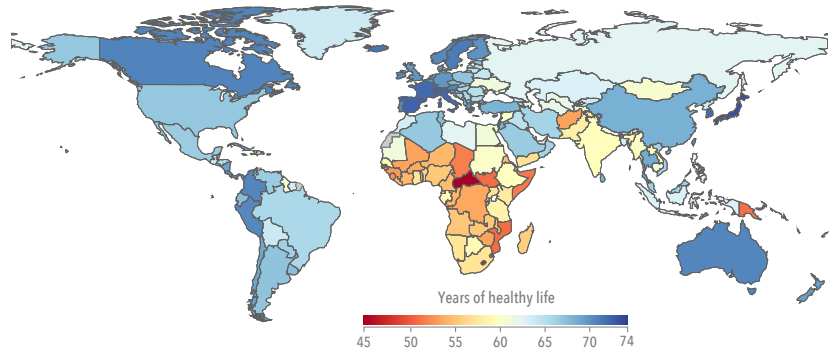# IHME

What is the Global Burden of Disease (GBD)?

Everyone, all over the world, deserves to live a long life in full health. One of the largest scientific collaborations in the world, the GBD enterprise measures what prevents us from achieving that goal, putting knowledge and tools into the hands of people and groups around the world to make people healthier.

By identifying the biggest health problems, it is helping governments, scientists, and partners advocate for resources and answer questions such as:

- *What diseases, injuries, and risk factors cause the most early death and disability in a given country?*

- *How does health performance differ across countries?*

- *When designing an intervention to improve the health of young women, which health problems should be targeted to make the greatest impact?*

Healthy life expectancy (HALE)*, 2017

Years of healthy life

45 50 55 60 65 70 74

*HALE summarizes the healthy years of life that a person in each country can expect to live. Data shown here represent HALE at birth.
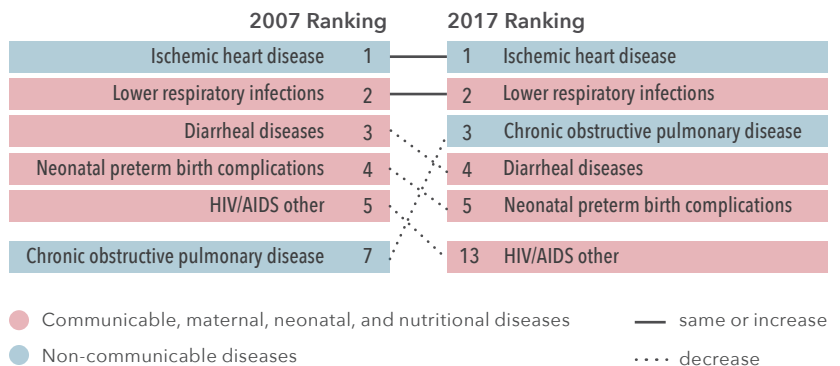
GBD: an international collaboration

| **195** countries and territories | **100,000+** data sources | **~450** diseases, injuries, and risk factors | **3,200+** collaborators in **141+** countries and territories |

To join the collaboration, visit **healthdata.org/gbd**

CASE STUDY

THE US NATIONAL INSTITUTES OF HEALTH (NIH) used GBD findings in their 2016–2020 strategic plan, a decision that was further strengthened by the bipartisan 21st Century Cures Act. Enacted into law in December 2016, the Act mandates that the NIH incorporate burden of disease estimates into criteria for awarding its Eureka Prize and into its strategic plan every six years. The strategic plan indicates that NIH will consider burden of disease data when making funding decisions.

Top five causes of early death and disability globally, 2007 and 2017**

	2007 Ranking			2017 Ranking	
Ischemic heart disease	1		1	Ischemic heart disease	
Lower respiratory infections	2		2	Lower respiratory infections	
Diarrheal diseases	3		3	Chronic obstructive pulmonary disease	
Neonatal preterm birth complications	4		4	Diarrheal diseases	
HIV/AIDS other	5		5	Neonatal preterm birth complications	
Chronic obstructive pulmonary disease	7		13	HIV/AIDS other	

● Communicable, maternal, neonatal, and nutritional diseases — same or increase

● Non-communicable diseases ···· decrease

**This figure measures the top five causes of early death and disability globally by disability-adjusted life years, or DALYs. It shows that the burden from non-communicable diseases is increasing in importance globally, while the burden of communicable, maternal, neonatal, and nutritional disorders is decreasing.

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The Global Burden of Disease enterprise also includes a range of research projects, such as Future Health Scenarios, which forecasts a range of scenarios for life expectancy, 250 causes of death, and 79 risks in 195 countries and territories through 2040. By illuminating the potential to improve health by addressing key health drivers, these scenarios can help frame health planning locally, nationally, and globally. Learn more at http://www.healthdata.org/future-health-scenarios.
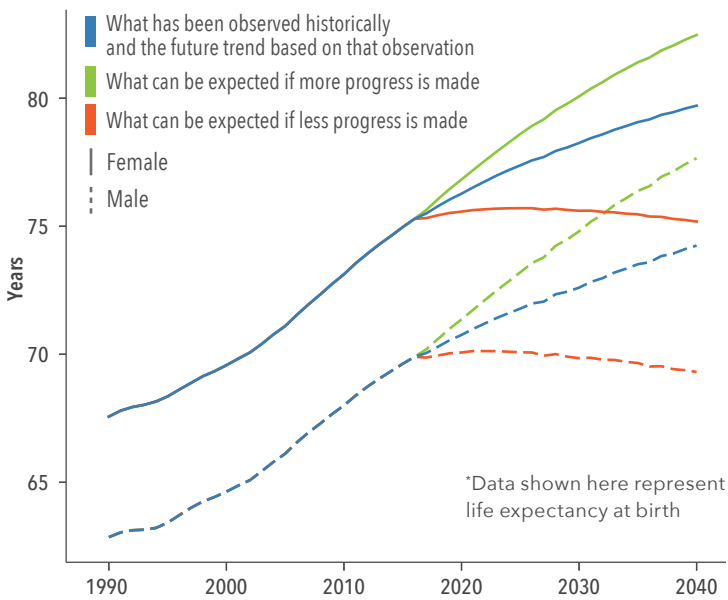
The enterprise also includes the Local Burden of Disease project, which aims to produce estimates at a very fine, local resolution – typically down to 5x5 km areas – of select health outcomes and related measures, including child growth failure, vaccine coverage, malaria, HIV/ AIDS, tuberculosis, diarrhea, lower respiratory infections, and the pandemic potential of five zoonotic infectious diseases, among others. Learn more at http://www.healthdata.org/lbd.

CASE STUDY

IN ETHIOPIA, the GBD has been a valuable resource in the government's efforts to strengthen the use of evidence in its decision-making. The Ministry of Health used GBD data to help guide its five-year Health Sector Transformation Plan, a strategic document that sets Ethiopia's health-related priorities and objectives. Now, IHME is working with the Ethiopian Public Health Institute as it builds its National Data Management Center, which includes a Burden of Disease Unit, with the aim of providing comprehensive, timely, and actionable evidence on the nation's health.
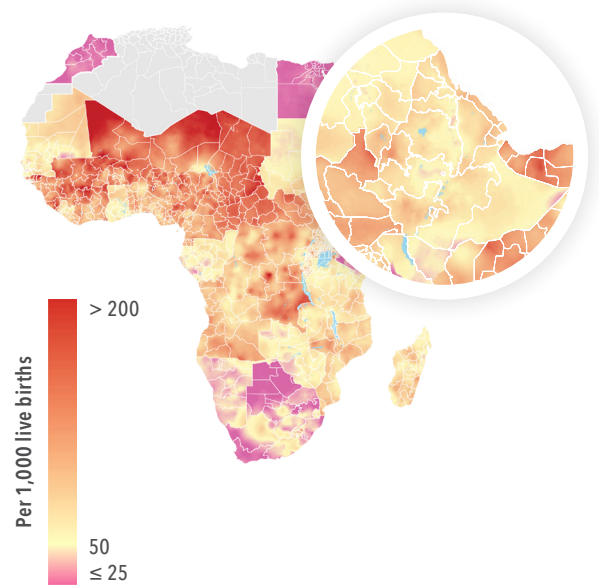
Future Health Scenarios
Global life expectancy,* 1990–2040

Legend:
- What has been observed historically and the future trend based on that observation
- What can be expected if more progress is made
- What can be expected if less progress is made
- Female
- Male

*Data shown here represent life expectancy at birth

Local Burden of Disease
Under-5 mortality, 2015

Per 1,000 live births
- > 200
- 50
- ≤ 25

About IHME

The Institute for Health Metrics and Evaluation (IHME) is an independent global health research center at the University of Washington that provides rigorous and comparable measurement of the world's most important health problems and evaluates the strategies used to address them. IHME is recognized as one of the leading health metrics organizations in the world. Learn more about the GBD enterprise and get involved at healthdata.org/gbd.