

## Progress in Health Indicators, 1991-2018

### Ministry of Health, Eritrea



The health services are organized in a three-tier basis with the primary level constituting community health services, the health stations, health centers and community hospitals, while the secondary level constitutes the Zoba referral hospitals and first contact hospitals and the tertiary level with national referral hospitals.

The outpatient service in Eritrea is provided in health stations, clinics, health centers and hospitals. The inpatient service is almost provided only by health centers and hospitals.

Hospitals are divided into three levels. The primary level hospitals that provide preventive and curative services which function at the community level receiving referrals from health centers. Some health centers also function as community hospitals. The secondary level hospitals are the Zoba referral hospitals that receive referrals from the primary level hospitals and provide general outpatient and inpatient services. The tertiary level hospitals are the National referral hospitals that provide specialized outpatient and inpatient services.

The overall national guidance and stewardship on health is provided by the Ministry of Health that has 4 departments and other structures that report to the office of the Minister. At the Zonal level, there are 6 zonal medical offices. At sub-Zoba - level, a sub-zoba health office or the highest health facility in the sub Zoba

carries the leadership and managerial responsibility of the sub-Zoba. Separate sub-Zoba Medical Offices have been established in some Zobas. The MOH is now making plans to scale-up establishing sub-Zoba health offices in all Zobas.

Health service delivery has been guided by the National Health Policy. Since 2000, the health policy has been implemented through cycles of five year strategic plans and annual operational plans, which started at programs level and since 2012 developed to a sector wide Strategic Development Plan (HSSDP). At the moment the country is implementing its HSSDP II, which covers the period 2017-2021. The HSSDP provides the medium term strategic directions that the health sector will facilitate the attainment of the Eritrean health aspirations and so contribute appropriately to the national development, and global health agenda.

The Eritrean health care system is made up of public and private sectors, majority of health care facilities are publically owned. As indicated in as

Table 1: by the end of December, 2018 there were 332 health facilities reporting on monthly bases to their respective Zobas

**Table 1: Number of Health facilities by Zoba and type as of December, 2018**

ZOBA	Hospital	Community Hospital	Health Center	MCH Clinic	Health Station	Clinic	Total	% of Total
AN	1	0	8	1	22	3	35	10.5
DE	1	6	9	2	42	1	61	18.4
DKB	1	1	1	0	12	2	17	5.1
GB	1	2	14	3	60	0	80	24.1
MA	1	2	10	0	24	40	77	23.2
National Referr	10	0	1	0	0	0	11	3.3

al								
<b>SKB</b>	<b>1</b>	<b>3</b>	<b>11</b>	<b>2</b>	<b>28</b>	<b>6</b>	<b>51</b>	<b>15.4</b>
<b>Eritrea</b>	<b>16</b>	<b>14</b>	<b>54</b>	<b>8</b>	<b>188</b>	<b>52</b>	<b>332</b>	<b>100.0</b>
<b>% of Total</b>	<b>4.8</b>	<b>4.2</b>	<b>16.3</b>	<b>2.4</b>	<b>56.6</b>	<b>15.7</b>	<b>100.0</b>	
<b>Key...AN= Anseba, DE= Debub, DK= Debubawi Keih Bahri, GB= Gash-Barka, MA=Maekel, NR= National Referral, SK= SemenawiKeih Bahri</b>								

Source: Health Information Management System (HMIS) Report- 2018 (MOH, 2019b)

In addition to the above stated number of health facilities there are 311 private retail outlets (46 Pharmacies, 41 drug shops, and 224 rural drug vendors) that distributed medicine to the concerned bodies as indicted in 2.

**Table 2: Current Distribution of Private Retail Outlets in 2018**

Zoba	Pharmacy	Drug shop	Rural Drug Vendor	Total
MA	34	19	11	64
SKB	2	4	29	35
DE	3	8	61	72
AN	3	4	28	35
GB	4	5	91	100
DKB	0	1	4	5
<b>Total</b>	<b>46</b>	<b>41</b>	<b>224</b>	<b>311</b>
<b>% of Total</b>	<b>15</b>	<b>13</b>	<b>72</b>	<b>100.0</b>

Source: Health Information Management System (HMIS) Report- 2018

The doctors, nurses and associate nurses, ratio in 2017 was 1:17134, 1:2965, 1:1312 respectively indicating that there were 0.58:3:4 and 7.6 per 10,000 people of doctors, nurses and associate nurses respectively taking only those employed by the MOH. An average of 20-30 doctors are graduating yearly starting in 2009 that will significantly reduce the ratio. The minimum requirement for nurses and associate nurses is already achieved. The WHO recommended target for developing countries in the doctor population and nurse population ratio is 1:10,000 and 1: 5,000 respectively (MOH, 2019b).

As the result of the concerted efforts made to expand health services by building health facilities and equipping them with the necessary equipment and skilled health personnel, access to health care within 10 Km radius, increased from 46 percent in 1991 to 80 percent at present (2019). Currently, over 60 percent of the population live within 5 kms. from a health facility.

There are notable successes in areas of service provision which include: at least one antenatal coverage, which stands at 96% and institutional delivery (delivery in a health facility), which stands at 62%, Immunization coverage for Penta and Measles including Pneumococcal conjugate 3<sup>rd</sup> dose (PCV3) stands at 98%. Drastic reductions were also seen in harmful practices including, early marriage and female genital mutilation. In the area of hygiene and sanitation, which was lagging behind, successes are reported with already 924 (35%) of the 2,666 rural villages in the country having been declared "Open Defecation Free". The effort of towards declaring open defecation free is being scaled up and consequently, Eritrea is planning to end open defecation by 2022 (MOH, 2019a).

Looking at specific contributors to disease burden, there have been improvements in the incidence, prevalence and mortality due to most communicable disease, including HIV, TB and Malaria. In 2016: New HIV infections was estimated at 0.15 per 1,000 uninfected population; Tuberculosis incidence was estimated at 74 per 100,000 population; Malaria incidence was estimated at 17.2 per 1,000 population at risk; Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years was estimated at 0.74 %; Probability of dying from any of cardiovascular diseases, cancer, diabetes, chronic respiratory diseases

between age 30 and exact age 70 was estimated at 23.9 %; Age standardized mortality rate attributed to household and ambient air pollution was estimated at 173.7 per 100,000 population; Mortality rate attributed to exposure to unsafe WASH (Water, sanitation and hygiene) at services was estimated at 45.6 per 100,000 population; Total alcohol per capita ( $\geq$  15 years of age) consumption was estimated at 1.3 litres of pure alcohol; Age-standardized prevalence of tobacco smoking among persons 15 years and older was estimated at 11.4 % for male and 0.2% for female; Average of 13 International Health Regulations core capacity scores was estimated at 49(MOH, 2019a).

These and other efforts and achievements in the health sector and in many other development endeavors resulted in continuous improvements of impact health indicators such as under-five mortality, maternal mortality and life expectancy. *From 1991 to 2015*, Maternal Mortality Ratio was reduced by 69 percent (from 1,590 to 501 per 100,000 LB), Neonatal Mortality Rate was reduced by 45 percent (from 33.6 to 18.4 per 1,000 LB) and Under-five Mortality Rate was reduced by 69 percent (151 to 47 per 1,000 LB). These remarkable achievements are among few best in Africa Region. As shown in the World Health Statistics Annual Reports (WHO, 2016), during the same period, the average reductions in Africa region were 45 percent, 38 percent and 54 percent for maternal, neonatal and under-five mortality respectively. Life expectancy at birth, which is considered as a summative health indicator increased by 35 percent from 48 years in 1990 to 65 years in 2016, (62.9 years for male and 67.1 years for female), while the Healthy life expectancy at birth was estimated at 57.4 years in 2016.

### **Child Mortality**

As there were no population surveys that estimated child mortalities, since EPHS 2010, and as the UN estimates are comparable with the MOH estimates, Eritrea adopts the UN estimates for its annual updates in early childhood mortality.

Figure 1: depicts the UN Inter-agency Group for Child Mortality Estimation (UN IGME) estimates from 1980 to 2017 (UNICEF et al 2019). As shown in figure 3.9 Under-five Mortality Rate was reduced by 72 percent, from 151 per 1,000 live births in 1991 to 43 in 2017 and Neonatal Mortality Rate was reduced by 47 percent, from 34 per 1,000 live births in 1991 to 18 in 2017. In 2017, neonatal mortality in Eritrea accounted for more than half (54%) of the infant deaths and about 42% of under-fives deaths.

Figure 1, reveals that under-five mortality rate in Eritrea is much lower and the rate of reduction much faster than the average for sub-Saharan Africa.

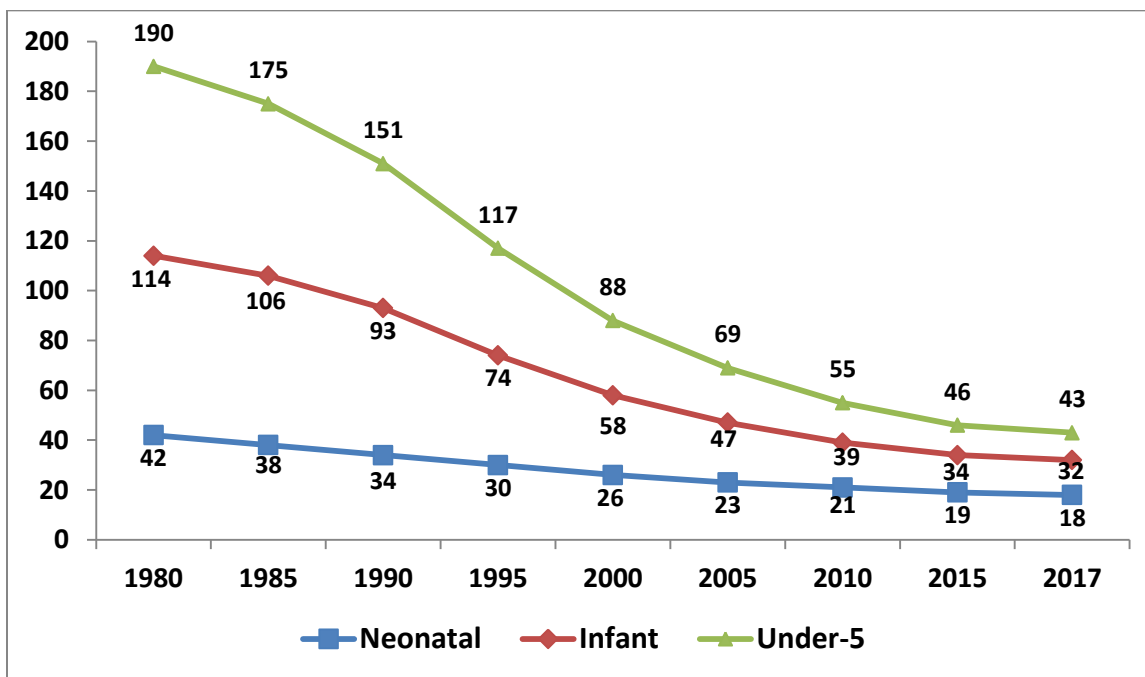
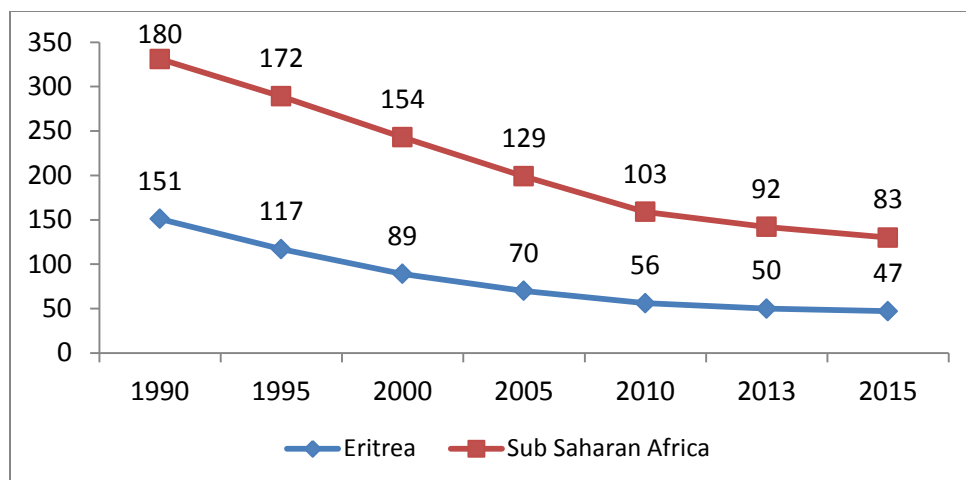
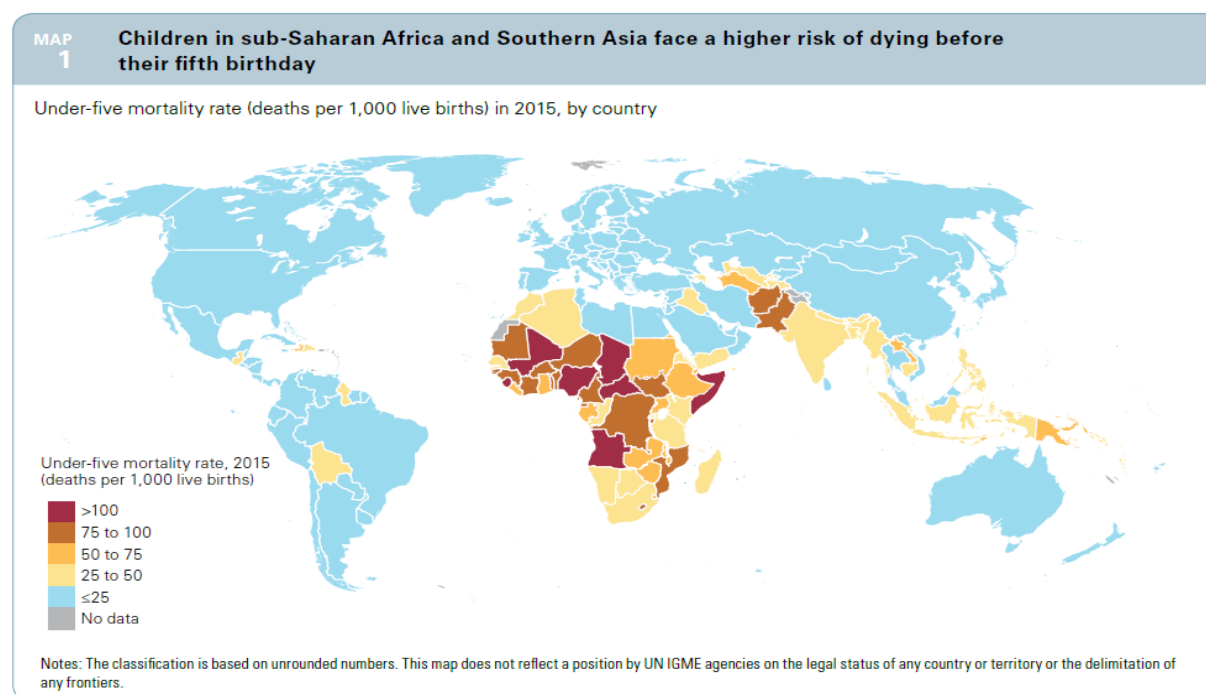


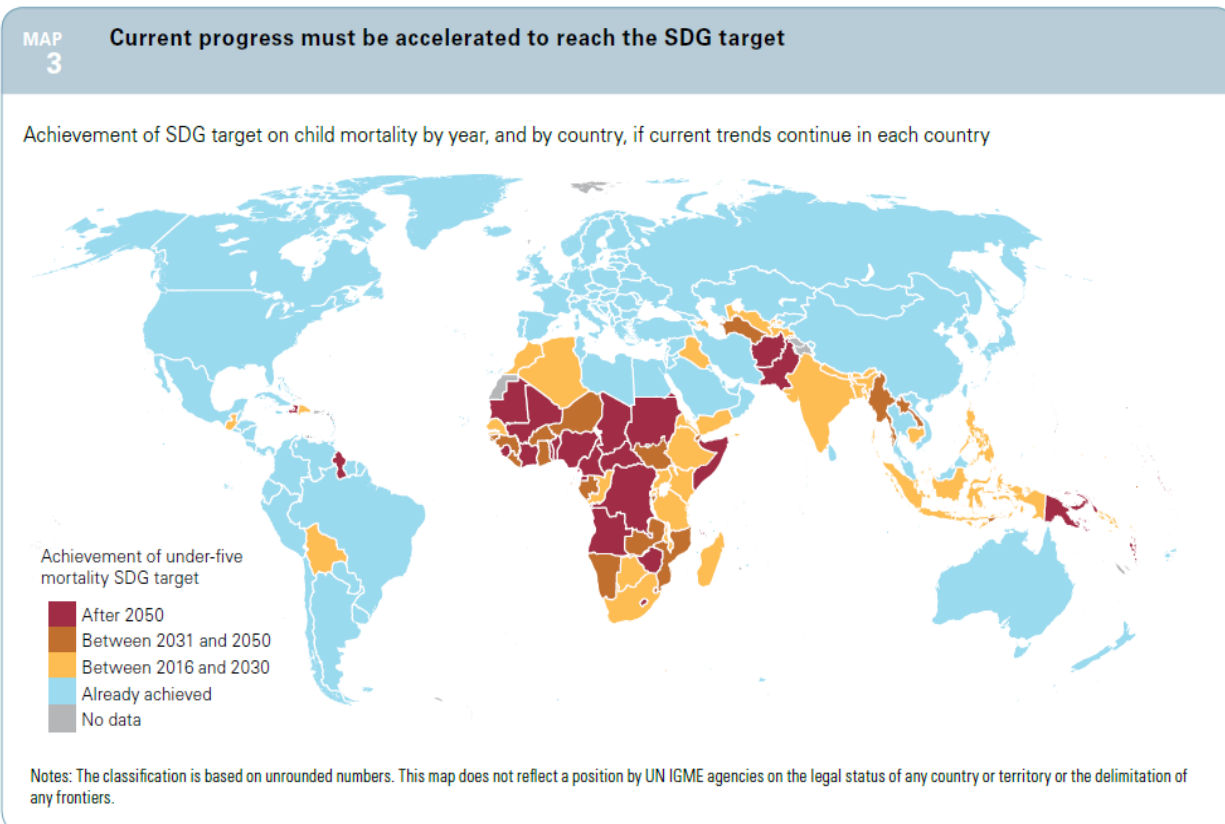
Figure 1: The UN Inter-agency Group for Child Mortality Estimation (UN IGME) estimates of under- five and infant mortality rates per 1,000 live births; from 1980 to 2017. Source: UN-IGME, Estimates; (UNICEF, et al 2019)



**Figure 2: Levels and Trends in Under-five Mortality Rate , Eritrea and Sub-Saharan Africa, 1990–2013** *Source: UN-IGME 2014, UN-IGME 2015. (UNICEF 2014, UNICEF 2015)*

The 2015 UN-IGME report (*UNICEF et al 2015*) states that, at the country level, about a third of countries (62) have reduced their under-five mortality by two thirds or more and achieved the MDG 4 target set in 2000. Eritrea is among the ten countries in the WHO Africa region that have achieved MDG4 in 2015, by reducing under-five mortality by two-third. For Eritrea this achievement was not a surprise, as it had been among the countries on track since 2006 and had already achieved it by 2013.





**Figure 3: Global Map for Classification of Levels in Under-five Mortality Rate , 2015, Source: UN-IGME 2015 (UNICEF et al 2015).**

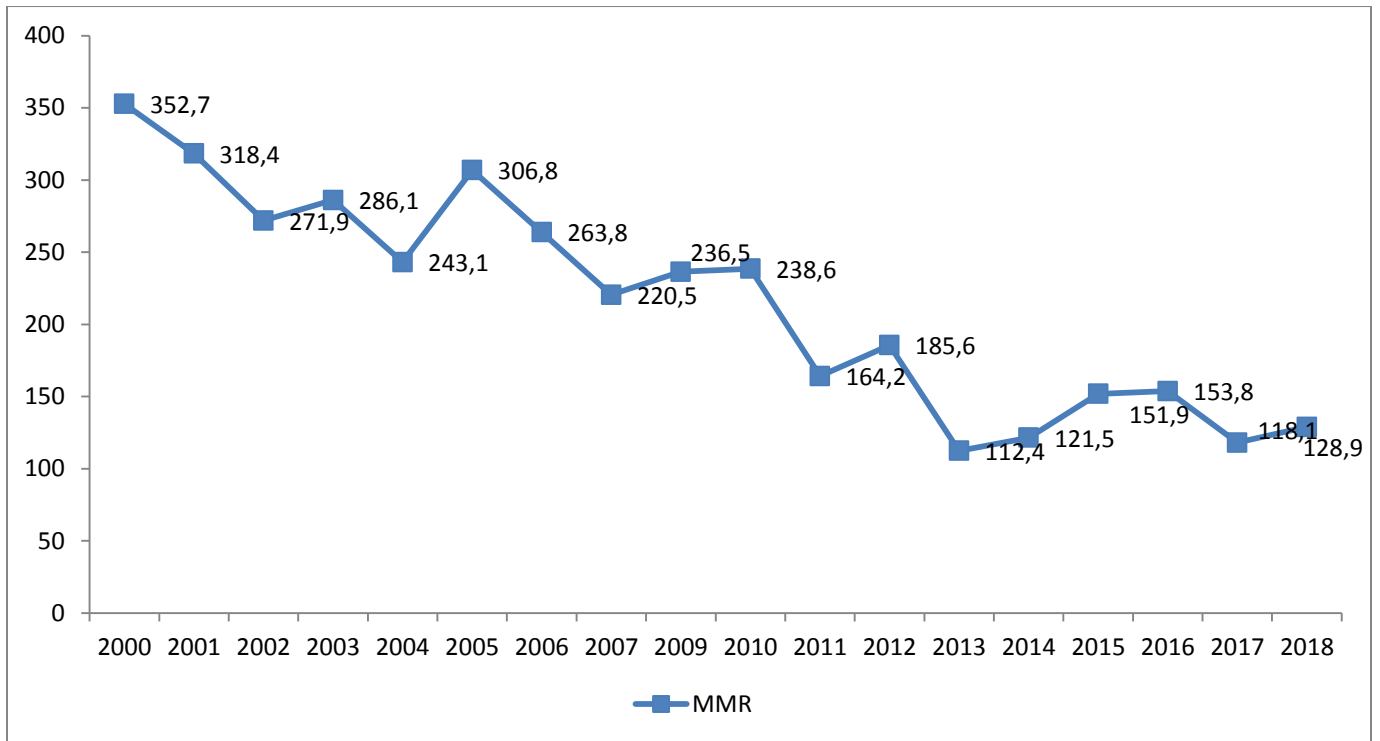
### Maternal Mortality

As shown in Figure 4: health facilities based maternal mortality ratio per 100,000 live births decreased by 46% from 238.6 per 100,000 in the year 2010 to 129 per 100,000 in 2018 (MOH, 2019b).

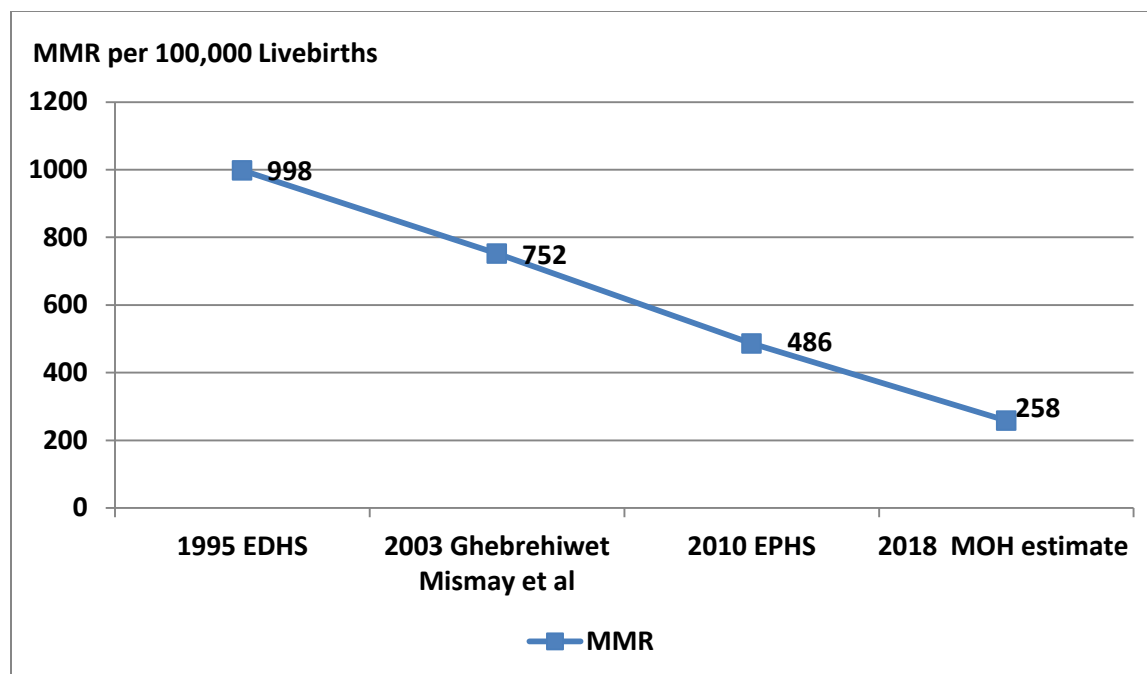
Closely studying the trends of health facility based maternal mortality deaths (Figure 4: ) and the three nationally representative studies that determined MMR, namely the 1995 EDHS, the 2003 study by Ghebrehwet Mismay et al (Ghebrehwet Mismay et al, 2006) and the 2010 EPHS (Figure 5: ); as well as the trends and the 62% current status of health facility delivery (Figure 4: ), the proportion of health facility based maternal deaths to the total maternal deaths is estimated at a minimum of 50%. Hence, the MMR for 2018 is estimated at maximum of 258 per 100,000 live births. This conservative point estimate (the range being within 20% below and above it) is accepted by the MOH and the Draft



2019 NHP states it as the 2018 MOH estimate for Maternal Mortality Ratio. This more plausible estimate is almost half of the UN estimate for 2015 (501 per 100,000 LB).



**Figure 4: Trend in Health Facility Based Maternal Mortality Ratio per 100,000 Health Facility Live Births, 2000-2018 (Data Source: MOH, HMIS/DHIS2 Annual Reports; MOH 2019b)**



**Figure 5: Trend Maternal Mortality Ratio per 100,000 Live Births, 1995-2018**

### Trends in Life Expectancy

Trends in life expectancy are usually taken as a summary indicator of many other health indicators. The indicators of life expectancy presented in

Table 3: are: Life Expectancy at Birth; Healthy Life Expectancy (HALE) at birth and Lost health expectancy.

Life expectancy at Birth reflects the overall mortality level of a population and summarizes the mortality pattern that prevails across all age groups-children and adolescents, adults and the elderly. HALE represents the average number of years that a person in a population can expect to live “ in full health” by taking into account years lived in less than full health due disease and/or injury. Lost health expectancy is a relative difference between life expectancy and healthy life expectancy, expressed as a percentage of life expectancy at birth.

Life expectancy at birth increased significantly from 48 years in 1990 to 65.5 years in 2017 (UNDP, 2018). In 2017, life expectancy in males is estimated at 63.4, while that of females is estimated at 67.7 years (UNDP, 2018). Life expectancy at

birth in Eritrea was continually showing a positive growth. This is partly due to the reduction in infant and child mortality as well as the reduction in adult mortality due to malaria and other communicable diseases.

**Table 3: Eritrea, Life Expectancy. Source: UNDP, 2018 Human Development Indices and Indicators, 2018 Statistical Update (UNDP, 2018)**

Life expectancy	Both sexes		Male		Female	
	1990	2017	1990	2017	1990	2017
Life expectancy at birth (years)	48	65.5	46	63.4	50	67.7
Healthy Life Expectancy at Birth (HALE) (years)	-	57.4	-	-	-	-
Lost health Expectancy (%)	-	11.6	-	-	-	-

Eritrea's achievement in all three health MDGs, namely MDG-4 on reduction of child mortality, MDG5- on reduction of maternal mortality, and MDG-6 on control of communicable diseases including HIV/AIDS, Malaria and tuberculosis was one of the most remarkable achievements in Africa Region. There are however emerging issues related to communicable and non-communicable diseases which include cardiovascular diseases, cancers, respiratory diseases, psychiatric conditions, congenital anomalies leading to a 'double burden of diseases'. There is no evidence of reductions in the trend of these diseases. Road traffic Injuries are high, mainly affecting the productive and young population, with increasing mortality levels over the years.

Although, the role of communicable diseases will still remain significant, emerging trends point that non-communicable conditions and injuries will, in the foreseeable future, be the leading contributors to high burden of disease in the country. Another key cross cutting intervention that shall be focused by the health sector and other stakeholders is the high rates of malnutrition.