Data Release Information Sheet

**Data Summary**


Date of release: May 23, 2018

Summary:
Global Burden of Disease Study 2016 (GBD 2016) estimates were used in an analysis of personal healthcare access and quality for 195 countries and territories, as well as selected subnational locations, over time. This dataset includes the following global, regional, national, and selected subnational estimates for 1990-2016: age-standardized risk-standardized death rates from 24 non-cancer causes considered amenable to healthcare; age-standardized mortality-to-incidence ratios for 8 cancers considered amenable to healthcare; and the Healthcare Access and Quality (HAQ) Index and individual scores for each of the 32 causes on a scale of 0 to 100. Code used to produce the estimates is also included.

Results were published in *The Lancet* in May 2018 in "Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016."

Relevant publications and visualizations:

- GBD Compare
Acknowledgements

Contributing organizations:

- Global Burden of Disease Collaborative Network

Funders:

- Bill and Melinda Gates Foundation (BMGF)

Suggested Citation:

File Inventory

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
<th>Version Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_SC ALED_CAUSE_VALUES_Y2018M05D23.CSV</td>
<td>HAQ Index: Scaled Cause Values</td>
<td>May 23, 2018</td>
</tr>
<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_UN SCALED_CAUSE_VALUES_Y2018M05D23.CSV</td>
<td>HAQ Index: Unscaled Cause Values</td>
<td>May 23, 2018</td>
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<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_CO DEBOOK_SCALED_CAUSE_VALUES_Y2018M05D23.CSV</td>
<td>Codebook: Scaled Cause Values</td>
<td>May 23, 2018</td>
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<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_CO DEBOOK_UNScaled_CAUSE_VALUES_Y2018M05D23.CSV</td>
<td>Codebook: Unscaled Cause Values</td>
<td>May 23, 2018</td>
</tr>
<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_CO DE.zip</td>
<td>R code used to produce the estimates</td>
<td>May 23, 2018</td>
</tr>
<tr>
<td>IHME_GBD_2016_HAQ_INDEX_1990_2016_INF O_SHEET_Y2018M05D23.PDF</td>
<td>Data Release Information Sheet</td>
<td>May 23, 2018</td>
</tr>
</tbody>
</table>

Data Files Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable Label</th>
<th>Variable Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>location_ID</td>
<td>Location ID</td>
<td>Unique numeric identifier for the location generated and stored in an IHME database of data dimensions.</td>
</tr>
<tr>
<td>ihme_loc_id</td>
<td>Abbreviated location name</td>
<td>ISO 3661-1 alpha-3 code for countries and bespoke alpha-numeric codes for GBD super-regions, regions, and subnational locations.</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>location_name</td>
<td>Location Name</td>
<td>Location of the estimate.</td>
</tr>
<tr>
<td>indicator_id</td>
<td>Indicator ID</td>
<td>Unique numeric identifier for the indicator. generated and stored in an IHME database of data dimensions. (Indicators are all equivalent to GBD causes with the exception of “Healthcare Access and Quality Index,” ID = 100).</td>
</tr>
<tr>
<td>indicator_name</td>
<td>Indicator name</td>
<td>The indicator estimated.</td>
</tr>
</tbody>
</table>
| measure | Measure | The measure of the estimate. For the scaled cause values data, there is one value: Index value (0 to 100). For the unscaled cause values data, there are two values:  
  - Age- and risk-standardized death rate per 100,000  
  - Age-standardized mortality-to-incidence ratio |
| year | Year | Time period of the estimate. |
| val | Mean value | Posterior mean estimate. |
| lower | 95% uncertainty interval (lower bound) | 2.5% percentile estimate. |
| upper | 95% uncertainty interval (upper bound) | 97.5% percentile estimate. |
| parent_location | Name of the "parent" location for subnational locations | Name of the "parent" location for subnational locations (e.g., China for Beijing). **Please note:** the parent value for global, super-region, region, and country locations are the locations themselves. |
| sdi_quintile | SDI quintile | The quintile of the Socio-demographic Index (SDI) in which the location is grouped, based on |
Codebooks
Variable names, labels, and value encoding can be found in the machine-actionable codebook files

- IHME_GBD_2016_HAQ_INDEX_1990_2016_CODEBOOK_SCALED_CAUSE_VALUES_Y2018M05D23.CSV
- IHME_GBD_2016_HAQ_INDEX_1990_2016_CODEBOOK_UNScaled_CAUSE_VALUES_Y2018M05D23.CSV

Code
The IHME_GBD_2016_HAQ_INDEX_1990_2016_CODE.zip archive contains the R code used to produce the estimates contained in the dataset.

Order for scripts to be run in.

1. prep_noncancer_inputs.R [Organizes and saves PAFs]
2. set_scalars.R [Sets scalar for PAFs that are > 1]
3. Risk standardizers
   a. risk_standardizer.R [Uses PAFs to risk-standardize non-cancer deaths, age-standardizes outputs]
   b. controller_risk_standardizer.R [Parallelizes risk_standardizer.R]
4. MI ratios
   a. cancer_mi_ratios.R [Creates mortality/incidence ratios, age-standardizes outputs]
   b. controller_mi_ratios.R [Parallelizes cancer_mi_ratio.R]
5. calc_index.R [Runs principal component analysis creates HAQ index]

* utilities.R is used as an auxiliary script through all scripts to load custom functions

Additional Information

Terms and Conditions
http://www.healthdata.org/about/terms-and-conditions
Contact information

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These files may be updated periodically, so we appreciate hearing feedback or additional information about how these data are being used.