

GBD PROFILE: CAMBODIA

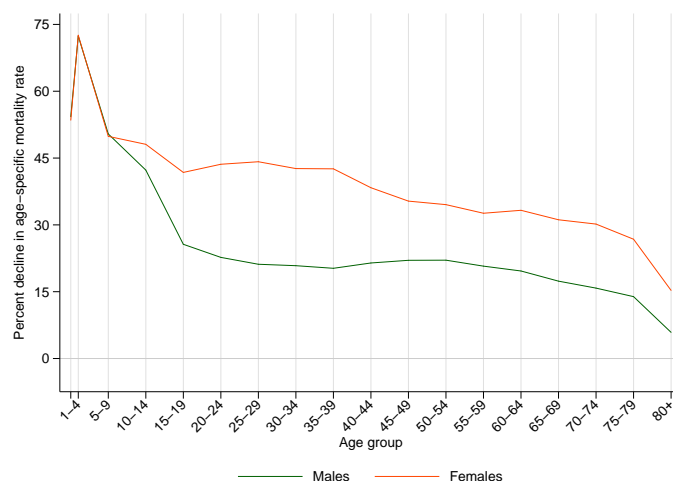
GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

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 Cambodia, lower respiratory infections, ischemic heart disease, and cerebrovascular disease 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 80% from 1990 to 2010.
- The leading risk factor in Cambodia is dietary risks.

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



ALL-CAUSE MORTALITY RATE

- This chart shows the decline in mortality rate at every age range. The higher points on the chart indicate that declines in mortality rates were faster in those age groups between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 1-4 years (73%). Males aged 80+ years saw the smallest decrease in mortality rate (6%).

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, Cambodia

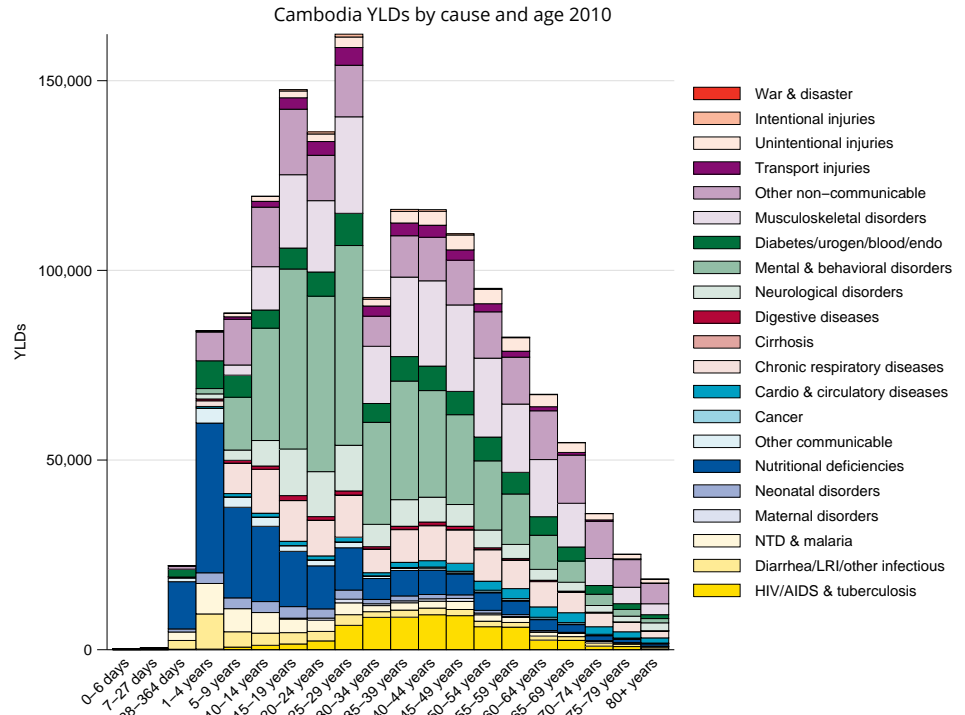
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
929 (16.0%)	1 Lower respiratory infections	1 Lower respiratory infections	357 (10.1%)	-61
626 (10.8%)	2 Diarrheal diseases	2 Ischemic heart disease	262 (7.4%)	80
467 (8.0%)	3 Malaria	3 Stroke	223 (6.3%)	63
319 (5.5%)	4 Preterm birth complications	4 Preterm birth complications	213 (6.0%)	-32
279 (4.8%)	5 Congenital anomalies	5 Congenital anomalies	164 (4.6%)	-41
302 (5.1%)	6 Measles	6 Road injury	123 (3.5%)	168
180 (3.1%)	7 Tuberculosis	7 Tuberculosis	124 (3.5%)	-30
177 (3.0%)	8 Tetanus	8 Diarrheal diseases	117 (3.3%)	-82
161 (2.8%)	9 Neonatal encephalopathy	9 Neonatal encephalopathy	117 (3.3%)	-27
153 (2.6%)	10 Protein-energy malnutrition	10 Malaria	97 (2.7%)	-79
145 (2.5%)	11 Ischemic heart disease	11 Self-harm	65 (1.8%)	67
138 (2.4%)	12 Stroke	12 HIV/AIDS	74 (2.1%)	752
118 (2.0%)	13 Meningitis	13 Meningitis	58 (1.6%)	-50
74 (1.3%)	14 Maternal disorders	14 Drowning	56 (1.6%)	1
59 (1.0%)	15 Asthma	15 Cirrhosis	53 (1.5%)	79
57 (1.0%)	16 Drowning	16 Diabetes	51 (1.5%)	99
54 (0.9%)	17 COPD	17 Other cardio & circulatory	48 (1.4%)	17
50 (0.9%)	18 Rheumatic heart disease	18 Asthma	49 (1.4%)	-16
58 (1.0%)	19 Mechanical forces	19 COPD	47 (1.3%)	-12
44 (0.8%)	20 Syphilis	20 Interpersonal violence	45 (1.3%)	108
49 (0.8%)	21 Road injury	21 Typhoid fevers	53 (1.5%)	81
42 (0.7%)	22 Other cardio & circulatory	22 Chronic kidney disease	44 (1.3%)	73
46 (0.8%)	23 Neonatal sepsis	23 Hypertensive heart disease	44 (1.2%)	75
39 (0.7%)	24 Self-harm	24 Protein-energy malnutrition	40 (1.1%)	-73
41 (0.7%)	25 Rabies	25 Rheumatic heart disease	39 (1.1%)	-20
	28 Cirrhosis	26 Neonatal sepsis		
	29 Diabetes	28 Maternal disorders		
	30 Chronic kidney disease	32 Mechanical forces		
	31 Hypertensive heart disease	37 Measles		
	32 Typhoid fevers	43 Syphilis		
	33 Interpersonal violence	44 Tetanus		

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 Cambodia are iron-deficiency anemia, major depressive disorder, low back pain, chronic obstructive pulmonary disease, and tuberculosis.

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.

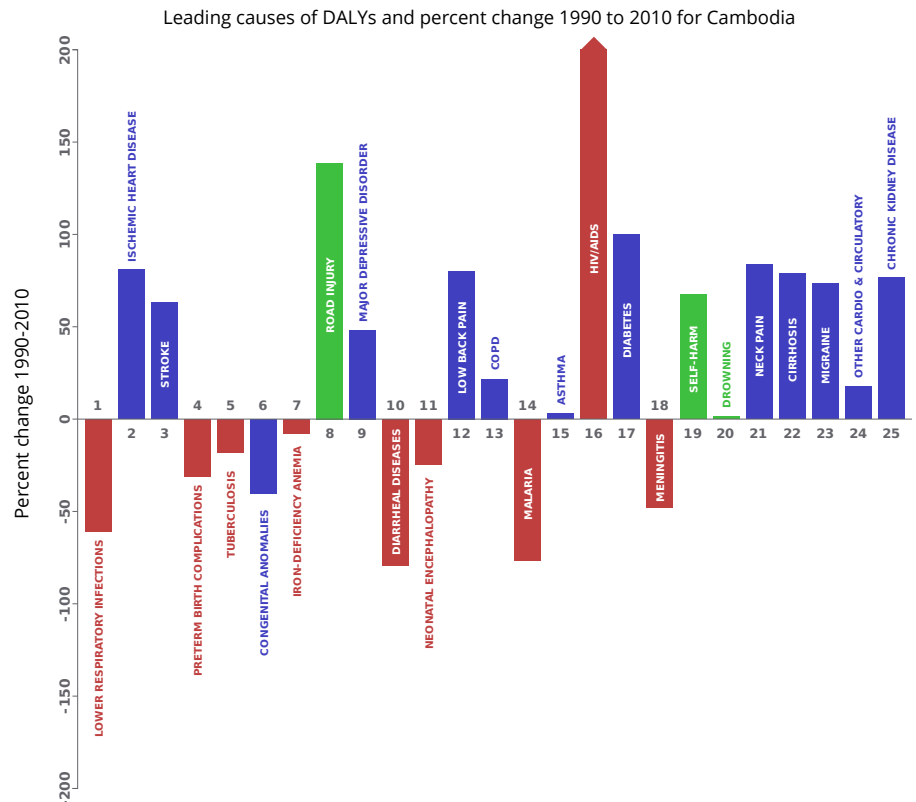


DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Cambodia, the top three causes of DALYs in 2010 were lower respiratory infections, ischemic heart disease, and cerebrovascular disease. The causes that were in the 10 leading causes of DALYs in 2010 and not 1990 were ischemic heart disease, cerebrovascular disease, road injury, and major depressive disorder.

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

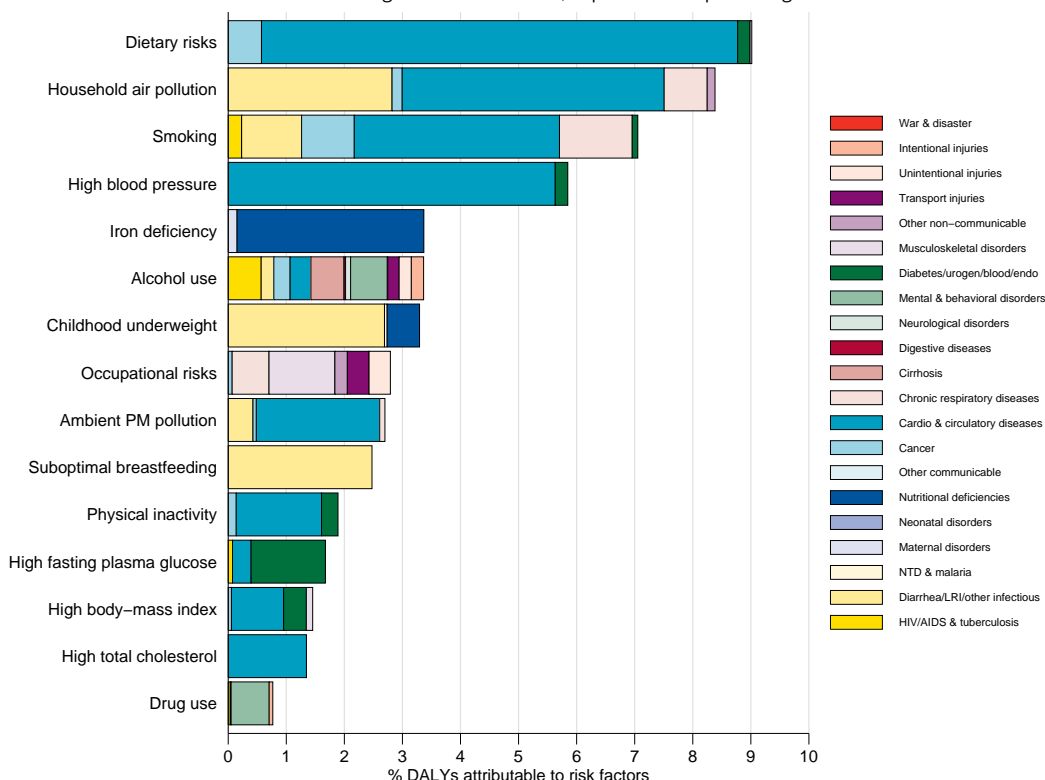


RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Cambodia are dietary risks, household air pollution from solid fuels, and tobacco smoking. The leading risk factors for children under 5 and adults aged 15-49 years were childhood underweight and iron deficiency, respectively, in 2010.

The graph shows the top 15 risk factors for Cambodia. 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.

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



COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Cambodia against other comparator countries provides key insight into public health successes and areas where Cambodia might be falling behind. The table identifies Cambodia'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, Cambodia ranked 3rd for health-adjusted life expectancy and 5th for age-standardized death rate.

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
Djibouti	1,180	6	1,129	12	45,440	7	38,655	11	13,493	5	14,182	13	60.6	6	63.2	11	51.6	5	53.5	11
Laos	1,532	15	1,094	10	56,031	13	34,746	8	13,297	4	12,323	2	56.2	13	64.7	9	48.3	13	55.9	7
Kyrgyzstan	1,047	2	999	6	33,446	1	30,037	6	12,606	2	12,336	3	65.5	1	66.9	6	56.2	1	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	2	51.4	6	57	6
Cameroon	1,296	10	1,277	14	51,072	11	49,262	13	14,617	11	13,891	11	58.3	11	59.1	14	49.1	11	50.2	14
Nigeria	1,343	12	1,159	13	60,604	15	49,276	14	14,273	8	13,842	10	55.1	15	59.6	13	46.4	15	50.4	13
Mauritania	1,244	8	1,031	9	45,799	8	36,003	9	15,248	14	14,307	14	60.2	8	64.5	10	50.3	8	54.3	10
Cambodia	1,355	13	957	5	47,844	9	28,770	5	14,501	10	12,603	4	59.2	9	67.5	5	50.1	9	58	3
Tajikistan	1,067	3	911	4	38,138	2	27,409	3	12,331	1	12,296	1	63.8	2	68.3	4	54.8	2	58.7	2
Senegal	1,278	9	1,009	7	49,632	10	33,824	7	13,914	7	13,379	8	58.8	10	65.3	7	49.9	10	55.6	8
São Tomé and Príncipe	1,044	1	794	1	39,144	3	24,592	1	13,532	6	13,252	6	63.5	3	70.2	1	53.9	3	59.6	1
Côte d'Ivoire	1,400	14	1,457	15	58,331	14	56,879	15	14,774	13	13,910	12	55.7	14	56	15	46.8	14	47.7	15
The Gambia	1,315	11	1,109	11	54,039	12	41,302	12	14,365	9	13,291	7	57.2	12	62.2	12	48.4	12	53.2	12
Kenya	1,092	4	1,013	8	39,731	4	36,153	10	13,184	3	12,884	5	63	4	64.8	8	53.8	4	55.5	9
Timor-Leste	1,223	7	872	3	45,244	6	26,770	2	14,698	12	13,715	9	60.5	7	68.7	3	50.7	7	58	4

COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Cambodia 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 Cambodia 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	Lower respiratory infections	Diarrheal diseases	Malaria	Preterm birth complications	Congenital anomalies	Tuberculosis	Measles	Iron-deficiency anemia	Neonatal encephalopathy	Protein-energy malnutrition	Tetanus	Ischemic heart disease	Stroke	Meningitis	Major depressive disorder	COPD	Maternal disorders	Asthma	Road injury	Low back pain	Drowning	Rheumatic heart disease	Mechanical forces	Syphilis	Other cardio & circulatory
Djibouti	10	4	3	12	10	4	9	3	11	14	6	10	10	10	7	6	11	5	15	13	12	7	10	5	12
Laos	13	11	5	10	15	14	7	7	3	6	15	13	14	6	6	14	9	15	5	5	14	15	15	6	15
Kyrgyzstan	6	1	1	4	11	2	1	1	15	1	1	14	15	1	3	15	1	1	10	7	15	12	11	1	1
Sudan	2	8	6	6	6	6	3	9	9	13	5	5	4	7	14	3	10	4	8	15	9	8	8	14	10
Cameroon	3	10	13	7	5	5	11	8	7	9	7	8	5	11	9	8	12	6	14	11	3	5	2	15	6
Nigeria	12	13	15	13	4	11	15	13	14	15	11	2	2	14	1	2	7	7	13	14	6	3	5	11	4
Mauritania	4	12	4	8	2	9	13	15	10	7	10	6	6	9	10	5	15	12	11	10	1	10	9	13	8
Cambodia	8	3	8	11	13	13	8	12	6	5	14	12	13	3	8	11	5	14	4	3	10	14	13	8	14
Tajikistan	14	9	2	15	9	1	2	2	13	2	2	15	12	2	2	4	2	2	7	8	13	11	14	2	2
Senegal	11	14	12	2	1	12	12	11	2	3	8	1	1	12	5	10	13	10	1	1	4	1	7	4	3
São Tomé and Príncipe	1	5	10	5	12	3	5	10	8	10	4	4	9	4	13	13	3	8	3	9	2	2	4	3	9
Côte d'Ivoire	5	15	14	14	7	7	6	6	12	8	9	7	7	13	11	9	6	9	12	6	5	6	6	7	5
The Gambia	15	7	11	3	8	10	10	14	4	12	12	9	11	15	15	12	14	11	9	12	8	9	3	12	11
Kenya	7	2	9	1	3	8	4	5	5	11	3	3	3	8	4	1	4	3	6	2	7	4	1	10	7
Timor-Leste	9	6	7	9	14	15	14	4	1	4	13	11	8	5	12	7	8	13	2	4	11	13	12	9	13
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Lower respiratory infections	Ischemic heart disease	Stroke	Preterm birth complications	Tuberculosis	Congenital anomalies	Iron-deficiency anemia	Road injury	Major depressive disorder	Diarrheal diseases	Neonatal encephalopathy	Low back pain	COPD	Malaria	Asthma	HIV/AIDS	Diabetes	Meningitis	Self-harm	Drowning	Neck pain	Cirrhosis	Migraine	Other cardio & circulatory	Chronic kidney disease
Djibouti	6	6	8	7	10	8	11	14	14	8	9	13	9	6	8	12	11	9	12	14	14	7	1	12	9
Laos	9	12	13	11	14	15	3	6	11	7	5	5	13	3	15	2	10	6	14	12	2	9	7	14	15
Kyrgyzstan	5	15	15	10	3	11	1	8	4	1	15	8	15	1	1	5	1	1	15	15	4	15	14	4	13
Sudan	3	1	1	4	4	3	10	9	15	10	8	15	3	7	6	9	2	7	11	8	12	1	3	5	2
Cameroon	13	9	5	8	5	7	7	13	2	13	10	11	6	12	4	15	14	14	6	4	10	13	11	8	11
Nigeria	12	5	3	14	8	4	12	15	1	11	13	14	1	15	5	11	6	13	3	5	6	11	4	1	4
Mauritania	11	7	6	12	7	6	15	11	6	12	11	10	4	8	12	7	12	11	2	2	9	10	10	11	10
Cambodia	4	13	12	13	11	12	9	5	5	2	6	4	12	4	14	4	5	3	13	11	3	5	6	15	12
Tajikistan	7	14	14	9	2	13	2	4	7	4	12	7	10	2	2	3	9	4	8	13	5	12	15	2	5
Senegal	10	2	2	2	9	1	14	1	3	14	1	1	7	11	7	6	13	10	5	3	11	6	12	3	6
São Tomé and Príncipe	1	4	7	1	1	5	5	2	13	3	3	9	14	10	10	8	3	5	1	1	13	4	9	6	1
Côte d'Ivoire	15	10	11	15	13	9	8	12	8	15	14	6	11	14	11	13	15	15	7	7	7	14	8	9	7
The Gambia	14	8	9	5	6	10	13	10	9	6	7	12	5	13	9	10	8	12	4	6	8	8	13	10	8
Kenya	8	3	4	3	12	2	6	7	10	9	4	2	2	9	3	14	4	8	10	9	15	3	2	7	3
Timor-Leste	2	11	10	6	15	14	4	3	12	5	2	3	8	5	13	1	7	2	9	10	1	2	5	13	14
Ranking Legend	1 - 3			4 - 7				8 - 11				12 - 15													