

GBD PROFILE: TANZANIA

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.

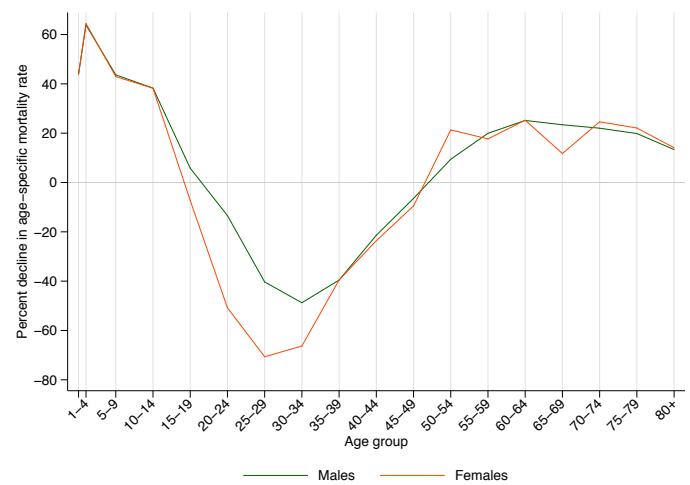
PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Tanzania, HIV/AIDS, malaria, 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 56% from 1990 to 2010.
- The leading risk factor in Tanzania is household air pollution from solid fuels.

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 (65%). Females aged 25-29 years saw the largest increase in mortality rate (71%).

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



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, Tanzania

# YLLs in thousands (% of total)	Rank and disorder 1990
4,260 (21.9%)	1 Malaria
3,034 (15.6%)	2 Lower respiratory infections
2,218 (11.4%)	3 Diarrheal diseases
1,086 (5.6%)	4 HIV/AIDS
1,044 (5.4%)	5 Protein-energy malnutrition
571 (2.9%)	6 Preterm birth complications
484 (2.5%)	7 Tuberculosis
469 (2.4%)	8 Neonatal encephalopathy
432 (2.2%)	9 Syphilis
408 (2.1%)	10 Neonatal sepsis
374 (1.9%)	11 Measles
279 (1.4%)	12 Road injury
255 (1.3%)	13 Maternal disorders
208 (1.1%)	14 Congenital anomalies
183 (0.9%)	15 Meningitis
179 (0.9%)	16 Fire
146 (0.8%)	17 Stroke
133 (0.7%)	18 Epilepsy
137 (0.7%)	19 Drowning
123 (0.6%)	20 Ischemic heart disease
112 (0.6%)	21 Poisonings
103 (0.5%)	22 Cirrhosis
96 (0.5%)	23 Interpersonal violence
75 (0.4%)	24 Self-harm
71 (0.4%)	25 Diabetes
	26 Typhoid fevers

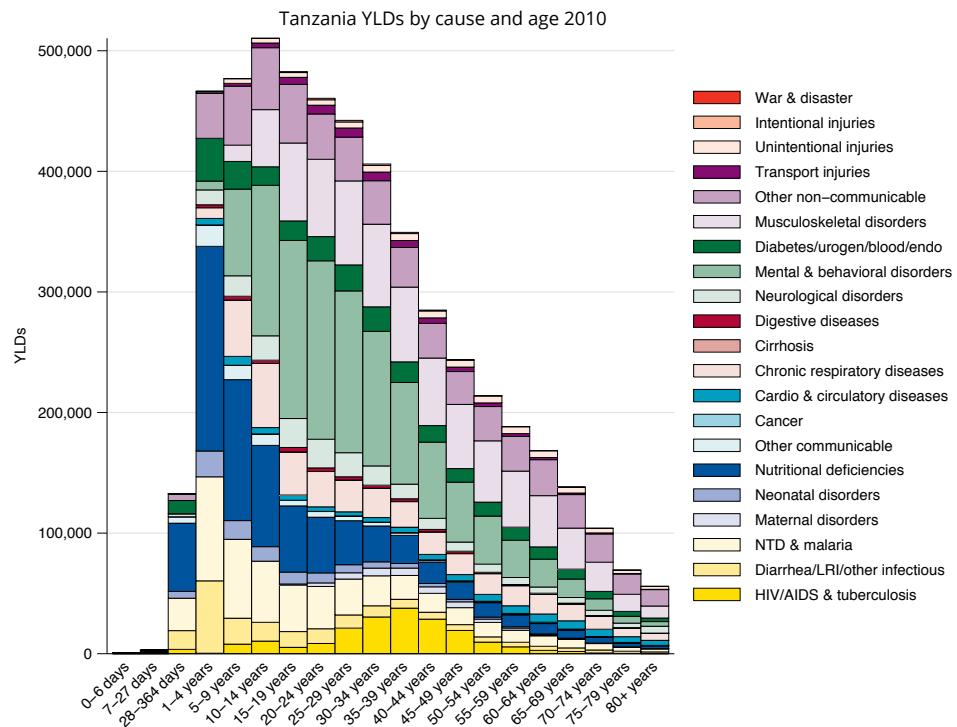
Rank and disorder 2010	# YLLs in thousands (% of total)	% change
1 HIV/AIDS	4,503 (20.6%)	315
2 Malaria	3,068 (13.9%)	-29
3 Lower respiratory infections	2,000 (9.2%)	-34
4 Diarrheal diseases	930 (4.3%)	-58
5 Neonatal encephalopathy	851 (3.9%)	76
6 Preterm birth complications	812 (3.7%)	43
7 Protein-energy malnutrition	676 (3.1%)	-35
8 Neonatal sepsis	636 (2.9%)	64
9 Syphilis	615 (2.8%)	42
10 Road injury	512 (2.3%)	83
11 Tuberculosis	501 (2.3%)	3
12 Maternal disorders	491 (2.3%)	92
13 Congenital anomalies	252 (1.2%)	20
14 Fire	236 (1.1%)	33
15 Interpersonal violence	216 (1.0%)	125
16 Drowning	214 (1.0%)	65
17 Meningitis	215 (1.0%)	15
18 Epilepsy	209 (1.0%)	58
19 Stroke	203 (0.9%)	38
20 Ischemic heart disease	175 (0.8%)	42
21 Self-harm	157 (0.7%)	110
22 Diabetes	145 (0.7%)	103
23 Cirrhosis	127 (0.6%)	25
24 Poisonings	125 (0.6%)	6
25 Typhoid fevers	146 (0.7%)	74
38 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 Tanzania are iron-deficiency anemia, major depressive disorder, low back pain, anxiety disorders, and HIV/AIDS.

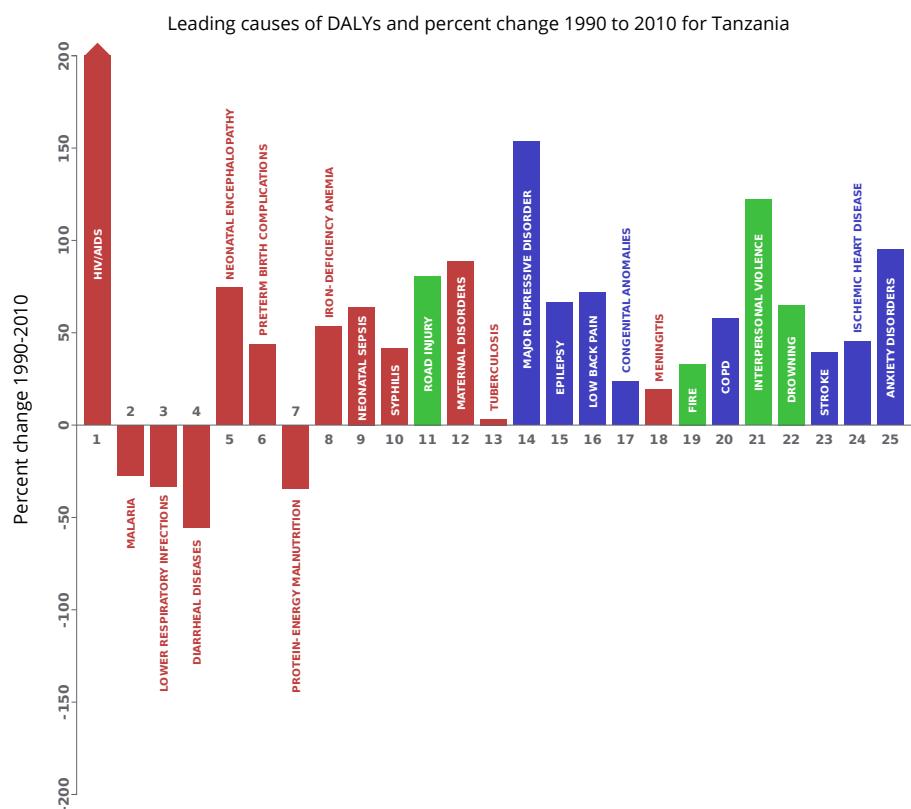
The size of the colored portion in each bar represents the number of YLDs attributable to each cause. The height of each bar shows which age groups had the most YLDs in 2010. The causes are aggregated. For example, musculoskeletal disorders include low back pain and neck pain.



DISABILITY-ADJUSTED LIFE YEARS (DALYs)

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

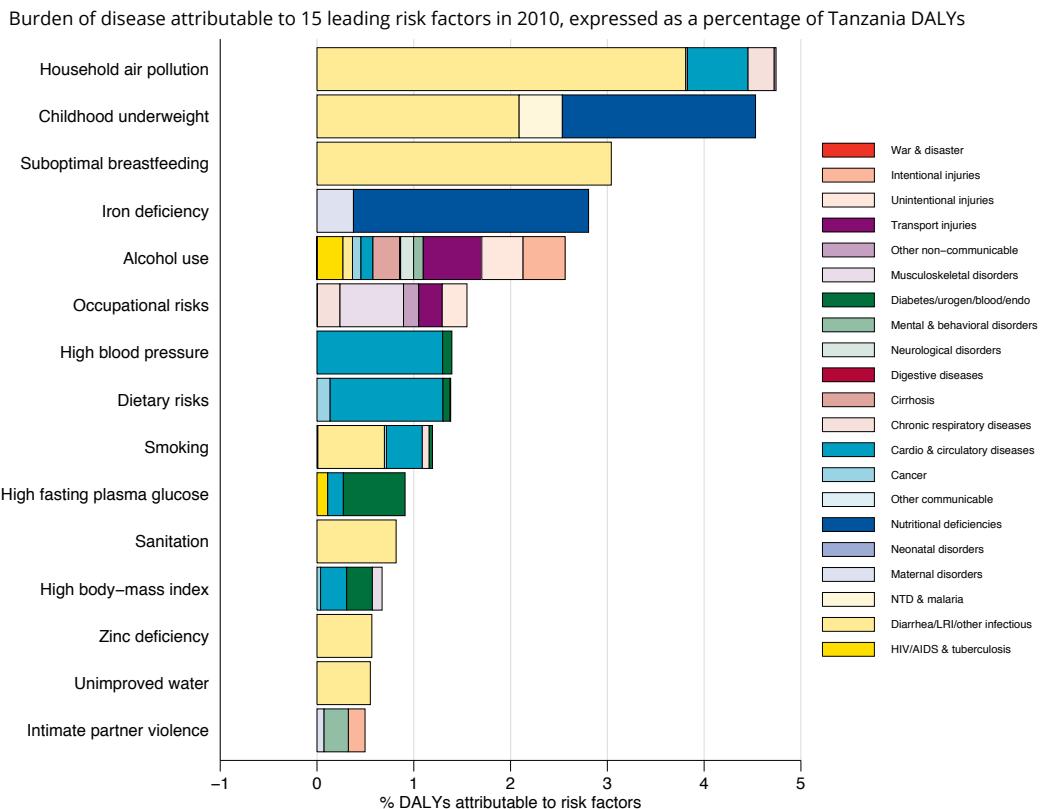
The top 25 causes of DALYs are ranked from left to right in order of the number of DALYs they contributed in 2010. Bars going up show the percent by which DALYs have increased since 1990. Bars going down show the percent by which DALYs have decreased. Globally, non-communicable diseases and injuries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



RISK FACTORS

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

The graph shows the top 15 risk factors for Tanzania. 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 Tanzania against other comparator countries provides key insight into public health successes and areas where Tanzania might be falling behind. The table identifies Tanzania'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, Tanzania ranked 6th for age-standardized death rate and 12th for age-standardized YLD rate.

Country	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																			
	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
Benin	1,312	5	1,080	5	58,713	9	38,726	6	15,237	14	13,830	9	55.9	9	63.4	6	46.6	9	53.7	7
Ghana	1,185	2	1,030	4	45,628	3	35,128	4	14,555	7	13,298	6	60.5	3	64.9	4	50.9	3	55.3	5
Bangladesh	1,295	4	864	3	49,258	4	26,361	3	14,743	9	13,206	5	58.9	4	69	3	49.2	6	58.4	3
Lesotho	1,316	6	2,130	14	43,569	2	85,888	14	13,503	3	15,483	14	60.9	2	47.4	14	52	2	40.2	14
Zambia	1,722	14	1,533	13	73,053	13	57,620	12	15,030	12	13,732	8	50.6	13	55.8	12	42.7	13	47.8	12
North Korea	895	1	832	2	25,915	1	21,755	1	10,569	1	10,347	1	68.9	1	70.8	1	60.7	1	62.4	1
Haiti	1,717	13	3,321	15	61,823	10	137,295	15	15,059	13	16,428	15	54.1	10	37.2	15	45.7	10	31.8	15
Tanzania	1,357	7	1,137	6	55,603	8	43,461	8	14,553	6	14,177	12	56.6	7	61.7	8	47.8	8	52.2	8
Nepal	1,285	3	832	1	49,745	5	26,361	2	13,660	5	12,959	4	58.8	5	69.2	2	49.8	4	58.8	2
Comoros	1,439	8	1,223	8	52,340	6	38,959	7	13,050	2	12,879	3	57.5	6	62.8	7	49.5	5	54	6
Burkina Faso	1,521	10	1,396	12	68,852	11	59,507	13	14,862	11	13,409	7	52.1	11	55.2	13	43.8	11	47.1	13
Uganda	1,658	12	1,290	10	75,253	14	45,587	9	15,596	15	13,882	10	50.4	14	60.3	9	42.2	14	51.5	9
Mali	1,726	15	1,331	11	78,963	15	53,703	11	14,609	8	13,991	11	48.7	15	57.3	11	41.1	15	48.6	11
Guinea	1,508	9	1,233	9	69,094	12	48,350	10	14,811	10	14,194	13	52.1	12	59.4	10	43.7	12	50.2	10
Myanmar	1,640	11	1,185	7	55,134	7	36,251	5	13,542	4	11,974	2	56.5	8	63.9	5	48.6	7	55.6	4

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Tanzania 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 Tanzania 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.

Country		Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 1990																										
		Malaria	Lower respiratory infections	Diarrheal diseases	HIV/AIDS	Neonatal encephalopathy	Protein-energy malnutrition	Preterm birth complications	Tuberculosis	Neonatal encephalopathy	Iron-deficiency anemia	Syphilis	Neonatal sepsis	Measles	Road injury	Maternal disorders	Congenital anomalies	Meningitis	Epilepsy	Low back pain	Major depressive disorder	Fire	Stroke	COPD	Ischemic heart disease	Drowning	Poisonings	
Benin	10	13	4	11	13	12	2	8	13	5	13	5	13	14	11	12	6	10	12	10	7	8	5	6	6	7	6	
Ghana	7	4	2	10	6	9	3	5	10	2	14	12	4	3	3	8	9	3	12	2	7	2	7	1	3			
Bangladesh	4	3	7	1	8	15	4	14	8	6	4	5	2	4	9	1	4	15	2	4	1	14	1	15	15			
Lesotho	1	2	6	6	2	7	14	4	5	7	3	3	1	2	11	4	6	6	4	7	12	11	5	3	7			
Zambia	13	9	5	14	14	1	11	7	2	12	6	4	13	7	4	11	11	5	15	15	9	4	10	12	14			
North Korea	2	1	1	2	1	2	1	1	1	1	1	1	1	1	7	1	15	2	1	8	3	1	11	13	12	14		
Haiti	5	5	14	9	4	6	12	6	15	14	11	2	6	10	7	9	5	4	10	5	15	1	15	2	1			
Tanzania	14	11	8	12	9	3	8	3	9	9	7	7	9	9	2	5	8	13	5	9	4	3	3	9	11			
Nepal	3	12	11	4	5	10	9	15	7	8	5	8	5	5	5	13	3	3	14	1	6	3	15	8	4	13		
Comoros	6	8	3	3	10	13	5	9	4	15	9	10	15	13	12	6	10	9	11	12	14	9	14	13	5			
Burkina Faso	11	14	15	13	7	5	6	2	12	3	10	9	14	8	8	13	13	7	13	10	2	8	2	6	9			
Uganda	9	10	10	15	11	4	13	10	6	10	8	11	10	11	5	12	7	12	14	14	6	5	4	10	12			
Mali	15	7	13	8	15	14	10	11	14	13	15	15	12	15	1	14	15	1	8	13	10	10	11	8	10			
Guinea	12	15	9	7	12	11	7	13	11	11	12	13	8	14	10	15	14	11	6	11	8	7	9	5	8			
Myanmar	8	6	12	5	3	8	15	12	3	4	2	6	3	6	14	7	2	2	9	3	13	12	13	11	2			
Country		Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																										
		HIV/AIDS	Malaria	Lower respiratory infections	Diarrheal diseases	Neonatal encephalopathy	Protein-energy malnutrition	Preterm birth complications	Iron-deficiency anemia	Neonatal sepsis	Syphilis	Road injury	Maternal disorders	Tuberculosis	Major depressive disorder	Epilepsy	Congenital anomalies	Meningitis	Fire	Interpersonal violence	Drowning	Stroke	COPD	Ischemic heart disease	Anxiety disorders			
Benin	6	12	12	5	4	10	10	13	12	5	9	9	9	4	4	4	10	11	7	11	6	6	3	6	4	5	6	3
Ghana	11	9	7	3	3	7	9	9	14	2	8	5	2	6	9	3	6	9	2	5	2	3	9	14	8			
Bangladesh	2	4	2	2	15	15	5	6	3	6	1	2	3	3	5	15	9	1	3	14	3	15	1	3	12			
Lesotho	15	2	14	14	11	14	4	4	4	8	2	12	15	13	6	6	14	6	14	13	15	8	13	4	2			
Zambia	14	11	10	9	8	2	14	3	7	15	12	7	13	11	5	5	12	13	4	11	13	10	9	10				
North Korea	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	8	13	2	1	12	4	12	11	13	1		
Haiti	5	5	5	12	5	6	6	15	11	12	5	6	11	8	4	4	11	8	9	1	14	2	15	15	15			
Tanzania	13	8	9	6	6	3	8	10	6	13	10	7	14	7	12	2	4	7	2	10	10	2	1	14				
Nepal	4	3	3	8	12	5	3	5	5	7	3	3	6	2	2	14	4	3	5	15	1	1	3	11	13			
Comoros	1	7	11	7	9	12	11	8	9	14	14	11	10	12	12	9	8	7	11	9	9	14	12	5	11			
Burkina Faso	9	15	15	15	2	9	13	12	10	4	15	8	5	5	5	14	7	12	15	15	8	8	7	6	7	4		
Uganda	12	10	4	4	7	4	7	7	8	11	13	10	14	15	8	13	3	10	10	7	12	9	4	2	2			
Mali	10	14	6	13	13	13	15	14	15	10	11	14	9	10	15	1	1	13	12	10	7	6	8	12	6			
Guinea	7	13	13	10	14	11	12	11	13	9	7	15	8	7	13	10	10	14	8	6	5	5	7	10	9			
Myanmar	8	6	8	11	10	8	2	1	2	3	6	4	12	9	3	2	15	5	4	11	13	11	14	8	5			
Ranking Legend		1 - 3			4 - 7			8 - 11			12 - 15																	