

Causes of death: Examining effects on life expectancy

Highlights

Global life expectancy increased by 6.2 years since 1990, largely thanks to:

lower mortality rates for diarrhea and lower respiratory infections.

lower mortality rates in ages over 55 for stroke, cancers, and ischemic heart disease.

COVID-19 derailed health improvements in many locations.

Diabetes and kidney diseases are rising threats to health all over the world.

What's new in this study?

First study to compare deaths from COVID-19 to deaths from other causes globally.

Links specific causes of death to changes in life expectancy.

Utilized hundreds of new data sources and improved statistical methods.

Added 12 new causes of death and more detailed age groups.

Mortality from leading causes of death declined over the past 30 years, but COVID-19 radically altered these rankings.

Leading causes of death around the world in 1990, 2019, and 2021

Leading causes, 1990	Age-standardized death rate (per 100,000), 1990		Leading causes, 2019	Age-standardized death rate (per 100,000), 2019		Leading causes, 2021	Age-standardized death rate (per 100,000), 2021
1 Ischemic heart disease	158.9 (147.4 to 165.4)†		1 Ischemic heart disease	110.9 (102.5 to 116.9)		1 Ischemic heart disease	108.7 (99.8 to 115.6)
2 Stroke	144.3 (134.0 to 152.3)		2 Stroke	89.3 (81.6 to 95.6)		2 COVID-19	94.0 (89.2 to 100.0)
3 COPD*	71.9 (64.6 to 77.5)		3 COPD*	46.1 (42.0 to 49.8)		3 Stroke	87.4 (79.5 to 94.4)
4 Lower respiratory infections	61.8 (57.0 to 66.8)		4 Lower respiratory infections	34.7 (31.5 to 37.5)		4 COPD*	45.2 (40.7 to 49.8)
5 Diarrheal diseases	60.6 (46.7 to 79.6)		5 Neonatal disorders	30.7 (26.8 to 35.3)	7	5 Other pandemic-related**	32.3 (24.8 to 43.3)
6 Neonatal disorders	46.0 (43.5 to 48.9)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	6 Alzheimer's disease	25.0 (6.2 to 65.0)	The same	6 Neonatal disorders	29.6 (25.3 to 34.4)
7 Tuberculosis	40.0 (34.1 to 44.6)		7 Lung cancer	23.7 (21.8 to 25.8)		7 Lower respiratory infections	28.7 (26.0 to 31.1)
8 Lung cancer	27.6 (26.1 to 29.0)		8 Diabetes	19.8 (18.5 to 20.8)	Jan 1	8 Alzheimer's disease	25.2 (6.4 to 65.6)
9 Alzheimer's disease	25.1 (6.0 to 66.1)	\bigwedge	9 Chronic kidney disease	18.6 (16.9 to 19.8)		9 Lung cancer	23.5 (21.2 to 25.9)
10 Cirrhosis of the liver	24.4 (22.3 to 27.5)	\mathcal{N}	10 Diarrheal diseases	17.1 (12.4 to 23.2)	Alexander of the second	10 Diabetes	19.6 (18.2 to 20.8)
		17	11 Cirrhosis of the liver	17.1 (15.9 to 18.5)	7 /	11 Chronic kidney disease	18.5 (16.7 to 19.9)
		/ /			1	12 Cirrhosis of the liver	16.6 (15.2 to 18.2)
	/	′/\					
14 Diabetes	18.2 (17.0 to 19.1)	/ '	14 Tuberculosis	14.9 (13.7 to 16.4)	/	14 Diarrheal diseases	15.4 (10.9 to 20.9)
		/			San		
		/			The same	16 Tuberculosis	14.0 (12.6 to 15.8)
	/		Non-communicable dise	ases			
18 Chronic kidney disease	14.9 (13.7 to 16.4)		Communicable, materna	l, neonatal, and nutrition	al disea	ases	
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[†] Uncertainty intervals are a range of values that are likely to include the correct estimate of health loss for a given cause.

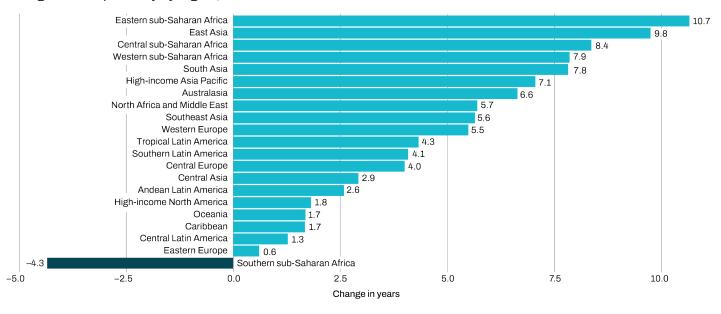
^{*} Chronic obstructive pulmonary disease

^{**} Other pandemic-related mortality; includes excess mortality associated with the pandemic.



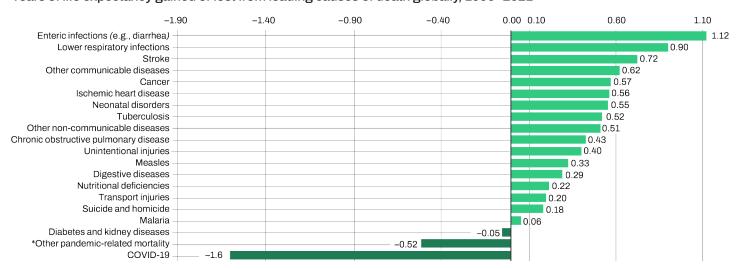
Eastern sub-Saharan Africa saw the largest increase in life expectancy among regions; the region's biggest gains stemmed from efforts to combat combat diarrhea, tuberculosis, lower respiratory infections, HIV/AIDS, and measles.

Change in life expectancy by region, 1990-2021



The highest increases in global life expectancy have come from progress against enteric diseases, including diarrhea and typhoid. The largest decreases in life expectancy have come from COVID-19 and COVID-related causes.

Years of life expectancy gained or lost from leading causes of death globally, 1990–2021



^{*} Other pandemic-related mortality includes excess mortality associated with the pandemic.

Source: https://bit.ly/CoD21, The Lancet.