Global Epidemics of Heart Failure

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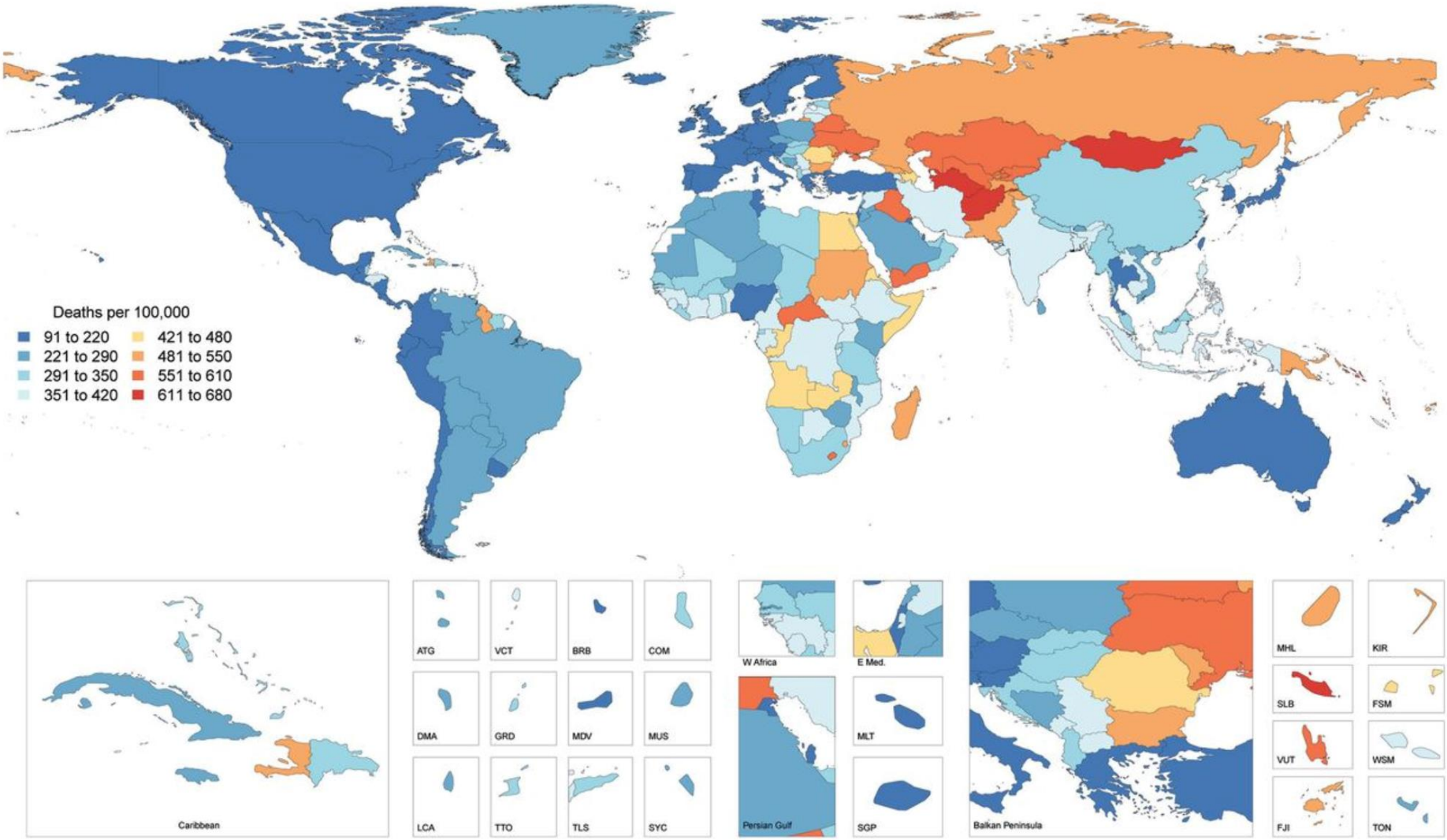
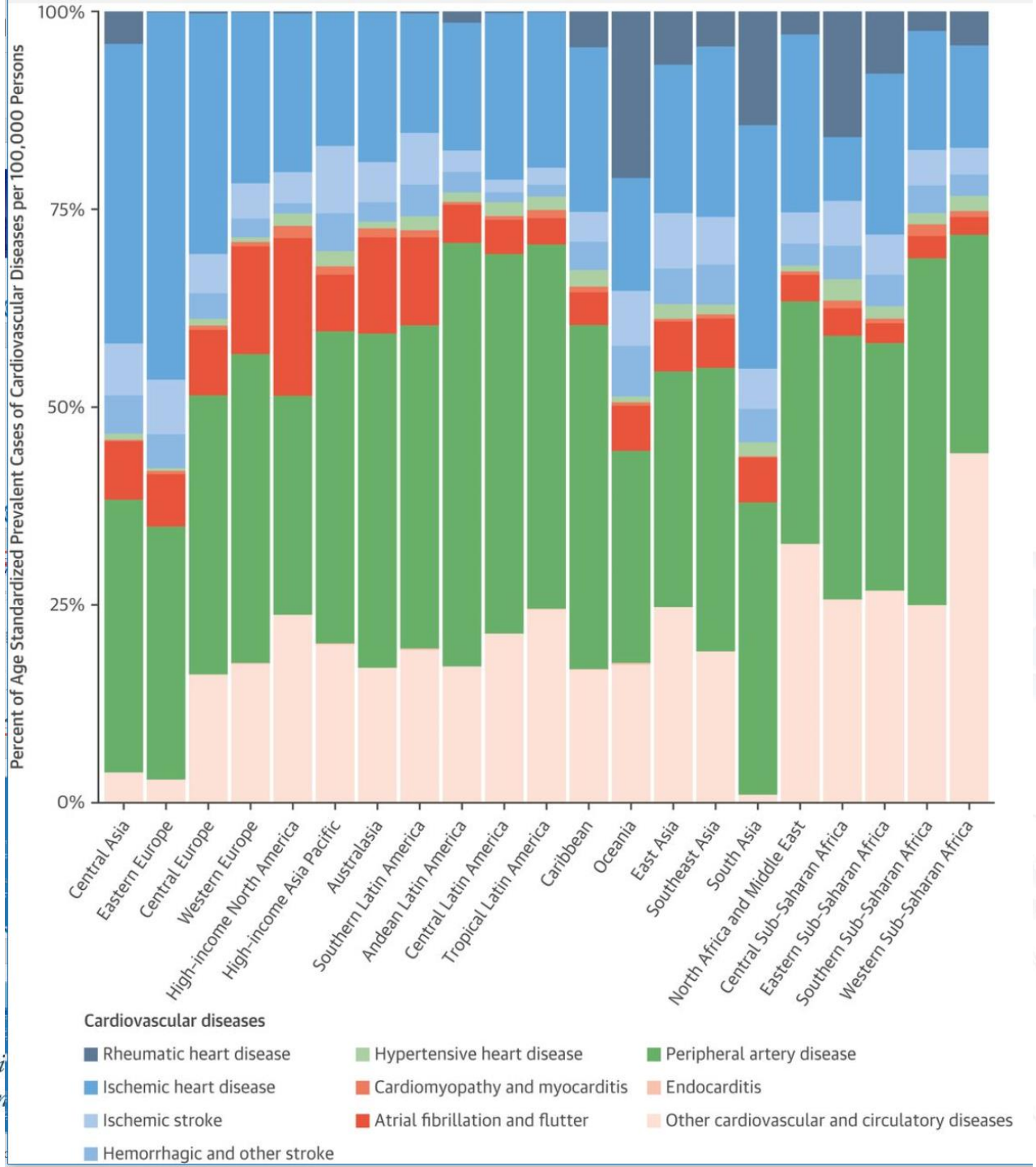
Global Epidemics of Heart Failure

- Heart failure (HF) is a global epidemic affecting an estimated 26 million people worldwide.
- In the United States, HF affects over 5 million people, and in 2009, 1 of every 9 deaths included HF as a diagnosis, reflecting 8% of the deaths attributable to cardiovascular disease (CVD).
- Approximately 1–2% of the adult population in developed countries has HF, with the prevalence rising to ≥10% among persons 70 years of age or older. There are many causes of HF, and these vary in different geographic regions of the world.
- HF with reduced ejection fraction (HFrEF) affects approximately half of the population with HF, with coronary artery disease, hypertension and diabetes being significant risk factors world-wide.

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



Roth, G.A. et al. J Am Coll Cardiol. 2017;70(1):1-25.


Percent of Age Standardized Prevalent Cases of Cardiovascular Diseases per 100,000 Persons
100%
75%
50%
25%
0%
Central Asia
Eastern Europe
Central Europe
Western Europe
High-income North America
High-income Asia Pacific
Australasia
Southern Latin America
Andean Latin America
Central Latin America
Tropical Latin America
Caribbean
Oceania
East Asia
Southeast Asia
South Asia
North Africa and Middle East
Central Sub-Saharan Africa
Eastern Sub-Saharan Africa
Southern Sub-Saharan Africa
Western Sub-Saharan Africa
Cardiovascular diseases
Rheumatic heart disease
Ischemic heart disease
Ischemic stroke
Hemorrhagic and other stroke
Hypertensive heart disease
Cardiomyopathy and myocarditis
Atrial fibrillation and flutter
Peripheral artery disease
Endocarditis
Other cardiovascular and circulatory diseases

Cardiomyopathies and Myocarditis

- Cardiomyopathies and acute myocarditis were a higher-ranked cause of CVD DALYs in the regions of Central and Eastern Europe than in other world regions.
- There were an estimated 2.54 million prevalent cases of cardiomyopathy and myocarditis in 2015. There was a slightly higher prevalence among children 1 to 4 years of age which then decreased for older children, increasing slowly throughout adulthood.
- A very large increase in cases of cardiomyopathy and acute myocarditis was estimated above 80 years of age, more than 6-fold higher than for the next youngest age group of 75 to 79 years of age.
- This condition accounted for a relatively small proportion of CVD cases overall, with the greatest age-standardized prevalence estimated for Southern sub-Saharan Africa, followed by tropical Latin America, high-income North America, and other regions of sub-Saharan Africa.

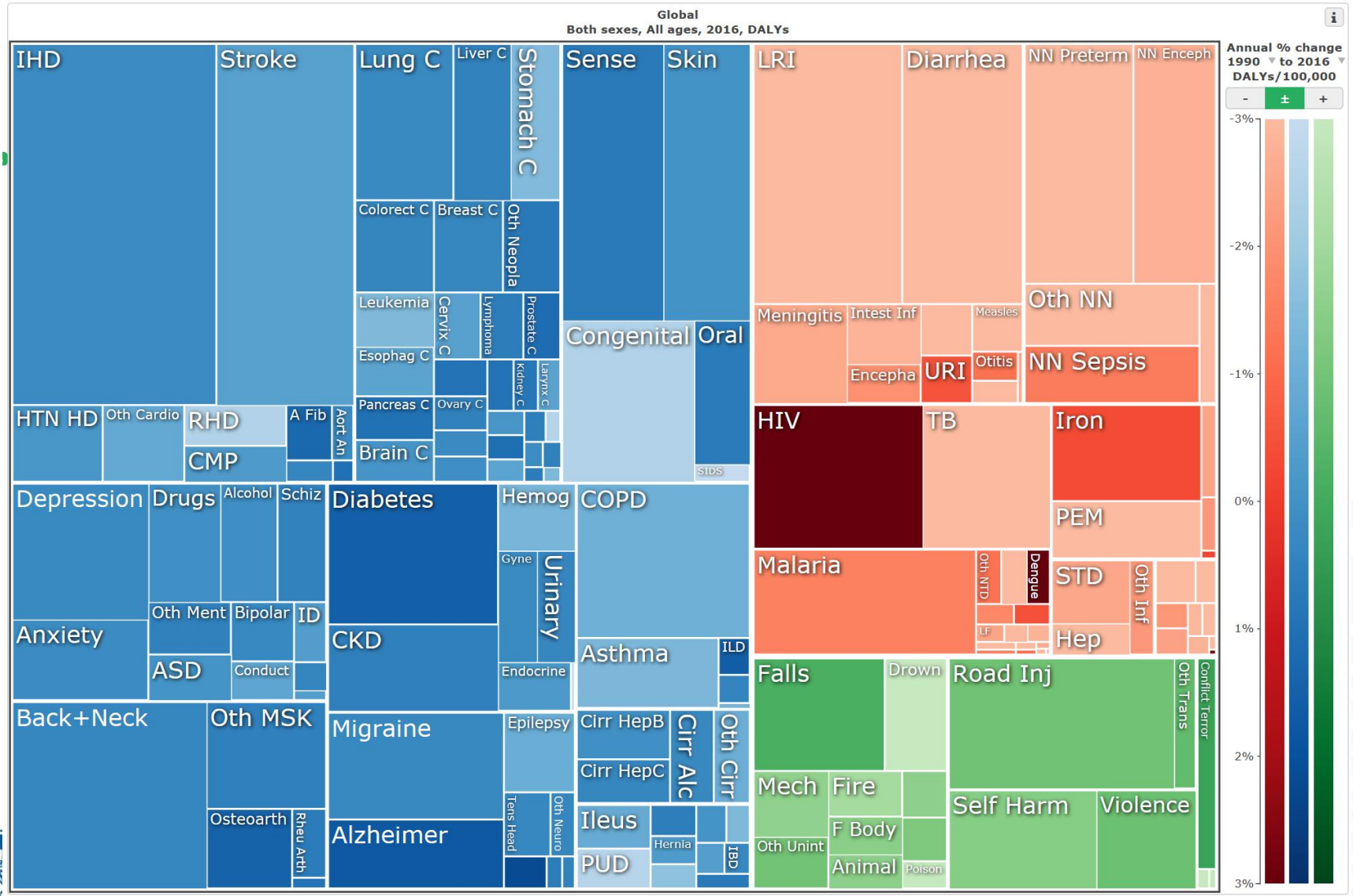
Roth, G.A. et al. J Am Coll Cardiol. 2017;70(1):1-25.

Cardiomyopathies and Myocarditis

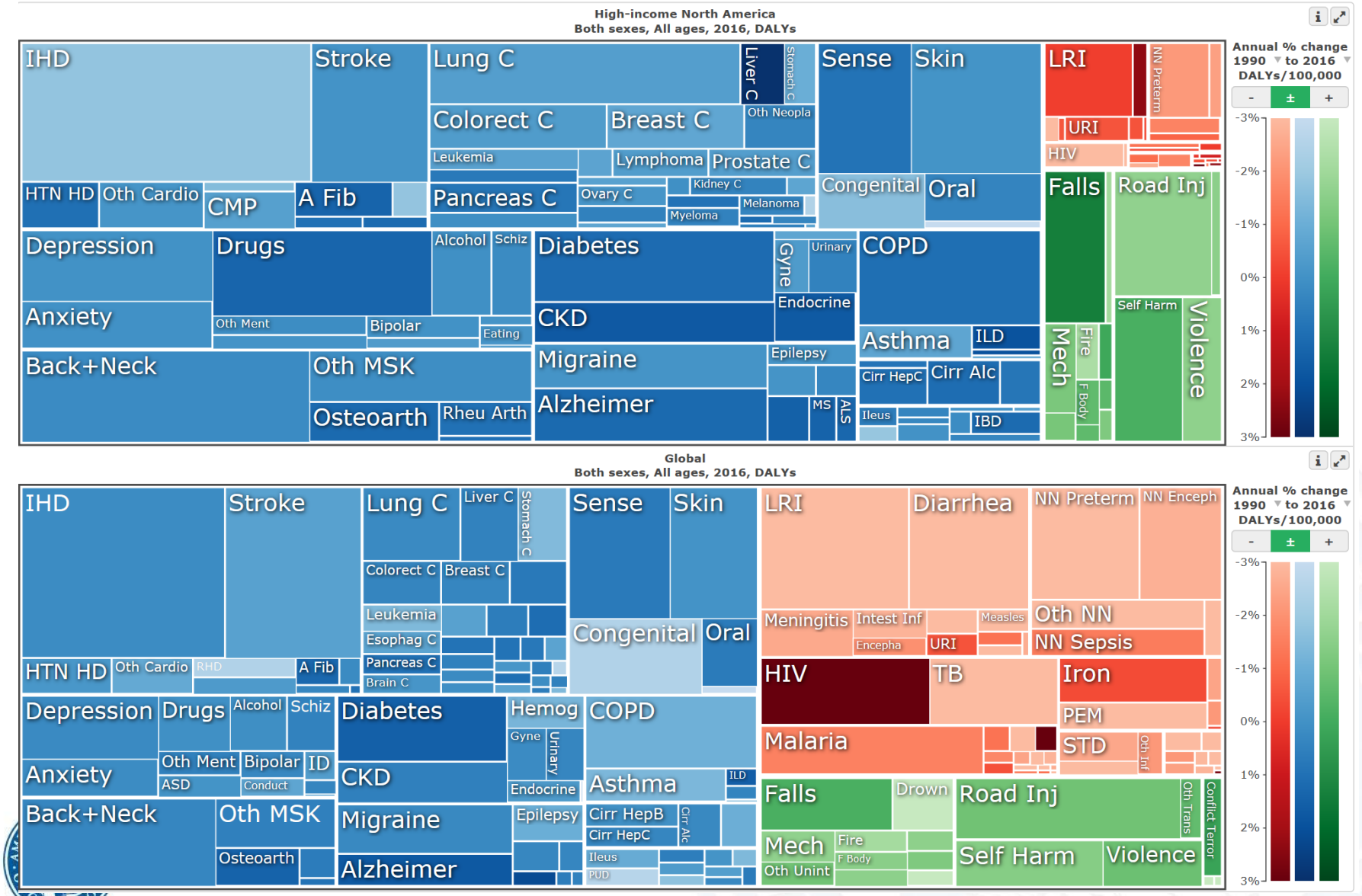
- There were 353,700 deaths due to cardiomyopathy and myocarditis in 2015.
- The mortality rate was as high as 47 per 100,000 persons within the first week of life. The mortality rate decreased by 5 years of age, and then increased steadily throughout adulthood before increasing more than 300% after 80 years of age, to a peak rate of 90 per 100,000.
- CVD deaths due to cardiomyopathy and myocarditis were most common in regions with high prevalence, including Southern sub-Saharan Africa and tropical Latin America.

Roth, G.A. et al. J Am Coll Cardiol. 2017;70(1):1-25.

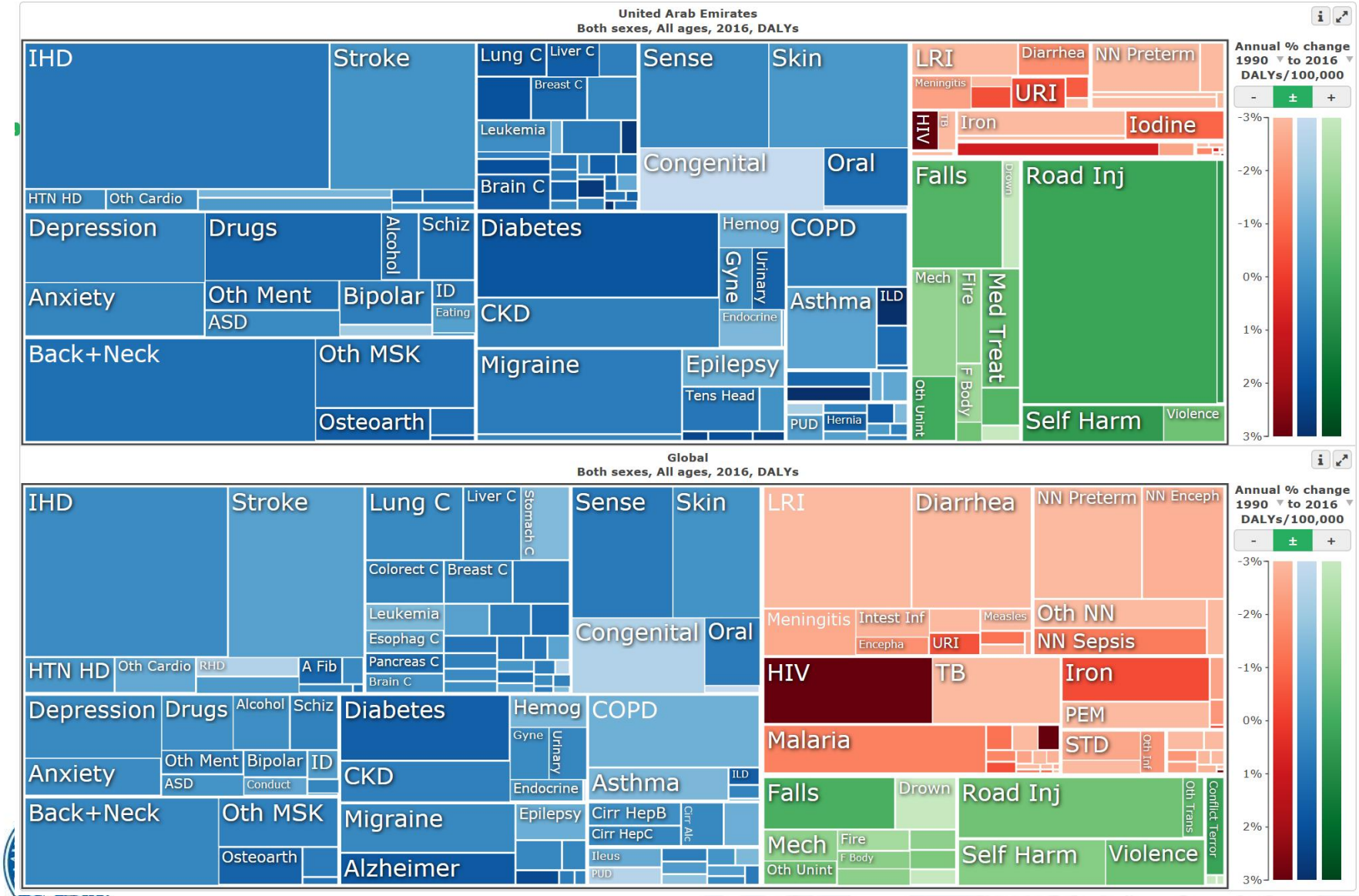
Global Burden of Disease 2015



High Income North America vs Global



UAE vs Global



Heart failure, a worldwide burden

26 million

Number of heart failure patients worldwide.[1]

1-2%

Health care expenditure attributed to heart failure in Europe and North America.[2]

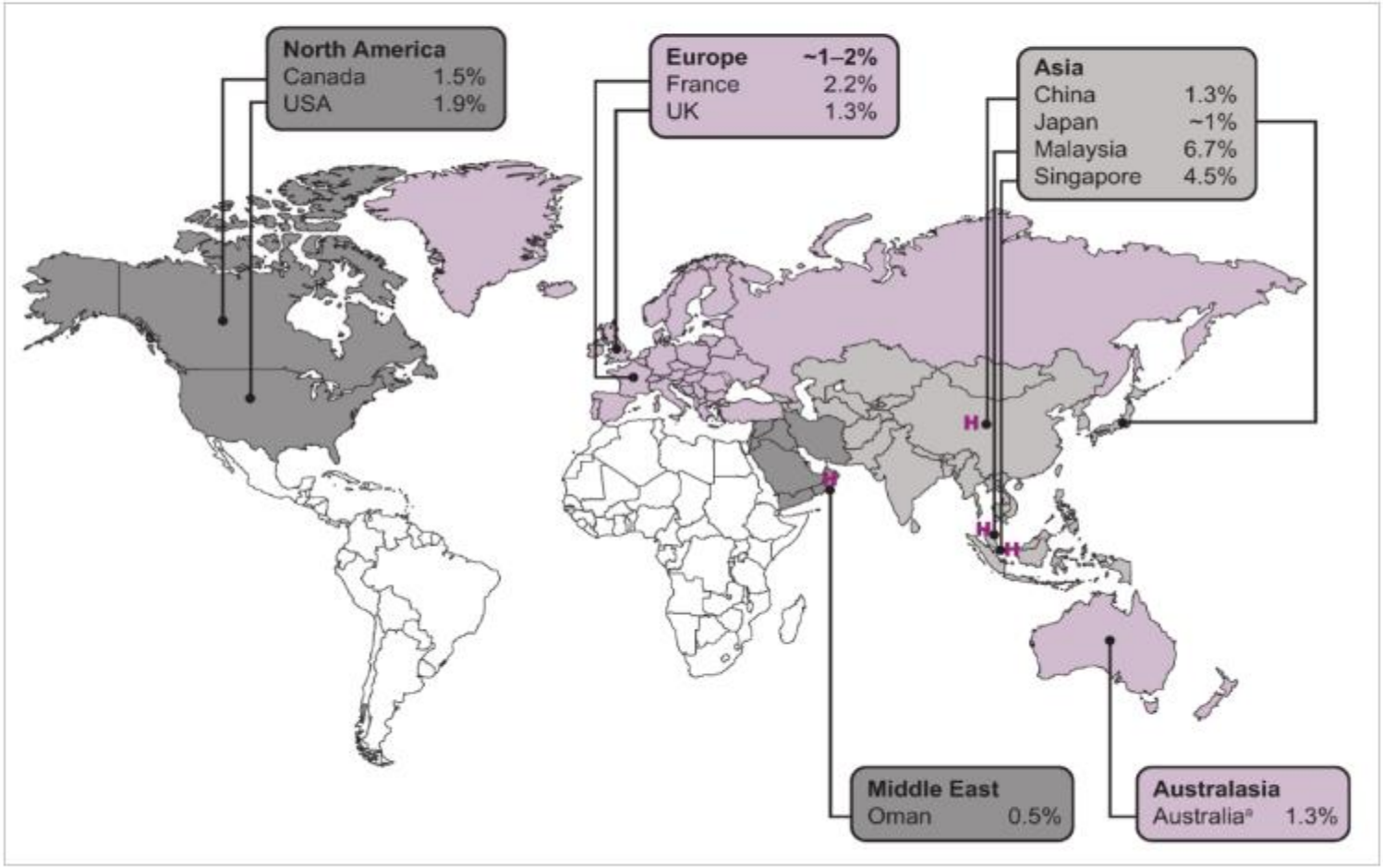
74%

Heart failure patients suffering from at least 1 comorbidity: more likely to worsen the patient's overall health status.[3]

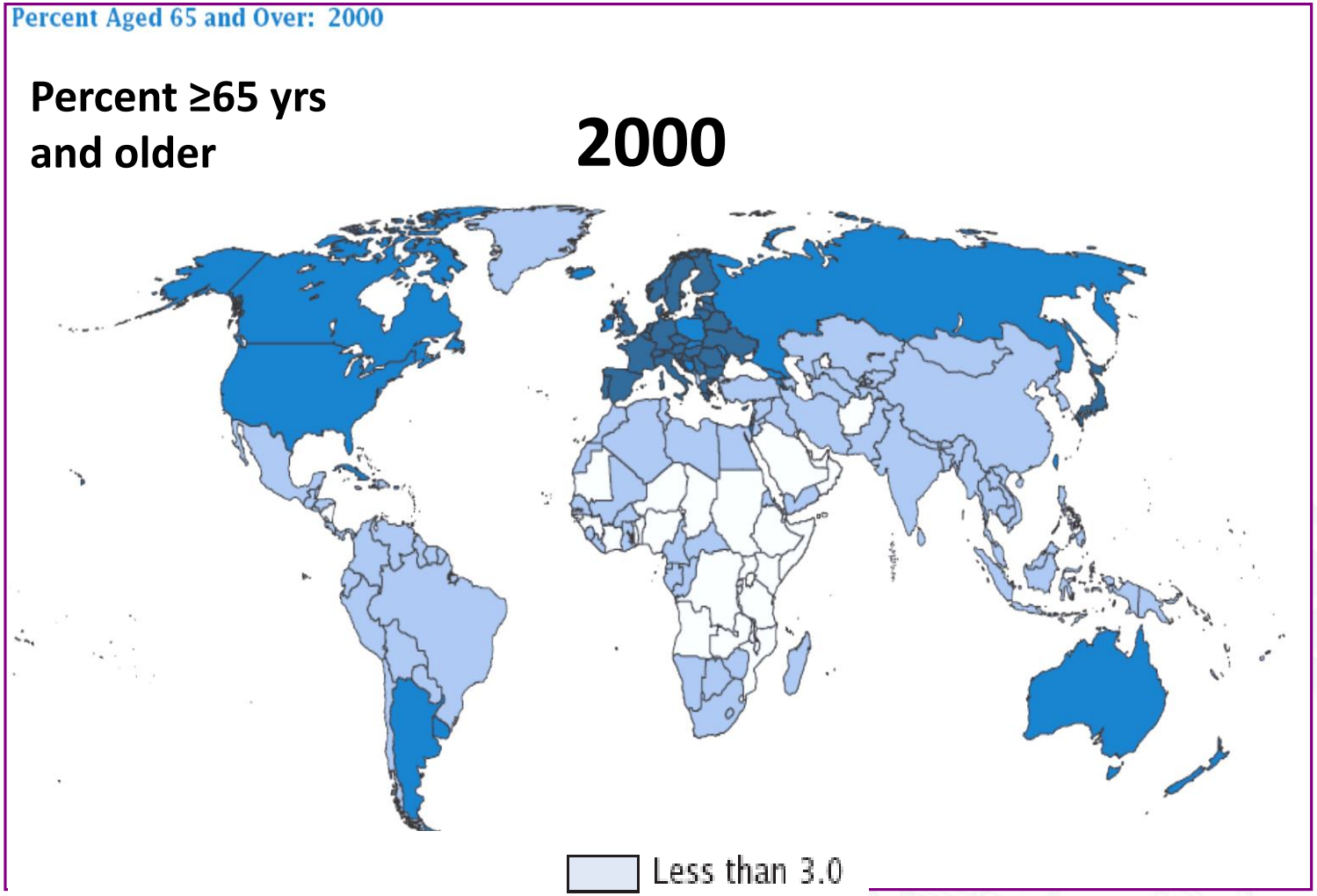
1. Ambrosy PA et al. The Global Health and Economic Burden of Hospitalizations for Heart Failure. Lessons Learned From Hospitalized Heart Failure Registries. *J Am Coll Cardiol*. 2014;63:1123–1133. **2.** Cowie MR et al. Improving care for patients with acute heart failure. 2014. Oxford PharmaGenesis. ISBN 978-1-903539-12-5. Available online at: http://www.oxfordhealthpolicyforum.org/reports/acute-heart-failure/improving-care-for-patients-with-acute-heart-failure **3.** van Deursen VM et al. Co-morbidities in patients with heart failure: an analysis of the European Heart Failure Pilot Survey. *Eur J Heart Fail*. 2014;16:103-111.

Prevalence of HF

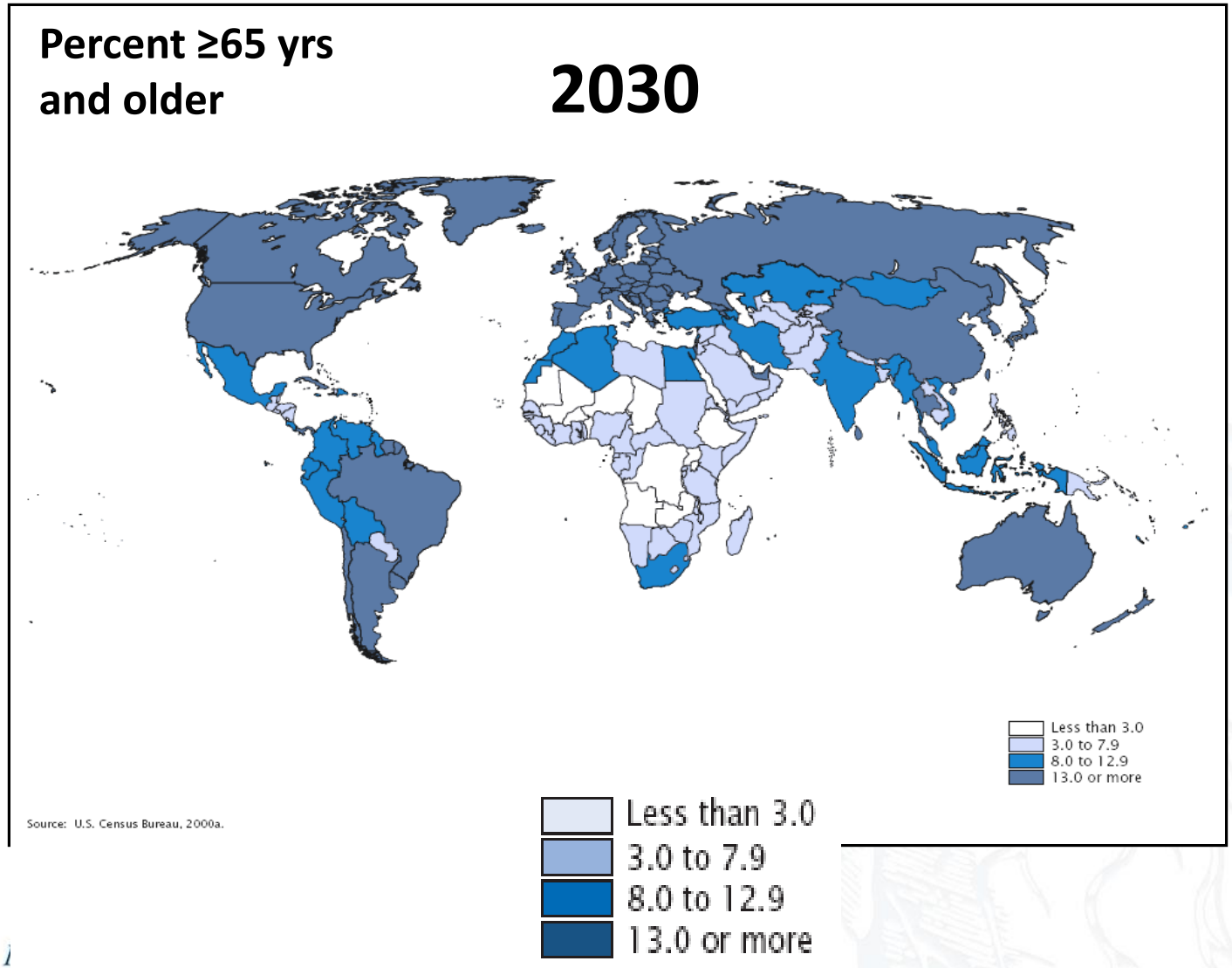
GLOBAL HEART FAILURE AWARENESS PROGRAMME



Global Perspective on Age



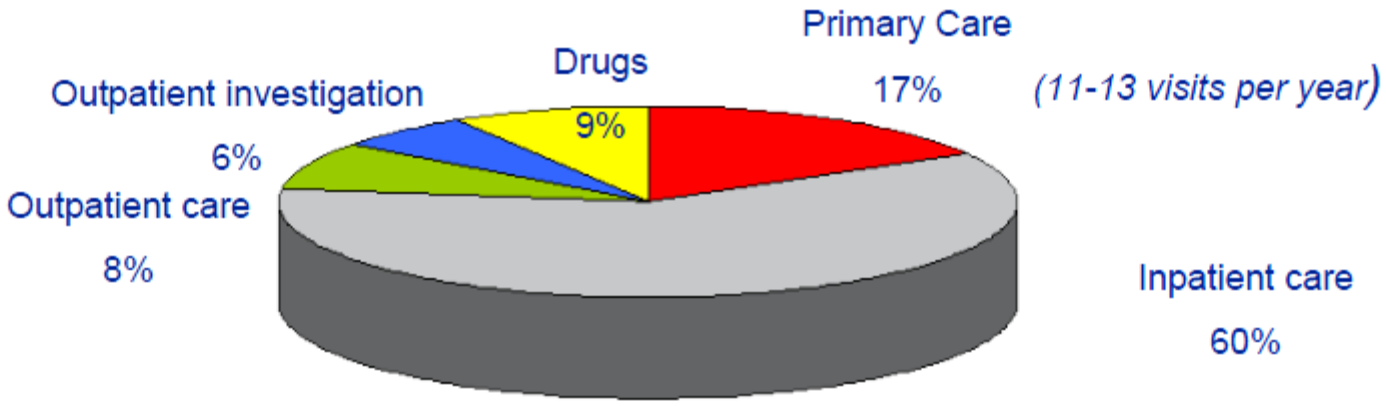
Global Perspective on Age



Global Epidemics of Heart Failure

- In economically developing regions, the prevalence of HF is increasing as a result of a shift toward a more Western lifestyle.
- Infections remain a common cause of HF in many countries.
- The economic impact of HF is profound. Considering data from 197 countries which includes over 98% of the world's population, the overall economic cost of HF in 2012 was estimated at $108 billion per year. Direct costs accounted for ~60% ($65 billion) and indirect costs accounted for ~40% ($43 billion) of the overall spend. Global per capita spending in 2012 was approximately $24/year.

The cost of heart failure is driven by hospitalisation

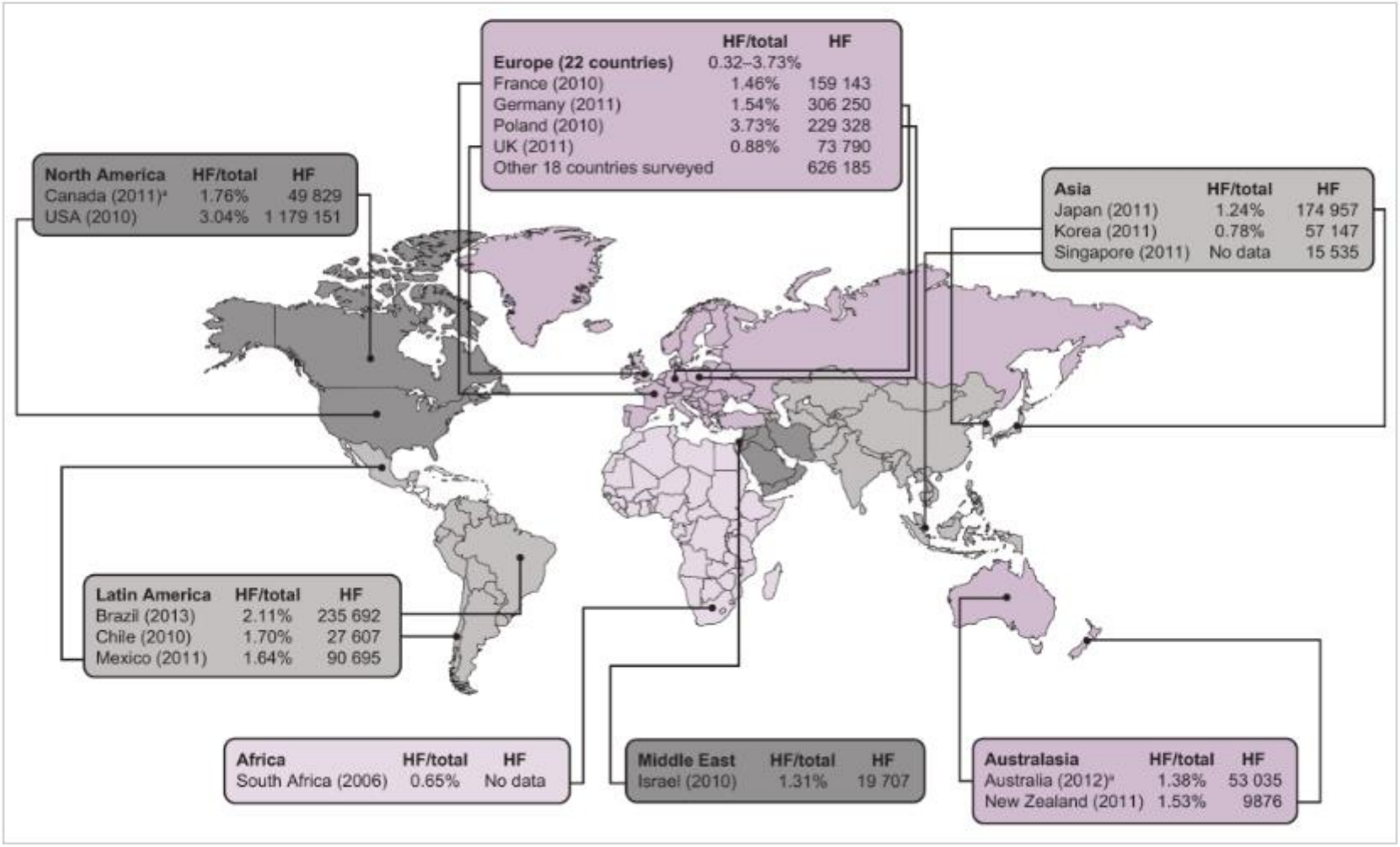


Total cost > GBP 980 million (1% of annual NHS budget)

British Heart Foundation, 2002 (updated to 2014)

Number and proportion of HF hospitalisations

GLOBAL HEART FAILURE AWARENESS PROGRAMME



Heart failure accounts for 1–3% of all US and European hospital admissions

GLOBAL HEART FAILURE AWARENESS PROGRAMME

USA (2007)
2.9%
LOS 5.3d

Norway
(2008)
1.1%

Sweden
(2011)
2.2%
LOS 6.4d

Netherlands
(2010)
1.5%

Poland (2010)
1.9%
LOS 8d

Germany
(2007)
2.0%

Austria
(2010)
1.0%
LOS 7.3d

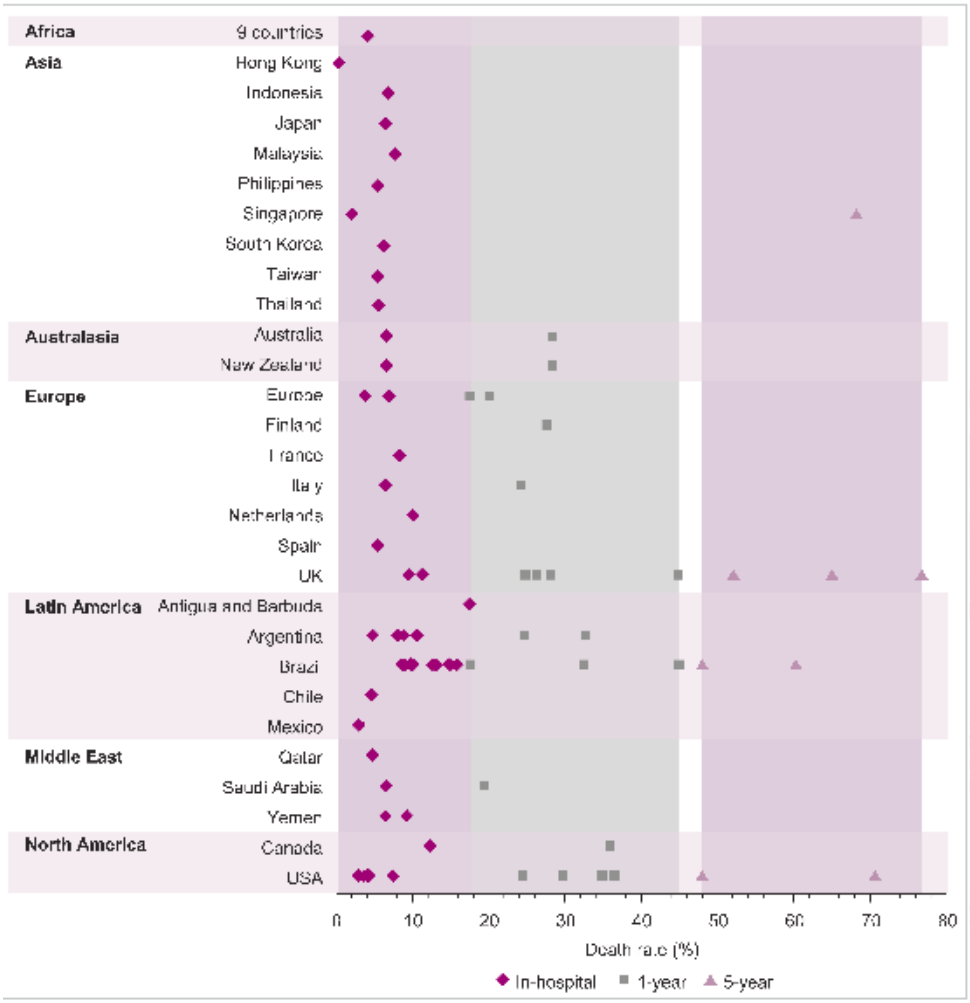
Switzerland
(2011)
1.1%

Spain
(2011)
1.8%
LOS 7.5d

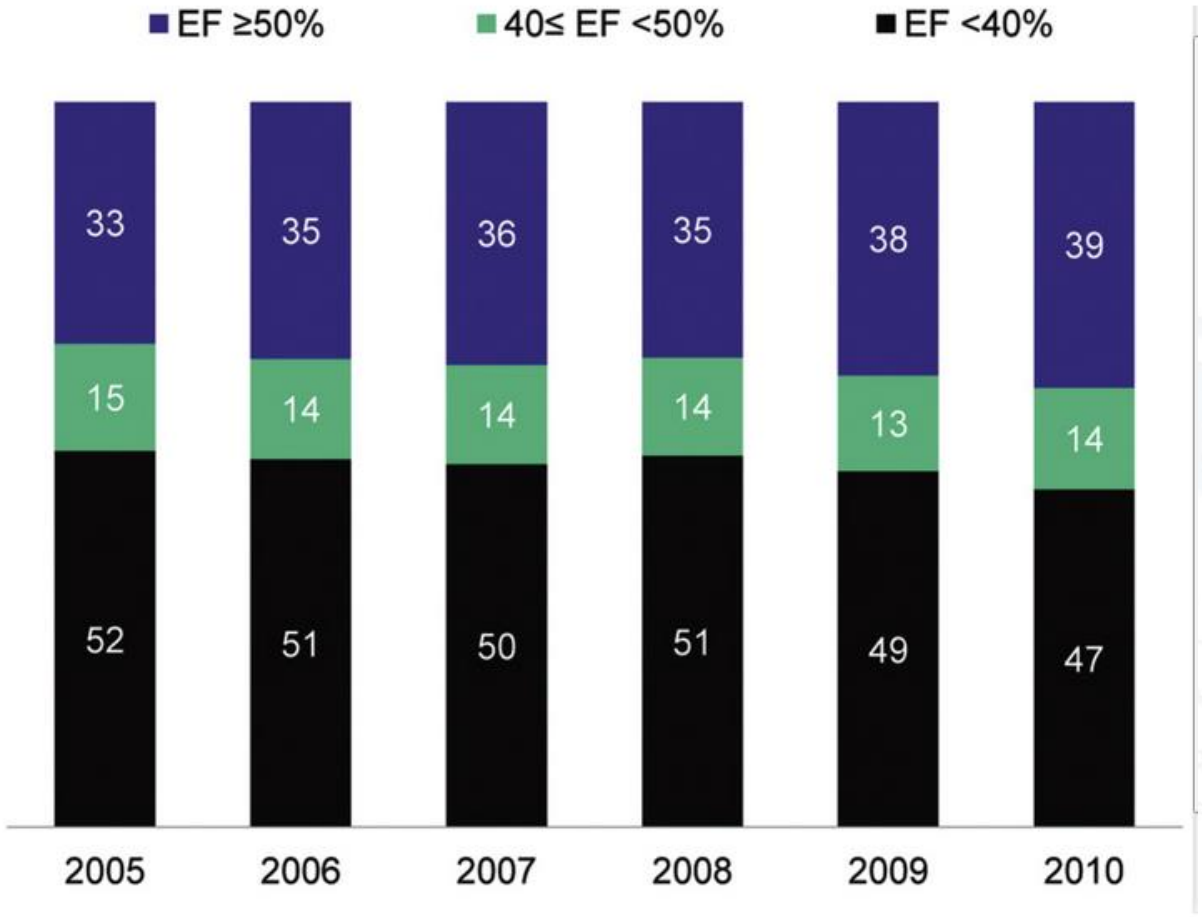
France
(2008)
1.1%
LOS 9.9d

England
(2011–12)
0.4%
LOS 7d

Death Rates for HF Around the World



The percentage of patients with preserved ejection fraction (EF) has gradually increased during the enrollment period of the GWTG-HF (Get With The Guidelines–Heart Failure) registry.



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Ambrosy et al. J Am Coll Cardiol 2014;63:1123–33

Table 1 Enrollment and Baseline Clinical Characteristics for Representative HHF Registries

	ADHERE (15)	OPTIMIZE-HF (16)	GWTG-HF (17)	EHFS II (18)*	ESC-HF Pilot (19)†	IN-HF Outcome (20)	EFICA (21)	RO-AHFS (22)	AHEAD (23)	ATTEND (24)	ADHERE-AP (25)‡	ALARM-HF (26)§
N	105,388	48,612	110,621	3,580	1,892	1,855	581	3,224	4,153	4,842	10,171	4,953
Timeframe	2001–2004	2003–2004	2005 to present	2004–2005	2009–2010	2007–2009	2001	2008–2009	2006–2009	2007–2011	2006–2008	2006–2007
Age, yrs	72 ± 14	73 ± 14	74 (62–83)	70 ± 13	70 ± 13	72 ± 12	73 ± 13	69 ± 12	74 (49–88)	73 ± 14	67/66‖	—
Male	48	48	53	61	63	60	59	56	58	58	57	62
Ischemic etiology	—	46	—	54	51	42	61	61	—	31	—	—
Hypertensive etiology	—	23	—	—	—	—	15	44	—	18	—	—
LVSD	63	49	50	66	—	81	73	66	—	53	53	—
LVEF, %	34 ± 16	39 ± 18	40 (25–55)	38 ± 15	—	38 ± 14	38 ± 15	38 ± 13	37 (16–65)	—	—	—
HTN	73	71	76	63	62	58	60	67	73	69	64	70
HL	37	32	44	—	—	—	30	40	—	37	—	—
CAD	57	—	50	54	—	—	—	—	51	—	50	31
Prior MI	31	—	—	—	—	—	22	17	32	—	—	—
Afib	31	31	31	39	44	38	25	44	27	40	24	24
DM	44	42	43	33	35	40	27	33	43	34	45	45
CKD	30	—	50	17	26	33	53	—	—	—	22	21
COPD	31	15	—	19	—	30	—	—	—	10	—	25
HR, beats/min	—	87 ± 22	82 (70–98)	95 (77–114)	88 ± 24	—	—	99 ± 29	90 (54–142)	99 ± 29	—	—
SBP, mm Hg	144 ± 33	143 ± 33	138 (118–159)	135 (110–160)	133 ± 29	134 ± 33	126 ± 39	143 ± 39	135 (80–200)	145 ± 37	—	—
Dyspnea at rest	—	44	—	—	—	—	—	—	—	—	40	73
Orthopnea	—	27	—	—	—	—	27	—	—	63	—	56
PND	—	15	—	—	—	—	—	—	—	53	—	—
Rales	66	64	—	—	—	—	—	—	—	71	80	61
Edema	65	65	—	—	—	—	27	—	—	67	—	43
Na, mEq/l	—	137 ± 11	138 (135–141)	—	—	—	—	136 (133–141)	139 (130–144)¶	139 ± 4	—	—
sCr, mg/dl	1.8 ± 1.6	1.8 ± 1.8	1.3 (1.0–1.9)	—	—	1.2 (1.0–1.6)	—	1.3 ± 0.8	1.2 (0.8–2.7)¶	1.4 ± 1.6	—	—
BNP, pg/ml	840 (430–1,730)	832 (451–1,660)	821 (386–1,690)	—	870 (423–1,950)	1,112 (542–2,225)	—	—	767 (38–3,414)¶	707 (362–1,284)	—	—
Hgb, g/dl	—	12.1 ± 3.4	12.0 (10.6–13.4)	—	—	12.5 ± 2.1	—	13.1 ± 1.8	13.2 (9.6–16.2)¶	12.0 ± 2.6	—	—

Values are %, mean ± SD, or median (25th–75th) unless otherwise specified. *30 European countries. †12 European countries. ‡Singapore, Thailand, Indonesia, Australia, Malaysia, Philippines, Taiwan, Hong Kong. §France, Germany, Italy, Spain, United Kingdom, Greece, Turkey, Australia, and Mexico. ‖Median/mean. ¶5th to 95th percentile.

ADHERE = Acute Decompensated Heart Failure National Registry; ADHERE-AP = Acute Decompensated Heart Failure National Registry International – Asia Pacific; Afib = atrial fibrillation; AHEAD = Acute Heart Failure Database; ALARM-HF = Acute Heart Failure Global Registry of Standard Treatment; ATTEND = Acute Decompensated Heart Failure Syndromes; BNP = B-type natriuretic peptide; CAD = coronary artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; DM = diabetes mellitus; EFICA = Epidémiologie Francaise de l'Insuffisance Cardiaque Aiguë; EHFS II = European Heart Failure Survey II; ESC-HF = European Society of Cardiology – Heart Failure; GWG-HF = Get With The Guidelines–Heart Failure; Hgb = hemoglobin; HHF = hospitalized heart failure; HL = hyperlipidemia; HR = heart rate; HTN = hypertension; IN-HF = Italian Registry on Heart Failure; JVP = jugular venous pulse; LVEF = left ventricular ejection fraction; LVSD = left ventricular systolic dysfunction; MI = myocardial infarction; OPTIMIZE-HF = Organized Program to Initiate Lifesaving Treatment in Hospitalized Patients With Heart Failure; PND = paroxysmal nocturnal dyspnea; RO-AHFS = Romanian Acute Heart Failure Syndromes; SBP = systolic blood pressure; sCr = serum creatinine.

Ambrosy et al. J Am Coll Cardiol 2014;63:1123–33

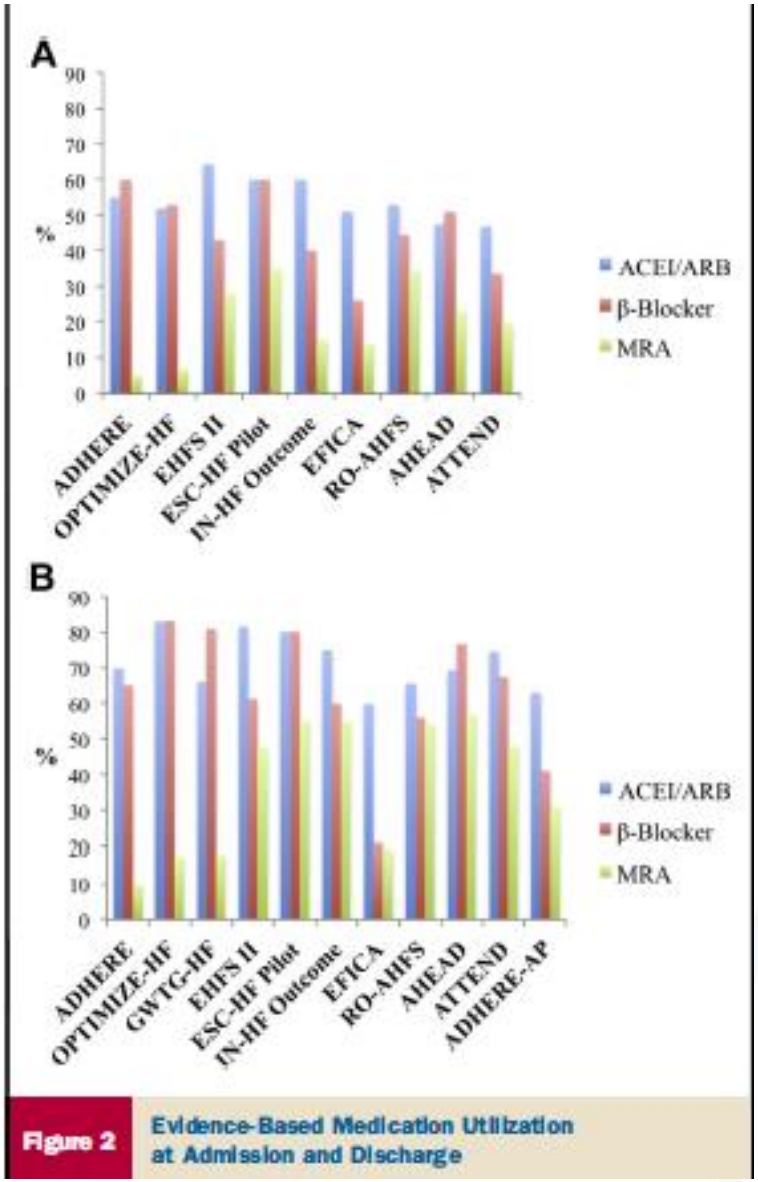


Figure 2 Evidence-Based Medication Utilization at Admission and Discharge

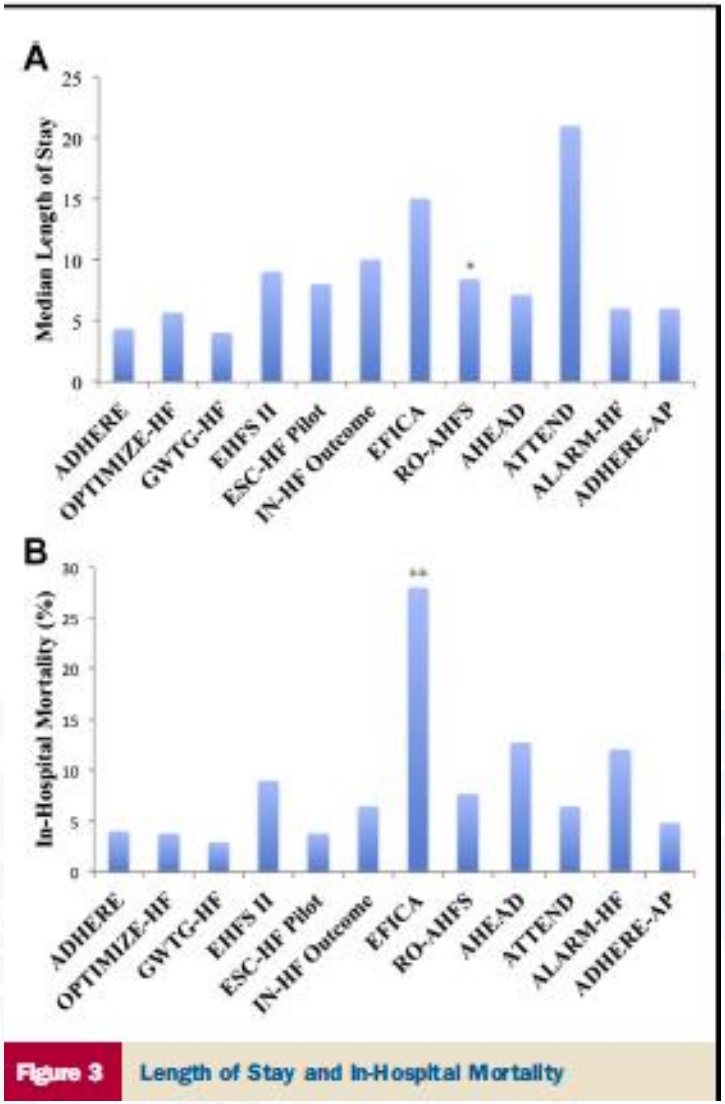


Figure 3 Length of Stay and In-Hospital Mortality

Ambrosy et al. J Am Coll Cardiol 2014;63:1123–33

Table 5 IV Therapies and Procedural Interventions for Representative HHF Registries

	ADHERE	EHFS II	RO-AHFS	ATTEND	ALARM-HF
IV therapies					
Diuretics	92	84.4	79.9	76.3	89.7
Vasodilators	9	38.0	33.4	78.3	41.1
Inotropes	15	30.0	17.7*	18.5	22.3†
Procedural interventions					
Coronary angiography	10	—	4.7	—	
PCI	8	8.4	2.0	8.0	12.8
CABG	—	1.8	0.4	1.3	3.0
Synchronized cardioversion	—	—	4.1	—	7.8
Pulmonary artery catheter	5	—	0.1	16.7	—
IABP	<1	2.2	0.2	2.5	4.8
Mechanical ventilation	5	5.1	3.5	—	16.2
Ultrafiltration	5	—	1.0	2.6‡	—

Values are %. *Estimate includes inotropes and vasopressors. †Overall inotrope utilization unavailable, but 22.3% of patients received dobutamine. ‡Continuous venovenous hemofiltration.

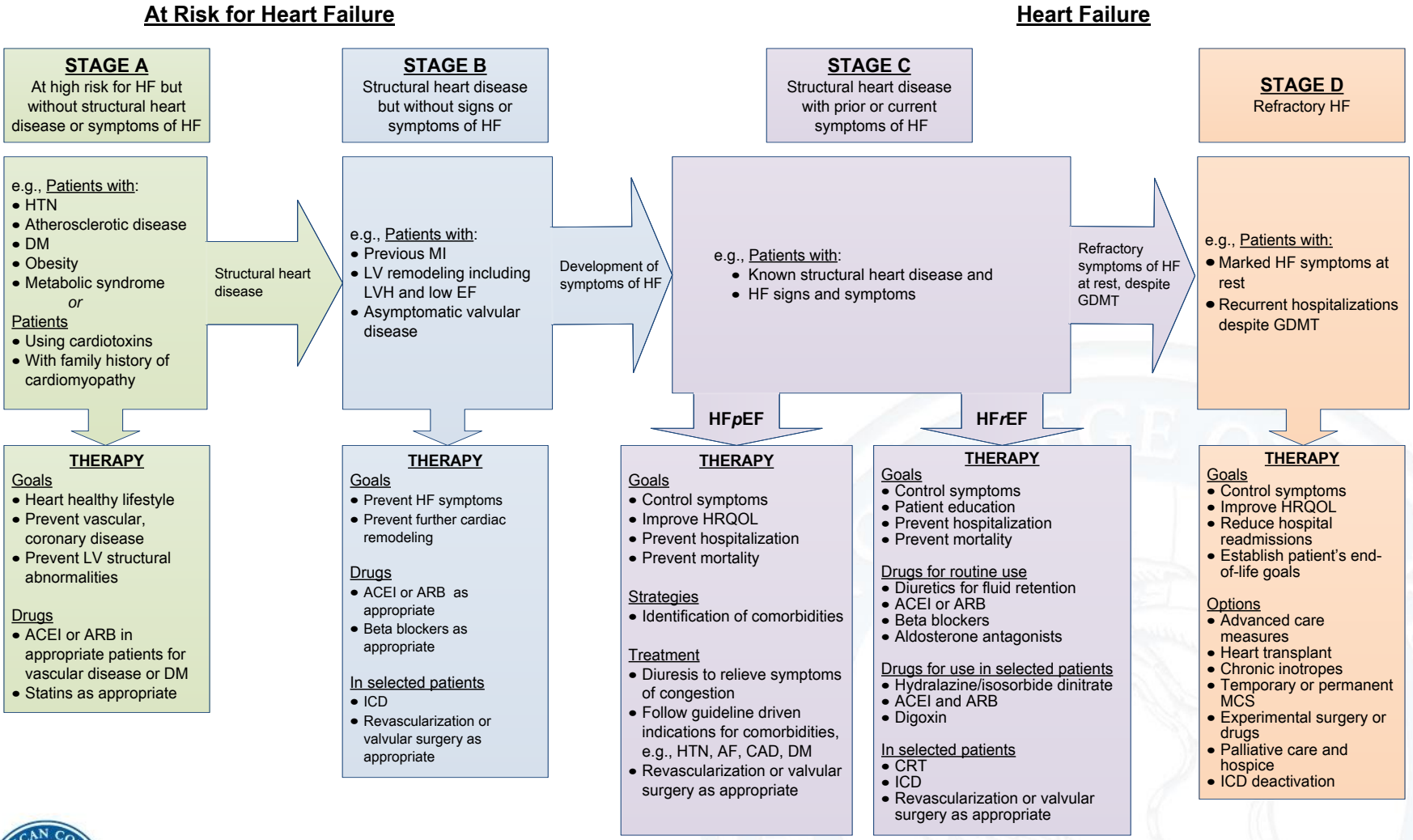
CABG = coronary artery bypass graft; IABP = intra-aortic balloon pump; IV = intravenous; PCI = percutaneous coronary intervention; other abbreviations as in Table 1.

Ambrosy et al. J Am Coll Cardiol 2014;63:1123–33)

Global Epidemics of Heart Failure

- Efforts at population health improvement will serve to prevent the development of HF as will public awareness campaigns with a focus on HF.
- Clinical practice guidelines published by professional societies around the globe all focus on the diagnosis, treatment and long-term management of patients with HF.
- Issues involving access to care vary from region to region and need to be addressed in order to provide patients with evidence-based therapies.
- Best practices informing efforts in access and patient adherence are needed to provide patients with life-saving treatment.
- Likewise, public policy is needed in all countries to support such programs.

Stages, Phenotypes and Treatment of HF



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To Treat HF Globally, We Need to Go Upstream and Treat What Causes HF

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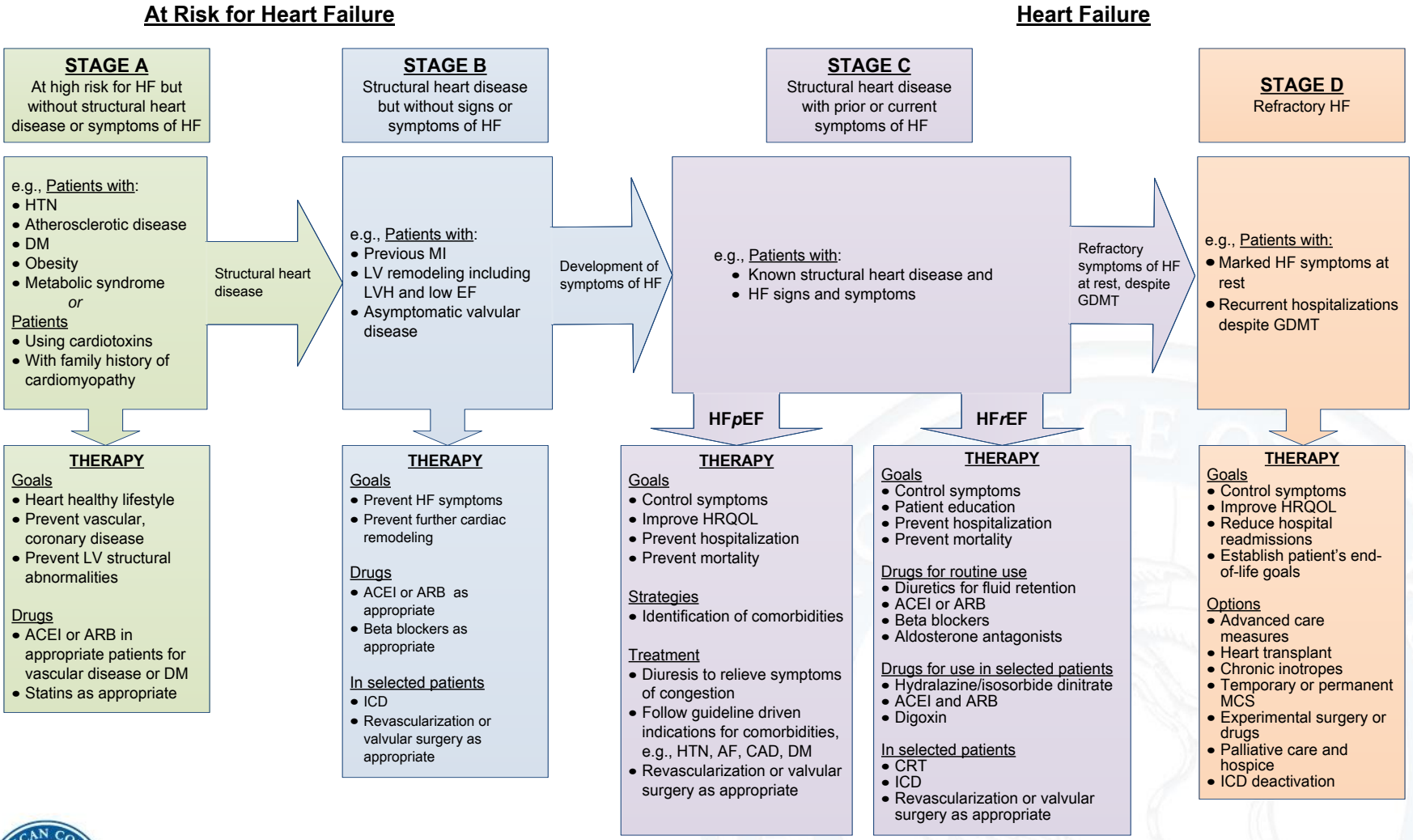
Stages, Phenotypes and Treatment of HF



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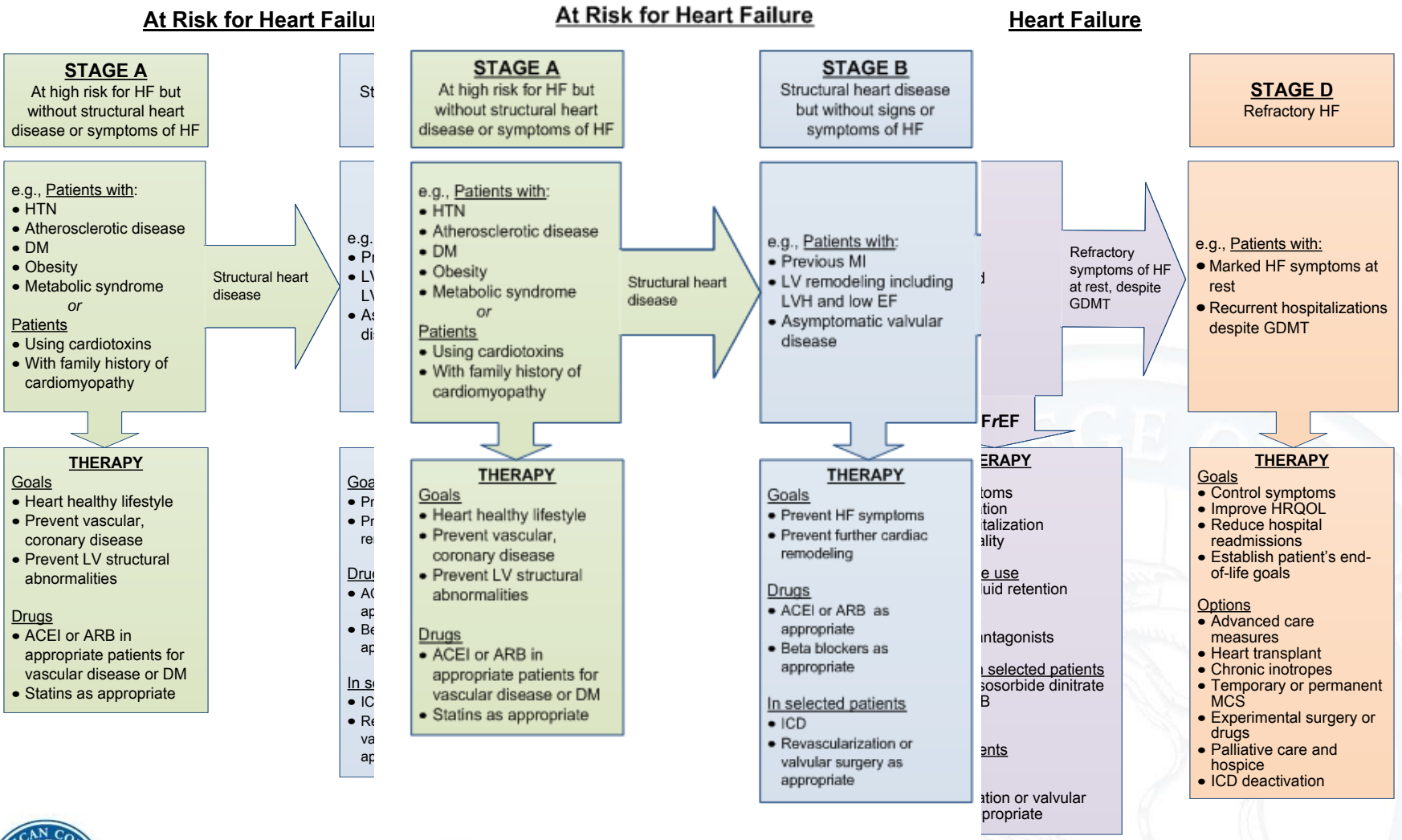
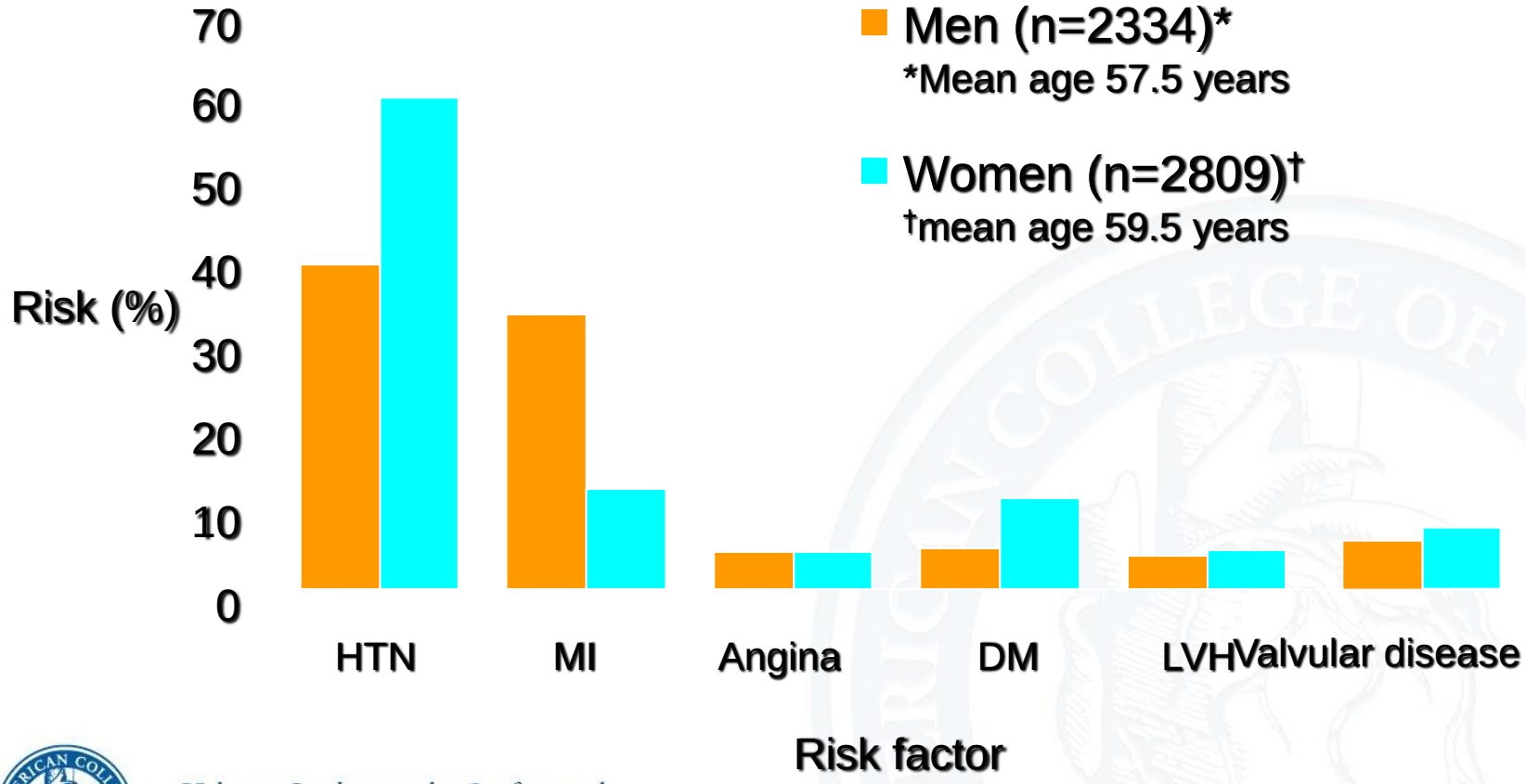
Stages, Phenotypes and Treatment of HF



Population-Attributable Risk for Heart Failure Development

Framingham Study: 20-year follow-up



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Levy D et al. *JAMA* 1996;275:1557

Lifetime Risk of Heart Failure at Age 40 Years According to Lifestyle Factors: The Physicians Health Study

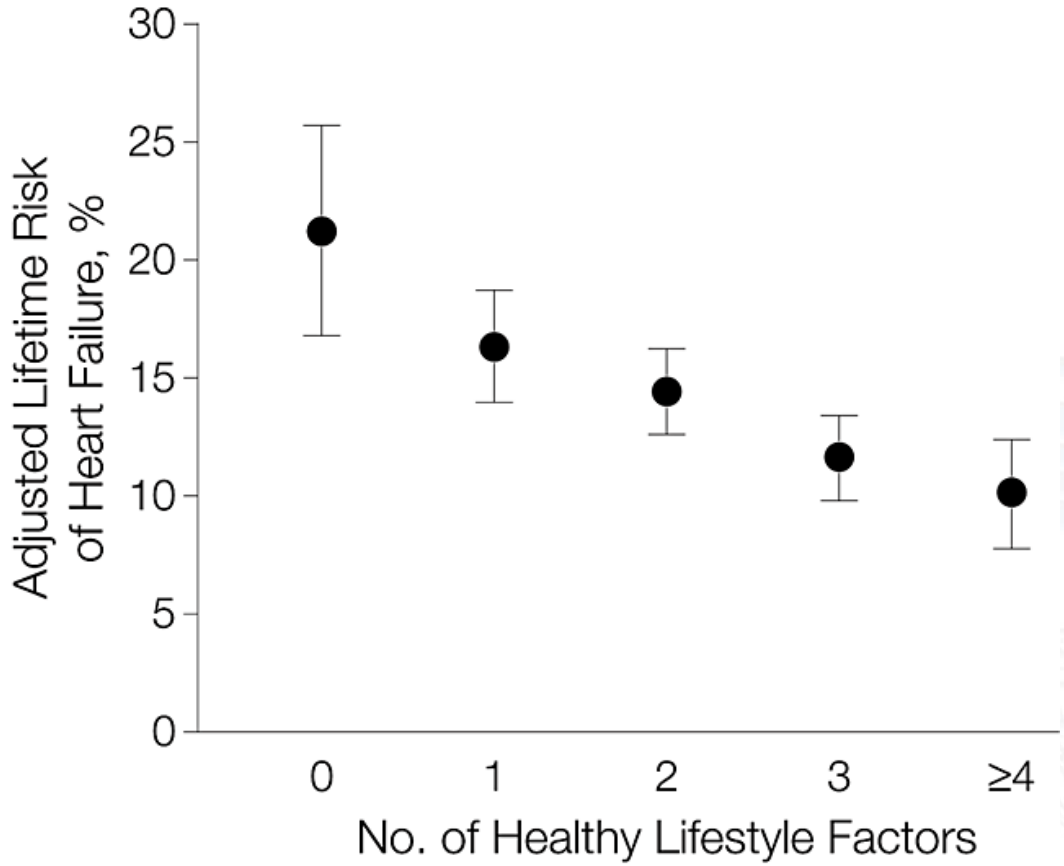
Table 3. Lifetime Risk of Heart Failure at Age 40 Years According to Lifestyle Factors

Lifestyle Factors	No.	Total Deaths, No.	Heart Failure, No.	Lifetime Risk (95% CI), %[a]
Overweight[b]				
Body mass index <25	12 007	3021	517	11.3 (10.2-12.5)
Body mass index ≥25	8893	2652	683	16.9 (15.4-18.4)
Smoking				
Never	10 360	227	473	13.2 (11.7-14.7)
Ever	10 540	3399	727	14.4 (13.1-15.6)
Exercise				
≥5 times/wk	3380	930	161	11.4 (9.4-13.5)
<5 times/wk	17 520	4743	1039	14.3 (13.2-15.4)
Alcohol intake				
5-14 drinks/wk	7807	2431	460	13.1 (11.7-14.5)
<5 drinks/wk	13 093	3242	740	14.2 (13.0-15.5)
Breakfast cereal consumption				
≥1 serving/wk	11 393	3094	620	12.9 (11.7-14.1)
<1 serving/wk	9507	2579	580	15.0 (13.5-16.5)
Fruit and vegetable consumption				
≥4 servings/d	1485	546	97	11.9 (9.5-14.4)
<4 servings/d	19 415	5127	1103	14.0 (13.0-15.1)

Abbreviation: CI, confidence interval.
[a] Lifetime risk is the mortality-adjusted cumulative risk conditional on disease-free survival to age 40 years.
[b] Body mass index calculated as weight in kilograms divided by height in meters squared.

Djousse, L. et al. JAMA 2009;302:394-400.

Lifetime Risk of Heart Failure at Age 40 Years According to Lifestyle Factors: The Physicians Health Study



The association remained when adjusted for antecedent MI, DM and HTN

Total No.	1199	4414	6922	5747	2618
Heart failure, No.	124	305	409	260	102

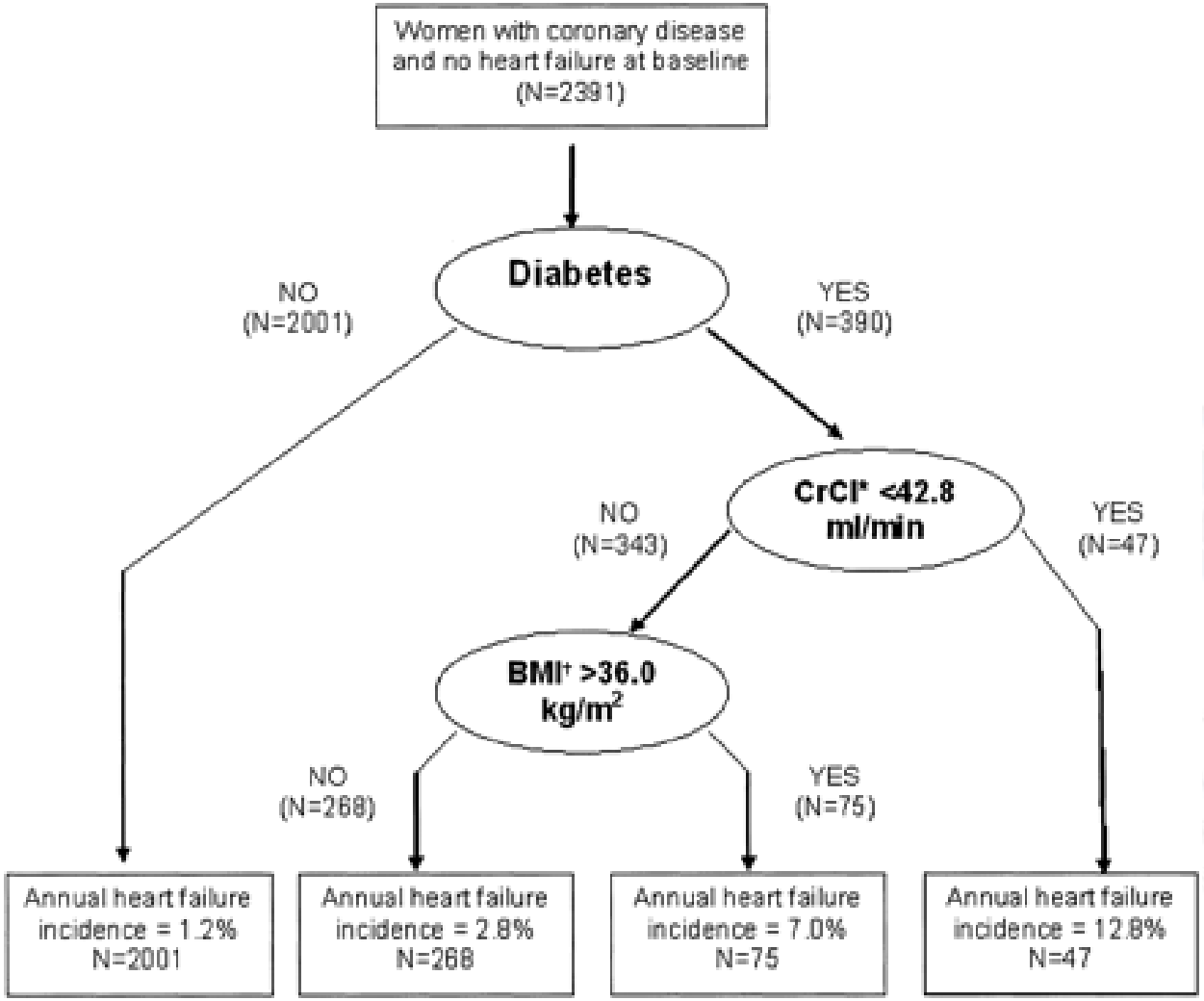
Djousse, L. et al. JAMA 2009;302:394-400.

Risk Factors for the Development of Heart Failure in Postmenopausal Women with CAD

- Diabetes
- Atrial fibrillation
- Myocardial infarction
- Creatinine clearance<40mL/min
- Systolic BP>120mmHg
- Current smoker
- Body mass index >35kg/m2
- LBBB
- Left ventricular hypertrophy

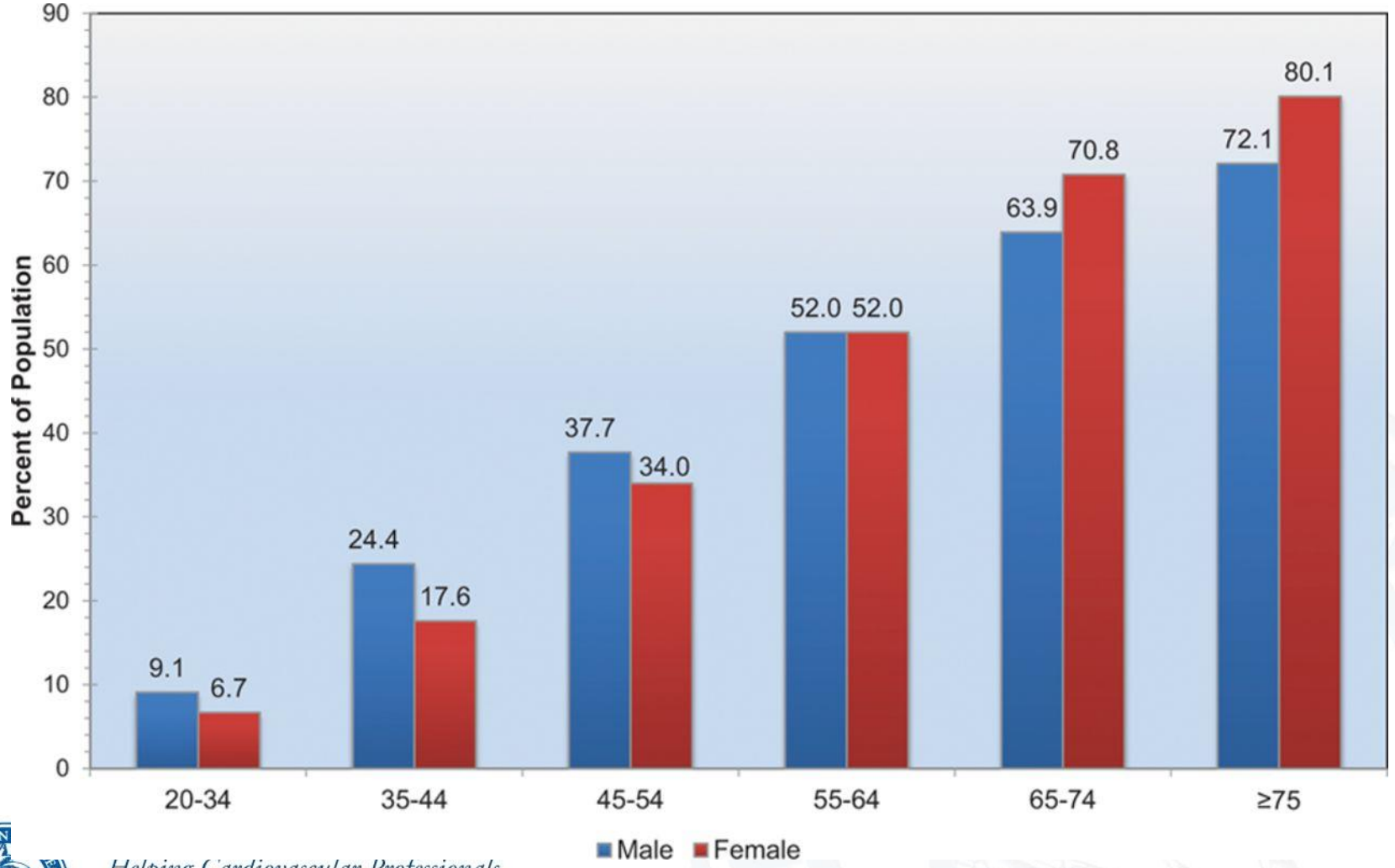
Bibbins-Domingo K Circulation 2004;110:1424-30

Risk Stratification for Incident Heart Failure in Postmenopausal Women with CAD



Bibbins-Domingo K Circulation 2004;110:1424-30

Prevalence of High BP in adults by Age and Sex: NHANES: 2007–2010



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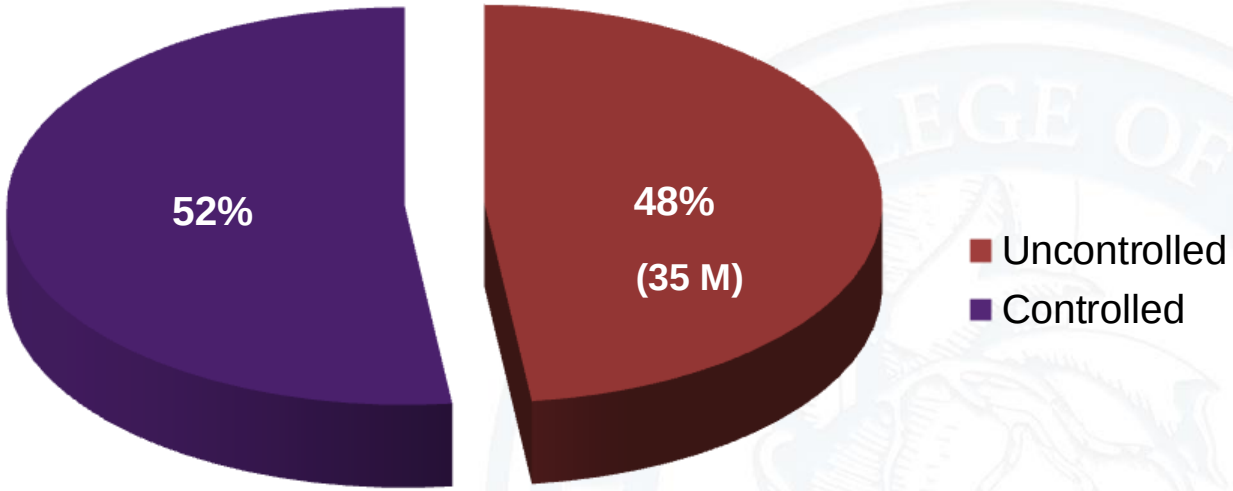
Go A S et al. Circulation. 2014;129:e28-e292

Only Half of Americans with Hypertension Have It Under Control

72 MILLION
ADULTS WITH HYPERTENSION (31%)



SOURCE: National Health and Nutrition Examination Survey 2011-2012.

In the WHO/European Region

over 50%
of people are
overweight or **obese**

over 20%
of people are
obese

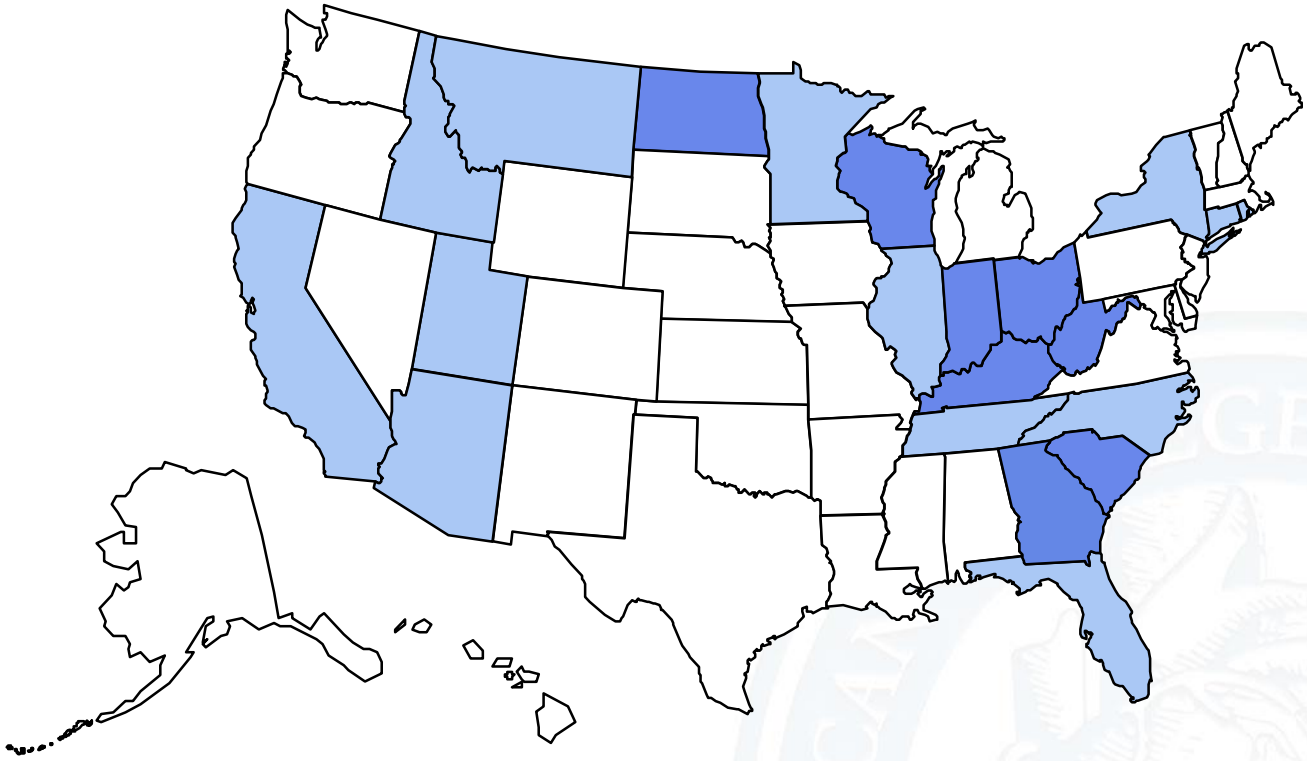
www.euro.who.int/obesity

World Health Organization
REGIONAL OFFICE FOR Europe

Obesity Trends* Among U.S. Adults

BRFSS, 1985

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)



Obesity Trends* Among U.S. Adults

BRFSS, 1990

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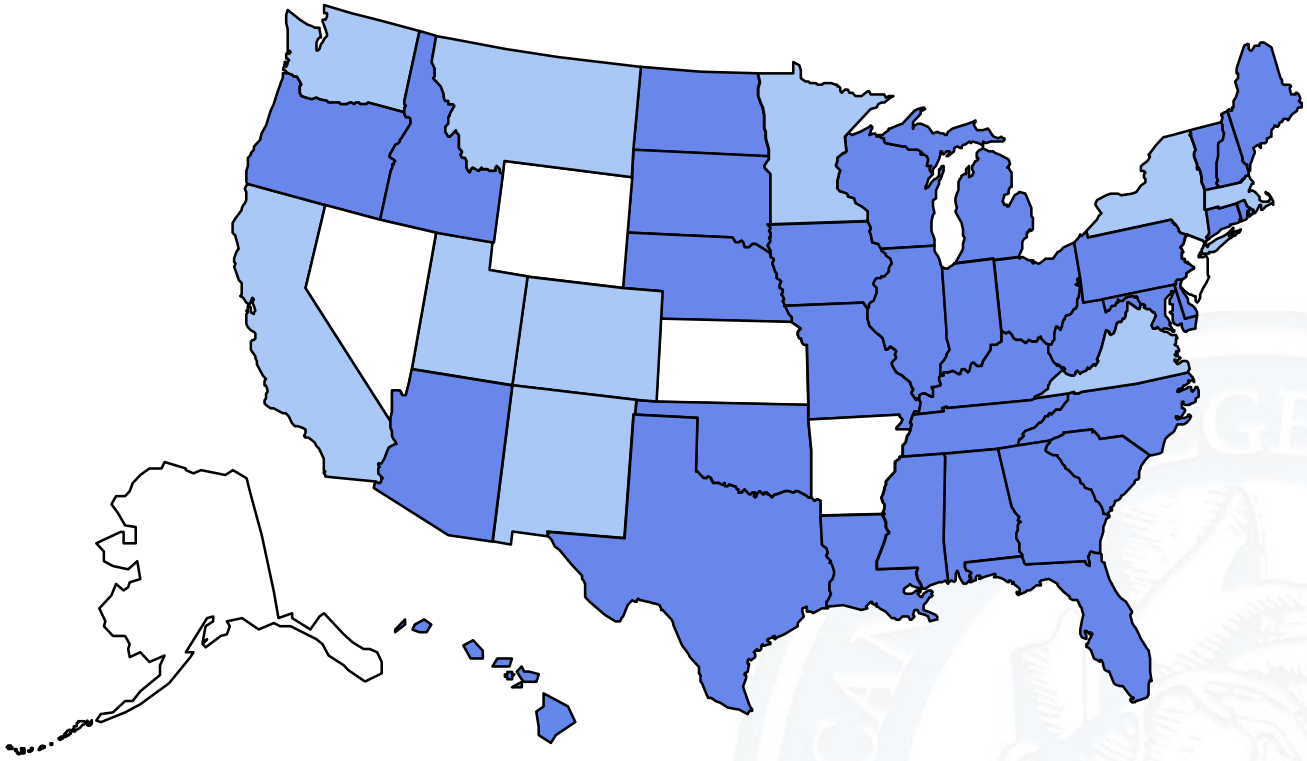
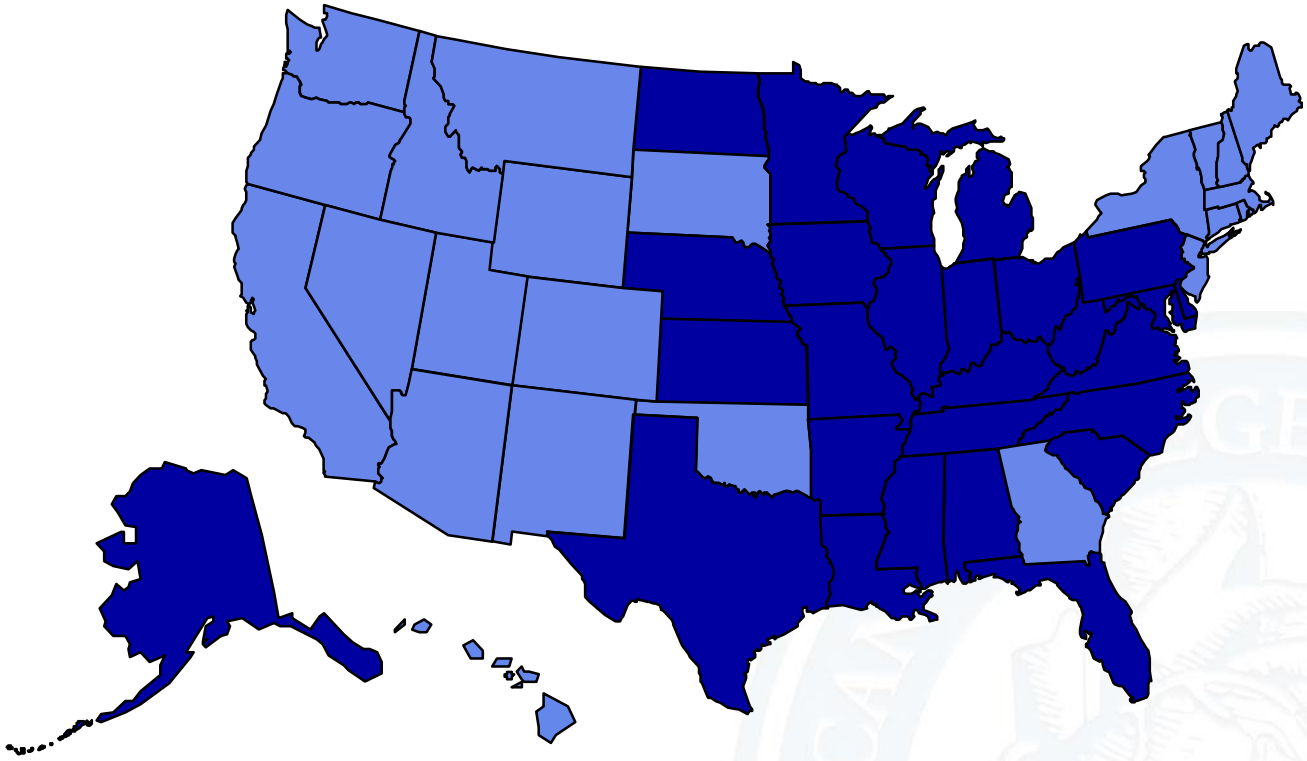


Obesity Trends* Among U.S. Adults

BRFSS, 1995

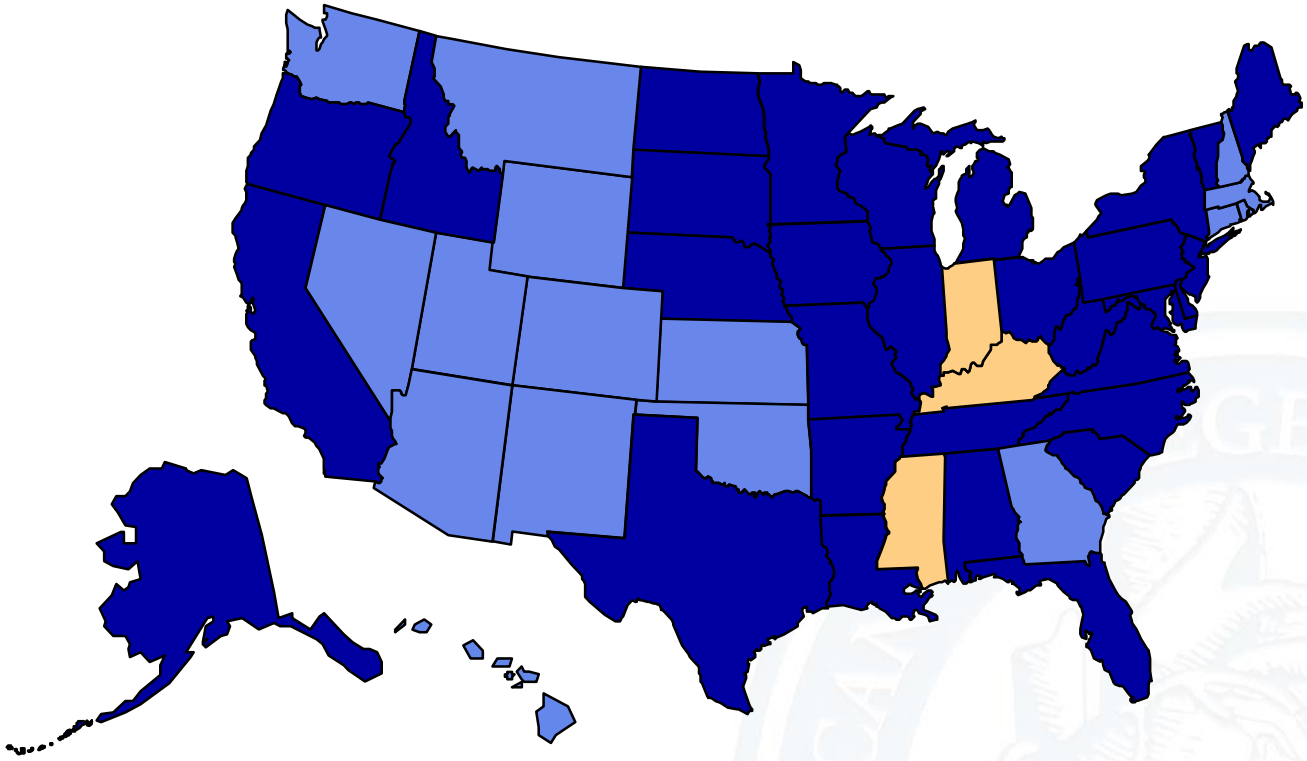
(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)



Obesity Trends* Among U.S. Adults

BRFSS, 1997

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)

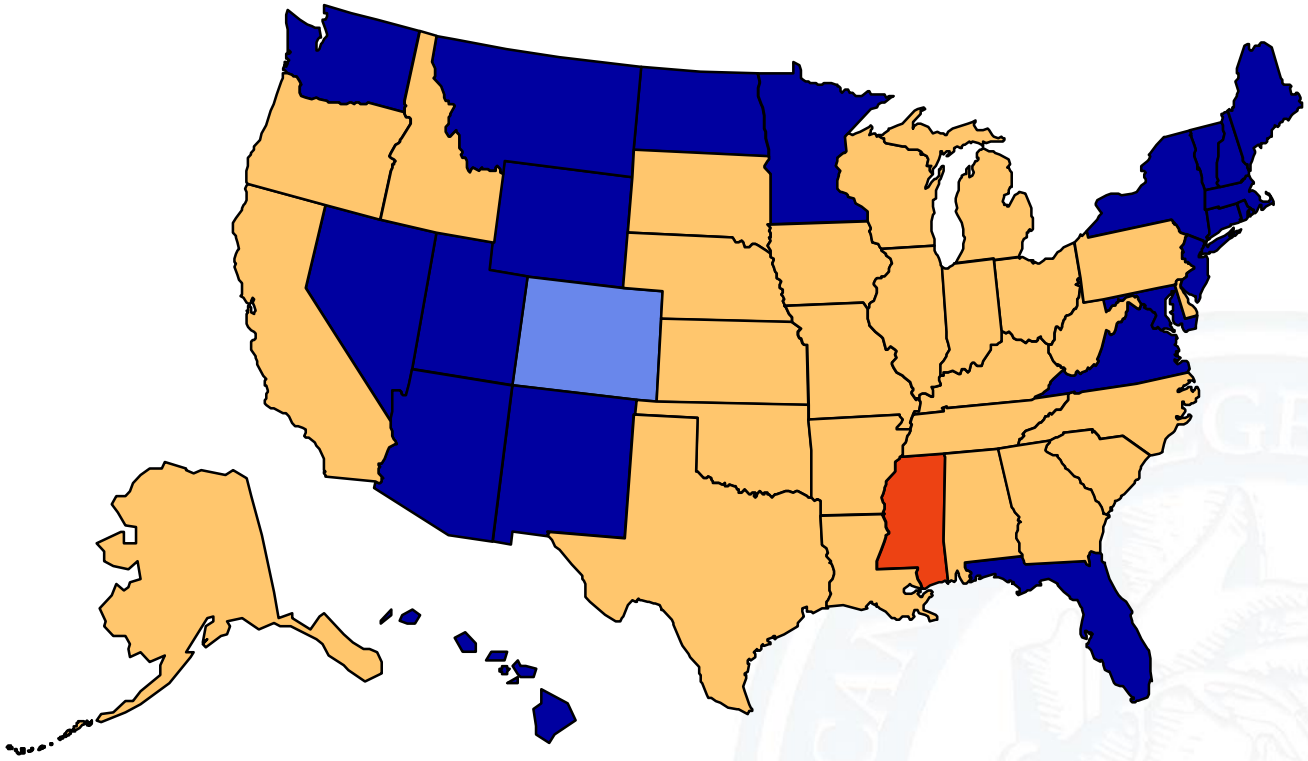


No Data | <10% | 10%–14% | 15%–19% | ≥20%

Obesity Trends* Among U.S. Adults

BRFSS, 2001

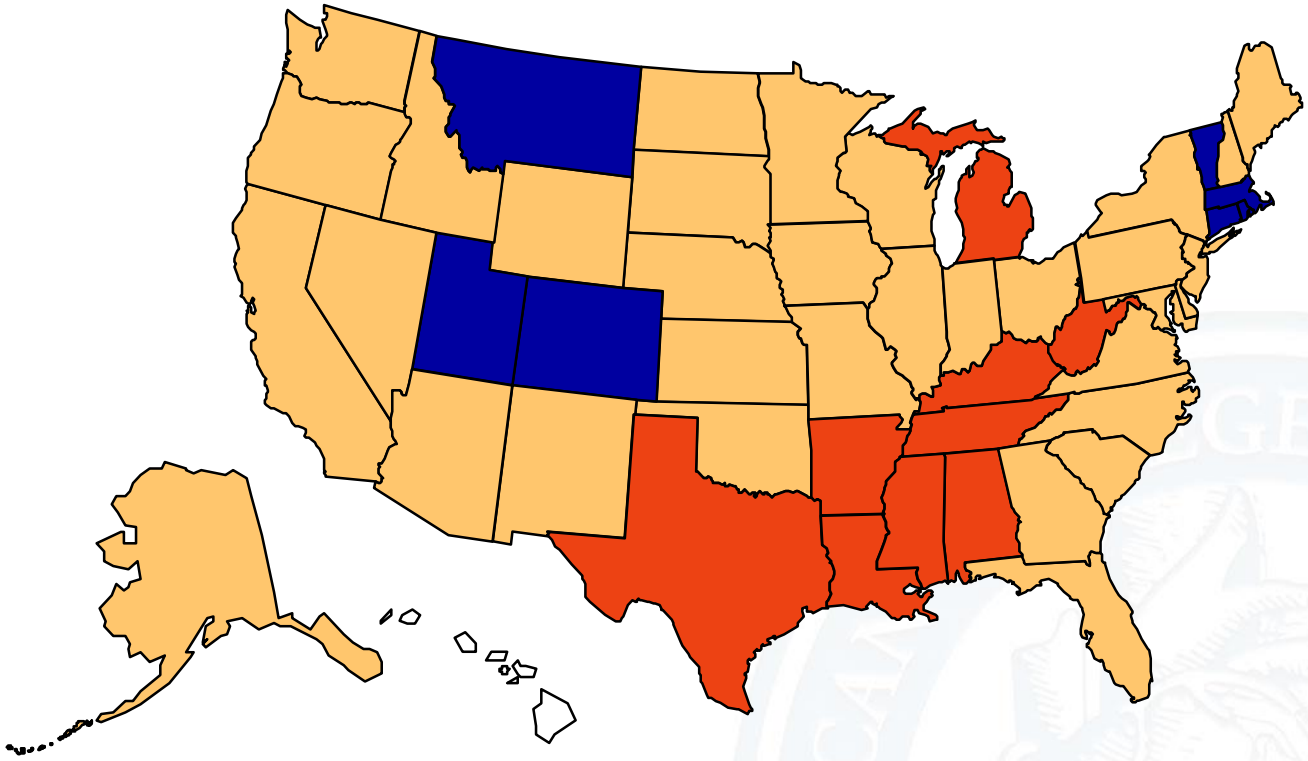
(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)



Obesity Trends* Among U.S. Adults

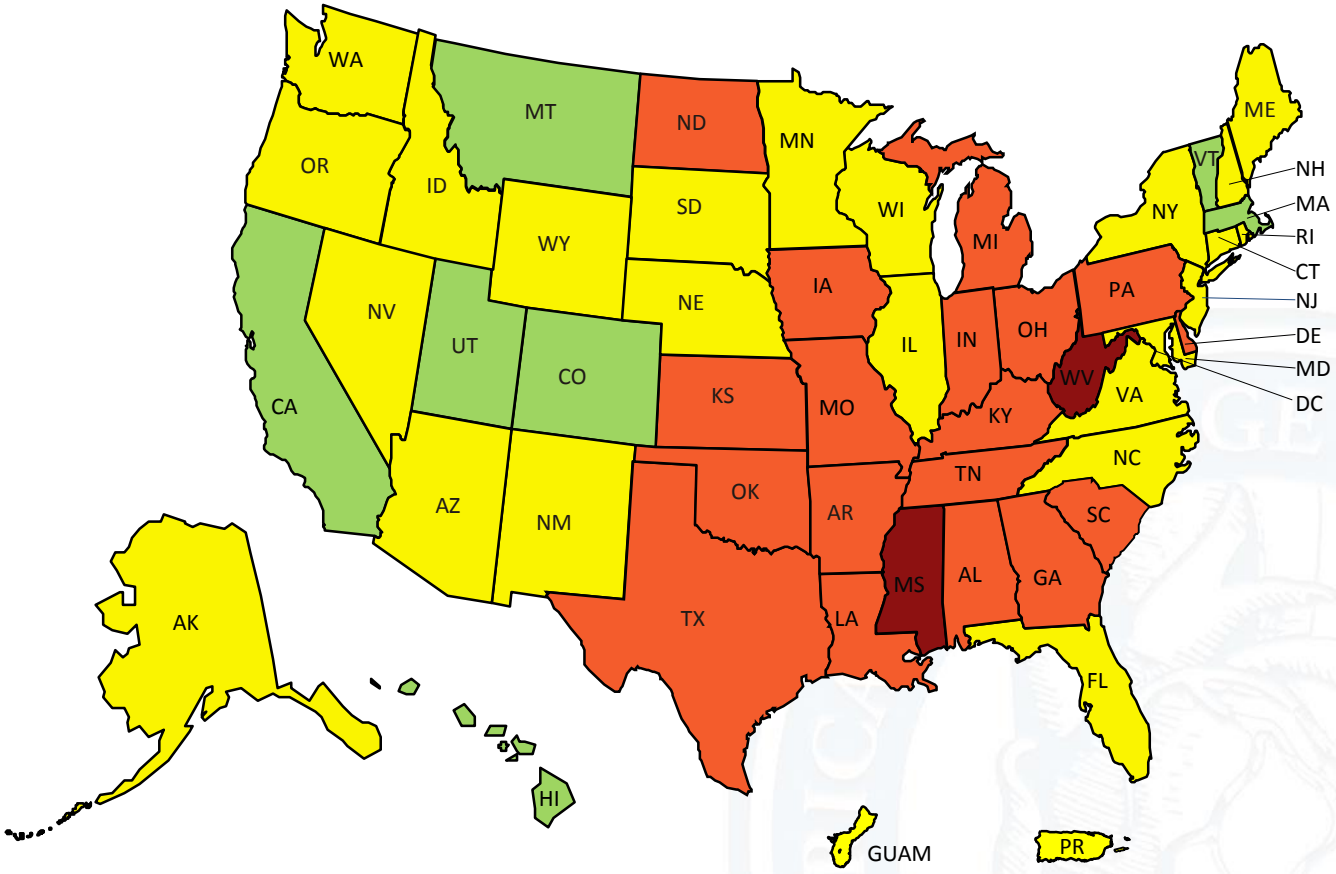
BRFSS, 2004

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)



Prevalence* of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2013

***Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.**



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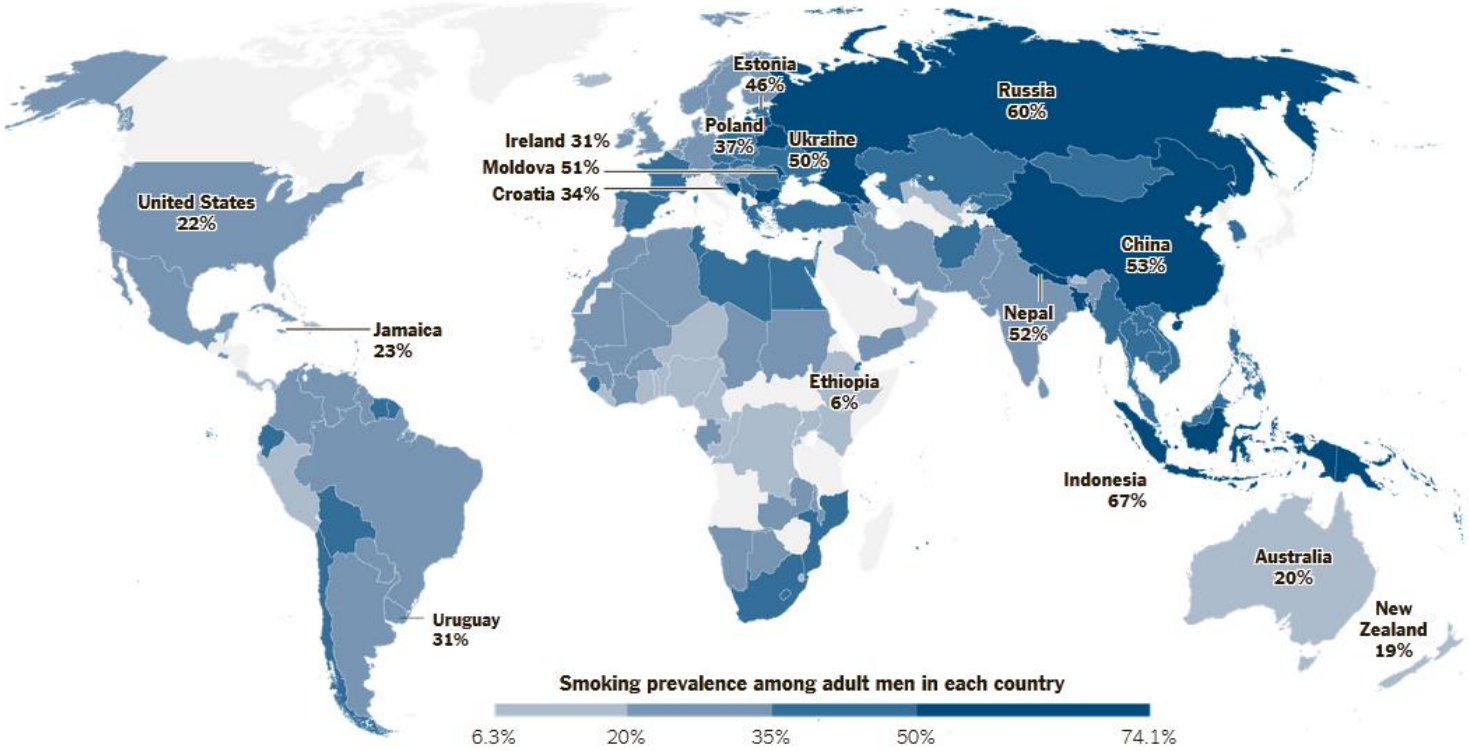
Smoking Prevalence Among Adult Men per Country



How Can Public Policy Impact Rates of HF?

Smoking Legislation: Why does it matter?

- **Smoke-free legislation aims to protect nonsmokers from secondhand smoke, but it may also reduce the risk among smokers because of reduced smoking or increased smoking cessation**
- **Exposure to secondhand smoke has immediate adverse cardiovascular effects, and prolonged exposure can cause coronary heart disease**

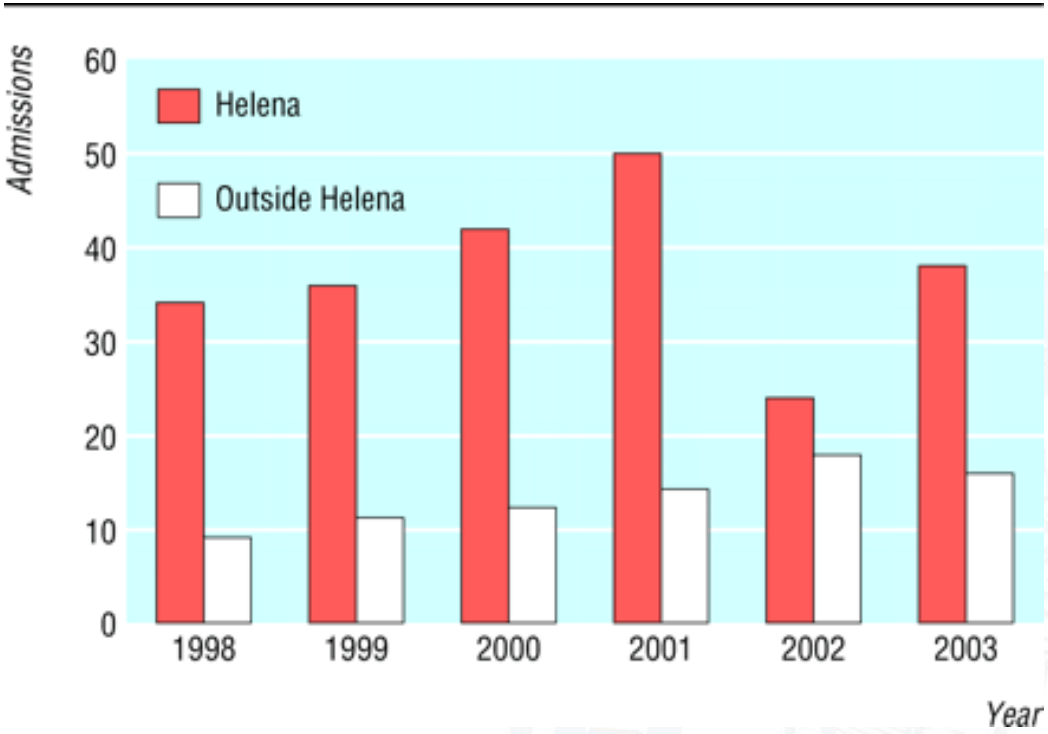
Smoking Legislation: Why does it matter?

- Secondhand smoke increases the risk of a myocardial infarction by about 30%
- The excess risk of acute coronary syndrome associated with smoking decreases within days after smoking cessation, and it is reduced by 50% at 1 year
- Multiple studies have reported that laws making indoor workplaces and public places smoke-free were associated with rapid, sizeable reductions in hospitalizations for acute myocardial infarction

Helena, Montana

- a geographically isolated community with one hospital serving a population of 68,140
- Helena enacted a smoke free ordinance on June 5, 2002
- This was overturned on Dec 3, 2002

Admissions for acute myocardial infarction in Helena, Montana



Smoking ban implemented June 5, 2002

Ireland

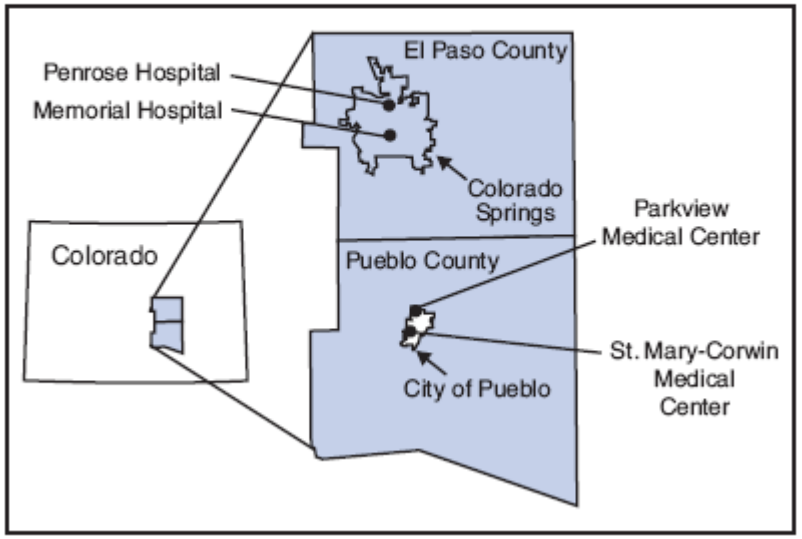
- On March 29, 2004, Ireland became the first country in Europe to impose a ban on smoking in workplaces. The legislation made it an offense to smoke in workplaces, including pubs and restaurants.

- After the ban, the number of admissions for acute MI declined 11%, a reduction that occurred mainly in males and appeared to be primarily driven by a reduction in non-ST-segment elevation MI (NSTEMI). The reduction appeared to be sustained throughout 2005-2006

Pueblo Heart Study
January 2002-June 2006

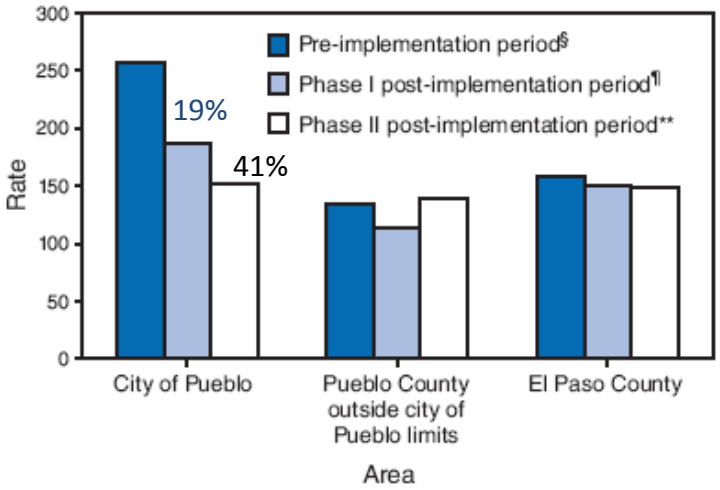
- The Pueblo Heart Study examined the impact of a municipal smoke-free ordinance in the city of Pueblo, Colorado, that took effect on July 1, 2003
- Two control sites were selected for comparison with the city of Pueblo: 1) the area of Pueblo County outside the city of Pueblo limits and 2) El Paso County, including Colorado Springs

FIGURE 1. Pueblo smoke-free area, comparison areas, and hospitals treating acute myocardial infarction patients — Pueblo Heart Study, January 2002–June 2006



Pueblo Heart Study
January 2002-June 2006

FIGURE 2. Rate* of hospitalizations for acute myocardial infarction before and after smoking ordinance, by area and period — city of Pueblo, Pueblo County outside city of Pueblo limits, and El Paso County, Pueblo Heart Study, January 2002–June 2006†



* Per 100,000 person-years. Based on U.S. Census Bureau population data for 2006.

† Because of receipt of routinely amended coding data from the Colorado Hospital Association, certain data points for the pre-implementation and Phase I post-implementation periods differ from those published previously (Bartecchi C, Alsever RN, Nevin-Woods C, et al. Reduction in the incidence of acute myocardial infarction associated with a citywide smoking ordinance. Circulation 2006;114:1490–6).

§ January 2002–June 2003.

¶ July 2003–December 2004.

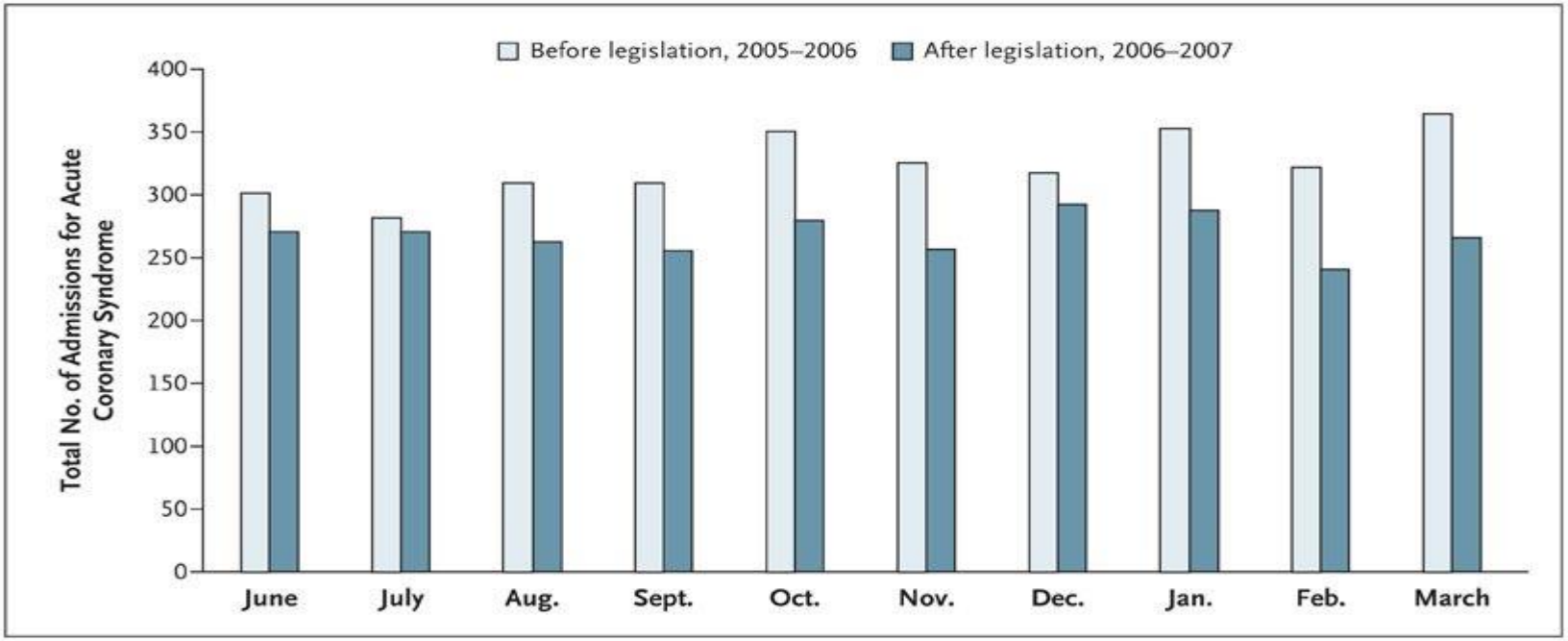
** January 2005–June 2006.

Scotland

- The Smoking, Health and Social Care Act, which was passed in Scotland in 2005, prohibited smoking in all enclosed public places and workplaces in Scotland after the end of March 2006
- Data was collected prospectively on all patients with acute coronary syndrome admitted to nine hospitals during the 10 months before implementation of the legislation (June 2005 through March 2006) and during the same 10 months thereafter (June 2006 through March 2007).

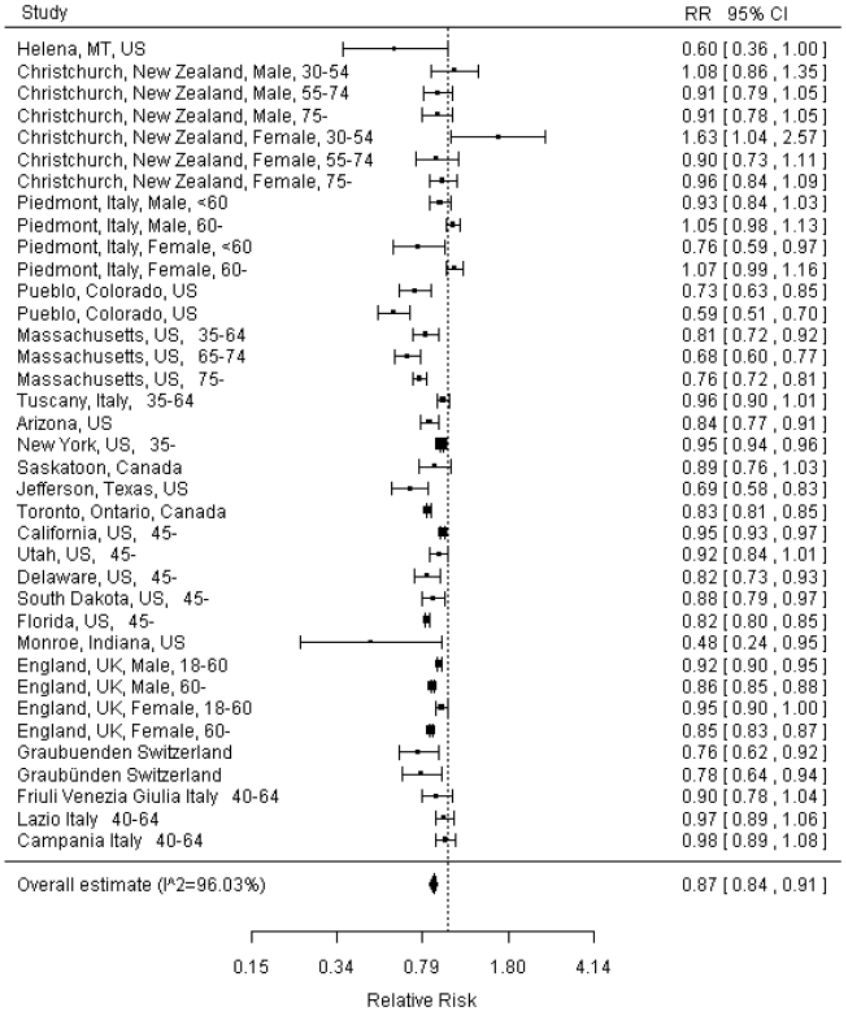
Pell N Eng J Med 359:482-91, 2008

Admissions for Acute Coronary Syndrome in Scotland According to Month before and after Smoke-free Legislation



Pell N Eng J Med 359:482-91, 2008

The effects of smoke-free legislation on acute myocardial infarction



Lin et al. BMC Public Health 2013, 13:529

Key Components of Million Hearts®

Keeping Us Healthy
Changing the environment

Health Disparities

Excelling in the ABCS
Optimizing care

Focus on the ABCS

Health tools and technology

Innovations in care delivery

Glantz. Prev. Med. 2008; 47(4): 452-3.
How Tobacco Smoke Causes Disease: A Report of the Surgeon General, 2010.

Targets for the ABCS

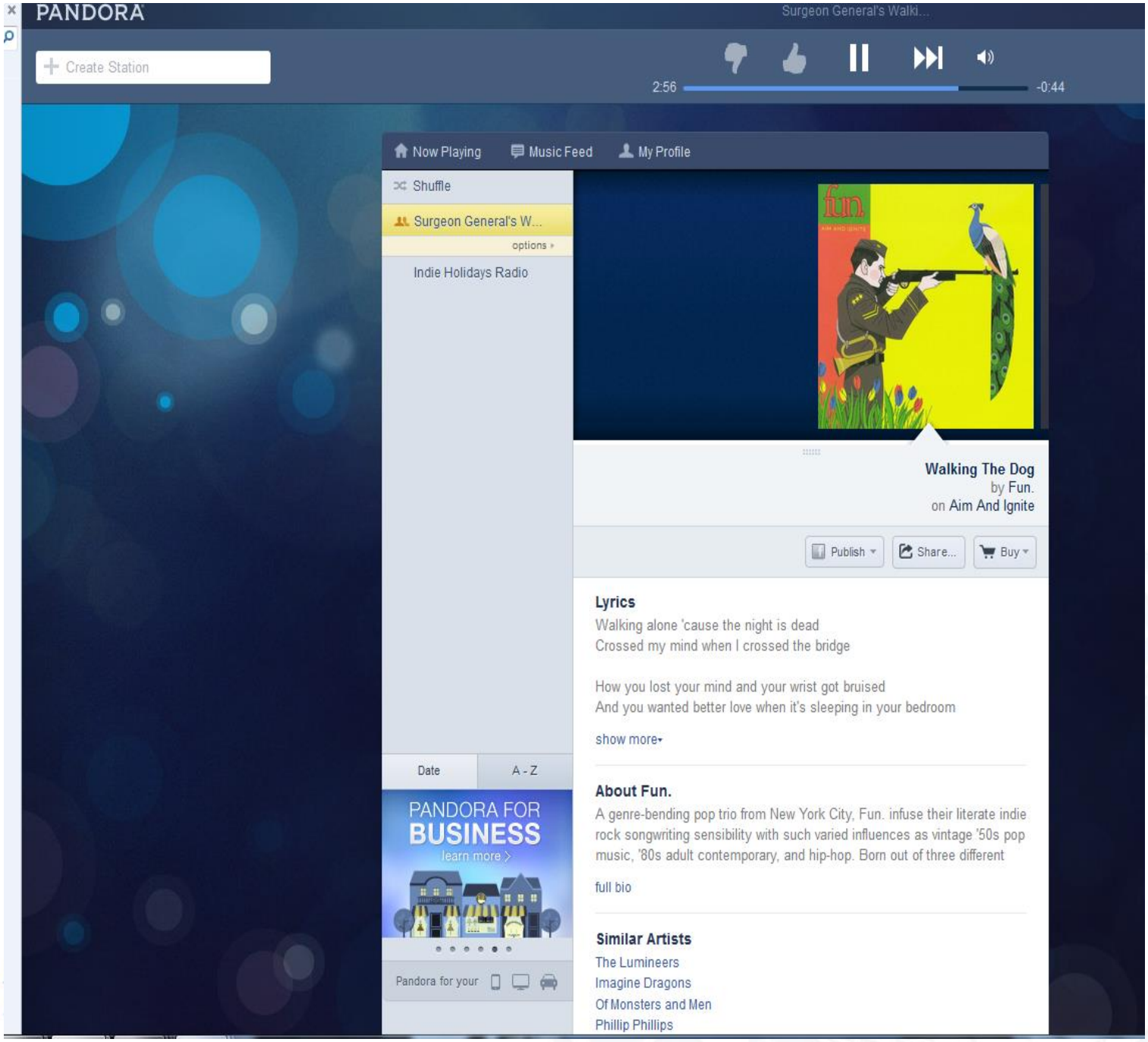
Intervention	Pre-Initiative Estimate (2009-2010)	2017 Population-wide Goal	2017 Clinical Target
Aspirin when appropriate	54%	65%	70%
Blood pressure control	53%	65%	70%
Cholesterol management	33%	65%	70%
Smoking cessation	22%	65%	70%

National Ambulatory Medical Care Survey, National Health and Nutrition Examination Survey

Helpin
Learn.

Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities

- **Goal 1. Make Walking a National Priority**
  - Encourage people to promote walking and make their communities more walkable.
  - Create a walking movement to make walking and walkability a national priority.
- **Goal 2. Design Communities that Make It Safe and Easy to Walk for People of All Ages and Abilities**
  - Design and maintain streets and sidewalks so that walking is safe and easy.
  - Design communities that support safe and easy places for people to walk.
- **Goal 3. Promote Programs and Policies to Support Walking Where People Live, Learn, Work, and Play**
  - Promote programs and policies that make it easy for students to walk before, during, and after school.
  - Promote worksite programs and policies that support walking and walkability.
  - Promote community programs and policies that make it safe and easy for residents to walk.
- **Goal 4. Provide Information to Encourage Walking and Improve Walkability**
  - Educate people about the benefits of safe walking and places to walk.
  - Develop effective and consistent messages and engage the media to promote walking and walkability.
  - Educate relevant professionals on how to promote walking and walkability through their profession.
- **Goal 5. Fill Surveillance, Research, and Evaluation Gaps Related to Walking and Walkability**
- Improve the quality and consistency of surveillance data collected about walking and walkability.
- Address research gaps to promote walking and walkability.
- Evaluate community interventions to promote walking and walkability.


PANDORA
Surgeon General's Walki...
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2:56
-0:44
Now Playing
Music Feed
My Profile
Shuffle
Surgeon General's W...
options
Indie Holidays Radio
Date
A - Z
PANDORA FOR BUSINESS
learn more
Pandora for your
Walking The Dog
by Fun.
on Aim And Ignite
Publish
Share...
Buy
Lyrics
Walking alone 'cause the night is dead
Crossed my mind when I crossed the bridge
How you lost your mind and your wrist got bruised
And you wanted better love when it's sleeping in your bedroom
show more
About Fun.
A genre-bending pop trio from New York City, Fun. infuse their literate indie rock songwriting sensibility with such varied influences as vintage '50s pop music, '80s adult contemporary, and hip-hop. Born out of three different
full bio
Similar Artists
The Lumineers
Imagine Dragons
Of Monsters and Men
Phillip Phillips

Box I.1 Voluntary global targets for prevention and control of noncommunicable diseases to be attained by 2025

(1) A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases

(2) At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context

(3) A 10% relative reduction in prevalence of insufficient physical activity

(4) A 30% relative reduction in mean population intake of salt/sodium

(5) A 30% relative reduction in prevalence of current tobacco use

(6) A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances

(7) Halt the rise in diabetes and obesity

(8) At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes

(9) An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities

ACC is taking action by…

Engaging Partners

Supporting Members

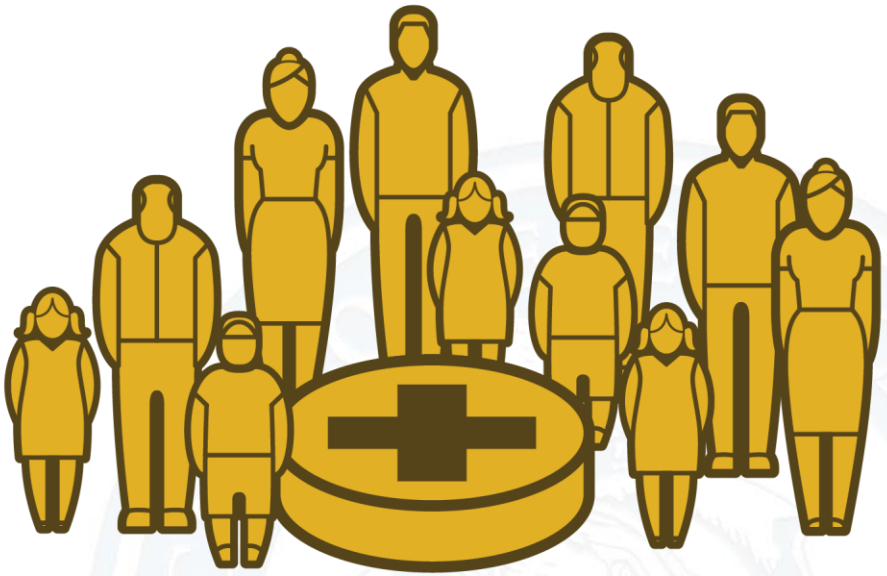
Encouraging CVT-Facilitated Patient Education

Helping Cardiovascular Professionals Learn. Advance. Heal.

Source: Gerard R. Martin, MD, FACC, *ACC In Touch Blog* post

POPULATION HEALTH

ACC is a leader in efforts to **reduce the burden of cardiovascular disease** in U.S. and global populations.



Top Population Health Efforts

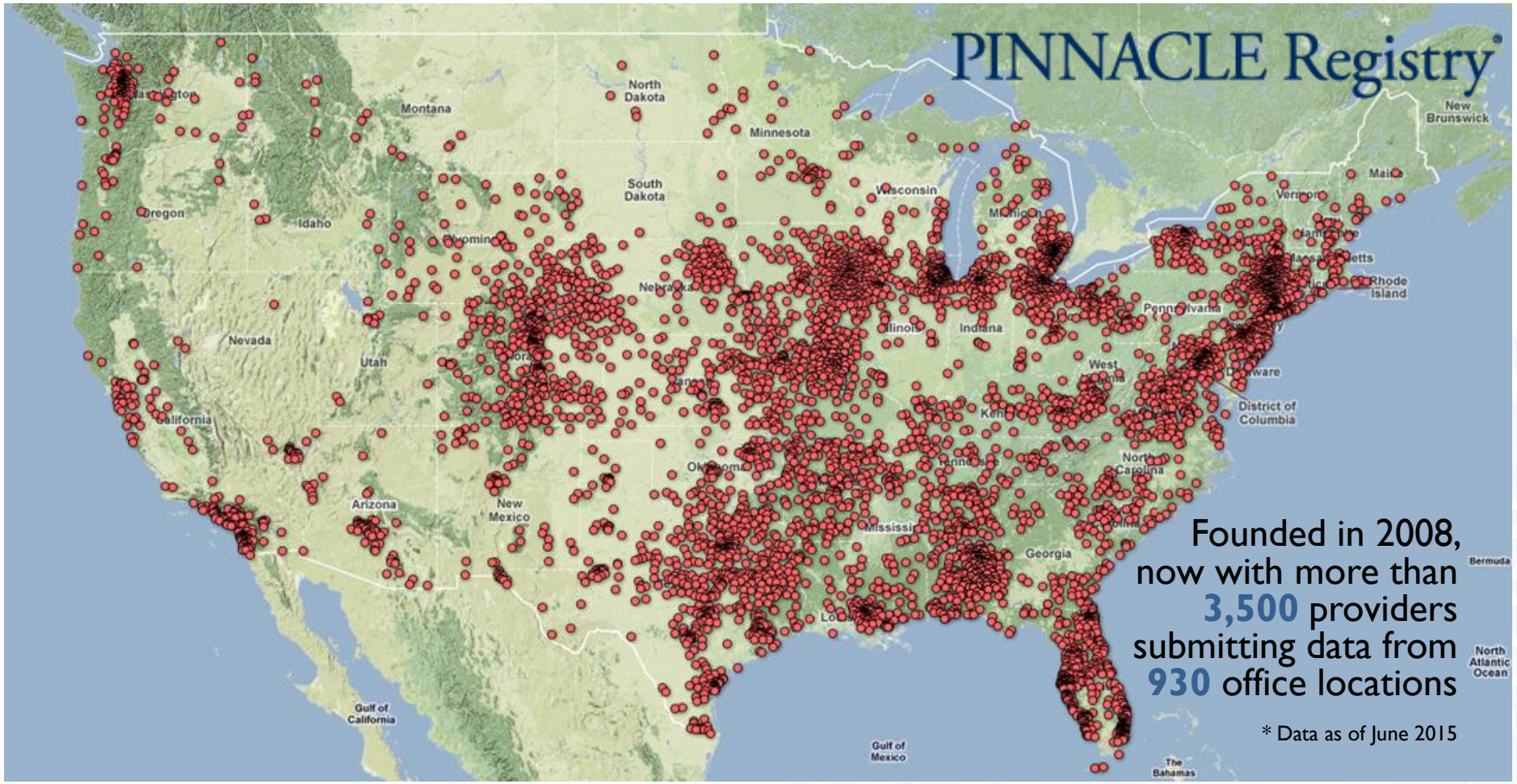
- Focus on Health Equity and Outcomes Disparities
- Supporting member accountability for population health in a value-based purchasing environment
- CardioSmart
- National and international advocacy efforts around prevention and health promotion (NCD Alliance)
- Diabetes Collaborative Registry
- Partnerships with Chapters and Organizations on Prevention Efforts (Million Hearts and Campaign For Tobacco Free Kids)

PINNACLE Registry®

- Cardiology's largest outpatient quality improvement registry
- 7 million patient records
- For coronary artery disease, hypertension, heart failure and atrial fibrillation in the outpatient setting
- Benchmarking reports

Leveraging PINNACLE - a Large Outpatient CV Registry

Over 20 million records from 5 million unique patient lives to-date



PINNACLE: Real World Evidence

- As part of the larger education initiative, ACC can develop a proprietary software tool mapped to the PINNACLE registry that would allow for each country participating in the program to be able to receive national, US, and global benchmark reports on their management of primary and secondary prevention and risk factor management for CAD, HF, and AF patients
- This tool can be designed to comply with regulations in countries where disaggregated and anonymized patient data cannot leave the country

ACC Around the World

A 'PINNACLE' Moment in Brazil

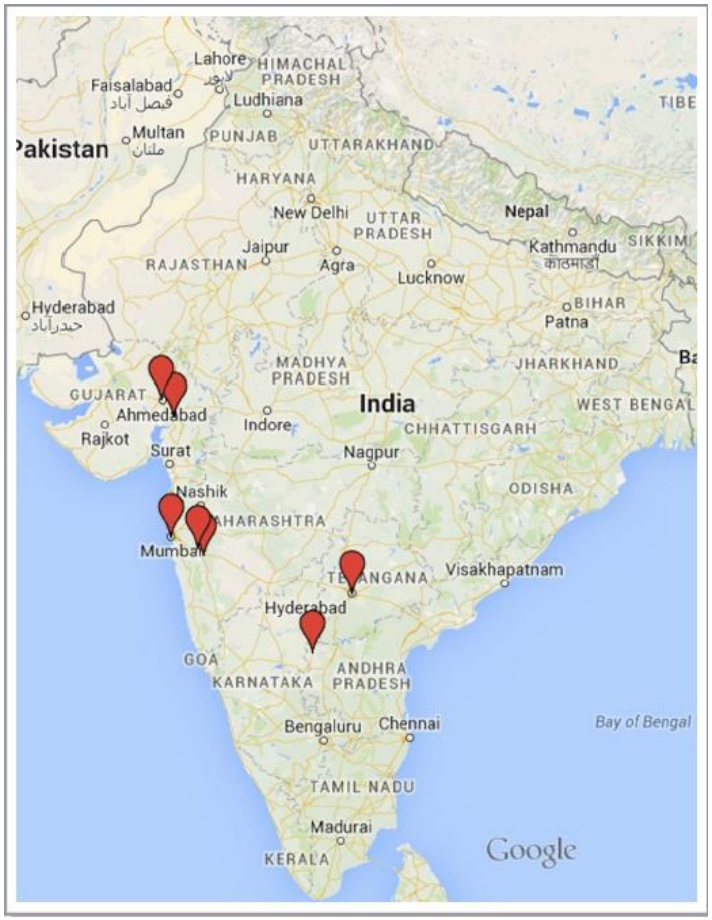
The College was featured prominently in the 34th annual meeting of the Sao Paolo State of Brazil Society of Cardiology (SOCESP) where over 7,000 cardiologists from across Brazil gathered for the latest updates in cardiovascular science. **Ronald Schwartz, MD, FACC,** and **James McClurken, MD, FACC,** spoke during the opening session of the congress and each delivered lectures on chronic coronary care. ACC Past President **Ralph G. Brindis, MD, MPH, MACC,** also spoke about the NCDR®, and participated in a signing ceremony that officially launched an ACC and SOCESP collaboration to implement the PINNACLE Registry® across Brazil. With the signing of the agreement, Brazil will join India as the second country outside of the U.S. to set-up a nationwide PINNACLE Registry. These partnerships will establish an unprecedented platform for comparisons in global cardiovascular care and the development of corresponding quality improvement programs.

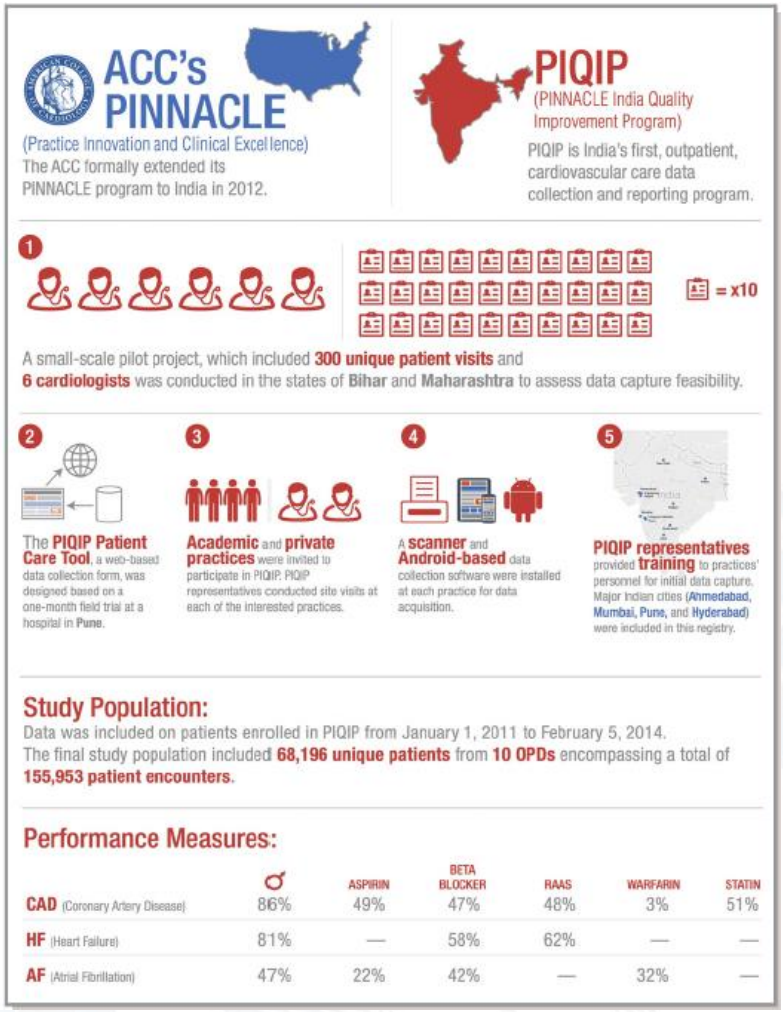
NCDR Global Partners

NCDR®
NATIONAL CARDIOVASCULAR DATA REGISTRY

Helping Cardiovascular Professionals
Learn. Advance. Heal.

PINNACLE: Promoting Quality Internationally





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SOURCE: Kalra A et al. J Am Heart Assoc. 2015;4:e001910
Doi:10.1161/JAHA.115.001910

Collaboration across the Care Continuum

American Diabetes Association®

AACE — American Association of Clinical Endocrinologists

ACP℠
American College of Physicians
Leading Internal Medicine, Improving Lives

Joslin Diabetes Center

American College of Cardiology

Helping Cardiovascular Professionals Learn. Advance. Heal.

DIABETES COLLABORATIVE REGISTRY™

Conclusions

- Heart failure (HF) is a global epidemic affecting an estimated 26 million people worldwide.
- Clinical practice guidelines published by professional societies around the globe all focus on the diagnosis, treatment and long-term management of patients with HF.
- Issues involving access to care vary from region to region and need to be addressed in order to provide patients with evidence-based therapies.
- Best practices informing efforts in access and patient adherence are needed to provide patients with life-saving treatment.
- Likewise, public policy is needed in all countries to support such programs.