the Ethiopian government introduced a National Health Policy to improve health by increasing access to primary health care services. This was followed by a 20-year, four-stage Health Sector Development Plan (HSDP) launched in 1997. The first two phases of the HSDP (1997–2005) focused on health facility expansion, human resource development, and promoting facility-based childbirth. The third phase (2005–2010) shifted focus to enhancing maternal and child health and tackling communicable diseases. Annis and Ratcliffe (2019) concluded that the HSDP, together with the Health Extension Program (HEP) launched in 2003, transformed Ethiopia's primary health care system, leading to significant improvements in service delivery.

Assefa et al. (2020) conducted a review of Ethiopia's primary health care system to assess progress toward universal health coverage, identifying key strengths and weaknesses by analyzing publicly available data. The study concluded that while the system successfully expanded health service coverage and improved the population's health status, it also faced significant challenges. These weaknesses included limited reach, inequitable access, slow progress in treating non-communicable diseases, poor service quality, and high out-of-pocket expenses for patients. To address these issues, the authors recommended strengthening domestic financing and creating tailored strategies to better serve disadvantaged populations.

Fetene et al. (2016) compared implementation strategies in high- and low-performing Ethiopian districts (woredas) to understand why some primary health care initiatives succeed more than others. Based on in-depth interviews, the study identified three critical factors that distinguished the successful districts: i) a greater use of data for performance improvement; ii) stronger collaboration between health extension workers, community members, and health centres; and iii) better coordination with regional health offices and financing bodies. Consequently, the authors recommended that fostering data-driven decision-making, building supportive community partnerships, and ensuring strong coordination

with higher-level authorities are essential for improving primary health care services.

1.2 Maternal and Child Health (MCH)

Biadgo et al. (2021) assessed the quality of maternal and neonatal healthcare provision in four Ethiopian regions: Tigray, Amhara, Oromia, and the former SNNP. This cross-sectional study collected data from 32 facilities (5 hospitals and 27 health centers) and found that the majority did not meet national standards. Consequently, the researchers recommended focusing on improvements to inputs, outputs and processes, with a particular emphasis on the latter.

Rieger et al. (2019) investigated the impact of two key initiatives on maternal health outcomes in Ethiopia: the Health Extension Program (HEP) and the Health Development Army (HDA). The HEP, launched in 2003, was designed to improve basic health infrastructure and local human resources. The HDA, introduced in 2011, is a women-centered volunteer group that mobilizes communities to promote the uptake of health programs and assist health extension workers. Using data from the Global Burden of Disease database and employing a synthetic comparator method, the study found that by 2016 maternal mortality in Ethiopia was 171 deaths per 100,000 live births lower ($p < 0.05$) compared to synthetic control groups. The authors concluded that a substantial share of this reduction may be attributed to the HEP and HDA.

Wilunda et al. (2016) evaluated the impact of a project implemented by the non-governmental organization (NGO) Doctors with Africa CUAMM in three Ethiopian districts between 2012 and 2015. The project aimed to improve access to maternal and child health services. Using a before-and-after study design with cross-sectional data from 999 women, the researchers found that following project implementation the odds of receiving all three components of antenatal care more than doubled, and the likelihood of skilled birth attendance increased fivefold.

Birhan et al. (2020) also documented an increase in the proportion of reproductive-age women receiving adequate antenatal care – defined as attending at least four antenatal care visits – from 16% in 2005 to 35% in 2016. The increase was largely explained by behavioral changes influenced by women's education, spousal education, religion, and place of residence. Muntean et al. (2015), on the other hand, reported that while there has been an improvement in antenatal services for married young women, there is a significant gap in access for unmarried young people. Shibre et al. (2023) found that the maternal health service utilization gap between empowered and less empowered women is exacerbated by inequalities in wealth, education, and place of residence.

Worku et al. (2018) investigated the impact of an innovative, multi-partner model implemented in four district hospitals in Ethiopia. The model involved installing advanced technology in Neonatal Intensive Care Units and training healthcare staff on its use, alongside best practices in newborn care. The study found that neonatal mortality declined by 24%, overall neonatal health outcomes improved by 3.3%, alongside enhanced skills and competencies of Neonatal Intensive Care Unit staff. Gebeyehu et al. (2022) found a nine-fold increase in deliveries at health facilities among adolescent women, from 4.6% in 2025 to 38.7%. This change was linked to place of residence and region, wealth, education, frequency of antenatal care visits, and number of living children.

Studies using the Ethiopian Demographic and Health Surveys (EDHS) data have uncovered significant nutritional improvements in Ethiopia. Tsegaye et al. (2023) reported a sharp drop in the incidence of anemia among reproductive-age women from 68% to 27.3% between 2005 and 2016. This change is associated with improved women's education, wealth, and radio listening. Similarly, Tasic et al. (2020) noted that national stunting rates fell from 51% to 32% between 2000 and 2016. The improvement is linked to better crop yields, better access to health workers and education.

Abadiga et al. (2022) investigated the determinants of adverse birth outcomes among women who delivered in public hospitals in the Wollega zones of Ethiopia's Oromia region. This case-control study analyzed data from 495 mothers, including 165 with adverse birth outcomes (cases) and 330 without (controls). Adverse birth outcome cases include, among others, preterm birth (before 37 weeks), low birth weight (<2.5 kg), stillbirth, infant died in the womb, birth defect, structural changes in one or more parts of the infant's body that are present at birth, and neonatal death. Data were collected using structured questionnaires and supplemented with clinical information from maternal and infant records. The study found that inadequate antenatal care (ANC) visits, anemia, pregnancy-induced hypertension, lack of dietary supplementation, and physical abuse were all significantly associated with adverse birth. The authors advised improving antenatal care follow-up, provision of dietary supplements and eliminating violence during pregnancy.

A meta-analysis by Shiferaw et al. (2021) investigated the effects of antenatal care on perinatal outcomes in Ethiopia. Their pooled estimate revealed that receiving at least one antenatal care visit was associated with a significant reduction in perinatal mortality compared to receiving no care. Based on this evidence, the authors recommended designing tailored interventions to increase antenatal care utilization and thereby reduce perinatal deaths.

Beyene et al. (2022) assessed the incidence of severe maternal outcomes (SMO) and quality of maternal health care in South Ethiopia. The study used data of women who visited hospitals while pregnant, during, and after giving birth from 12 July - 26 November 2018. The results showed that of 2,880 live births, 11% had life-threatening conditions and 3.8% had SMO (3.1% maternal near miss and 0.7% maternal deaths). The study also found that most women with SMO in the study hospitals were referred from other health facilities, which indicates the presence of the first delay (seeking care) and/or the second delay (reaching care). The study suggests, among others, utilizing intensive care units (ICUs) effectively, reducing delays, and improving the referral system.

A meta-analysis by Demelash et al. (2023) synthesized Ethiopian data on environmental exposures and adverse pregnancy outcomes. The results linked household air pollution (biomass fuel use, no separate kitchen) to a 2- to 2.5-fold increased risk of low birth weight. Active smoking increased the risk of low birth weight and preterm birth fourfold, while passive smoking raised the risk of low birth weight 2.6-fold. Pesticide exposure was also associated with a fourfold increase in the risk of birth defects. The study recommends promoting clean energy to reduce these risks.

In a similar meta-analysis, Mersha et al. (2019) compiled evidence on the maternal and perinatal outcomes of hypertensive disorders of pregnancy (HDP) in Ethiopia. The pooled analysis found that among women with HDPs, the maternal mortality rate was 4%, while 13% developed HELLP

syndrome (haemolysis, elevated liver enzymes and low platelet count), a life-threatening pregnancy complication. The study also reported a 25% rate of perinatal death and a 37% rate of low birth weight among women with HDPs. The authors recommended early detection and referral of pregnant women with HDPs and improving the quality of maternal health services.

In summary, the Health Extension Program (HEP) and the Health Development Army (HDA) have been instrumental in increasing antenatal care visits and health facility deliveries, leading to significant reductions in maternal and infant mortality. In addition, anemia rates among reproductive-age women and national stunting rates have also dropped significantly. However, many maternal and neonatal healthcare facilities still fall short of national standards. While married young women have seen overall improvements, unmarried young people continue to face significant barriers to accessing antenatal services.

1.3 Sexual and Reproductive Health (SRH)

The Ethiopian government's substantial investment in strengthening the health system over recent decades has extended access to family planning services, particularly in rural areas, through the national Health Extension Program. These efforts have produced notable results in improving access to SRH services.

Studies show positive trends in women's health, such as declining fertility and teenage pregnancy rates. Alazibih et al. (2021) found that fertility rates have declined in Ethiopia (especially in the Amhara region) since the 1990s. The change is attributed to the increased age of women at first marriage -having children at an older age - and girls' education. Alamneh et al. (2023) reported declines in teenage pregnancy from 16% to 13% between 2005 and 2011. This change is linked to shifts in education, work status, contraception use, and reduced sex before 18.

There has also been an increase in contraceptive use. Kebede et al. (2023) showed that modern contraceptive use among married women in the emerging regions (Afar, Somali, and Benishangul Gumuz, and Gambella) increased from 6.3% in 2000 to 22% in 2019. The change is linked to behavioral changes among traditionally underserved groups including uneducated women in rural and pastoral communities. Tareke et al. (2022) reported that unmet needs for family planning among reproductive-age women were slashed by half, from 40% in 2005 to 20% in 2016. This was primarily driven by factors such as increased girls' education (especially at the secondary level) and a growing preference for fewer babies among women.

Similarly, DeMaria et al. (2020) found that the use of modern contraceptives among married women of reproductive age increased more than fivefold between 2000 and 2019, rising from 6.6% to 40.5%. Consequently, the total fertility rate dropped from 5.5 to 4.1 children per woman, and the median age at first marriage rose from 16 to 17.1 between 2000 and 2016. Despite these gains, the study revealed critical gaps. Over 20% of women of reproductive age still have an unmet need for family planning, and adolescents often rely on unreliable sources like friends for sexual and reproductive health (SRH) information. To build on these gains, the authors recommended a stronger, data-driven implementation of current policies.

Admassu et al. (2022) noted that while the government has focused on adolescence and youth SRH since 2005, its programs remain fragmented, uncoordinated, and underfunded across various ministries. These challenges have direct consequences, as adolescents continue to face severe SRH challenges—including high rates of teenage pregnancy, sexually transmitted diseases (STDs), child marriage, and unsafe abortion—that contribute to significant morbidity and mortality. The authors recommend a holistic, evidence-based, and well-funded national response that is coordinated to address urgent health and development issues.

Muntean et al. (2015) also found that young people's access to SRH services is constrained by factors such as limited SRH knowledge, a lack of open discussion on sexual matters, restrictive gender norms, cultural barriers, and negative provider attitudes towards unmarried youth. Consequently, they recommend reducing these barriers, mobilizing resources, fostering strong leadership and effective coordination between stakeholders and donors, and prioritizing the needs of underserved unmarried young people.

Several studies also examine access to SRH services and related barriers. Melaku et al. (2014) assessed the link between SRH communication and contraceptive awareness among 807 female students in six secondary schools in Mekele, Ethiopia. The study found that 16% of respondents were sexually active. Among these sexually active students, 86% had used contraceptives, 16% had been pregnant, and 90% of those pregnancies had ended in induced abortion. The research also showed that communication was a key predictor of contraceptive awareness, with 44% of students having discussed SRH matters with parents and 61% with peers in the preceding six months. Overall, 88% of all students were aware of various contraceptive methods.

Bilal et al. (2015) investigated the utilization of SRH services and sexual activity using data from 1,031 male and female high school students (aged 10-14) in Mekelle, Ethiopia. The results showed that 20% of students had visited SRH services in the last 12 months to receive SRH information. However, early sexual intercourse (at an average age of 15.7) and unwanted pregnancies and abortions among female students were reported, highlighting the need to provide accurate SRH information on safe sex and enhance family–student discussions.

Similarly, Ayalew et al. (2014) examined parent-adolescent SRH communication using a sample of 695 secondary school female and male students in Dire Dawa. The findings revealed low levels of communication, with only 37% of students ever having discussed SRH topics with their parents, and a majority preferring to discuss with peers instead. The primary barriers to parent-adolescent dialogue were identified as cultural taboos, poor communication skills, and embarrassment. To address this, the authors recommended implementing school-based educational programs to foster better SRH communication between adolescents and their parents.

Binu et al. (2018) investigated access to SRH services and its associated factors using data from a randomly selected sample of 768 secondary school students in Nekemt town, Ethiopia. The study showed very low (only 21.2%) utilization of SRH services among the sampled youth. The findings indicated that access to SRH services was positively influenced by discussions with health workers, a previous history of STD symptoms, sexual experience, and information provided by school teachers, while barriers included inconvenient service

times, lack of privacy, religious and cultural norms, and parental prohibition.

Yared et al. (2017) assessed the SRH experiences, knowledge, and challenges faced among university students at Ambo University in Ethiopia using quantitative data from 400 respondents and qualitative data from 10 in-depth interviews. Students started their first sexual activity at an average age of 17.3, and 21% of respondents felt they were at risk of HIV/AIDS. A high rate of awareness about STDs (95%), HIV/AIDS (98%), and modern contraceptives (89%) was reported. Despite this, about 23% of students reported STD symptoms in the past year, and a minority also reported unwanted pregnancy (5%) and abortion (2.5%). The authors recommend programs directed towards reducing STDs and improving SRH, especially among female students.

Jones et al. (2020) employed mixed-methods longitudinal research collecting quantitative data from 6,800 adolescents (in Afar, Amhara, and Oromia) and their caregivers, and qualitative data from 220 adolescents, their families, and communities. Their findings reveal that gendered cultural norms limit the use of contraception by prioritizing marriage and motherhood, especially in rural areas.

Kassa et al. (2014) investigated the SRH status and associated factors of young people with disabilities (YPWD) in Addis Ababa, using data from 426 respondents. Although just over half of the respondents had ever had sexual intercourse, only 35% of this group used a contraceptive during their first sexual encounter. The study further showed that about 60% of those who were sexually active had multiple partners, and only 48% used condoms consistently with their casual or commercial partners. Of the sexually experienced YPWD, 24% had a history of a sexually transmitted disease. The findings underscore the need for further in-depth research to better understand the determinants of risky sexual behavior and to propose preventive approaches. The authors conclude that such research is essential to identify the determinants of high-risk behaviors and to inform the design of targeted preventive interventions.

Tilahun et al. (2012) examined health care workers' attitudes toward SRH services for unmarried adolescents using data from a sample of 424 health workers in Eastern Hararghe. The study found that health workers were generally positive towards the SRH of unmarried adolescents. However, nearly 30% were against providing SRH services to unmarried adolescents, and 46.5% gave an unfavorable response towards providing family planning to unmarried adolescents. These negative attitudes were associated with lower education and a lack of training on SRH services. The authors called for a targeted effort to address the negative attitudes of health workers, advocating for better SRH communication through improved parent-child dialogue and robust, school-based peer-to-peer programs.

In summary, significant government investment between 2000 and 2020, including through the national Health Extension Program, significantly expanded access to family planning services, especially in rural areas, alongside declines in fertility and teenage pregnancy, increased use of modern contraceptives among married women—including in emerging regions—and a reduction in the unmet need for family planning. However, significant regional differences are evident. Gendered cultural norms that prioritize marriage and motherhood limit girls use of modern contraception in Afar, Amhar, and Oromia regions, especially in rural areas. Young people with disabilities in Addis Ababa are

disproportionately vulnerable to risky sexual behaviors. In Eastern Hararghe, about 30% of health workers were against providing SRH services to unmarried adolescents. Policy recommendations include evidence-based implementation of current SRH policies; strengthening the capacity of health workers; addressing youth-specific barriers to SRH service utilization—such as restrictive norms, cultural barriers, and provider attitudes—and improving communication of youth and adolescent people with their parents, peers, and teachers.

1.4 Child Marriage and FGM/C

Child marriage and FGM/C are among the most prevalent harmful traditional practices in Ethiopia. Using the EDHS data, Erulkar (2022) found that the national rate of child marriage (before the age of 18) declined by more than half from 40% in 2002 to 18% in 2016. However, the study showed that most of this decline occurred in Addis Ababa, Tigray, and Amhara, while the reduction was much slower in Oromia and pastoralist regions of Afar and Somali, and the emerging region of Benishangul Gumuz. Dessie et al. (2023) also reported that the prevalence of child marriage in the Amhara region decreased substantially from 80% in 2000 to 43% in 2016, due to an increase in school enrollment of girls (especially at the secondary level) and media exposure.

Drawing on key findings from a synthesis of 27 Young Lives publications relating to SRH, Pankhurst and Espinoza (2022) reported that marriage or cohabiting rates among the study's older cohort tripled from 6% at age 19 to 18% at age 22. Girls were more likely to get married in their teens when they were engaged in paid work, or had experienced the death or serious illness of a parent, particularly the family's main breadwinner (usually the father). Gender differences were huge: the proportion of married/cohabiting women increased from 13% to 32% while men increased from 0.6% to 6.8%. About 8.6% of the older adolescents were married before 18 at age 22 (15.2% of women and 2.7% men). The study highlighted that paid work and the death or illness of parents increase the risk of child marriage; whereas schooling, parental education, and the presence of sisters mitigate this risk.

Concerning the wider consequences of child marriage, John et al. (2019) investigated the links between child marriage and mental health in Ethiopia and Niger. The study found a significant negative association between psychological well-being and child marriage (at age 15 or younger) in both countries. Further qualitative findings from Ethiopia showed that child brides experience a heavy burden of household responsibilities, exacerbated by emotional distress and depression.

Studies also document significant declines in the prevalence of FGM over the last two decades, but that changes have been uneven. Azeze et al. (2020) showed a decrease in the national FGM prevalence from 79.9% in 2000 to 65.2% in 2016 among 15-19-year-old girls in Ethiopia. However, the study noted that progress has been limited in pastoralist regions and rural areas. Tesema et al. (2020) reported a 10 percentage point reduction (from 80% to 70%) in FGM/C between 2000 and 2016, but that the practice is still highly prevalent in certain areas, such as Afar, Somali, and Harari. Factors such as location of residence, occupation, education, and media exposure are among the key drivers of the reduction in FGM/C.

Drawing on key findings from Young Lives publications on SRH, Pankhurst and Espinoza (2022) reported significant

declines in FGM/C across the study sites in the five regions between 2000 and 2019. The reduction was attributed to a combination of a favourable legal framework, political will, sanctions and threats, and interventions by the government with support from international organisations, NGOs, and the media, as well as broader processes of modernisation, including urbanisation, education, and migration. The study highlighted a greater prevalence of FGM/C in rural areas, with most of the reductions occurring in Tigray and Amhara and limited progress in Oromia and SNNP.

Based on two rounds of surveys of 900 adolescent girls and 120 adolescent boys in each region in 2022 and 2024, Endale et al. (2025) reported FGM/C among adolescent girls remains universal in Afar (increasing from 97% to 99%) and increasing in Somali from 73% to 80%. The study revealed differences in FGM/C practices: in the Afar region, the procedure is typically performed at 1-2 years of age with an 85% infibulation rate, whereas in the Somali region, it occurs at age 7 or older with a 100% infibulation rate.

In summary, national rates of child marriage (before age 18) and FGM/C among girls significantly declined between 2000 and 2016. Factors increasing the risk of child marriage include paid work and parental death or illness, while schooling, parental education, and the presence of sisters reduces this risk. The reduction in national FGM/C prevalence is attributed to factors such as location of residence, occupation, education, media exposure, legal frameworks, political and societal sanctions, and NGO support. However, empirical studies reveal significant regional variations in these achievements. Substantial reductions in child marriage were observed in Addis Ababa, Tigray, and Amhara, while declines were slower in Oromia, Afar, Somali, and Benishangul Gumuz regions. Similarly, FGM/C practice dropped significantly in Tigray and Amhara, with limited progress in Oromia and SNNP, with the practice remaining endemic in the pastoralist regions of Afar and Somali.

1.5 Impact of Armed Conflict on Healthcare

Several empirical studies confirm that armed conflicts in the Tigray and Amhara regions have led to the widespread destruction of healthcare infrastructure. Consequently, access to health care facilities has decreased significantly due to pervasive insecurity and the frequent non-operational status.

Conflict and Healthcare in Tigray

Studies on the conflict in Tigray reveal severe disruption of health services. Gessesew et al. (2021) investigated the functionality of health facilities in Tigray by comparing pre-war data with data from the first six months of the conflict (November 2020 - June 2021). Pre-war data were sourced from the Tigray Regional Health Bureau and the Ethiopian Demographic and Health Survey, while conflict-period data came from the interim government and international NGO reports. The study found that facility functionality had declined dramatically to just 27.5% for hospitals, 17.5% for health centers, and 0% for all 712 health posts.

Similarly, Gebregziabher et al. (2022) conducted a study to assess the impact of the Tigray war on healthcare infrastructure by comparing the functionality of 1,007 health facilities before and during the conflict period. The study found that only 3.6% of facilities were fully operational during the conflict (February - June 2021). The study further found

that all of the health posts and 87% of health centers were non-functional during this period. Widespread geographical differences were also reported in the status of functionality, ranging from 3.3% in the Western zone to 79% in the regional capital, Mekelle.

Tekulu et al. (2025) employed a mixed-methods study to assess the impact of armed conflict on health facilities in the Eastern zone of Tigray region. The researchers gathered data through both qualitative and quantitative methods. They also used secondary data from published and unpublished sources. The study revealed that 83% of the 177 health facilities in the Eastern zone were damaged (of which 16.4% were severely damaged and 66.7% were fully damaged). The linear regression estimation employed by the researchers attributed 55.8% of the health facility destruction to the armed conflict.

Abay et al. (2022) analyzed World Bank phone survey data during the conflict's first phase (November 2020 to May 2021), and found that access to health services was reduced by 35 percentage points.

Abraha et al. (2024) investigated the causes of death among women of reproductive age in Tigray during the conflict. In a large-scale community survey covering 189,087 households across six zones, they identified 832 deaths, concluding that the leading causes of death were infectious diseases (including HIV/AIDS) and assault (escalation of physical violence due to the conflict).

Gebreyesus et al. (2023) conducted a study of 3,572 displaced and host households in Tigray, revealing the devastating health consequences of the conflict, with IDPs bearing a disproportionate burden. Among the displaced population, 12.3% had to stop chronic medical care; there were high family casualty rates (15% killed, 6.8% disabled), and widespread psychological trauma, as reflected by high rates of depression (43.8%) and PTSD (58.8%).

Tsadik et al. (2021), used a community based cross-sectional survey of 4,381 mothers with at least one child younger than 1 year old in Tigray, and reported critically low utilization rates for modern contraceptives (23%), antenatal care (36.5%), skilled delivery (47.1%), and postnatal care (just 15%) compared to pre-war maternal and child health care. Among the women using contraceptives, nearly half (47%) relied on the injectable method.

Abraha et al. (2024) conducted a community-based survey of nearly 30,000 births in 31 districts of Tigray to assess the impact of the armed conflict on institutional deliveries. The study found a large drop in health facility deliveries, from 81% in 2020 to 48.9% in 2022. Consequently, births outside health facilities increased, with many occurring at home (47.7%) and a 2.7% in caves or bushes due to mothers fleeing violence.

Tasdik et al. (2023) analyzed a survey of 4,381 caregivers with at least one child younger than one from 52 districts of Tigray, and reported a significant decline in child health services compared to the pre-conflict period. The findings indicated a severe breakdown in immunization: 39% of infants had received no basic vaccines, while only 20% were fully vaccinated. Furthermore, the study showed that 61% of children suffered from at least one illness, with a large proportion of these cases reported among infants whose mothers had not accessed postnatal care.

Fisseha et al., (2023) conducted a community-based survey of 5,171 women in 52 districts (out of 84) in Tigray region to investigate the prevalence of conflict-related sexual and gender-based violence. The study found that 43.3% of women experienced at least one form of violence: psychological (40.4%) and physical (28.6%). One in ten (9.7%) also experienced sexual violence, with rape the most common form of sexual violence reported by 7.9% of all participants, leading to physical trauma, depression, unwanted pregnancies, and STDs.

In summary, evidence indicates a dramatic decline in the functionality of health facilities during the armed conflicts, with significant geographical disparities—ranging from 3% in the Western zone to 79% in Mekelle. Consequently, access to and utilization of essential health services, including modern contraception, antenatal care, skilled delivery, and postnatal care, plummeted to critically low levels compared to pre-war periods. Children's health services, including vaccinations, has also significantly declined. The health burden of the conflict disproportionately affected displaced populations, with 12.3% of displaced individuals discontinuing chronic medical care and experiencing high rates of depression (43.8%) and PTSD (58.8%).

Conflict and Healthcare in Amhara

Arage et al. (2023) used qualitative methods to investigate the health consequences of the 2020-2022 armed conflict in the North Wollo zone of the Amhara region, conducting in-depth interviews and focus group discussions with 100 participants—including patients, pregnant women, community leaders, and health care professionals—from six affected woredas. The study documented profound disruption to the health system, including the flight of health workers, medicine shortages, interruptions to immunization services, widespread psychological distress such as post-traumatic stress disorder, and an increase in lifelong disabilities.

Building on this work, Arage et al. (2024) employed a follow-up mixed-methods design, drawing on quantitative data from 1806 individuals, alongside the aforementioned qualitative data (40 in-depth interviews and 60 focus group discussions), and similarly found that the local health system had effectively collapsed. Severe shortages of health care workers and medical supplies were linked to a sharp decline in health facility utilization; for example, although 224 survey respondents reported experiencing illness, only 21% sought care at a health facility.

Biset et al. (2023) used cross-sectional data to assess the impact of the 2020-2022 armed conflict on the health of children and adolescents in the North Wollo, South Wollo, and Dessie Zuria administrative zones of the Amhara region. The study collected quantitative data from 798 participants under the age of 18. The findings showed that over 35% of children experienced conflict-related displacement, 41.5% suffered from an illness for which most received no treatment, and nearly 70% were subjected to violence. This violence included physical (53%), psychological (67%), and sexual violence (12%).

Gedef et al. (2023) conducted a cross-sectional study in the conflict-affected Sekota town, finding that institutional delivery service usage among 420 mothers was only 48%. In a subsequent study, Gedef et al. (2024) assessed antenatal care utilization in the surrounding Sekota Zuria district. Based on a survey of 593 mothers, the study found a utilization rate of just 54.5%, attributing the decline in service use (compared to the pre-war period) primarily due to movement restrictions

caused by insecurity. To address this, the authors recommend strengthening maternal healthcare through outreach programs and mobile clinics.

Tenaw et al. (2022) investigated the psychological and medical consequences of rape for survivors in the North Wollo and Waghimra zones of the Amhara region. Using a mixed-methods approach, the study conducted 21 in-depth interviews and analyzed health care facility data for 271 survivors who received treatment. The medical data revealed that 35% of survivors tested positive for sexually transmitted diseases (STDs), with Chlamydia (58.4%) and HIV (34.8%) being the most common. Additionally, 11% became pregnant following the assault, and nearly half underwent an abortion. The interviews further revealed that survivors experienced social rejection and exclusion, which exacerbated their trauma.

Alene et al. (2023) investigated the impact of the armed conflict on antenatal care, institutional delivery, and postnatal care services across seven zones of the Amhara region, including North Wollo and Waghimra. Using data from 22 key informants and regional health bureaus, the study compared service availability before and after the conflict. The findings revealed a dramatic decline in maternal healthcare. While all health facilities provided these services before the conflict, only 53% could provide antenatal care, and 47% could provide postnatal care after the conflict. Between January - June 2021 (six months prior to conflict) and July - December 2021 (during conflict), average monthly antenatal care visits declined by 62%, falling from 28,891 to 10,895, while the monthly average number of births attended by skilled health professionals decreased by 73%, from 18,527 to 5,062, and the monthly average number of women receiving postnatal care within seven days of delivery decreased by 71.8%.

Yigzaw et al. (2023) used a mixed-methods approach to investigate psychological distress in the war-affected Chenna Kebele of North Gondar, Ethiopia. The study combined qualitative data from in-depth interviews, focus group discussions, and observations with quantitative data from 550 respondents. The results showed that 45 participants (8.2%) experienced mental health issues, with post-traumatic stress disorder (PTSD) the most common issue, accounting for 38 of these cases and appearing to be more prevalent among women than men. The study also found that 15 young women had been victims of sexual violence.

In summary, the 2020-2022 armed conflict in Northern Ethiopia led to a severe humanitarian crisis, marked by the collapse of the health system, widespread service disruption, and profound health consequences in the Amhara and Tigray regions. This includes the flight of health workers, severe medicine shortages, and interruptions in immunization services. Consequently, access to health facilities has sharply declined, including maternal and child health care services. Children and adolescents in conflict-affected areas have experienced significant trauma. Rape survivors faced severe medical and psychological consequences.

Section 2: Review of Health Expenditure and Key Health Outcomes in Ethiopia

Overview

Real government health expenditure more than doubled from 2007/08 to 2020/21, mainly due to increased spending on primary care by regional governments. However, this trend has reversed since 2020/21 because of high inflation. National health financing was funded roughly equally by donors (34%), the government (32%), and households' out-of-pocket payments (30%).

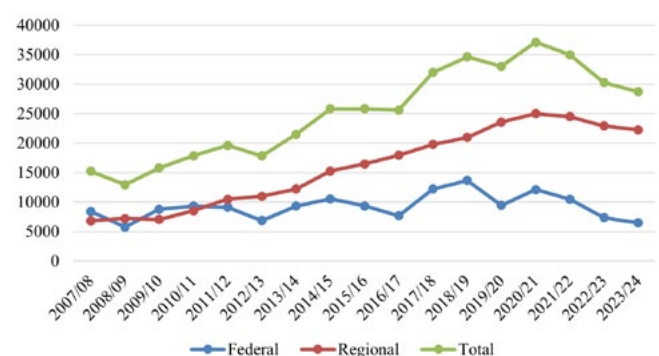
Significant progress has been made across key health outcomes, with under-5 mortality halving between 2005 and 2019, and major improvements in maternal health services such as antenatal care, skilled birth attendance and contraceptive use. Yet, challenges remain: neonatal mortality has risen since 2016, child malnutrition targets have been missed, and maternal mortality is still above the target level. In addition, while the overall prevalence of female genital mutilation and cutting (FGM/C) has declined and attitudes towards spousal violence have improved, both remain high. Another key finding is the persistent disparity across all health indicators based on wealth, education, urban versus rural residence, and region, with the pastoralist regions of Somali and Afar consistently showing the poorest health outcomes.

2.1 Health Expenditure in Ethiopia

Figure 1 shows continuous increases in the government's real total health expenditure (at 2016/17 prices) between 2007/08 and 2020/21. Regional governments accounted for the largest share of government health care spending during this period because most health services were provided by regional government-operated health providers due to fiscal decentralization. The federal government, on the other hand, was largely financing university-based specialized hospitals and health research and training.

Total government expenditure on health more than doubled between 2007/08 and 2020/21, rising from 15 billion Birr to 37 billion Birr. During the same period, regional government spending increased more than threefold, from 6.8 billion Birr to 24.9 billion Birr. In contrast, federal government health spending increased more moderately and with some fluctuations, rising from 8 billion Birr in 2007/08 to 13.6 billion Birr in 2018/19, before declining to 9 billion Birr in 2019/20.

Figure 1. Trends in government health expenditure, in millions of Birr at 2016/17 prices

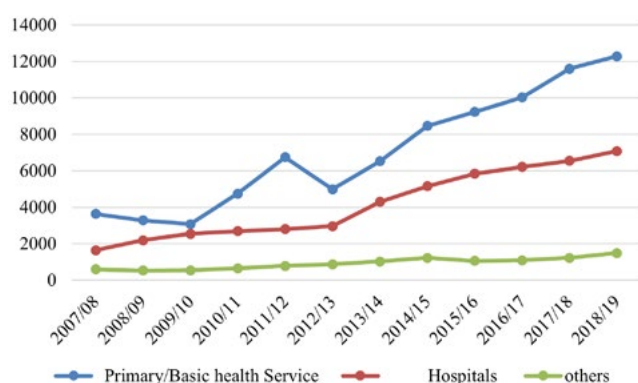


Source: Computed based on Ministry of Finance figures (2023/24)

Although there was a substantial increase in the nominal value of the government's health care spending after 2020/21, its real value declined due to high inflation. This also coincides with the armed conflict in many parts of the country. Total government spending decreased by 8.4 billion Birr between 2020/21 and 2023/24, from 37 billion Birr to 28 billion Birr. The decline in federal spending (by 5.7 billion Birr, from 12.1 billion Birr to 6.4 billion Birr) was much larger than the decline in regional government spending (by 2.7 billion Birr, from 24.9 billion Birr to 22.2 billion Birr).

Regional governments largely finance primary/basic health services such as health posts and health centers operating in rural areas and small towns, followed by primary and secondary hospitals operating in woreda towns, zones, and regional capital towns. Figure 2 shows that spending on primary and basic services increased more than fivefold between 2007/08 and 2018/19, rising from 3.6 billion Birr to 21.3 billion Birr. During the same period, spending on hospital services increased from 1.6 billion Birr to 7 billion Birr.

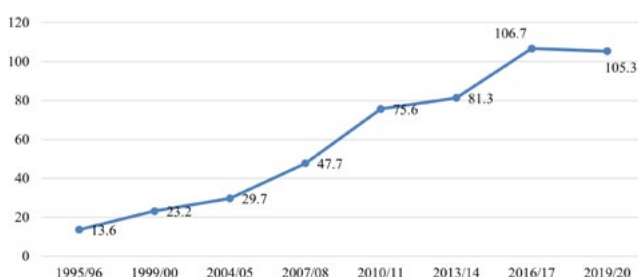
Figure 2. Regional government spending on health services by type (millions of Birr at 2016/17 prices)



Source: Computed based on Ministry of Finance figures (2019/20)

Figure 3 shows that per capita health expenditure increased continuously between 1995/6 and 2016/17, which corresponds to the considerable emphasis the government placed on the health sector. Per capita expenditure on health (in US\$ PPP) increased from 13.6 to 29.6 between 1995/96 and 2004/05. It increased further to reach PPP\$106.7 in 2016/17, but then declined slightly to PPP\$105.3 in 2019/20.

Figure 3. Total per capita health expenditure (in purchasing power parity adjusted USD)



Source: Ministry of Health (2022)

Table 1 shows that health care spending from all sources increased from 72 billion Birr to 94.2 billion Birr between 2016/17 and 2019/20. The main sources of funding were donors, government (especially regional governments), and households' direct out-of-pocket expenditures. The share of donor contributions declined slightly from 35.2% to 33.9% during this period. The share of government spending was

roughly flat at 32% (10% for federal and 22% for regional). Similarly, households' out-of-pocket spending remained flat at 30%. The share of community-based health insurance (CBHI) remained below 1%, but showed moderate growth from 0.35% to 0.9%. Health care spending by private employers for their employees increased slightly from 2.1% to 2.5%.

Table 1. Health care spending by source of finance

	Spending in million Birr at 2016/17 prices		% share from each source of finance	
	2016/17	2019	2019	2019/20
Donors	23.35	31.94	35.2	33.9
Govt including parastatals	23.19	30.33	32	32.2
<i>Federal</i>	6.93	9.85	9.6	10.5
<i>Regional</i>	16.27	20.48	22.5	21.7
Households direct out-of-pocket	21.83	28.77	30.2	30.5
CBHI (Voluntary pre-payment)	0.25	0.84	0.35	0.9
Private employers and others	1.54	2.34	2.1	2.5
Total	72.2	94.21	100	100

Source: Ministry of Health (2022)

Recent UNICEF data (2023/24) indicates a decreasing share of external assistance in health care funding. Table 2 shows that external aid accounted for as much as 61% of capital health spending in 2019/20, but steadily declined, especially between 2021/22 and 2023/24, from 56.25% to 41.3%. The shift is explained by a reduction in official development assistance due to global economic challenges and increased reliance on domestic borrowing to finance expenditure needs (UNICEF, 2023/24).

Table 2. Recent trends in healthcare capital spending (millions of Birr by source, at 2016/17 prices)

	2019/20	2020/21	2021/22	2022/23	2023/24
Domestic Sources	4488.9	4695.1	5,318.9	4,908.2	5,480.4
External Assistance	7,057.9	2,707.8	6,839.9	4,073.1	3,861.9
Total Capital	11,546.8	7402.9	12,158.9	8,981.4	9,342.3
% Share					
Domestic %	38.88	63.42	43.75	54.65	58.66
External Assistance (%)	61.12	36.58	56.25	45.35	41.34

Source: UNICEF (2023/24)

Table 3 also shows a declining trend in functional health facilities after 2020/21, especially in health posts, the number of which decreased from 17,699 to 17,457 between 2020/21 and 2022/23, before slightly recovering to 17,569 in 2022/23. The number of health centers and public hospitals also decreased between 2020/21 and 2021/22, but both recovered fully in 2023/24. Conflict, notably the war in Northern Ethiopia, was the main reason for the reported declines in health facilities (UNICEF, 2023/24).

Table 3. Recent trends in number of health facilities

	2020/21	2021/22	2022/23
Health posts	17,699	17,457	17,569
Health centres	3,777	3,587	3,826
Public hospitals	367	343	431

Source: UNICEF (2023/24)

Table 4 shows health care spending by disease category between 2016/17 and 2019/20. Infectious and parasitic (communicable) disease accounted for the largest share of spending but declined from 51% to 46%. Major types of disease with large shares of the health budget include neglected tropical disease (8.4%), HIV/AIDS and other sexually transmitted disease (6.1%), malaria (5.3%), Covid-19 (5.2%), and tuberculosis (3.6%). Non-communicable diseases accounted for the second largest share, and the proportion of health spending on this category more than doubled, from 12% in 2016/17 to 24.7% in 2019/20. Among the non-communicable diseases, cardiovascular disease accounted for 11.6% of total health care spending in 2019/20, followed by digestive problems (3.3%) and respiratory diseases (2%). Mental health accounted for 1.3% health spending share in the same year.

Nutritional deficiencies were third in terms of health spending share, with 11% in 2016/17, but this declined to 3.8% in 2016/19. In contrast, reproductive health's share of health budget increased from 8% to 12.5%. Maternal conditions, family planning, and prenatal conditions, respectively accounted for 5.5%, 3.7%, and 1.7% of total healthcare spending in 2019/20. The proportion of the health budget spent on injuries declined from 3% to 1.6%, non-specific disease decreased from 9% to 4%, whereas the share of others (unspecified) increased from 7% to 8%.

2.2 Trends in Child Health

Child Mortality and Vaccination

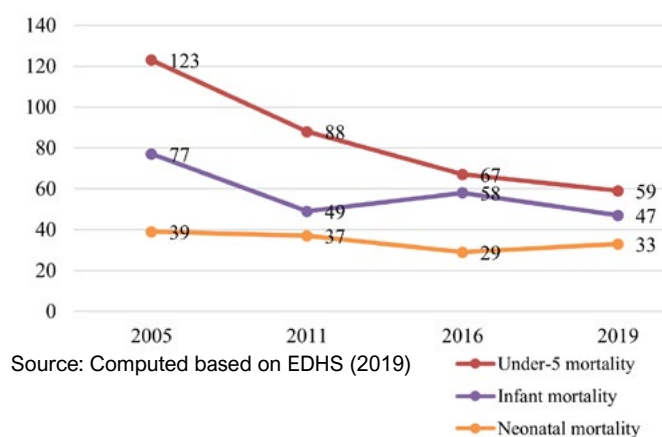
Figure 4 shows declining trends in child mortality (per 1000 live births) in the 5 years before the survey, between 2005 and 2019. Under-5 mortality (died before turning 5 years) more than halved, from 123 in 2005 to 59 in 2019. However, despite this achievement, rates remained much higher than the national target of reducing under-5 mortality to 30 per 1000 live births for 2019 (NPC, 2017). Infant mortality (died before turning 1 year) decreased from 77 to 49 between 2005 and 2011, but then increased to 58 in 2016 before declining to 47 in 2019. Neonatal mortality (died before turning one month) decreased continuously from 39 to 29 between 2005 and 2016, but rose to 33 in 2019, and therefore did not meet the 2019 national target of reducing neonatal mortality to 10 per 1000 live births (NPC, 2017). Estimates from the UN Inter-agency group for Child Mortality Estimation (UN IGME)¹ indicate that under-5, infant, and neonatal mortality rates declined to 46.5, 35.7 and 27.4 (per 1000 live births, respectively) between 2019 and 2023.

Table 4. Health expenditure by disease category

Major Disease Category	2016/17	2019/20
Infectious and parasitic (communicable) diseases	51%	46%
HIV/AIDS and other Sexually transmitted disease		6.10%
Tuberculosis		3.60%
Malaria		5.30%
Respiratory infection		1.40%
Diarrhea; disease		1.00%
Neglected tropical disease		8.40%
Covid-19		5.20%
Others		6.90%
Reproductive health	8%	12.50%
Maternal conditions		5.50%
Prenatal conditions		1.70%
Contraceptive management (family planning)		3.70%
Unspecified reproductive health conditions		1.60%
Nutritional deficiencies	11%	3.80%
Non-communicable diseases	12%	24.70%
Neoplasms		1.40%
Endocrine and metabolic disorders		1.40%
Cardiovascular diseases		11.60%
Mental and behavioral disorders, and neurological conditions		1.30%
Respiratory diseases		2.00%
Disease of the digestive system		3.30%
Disease of the genito-urinary system		1.30%
Sense organ disorders		1.20%
Oral disease		0.50%
Other and unspecified non-communicable disease		0.80%
Injuries	3%	1.60%
Non-disease specific	9%	4%
Other and unspecified diseases/ conditions	7%	8%

Source: Ministry of Health (2022)

Figure 4. Trends in child mortality rates (per 1000 live births)

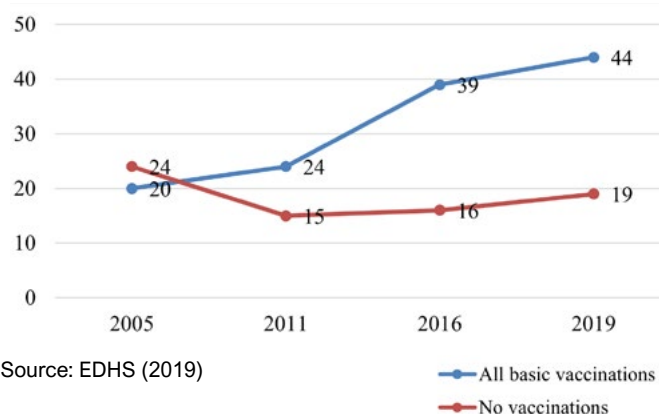


Source: Computed based on EDHS (2019)

¹ <https://data.unicef.org/country/eth/>

Figure 5 shows that the percentage of 12-23-month-old children who received all the necessary basic vaccines at any time before the survey more than doubled, from 20% to 44%, between 2005 and 2019. The proportion who did not receive any vaccinations decreased from 24% to 15% between 2005 and 2011, but then increased continuously to 19% in 2019. This indicates that 37% of 12-23-month-old children received a portion of the vaccines.

Figure 5. Percentage of children aged 12-23 months who were fully vaccinated prior to the survey



Source: EDHS (2019)

Table 5 presents the incidence of child mortality and vaccination coverage by wealth status, location of residence, and region in 2019. There was a clear inverse relationship between under-5 mortality and wealth status. Under-5 mortality per 1000 live births was 77 in the lowest quintile, compared to 73 in the second quintile, 72 in the middle quintile, and 62 in the fourth quintile. By contrast, the prevalence of under-5 mortality in the highest wealth quintile was 42. Infant mortality was slightly higher in the second quintile (62) compared to the lowest quintile (58), but then decreases continuously between the second and highest quintiles to 39 deaths per 1000 live births. Neonatal mortality is significantly higher in the second quintile (41) compared to the lowest quintile (34), but then declines continuously to 24 in the highest quintile. Child mortality rates were higher in rural than urban areas: 64 vs 46 for under-5 mortality, 51 vs 32 for infant mortality, and 37 vs 21 for neonatal mortality.

The analysis of child mortality by region indicates that mortality rates were lowest in the capital city (Addis Ababa), with an under-5 mortality rate of 26, an infant mortality rate of 21, and a neonatal mortality rate of 17. The Tigray region was the second-best performing region in terms of under-5 mortality, with 43 deaths per 1000 live births, and third-best performing in infant mortality, with 38 deaths per 1000 live births (after Addis Ababa and former SNNPR). The pastoralist Somali region registered the highest number of under-5 mortality, with 101 deaths per 1000 live births, and the second highest infant mortality (with 71 deaths per 1000 live births) after Benishangul Gumuz (74 deaths per 1000 live births). Benishangul Gumuz and Gambella regions, both emerging regions, registered the 2nd and 3rd highest numbers of under-5 mortality rates, with 90 and 86, respectively. On the other hand, the other pastoralist region, Afar, performed better in all forms of child mortality compared to regions with more capacity, notably the Amhara and Oromia regions.

Table 5. Child mortality rates and vaccination coverage by wealth status and region in 2019

Year	Deaths per 1000 live births in the 5 years before the survey			% age 12-23-month-olds who received vaccines any time before the survey	
	Under-5 mortality	Infant mortality (death < 1 year old)	Neonatal mortality (death < 1 month)	All basic vacc.	No vacc.
by wealth status					
Lowest	77	58	34	26.4	35.6
Second	73	62	41	42.5	20.1
Middle	72	57	40	35.4	23.8
Fourth	62	49	36	42.6	15.5
Highest	46	39	24	67	3.9
Location of residence					
Urban	46	32	21	62.2	9.8
Rural	64	51	37	36.1	23.3
by Region					
Tigray	43	38	28	73	4.6
Afar	58	46	22	19.7	44.8
Amhara	69	58	46	62.9	14.8
Oromia	72	62	39	29.2	18.9
Somali	101	71	45	18.5	47.3
Benishangul Gumuz	90	74	55	66.1	9.7
SNNPR	56	37	22	43.5	24.2
Gambella	86	50	33	39.8	14.2
Harari	64	49	37	44.7	21.4
Addis Ababa	26	21	17	83.3	3.7
Dire Dawa	79	61	31	56.4	2.6

Source: EDHS (2019)

Regarding vaccination coverage by wealth status, the proportion of children aged 12-23 months who received all forms of vaccine rises from 26.2% to 42.5% between the lowest and second quintiles, falls back to 35.4% in the middle quintile, and increases to 42.6% in the fourth quintile and 67% in the highest quintile. The proportion who didn't receive any vaccine, decreases between the lowest and highest wealth quintiles, except between the second and middle quintiles. Among the highest wealth quintile, only 3.9% of 12-23-month-old children did not receive any type of vaccines, compared to 35.6% in the lowest quintile.

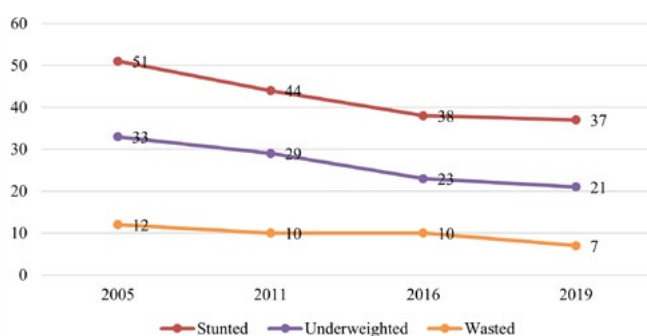
There was also a huge disparity in vaccine coverage by location of residence. In urban areas, 62.2% of 12-23-month-old children received all types of vaccines, compared to only 36.1% in rural areas. The proportion who did not receive any type of vaccine was also far higher in rural areas (23.3%) than in urban areas (9.8%). The analysis of vaccination coverage by region shows better coverage for all types of vaccines in Addis Ababa (83.3%), followed by Tigray (73%), Benishangul Gumuz (66%), and Amhara (62.9%). Lowest vaccination coverage was reported in the pastoralist regions of Somali (18.5%) and Afar (19.7%). The proportion of 12-23-month-old children who did not receive any vaccine was also highest in these two pastoralist regions (47.3% in Somali and 44.8% in Afar) and lowest in Dire Dawa (2.6%), Addis Ababa (3.7%), and Tigray (4.6%).

2.3 Malnutrition

Figure 6 presents trends in malnutrition among children under 5 from 2005 to 2019. More than half (51%) of children under-5 were stunted (low height for age) in 2005, this decreased to 44% in 2011 and 38% in 2016. The rate of decline slowed after that, and decreased by just one percentage point further to reach 37% in 2019. The prevalence of underweight (low weight-for-age) was 33% in 2005, but it declined continuously to reach 21% in 2019. The largest reduction in underweight occurred between 2011 and 2016, with a 6-percentage point decrease from 29% to 23%. The incidence of wasting (low weight for age) also declined moderately from 12% to 7% between 2005 and 2019. The largest decline was reported between 2016 and 2019, with a 3-percentage point reduction from 10% to 7%.

The targets set for reducing the prevalence of stunting, underweight and wasting among children under 5 for 2019 were 28.8%, 15.4%, and 5.7%, respectively (MoH, 2016). Comparing the achievements against the targets therefore shows considerable lags in all three indicators for 2019. The prevalence of stunting was 8 percentage points higher than the target, underweight was 6 percentage points higher, and wasting was 1.3 percentage points higher.

Figure 6. Trends in malnutrition prevalence among children under 5 (%)



Source: EDHS (2019)

Table 6 shows the incidence of malnutrition by wealth status, mother's education, and region. Wealth status and malnutrition indicators were inversely related, with minor exceptions. Stunting declined with wealth status, except in the middle quintile, and wasting was negatively related to wealth status, except in the fourth quintile. Underweight declined continuously with wealth status. The education of mothers was the other variable of interest, with a strong association between low levels of education and child malnutrition. Stunting was as high as 41.5% in households with non-educated mothers, but as low as 19% and 21.6% in households with mothers who completed secondary and post-secondary education, respectively. Underweight and wasting prevalence were 26.1% and 9.2%, respectively, among children under 5 with non-educated mothers. Among children with post-secondary education mothers, the incidences were only 3.4% and 0.2%, respectively.

Rural children were at a disadvantage compared to their urban peers across all three malnutrition indicators. In rural areas, the prevalence of stunting, underweight and wasting was 40.4%, 23.4% and 7.5%, respectively. The corresponding figures in urban areas were 26.2%, 15.1%, and 5.4%. The comparison by region shows that stunting was highest in Tigray (48.4%), followed by Afar (42.2%), Amhara (41.5%) and Benshangul Gumuz (40.7%). The regions with the lowest

stunting prevalence were Addis Ababa (15%) and Gambella (17.3%). Underweight was highest in Benshangul Gumuz and Somali regions (both 32%), Afar (31.1%) and Tigray (30.5%), and lowest in Addis Ababa (4.9%). Wasting was highest in the pastoralist regions of Somali (21.4%) and Afar (13.5%), and lowest in Addis Ababa (2.2%), Harari (4.1%), and Oromia (4.3%).

Table 6. Prevalence of malnutrition among children under 5 by wealth, education of mother, and location of residence in (%)

Year	Stunting	Underweight	Wasting
Wealth status			
Lowest	43.3	30.2	11.7
Second	38.6	23.1	6.9
Middle	42.2	22.0	5.1
Fourth	35.2	17.0	6.2
Highest	22.6	11.5	3.9
Mother's education			
No education	41.5	26.1	9.2
Primary	35.4	17.3	4.9
Secondary	19.0	9.4	5.7
More than secondary	21.6	3.4	0.2
Location of residence			
Urban	26.2	15.1	5.4
Rural	40.4	23.4	7.5
Region			
Tigray	48.4	30.5	9.1
Afar	42.2	31.1	13.5
Amhara	41.5	27.1	7.6
Oromia	35.3	16.3	4.3
Somali	30.6	31.9	21.4
Benshangul Gumuz	40.7	32.0	6.4
SNNPR	36.4	20.3	6.3
Gambella	17.3	17.6	13.1
Harari	36.4	20.2	4.1
Addis Ababa	15.0	4.9	2.2
Dire Dawa	25.4	15.8	5.9

Source: EDHS (2019)

2.4 Maternal Health

Antenatal Care and Contraception

Table 7 shows trends in antenatal care, skilled birth attendance, and modern contraceptive use among women aged 15-49. Among women who had a live birth in the 5 years before the survey, access to antenatal care during the most recent pregnancy increased from 28% to 74% between 2005 and 2019, with the proportion of pregnant women who had four or more antenatal care visits increasing more than threefold (12% to 43%). Similarly, the proportion of women who had an antenatal care visit during the first trimester of pregnancy increased more than fourfold, from 6% to 28%. Skilled birth attendance was only 5% in 2005, but increased about tenfold to reach 48% in 2019. The largest improvement was registered between 2016 and 2019, when skilled birth attendance increased from 26% to 48%.

Table 7. Trends in antenatal care (ANC), skilled birth attendance, and modern contraceptive use (%)

Year	Percentage of women age 15-49 who had a live birth in the 5 years before the survey (for the most recent birth within each period)				Any modern contraceptive use among currently married 15-49 aged women (%)
	Received any ANC from skilled provider (%)	Had 4+ ANC visits (%)	Had ANC in first trimester (%)	Delivery in health facility (%)	
2000					6
2005	28	12	6	5	14
2011	34	19	11	10	27
2016	62	32	20	26	35
2019	74	43	28	48	41

Source: EDHS (2019)

The prevalence of modern contraceptive use among married women was only 6% in 2000, but increased continuously and reached 41% in 2019. The largest increase was observed between 2005 and 2011, when prevalence increased from 14% to 27%. Table 8 shows that, on average, respondents were aware of six methods of birth control, and more than 95% knew at least one method. The most commonly known methods were injectables (known by more than 91%), implants (known by more than 84%), pills (known by more than 81%), and male condoms (known by more than 69%). The least known methods include traditional methods (known by fewer than 1%), male sterilization (known by fewer than 14%), and the standard days method (known by fewer than 25%).

Table 8. Percentage of women aged 15-49 aware of contraceptive methods

Method	All women	Married women
Any method (=1)	95.2	96.2
Any modern method (=1)	95.0	96.1
Female sterilization (=1)	30.7	32.1
Male Sterilization (=1)	13.2	12.8
Pill (=1)	81.0	83.0
IUD (=1)	50.5	52.3
Injectables (=1)	91.0	92.5
Implants (=1)	84.3	87.1
Male condom (=1)	70.9	68.7
Female condom (=1)	24.7	22.3
Emergency contraception (=1)	27.2	25.0
Standard days method (=1)	19.2	20.3
Lactational amenorrhoea (LAM)	42.1	46.9
Rhythm (=1)	46.7	46.7
Withdrawal (=1)	24.0	24.7
Other traditional methods (=1)	0.2	0.2
Number of methods known by the respondents	6.1	6.1

Source: EDHS (2019)

Table 9 presents the incidence of antenatal care access, skilled birth delivery, and modern contraceptive use by wealth status, education status, location of residence, and region.

The results show that receiving antenatal care, health facility delivery, and modern contraceptive use all increase with wealth status. There was a huge difference between the lowest and the highest quintiles across all three indicators, especially in health facility delivery, with only 19.7% of the lowest wealth quintile being delivered in health facilities, compared to 85.6% in the highest quintiles. Similar results were observed between education status. The higher the level of education, the higher the prevalence of access to antenatal services, delivery in health facilities, and modern contraceptive use.

Table 9. Antenatal care, skilled birth attendance, and modern contraceptive use among women aged 15-49 who had a live birth in the five years preceding the survey (with data specific to the most recent birth)

Year	Received any ANC from a skilled provider	Delivered in a health facility	Any modern contraceptive use among married women
Wealth status			
Lowest	47.3	19.7	27.0
Second	71.0	38.5	35.0
Middle	75.6	43.3	45.0
Fourth	80.7	61.5	43.0
Highest	94.6	85.9	51.0
Education			
No education	62.0	32.7	32.0
Primary education	81.4	57.8	47.5
Secondary	97.1	83.8	55.8
Post-secondary	99.8	93.1	53.8
Residence			
Urban	84.5	70.4	47.7
Rural	69.7	40	37.7
Region			
Tigray	94.0	72.4	36.3
Afar	62.7	28.3	12.7
Amhara	82.6	54.2	49.5
Oromia	70.8	41	38.9
Somali	30.2	23.3	3.4

Year	Received any ANC from a skilled provider	Delivered in a health facility	Any modern contraceptive use among married women
Region cont'd...			
Benshangual Gumuz	83.3	63.7	36.7
SNNPR	69.4	47.5	44.6
Gambella	85.7	70.3	33.2
Harari	80.7	63.8	30.3
Addis Ababa	96.9	94.8	47.6
Dire Dawa	83.5	69.2	30.3

Source: EDHS (2019)

Antenatal care service use and delivery in health facilities were highest in Addis Ababa and Tigray. Contraceptive use was highest in Amhara region (49.5%), followed by Addis Ababa (47.6%) and the former SNNPR (44.6%). The pastoralist Somali region performed worst across all three indicators: 30.2% antenatal care use, 23.3% health facility delivery, and only 3.4% modern contraceptive use. Afar, the other pastoralist region, also had low prevalence across the three indicators, with 62.5% of mothers receiving antenatal care from skilled providers, 28.3% of births occurring in health facilities, and 12.7% contraceptive use among married women aged 15-49.

2.5 Fertility Rates

Table 10 shows trends in total fertility from 2011 to 2024. Total fertility per woman declined from 4.8 to 4.6 births per woman between 2011 and 2016, and further to 4.1 in 2024. Table 11 presents data from the 2016 EDHS, providing more detailed information about variations in total fertility by wealth, location of residence, and region in the three years prior to the survey from the 2016 EDHS.

Table 10. Trends in total fertility among women aged 15-49

	Number if children ever born
2011	4.8
2016	4.6
2024	4.1 ²

Source: EDHS (2016) and Ministry of Health

Table 11 shows that the total fertility rate declines with higher wealth and more years of schooling. Fertility also declines with urbanization, with the total fertility in urban areas (2.3) less than half the fertility rate in rural areas (5.2). The comparison between regions also shows an interesting difference between pastoralist regions and other regions. The Somali region has the highest total fertility (7.2), followed by Afar (5.5). As shown above, these two pastoralist regions also recorded the lowest levels of contraceptive use; their higher fertility rates reflect the limited reach of family planning services in these areas.

Table 11. Trends in total fertility among women aged 15-49 for the 3 years preceding the survey by wealth status, level of education, and location of residence in 2016

	Fertility rate (%)
Wealth status	
Lowest	6.4
Second	5.6
Middle	4.9
Fourth	4.3
Highest	2.6
Education	
No education	5.7
Primary	4.2
Secondary	2.2
More than secondary	1.9
Location of residence	
Urban	2.3
Rural	5.2
Region	
Tigray	4.7
Afar	5.5
Amhara	3.7
Oromia	5.4
Somali	7.2
Benshangual Gumuz	4.4
SNNPR	4.4
Gambella	3.5
Harari	4.1
Addis Ababa	1.8
Dire Dawa	3.1

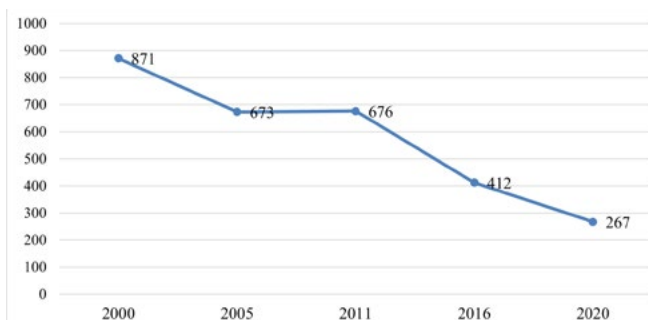
Source: EDHS (2016)

2.6 Maternal Mortality

Figure 7 shows the trend in maternal deaths from 2000 to 2020. Between 2000 and 2005, maternal deaths decreased by 198 (per 100,000 live births), and the largest reduction (by 264) occurred between 2011 and 2016. The maternal mortality rate was reduced by a further 145 between 2016 and 2020. However, although there has been good progress, by 2020 the level still fell below the 199 target. Due to the devastating armed conflicts which destroyed health facilities and caused a huge loss of human life, it is going be very difficult to achieve the SDG target of reducing maternal mortality to 70 by 2030.

² The 2024 figure was obtained from Factsheet Ethiopia 2025

Figure 7. Maternal mortality (per 100,000 live births) over the seven years preceding the survey

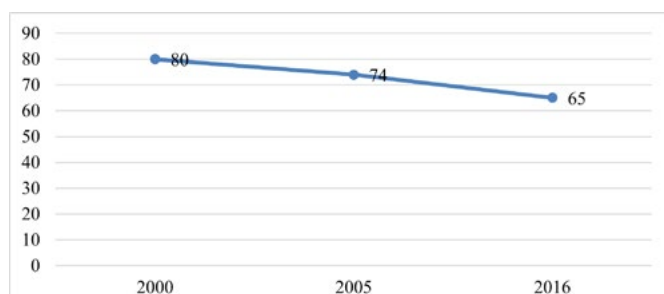


Source: EDHS (2016) and Ministry of Health³

2.7 Female Genital Mutilation and Cutting (FGM/C)

Table 11 shows that the proportion of women experiencing FMG/C declined from 80% to 74% between 2000 and 2005, and further decreased to 65% between 2005 and 2016. Table 12 presents differences in FGM/C prevalence across respondents' characteristics. The practice was highly prevalent among Muslim women (82.2%) followed by protestant women (66%). More than half of Catholic and Orthodox women also experienced FGM/C. The analysis by ethnicity shows that FGM/C was universal among Afar and Somali ethnic groups, affecting over 98% of women, as well as over 92% of women in Wolayta and Hadiya. FGM/C was also very common among the Sidama (87.6%), Guragie (78.3%), Oromo (77.1%) and Amhara (60.5%), and less prevalent in relative terms among Tigray ethnic groups (23%).

Figure 8. Percent of women aged 15-49 who experienced FGM/C



Source: EDHS (2016)

The investigation of FGM/C by location shows that the practice was more prevalent in rural areas (68%) than in urban (54%), and that the regional prevalence mirrors the result of the ethnicity analysis. Among the regions, the practice was universal in Somali (99%) and almost universal in Afar (91%), followed by Harari (87%), Oromia (76%), Dire Dawa city administration (75%), Amhara (65%), Benishangul Gumuz (63%), former SNNPR (62%), Gambella (33%), and Tigray (24%).

Table 12. Percent of women aged 15-49 who experienced FGM/C, by socioeconomic characteristic

Variables	%
Religion	
Orthodox	54.2
Catholic	58.2
Protestant	65.8
Muslim	82.2
Ethnicity	
Afar	98.4
Amhara	60.5
Guragie	78.3
Hadiya	92.3
Oromo	77.1
Sidama	87.6
Somali	98.5
Tigray	23
Wolayta	92.3
Others	38.1
Location of residence	
Urban	54
Rural	68
Region	
Tigray	24
Afar	91
Amhara	62
Oromia	76
Somali	99
Benshangul Gumuz	63
SNNPR	62
Gambella	33
Harari	82
Addis Ababa	54
Dire Dawa	75
Ethiopia	65

Source: EDHS (2016)

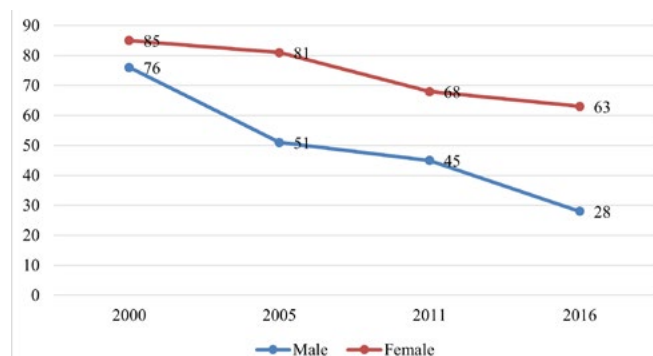
2.8 Violence Against Women

Attitudes Toward Spousal Violence

Figure 9 shows that the percentage of men and women justifying wife beating in at least one of the five specified circumstances (burns the food, argues with husband, goes out without telling him, neglects the children, and refuses sexual intercourse) has dropped over time. The percentage of men who justified wife beating more than halved, from 76% to 28%, between 2000 and 2016. The proportion of women who justified wife beating also declined, but at a slower pace, (from 85% to 63%).

³The 2020 figure was obtained from Factsheet Ethiopia 2025

Figure 9. *Trend in the percentage of women and men who believe that a husband is justified in beating his wife under at least one of five specified circumstances*



Source: EDHS (2016)

Table 13 shows the percentage of women and men aged 15-49 who agreed that a husband was justified in beating his wife for specific reasons, according to the 2016 EDHS report. The proportion of men who justified wife beating ranged from 12% for burning food to 19% for neglecting children, and those who justified any of the five reasons was 28%. A larger proportion of women justified wife beating, varying between 35% for refusing sexual intercourse to 48% for neglecting children.

Table 13. *Percentage of women and men aged 15-49 who agreed that a husband was justified in beating his wife for specific reasons (2016)*

Reason	Men	Women
Burns the food	12	40
Argues with him	16	42
Goes out without telling him	17	43
Neglects the children	19	48
Refuses sexual intercourse	13	35
Any of these reasons	28	63

Source: EDHS (2016)

Incidence of violence against women

Table 14 shows the prevalence of women aged 15-49 who have experienced violence by marital status. The results show that the incidence of both physical and sexual violence was higher among divorced/separated/widowed women while there was a lower incidence among never-married and married women. Physical violence since age 15 was reported by 7% of never-married women, 27% of those married/living together, and 39% of those widowed/separated. Sexual violence was reported by 2% of never-married, 12% of married/living together, and 18% of divorced/separated.

Table 14. *Women's experience of violence by marital status*

	Never married	Married or living together	Divorced/separated/widowed
Physical violence since age 15	7	27	39
Sexual violence	2	12	18

Source: EDHS (2016)

Table 15 shows the incidence of different types of violence perpetrated by spouses for ever-married 15-49-year-old women. Emotional violence was reported by 24%, with 20% of women experiencing it in the last 12 months. Under the emotional violence category, 19.4% of women reported they were insulted and 16.7% reported that the violence happened in the last 12 months. Physical violence was reported by 24% and 17% of the victims reported that it happened in the last 12 months. The most frequently reported physical violence was slapping and/or twisting arm or pulling hair. This type of physical violence was reported by 18.8% of the respondents. Sexual violence was reported by 10%, with 8% of the respondents experiencing it in the last 12 months.

Table 15. *Percentage of ever-married women who experienced types of spousal violence*

	Ever experienced	Past 12 months
Emotional	24.0	20.0
Said or did something to humiliate her in front of others	13.7	11.2
Threatened to hurt/harm her or someone she cared about	7.9	6.4
Insulted her or made her feel bad about herself	19.4	16.7
Physical	24.0	17.0
Pushed her, shook her or threw something at her	12.4	8.7
Slapped her, twisted her arm or pulled her hair	18.8	12.7
Punched her with his fist or something that could hurt	8.1	4.7
Kicked her, dragged her or beat her up	9.7	6.4
Tried to choke her or burn her on purpose	2.1	1.4
Threatened her or attacked her with a knife or other weapon	2.2	1.5
Sexual	10.0	8.0
Forced sexual intercourse when she did not want	8.4	6.4
Forced her to perform any other sexual acts she did not want to	4.4	3.7
Forced her with threats to perform sexual acts she did not want to	3.0	2.3
Physical or sexual	26.0	20.0
Physical, sexual, or emotional	34.0	27.0
Spousal violence committed by husband/partner		
Physical violence	24.9	16.9
Sexual violence	11.1	8.3
Physical and/or sexual violence	28.0	19.8

Source: EDHS (2016)

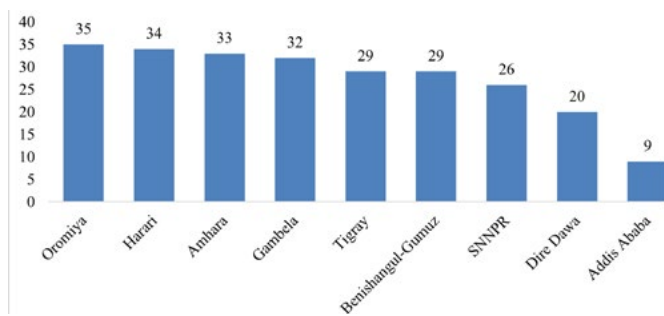
Table 15 further shows that violence was perpetrated largely by women's husband or partner. About 25% of the respondents reported that physical violence was perpetrated by their spouse (and 16.9% reported that this happened in the last 12 months before the survey). Similarly, 11.1%

experienced sexual violence from their spouse (and 8.3% reported that it happened in the last 12 months before the survey).

Figure 10 shows the prevalence of spousal violence against ever-married women across regions. The problem was highly prevalent in Oromia (38%), followed by Harari (34%) and Amhara (33%), while it was less prevalent in Addis Ababa (9%).

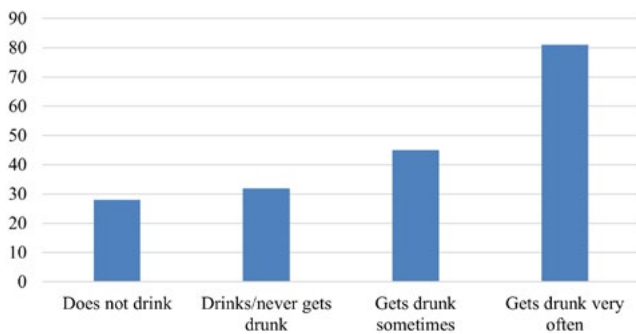
Figure 11 shows spousal violence by husband's alcohol consumption. Spousal violence was reported by 81% of women who reported that their husband was often drunk, by 45% of those who reported their husband was sometimes drunk, by 32% of those who reported that their husband drinks but was never drunk, by 28% of those who reported that their husband never drinks.

Figure 10: Percentage of ever-married women aged 15-49 who have ever experienced physical, sexual, or emotional violence by a husband or partner



Source: EDHS (2019)

Figure 11: Percentage of ever-married women who have ever experienced spousal (physical, sexual, or emotional) violence, by husband's or partner's alcohol consumption status



Source: EDHS (2019)

Conclusion on Health Expenditure and Key Health Outcomes

This review of Ethiopia's health sector shows significant progress in real health spending, a halving of under-5 mortality, and a substantial expansion of maternal health services such as antenatal care, skilled birth attendance, and modern contraceptive use, up to the last nationally representative data released in 2019-20. Additionally, there were gradual declines in harmful practices like FGM/C and the acceptance of spousal violence.

However, these achievements face serious challenges. For example, due to high inflation, real health expenditure has decreased despite nominal spending rising. Ongoing armed conflict has destroyed health facilities and disrupted essential services like vaccination and skilled birth attendance. Key health goals related to child mortality, child malnutrition, and maternal mortality had not been met by 2019, and neonatal mortality has been increasing since 2016. The escalation of conflict could undo the progress made over the last twenty years. Another important finding was the persistent inequality in health outcomes by wealth, education, location, and region, with improvements more limited among low-wealth, less educated, and rural populations. The regional analysis highlights the poorest health outcomes in Somali and Afar's pastoralist regions across nearly all indicators, including vaccination coverage, child mortality, facility-based deliveries, and contraceptive use.

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Young Lives is a longitudinal study of poverty and inequality, following the lives of 12,000 young people – from infancy to adulthood – in four countries (Ethiopia, India, Peru and Vietnam).

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