

GBD PROFILE: CAMEROON

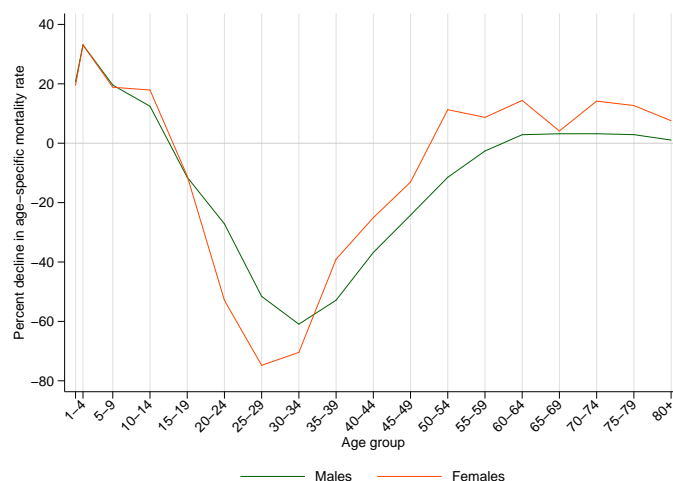
GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

The Global Burden of Disease Study 2010 (GBD 2010) is a collaborative project of nearly 500 researchers in 50 countries led by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. It is the largest systematic scientific effort in history to quantify levels and trends of health loss due to diseases, injuries, and risk factors. GBD serves as a global public good to inform evidence-based policymaking and health systems design.

PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Cameroon, malaria, HIV/AIDS, and lower respiratory infections were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), diarrheal diseases showed the largest decrease, falling by 29% from 1990 to 2010.
- The leading risk factor in Cameroon is childhood underweight.

Percent decline in age-specific mortality rate by sex from 1990-2010 in Cameroon



ALL-CAUSE MORTALITY RATE

- This chart shows the change in mortality rate at every age range. The points above 0 on the chart indicate positive declines in the all-cause mortality rate, while points below 0 indicate an increase in mortality rate between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 1-4 years (33%). Females aged 25-29 years saw the largest increase in mortality rate (75%).

CAUSES OF PREMATURE DEATH

Years of life lost (YLLs) quantify premature mortality by weighting younger deaths more than older deaths.

Ranks for top 25 causes of YLLs 1990-2010, Cameroon

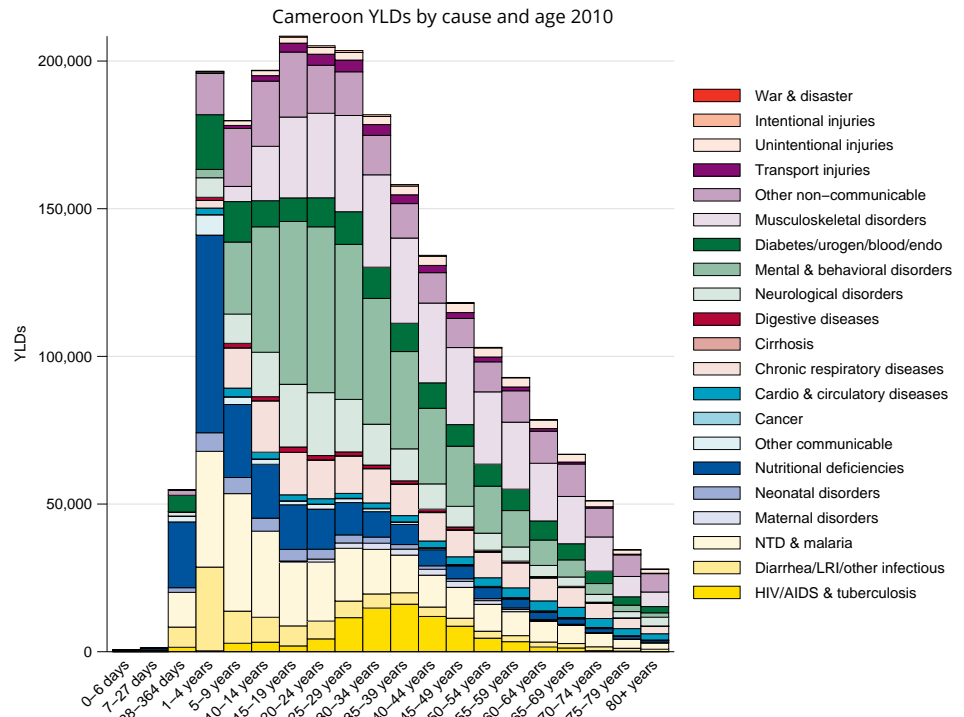
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
1,080 (13.0%)	1 Diarrheal diseases	1 Malaria	1,678 (15.2%)	78
972 (11.7%)	2 Lower respiratory infections	2 HIV/AIDS	1,481 (13.5%)	531
951 (11.4%)	3 Malaria	3 Lower respiratory infections	1,021 (9.3%)	4
354 (4.3%)	4 Preterm birth complications	4 Diarrheal diseases	756 (6.9%)	-31
363 (4.4%)	5 Protein-energy malnutrition	5 Neonatal sepsis	490 (4.5%)	49
410 (4.9%)	6 Measles	6 Preterm birth complications	451 (4.1%)	29
324 (3.9%)	7 Meningitis	7 Meningitis	427 (3.9%)	29
328 (4.0%)	8 Neonatal sepsis	8 Road injury	378 (3.5%)	74
237 (2.9%)	9 HIV/AIDS	9 Protein-energy malnutrition	323 (3.0%)	-12
219 (2.6%)	10 Neonatal encephalopathy	10 Neonatal encephalopathy	306 (2.8%)	38
216 (2.6%)	11 Road injury	11 Stroke	199 (1.8%)	28
156 (1.9%)	12 Stroke	12 Maternal disorders	189 (1.7%)	54
146 (1.8%)	13 Syphilis	13 Congenital anomalies	184 (1.7%)	47
123 (1.5%)	14 Maternal disorders	14 Ischemic heart disease	164 (1.5%)	51
126 (1.5%)	15 Congenital anomalies	15 Tuberculosis	144 (1.3%)	28
112 (1.4%)	16 Tuberculosis	16 Cirrhosis	142 (1.3%)	90
109 (1.3%)	17 Ischemic heart disease	17 Epilepsy	158 (1.4%)	62
96 (1.1%)	18 Epilepsy	18 Falls	109 (1.0%)	37
81 (1.0%)	19 Falls	19 Syphilis	110 (1.0%)	-24
75 (0.9%)	20 Fire	20 Fire	107 (1.0%)	40
76 (0.9%)	21 Cirrhosis	21 Diabetes	96 (0.9%)	133
67 (0.8%)	22 Iron-deficiency anemia	22 Liver cancer	67 (0.6%)	19
56 (0.7%)	23 Liver cancer	23 Chronic kidney disease	59 (0.5%)	141
54 (0.7%)	24 COPD	24 Sickle cell	59 (0.5%)	110
42 (0.5%)	25 Diabetes	25 Iron-deficiency anemia	55 (0.5%)	-19
	32 Sickle cell	29 COPD		
	37 Chronic kidney disease	31 Measles		

This chart shows the change in the top 25 causes of YLLs due to premature mortality from 1990 to 2010. Solid lines indicate a cause has moved up in rank or stayed the same. Broken lines indicate a cause has moved down in rank. The causes are color coded by blue for non-communicable diseases, green for injuries, and red for communicable, maternal, neonatal, and nutritional causes of death.

YEARS LIVED WITH DISABILITY (YLDs)

Years lived with disability (YLDs) are estimated by weighting the prevalence of different conditions based on severity. The top five leading causes of YLDs in Cameroon are iron-deficiency anemia, major depressive disorder, low back pain, malaria, and chronic obstructive pulmonary disease.

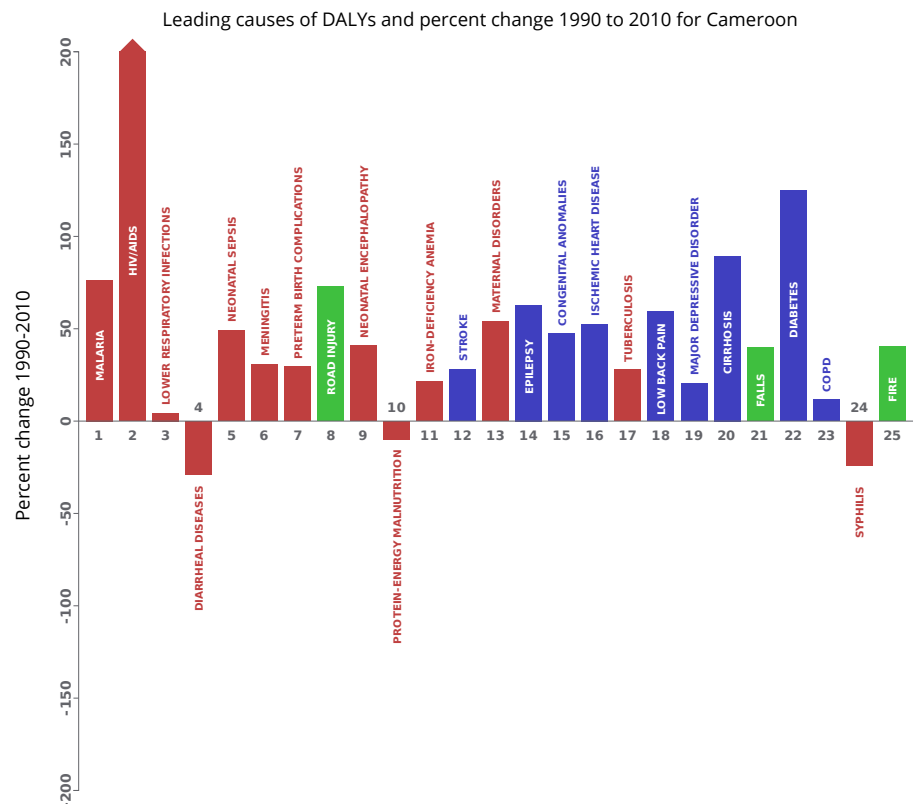
The size of the colored portion in each bar represents the number of YLDs attributable to each cause. The height of each bar shows which age groups had the most YLDs in 2010. The causes are aggregated. For example, musculoskeletal disorders include low back pain and neck pain.



DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Cameroon, the top three causes of DALYs in 2010 were malaria, HIV/AIDS, and lower respiratory infections. The only cause to appear in the 10 leading causes of DALYs in 2010 and not 1990 was road injury.

The top 25 causes of DALYs are ranked from left to right in order of the number of DALYs they contributed in 2010. Bars going up show the percent by which DALYs have increased since 1990. Bars going down show the percent by which DALYs have decreased. Globally, non-communicable diseases and injuries are generally on the rise, while communicable, maternal, neonatal, and nutritional causes of DALYs are generally on the decline.



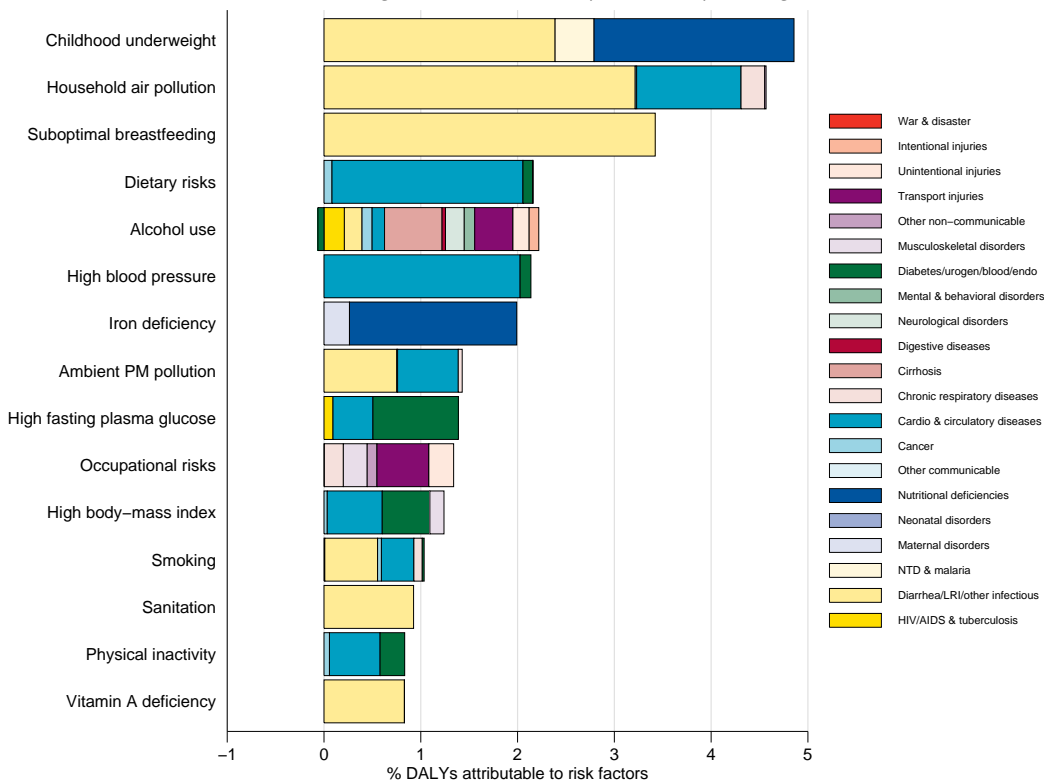
- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries

RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Cameroon are childhood underweight, household air pollution from solid fuels, and suboptimal breastfeeding. The leading risk factors for children under 5 and adults aged 15-49 years were childhood underweight and occupational risks, respectively, in 2010.

Burden of disease attributable to 15 leading risk factors in 2010, expressed as a percentage of Cameroon DALYs

The graph shows the top 15 risk factors for Cameroon. The colored portion of each bar represents the specific diseases attributable to that risk factor while bar size represents the percentage of DALYs linked to specific risk factors.



COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Cameroon against other comparator countries provides key insight into public health successes and areas where Cameroon might be falling behind. The table identifies Cameroon's rank across 14 other comparator countries, selected and ordered by income per capita, for five metrics of interest, with 1 indicating the best rank and 15 indicating the worst rank.

- Age-standardized rates are used to make meaningful comparisons across time by adjusting for changes in population size and age structure.
- Life expectancy incorporates mortality, and health-adjusted life expectancy further incorporates years lived in less than ideal health.
- In 2010, Cameroon ranked 11th for age-standardized YLD rate and 14th for health-adjusted life expectancy.

Age-standardized death rates, YLL rates, YLD rates, and life expectancy at birth and health-adjusted life expectancy at birth for 1990 and 2010, both sexes combined

Country	Age-standardized death rate (per 100,000)				Age-standardized YLL rate (per 100,000)				Age-standardized YLD rate (per 100,000)				Life expectancy at birth				Health-adjusted life expectancy at birth			
	1990		2010		1990		2010		1990		2010		1990		2010		1990		2010	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	LE	Rank	LE	Rank	HALE	Rank	HALE	Rank
Uzbekistan	972	1	911	4	29,477	1	26,063	2	12,381	2	12,150	1	67.3	1	68.8	2	57.8	1	59.3	2
Solomon Islands	1,707	14	1,510	14	47,851	9	40,489	11	13,520	6	12,482	5	59.4	8	62	11	51.2	7	54	10
Papua New Guinea	1,990	15	1,700	15	64,195	15	49,553	14	14,891	13	13,793	9	53.8	15	58.7	14	45.7	15	50.4	12
Djibouti	1,180	6	1,129	10	45,440	6	38,655	10	13,493	5	14,182	13	60.6	6	63.2	10	51.6	5	53.5	11
Laos	1,532	13	1,094	9	56,031	12	34,746	8	13,297	4	12,323	3	56.2	12	64.7	8	48.3	12	55.9	7
Kyrgyzstan	1,047	3	999	6	33,446	2	30,037	6	12,606	3	12,336	4	65.5	2	66.9	6	56.2	2	57.6	5
Sudan	1,110	5	799	2	41,735	5	28,295	4	15,584	15	14,781	15	62.1	5	68.8	3	51.4	6	57	6
Cameroon	1,296	9	1,277	12	51,072	11	49,262	12	14,617	11	13,891	11	58.3	11	59.1	13	49.1	11	50.2	14
Nigeria	1,343	10	1,159	11	60,604	14	49,276	13	14,273	9	13,842	10	55.1	14	59.6	12	46.4	14	50.4	13
Mauritania	1,244	7	1,031	8	45,799	7	36,003	9	15,248	14	14,307	14	60.2	7	64.5	9	50.3	8	54.3	9
Cambodia	1,355	11	957	5	47,844	8	28,770	5	14,501	10	12,603	6	59.2	9	67.5	5	50.1	9	58	4
Tajikistan	1,067	4	911	3	38,138	3	27,409	3	12,331	1	12,296	2	63.8	3	68.3	4	54.8	3	58.7	3
Senegal	1,278	8	1,009	7	49,632	10	33,824	7	13,914	8	13,379	8	58.8	10	65.3	7	49.9	10	55.6	8
São Tomé and Príncipe	1,044	2	794	1	39,144	4	24,592	1	13,532	7	13,252	7	63.5	4	70.2	1	53.9	4	59.6	1
Côte d'Ivoire	1,400	12	1,457	13	58,331	13	56,879	15	14,774	12	13,910	12	55.7	13	56	15	46.8	13	47.7	15

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Cameroon relative to the same comparator countries for the leading causes of DALYs in 1990 (top) and 2010 (bottom).

- The columns are ordered by the absolute number of DALYs in Cameroon for that particular year, with greatest burden on the left.
- The numbers indicate the rank across countries for each cause in terms of age-standardized DALY rates, with 1 as the best performance and 15 as the worst.

Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 1990																									
Country	Diarrheal diseases	Malaria	Lower respiratory infections	Preterm birth complications	Protein-energy malnutrition	Meningitis	Measles	Neonatal sepsis	HIV/AIDS	Neonatal encephalopathy	Road injury	Iron-deficiency anemia	Stroke	Syphilis	Maternal disorders	Tuberculosis	Congenital anomalies	Epilepsy	Major depressive disorder	Ischemic heart disease	COPD	Low back pain	Falls	Fire	Cirrhosis
Uzbekistan	1	1	3	1	2	2	1	1	4	15	8	5	11	2	1	3	6	3	5	15	1	6	4	2	12
Solomon Islands	3	7	1	2	6	7	4	6	1	1	5	1	15	15	4	12	1	6	2	10	13	9	13	12	14
Papua New Guinea	4	10	15	3	10	10	5	7	6	2	6	4	1	10	13	15	7	7	3	8	12	7	14	14	15
Djibouti	6	4	10	12	14	11	11	8	12	10	15	6	9	6	11	5	11	12	9	9	6	13	2	13	3
Laos	11	6	13	10	7	6	9	4	2	4	4	8	13	7	9	14	15	2	8	12	14	3	5	5	9
Kyrgyzstan	2	2	8	5	1	1	2	2	3	14	10	2	14	1	2	2	12	4	6	13	15	5	7	1	11
Sudan	8	8	4	7	13	8	6	9	13	8	9	10	4	13	10	7	8	8	15	4	3	15	1	11	1
Cameroon	10	13	5	8	11	12	12	11	14	6	14	9	5	14	12	6	5	15	11	7	7	12	12	10	13
Nigeria	13	15	12	13	15	15	15	15	10	13	13	14	3	11	8	10	4	11	1	2	2	14	15	15	7
Mauritania	12	5	6	9	8	9	14	13	11	9	11	15	6	12	15	9	3	10	12	5	5	11	6	7	6
Cambodia	5	9	9	11	5	4	10	5	7	5	3	13	12	9	6	13	14	1	10	11	10	2	3	3	2
Tajikistan	9	3	14	15	3	3	3	3	5	12	7	3	10	3	3	1	10	5	4	14	4	8	8	4	8
Senegal	14	12	11	4	4	13	13	10	9	3	1	12	2	5	14	11	2	14	7	1	9	1	10	6	5
São Tomé and Príncipe	7	11	2	6	12	5	7	12	8	7	2	11	8	4	5	4	13	9	14	3	11	10	9	8	4
Côte d'Ivoire	15	14	7	14	9	14	8	14	15	11	12	7	7	8	7	8	9	13	13	6	8	4	11	9	10
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Malaria	HIV/AIDS	Lower respiratory infections	Diarrheal diseases	Neonatal sepsis	Meningitis	Preterm birth complications	Road injury	Neonatal encephalopathy	Protein-energy malnutrition	Iron-deficiency anemia	Stroke	Maternal disorders	Epilepsy	Congenital anomalies	Ischemic heart disease	Tuberculosis	Low back pain	Major depressive disorder	Cirrhosis	Falls	Diabetes	COPD	Syphilis	Fire
Uzbekistan	1	3	8	1	1	1	1	7	15	2	5	12	1	3	7	15	2	7	11	13	6	10	2	1	2
Solomon Islands	6	1	2	6	6	7	2	4	1	7	1	15	6	4	2	10	13	11	1	9	9	15	13	12	8
Papua New Guinea	8	8	15	7	7	9	3	5	2	9	3	4	9	6	8	8	15	12	8	14	12	14	14	10	11
Djibouti	7	13	6	9	8	10	7	14	8	13	12	8	12	11	10	5	10	13	14	5	3	8	7	4	14
Laos	4	2	9	8	4	6	11	8	5	6	6	11	7	1	15	11	14	3	12	6	7	7	11	8	4
Kyrgyzstan	2	6	5	2	2	2	10	9	14	1	2	14	3	5	12	14	4	6	5	15	8	1	15	2	3
Sudan	9	11	3	10	9	8	6	10	7	11	11	1	8	9	3	1	5	15	15	1	1	2	3	15	9
Cameroon	13	15	13	13	12	14	8	13	9	12	8	5	14	15	9	7	6	10	3	11	14	12	5	14	12
Nigeria	15	12	12	11	15	13	14	15	12	15	13	3	13	10	4	4	8	14	2	8	15	5	1	13	15
Mauritania	10	9	11	12	13	12	12	11	10	10	15	6	15	13	6	6	7	9	7	7	10	9	4	11	10
Cambodia	5	5	4	3	5	3	13	6	6	5	10	10	4	2	13	12	11	2	6	3	2	4	10	6	1
Tajikistan	3	4	7	5	3	4	9	3	11	3	4	13	2	7	14	13	3	5	9	10	4	6	8	7	5
Senegal	12	7	10	14	11	11	5	1	3	4	14	2	10	12	1	2	9	1	4	4	11	11	6	5	6
São Tomé and Príncipe	11	10	1	4	10	5	4	2	4	8	7	7	5	8	5	3	1	8	13	2	5	3	12	3	7
Côte d'Ivoire	14	14	14	15	14	15	15	12	13	14	9	9	11	14	11	9	12	4	10	12	13	13	9	9	13
Ranking Legend	1 - 3			4 - 7			8 - 11			12 - 15															