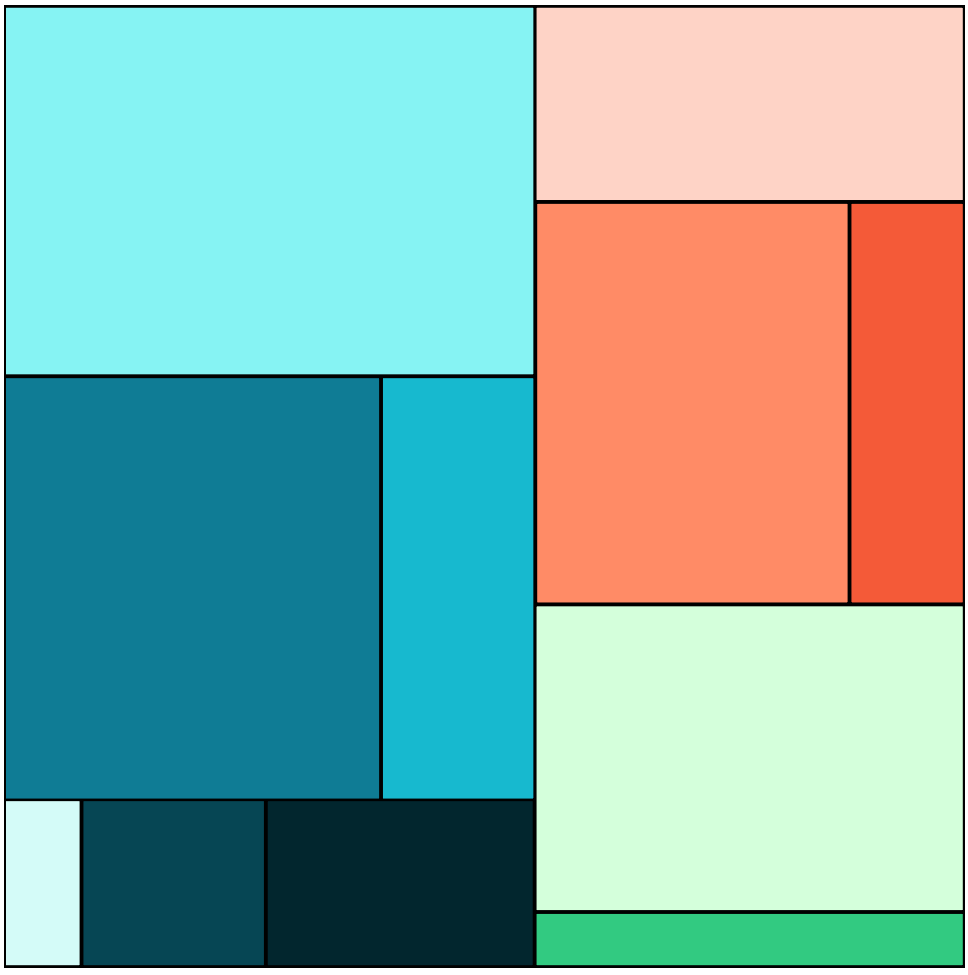
Institute for Health
Metrics and Evaluation

GBD 2021 Data and Tools Overview



Updated May 2024

Introduction

This document is a basic guide to results from the Global Burden of Disease Study (GBD) and the suite of web-based tools used to disseminate these results. These tools allow students, researchers, policymakers, and other members of the public to access, view, and interact with GBD data outputs. They are all freely available for non-commercial use.

IHME maintains eight online GBD query tools and data visualizations. These are the GBD Results Tool, GBD Compare, GBD Foresight, Mortality Visualization (MortViz), Causes of Death Visualization (CoDViz), Epi Visualization (EpiViz), Burden of Proof Visualization (BoPViz), and GBD Sources Tool. With these, users can query, view, and download, in CSV format, information and data of the following types:

- **Data sources:** These are lists of the primary data sources used to produce estimates for different components of the study, and relevant metadata about them.
- **Model input data:** These are input data points adjusted to meet GBD's format and quality requirements
- **Estimates:** These are final GBD results, the point estimates and 95% uncertainty intervals, where appropriate, for study indicators

While most GBD results are distributed through the tools listed above, certain results are published and made available for download as prepackaged files in the Global Health Data Exchange (GHDx), IHME's catalog of health and demographic data. Covariate data used in GBD and certain items of frequently requested documentation (disability weights, GBD cause-ICD code maps, relative risks, and more) are available through GHDx records. Code used to produce GBD estimates is also hosted in the GHDx.

This guide offers the following:

- Brief descriptions of each GBD tool and resource
- A glossary of key terms found in GBD and GBD results
- An overview of the indicators and data outputs available from each tool and resource
- Appendices to this document in Excel [xlsx file] format containing:
    - GBD cause, risk/etiology/impairment/injury (REI), and location hierarchies
    - Lists of each cause and cause-risk, cause-impairment, and cause-injury pair, with the measures available for each
    - Age groups available for each context (e.g., cause, life expectancy, population, etc.) in GBD results
    - Metrics definitions for each measure
    - A list of models in EpiViz and the corresponding causes, risks, and impairments for each

Additional data resources for GBD 2021 are available at http://ghdx.healthdata.org/gbd-2021.

Information on the GBD study is available at http://www.healthdata.org/gbd.

Contact Us

Do you have questions or comments about any of the GBD 2021 data or online tools?

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GHDx: www.ghdx.healthdata.org

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Section 1: Tool Descriptions

1.1 GBD Results Tool

Use the GBD Results Tool to view and download estimates of the world's health as CSV files. Select your target dataset from 288 causes of death, 371 diseases and injuries, and 88 risk factors in 204 countries and territories, including subnational estimates for 21 countries and territories and 204 years from 1990 to 2021.

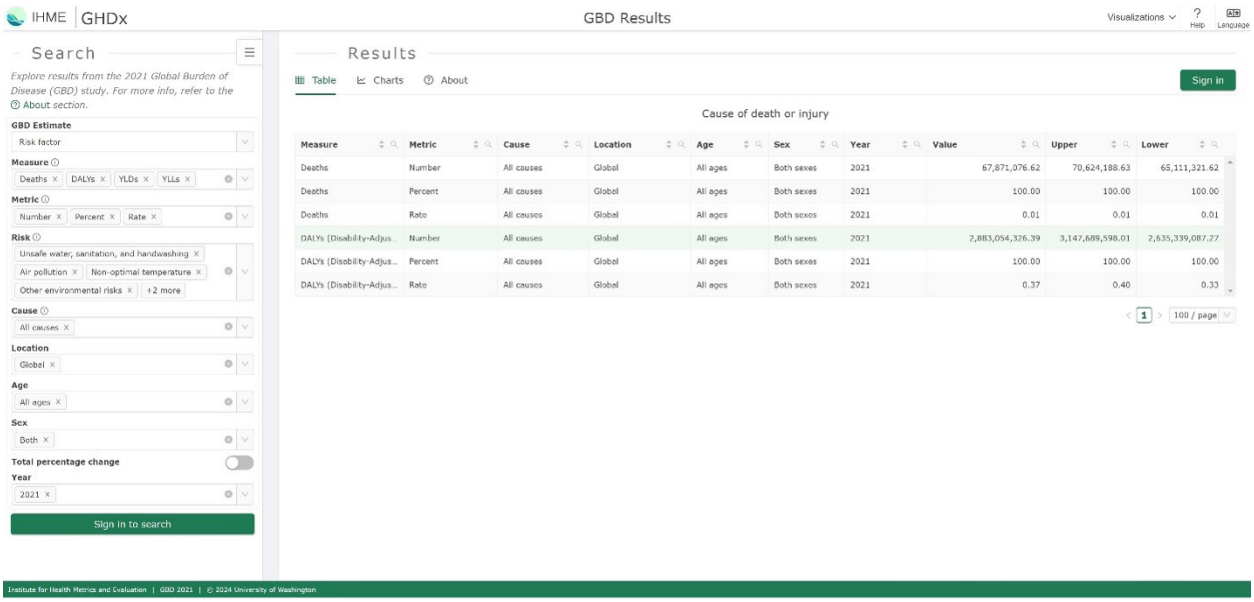
You can also explore trends by age and sex, and select from available measures:

- All-cause mortality rates
- Population
- Fertility
- Life tables
- Deaths by cause
- Years of life lost to premature mortality (YLLs) by cause and impairment
- Years lived with disability (YLDs)
- Disability-adjusted life years (DALYs)
- Incidence by cause
- Prevalence by cause and impairment
- Maternal mortality ratio
- Probability of death by cause
- Life expectancy
- Healthy life expectancy (HALE)
- Population attributable fractions
- Attributable deaths, YLLs, YLDs, and DALYs due to risk factors and etiologies
- Summary exposure values by risk factors

All users must create an account to download GBD data; users will be prompted to register to create an account when initially visiting GBD Results (https://vizhub.healthdata.org/gbd-results/).

To get support for your account, visit: https://www.healthdata.org/account-support

Figure 1. GBD Results Tool



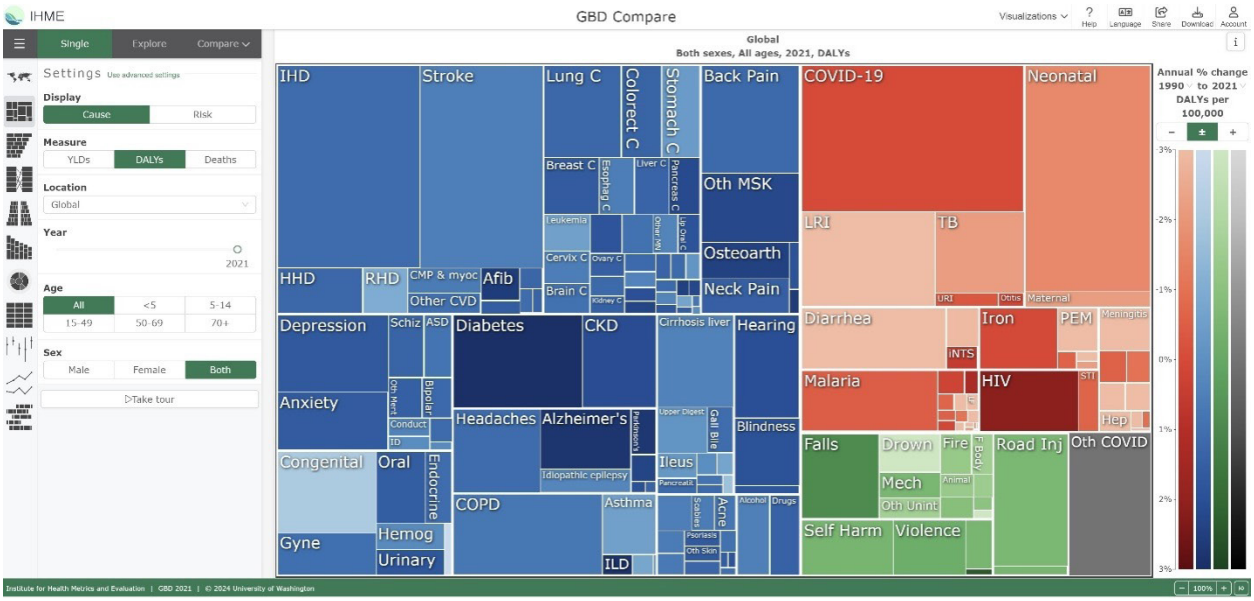
The GBD Results Tool is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-results

1.2 GBD Compare

Analyze how disease patterns have changed over time with the GBD's most comprehensive visualization. Answer questions like: What was the global death toll of COVID-19 in 2020? What is the top cause of disability in your country? What percentage of lung cancer deaths were caused by smoking?

Use maps, plots, treemaps, arrow diagrams, and a dozen other charts to compare trends in diseases, injuries, and risk factors; to explore the health profile within a country by age and sex; to compare countries with one another; or to explore regional and global trends. The visualization is available in 16 languages and the data are available to download.

Figure 2. GBD Compare

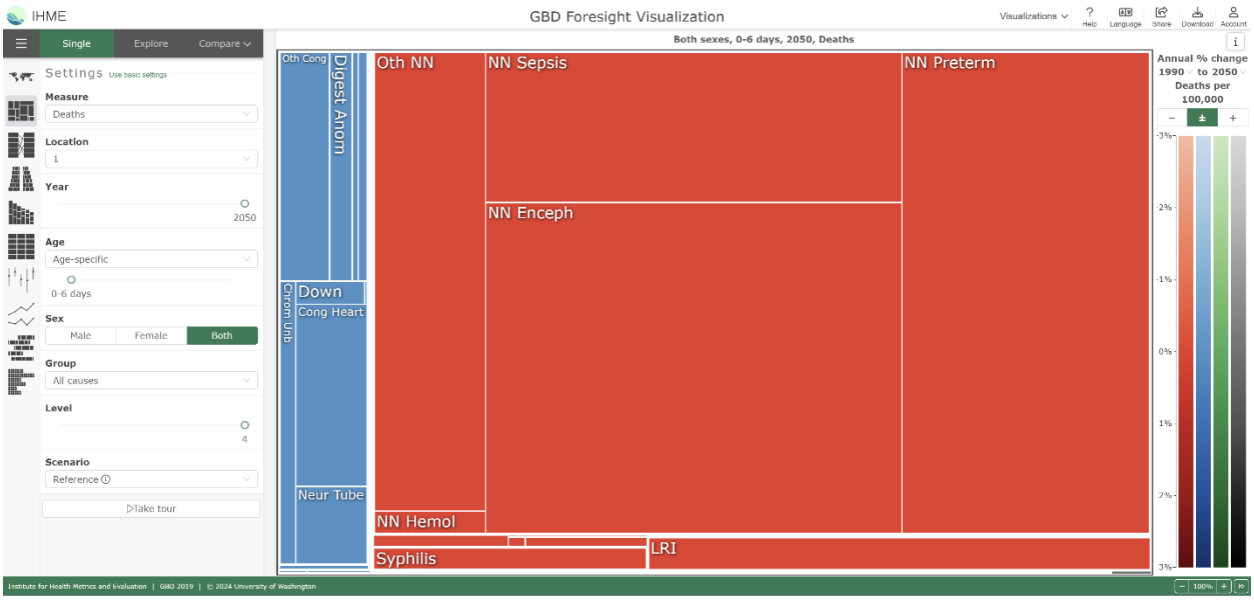


GBD Compare is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-compare

1.3 GBD Foresight

Evaluate and analyze forecasts and alternative future scenarios from 2022 to 2050 for death, life expectancy, years of life lost (YLLs), years lived with disability (YLDs), and disability-adjusted life years (DALYs). Future scenarios of summary exposure values (SEV) by risk are also available through 2050. Use the treemap, arrow diagram, decomposition plot, line chart, maps, and other views to compare across countries and regions of the world and across scenarios. Explore patterns and trends by country, age, and sex. Examine the impact of custom scenarios on disease burden.

Figure 3. GBD Foresight

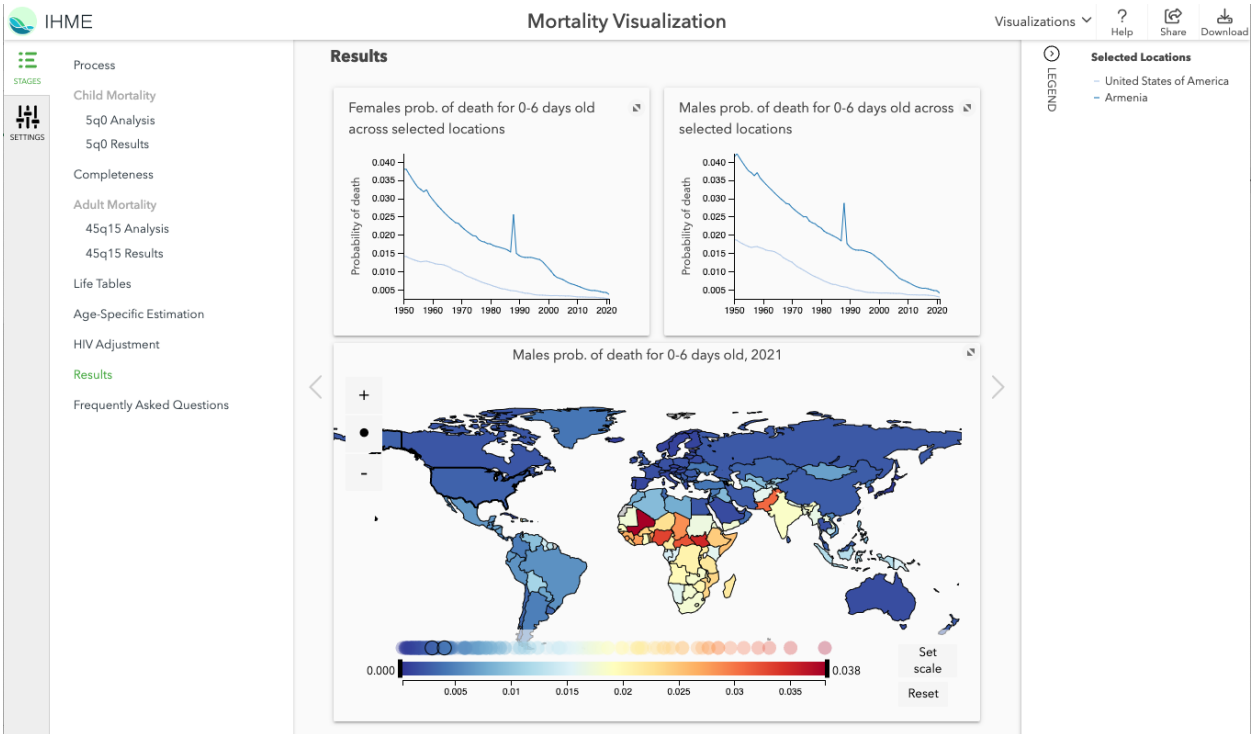


GBD Foresight visualization is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-foresight-visualization

1.4 Mortality Visualization (MortViz)

How do input data become GBD estimates? Walk through the estimation process for mortality trends for children and adults for 204 countries and territories using the Mortality visualization. See source and comparative data and step through the stages in the estimation process to reveal the final mortality estimates from 1950 to 2021. Learn more about the process by reviewing the “Frequently Asked Questions” section in the visualization. Data are available for download on the visualization.

Figure 4. MortViz

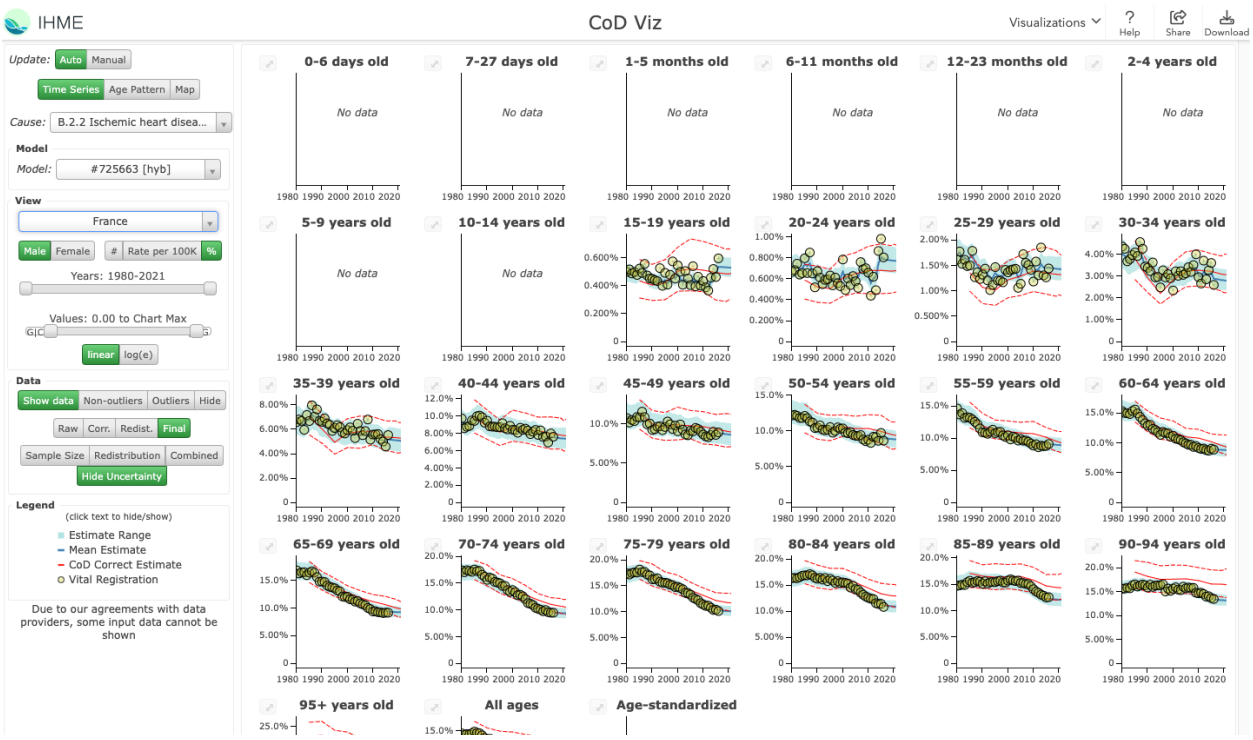


MortViz is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/mortality-visualization

1.5 Causes of Death Visualization (CoDViz)

Where do we have the best data on different health conditions? For any age group, see where various data sources have placed trends in causes of death over time. You can examine more than 250 causes in both adjusted and pre-adjusted numbers, rates, and percentages for 204 countries and territories. Data are available for download on the visualization.

Figure 5. CODViz

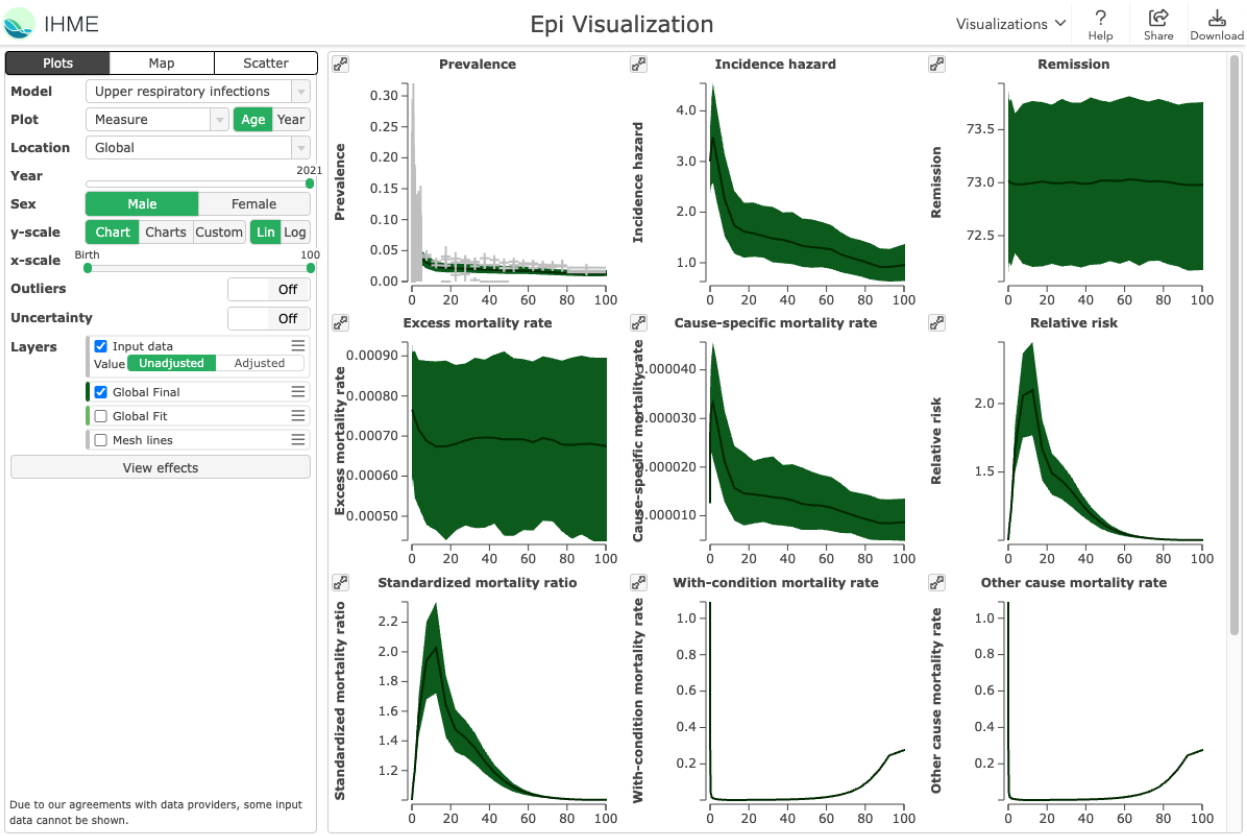


CodViz is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/causes-death-cod-visualization

1.6 Epi Visualization (EpiViz)

With this interactive tool, you can explore data inputs and epidemiological estimates from the GBD 2021 study. Estimates of nonfatal health loss for the majority of diseases, and exposure estimates for many risk factors, were modeled using DisMod-MR 2.1, a Bayesian mixed-effects meta-regression modeling tool developed for GBD analyses. Initial estimates are made at the global level then sequentially revised down to the national and subnational levels using data that are progressively more detailed with respect to geography and time. Select any condition that was modeled using DisMod-MR 2.1, visualizing the pre- and post-adjusted incidence, prevalence, mortality, and remission data across hundreds of conditions in 204 countries and territories from 1990 to 2021. Model results estimated using other methods are also available for causes, risk factors, and impairments. Input data are available for download via the visualization for models using DisMod-MR.

Figure 6. EpiViz

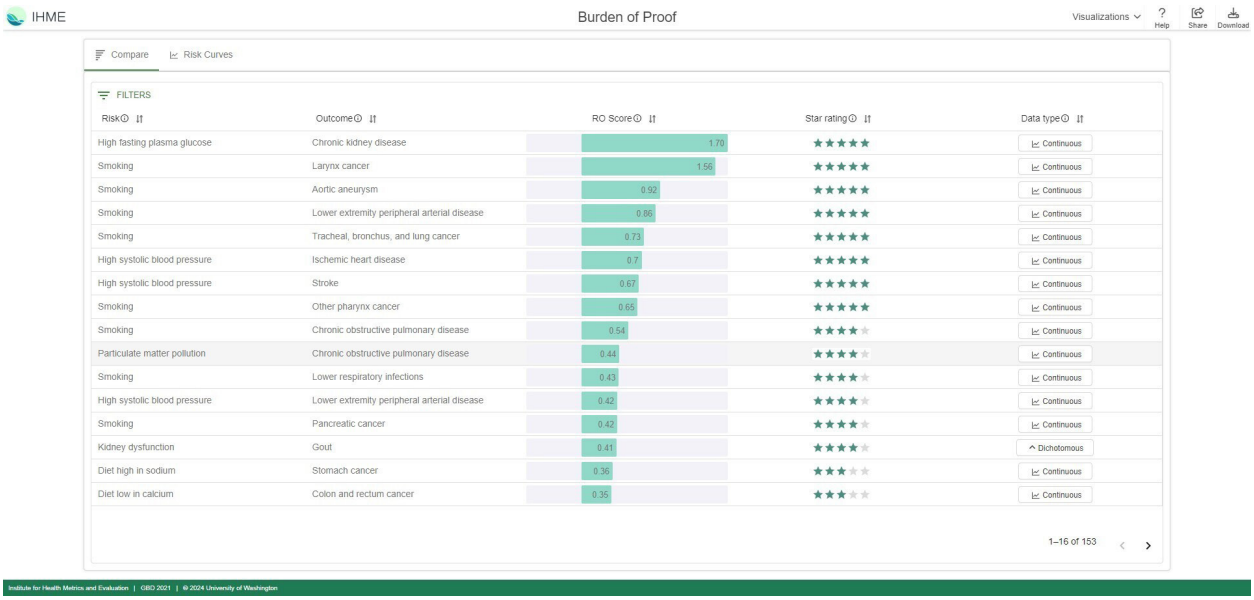


EpiViz is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/epi-visualization

1.7 Burden of Proof Visualization (BoPViz)

The Burden of Proof tool shows the strength of evidence between health risks and outcomes, indicating the likelihood of certain behaviors to have an impact on health. The tool uses a novel star-rating system to rank each pair from one to five, based on both the magnitude of risk shown by studies to date, as well as the consistency of findings between those studies.

Figure 7: BoPViz



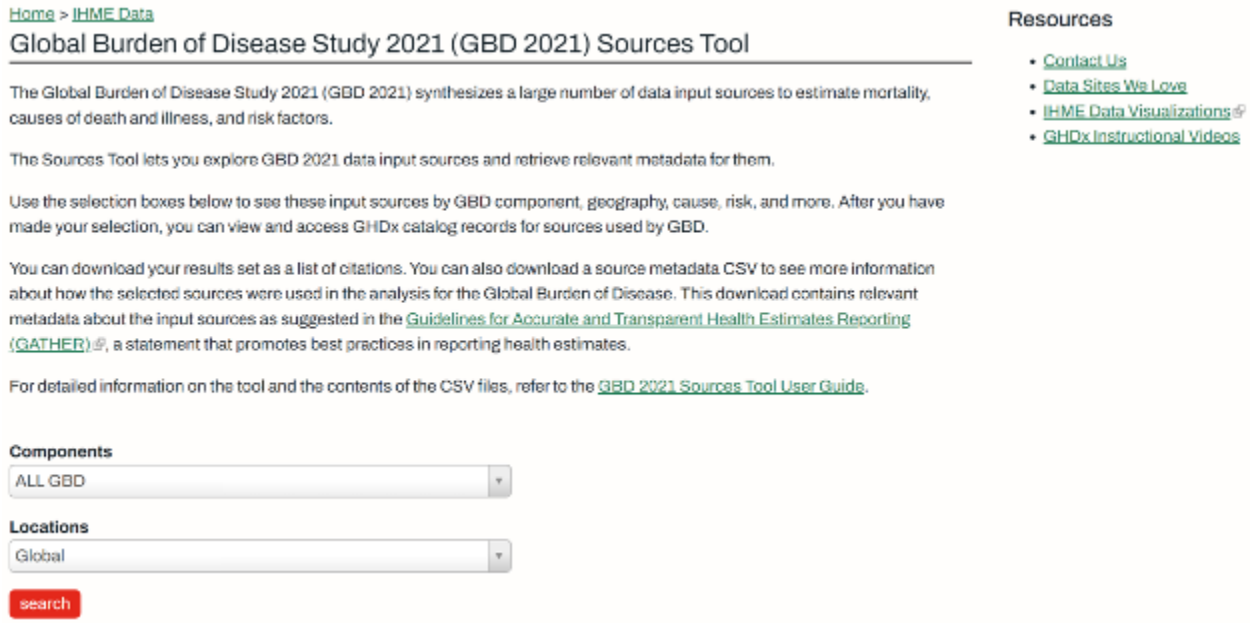
Burden of Proof visualization is found here: https://www.healthdata.org/data-tools-practices/interactive-visuals/burden-proof

1.8 GBD Sources Tool

The GBD Sources Tool lets you explore citations for the data sources used to generate GBD 2021 estimates and research findings. You can filter by GBD component, geography, and cause, risk, covariate, or impairment. After you have made your selection, you can view and access catalog entries for input sources used by GBD through the Global Health Data Exchange (GHDx).

Download these input sources as a CSV file to see more information about how they were used in the analysis of the GBD. This CSV file contains metadata about the input sources as suggested in the Guidelines for Accurate and Transparent Health Estimates Reporting (GATHER), a statement that promotes best practices in reporting health estimates.

Figure 8. GBD Sources Tool



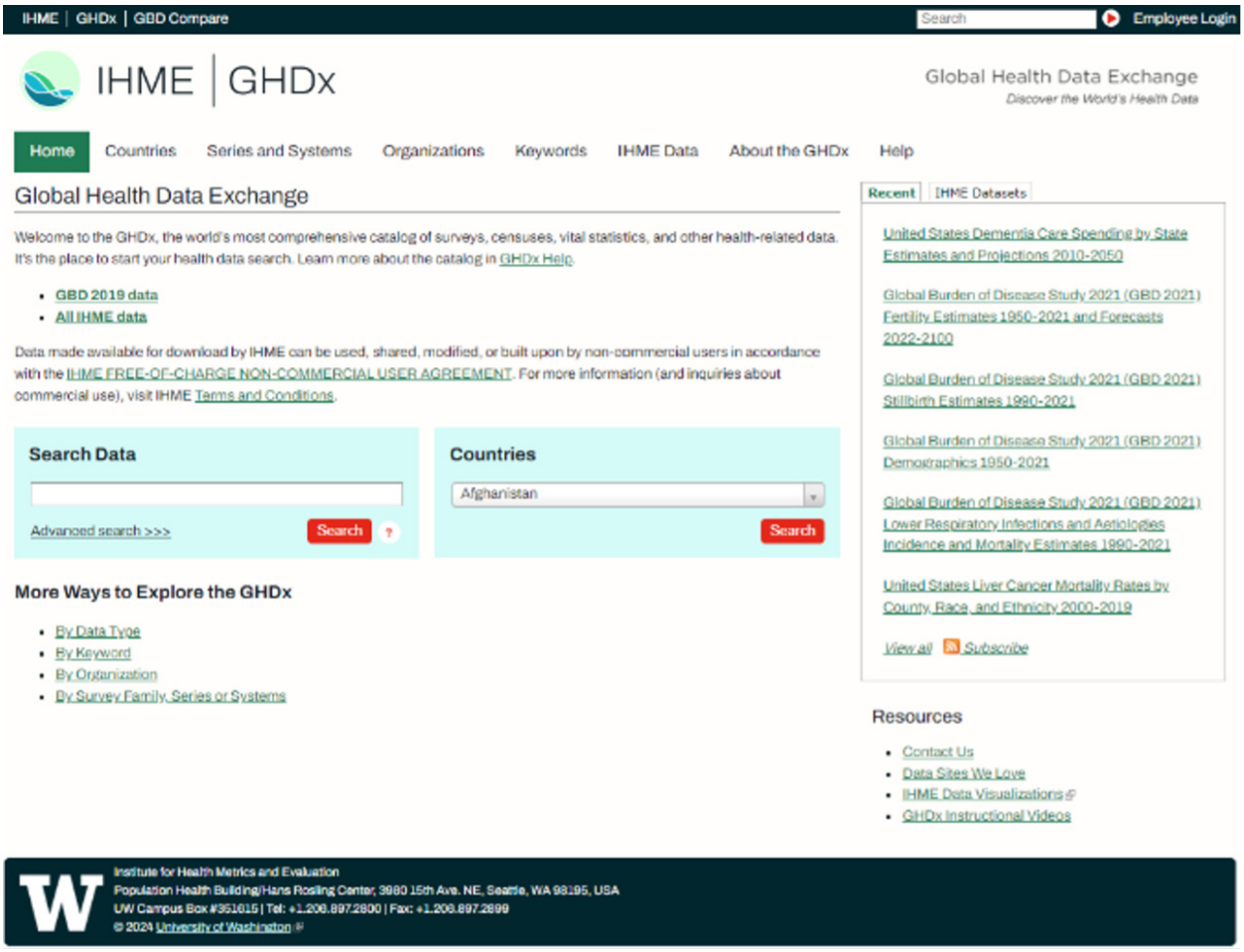
The GBD Sources Tool is found here: https://ghdx.healthdata.org/gbd-2021/sources

View a complete guide to the GBD Sources Tool here.

1.9 Global Health Data Exchange (GHDx)

The Global Health Data Exchange (GHDx) is a catalog of data sources related to health. It includes citations for all sources used in the most recent version of the annually published GBD. (It also includes sources that are not included in or relevant to the GBD, but are health-related and may be of use to other research.) Users can perform searches based upon keyword, location, data type, and year. Full citation information is provided for all sources. Wherever possible, links are provided to the data contained in each source. Where data holders prohibit direct access to the data and require further registration or request, links are provided to the relevant instructions.

Figure 9. GHDx



The GHDx is found here: http://ghdx.healthdata.org/

1.10 Code

Starting with the 2015 study, GBD publishes its analytic code in concordance with the GATHER guidelines.

Code is found here: https://ghdx.healthdata.org/gbd-2021/code

Section 2: Term Definitions

Term	Definition
Age group	A population segment within a specified age range.
All-cause mortality rate	The number of deaths due to all conditions by the mid-year population.
Cause	A single disease or injury or an aggregation of diseases and injuries that causes death or disability.
Cause hierarchy	The classification of diseases and injuries. The causes in GBD are classified into four levels. At Level 1, there are three large cause groupings: communicable, maternal and neonatal conditions and nutritional deficiencies (CMNN); non-communicable diseases (NCDs); and injuries. At Level 2 there are 21 disease and injury categories. The finest level of detail in causes is provided at Levels 3 and 4. Note: GBD 2021 includes a fourth Level-1 cause for Other COVID-19 pandemic related outcomes.
Cause-specific mortality rate	The number of deaths due to cause divided by the mid-year population.
Combined	This scenario combines all the target-based trends from the safer environment, improved behavioral and metabolic risk factor, and improved childhood nutrition and vaccination scenarios
Continuous variable	A population characteristic that is measured on a continuous scale (e.g., the mean level of blood pressure or body mass index).
Covariate	Covariates are variables that have a positive or negative impact on disease or conditions in GBD. For countries that contain little data, covariates are an important part of helping fill in the gaps of missing information. For example, since there is not very much information collected on North Korea, from North Korea's GDP we can extract data on how much food is being produced and use that to make estimates on the amount of food being consumed by individuals.
Deaths	Deaths occurring in a population during a certain time period.
Disability-adjusted life years (DALYs)	The sum of years lost due to premature death (YLLs) and years lived with disability (YLDs). One DALY equals one lost year of healthy life.
Etiology	The cause, set of causes, or manner of causation of a disease or condition. For example, diarrhea is a cause in the GBD. Diarrhea itself has many causes (like norovirus). Diarrhea is the cause; norovirus is one of the etiologies.

Term	Definition
Excess mortality rate	The number of excess deaths divided by the number of prevalent cases. It is equivalent to the cause-specific mortality rate divided by prevalence.
Expected value (life expectancy, deaths, YLLs, YLDs, DALYs)	The value of a specified measure (life expectancy, deaths, YLLs, YLDs, or DALYs) that is expected for a particular GBD location and year, given its socio-demographic development status as measured by SDI.
Fatal discontinuities	An increase in the death rate of more than 1 per million, resulting from conflict and terrorism, natural disasters, major transport accidents, or epidemics.
Fertility	The actual level of reproduction of a population, based on the number of live births that occur. Fertility is often measured in terms of women of childbearing age, defined as 15-49 years. GBD estimates fertility for females ages 10-54.
Healthcare Access and Quality (HAQ) Index	A summary measure of personal health care access and quality for a given location. HAQ Index is based on risk-standardized mortality rates from causes that, in the presence of high-quality health care, should not result in death – also known as amenable mortality.
Healthy life expectancy (HALE)	The number of years that a person at a given age can expect to live in good health, if the rates of all-cause mortality and all-cause disability in a specified year of interest would remain constant into the future.
Impairment	Consequences (or sequelae) of multiple underlying causes for which the main sources of data pertain to the sum of these across all causes. GBD currently measures nine impairments: vision loss, hearing loss, anemia, heart failure, epilepsy, infertility, developmental intellectual disability, pelvic inflammatory disease, and Guillain-Barré syndrome.
Improved Behavioral and Metabolic Risks	This scenario assumes exposure to high LDL cholesterol, high adult body mass index, high fasting plasma glucose, and high systolic blood pressure are linearly eliminated by 2050 in all locations. It further assumes that exposure to non-optimal diet for all GBD diet-related risk factors is likewise eliminated by 2050. In addition, we assumed a linear reduction of current tobacco smokers to zero by 2050 as well as no new smokers after 2022 in all locations.

Term	Definition
Improved Childhood Nutrition and Vaccination	This scenario assumes exposure to child growth failure (stunting, wasting, underweight), iron and vitamin A deficiency, and suboptimal breastfeeding (discontinued or non-exclusive) linearly decreases to zero by 2050 and assumes a linear increase in vaccine coverage to 100% in all locations by 2050 for the following vaccines: DTP3, MCV1, MCV2, Hib, PCV3, and Rota.
Incidence	The number of new cases of a given cause during a given period in a specified population. It is often approximated by taking the number of new cases in a year divided by the mid-year population size.
Injury n-codes (Injury by Nature)	Injuries are classified into two dimensions: the cause of injury (e.g., road injury, fall or interpersonal violence) and the nature of injury ("n-code") that determines the bodily consequences of the injury (e.g., fracture or head injury). Causes of death are classified by cause of injury; disability is determined by the nature of injury.
Life expectancy	The number of years a person is expected to live at a given age assuming he or she will experience the age-specific mortality rate observed in a given year throughout his or her lifetime. For GBD, the life expectancy associated with an age group (e.g., 50- to 54-year-olds) is life expectancy at the starting year of the age group.
Life expectancy (without fatal discontinuities or HIV)	Life expectancy when the impact of fatal discontinuities or the HIV epidemic is removed.
Life expectancy (without fatal discontinuities, with HIV)	Life expectancy as estimated without including the impact of fatal discontinuities but including the HIV epidemic.
Life expectancy decomposition (LE decomp)	Changes in life expectancy over time attributed to the causes of death that resulted in the changes in life expectancy.
Life table	A table that shows, for a person at each age, what the probability is that they die before their next birthday. Life tables are used to measure mortality, survivorship, and the life expectancy of a population at varying ages.
Location	Includes country, non-sovereign region, principal administrative unit of a country (e.g., state, province), GBD region, or other custom administrative division, such as World Bank income level or WHO region.

Term	Definition
Maternal mortality ratio (MMR)	The number of maternal deaths per 100,000 live births. GBD defines maternal deaths as any death of a woman while pregnant or within one year of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Ages included range from 10 to 54 years.
Measure	The indicator for which estimates are produced.
Metric (units)	The unit by which a measure is expressed, e.g., number, percent, rate, etc.
Other cause mortality rate	The number of all-cause deaths minus deaths due to a specific cause, divided by the mid-year population.
Prevalence	The total number of cases of a given cause in a specified population at a designated time. All results in GBD refer to point prevalence.
Probability of death	The probability that a person dies during an interval of two ages (e.g., between birth and age 5), if the rates of all-cause mortality in a specified year of interest would remain constant into the future.
Probability of death (without fatal discontinuities or HIV)	The estimated probability of death without the impact of fatal discontinuities or the HIV epidemic.
Probability of death (without fatal discontinuities, with HIV)	The estimated probability of death without the impact of fatal discontinuities but including the HIV epidemic.
Proportion	The number of cases with a certain characteristic in a population (e.g., the proportion of HIV that is due to sexual transmission or the proportion of households using solid fuels for cooking).
Reference	This scenario assumes past trends and relationships between drivers and health outcomes remain.
Relative risk	The ratio of the mortality rate in the diseased and the mortality rate in the non-diseased population.
Remission	The number of cases that resolve or are cured per person-year of follow-up.
Risk (risk factor)	An attribute, behavior, exposure, or other factor which is causally associated with an increased (or decreased) probability of a disease or injury. If the probability decreased, the risk is a protective factor.

Term	Definition
Safer Environment	This scenario assumes that exposure to household air pollution and unsafe water, unsafe sanitation, and unsafe hygiene decreases, and will be eliminated linearly by 2050 in all locations. In addition, forecasts of particulate matter air pollution and non-optimal temperature reflect carbon emissions trends from the shared socioeconomic pathways SSP1-1.9 scenario as published in the CMIP6 climate projections (https://pcmdi.llnl.gov/CMIP6/), representing an aggressive decrease in emissions and reaching net 0 carbon dioxide emissions by 2050 for the alternative scenario.
Sequela	The non-fatal consequence of a disease or injury. In GBD, mutually exclusive sequelae are defined for each disease and injury that in a parsimonious manner quantify the consequences that cause disability or may lead to disability in the future.
Sex	Male, female, or both sexes combined.
Socio-demographic Index (SDI)	A measure that identifies where countries or other geographic areas sit on the spectrum of development. It is expressed on a scale of 0 to 100, with 0 being the lowest SDI value and 100 being the highest. SDI is based on three measures: i) lag-distributed income per capita; ii) average years of schooling in ages 15 and older; and iii) total fertility rate (TFR) for females under age 25.
Standardized mortality ratio	The mortality rate in the diseased compared to the mortality rate in the entire population.
Summary exposure value (SEV)	A measure of a population's exposure to a risk factor that takes into account the extent of exposure by risk level and the severity of that risk's contribution to disease burden. SEV takes the value zero when no excess risk for a population exists and the value one when the total population is at the highest level of risk; we report SEV on a scale from 0% to 100% to emphasize that it is risk-weighted prevalence.
Sustainable Development Goals (SDGs)	The United Nations established, in September 2015, the Sustainable Development Goals (SDGs), which specify 17 universal goals, 169 targets, and 232 indicators leading up to 2030. Member countries adopted this set of goals to end poverty, protect the planet, and ensure prosperity for all. The GBD study estimates progress made by countries for 41 health-related SDG indicators.

Term	Definition
Uncertainty interval	A range of values that reflects the certainty of an estimate. In GBD, every estimate is calculated 500 times, each time sampling from distributions rather than point estimates for data inputs, data transformations, and model choice. The 95th uncertainty interval is determined by the 25th and 975th value of the 1,000 values after ordering them from smallest to largest. Larger uncertainty intervals can result from limited data availability, small studies, and conflicting data, while smaller uncertainty intervals can result from extensive data availability, large studies, and data that are consistent across sources.
Value	The mean value of an estimate.
With-condition mortality rate	Total number of deaths among prevalent cases in a year of interest. It is equivalent to the sum of other cause mortality rate and cause-specific mortality rate.
Year	The period of 365 days (or 366 days in leap years) in the Gregorian calendar divided into 12 months beginning with January and ending with December.
Years lived with disability (YLDs)	Years lived with any short-term or long-term health loss. It is measured by taking the prevalence of the condition multiplied by the disability weight for that condition. Disability weights reflect the severity of different conditions and are developed through surveys of the general public.
Years of life lost (YLLs)	Years of life lost due to premature mortality. YLLs are calculated by subtracting the age at death from the longest possible life expectancy for a person at that age. For example, if the longest life expectancy for men in a given country is 75, but a man dies of cancer at 65, this would be 10 years of life lost due to cancer.

Section 3: Tool Outputs and Indicators Overview

GBD 2021 Tool		GBD Results Tool	GBD Compare	GBD Results Tool	MortViz	EpiViz	GHDx	GBD Sources
GBD Component	Mortality	X	X	X			X	X
	Population		X					X
	Fertility	X					X	X
	Migration	X						X
	Causes of death	X	X		X		X	X
	Nonfatal health outcomes	X	X			X	X	X
	Risk factors	X	X				X	X
	Covariates						X	X
Output	Estimates	X	X	X	X	X	X	
	Model input data			X	X	X		
	Data input sources							X
Dimension	Age group	X	X	X	X	X	X	X
	Cause	X	X		X	X	X	X
	Impairment	X	X			X		X
	Injuries by nature	X	X					X
	Location	X	X	X	X	X	X	X
	Risk	X	X			X	X	X
	Sex	X	X	X	X	X	X	X
	Year	X	X	X	X	X	X	X
Measure / Indicator	Deaths	X	X	X	X			
	Disability-adjusted life years (DALYs)	X	X					
	Years lived with disability (YLDs)	X	X					
	Years of life lost (YLLs)	X	X					
	Prevalence	X	X			X		
	Incidence	X	X			X		
	Maternal mortality ratio (MMR)	X	X					
	Probability of death		X	X			X	
	Life expectancy	X	X	X			X	
	Healthy life expectancy (HALE)	X	X				X	
	Summary exposure value (SEV)	X	X					
	Life expectancy decomposition		X					
	Expected value (life expectancy, deaths, YLLs, YLDs, DALYs)		X					

GBD 2021 Tool		GBD Results Tool	GBD Compare	GBD Results Tool	MortViz	EpiViz	GHDx	GBD Sources
Measure / Indicator	Covariates						X	
	Population	X						X
	Migration	X						X
	Fertility	X					X	X
	Universal healthcare (UHC) effective coverage index						X	
	Life expectancy (without fatal discontinuities or HIV)			X			X	
	Life expectancy (without fatal discontinuities, with HIV)			X			X	
	Probability of death (without fatal discontinuities or HIV)			X			X	
	Probability of death (without fatal discontinuities, with HIV)			X			X	
	Remission					X		
	Excess mortality rate					X		
	Standardized mortality ratio					X		
	With-condition mortality rate					X		
	All-cause mortality rate			X		X		
	Cause-specific mortality rate				X	X		
	Other cause mortality rate					X		
	Proportion					X		
	Continuous measure					X		

Appendices

Appendix 1: Cause, REI, and Locations Hierarchies [xlsx file]

File: IHME_GBD_2021_A1_HIERARCHIES_Y2024M05D15.XLSX

The **Cause Hierarchy, REI Hierarchy** (risk factor, etiology, impairment, and injury n-code), and **GBD 2021 Locations Hierarchy** sheets contain GBD 2021 reporting hierarchies with values in the order they appear in online tools, such as the GBD Results Tool and GBD Compare.

The **All Locations Hierarchies** sheet contains the GBD 2021 reporting hierarchy and a number of other hierarchies which will allow users of GBD 2021 results to aggregate results by location in various ways (by GBD regions, World Bank regions, OECD countries, African Union countries, etc.).

To filter for the child values of a given parent value in any hierarchy file (e.g., all countries in the GBD region "South Asia," or all causes under "Chronic respiratory diseases"), filter on the parent ID in the **Parent ID** column.

To view each hierarchy in its proper nested order (the order they appear in online tools), sort by the **Sort Order** column.

For the Cause Hierarchy, users can also filter by cause outline value (e.g., all causes in "A" or "A.1"), or for causes for which either only years of life lost (YLLs) or years lived with disability (YLDs) results were produced.

For the All Locations Hierarchies, filter first by **Location Set Version ID**, and then by Parent ID and/or Sort Order.

Locations and Levels: In the locations hierarchies files:
- Level 3 = country or territory
- Levels 4 and 5 = subnational units

Location Set Version IDs

Location Set ID	Location Set
543	GBD 2021 Reporting
587	African Union
592	Commonwealth
591	European Union
593	Four World Regions
588	G20
586	Nordic Region
589	OECD countries
670	WHO region
596	World Bank income levels
595	World Bank regions

Select Variable Definitions

Variable	Definition
Cause ID	Cause IDs for cause variables come from an IHME database that creates and stores unique numeric identifiers for each GBD cause.
Cause Outline	This outline represents the hierarchy of causes and the depth of each cause in the hierarchy by alphanumeric code for the current round of GBD.
Level	This indicates a location value's level in a location hierarchy.
Location ID	Locations IDs for geographic variables come from an IHME database that creates and stores unique numeric identifiers for locations of various location types.
Location Set Version ID	IDs for GBD 2021 location sets (including the GBD locations and custom region locations) come from an IHME database that creates and stores unique numeric identifiers for location set versions.
Parent	This indicates the parent ID for a value's parent in the hierarchy. For example, all 31 Mexican states and 1 federal district (Mexico City) have a parent ID of 130, the location ID for the country of Mexico.
REI ID	REI IDs for risk, etiology, impairment, and injury n-code (injury by nature) variables come from an IHME database that creates and stores unique numeric identifiers for each risk, etiology, impairment, and injury.
REI Type	This indicates whether the value is a risk, etiology, impairment, or injury.
Sort Order	This can be used to sort a set of values in a particular order (not alphabetical, but the order in which the values appear in online tools, paper tables, etc.).
YLL Only	Indicates causes for which only mortality estimates (deaths, years of life lost [YLLs]) were produced.
YLD Only	Indicates causes for which only nonfatal estimates (years lived with disability [YLLs]) were produced.

Appendix 2: Results by Measure and Cause-Risk/Impairment/ Injury Pairs [xlsx file]

File: IHME_GBD_2021_A2_RESULTS_BY_MEASURE_Y2024M05D15.XLSX

This Excel file contains a set of sheets that display the measures (deaths, DALYs, incidence, etc.) for which estimates are provided for each GBD cause, risk, impairment, and injury by nature.

Filter on cause, risk, etc., or a measure (deaths, YLDs, incidence, etc.), to see available results.

Additionally, the sheets display which causes each risk, impairment, and injury by nature are associated with. For example:

- In the “Risk” sheet, filter for “Ambient particulate matter pollution” in the “Risks” column and see the 18 causes associated with the Ambient particulate matter pollution risk

In the “Impairment” sheet, filter for “Blindness” in the “Impairments” column and see the 34 causes associated with the Blindness impairment.

Appendix 3: Metrics by Measure Definitions [xlsx file]

File: IHME_GBD_2021_A3_MEASURE_METRIC_DEFINITIONS_Y2024M05D15.XLSX

This file (also included as a tab in the “Results by Measure” file) provides definitions for each metric, by measure, contained in the GBD Results Tool and GBD Compare.

Appendix 4: Contexts by Age [xlsx file]

File: IHME_GBD_2021_A4_CONTEXTS_BY_AGE_Y2024M05D15.XLSX

This Excel file provides the full set of age groups used, cumulatively, in results available from the GBD Results, and the context each age group appears in. Filter on contexts like Cause, Risk, Life expectancy, Population, etc. to the see the ages available for each.

Ages are largely the same in GBD Compare and the other GBD data visualizations, but similar tables for those tools are forthcoming.