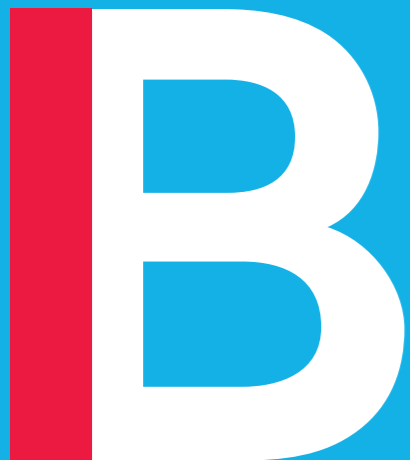


# The Economic Impact of Disease in G20 Countries

Franco Sassi PhD

*Professor of International Health Policy and Economics, Imperial College Business School*



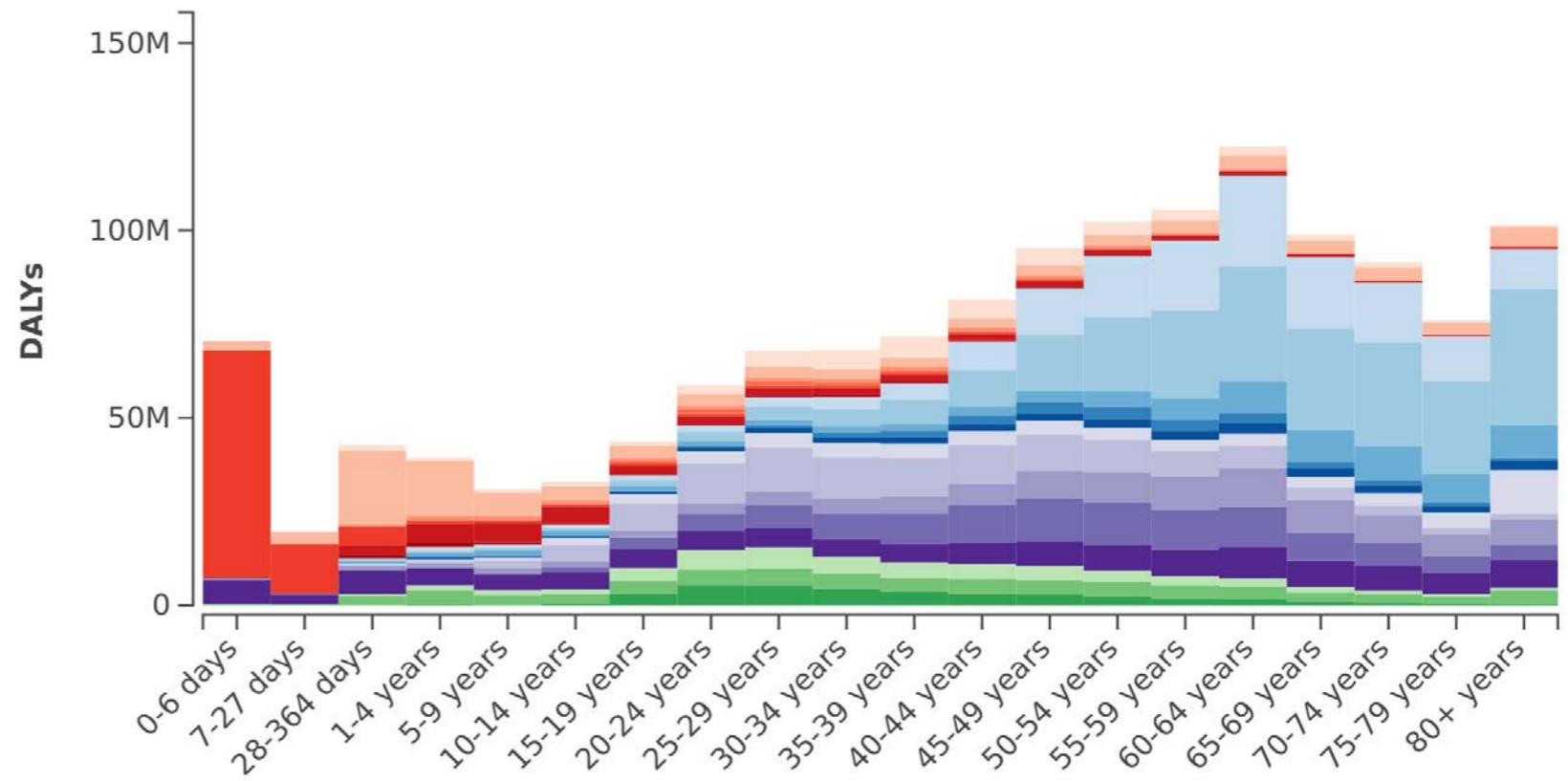


# Disease Burden from CDs and NCDs in G20 Countries

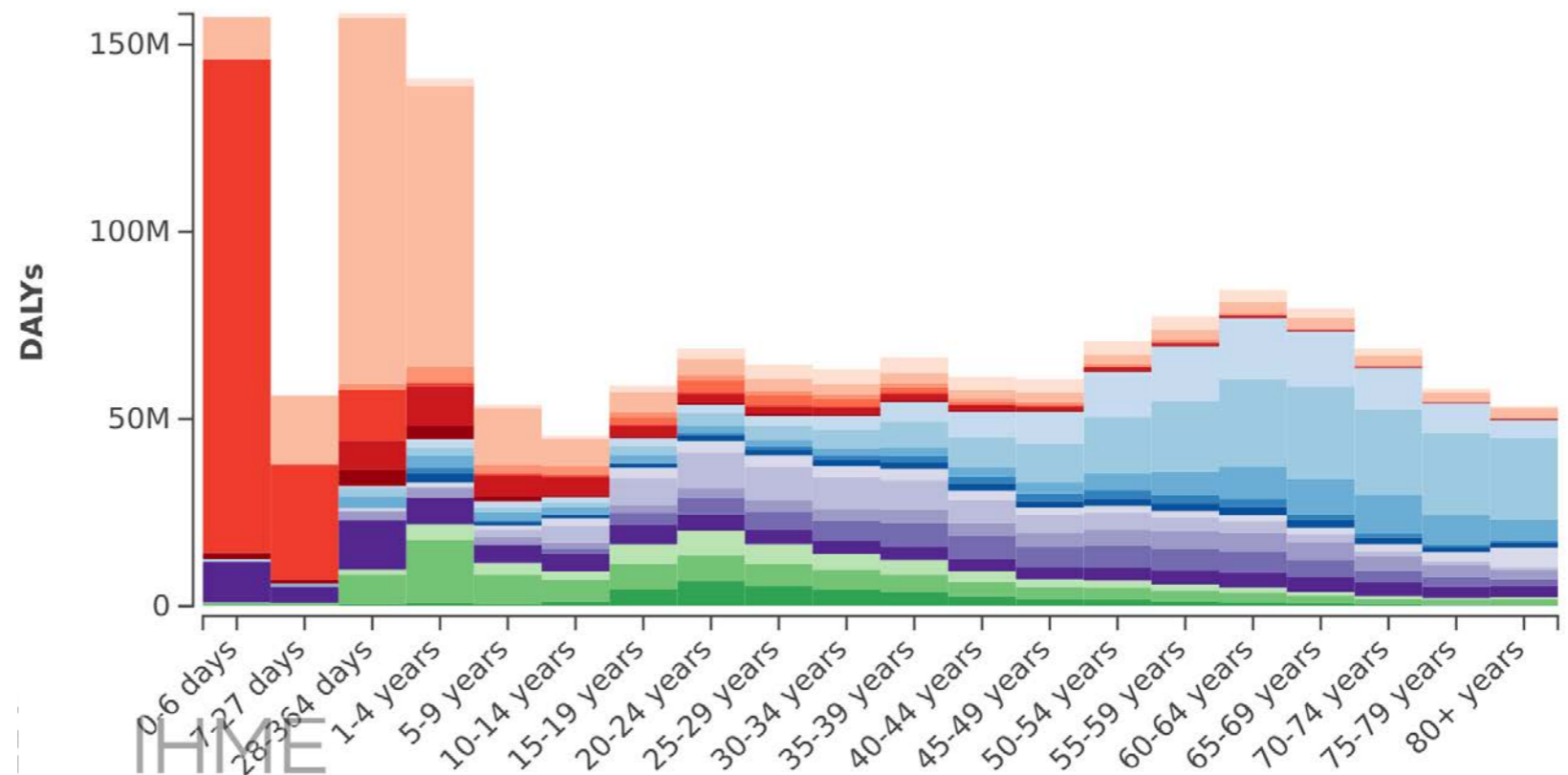
- HIV/AIDS & tuberculosis
- Diarrhea/LRI/other
- NTDs & malaria
- Maternal disorders
- Neonatal disorders
- Nutritional deficiencies
- Other group I
- Neoplasms
- Cardiovascular diseases
- Chronic respiratory
- Cirrhosis
- Digestive diseases
- Neurological disorders
- Mental & substance use
- Diabetes/urog/blood/endo
- Musculoskeletal disorders
- Other non-communicable
- Transport injuries
- Unintentional inj
- Self-harm & violence
- War & disaster

Source: IHME data

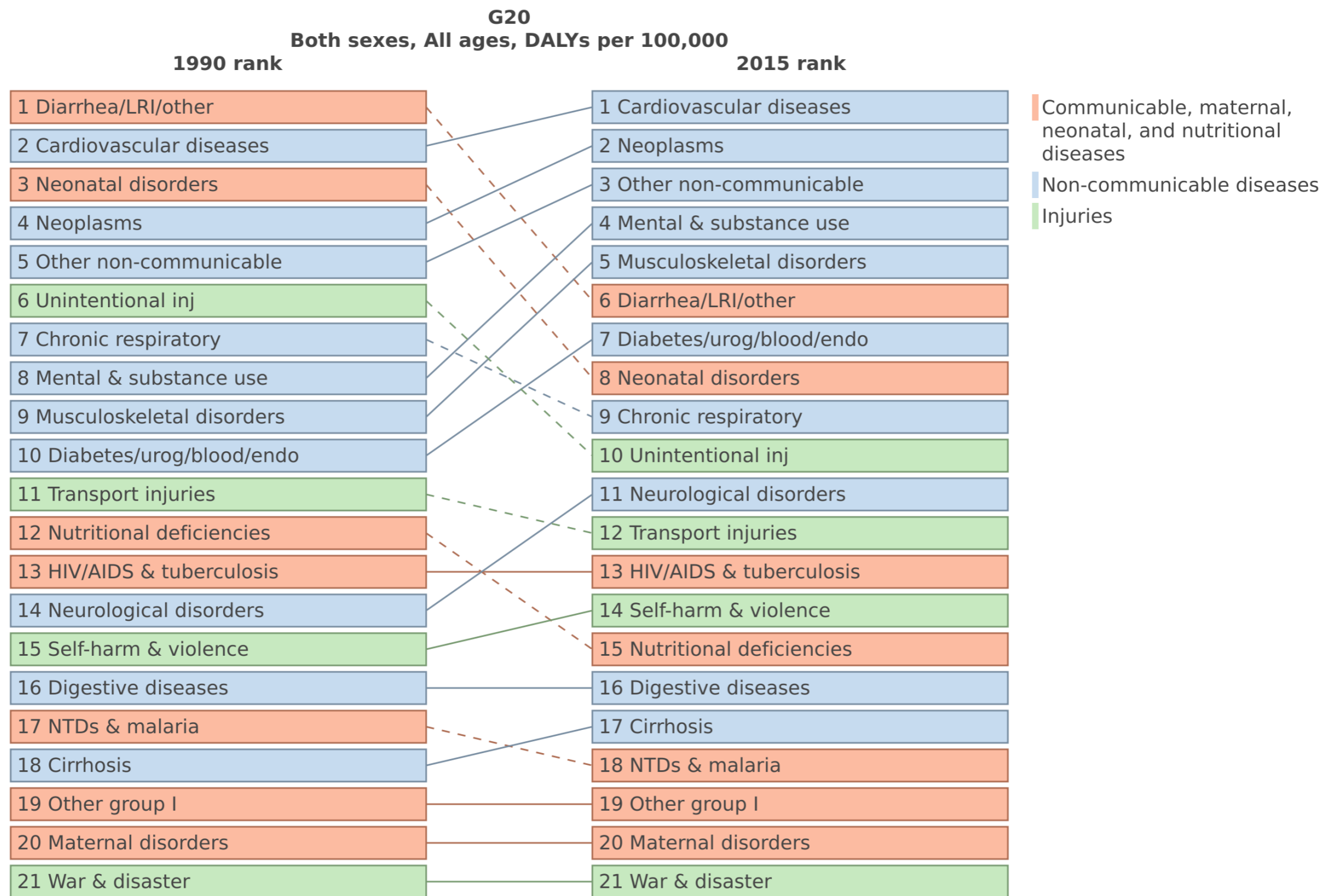
G20, Both sexes, 2015



G20, Both sexes, 1990



# Top Causes of Disease Burden in G20 Countries – 1990 and 2015

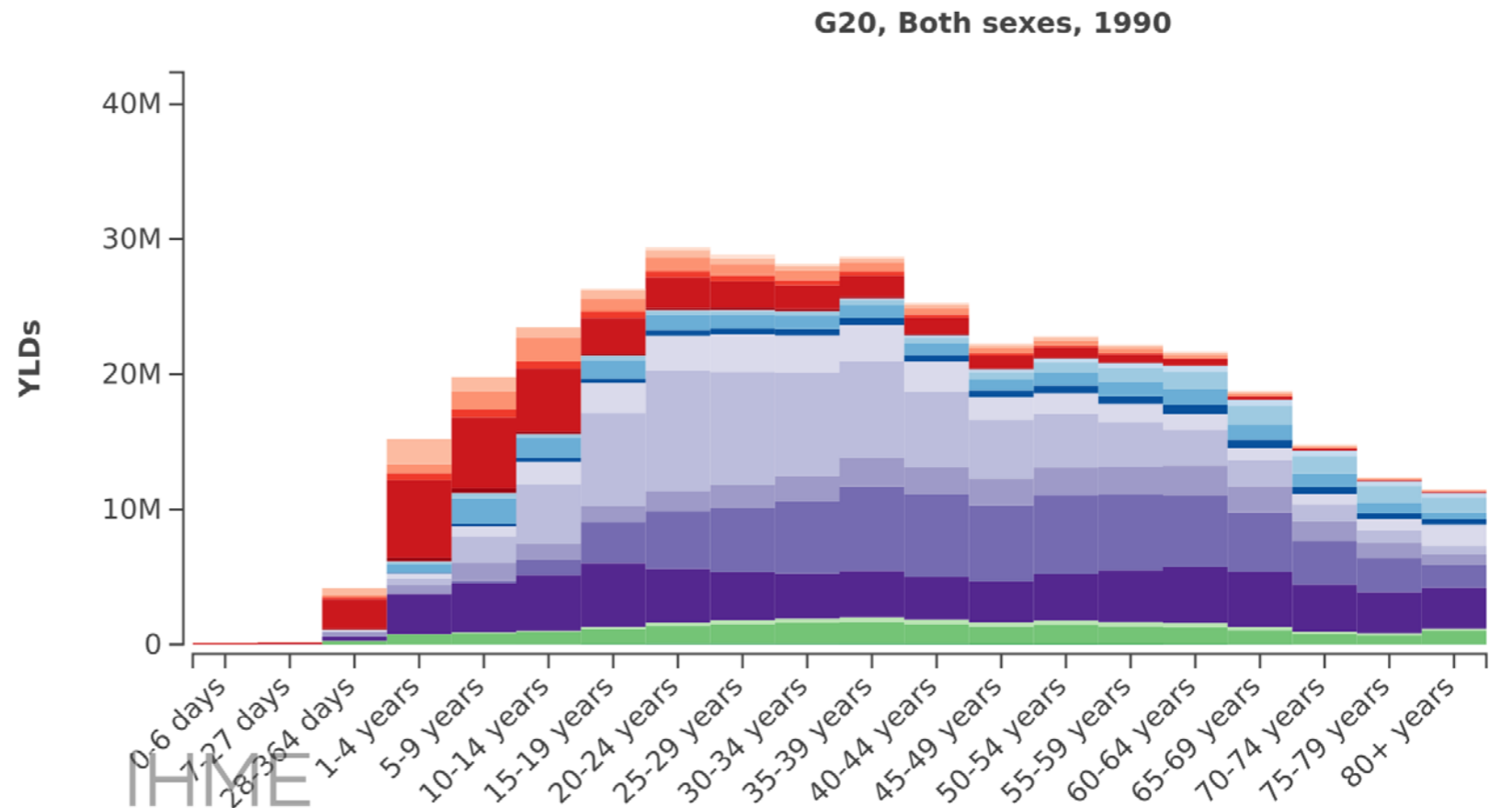
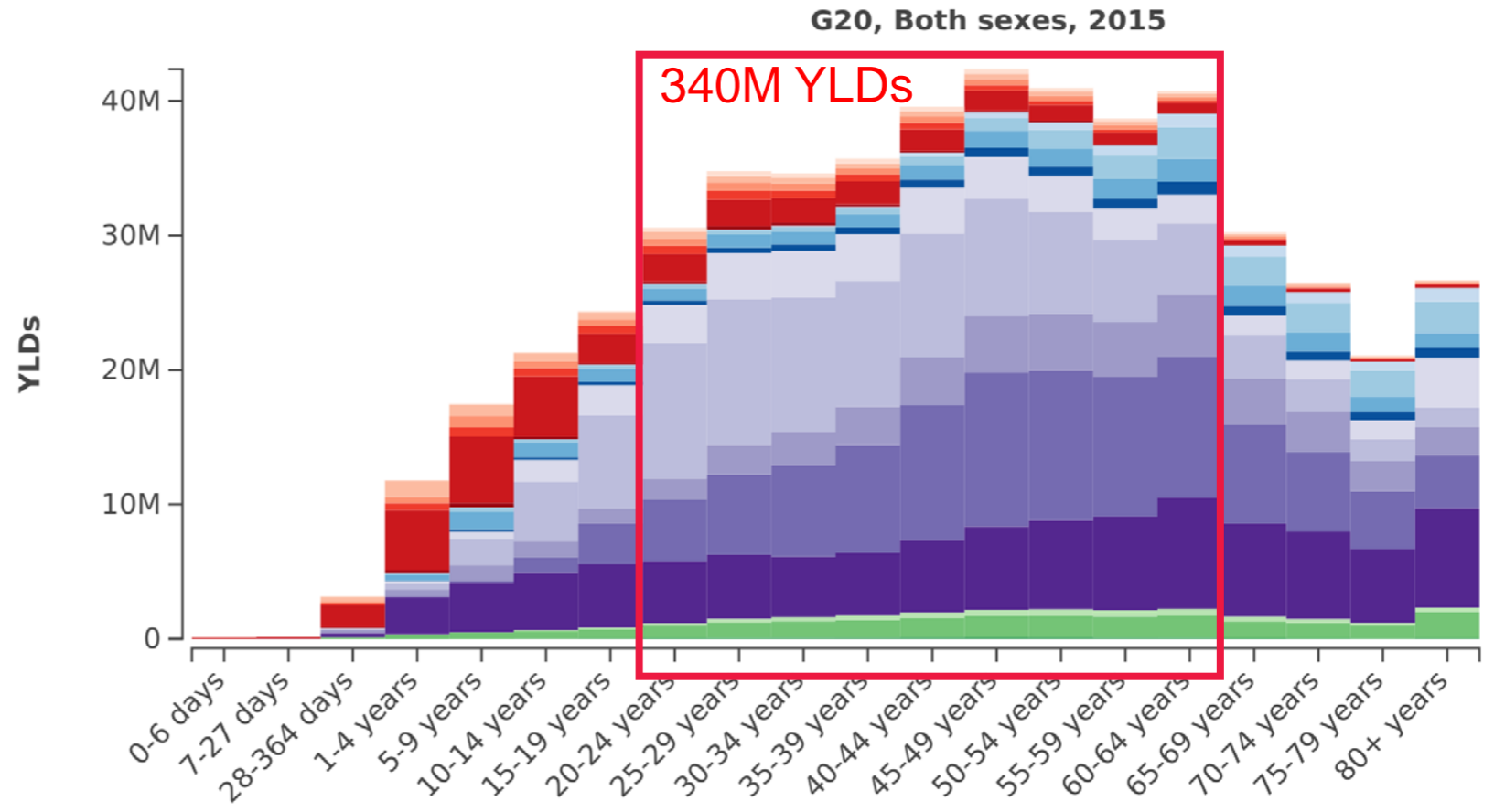


Source: IHME data

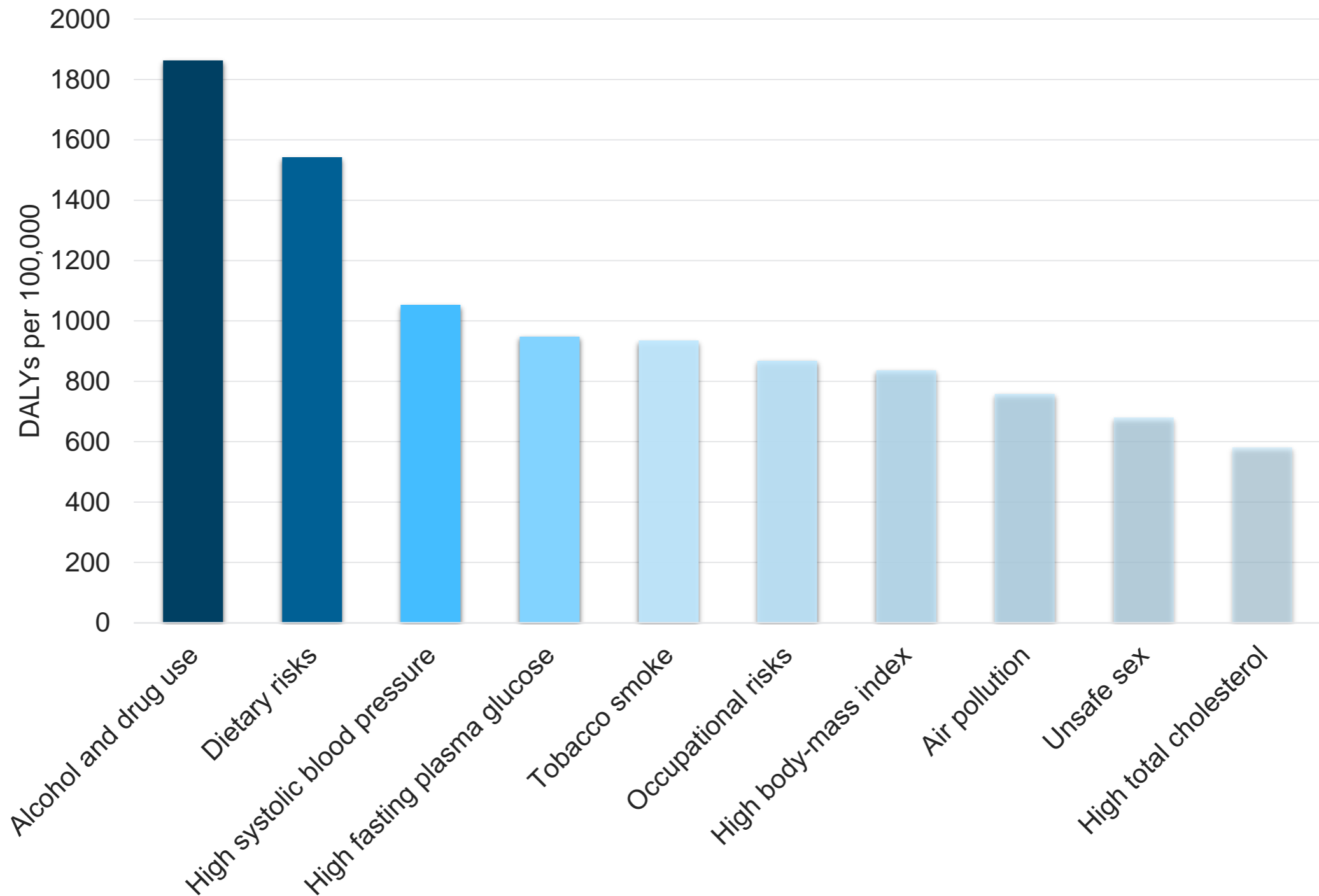
# Years Lived with Disability in G20 Countries

- HIV/AIDS & tuberculosis
- Diarrhea/LRI/other
- NTDs & malaria
- Maternal disorders
- Neonatal disorders
- Nutritional deficiencies
- Other group I
- Neoplasms
- Cardiovascular diseases
- Chronic respiratory
- Cirrhosis
- Digestive diseases
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- Mental & substance use
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- Musculoskeletal disorders
- Other non-communicable
- Transport injuries
- Unintentional inj
- Self-harm & violence
- War & disaster

Source: IHME data

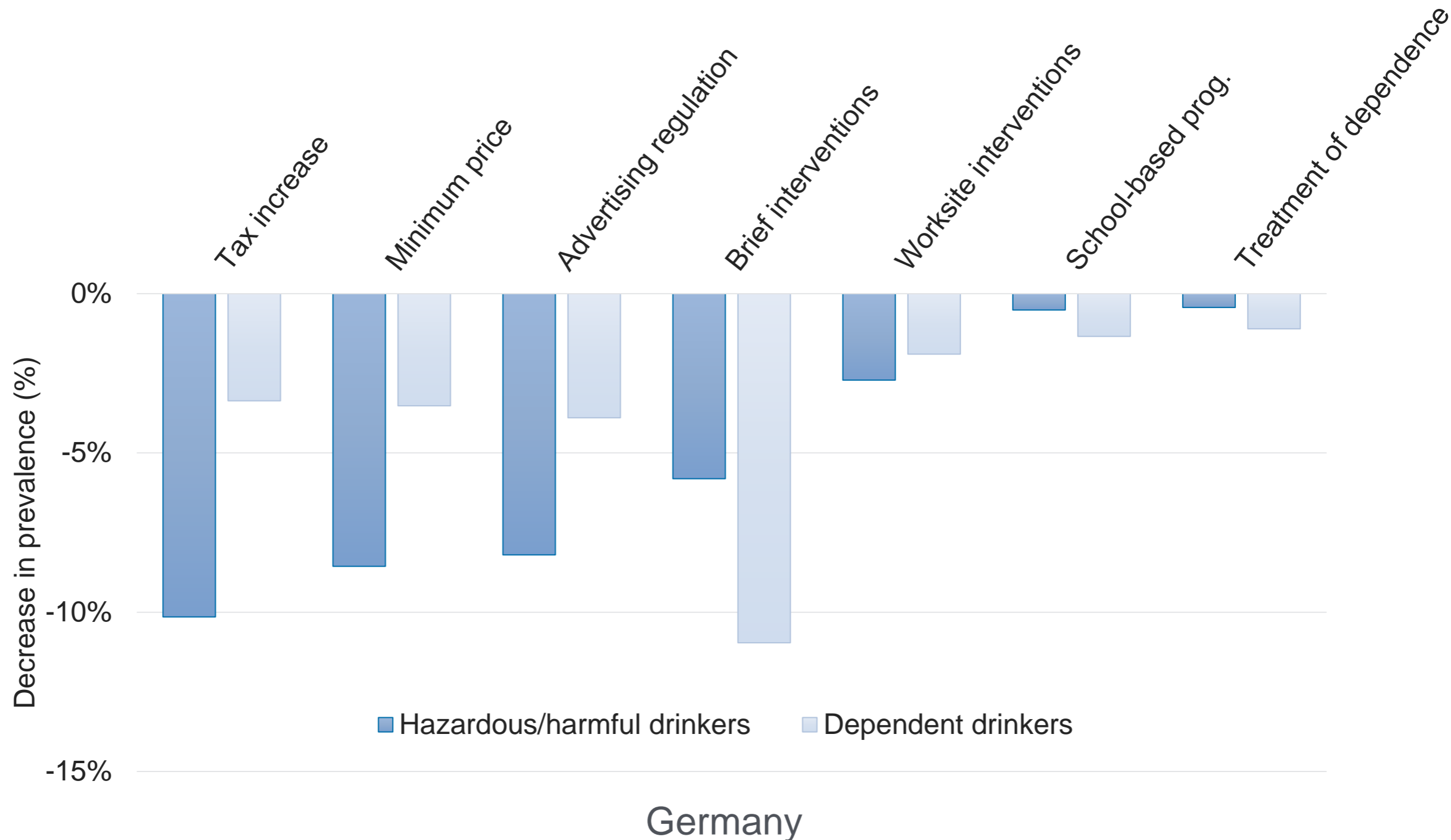


# Top Risks for Disease Burden in Young Adults, G20 Countries



Source: IHME data

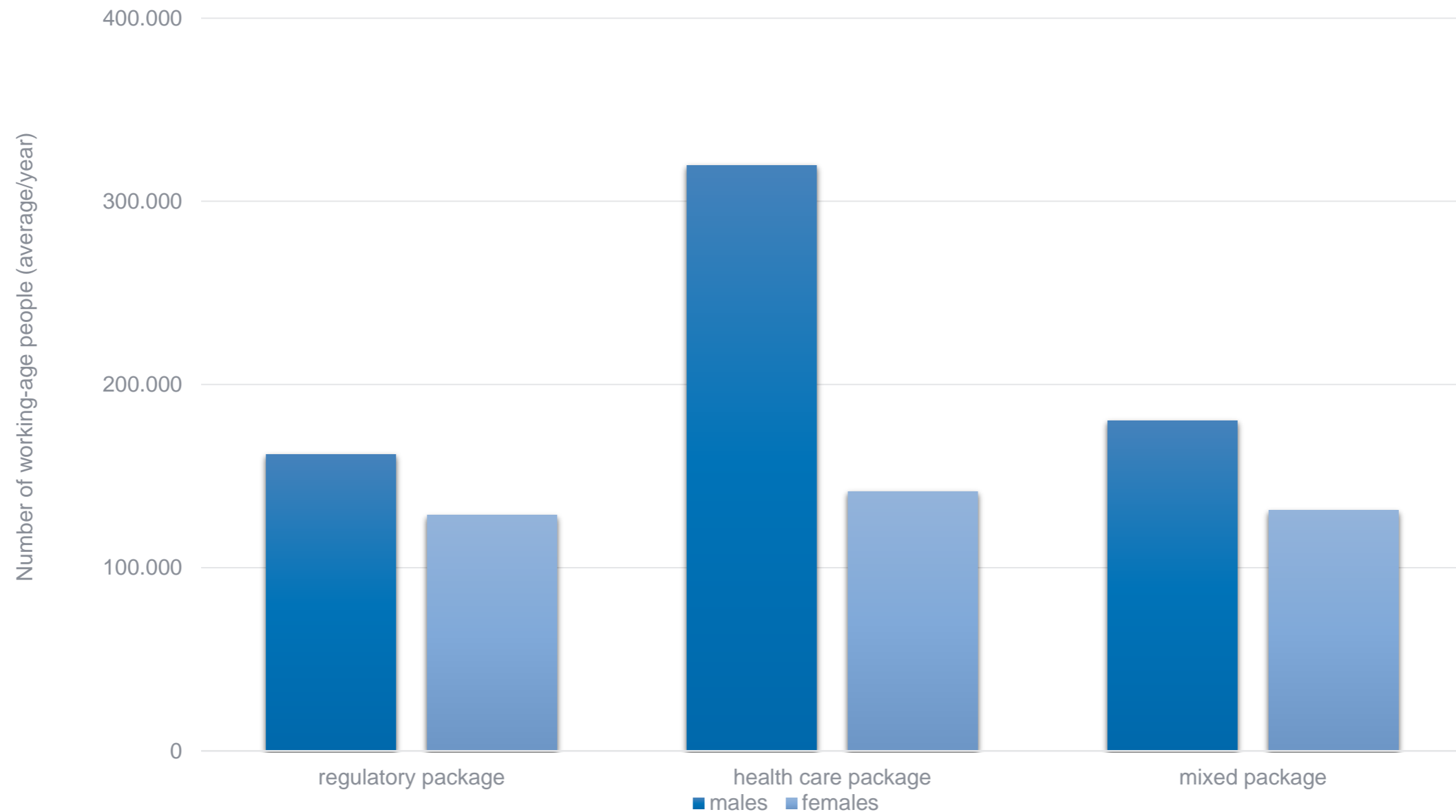
# Harmful Alcohol Use Can Be Reduced



Source: Sassi (Ed.), Tackling Harmful Alcohol Use, 2015

# A Healthier Workforce by Preventing Harmful Alcohol Use

Number of working-age people who will not develop alcohol-related diseases (Germany)

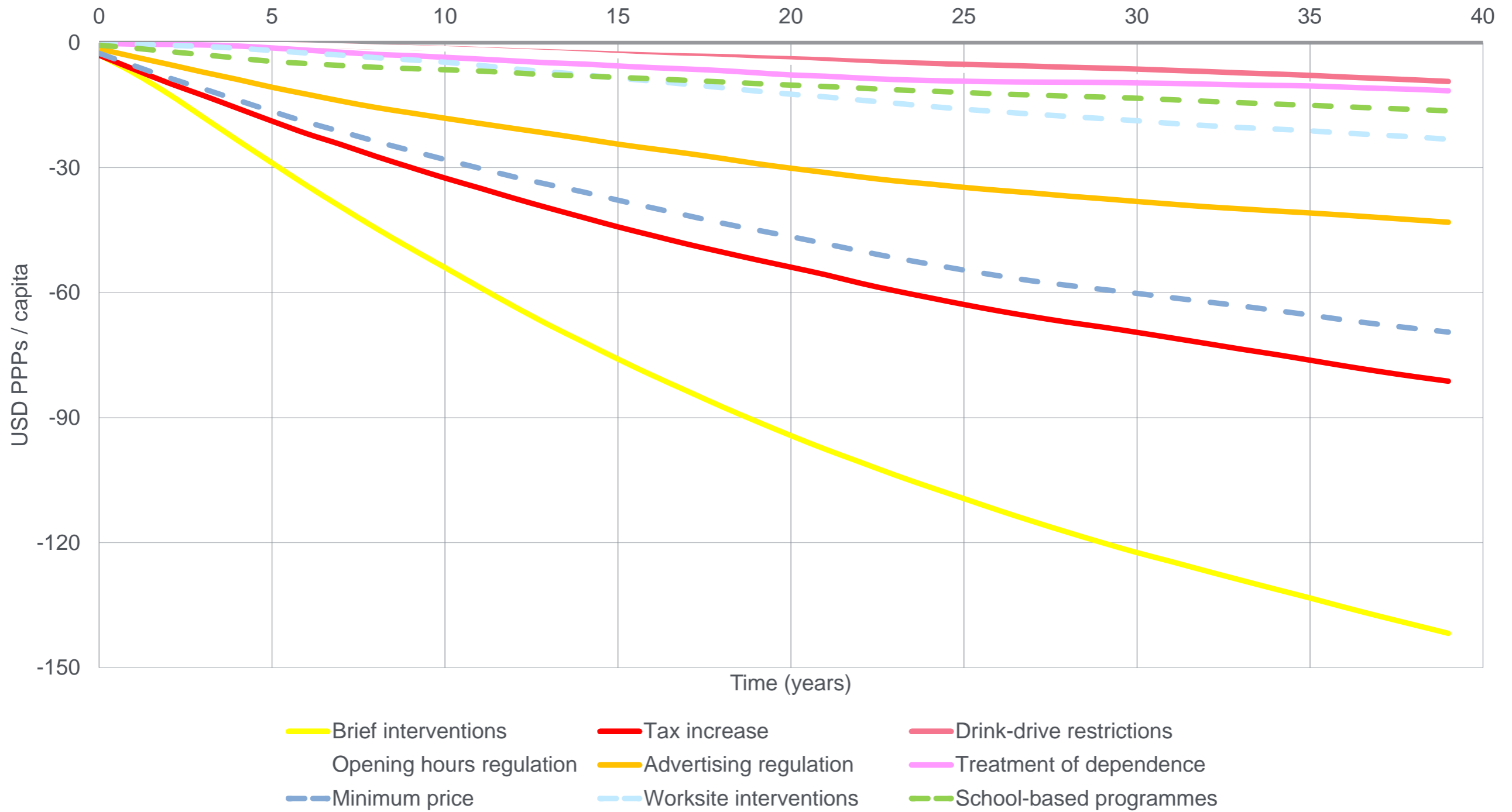


\* "Mixed package" includes both regulatory/fiscal policies and health policies

Source: OECD analysis.



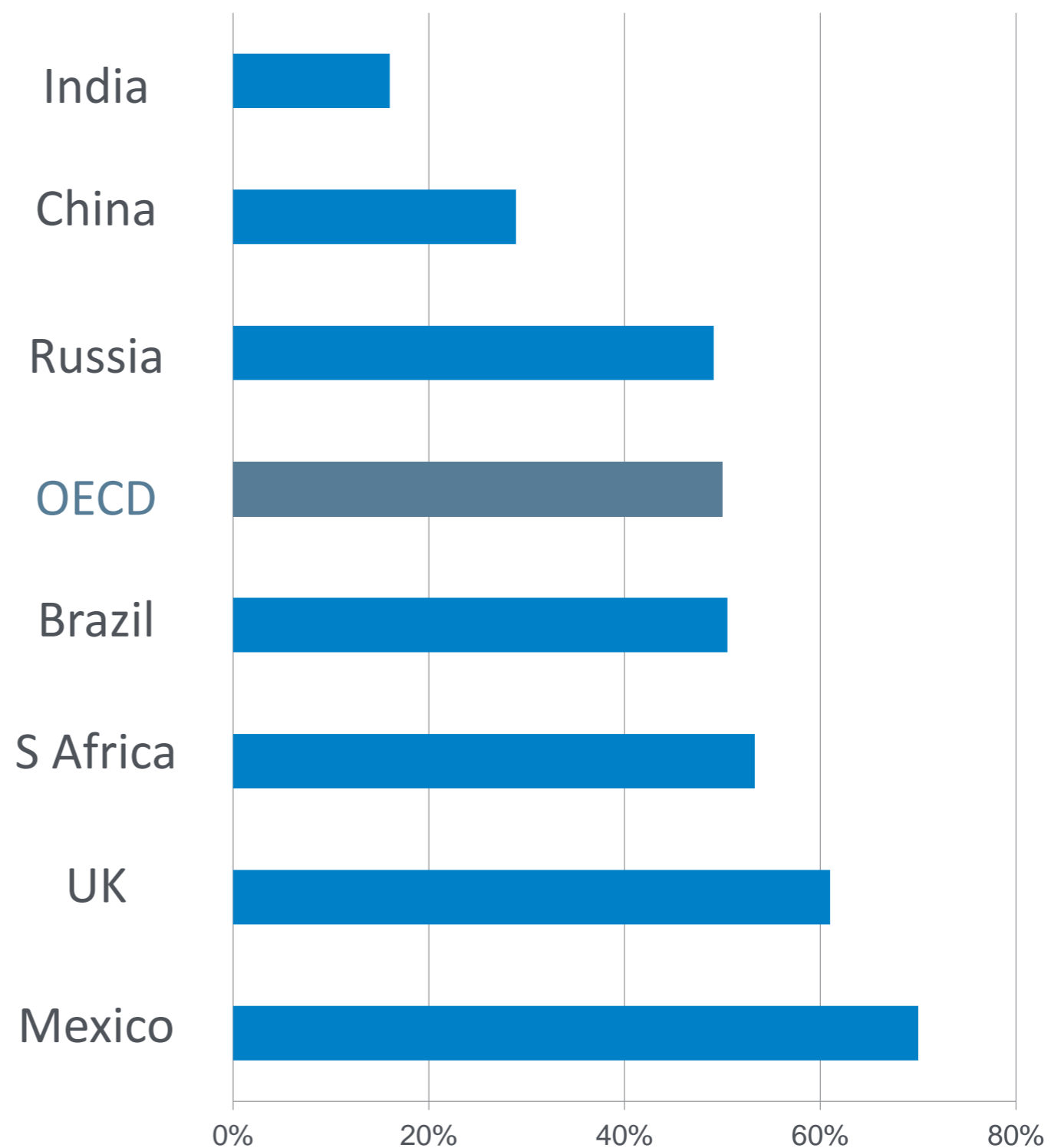
# Tackling Harmful Alcohol Use Reduces Health Expenditure



Source: Sassi (Ed.), Tackling Harmful Alcohol Use, 2015

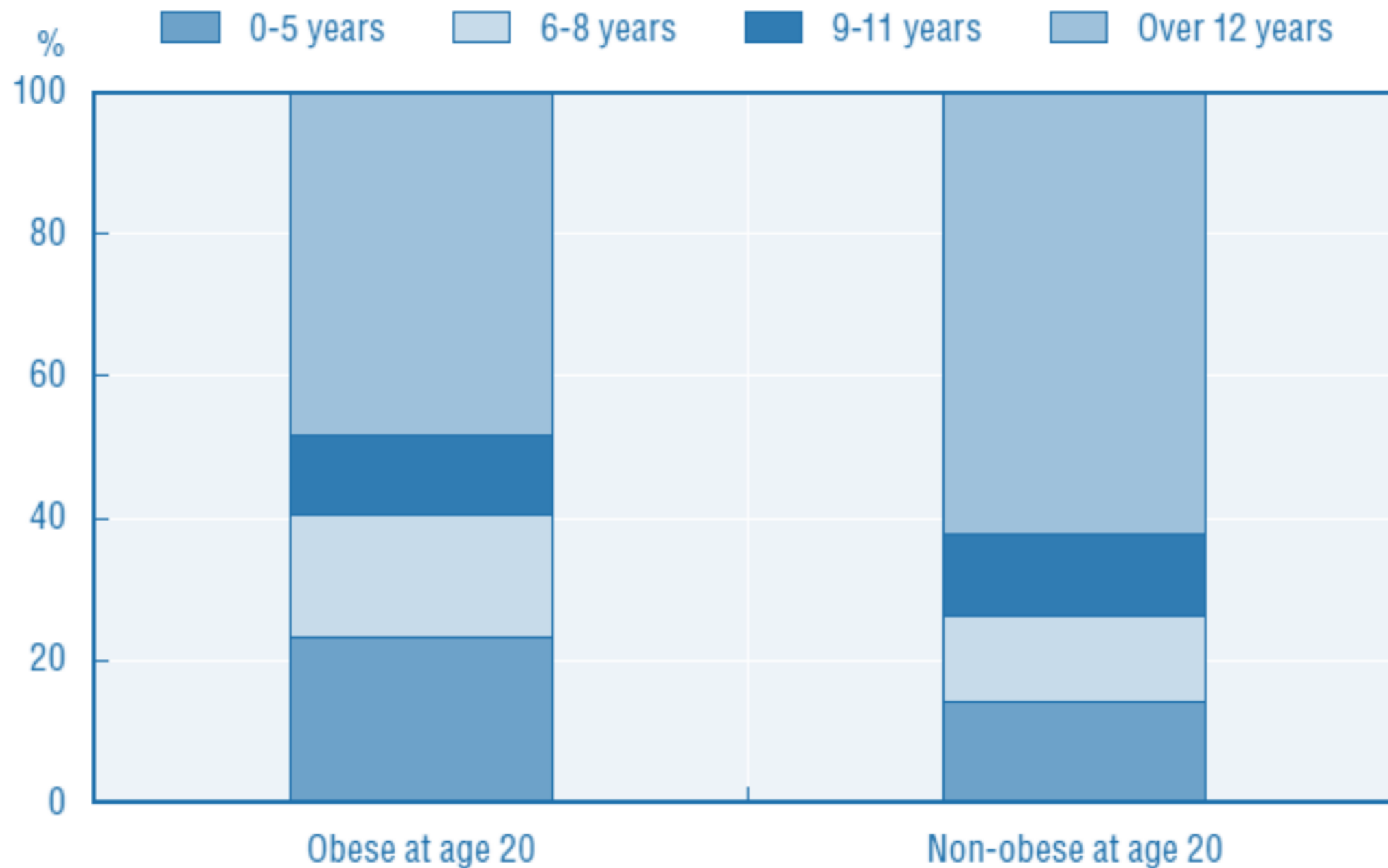
# Obesity: a Global Epidemic

- In Brazil, obesity tripled in men and doubled in women in 30 years; in India, up to 40% are overweight in urban areas
- Diabetes in China is now as common as in the US
- Obesity costs are less than 1% of GDP in most OECD countries, over 1% in the US and up to 4% in China



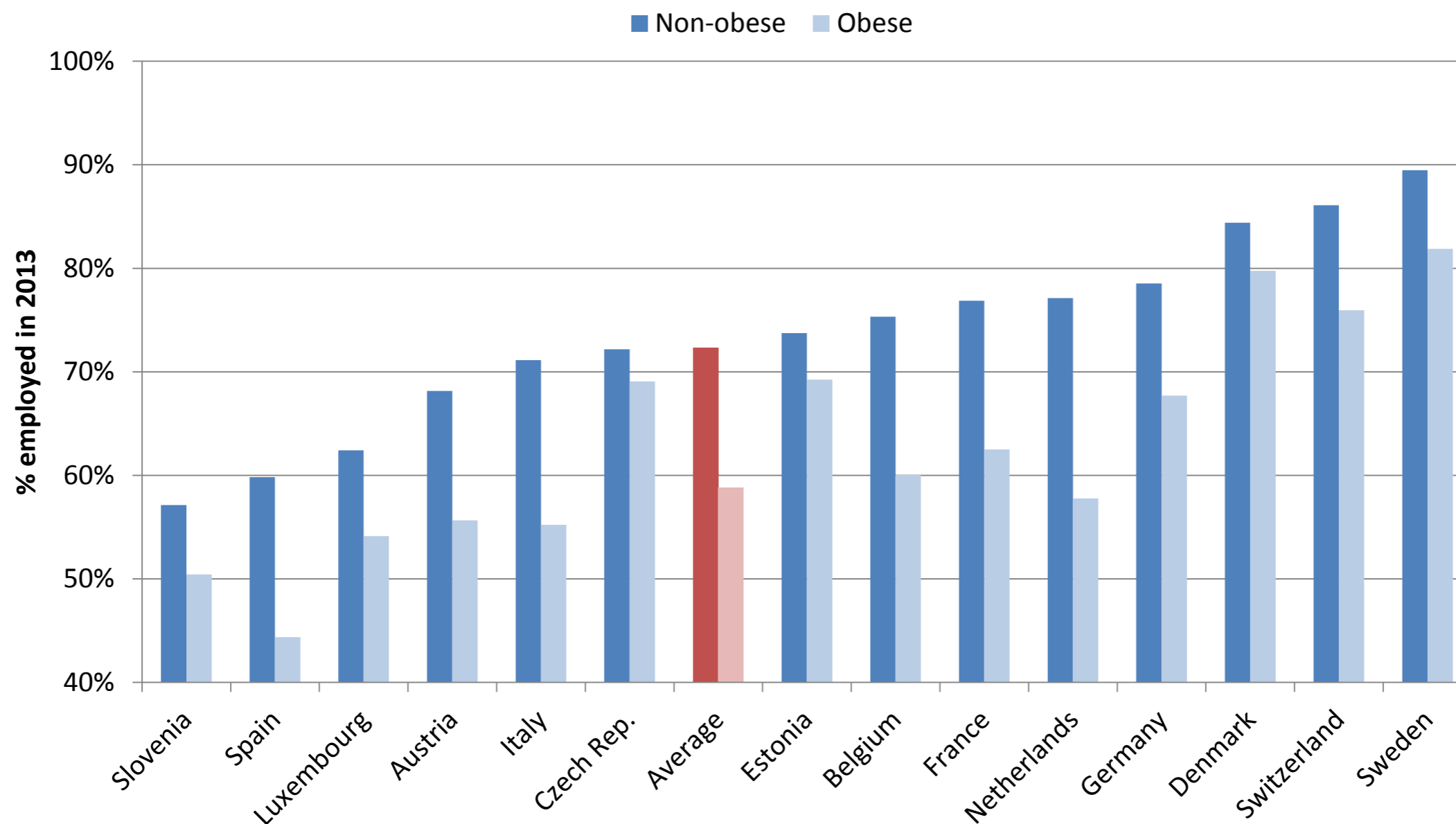
Source: OECD, 2010. % overweight in the of adult population

# Obesity is a Hindrance to Human Capital



Source: French data from *Enquête Décennale Santé 2002-03*; OECD analysis.

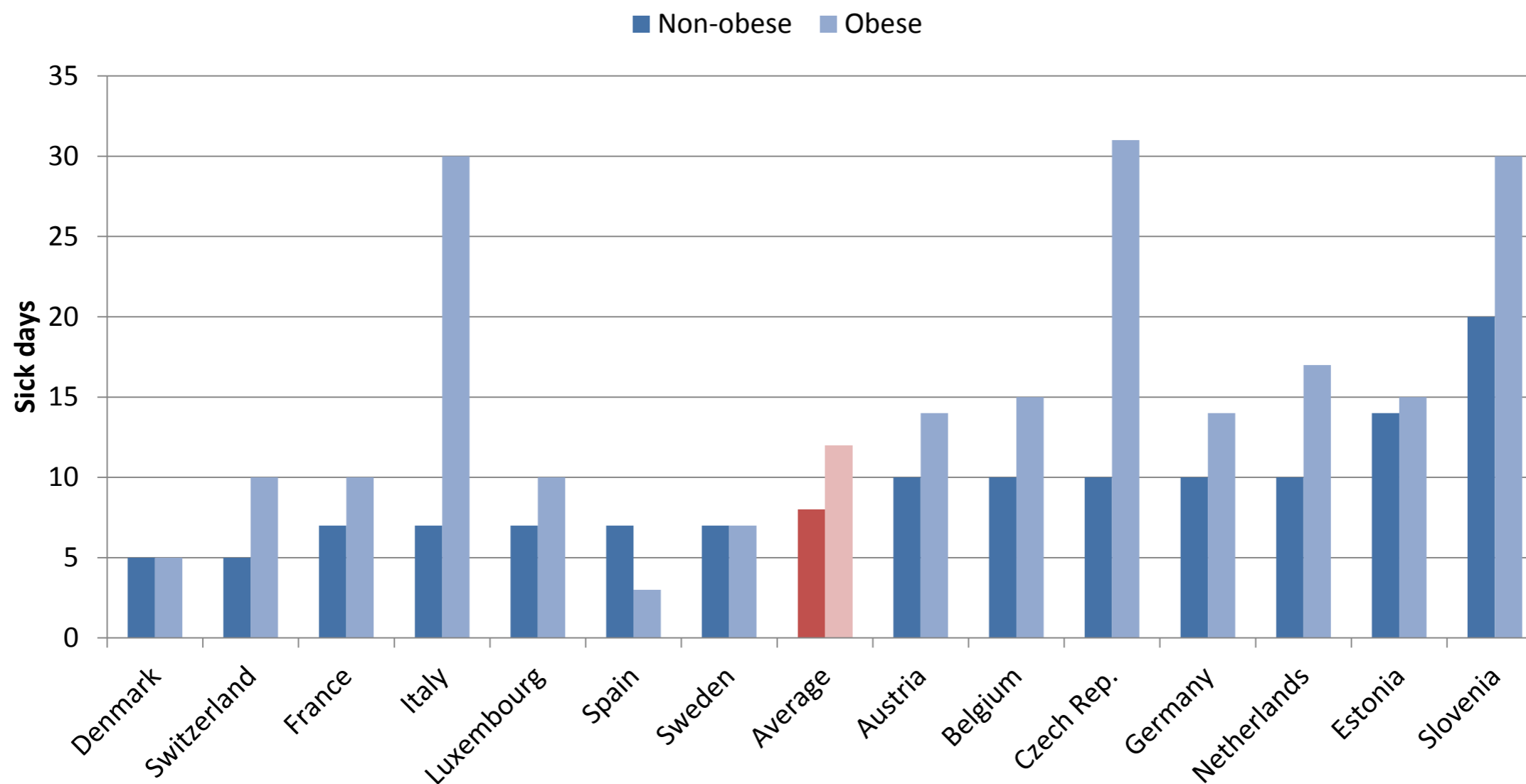
# Obese People are Less Likely to Be Employed



Employment rate, age 50-59, in 2013, SHARE data

Source: OECD/EU Health at a Glance Europe 2016

# Obese People are More Likely to Be on Sick Leave



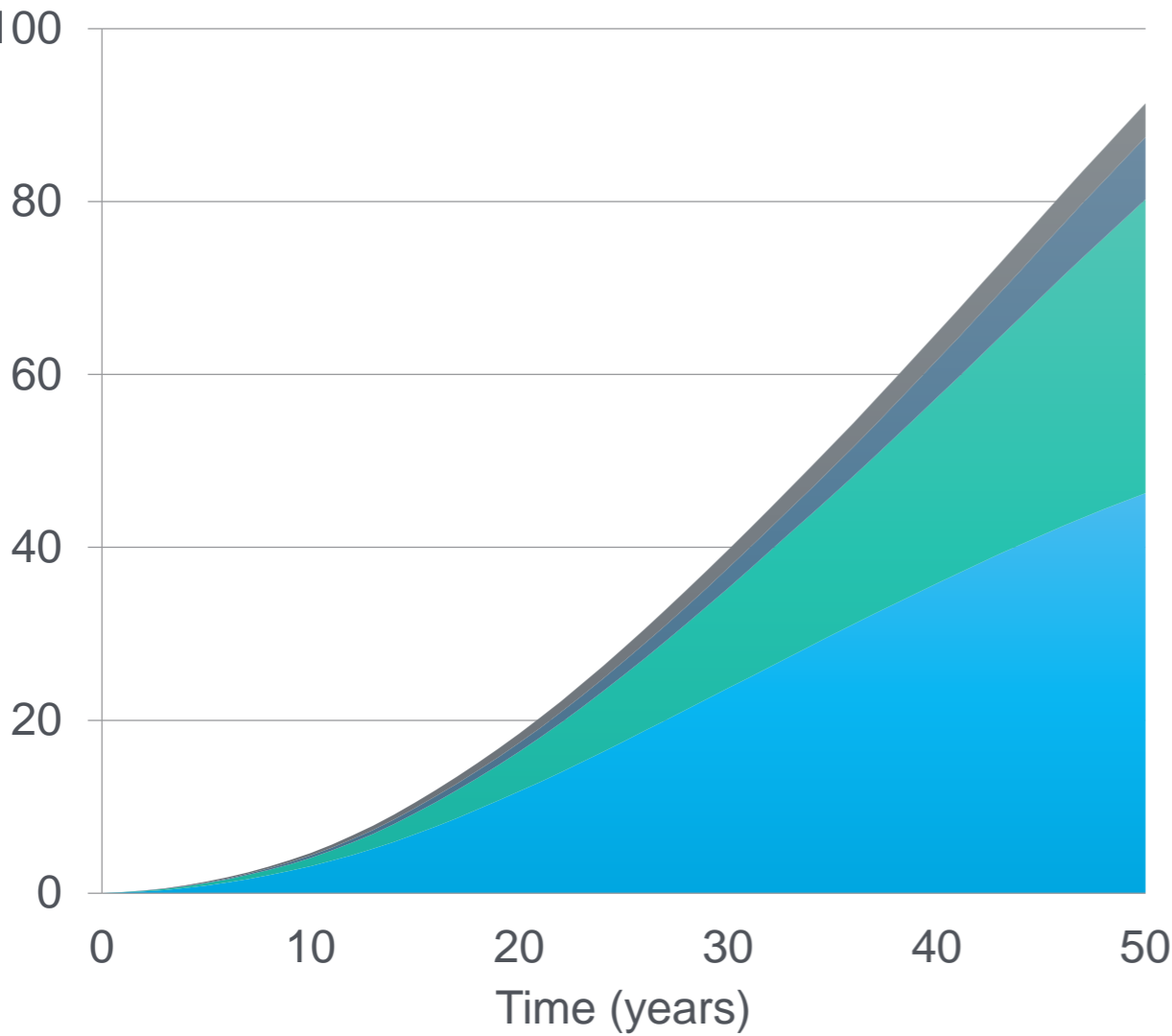
Median number of sick days in last 12 months, age 50-59, in 2013, SHARE data

Source: OECD/EU Health at a Glance Europe 2016

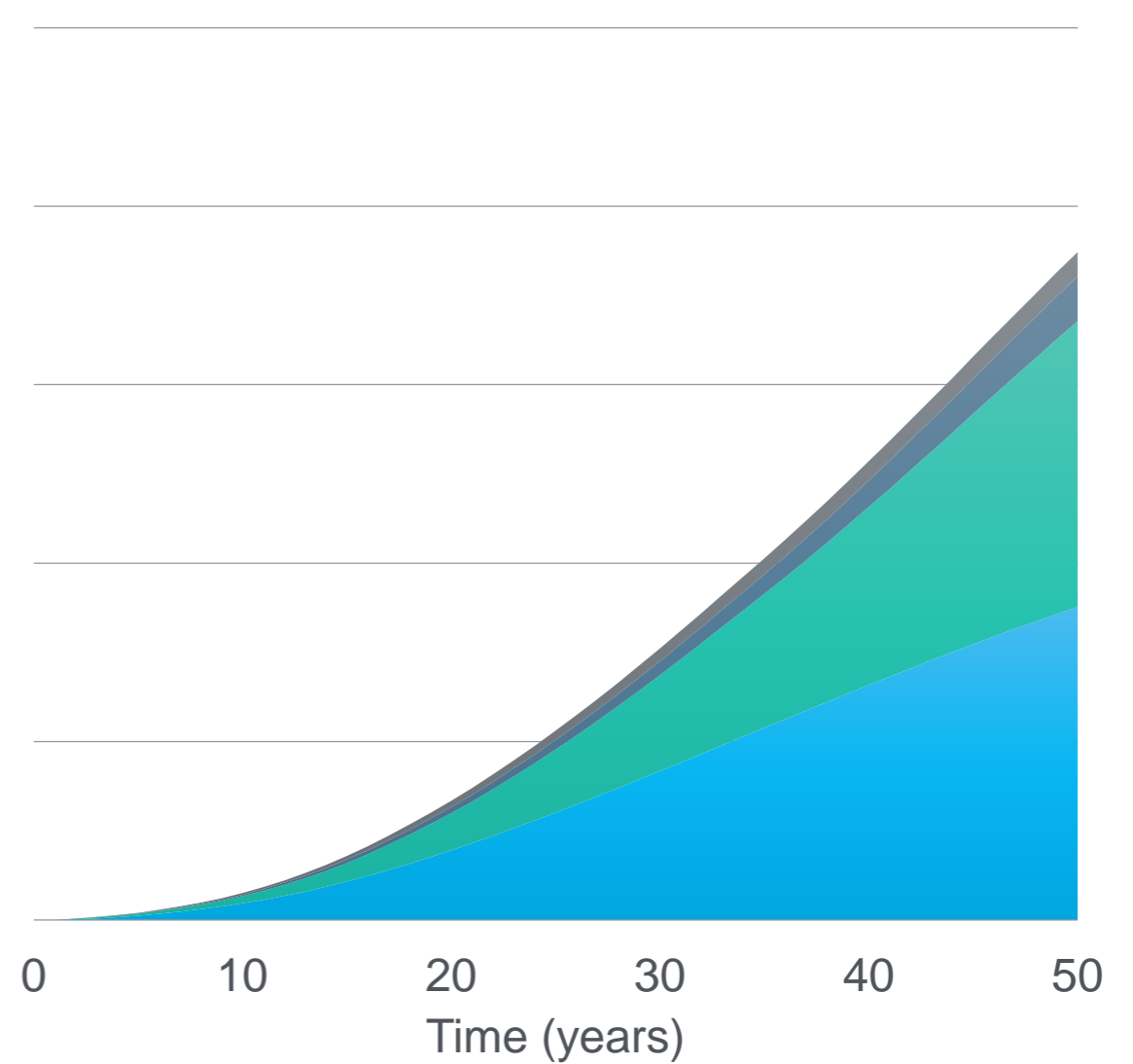


# Years of Life Free of NCDs Through Obesity Prevention

## Cancers (lung, colorectal, breast)



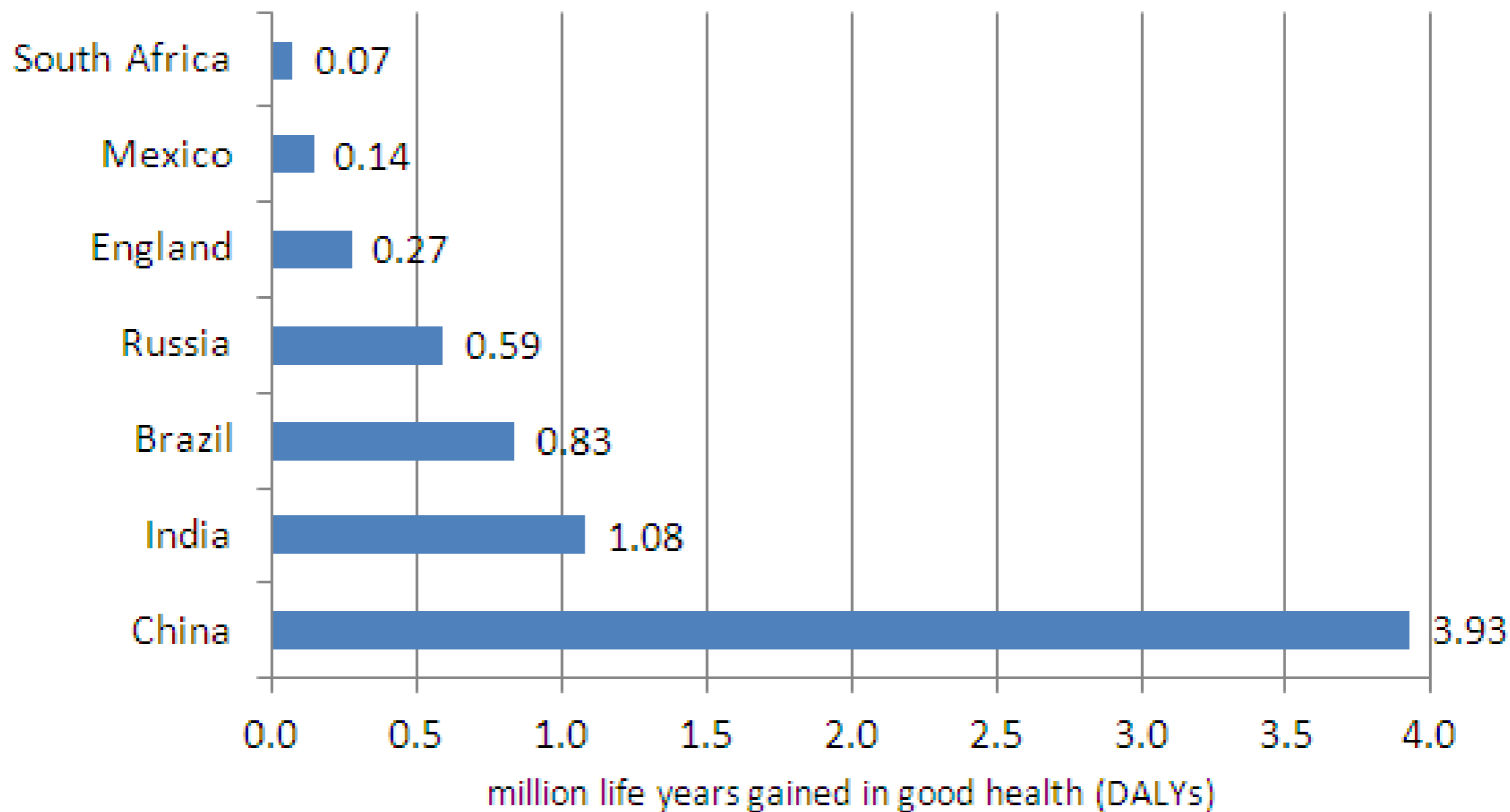
## Cardiovascular diseases



■ Europe ■ China ■ Brazil ■ Canada

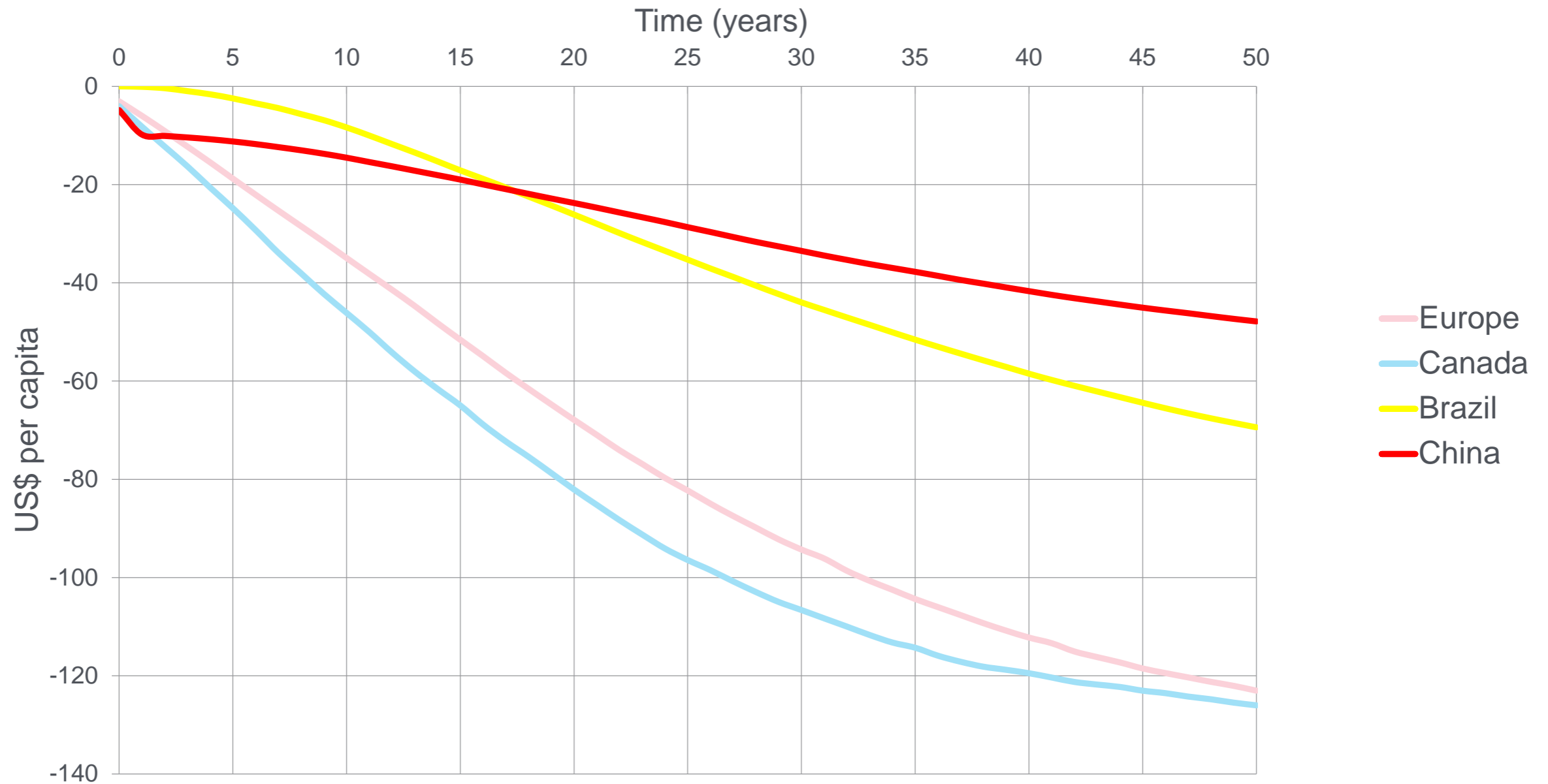
Source: OECD analysis

# What Can Prevention Achieve?



Source: OECD, 2010

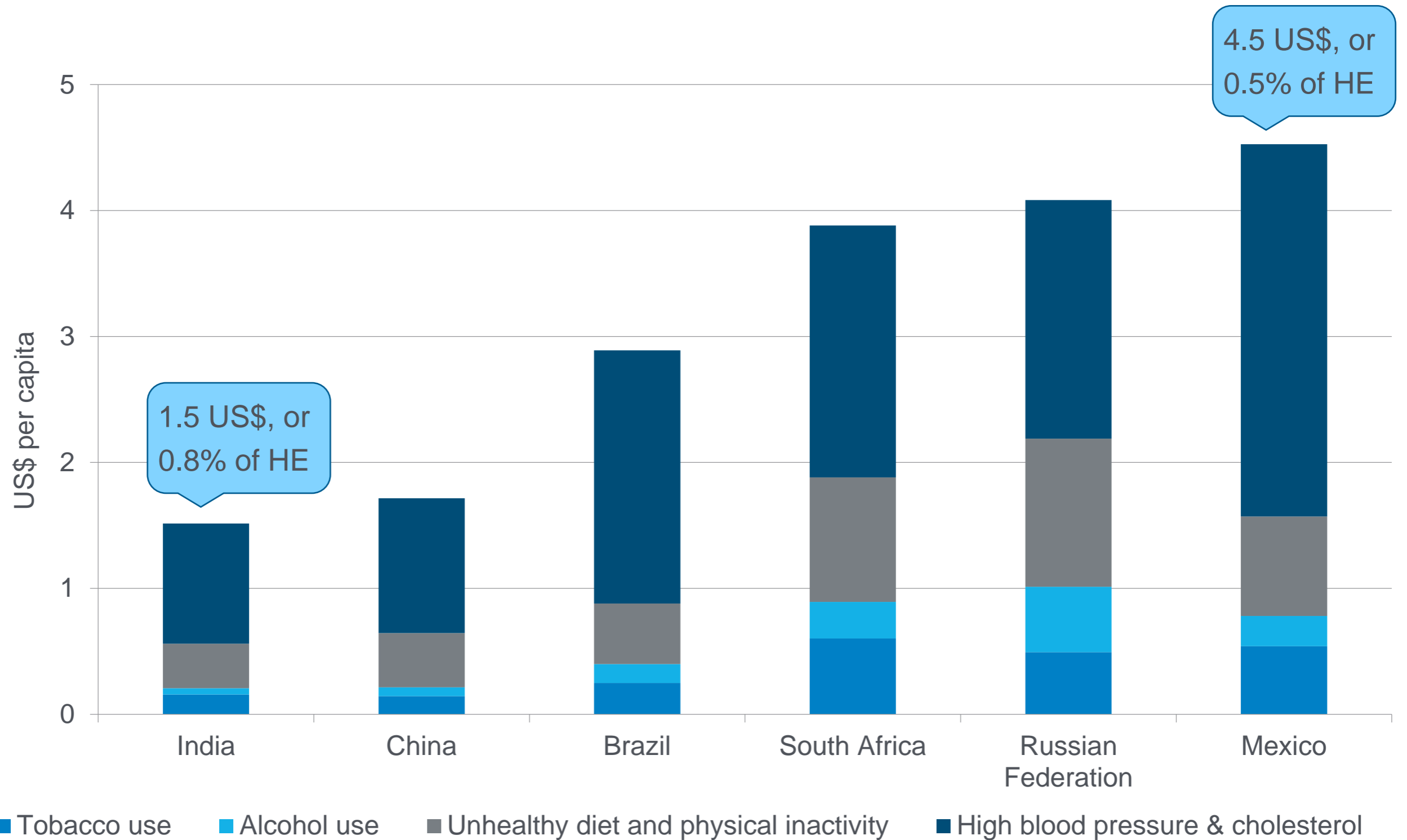
# Preventing Obesity Reduces Health Care Expenditure



Source: OECD analysis



# An Affordable Prevention Package



Source: Cecchini et al., Lancet, 2010

# Key Messages

- An economic case is best made by assessing what we can achieve through real policies
- Infectious diseases still an important cause of premature mortality in some G20 countries
- Emerging communicable disease threats, but the most of the burden of disease is from NCDs
- Behaviours are the key driver of NCD burden – action is needed beyond health care systems
- Alcohol and obesity are major threats to economic productivity, but effective actions are available
- Are we prepared to spend a fraction of what we spend on health care to prevent unhealthy behaviours?