VII. STANDING COMMITTEES

A. Academic and Student Affairs Committee

Presentation: Global Burden of Disease

This presentation is for information only.

Christopher Murray
Professor, Global Health
Adjunct Professor, Health Services

Biography
Dr. Christopher Murray is Institute Director of the Institute for Health Metrics and Evaluation (IHME).

A physician and health economist, his work has led to the development of a range of new methods and empirical studies to strengthen the basis for population health measurement, measure the performance of public health and medical care systems, and assess the cost-effectiveness of health technologies.

Dr. Murray worked at the World Health Organization (WHO) from 1998 to 2003 where he served as the Executive Director of the Evidence and Information for Policy Cluster. From 2003 until 2007, Dr. Murray was the Director of the Harvard University Initiative for Global Health and the Harvard Center for Population and Development Studies, as well as the Richard Saltonstall Professor of Public Policy at the Harvard School of Public Health.

Institute for
Health Metrics
and Evaluation

Global Burden of Disease 2010

July 12, 2012

Christopher J.L. Murray
IHME Director

UNIVERSITY of WASHINGTON

Institute for Health Metrics and Evaluation

Established at UW in 2007 with core grant funding from the Bill & Melinda Gates Foundation of $105 million and approximately $2 million per year in new state resources.

Goal: to provide an independent, scientific source of information on what peoples' health problems are , how health systems and societies are performing in addressing these health problems and how the impact of scarce resources can be improved in the future.

Growth

Started with 3 faculty and staff on July 1, 2007.

Grew to total size of 115 faculty, fellows and staff today with projected growth this year to 145 faculty, fellows and staff.

Total expenditure this year projected to be $25 million.

Four Major Program Areas

1) Measuring health – the Global Burden of Disease project quantifies the levels and trends in all major diseases, injuries and risk factors for 187 countries in the world. We also examine US trends at the county level.
2) Tracking performance – track the performance of medical care and public health systems around the world by measuring the resource flows, the delivery of key interventions to those who need them, the trends in key social and economic determinants of health, evaluate the performance of selected programs.

Four Major Program Areas

3) Maximizing impact – study the cost-effectiveness of different interventions and the way packages of care can be used to improve outcomes.

4) Better health information systems – research on how to be more efficient collecting health data and getting more out of existing datasets through information integration.

Educational Programs

1) Post-bachelor fellowship in global health – 375+ applicants per year, accept 10 each year. Work full-time for 3 years, most get a masters in public health during the period of work.
2) Post-graduate fellowship program. 120+ applicants worldwide accept up to 5 per year.
3) Masters in Public Health, metrics and evaluation track.
4) PhD in global health – focus on metrics and evaluation and implementation science.
5) Certificate in metrics and evaluation – distance learning component.

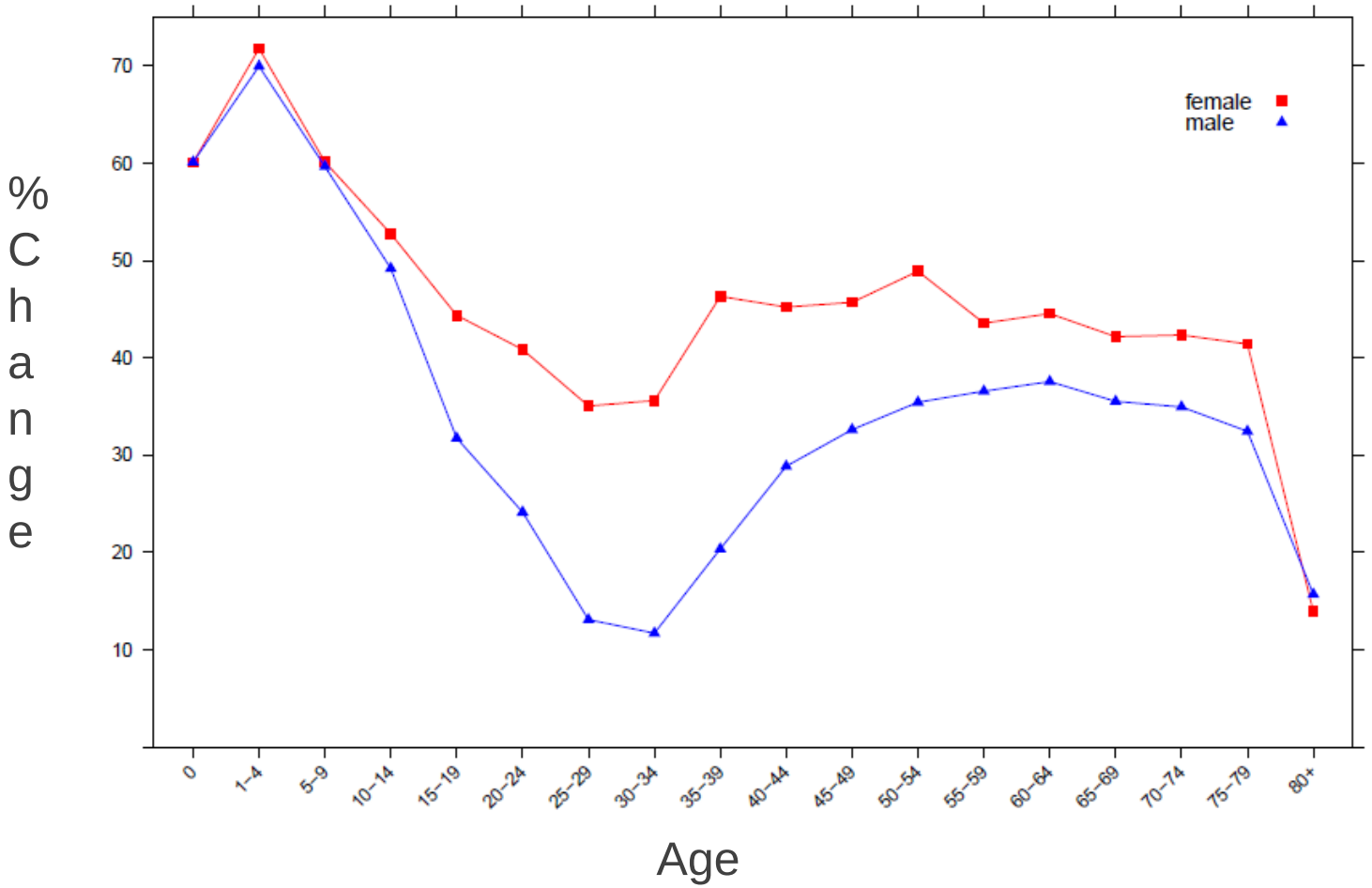
What is the GBD?

A *systematic scientific* effort to quantify the *comparative* magnitude of *health loss* due to diseases, injuries and risk factors by age, sex, and geographies for specific points in time.

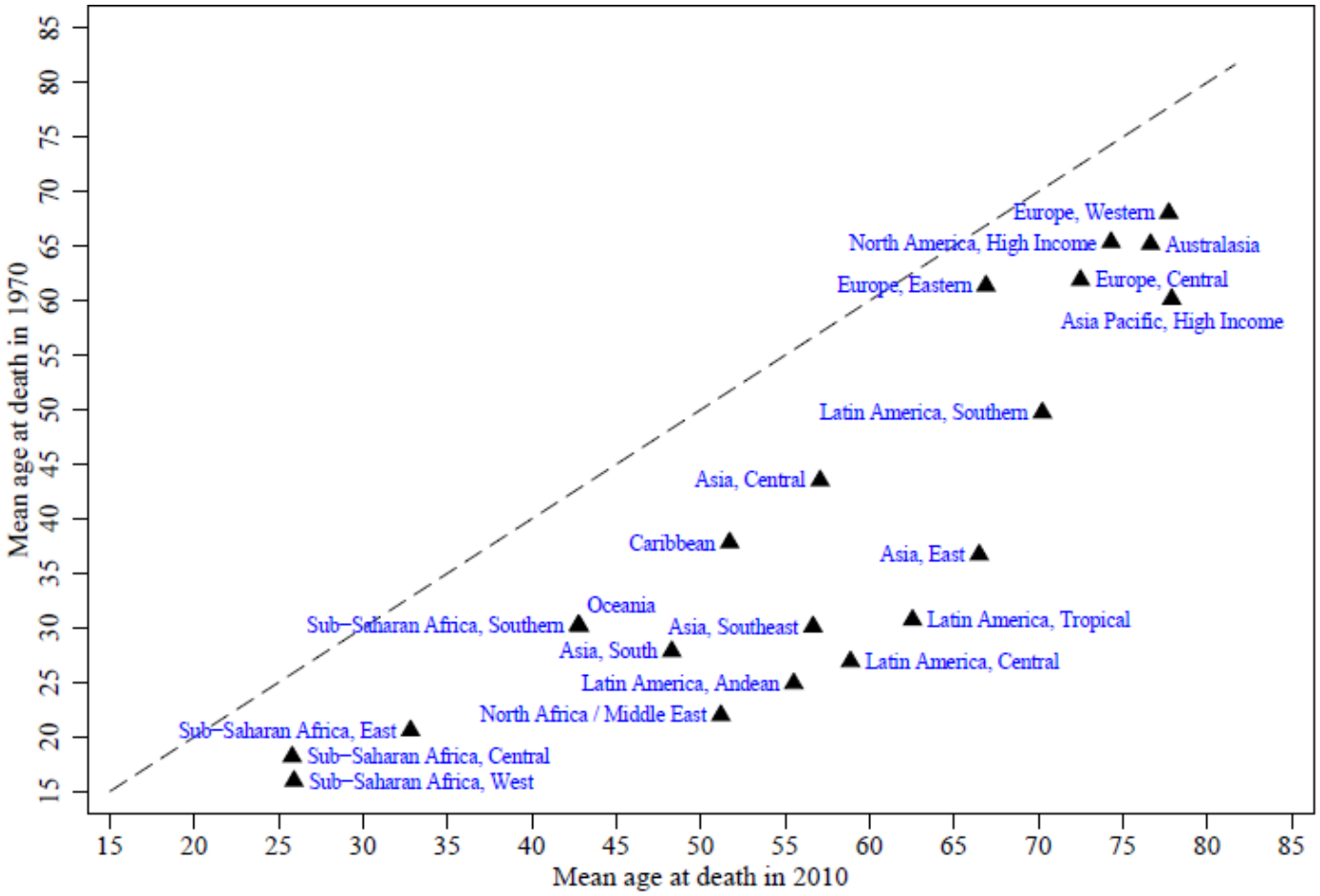
Global Burden of Disease 2010

1. Continuation of work initiated by the World Bank and World Health Organization in 1991.
2. Collaboration of UW, WHO, Johns Hopkins, Harvard, Imperial College, University of Tokyo, University of Queensland. 800+ academics around the world involved. IHME is the coordinating center.
3. 2010 Revision systematically assesses all the available evidence on mortality and morbidity from 291 causes and 55 risk factors. 1,163 disease sequelae.
4. Results for 187 countries, three years 1990, 2005 and 2010.
5. GBD 2010 provides uncertainty intervals for all quantities of interest.

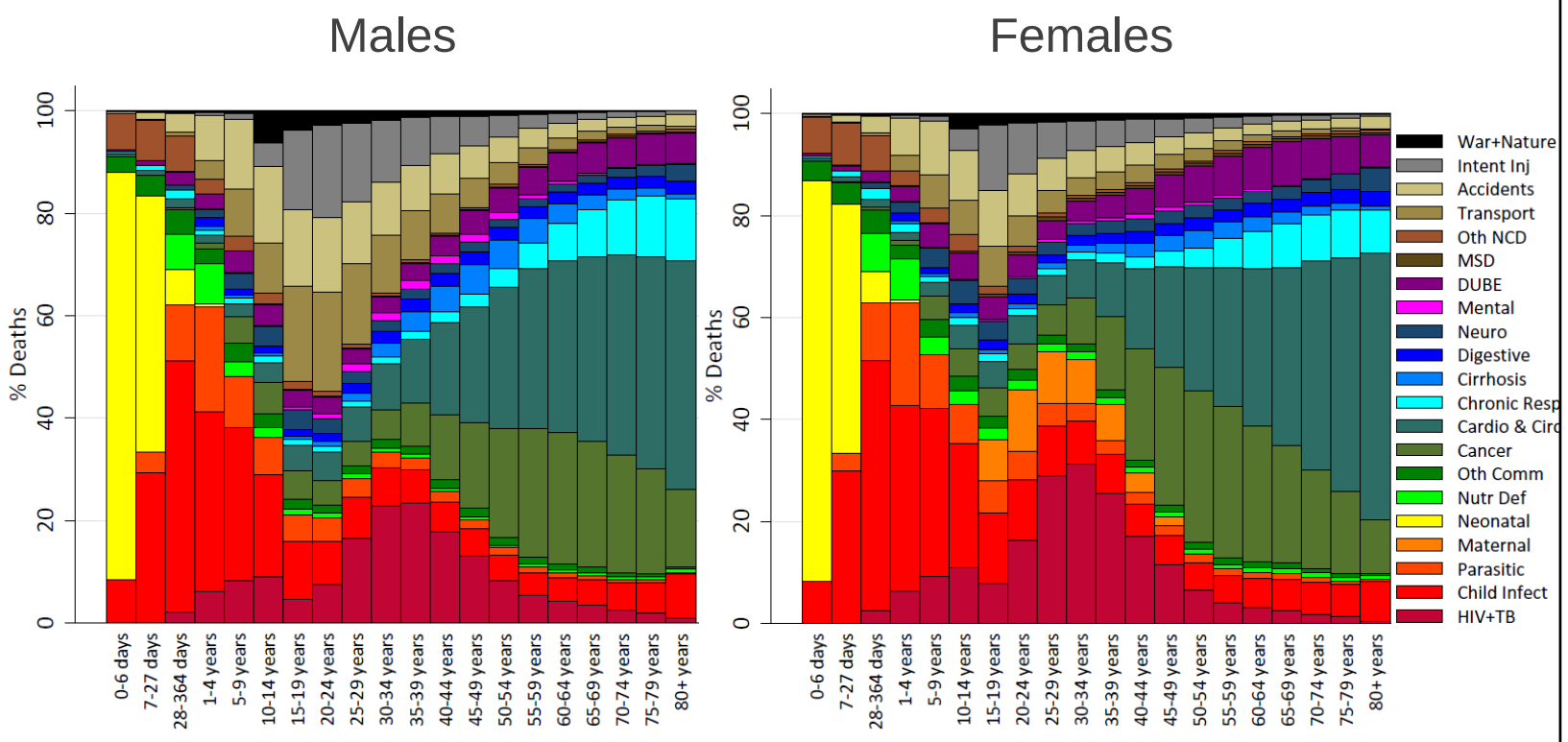
Percent Change Age-Specific Mortality 1970 to 2010



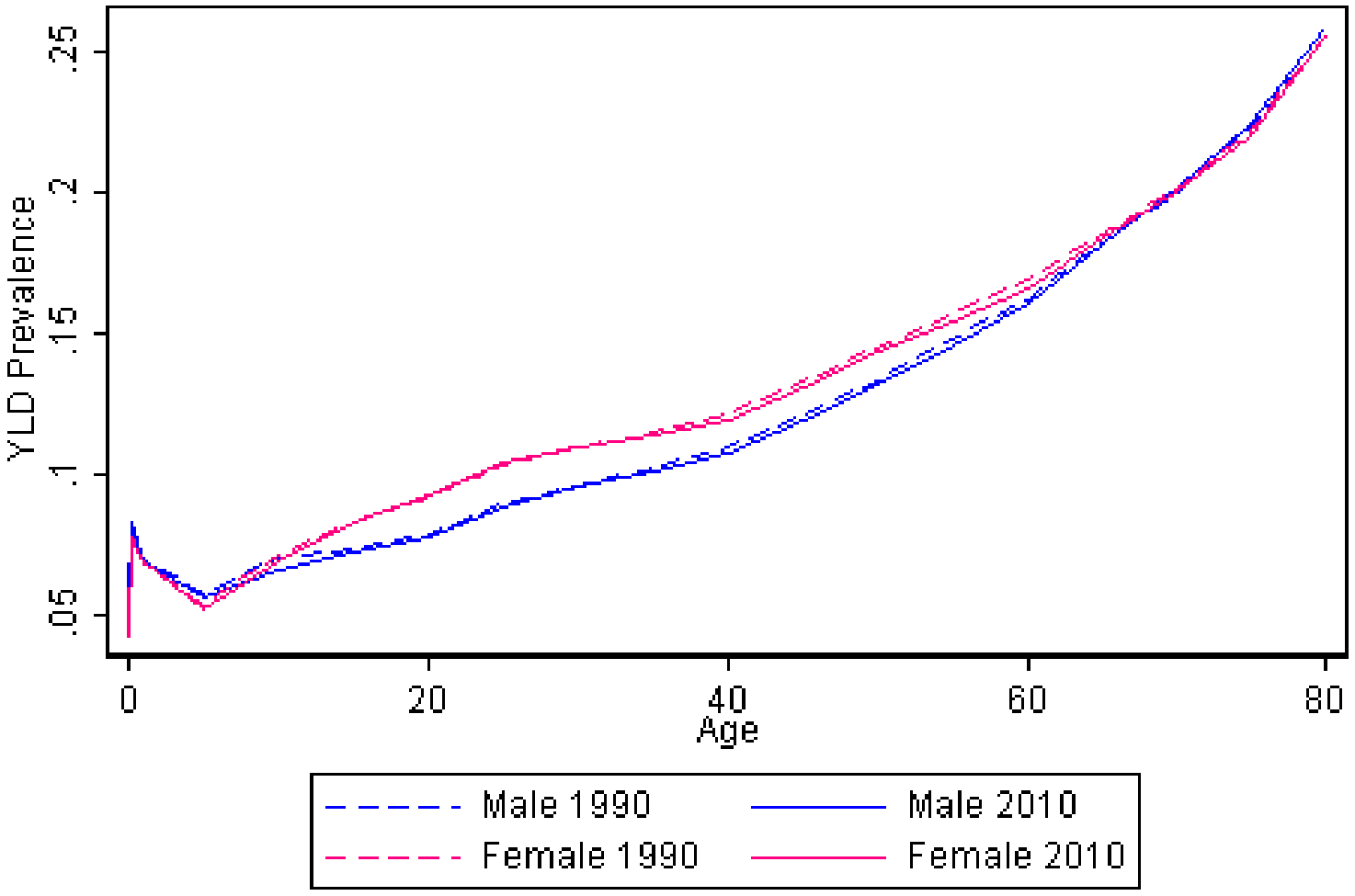
Shift in the Mean Age of Death 1970 to 2010:Profound Effect on BoD



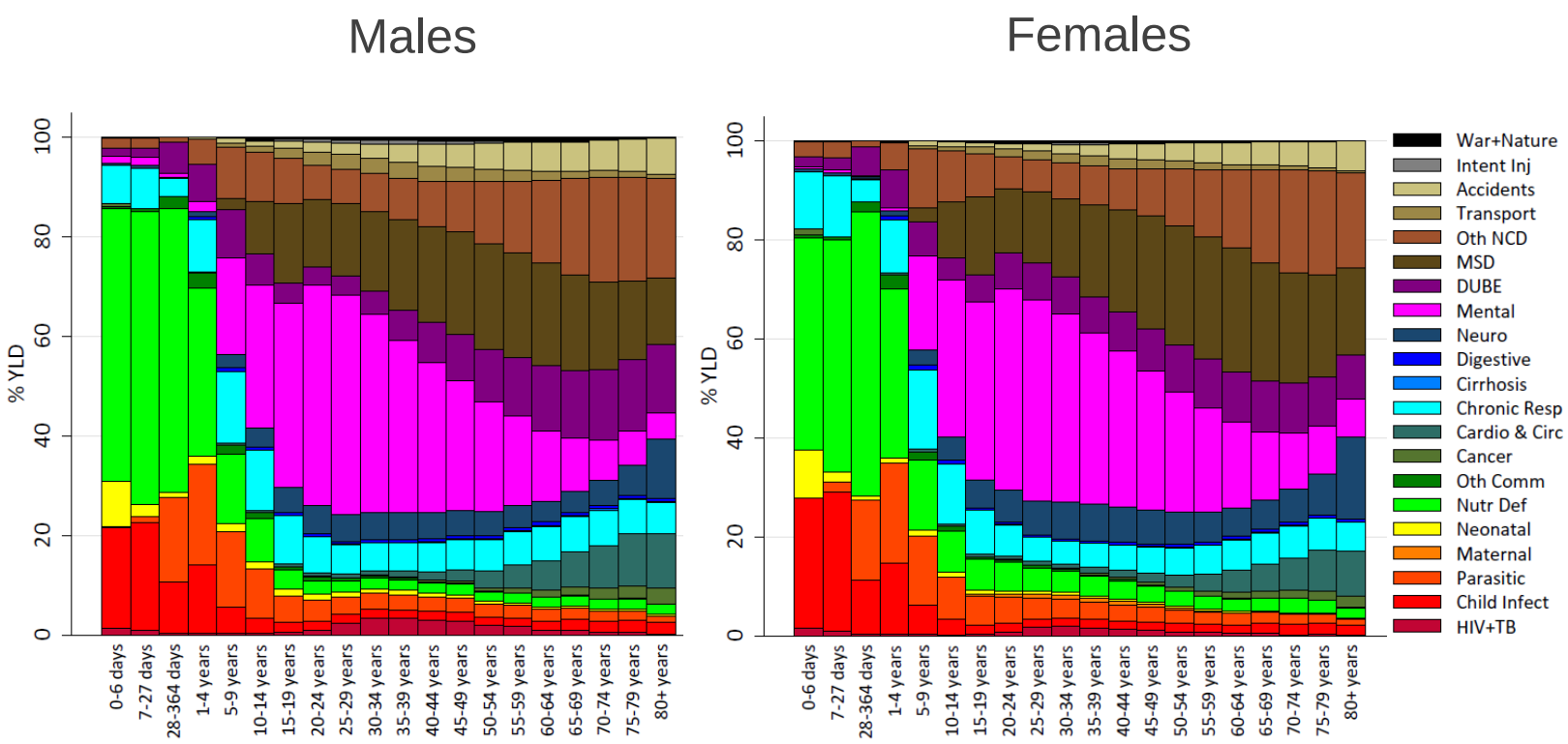
Composition of Causes of Death by Age, 2010



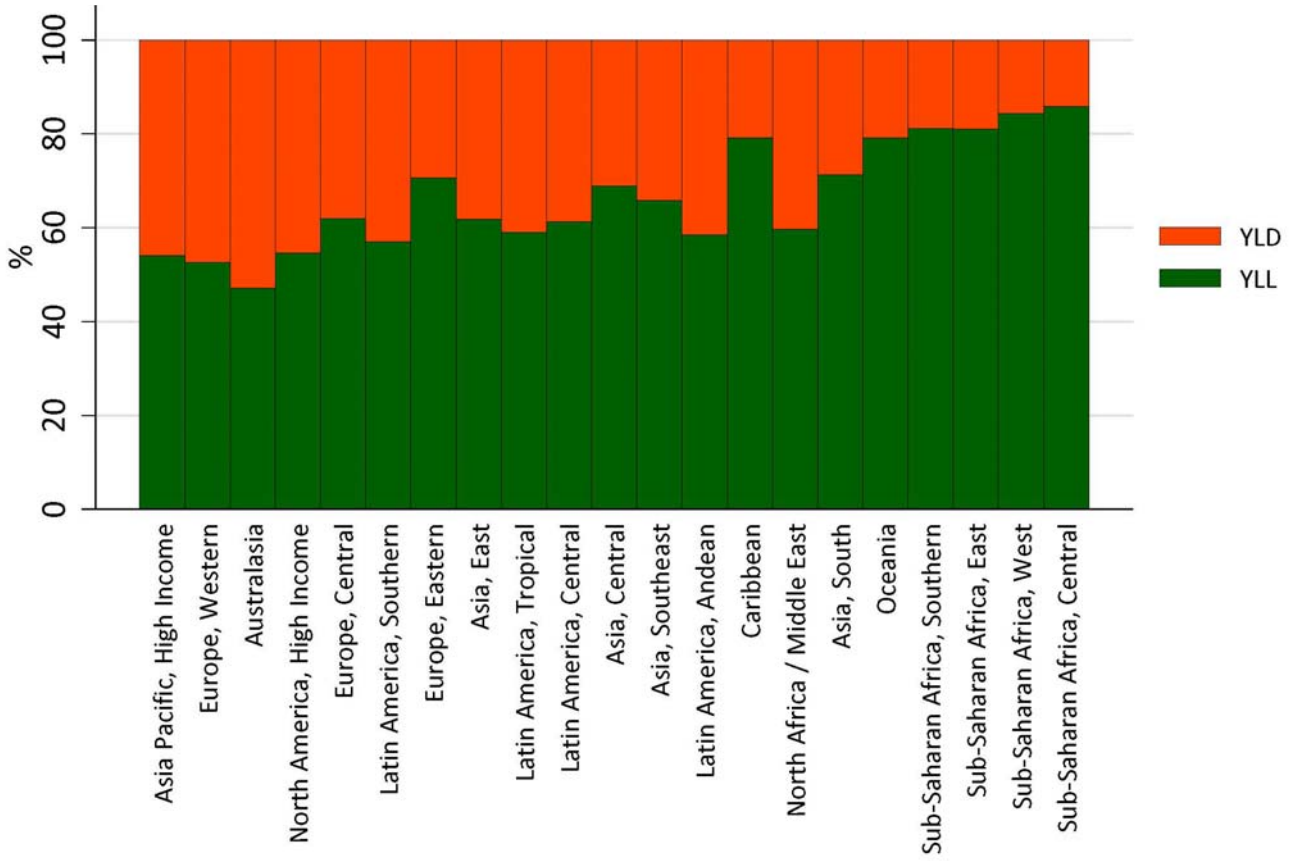
Global YLDs Per Capita by Age



YLDs by Cause and Age, 2010



YLL and YLD Composition of Total DALYs by Region, 2010



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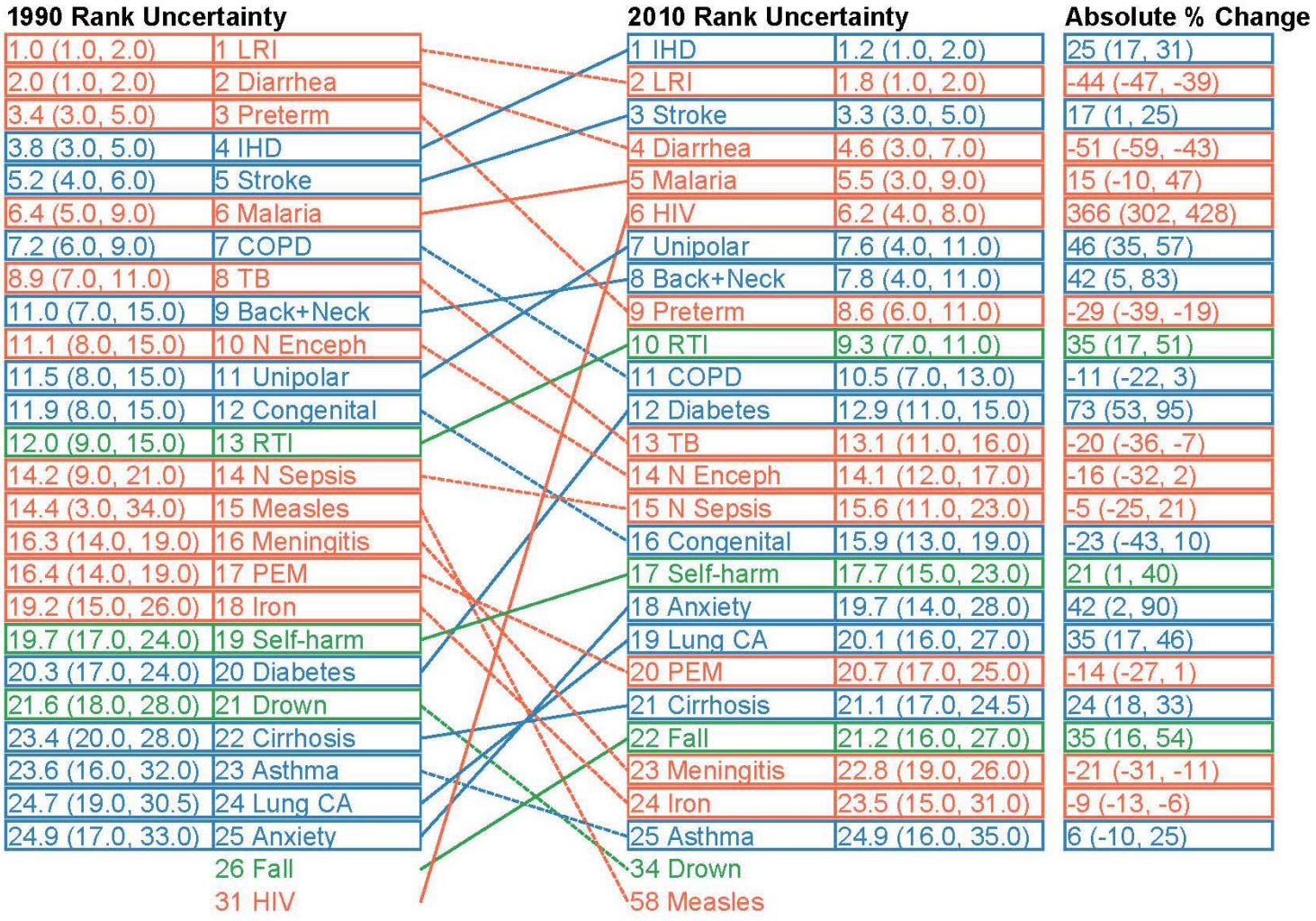
Global DALY Ranks for Top 25 Causes, 1990 to 2010



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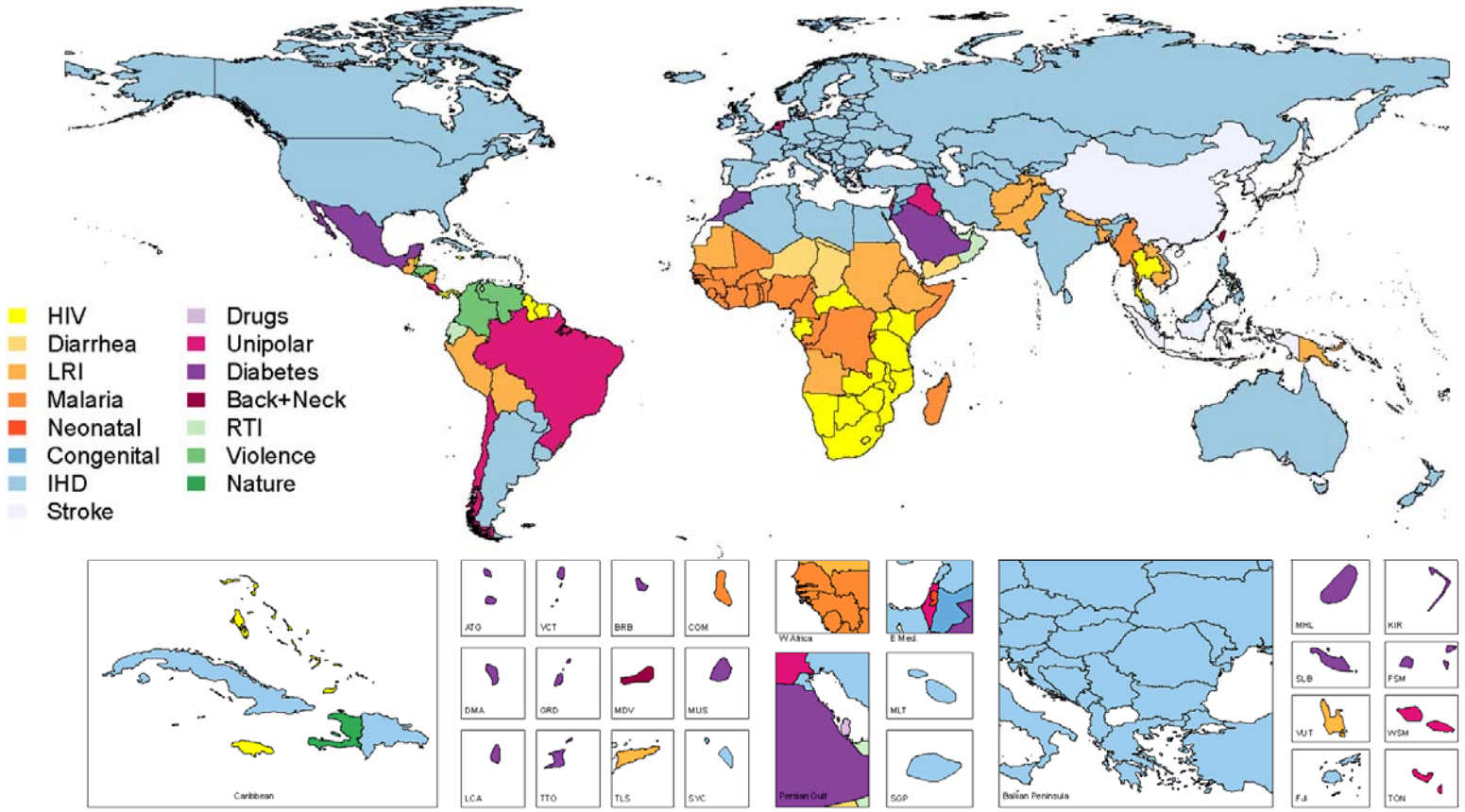
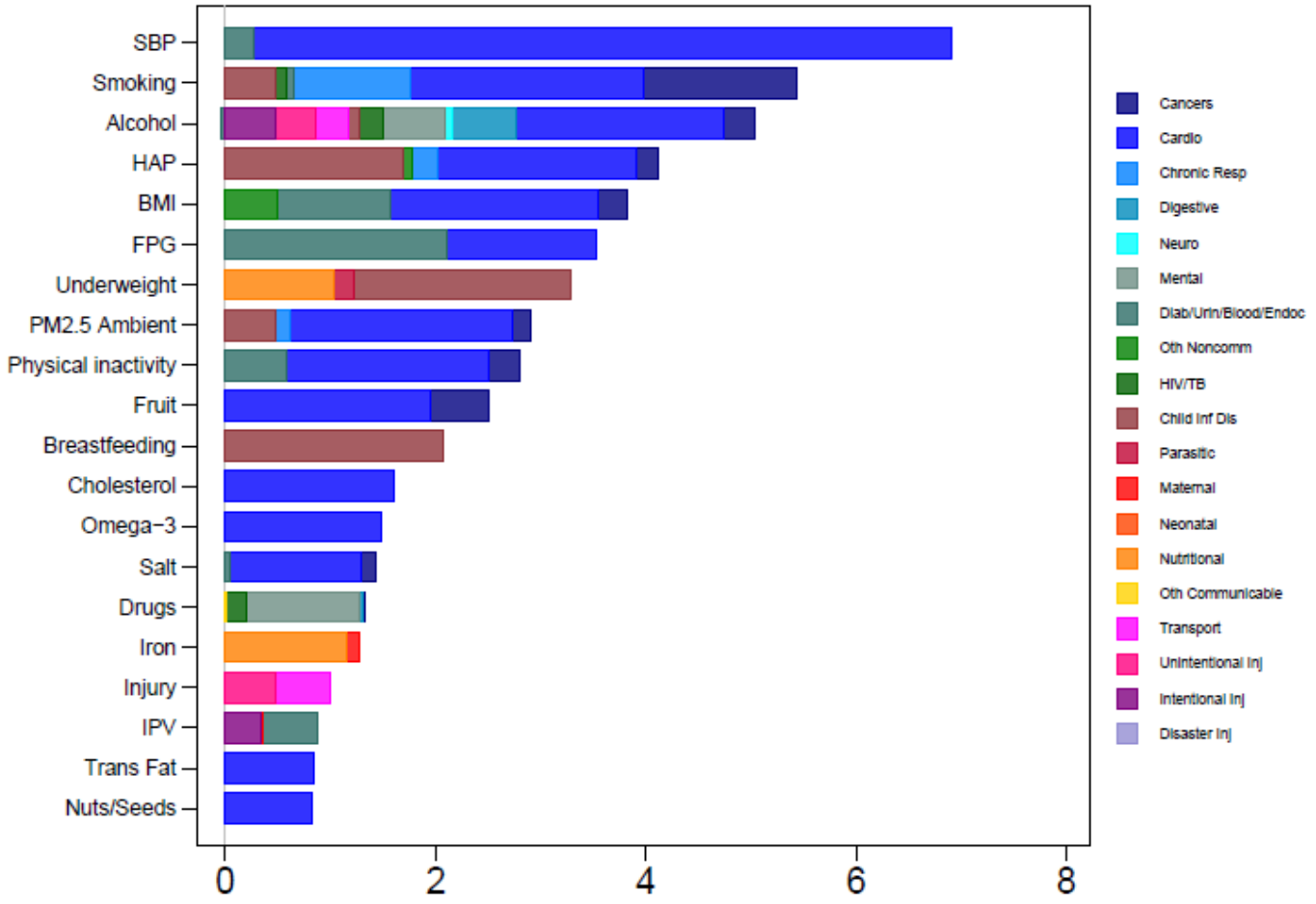
Leading Cause of DALY, 2010, Both Sexes



Percent of Global DALYs, 2010



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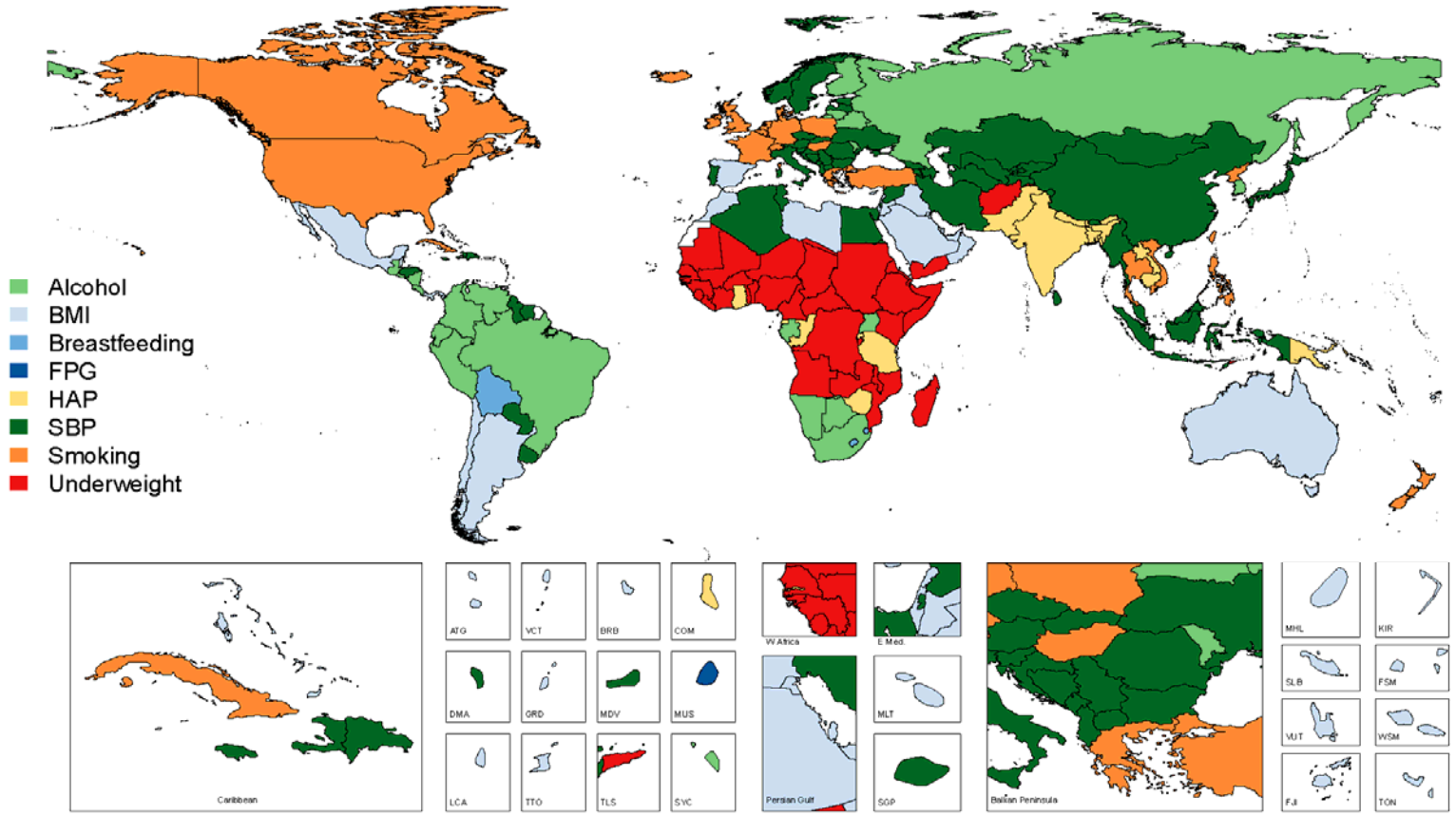
Leading Risk Factor DALYs, 2010, Both Sexes



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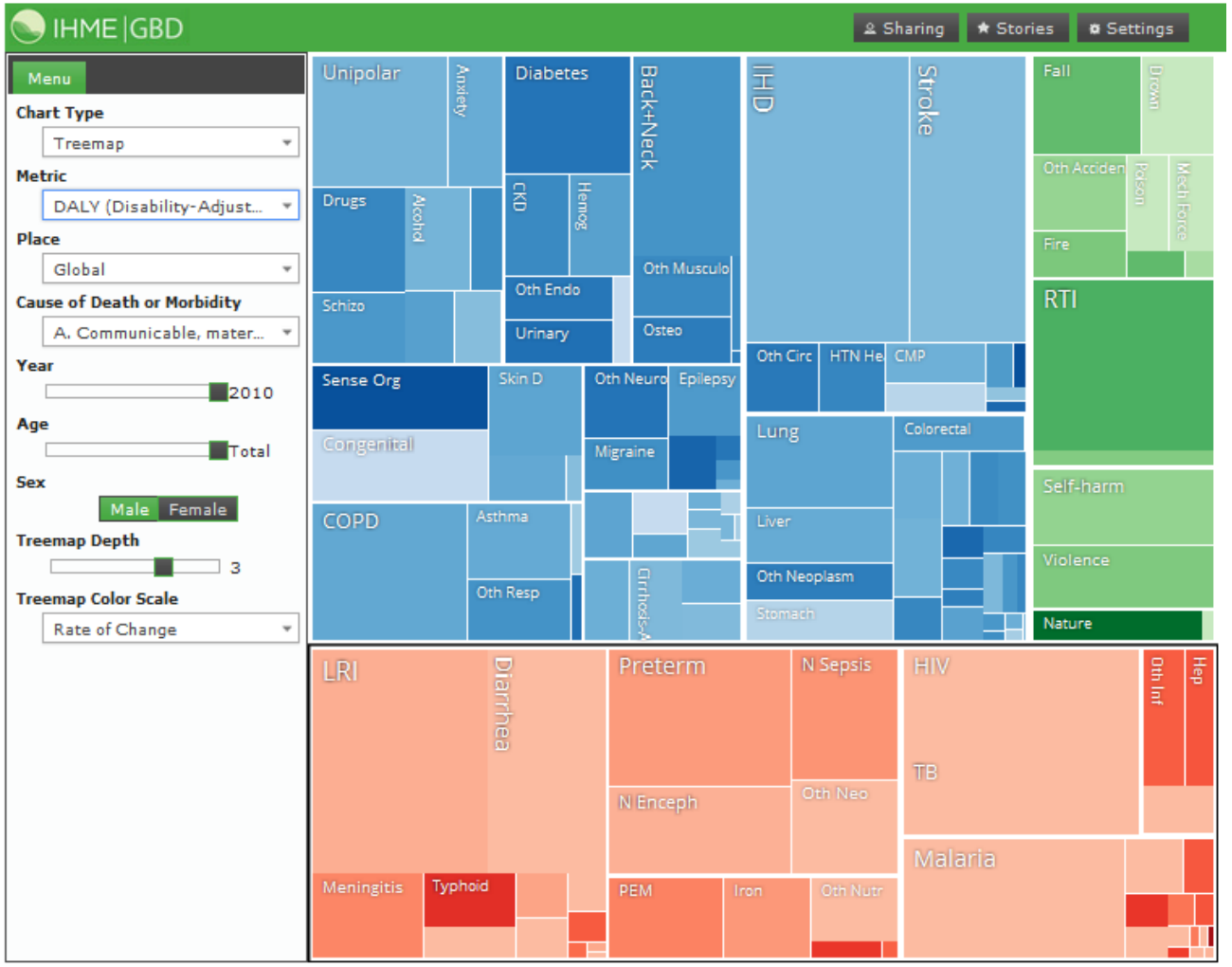
IHME | GBD
Sharing
Stories
Settings
Menu
Chart Type
Treemap
Metric
DALY (Disability-Adjust...
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Global
Cause of Death or Morbidity
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Fall
Drown
Drugs
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Lung
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Violence
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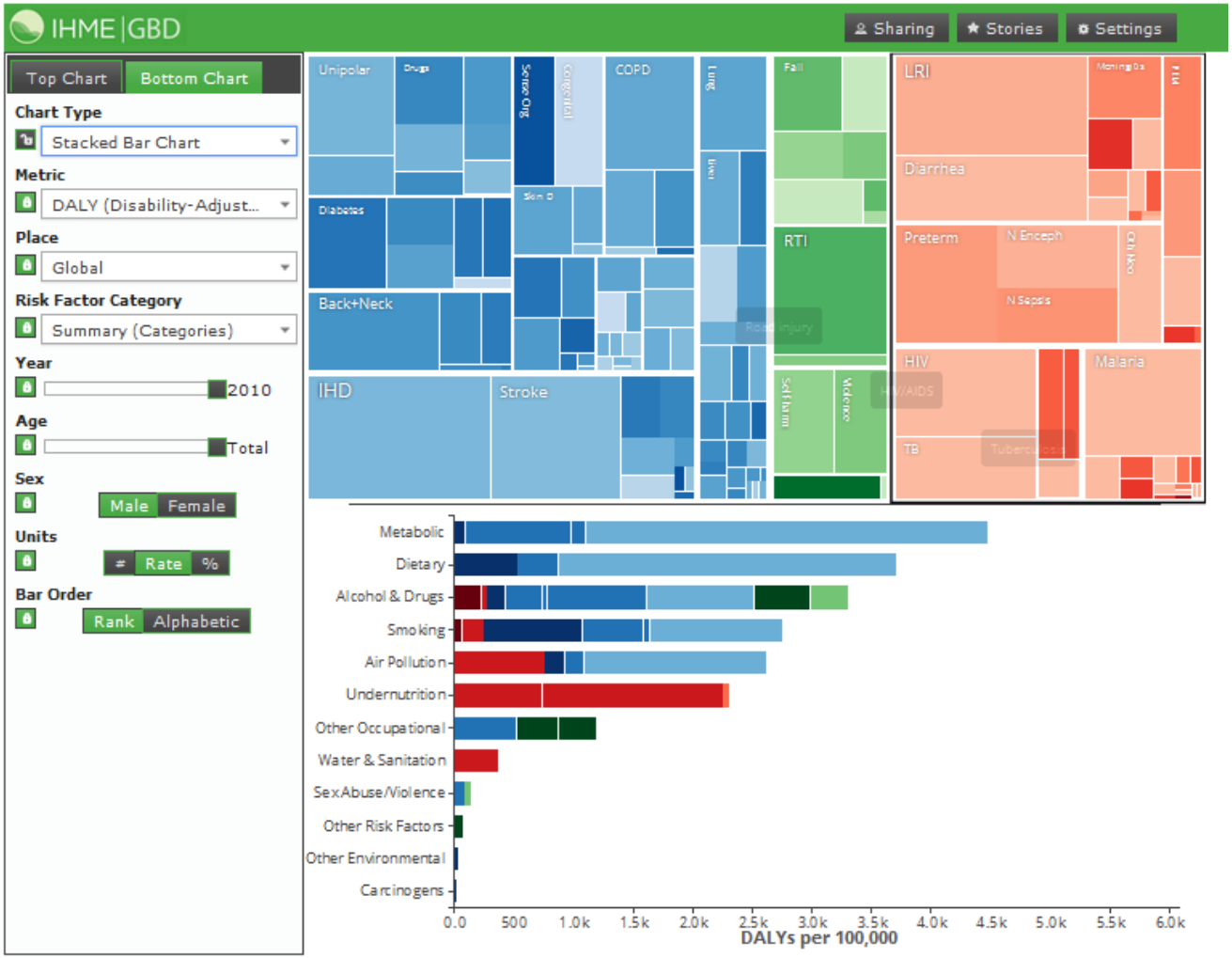
IHME | GBD
Sharing
Stories
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Top Chart
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DALY (Disability-Adjust...
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Risk Factor Category
Summary (Categories)
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Congenital
COPD
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Diabetes
Skin D
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Back+Neck
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Stroke
Self-harm
Violence
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Malaria
TB
Tuberculosis
Metabolic
Dietary
Alcohol & Drugs
Smoking
Air Pollution
Undernutrition
Other Occupational
Water & Sanitation
Sex Abuse/Violence
Other Risk Factors
Other Environmental
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2.5k
3.0k
3.5k
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5.0k
5.5k
6.0k
DALYs per 100,000

Some Future Plans

1) Sustain the GBD as a continuously updated global resource.
2) Work with multiple countries to develop sub-national assessments of the burden of disease.
3) Use approach to metrics on a broader set of related sectors that are critical determinants of health – poverty, environment, education.
4) Expand role of the institute in global education and training related to metrics and evaluation.
5) Link analysis of burden to policy options and choices – visual tools and analytics.