



# ACC Middle East Conference 2018

In partnership with:



جمعية القلب السعودية  
Saudi Heart Association

# State of CV Health Globally & in the Middle East

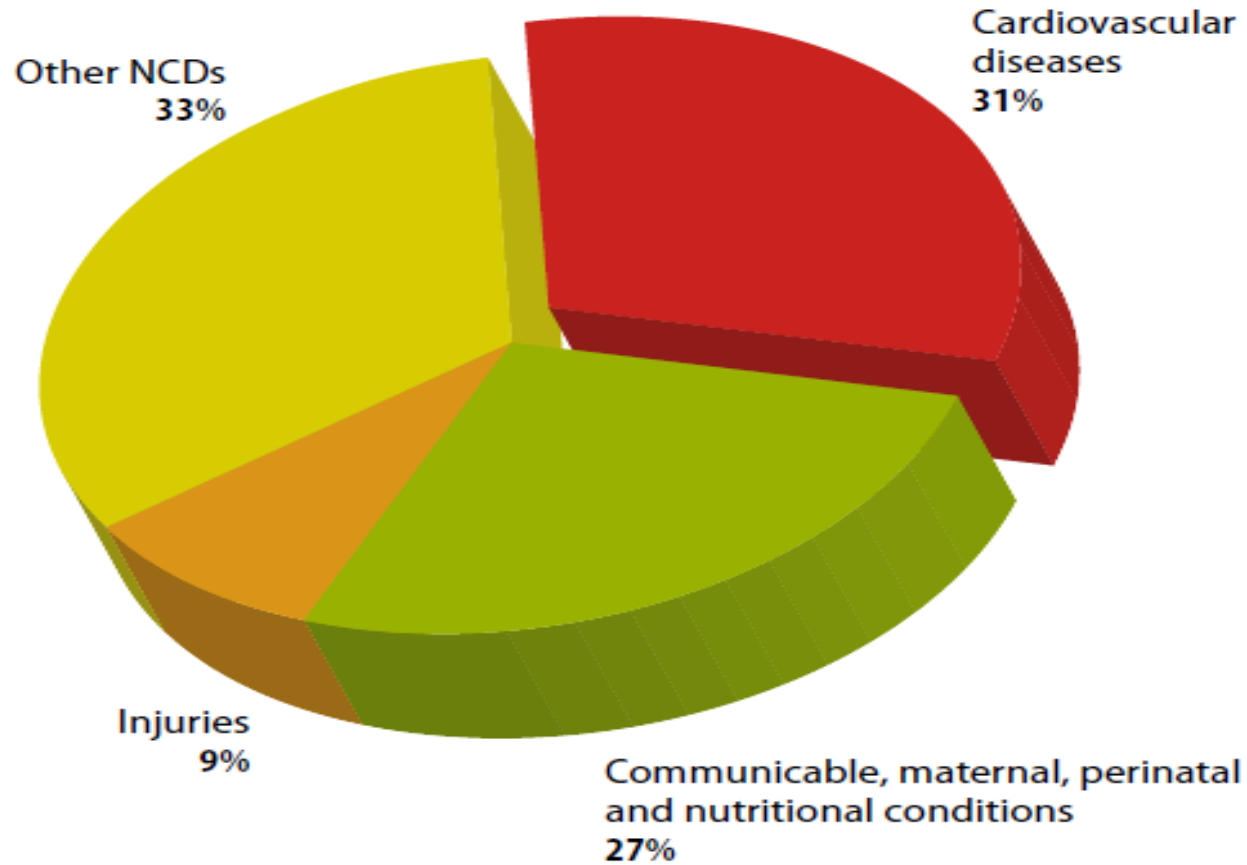
**William A. Zoghbi MD, MACC**

*Elkins Family Distinguished Chair in Cardiac Health  
Professor and Chairmen, Department of Cardiology  
Houston Methodist DeBakey Heart & Vascular Center*

@williamzoghbi



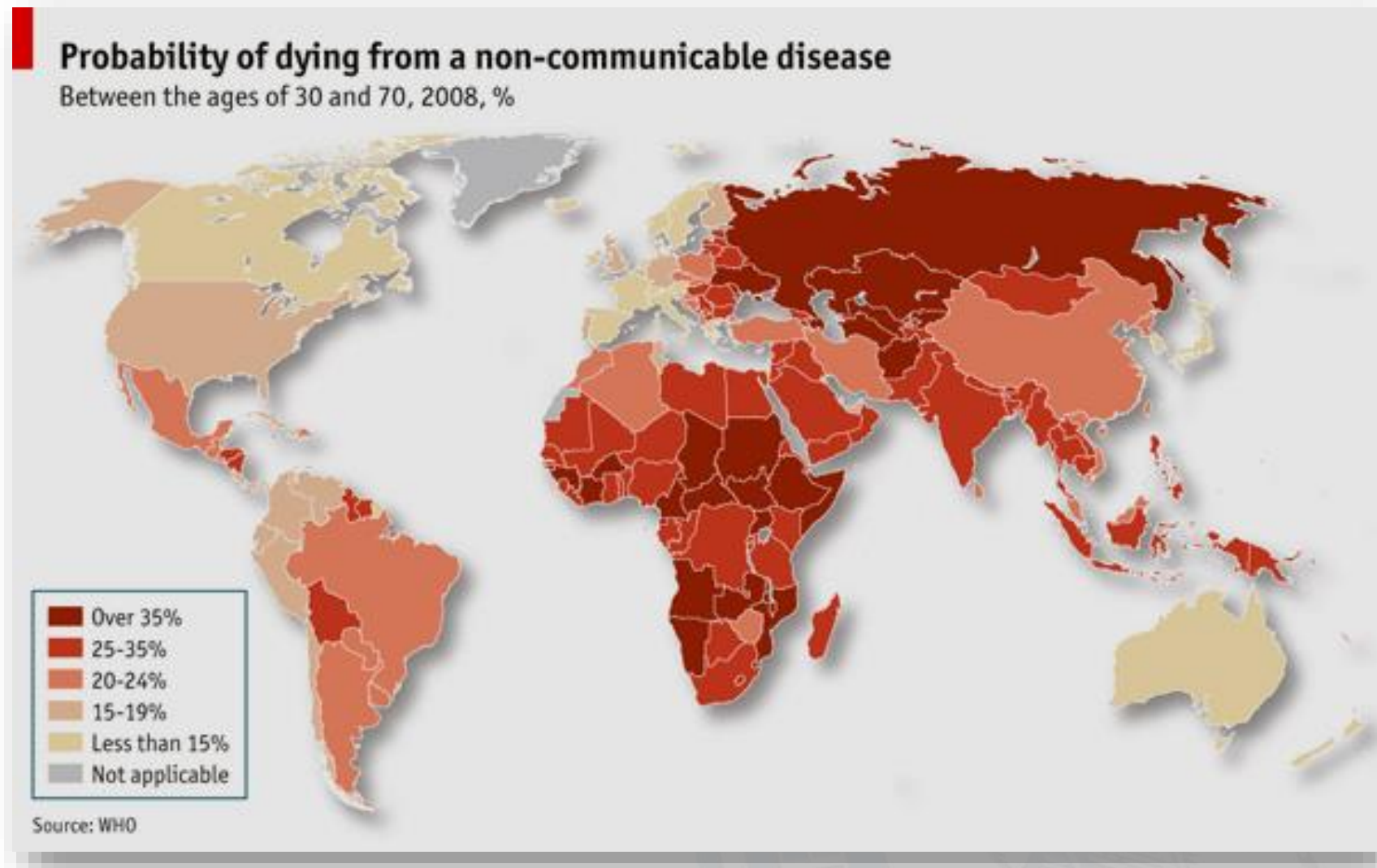
# Distribution of Major Causes of Death Worldwide



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# Non Communicable Disease

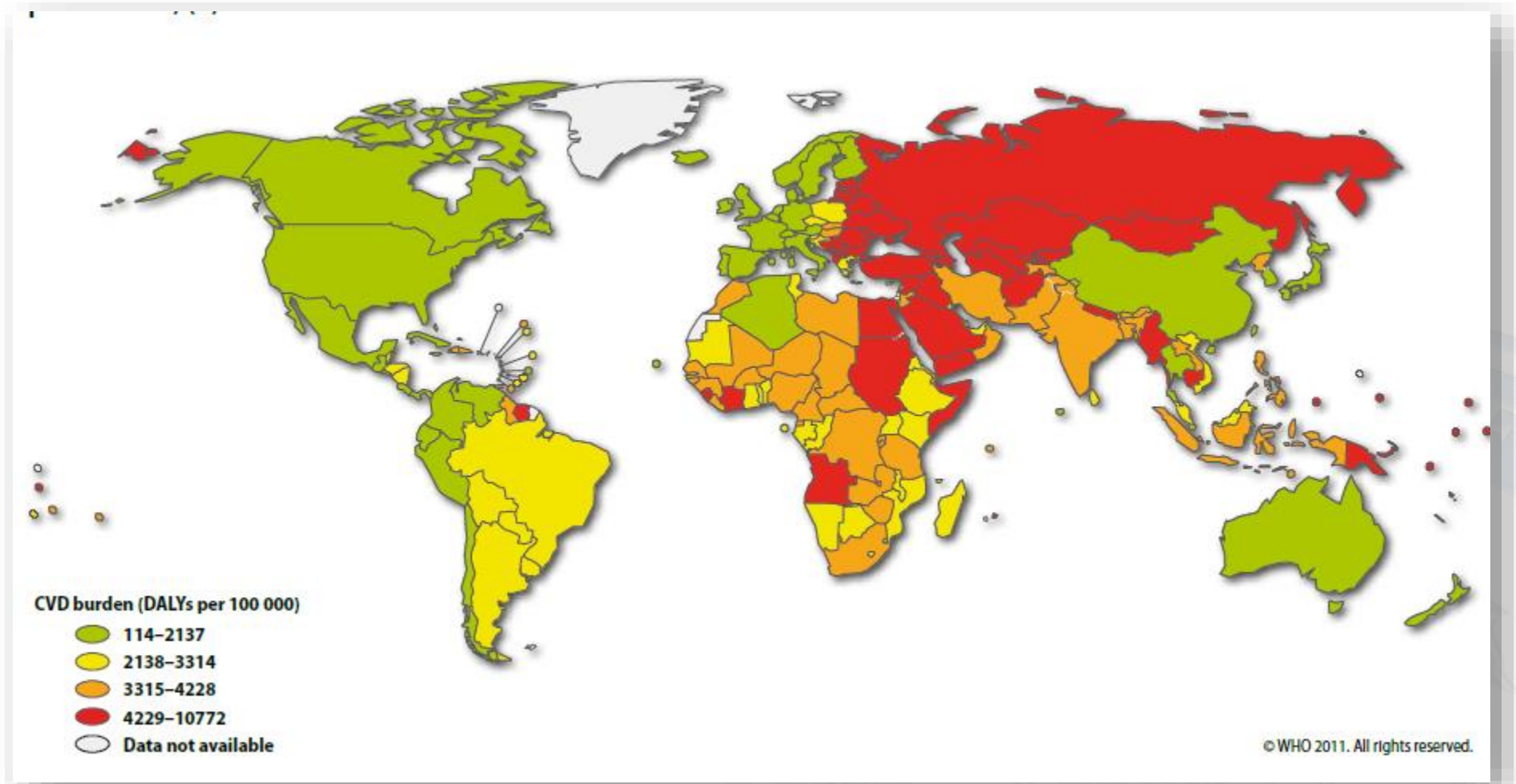
A Burden on the *Developed* and *Developing* World



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# Burden of Cardiovascular Disease

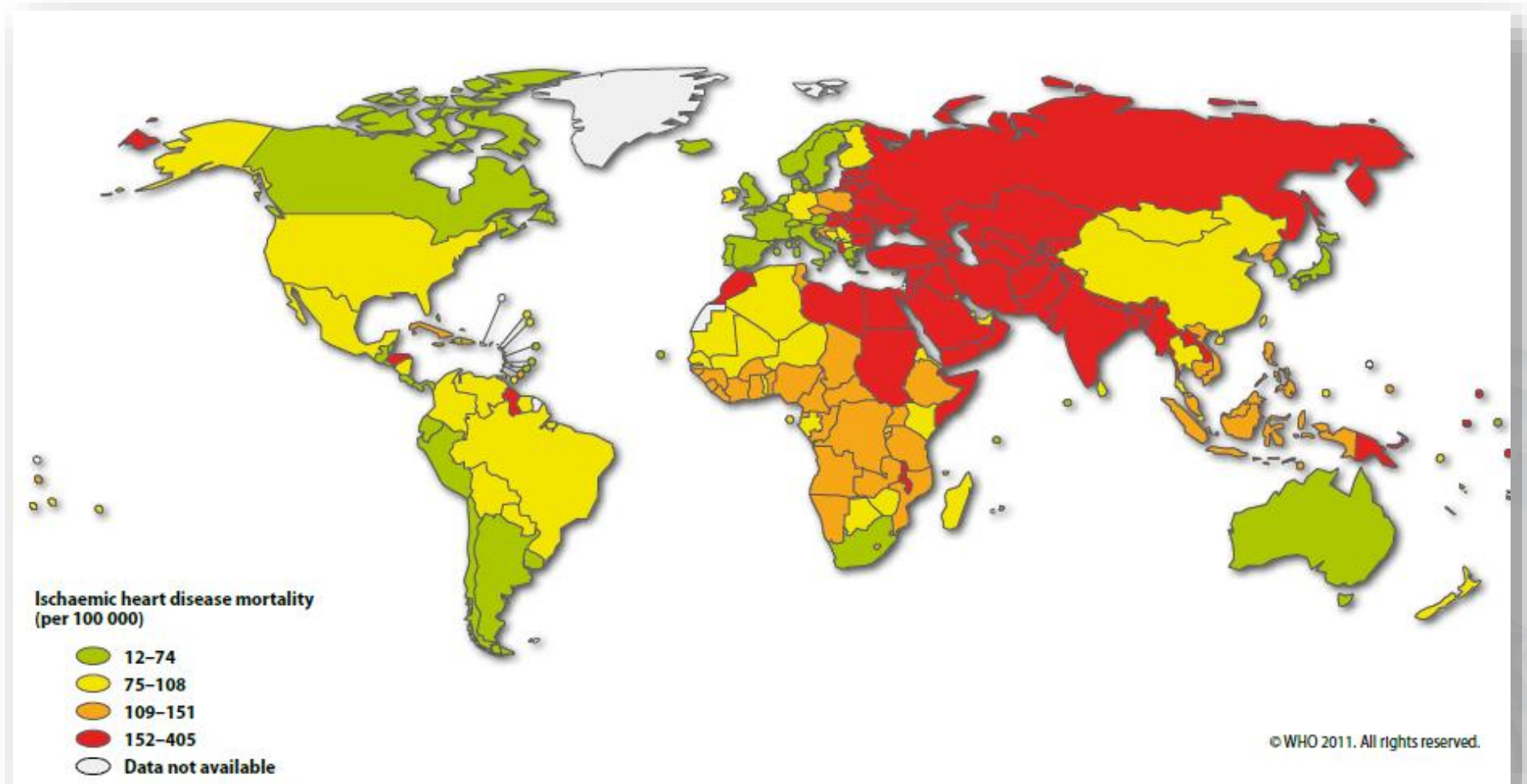
DALYs, Age Standardized/100,000



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# Mortality Rates from Ischemic Heart Disease

Age Standardized/100,000

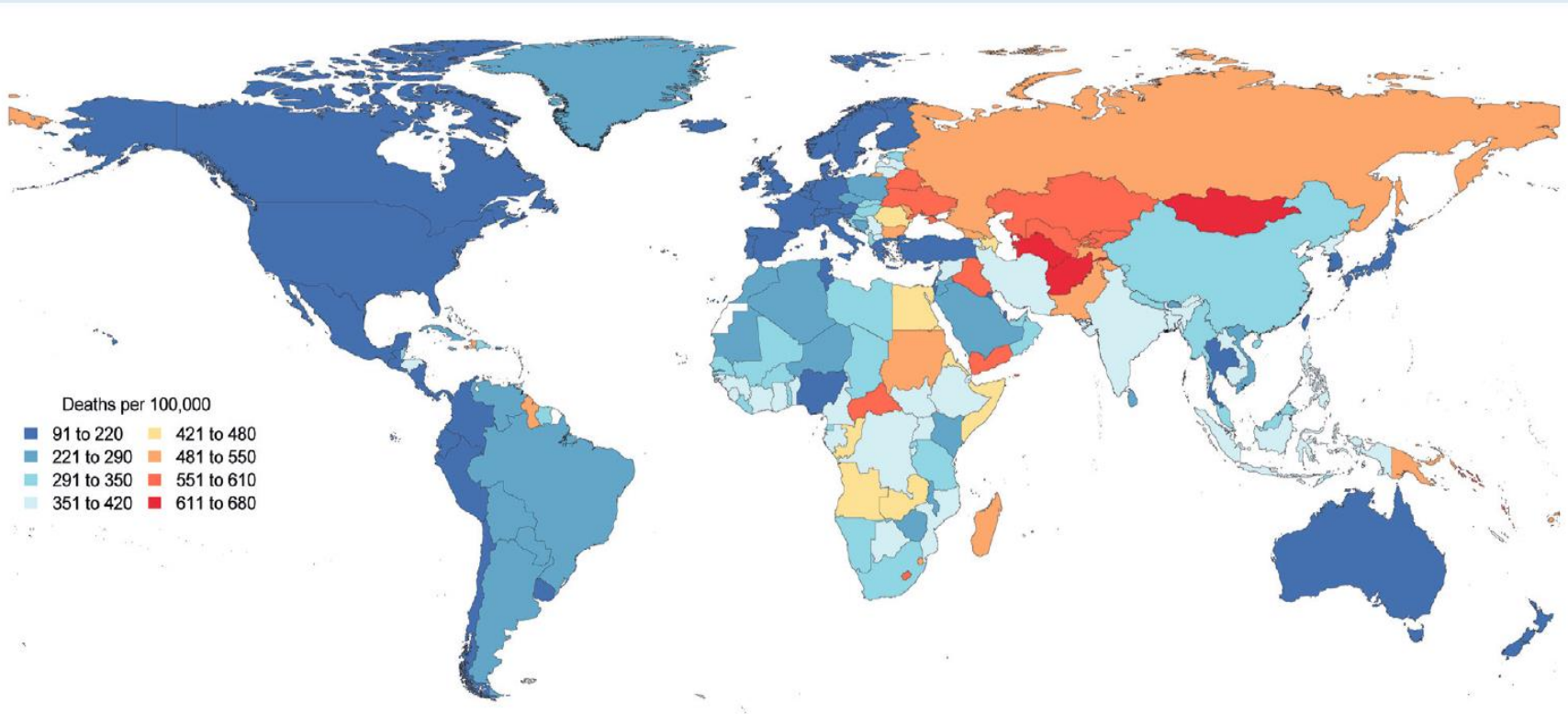


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# Age Standardized Mortality Rate from CVD 2015

**CENTRAL ILLUSTRATION** Global Map, Age-Standardized Death Rate of CVD in 2015



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Roth GA et al. JACC 2017; 70-1-25

# An Urgent Development Issue

- NCDs make the largest contribution to mortality both globally and in the majority of low- and middle- income countries (LMICs)
- Worldwide, NCDs account for 60% (35 million) of global deaths
- The largest burden - 80% (28 million) - occurs in LMICs, making NCDs a major cause of poverty and an urgent development issue



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# Global Increase in CV Diseases

## Impact

- NCDs will cost the world \$47 trillion over the next 20 years
- Of this, heart disease represents 43% or \$20 trillion

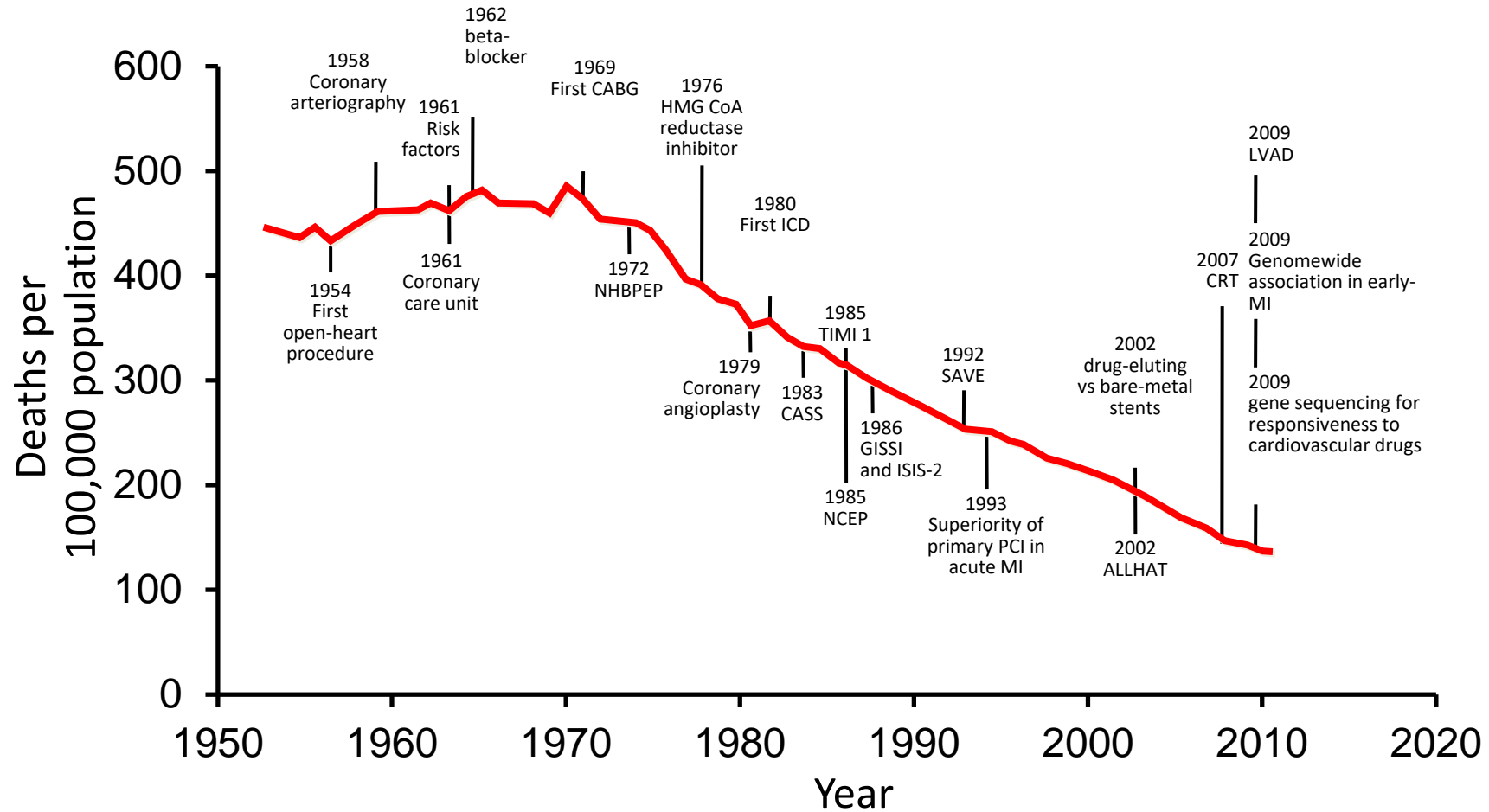


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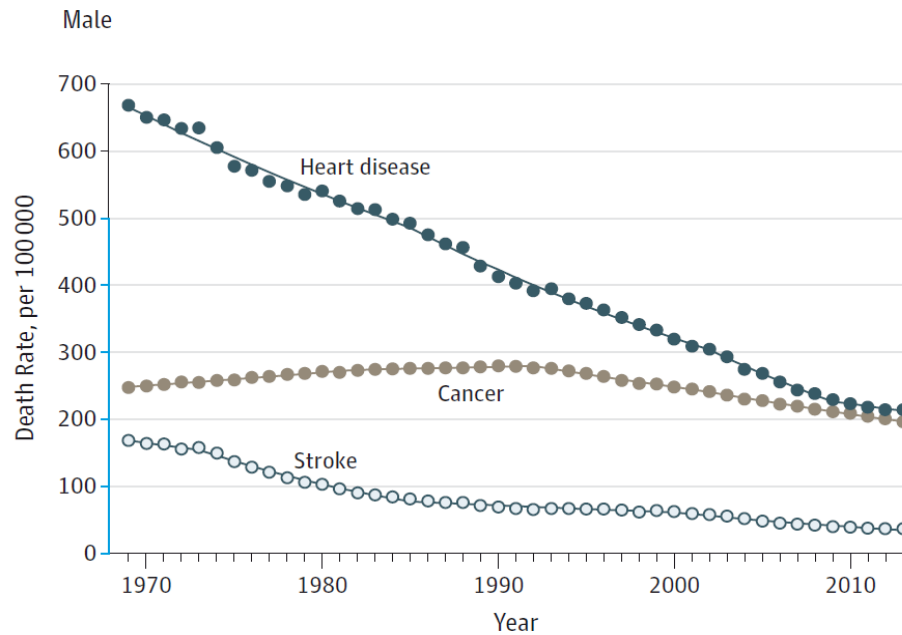
Sources: WEF, Harvard U & WHO



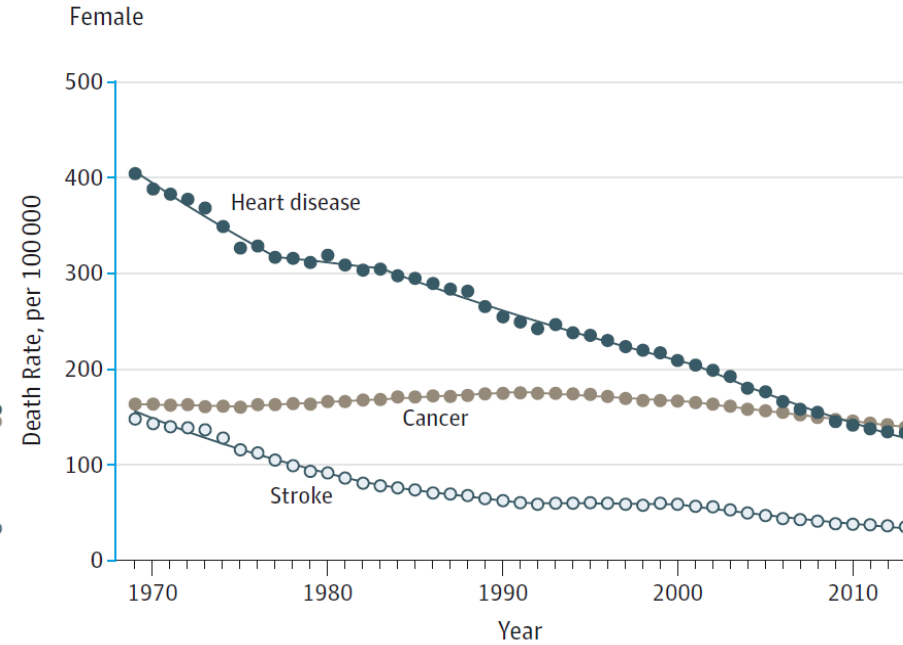
# Trends in CV Mortality in the US



# Age-Standardized Death Rates by Sex and Cause of Death in the United States, 1969-2013.



3% per year



2.5% per year

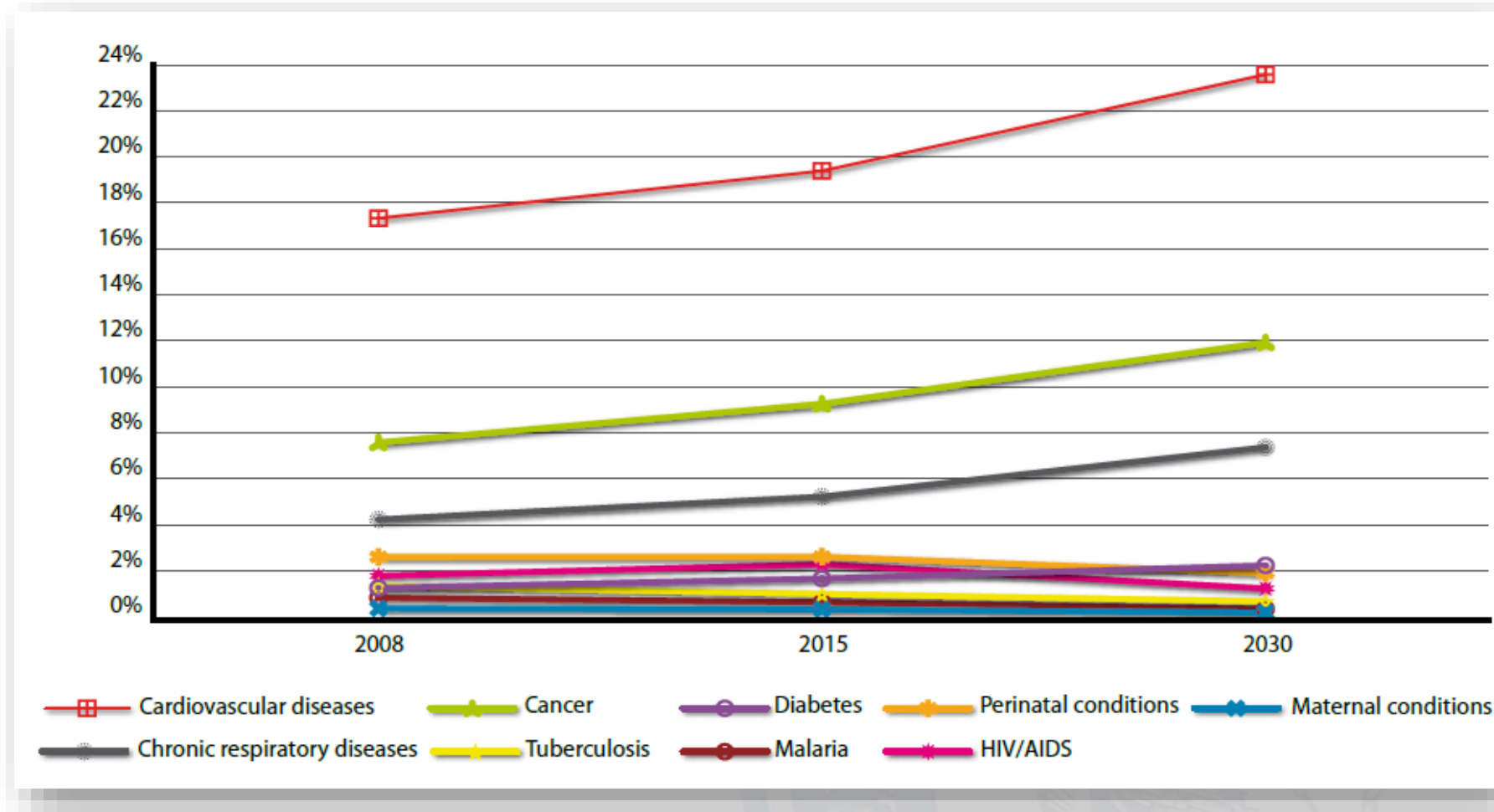
Source: Ma J, Ward EM, Siegel RL, Jemal A. Temporal trends in mortality in the United States, 1969-2013. *JAMA*. 2015;314(16):1731



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# Projected Mortality Trends

## NCD, Cardiovascular & Communicable Diseases



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# Global distribution of the physician workforce (per 10,000 population), 2000-2009

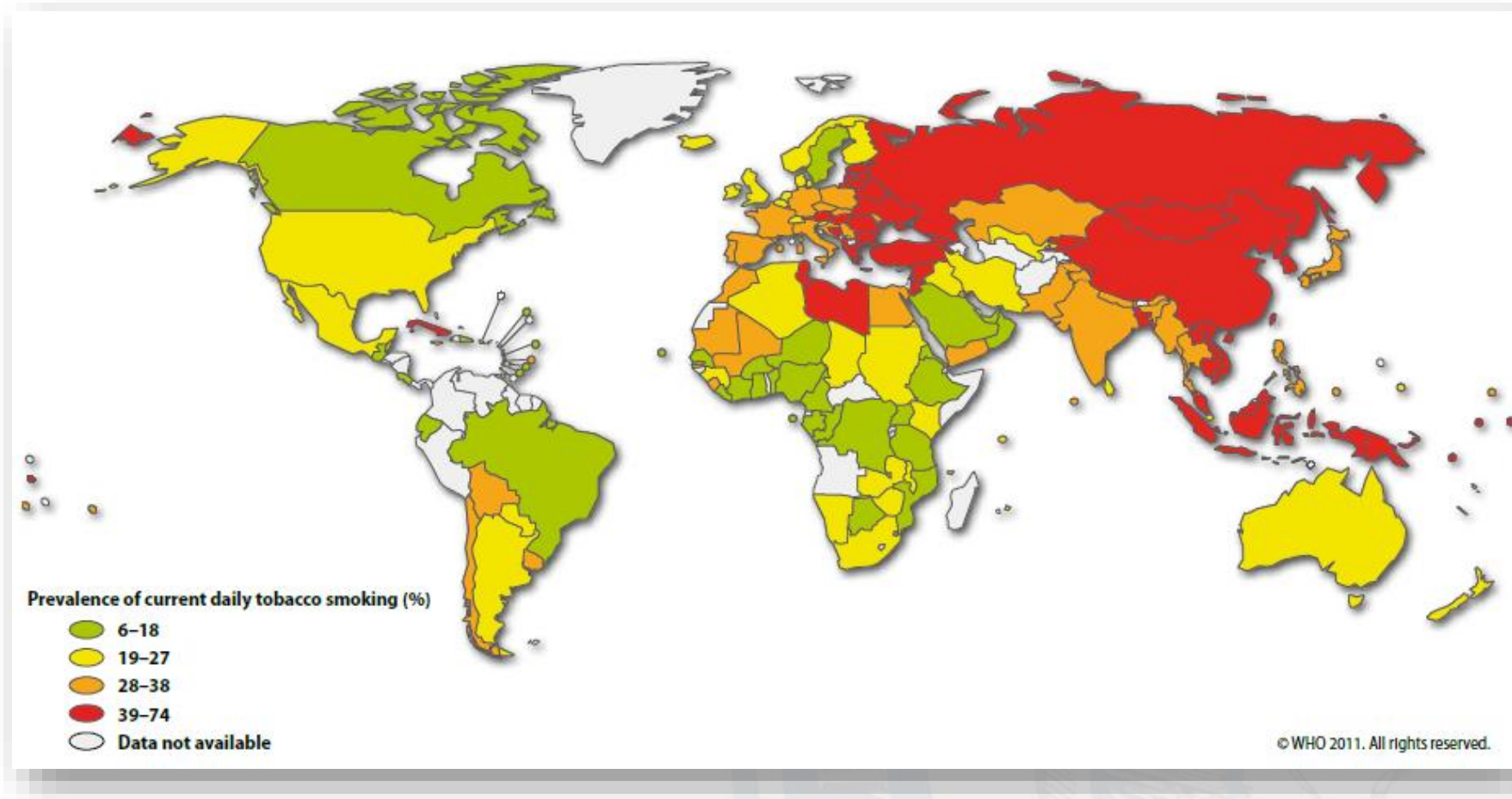


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Source: World Health Statistics - 2010, World Health Organization, 2010.

# Prevalence of Daily Tobacco Smoking in Males

*Age Standardized Adjusted*

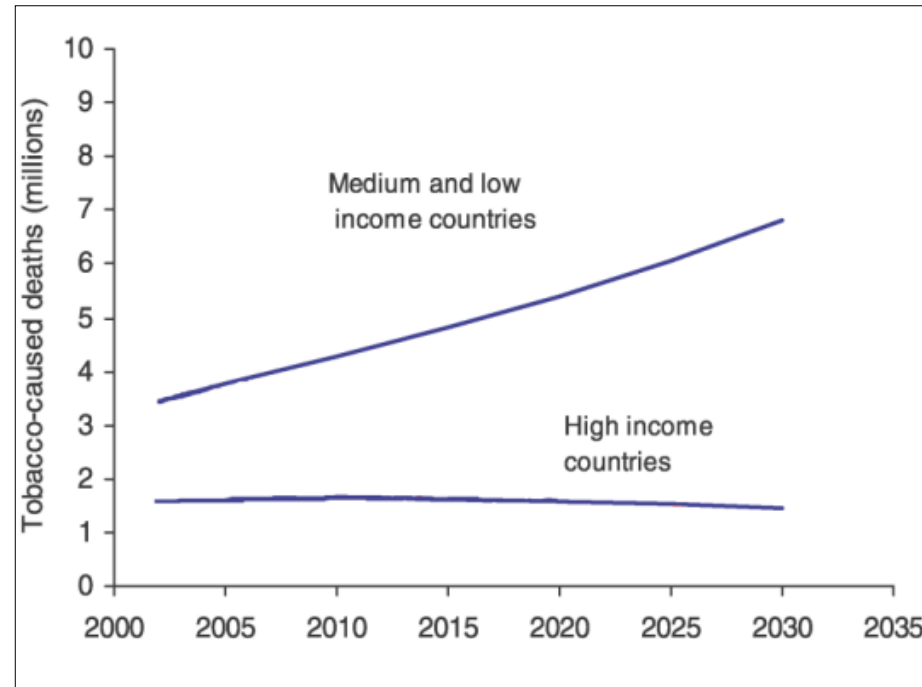


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# Tobacco and the Global NCD Epidemic

Tobacco use kills 15,000 people a day around the world...and second hand smoke exposure kills another 1,000.

70% of tobacco deaths occur in developing and middle-income countries, where tobacco use continues to rise.

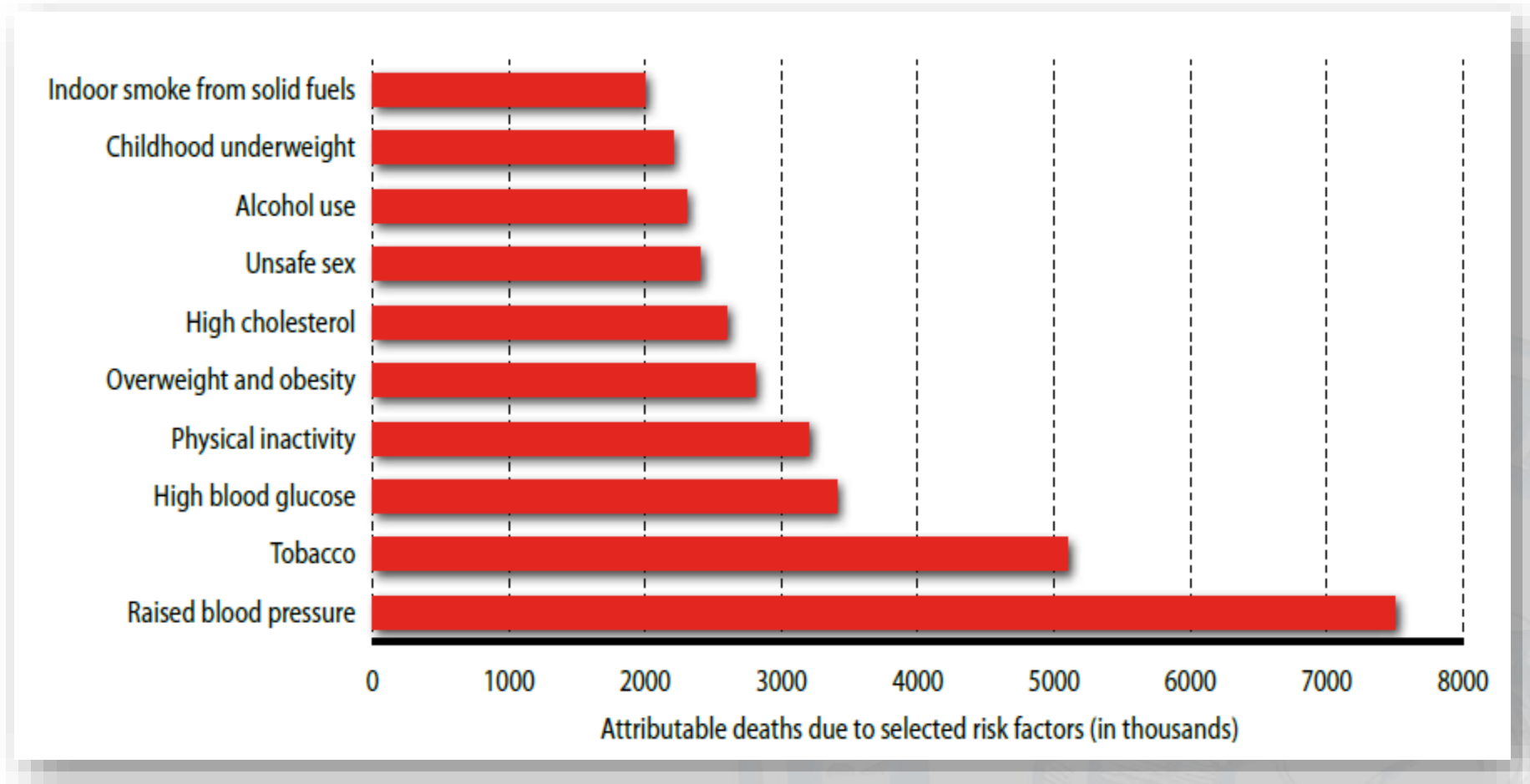


Source: **NCD Alliance (2011)**. The FCTC – and evidence-based tool to reduce the burden of disease



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# Ranking of 10 Selected Risk Factors of Cause of Death



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# Global Advocacy

## *United Nations Summit on Non-Communicable Diseases*



- First ever UN High Level Meeting on NCDs, September 2011
- Second UN Summit on Health after AIDS summit in 2001
- CV disease Voice: ACC,AHA,WHF
- Political declaration to establish targets for NCDs



# Political Declaration

## Outcome of Summit:

Political Declaration that detailed the global strategy for combatting NCDs


Called on the WHO to establish global targets for combatting NCDs during 2012



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United Nations A/RES/66/2

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 **General Assembly** Distr.: General  
24 January 2012

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Sixty-sixth session  
Agenda item 117

**Resolution adopted by the General Assembly**  
*[without reference to a Main Committee (A/66/L.1)]*

**66/2. Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases**

*The General Assembly*

*Adopts* the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases annexed to the present resolution.

*3rd plenary meeting  
19 September 2011*

**Annex**

**Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases**

We, Heads of State and Government and representatives of States and Governments, assembled at the United Nations on 19 and 20 September 2011, to address the prevention and control of non-communicable diseases worldwide, with a particular focus on developmental and other challenges and social and economic impacts, particularly for developing countries,

1. Acknowledge that the global burden and threat of non-communicable diseases constitutes one of the major challenges for development in the twenty-first century, which undermines social and economic development throughout the world and threatens the achievement of internationally agreed development goals;
2. Recognize that non-communicable diseases are a threat to the economies of many Member States and may lead to increasing inequalities between countries and populations;
3. Recognize the primary role and responsibility of Governments in responding to the challenge of non-communicable diseases and the essential need for the efforts and engagement of all sectors of society to generate effective responses for the prevention and control of non-communicable diseases;

# World Health Assembly 2012

**Approved Goal:**  
**25% reduction in  
premature NCD  
mortality by 2025**



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## Our Time: A Call to Save Preventable Death From Cardiovascular Disease (Heart Disease and Stroke)

### WRITING COMMITTEE

Sidney C. Smith, Jr, MD, FACC, FAHA, FESC, Chair; Amy Collins, MA;  
Roberto Ferrari, MD, PhD, FESC; David R. Holmes, Jr, MACC, FAHA, FESC;  
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David A. Wood, MSc, FRCP, FRCPE, FFPHM, FESC; William A. Zoghbi, MD, FACC, FAHA

*The writing committee members represent the following participating organizations:*

*World Heart Federation (S.C.S., A.C., J.R., K.T.), American Heart Association (D.V.M., R.L.S.), American College of Cardiology Foundation (D.R.H., W.A.Z.), European Heart Network (S.L., H.S.), and European Society of Cardiology (R.F., D.A.W.)*

September, 2012



# WHO Meeting Geneva 2013

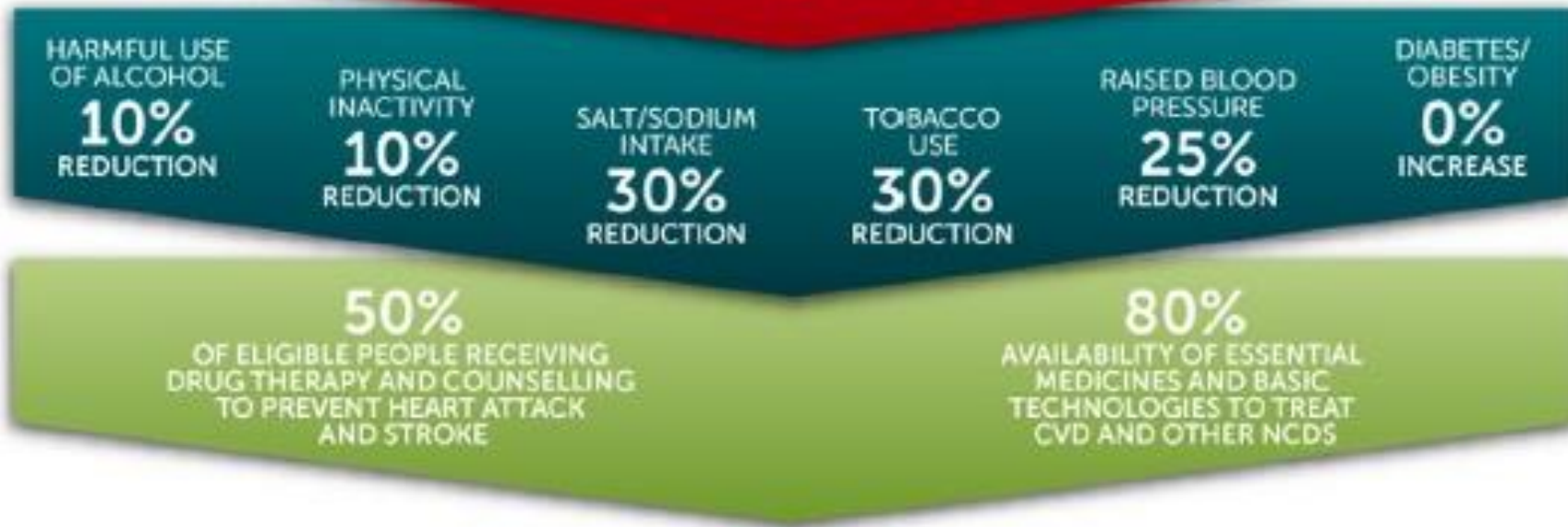


# 25by25 GLOBAL TARGET

A 25% RELATIVE REDUCTION IN OVERALL MORTALITY FROM CARDIOVASCULAR DISEASE, CANCER, DIABETES OR CHRONIC RESPIRATORY DISEASES

## WHF GOAL

A 25% REDUCTION IN PREMATURE MORTALITY FROM CARDIOVASCULAR DISEASE BY 2025



2025



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# Sustainable Development Goals and the Future of Cardiovascular Health



## A Statement From the Global Cardiovascular Disease Taskforce

*Writing Committee:* William A. Zoghbi, MD, Tony Duncan, MBA, (*Chairs*), Elliott Antman, MD, Marcia Barbosa, MD, PhD, Beatriz Champagne, PhD, Deborah Chen, SRN, MPH, Habib Gamra, MD, John G. Harold, MD, Staffan Josephson, PhD, Michel Komajda, MD, Susanne Logstrup, CAND JUR, MBA, Bongani M. Mayosi, MBChB, Jeremiah Mwangi, MA, Johanna Ralston, MA, MSc, Ralph L. Sacco, MD, MS, K.H. Sim, MBBS, Sidney C. Smith Jr, MD, Panos E. Vardas, MD, PhD, David A. Wood, MSc

**W**e are on the cusp of a new era in global health policy that could transform the lives of millions worldwide. Whether car-

Agenda of the United Nations (UN) sets the focus for funding and policy-making by governments in all 193 member states. In 2000, world leaders signed the

# 2030 Agenda



By 2030, reduce by 1/3 premature mortality from NCDs through prevention and treatment...  
Achieve Universal health Coverage

## **AHA/WHF Scientific Statement**

### **The Heart of 25 by 25: Achieving the Goal of Reducing Global and Regional Premature Deaths From Cardiovascular Diseases and Stroke**

#### **A Modeling Study From the American Heart Association and World Heart Federation**

Ralph L. Sacco, MD, MS, FAHA; Gregory A. Roth, MD, MPH; K. Srinath Reddy, MD, DM;  
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Paul A. Heidenreich, MD, MS, FAHA; Mark D. Huffman, MD, MPH, FAHA;  
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Pablo Perel, MD, MSc, PhD; Daniel J. Piñeiro, MD, FAHA; Sidney C. Smith, Jr, MD, FAHA;  
Kathryn A. Taubert, PhD, FAHA; David A. Wood, MSc; Dong Zhao, MD, PhD;  
William A. Zoghbi, MD, FAHA

*Circulation & Global Heart, May 2016*

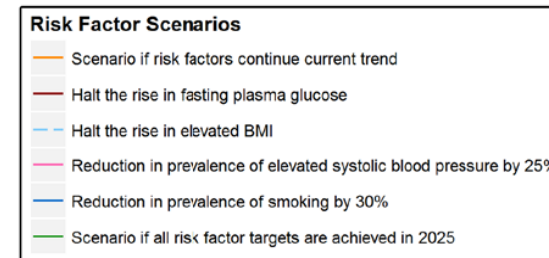
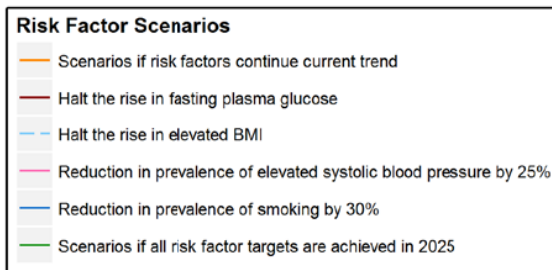
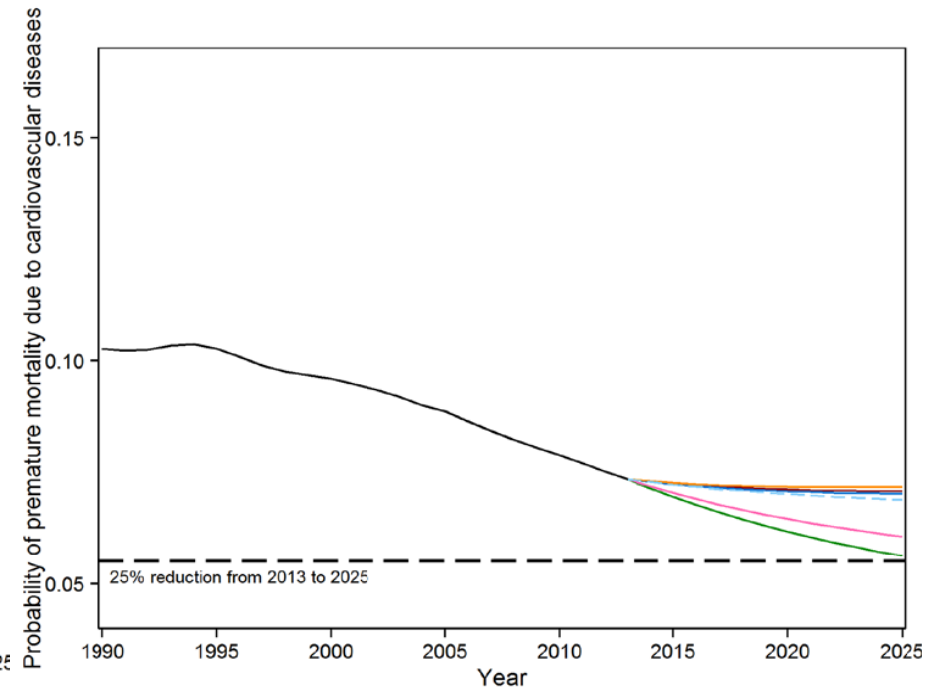
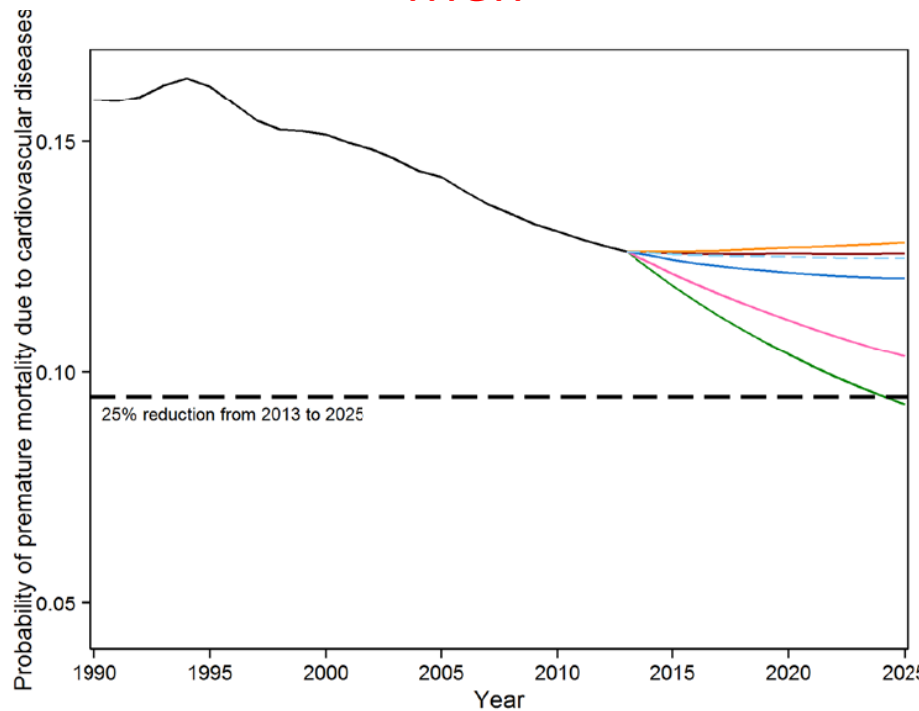


# Global Probability of Premature CV Death

## Effect of Risk factors Modification

Men

Women



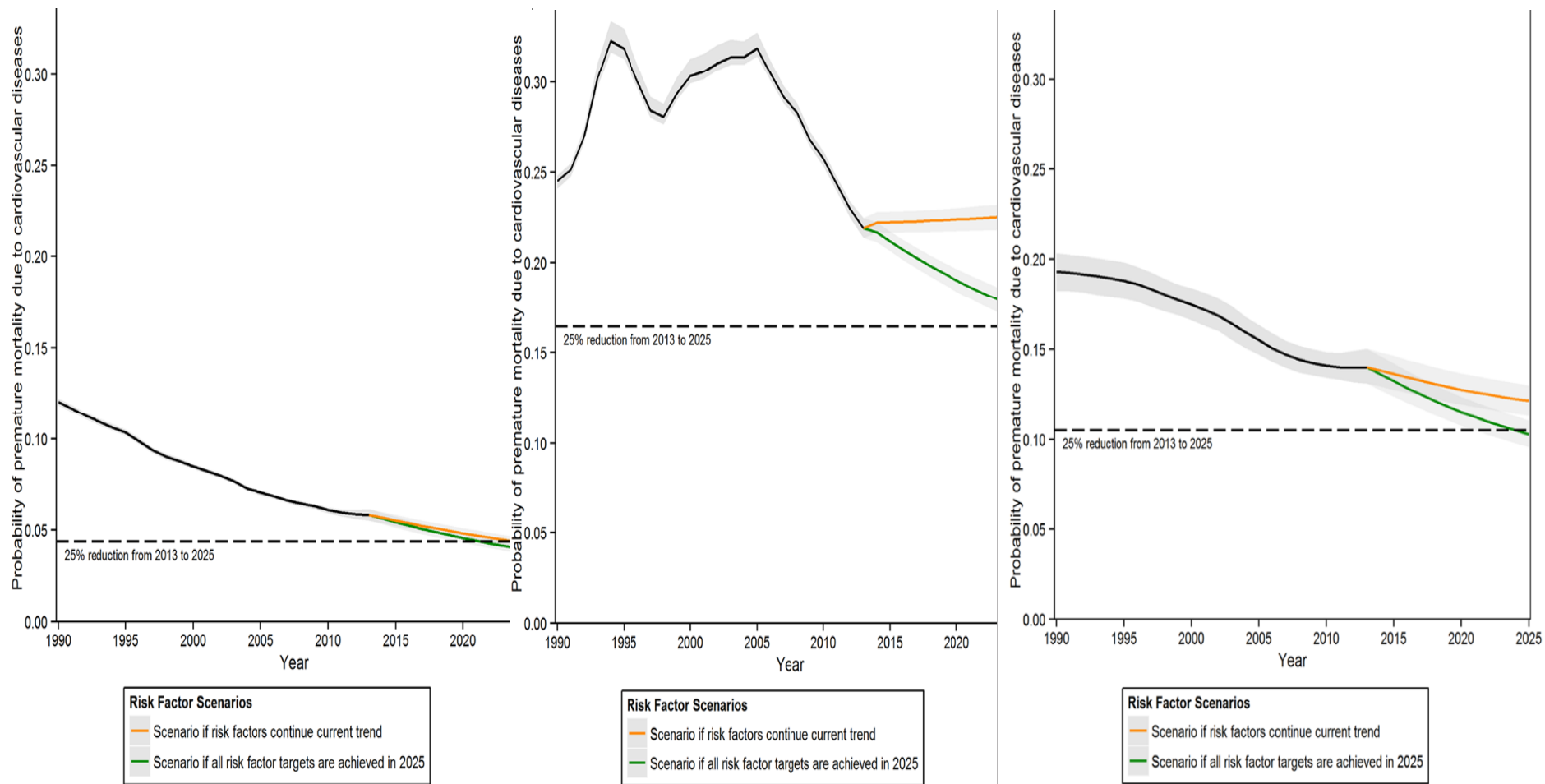
# Regional Probability of Premature CV Death

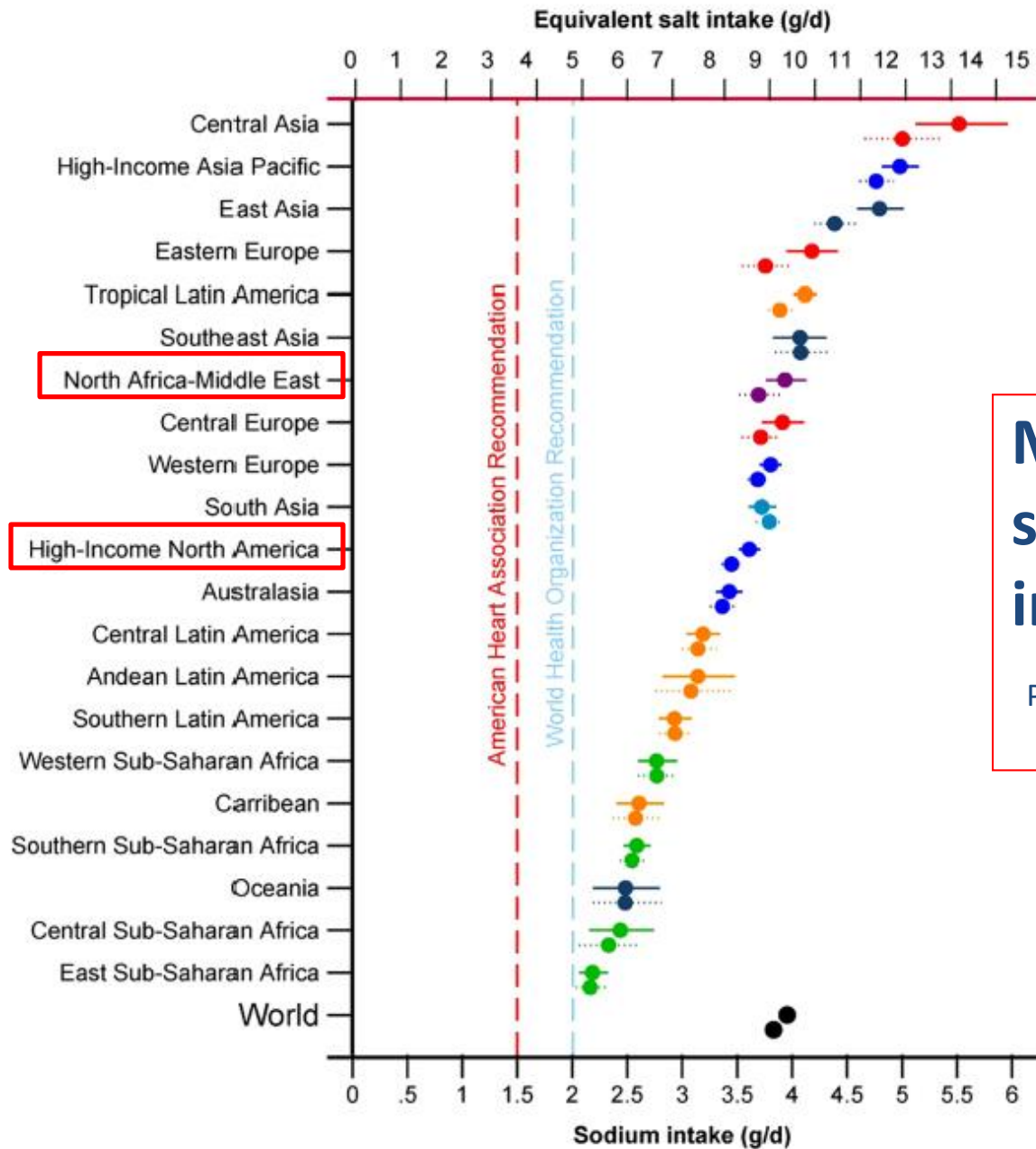
## Effect of Risk factors Modification

High Income Countries

Eastern Europe/Central Asia

Middle East/North Africa



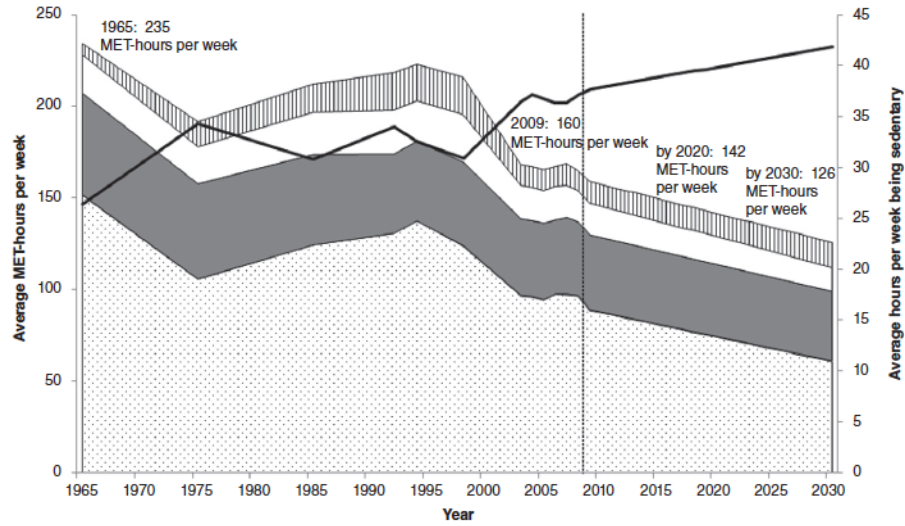


**Mean age-standardized sodium intakes (g/day) in 1990 and 2010**

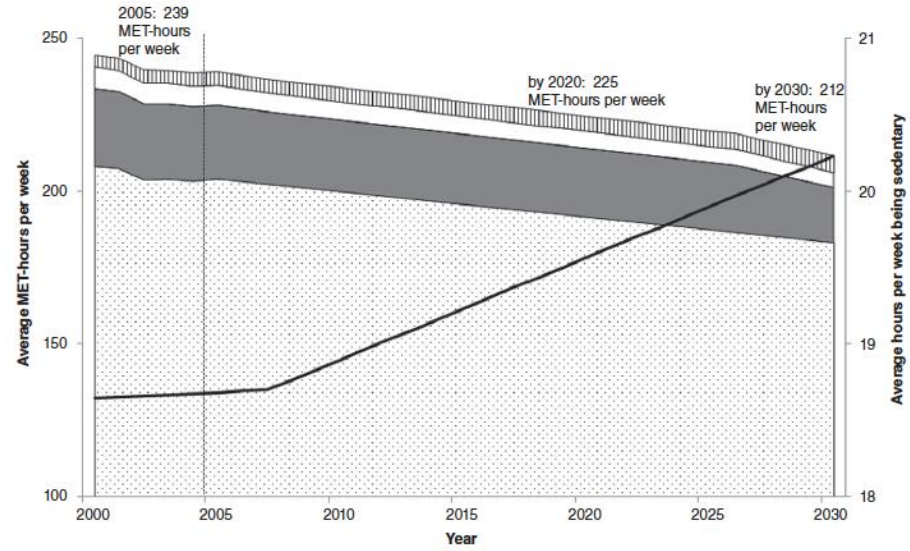
Powles J, *BMJ Open*. 2013;3(12).



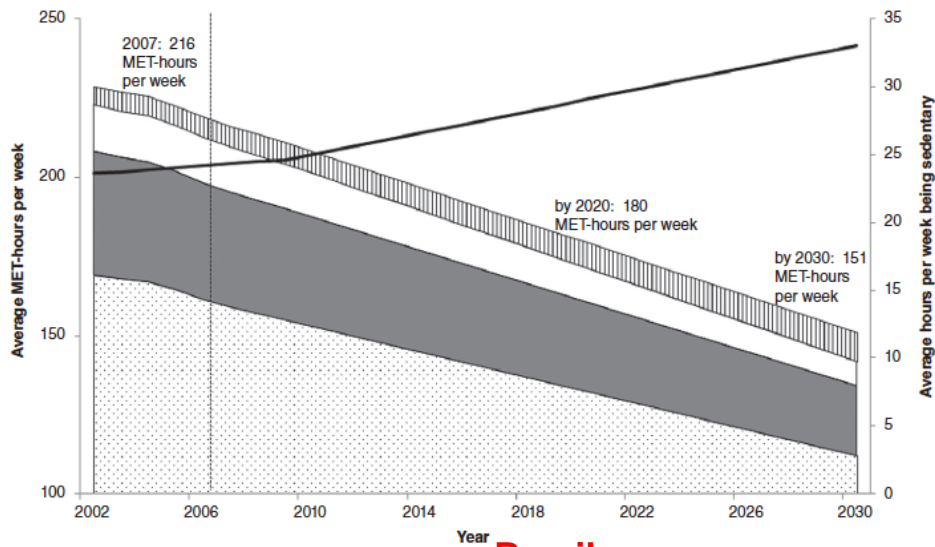
# Average Physical Activity (MET-hours/week)



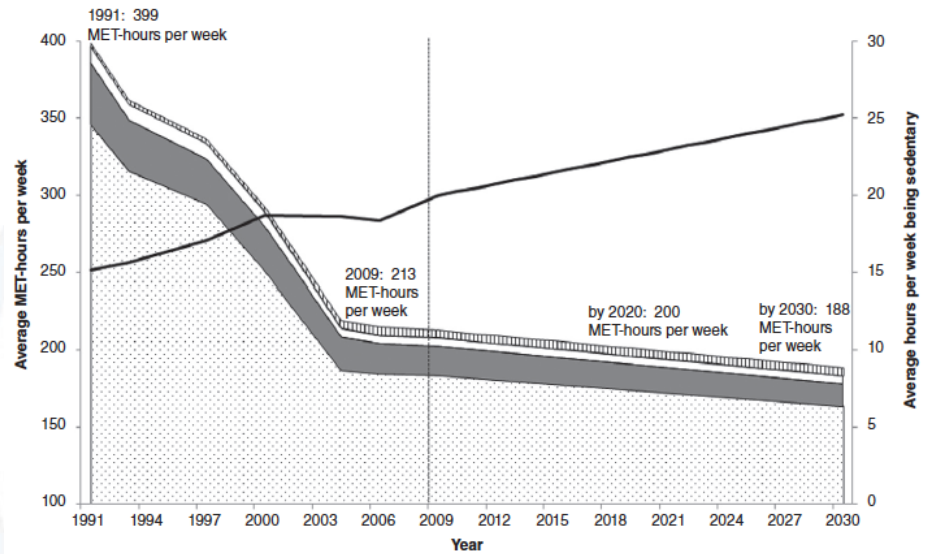
**United States**



**India**



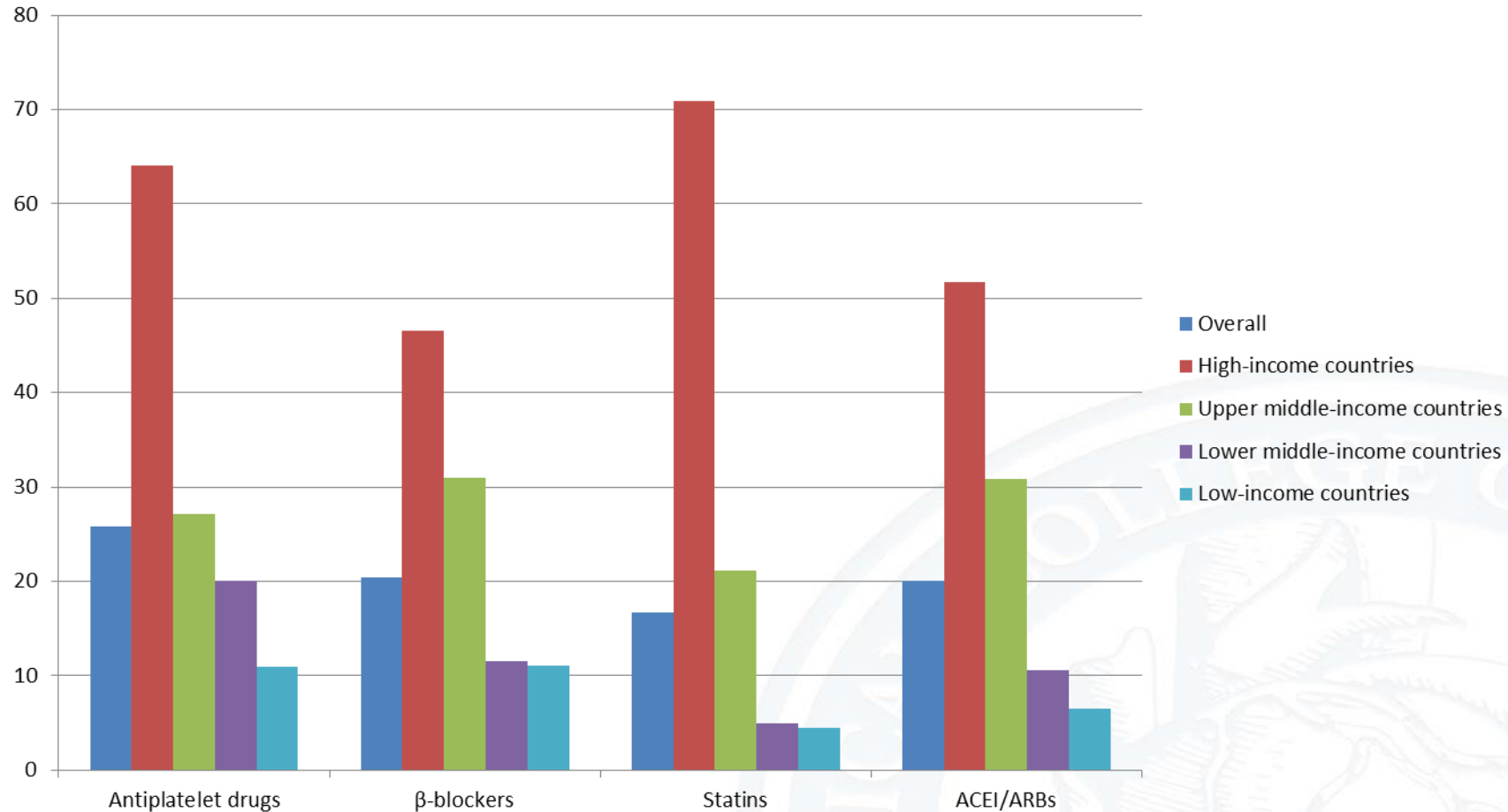
**Brazil**



**China**



# Use of Secondary Meds by Country Income (%)



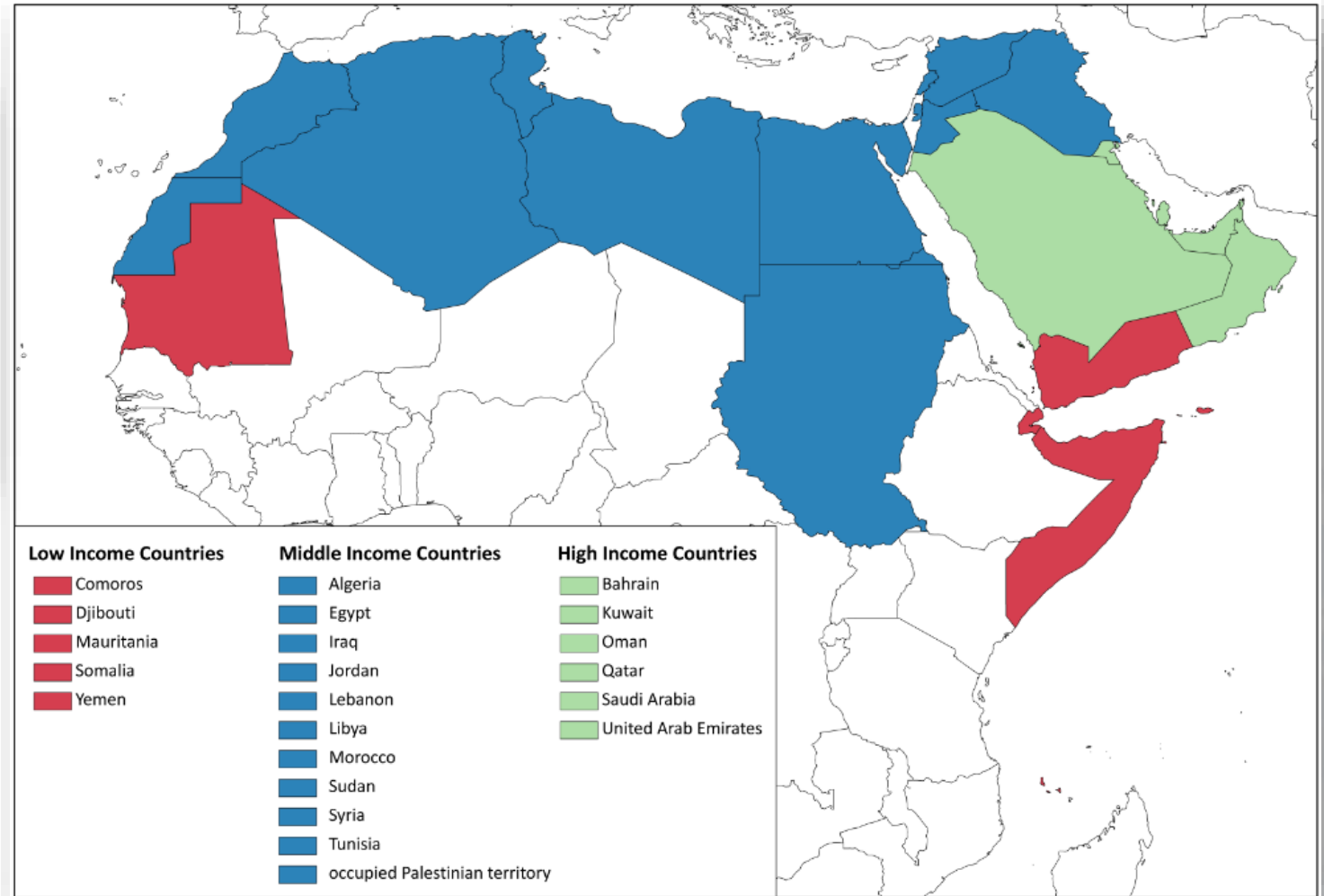
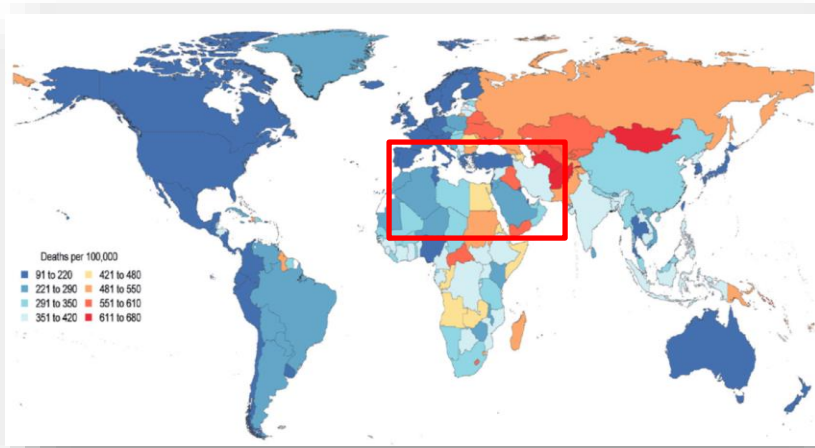
Source: Yusuf, S., Islam, S., Chow, C. K., Rangarajan, S., Dagenais, G., Diaz, R., ... Teo, K. K. (2011). *Lancet* 378(9798), 1231–43.



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# The Middle East and North Africa

## *Distribution of Countries by Income Level*



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# Top 10 causes of Death in the Arab Region, 2010

## Low income countries

1 Lower respiratory	52.5
2 Diarrheal diseases	27.2
3 Malaria	19.5
4 Ischemic heart disease	16.1
5 Stroke	16.1
6 Preterm birth complications	11.1
7 Protein-energy malnutrition	9.8
8 Congenital anomalies	9.8
9 Tuberculosis	8.1
10 Road injury	7.2

## Middle income countries

1 Ischemic heart disease	196.9
2 Stroke	150.9
3 Lower respiratory infections	73.0
4 Cirrhosis	52.0
5 Diabetes	49.5
6 Hypertensive heart disease	38.4
7 Road injury	37.4
8 Preterm birth complications	36.7
9 Other cardio & circulatory	34.1
10 Chronic kidney disease	31.4

## High income countries

1 Ischemic heart disease	20.3
2 Road injury	13.1
3 Stroke	12.7
4 Lower respiratory infections	5.4
5 Diabetes	4.7
6 Chronic kidney disease	3.9
7 Preterm birth complications	3.8
8 Congenital anomalies	2.6
9 Hypertensive heart disease	2.5
10 Other cardio & circulatory	2.2

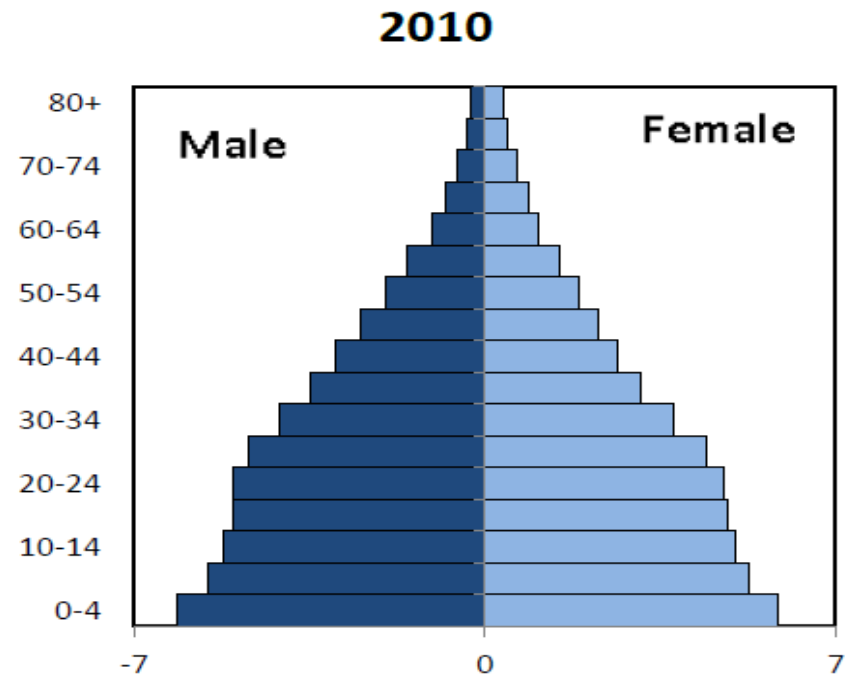
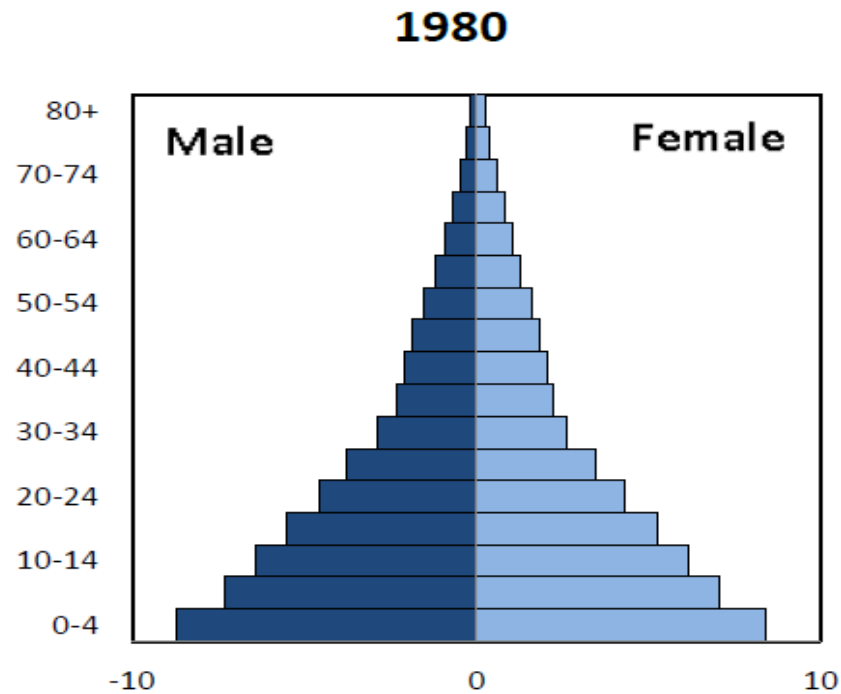
Abdul Rahim H. et al., Lancet 2014



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# Demographic Transition

## Population Pyramid: Arab World



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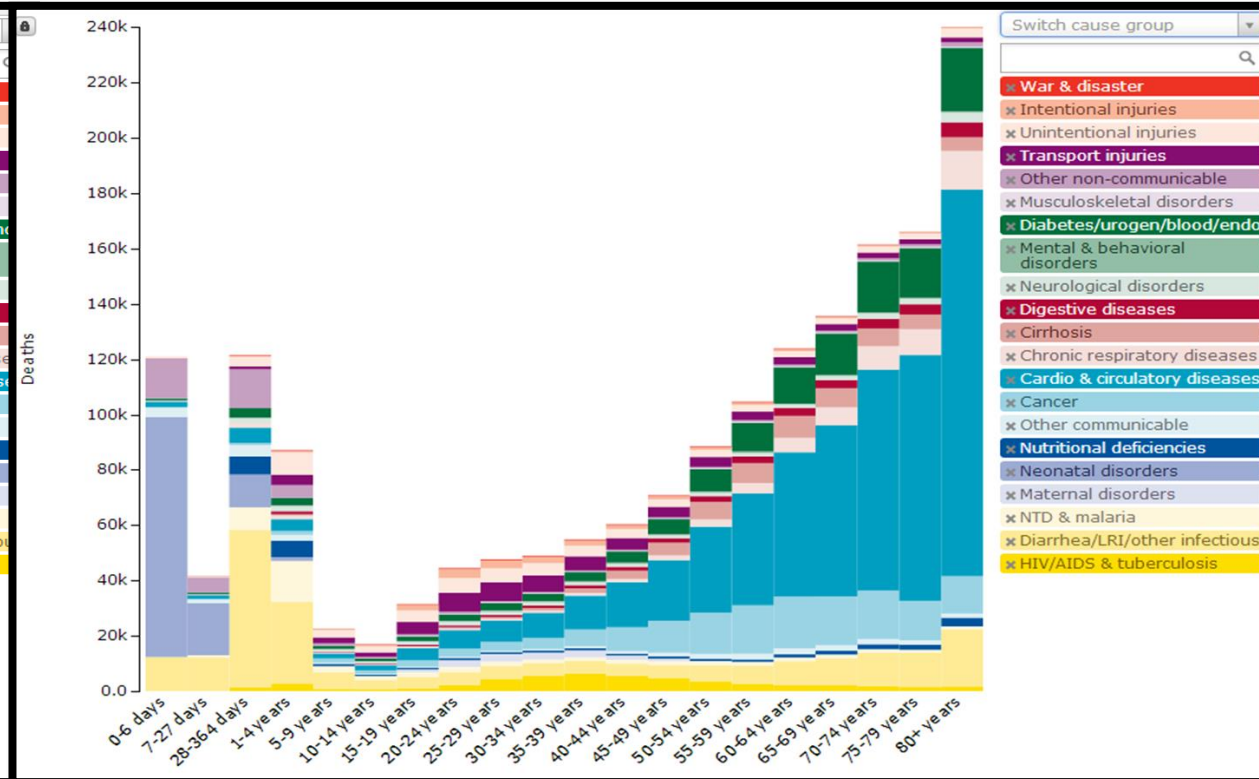
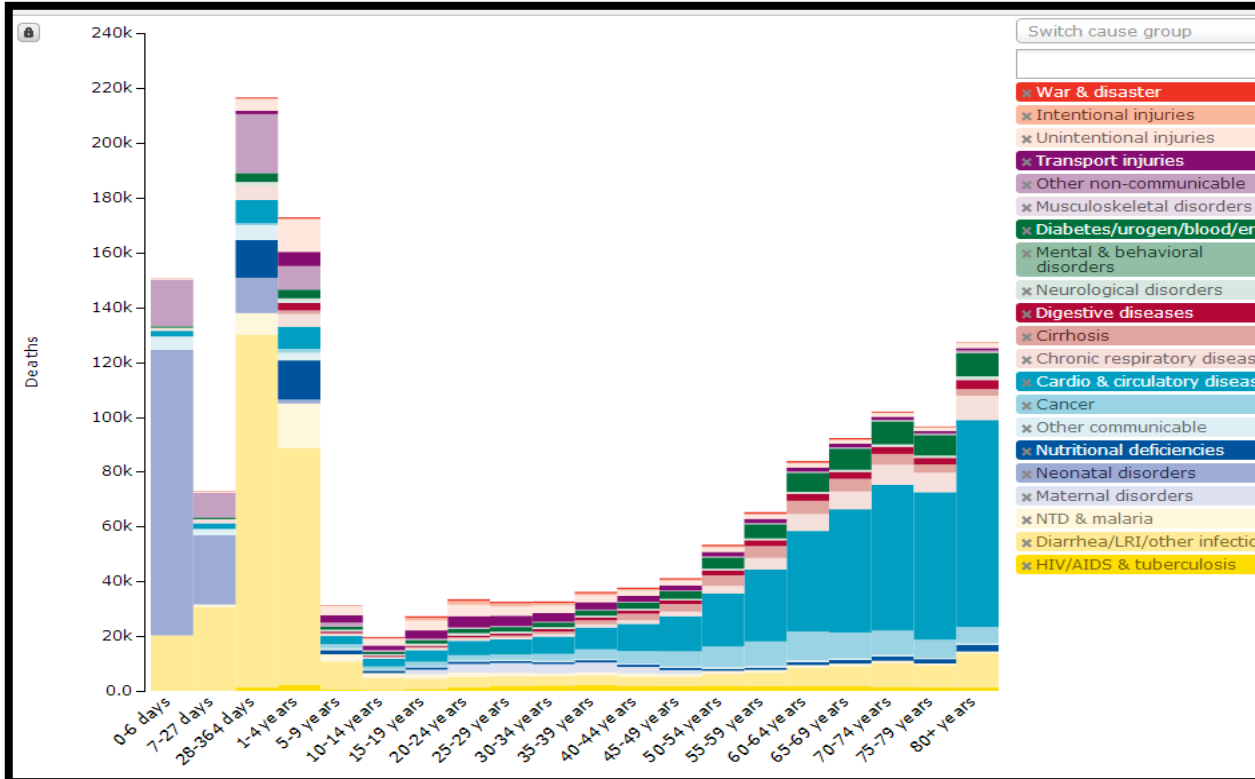
AM Sibai



# Age and Cause of Deaths in the Arab World

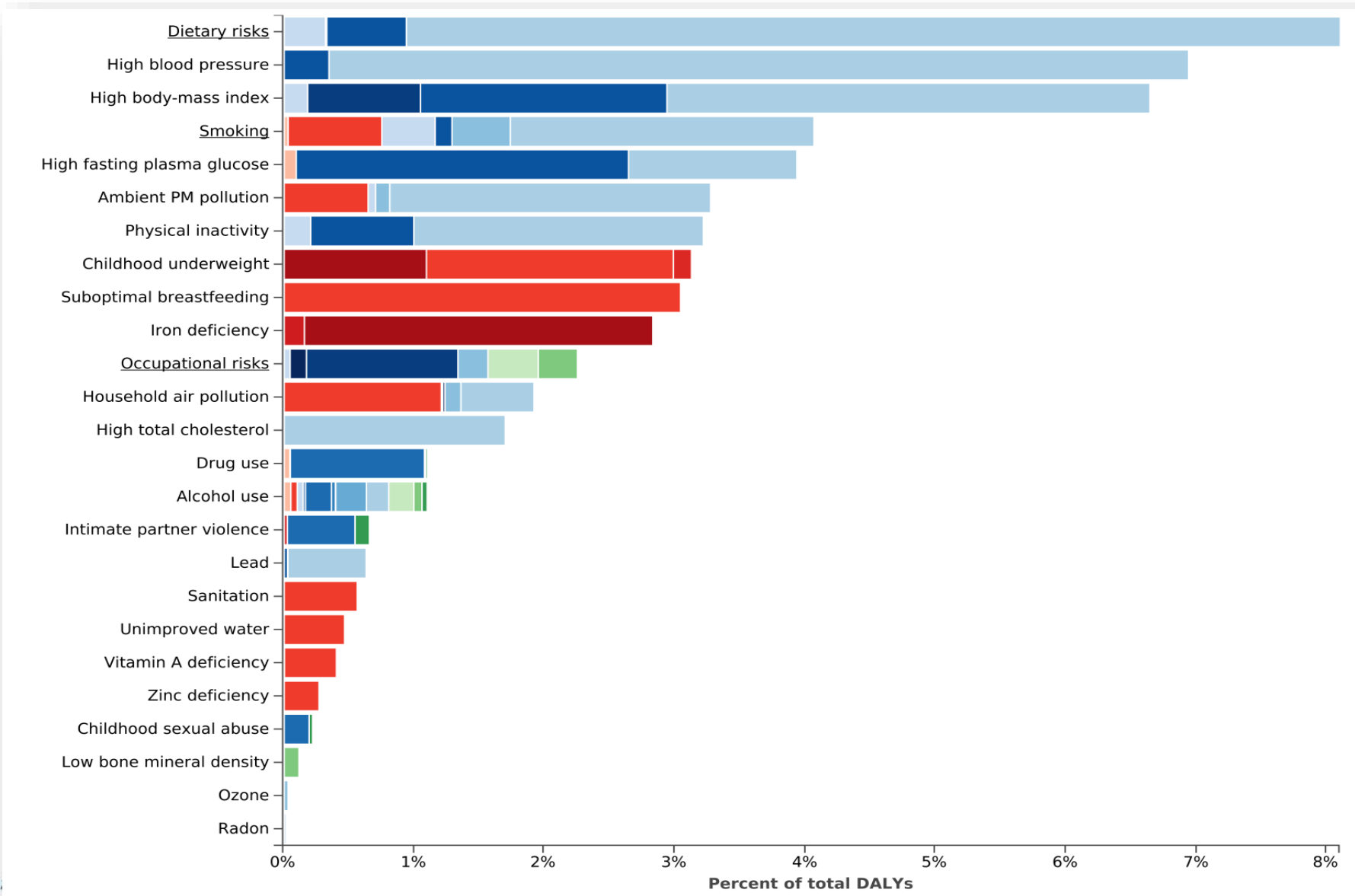
1990

2010



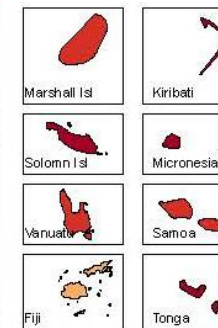
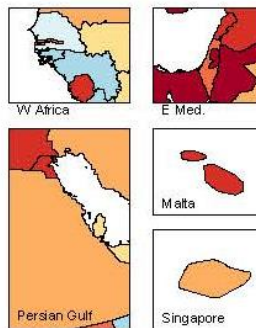
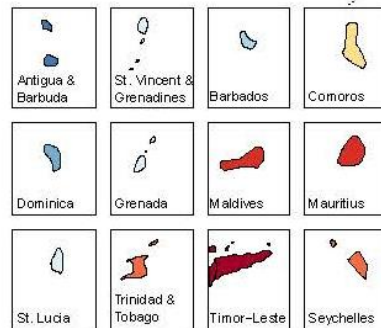
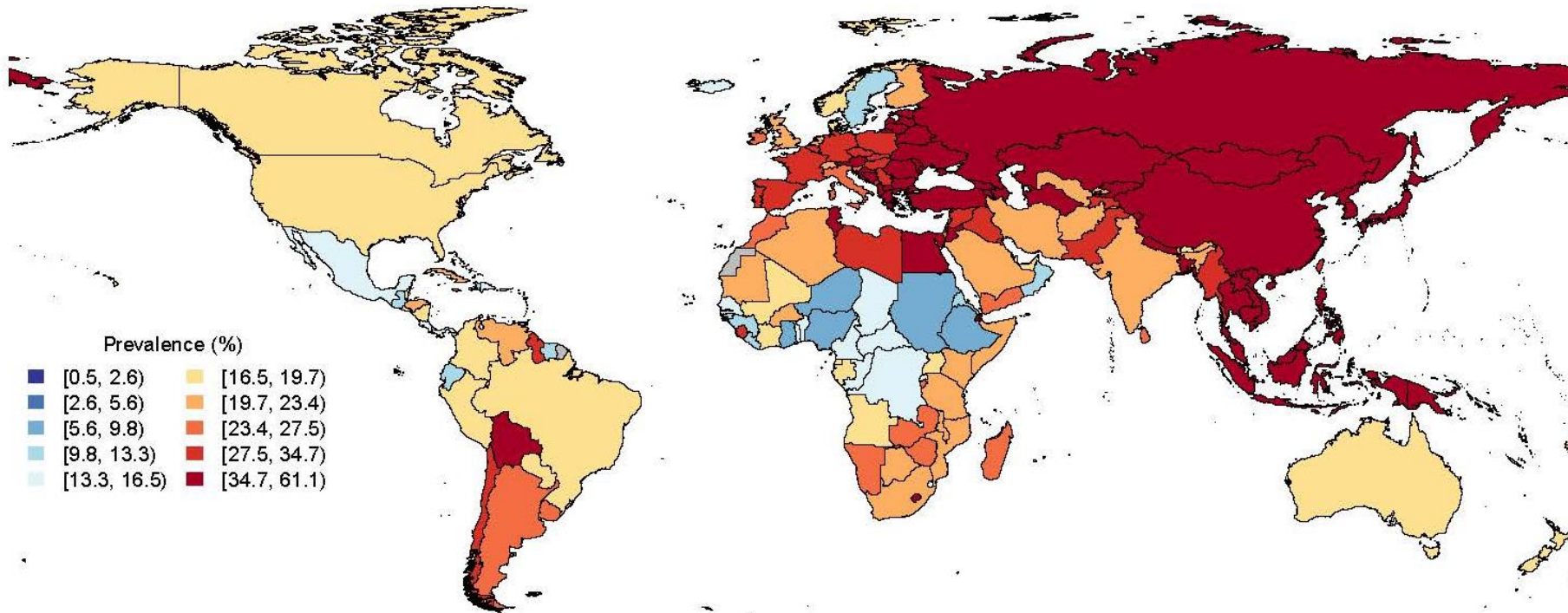
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# Top risk factors, Arab World, 2010



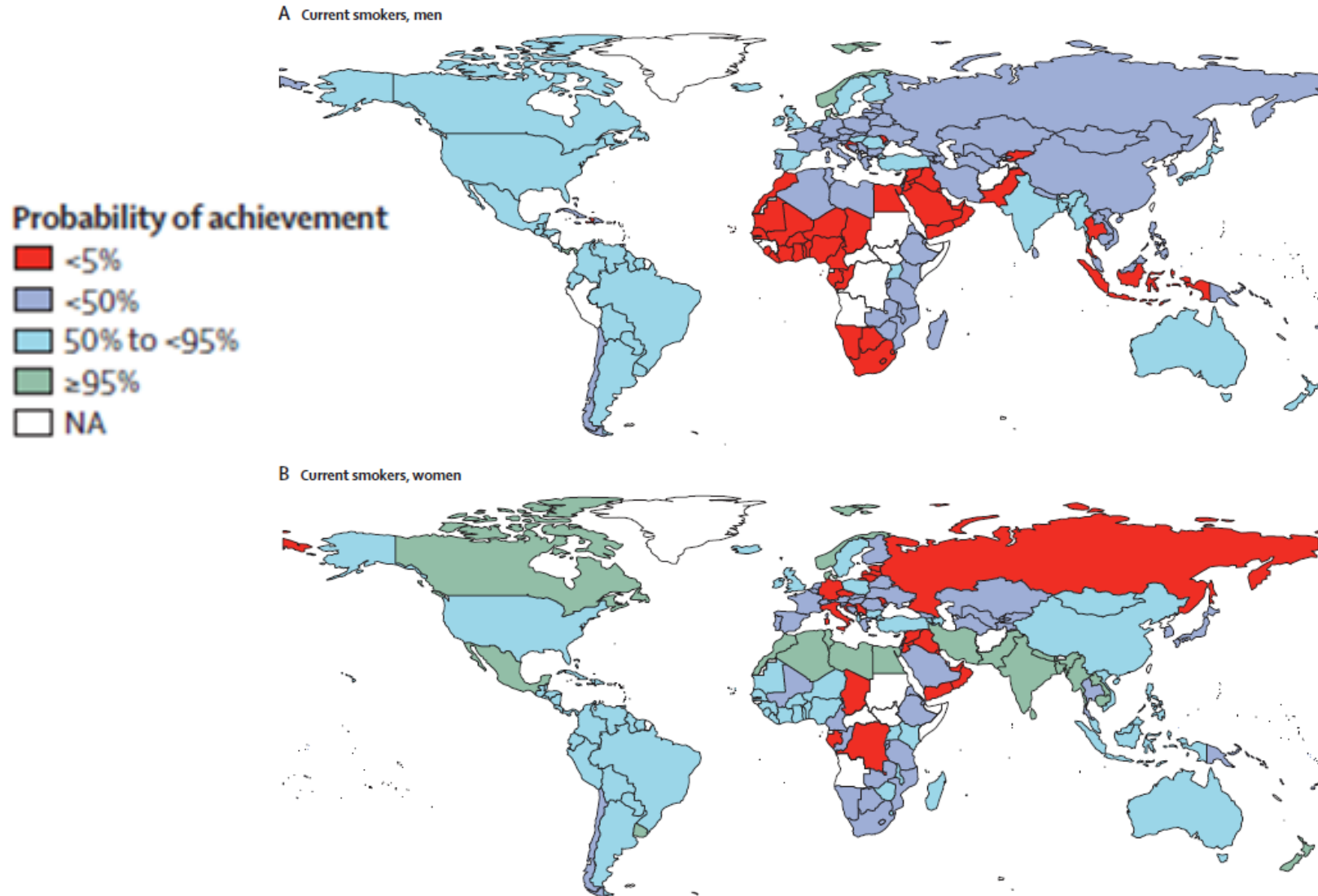
Help.  
Learn. Advance. Heal.

# Age-standardized smoking prevalence, males, 2012



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# Probability of 30% reduction in tobacco use by 2025



Source: Bilano V, Gilmore S, Moffet T, et al. Global trends and projections for tobacco use, 1990–2025: an analysis of smoking indicators from the WHO Comprehensive Information Systems for Tobacco Control. *The Lancet*. 385(9972):966-976.

# Government's challenges

- Government main preoccupation is to **treat illness** and provide medical care, as demanded by the people.
- **Vested interests** oppose potential government prevention programs. The tobacco industry is the strongest case in point.
- Many chronic conditions are related to lifestyle; hence **Government interference with personal choices** is not welcome.
- Prevention programs need to be **multi-sectoral** and so require leadership and coordination at all levels of the government.
- Collaboration of government with CV professional organizations on health is beneficial, requires trust, takes time to achieve



# How Can Health Care Professionals & CV Societies Contribute?



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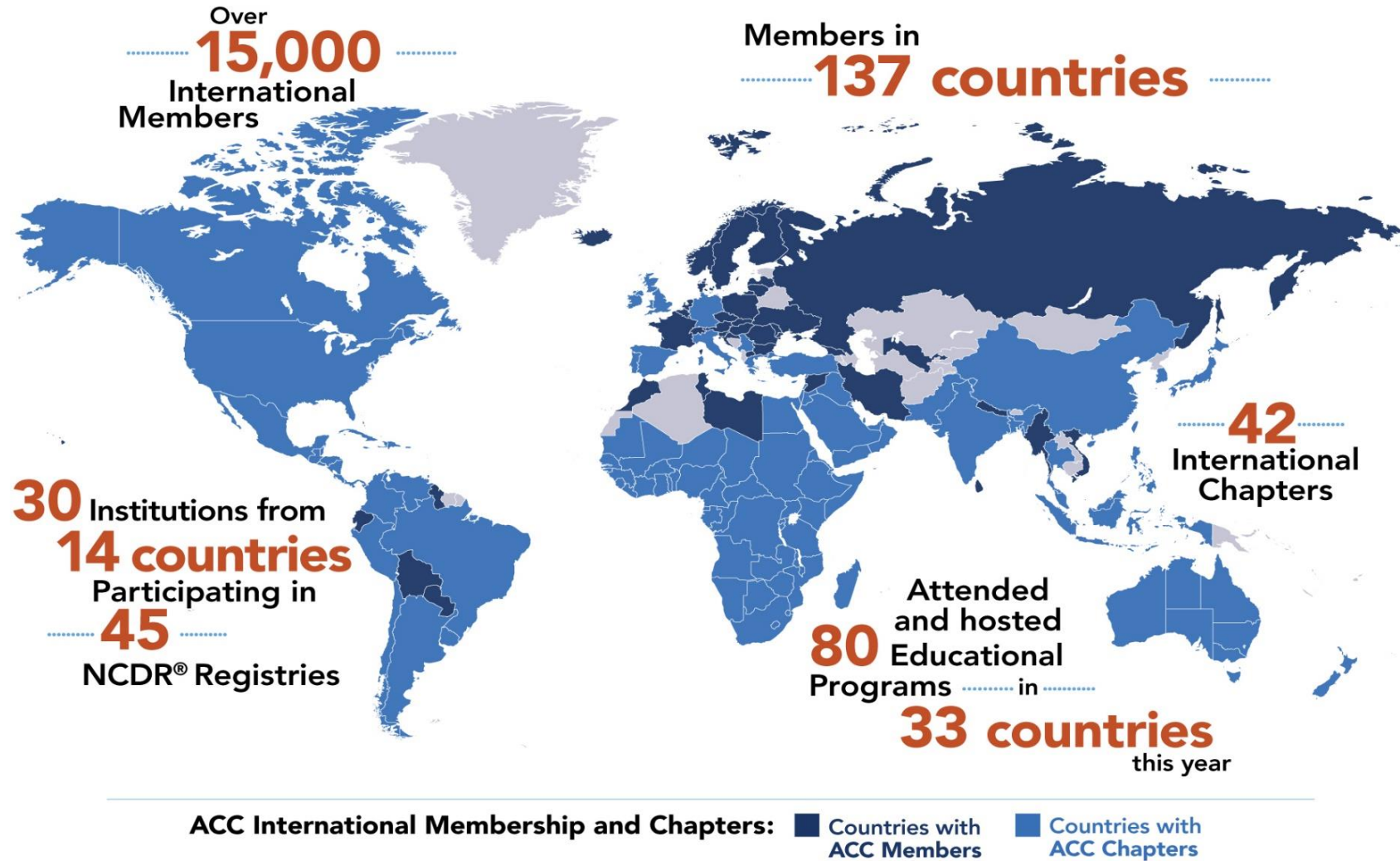


AMERICAN  
COLLEGE *of*  
CARDIOLOGY®

## The ACC Vision

A world where **innovation**  
and **knowledge** optimize  
cardiovascular care  
and outcomes.

# The Global Reach of the ACC



[ACC.org/International](https://acc.org/International)



# A Strong Network of Chapters Allows for Easy Implementation of Education and QI Initiatives

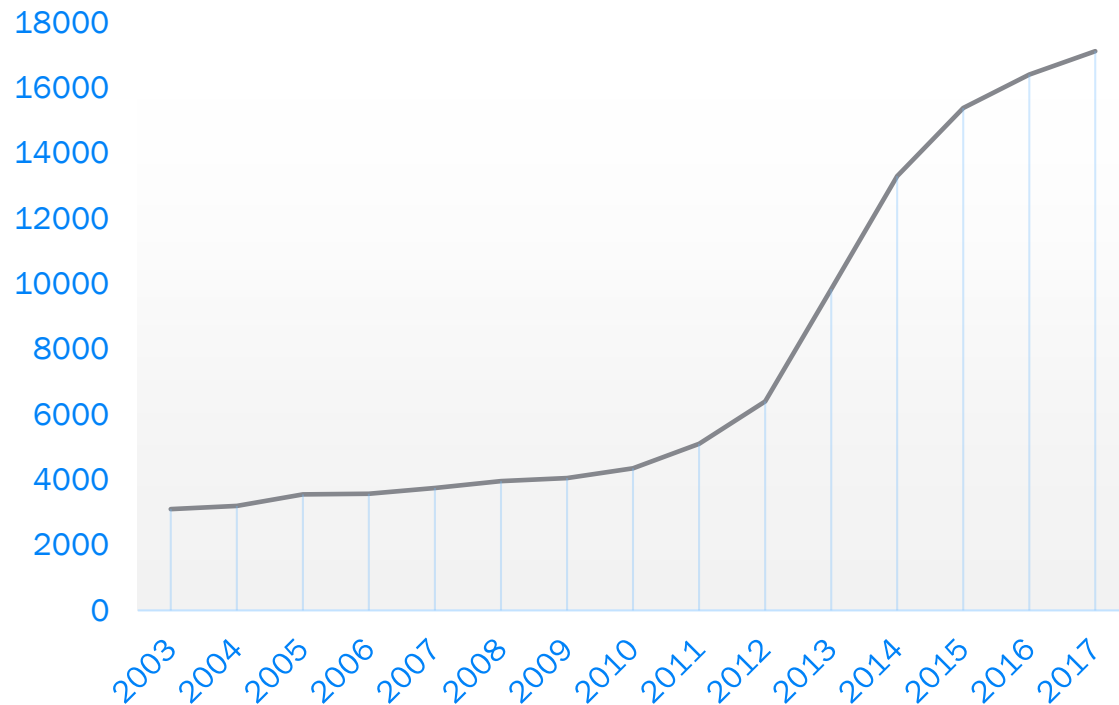
## The ACC's 42 International Chapters



# We Have Seen the Fruits of an Inclusive Approach

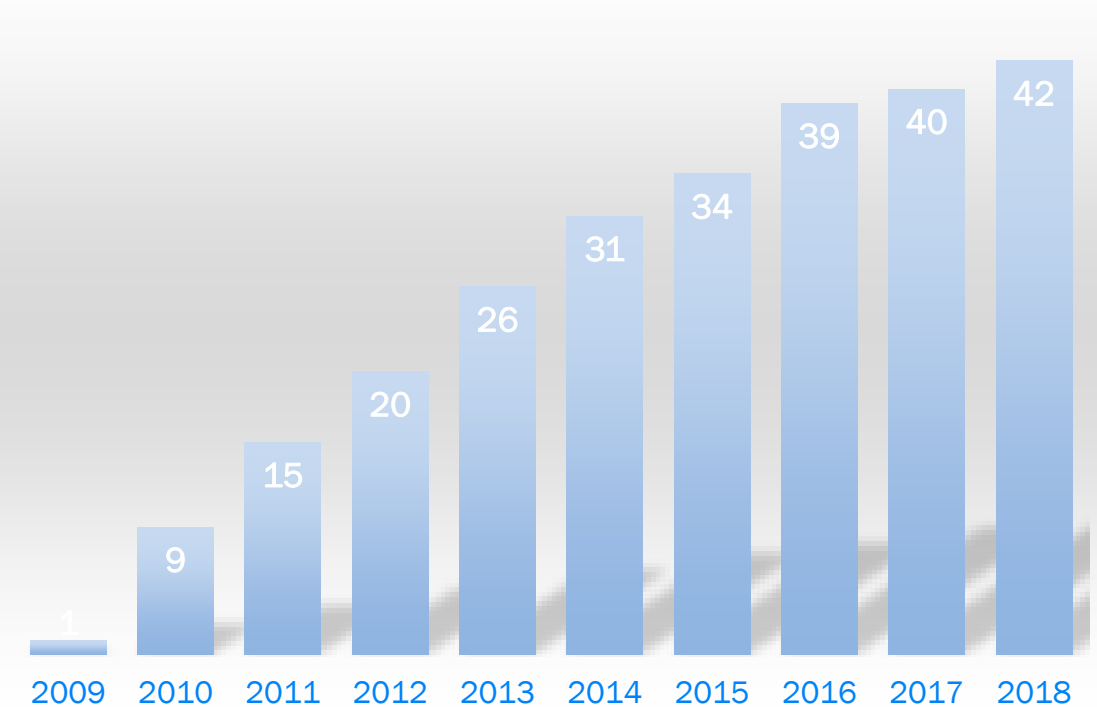
**International Members Have Grown 20% YoY since 2012 and Constitute Almost One Third of ACC Membership**

International Member Growth



**Rapid Proliferation of International Chapters Has Strengthened ACC's Global Relationships and Infrastructure**

International Chapter Growth



# The ACC Regional Conferences Epitomize Our Approach

**ACC LATIN AMERICA CONFERENCE**  
LIMA  
Fall 2018  
[ACC.org/LatinAmerica2018](http://ACC.org/LatinAmerica2018)

**ACC MIDDLE EAST CONFERENCE**  
JEDDAH  
Fall 2018  
[ACC.org/MiddleEast2018](http://ACC.org/MiddleEast2018)

**ACC ASIA CONFERENCE**  
SHANGHAI  
Fall 2018  
[ACC.org/Asia2018](http://ACC.org/Asia2018)

**ACC International Conferences 2018**

**GLOBAL EXPERTS.  
LOCAL LEARNING.**

**LEARN MORE AT ACC CENTRAL, BOOTH #3345**

**#ACC18**

ACC.18

# Train the Trainer

**A top down teaching program  
with far reach and exponential growth**



**Train the Trainer in China  
2013-2015**



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# ACC's Global CVD Prevention Program

In 2016, the ACC launched a global CVD Prevention Webinar Education Program in 10 countries; to date, the program has reached over **50,000 clinicians**.

## Locally Relevant



Education is developed in partnership with ACC and local experts to ensure clinically relevant instruction

## Practical



Webinars feature case studies presented by ACC faculty and local experts to reinforce real-world application of knowledge gained

## Interactive



Technology through a webinar platform allows clinicians to participate remotely and submit questions to the presenters

## Continual

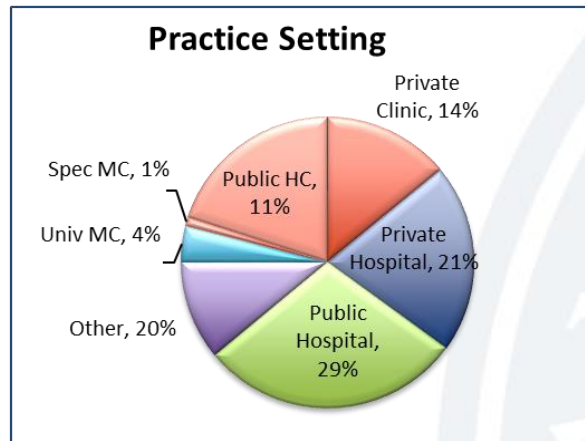
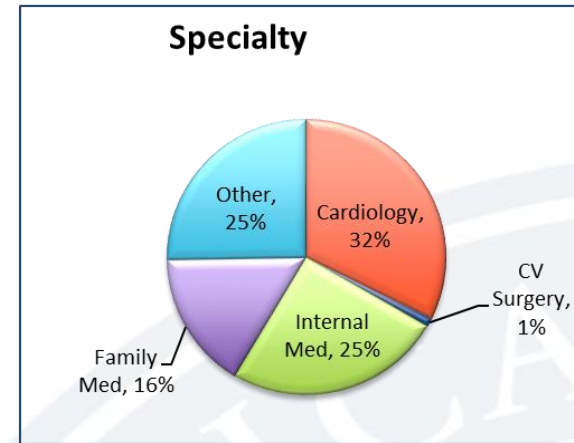
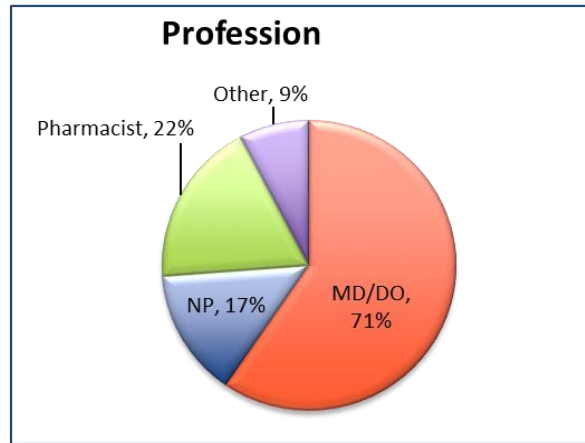


ACC provides social media posts with the latest developments in ASCVD prevention for each participating country

# Achieving Global Coverage

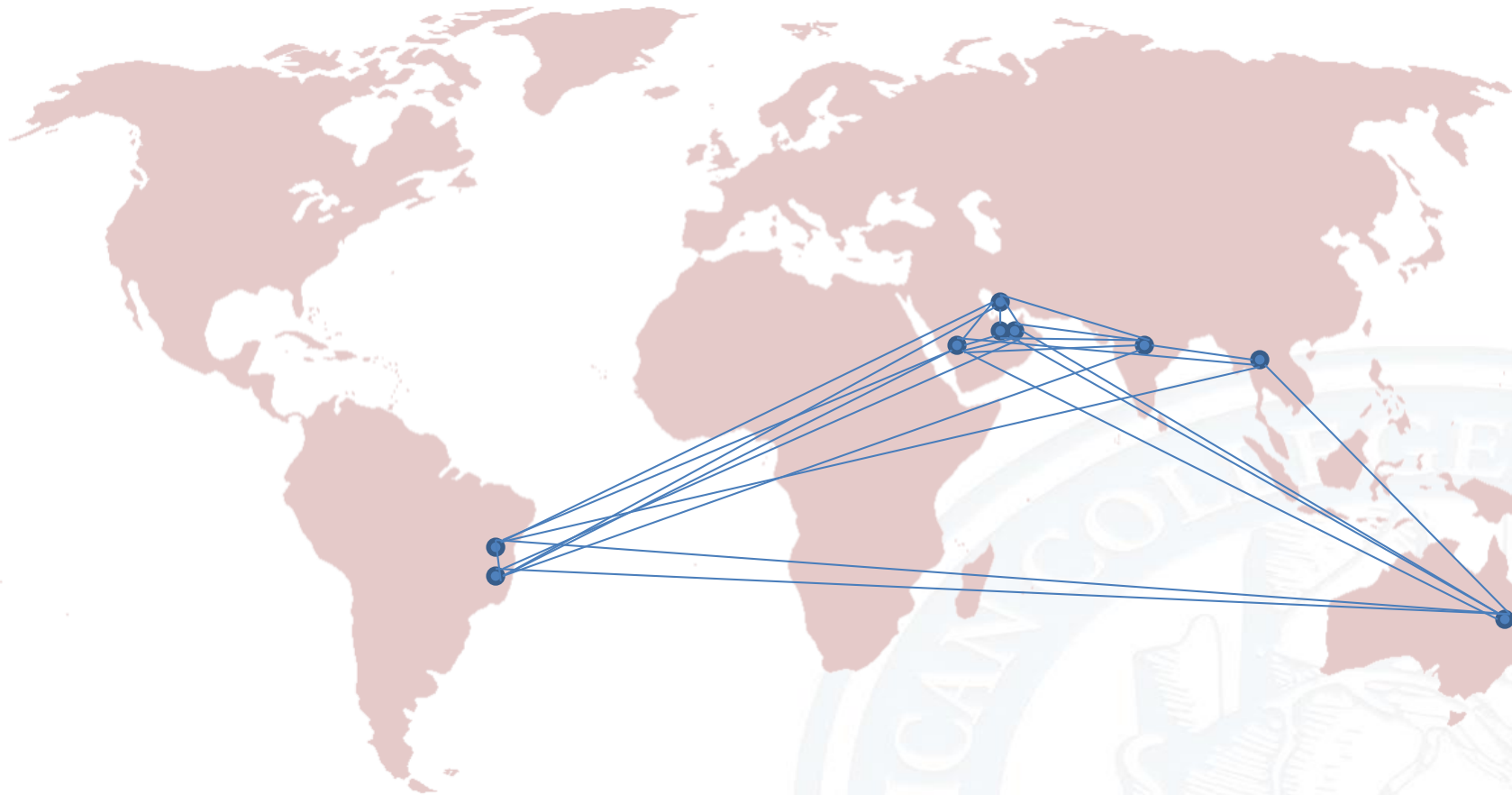


# ASCVD Program Reach & Audience



# NCDR: A Global Initiative

*Assessing Quality*

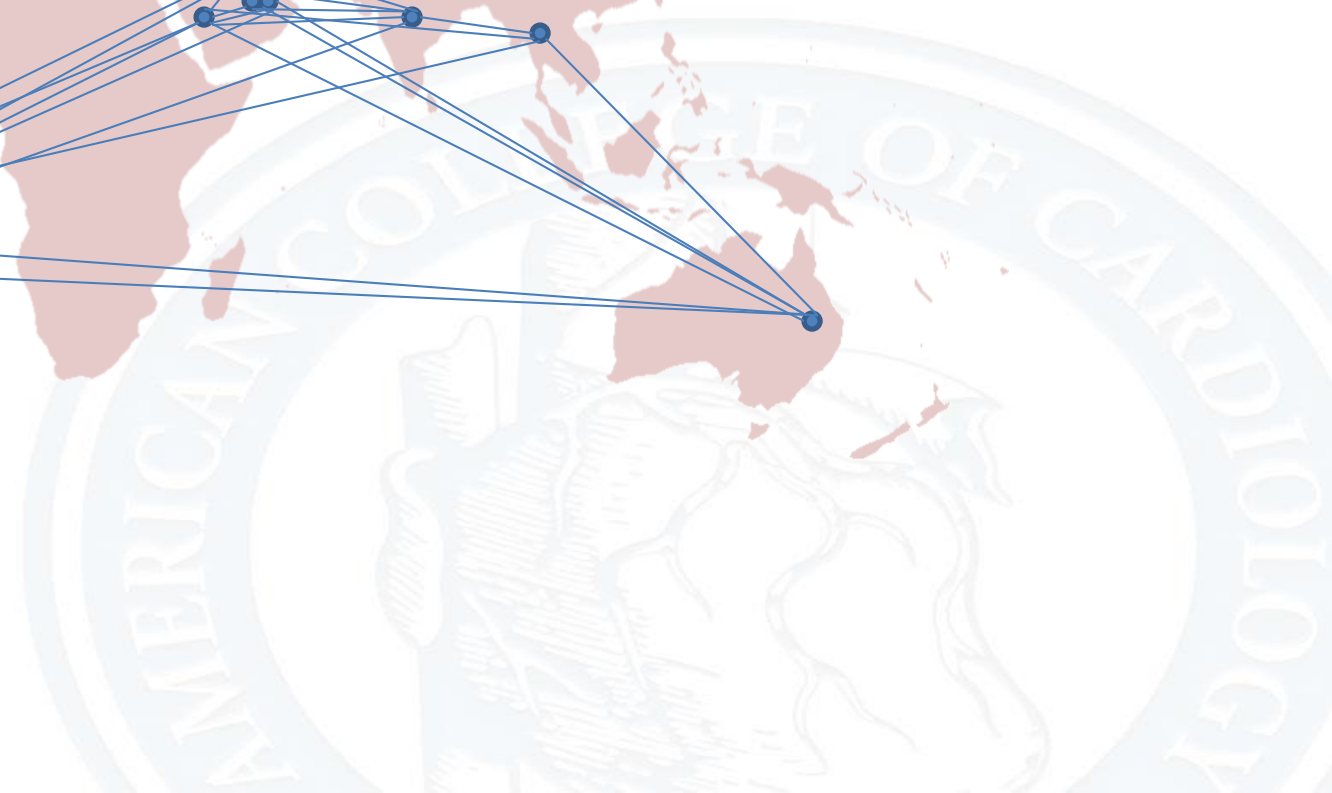


*H  
L*



**NCDR**<sup>®</sup>

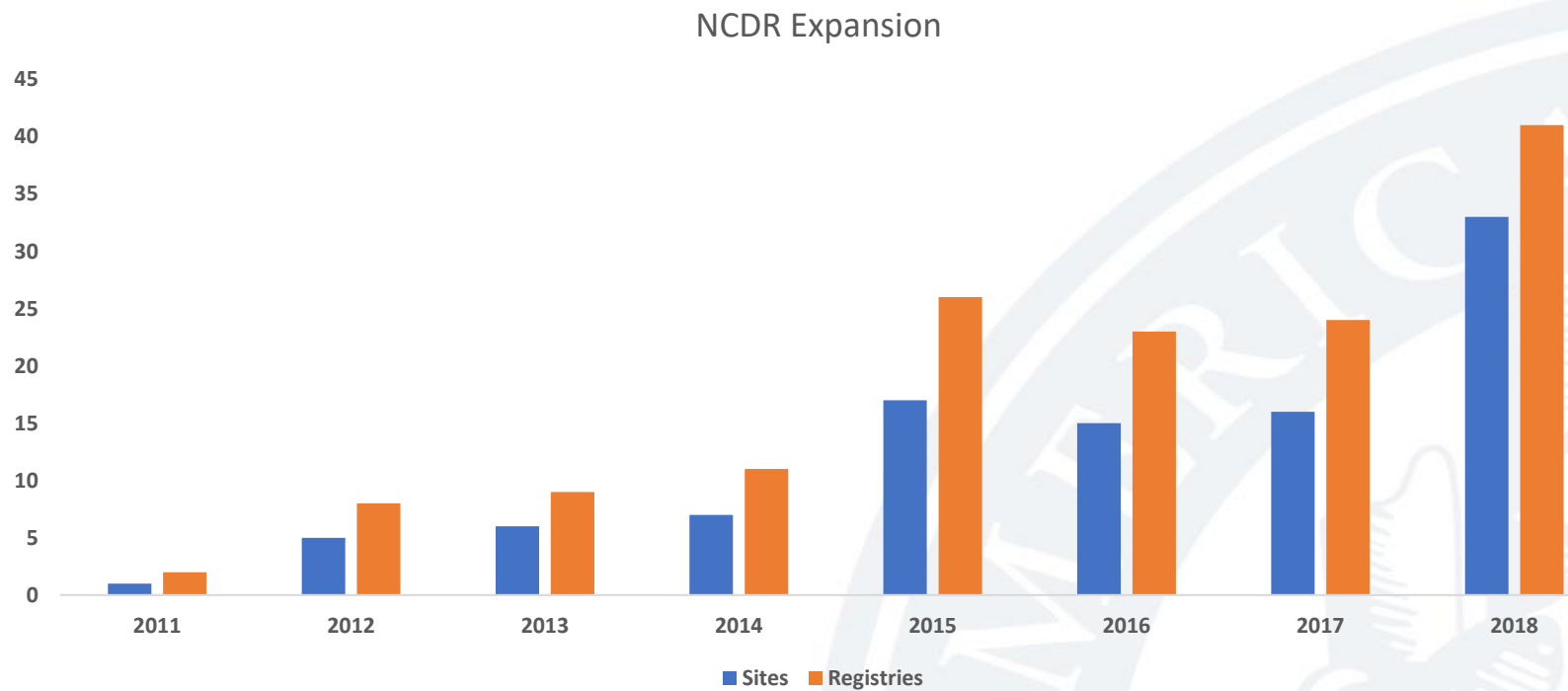
NATIONAL CARDIOVASCULAR DATA REGISTRY





# ...that is Steadily Growing with a Registry Presence across Five Continents

## International Sites and Registries by Year





**CardioSmart**<sup>®</sup>

American College *of* Cardiology

# The CardioSmart 2018



# Ecosystem

# It is Essential to Engage with the Community & Promote CV Health



## Learn When To Listen To Your Heart:

Signs, Symptoms and Risk Factors of Heart Disease



# International Leadership Academy at ACC

## *Growing the Emerging Leaders*



*Helping Cardiovascular Professionals  
Learn. Advance. Heal.*

# The Road Towards Achieving “25 x 25” & Better Cardiovascular Health

- Significant reduction in CV Risk factors, morbidity and mortality is achievable; It is regional, local, and difficult.
- It is multifactorial: aim at risk factor modification and availability of both treatments and policies to reduce CVD mortality
- Policy interventions will likely include a focus on tobacco and salt reduction
- Need resources! Countries will need to improve access to medications and develop health systems that are capable of managing acute and chronic conditions
- Need champions and emerging leaders of health in government, community, and in the CV profession
- Professional societies can help partner for health (*community, government, industry*), educate health professionals and groom emerging leaders

