

HEART ATTACK TREATMENT AND PREVENTION

Alden (Chip) McDonald, MD, FACC

Cardiologist

**Stanford Health Care, University Medical Partners
Alta Bates Summit and Eden Medical Centers**

Past President

Greater Bay Area American Heart Association

OVERVIEW

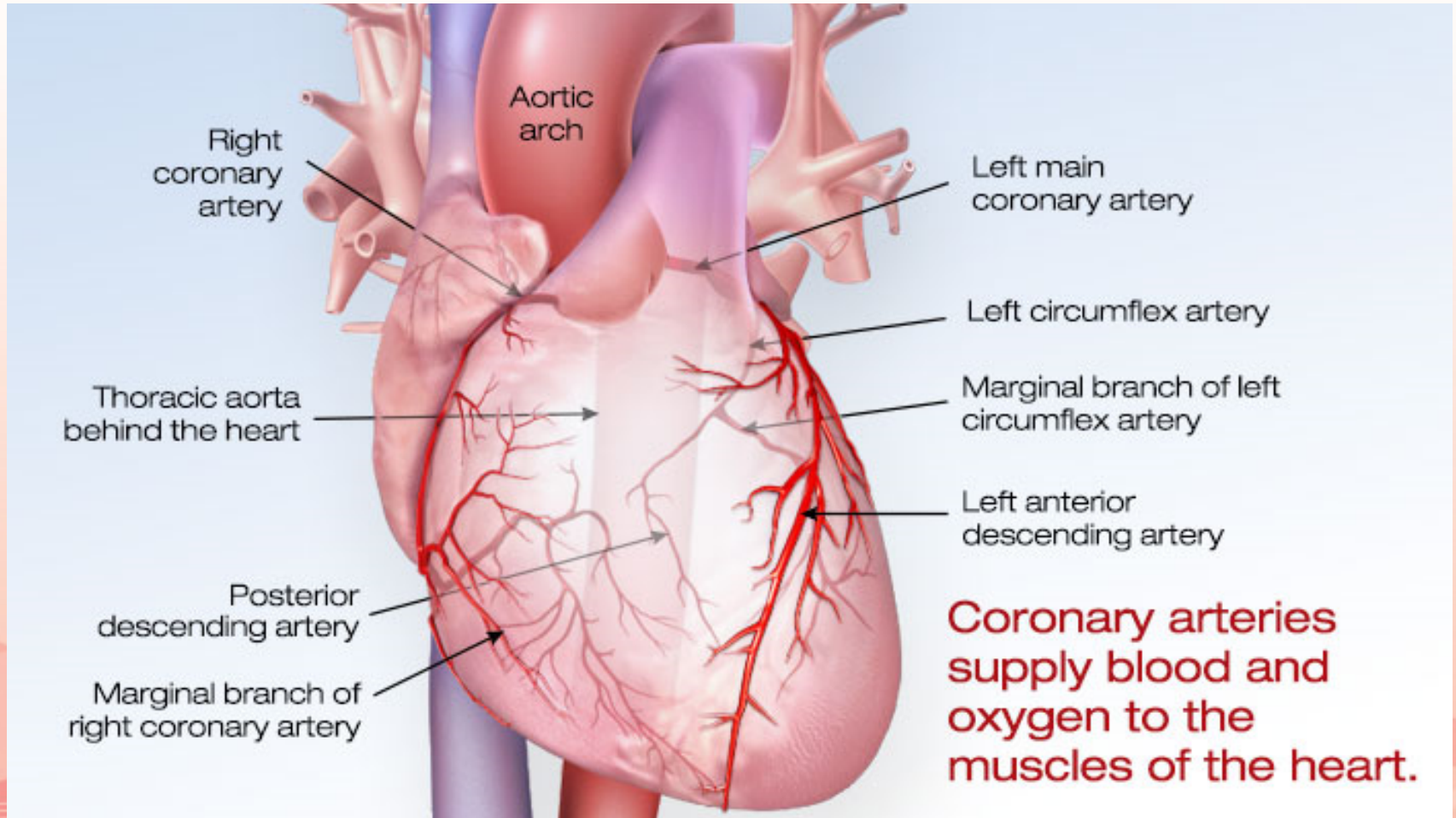
- **Case presentation**
- **Impact of cardiovascular disease and disparities**
- **Prevention of cardiovascular disease**
- **Individual and community strategies to improve cardiovascular health**

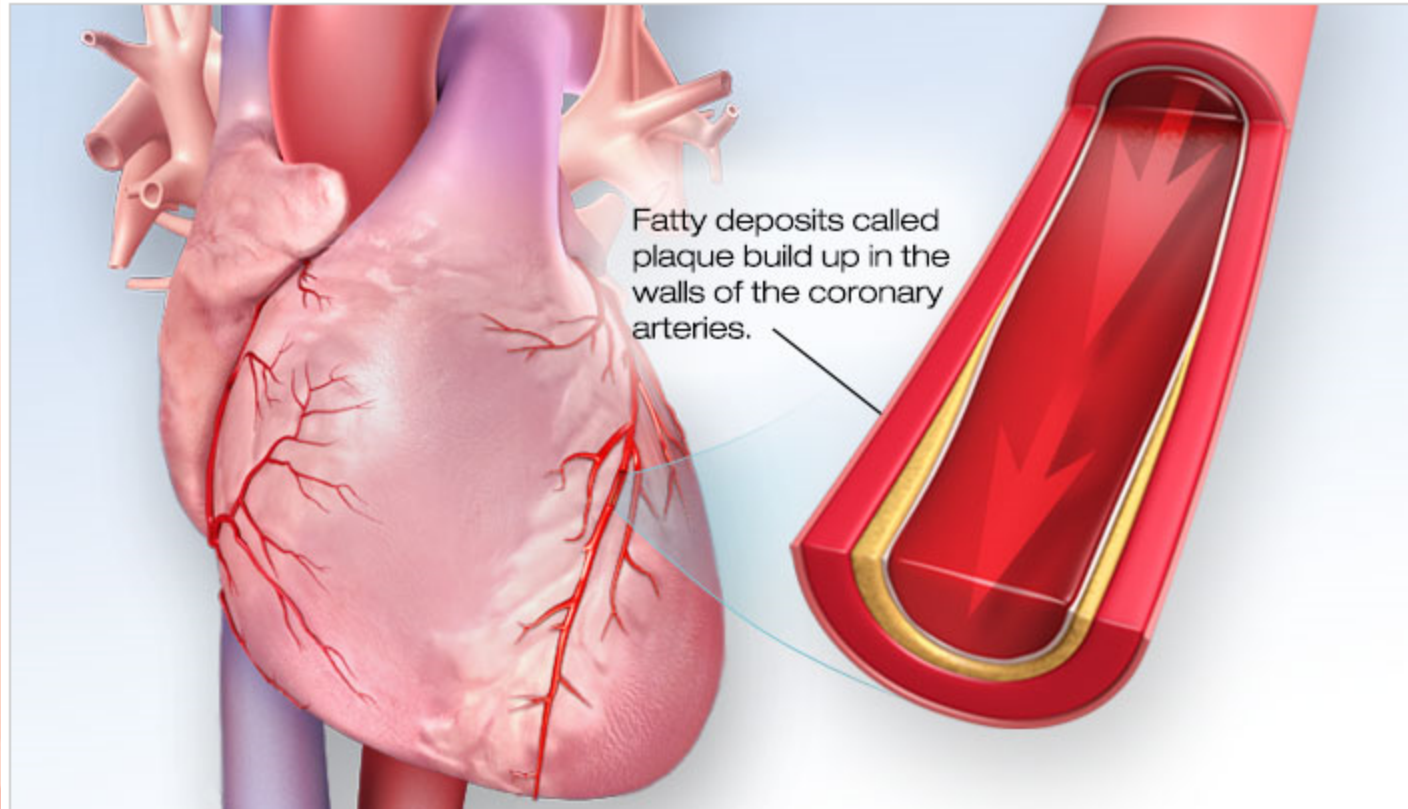
OVERVIEW

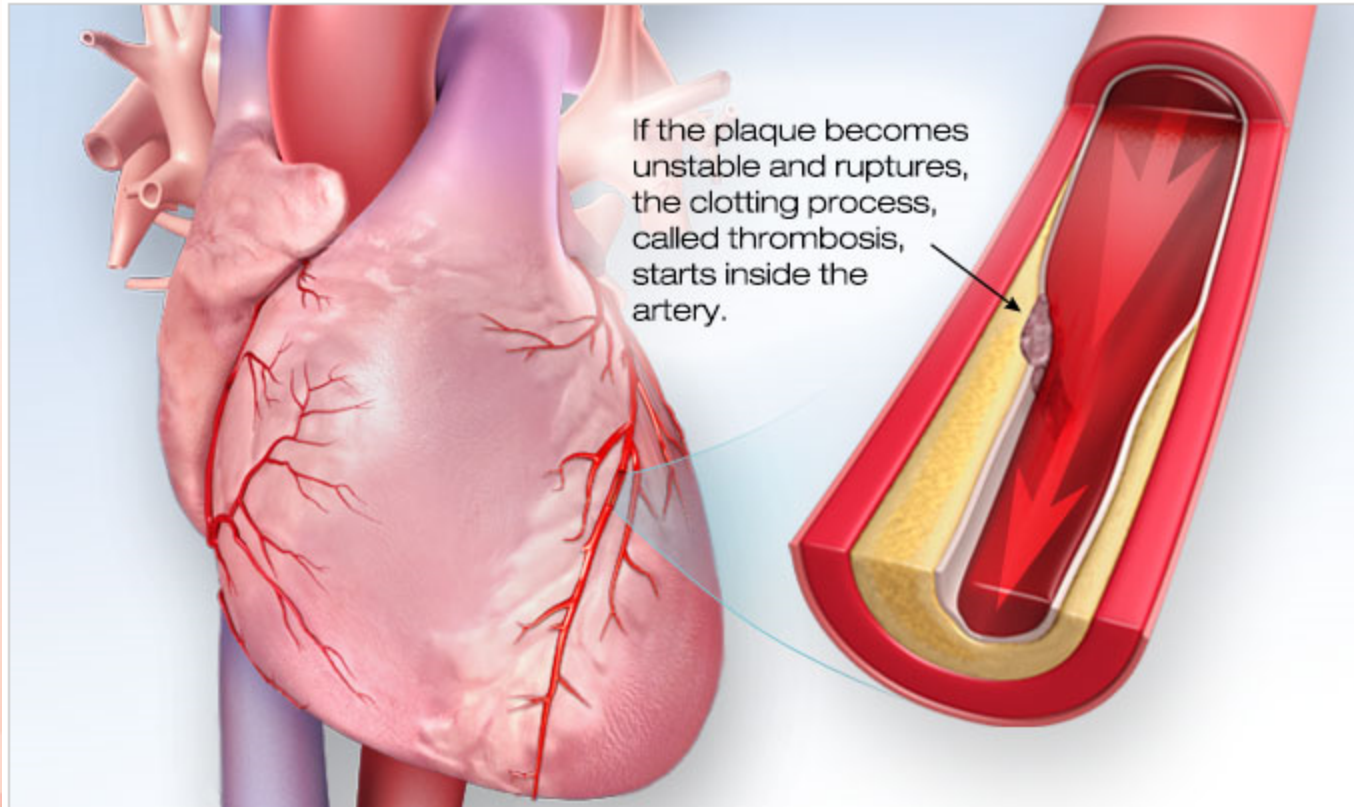
- ***Case presentation***
- **Impact of cardiovascular disease and disparities**
- **Prevention of cardiovascular disease**
- **Individual and community strategies to improve cardiovascular health**

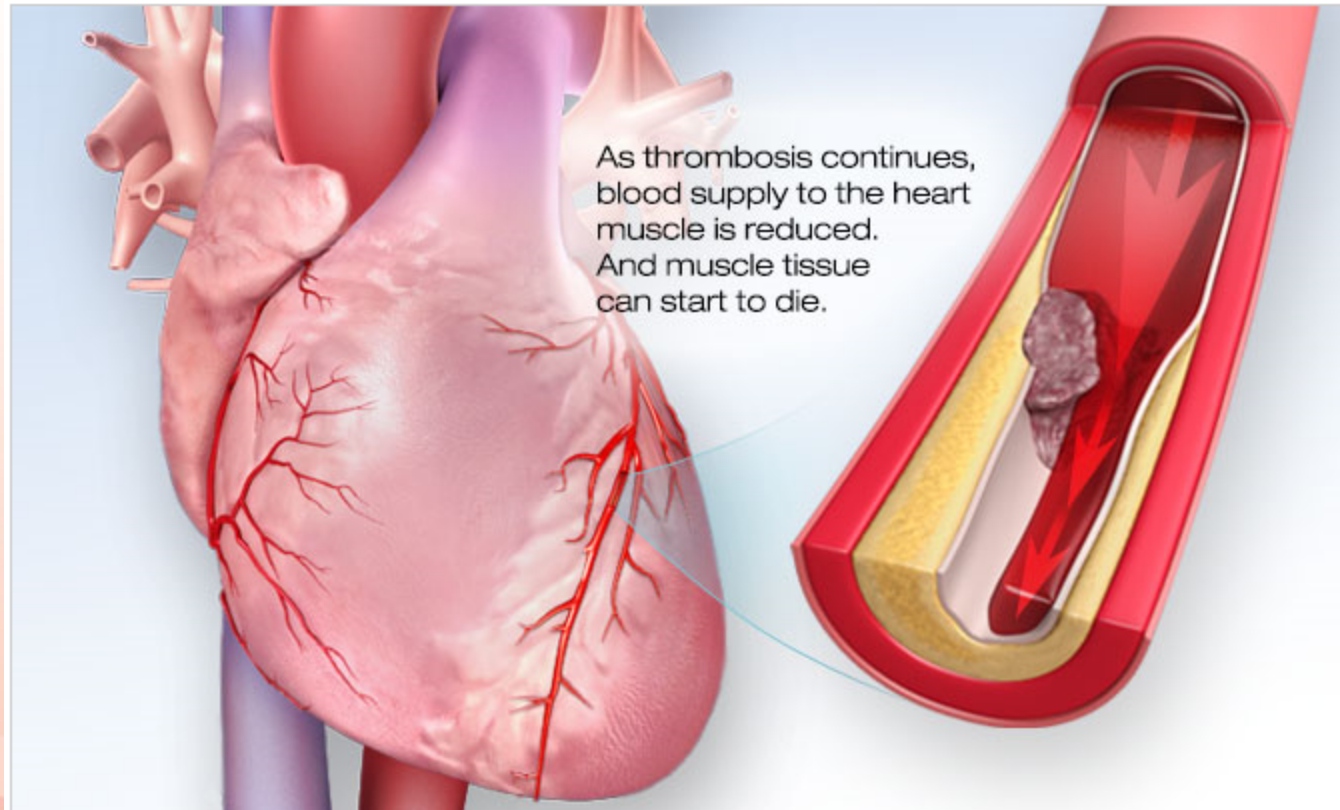
PATIENT

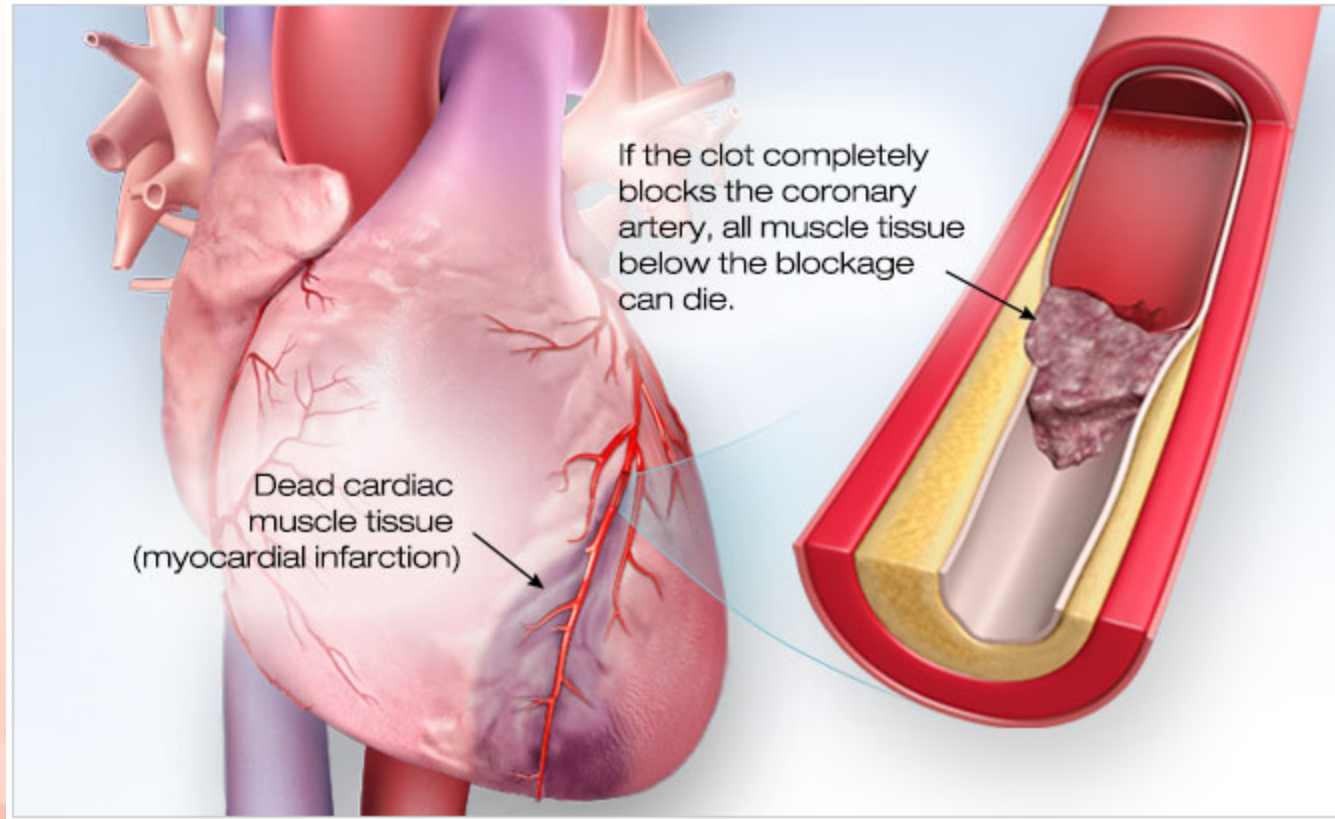
- **67 y.o. woman with crushing chest pain starting 30 minutes ago**
- **History of diabetes, hypertension, high cholesterol, and obesity**
- **Blood pressure 60s, heart rate 30, lethargic**
- **Required:**
 - **Intubation/ breathing machine**
 - **External pacing**
 - **Medications to increase blood pressure**
- **EKG showed an acute heart attack**



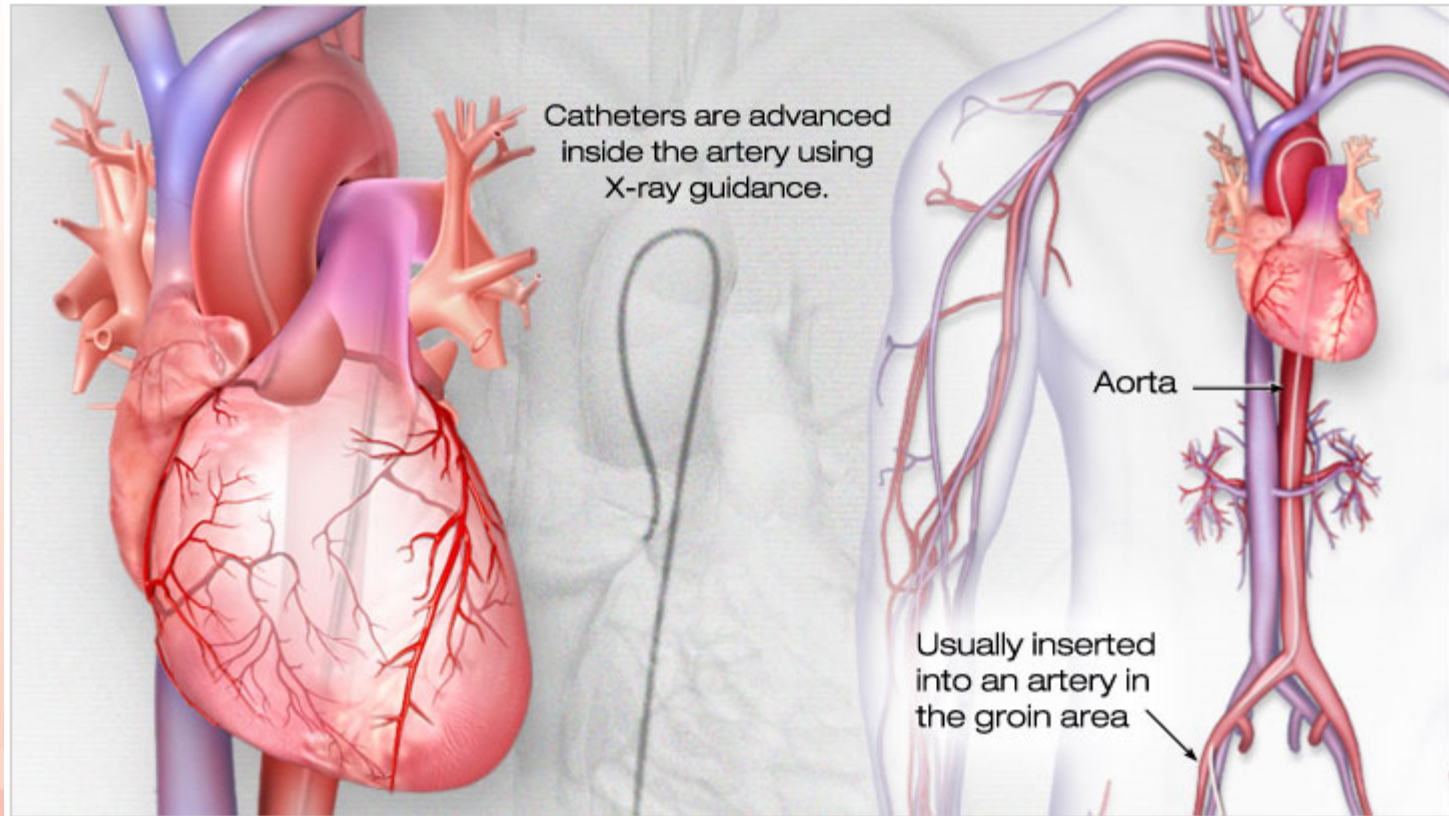


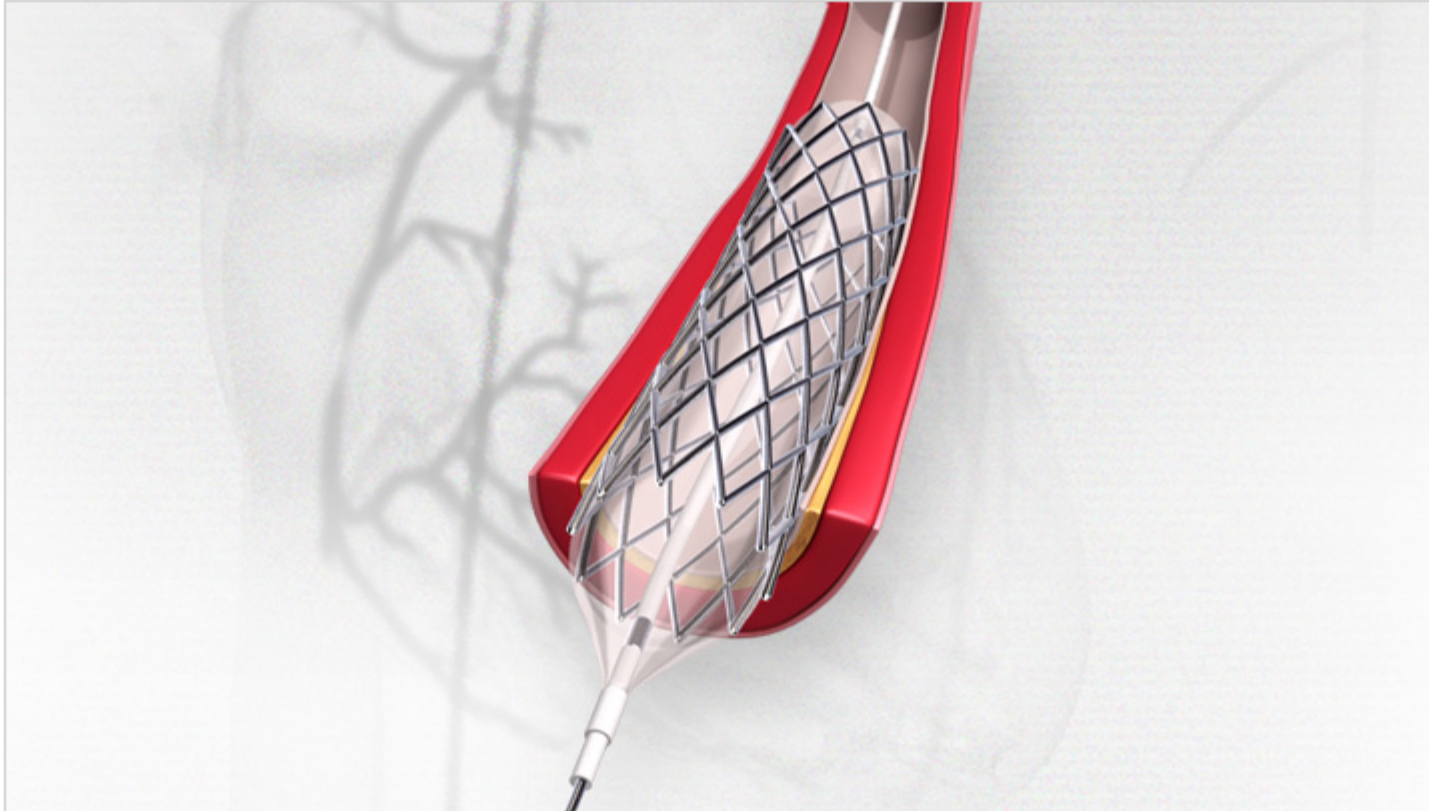






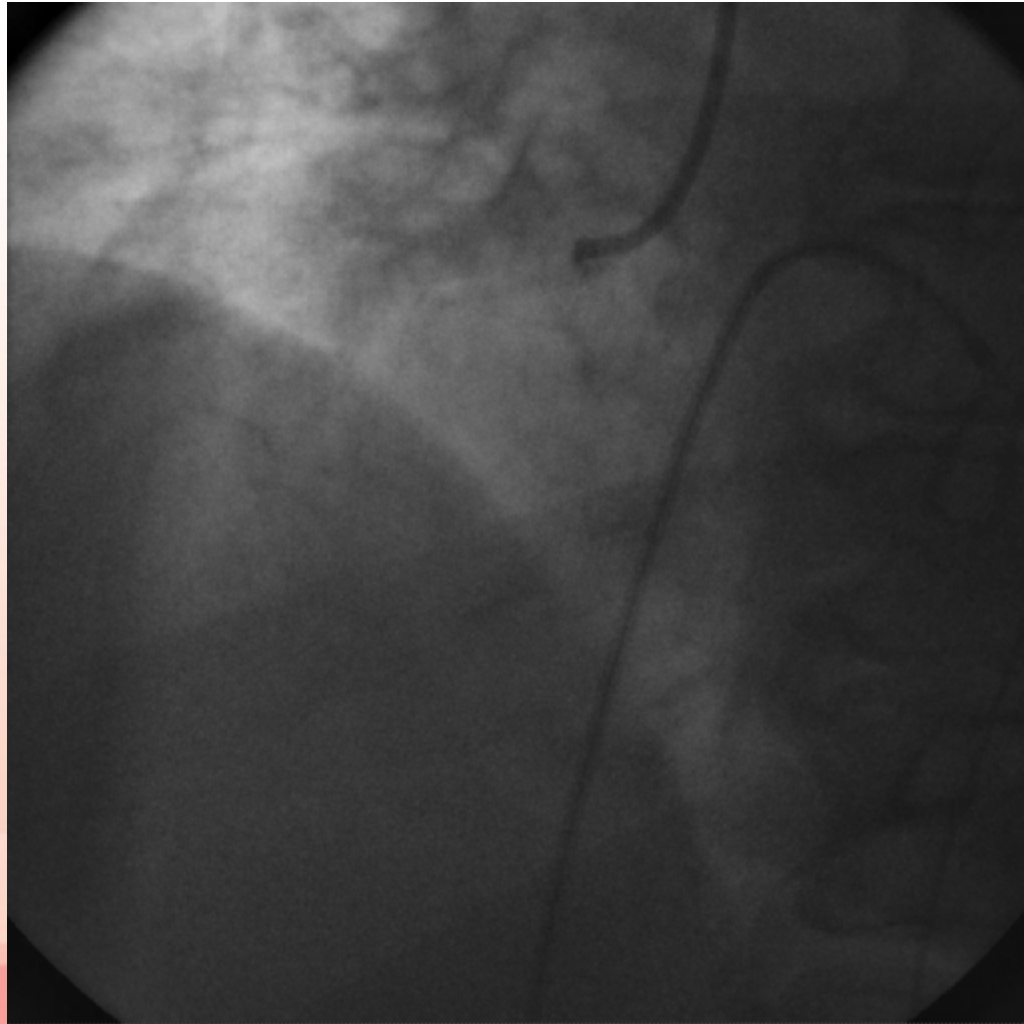
Time is muscle!

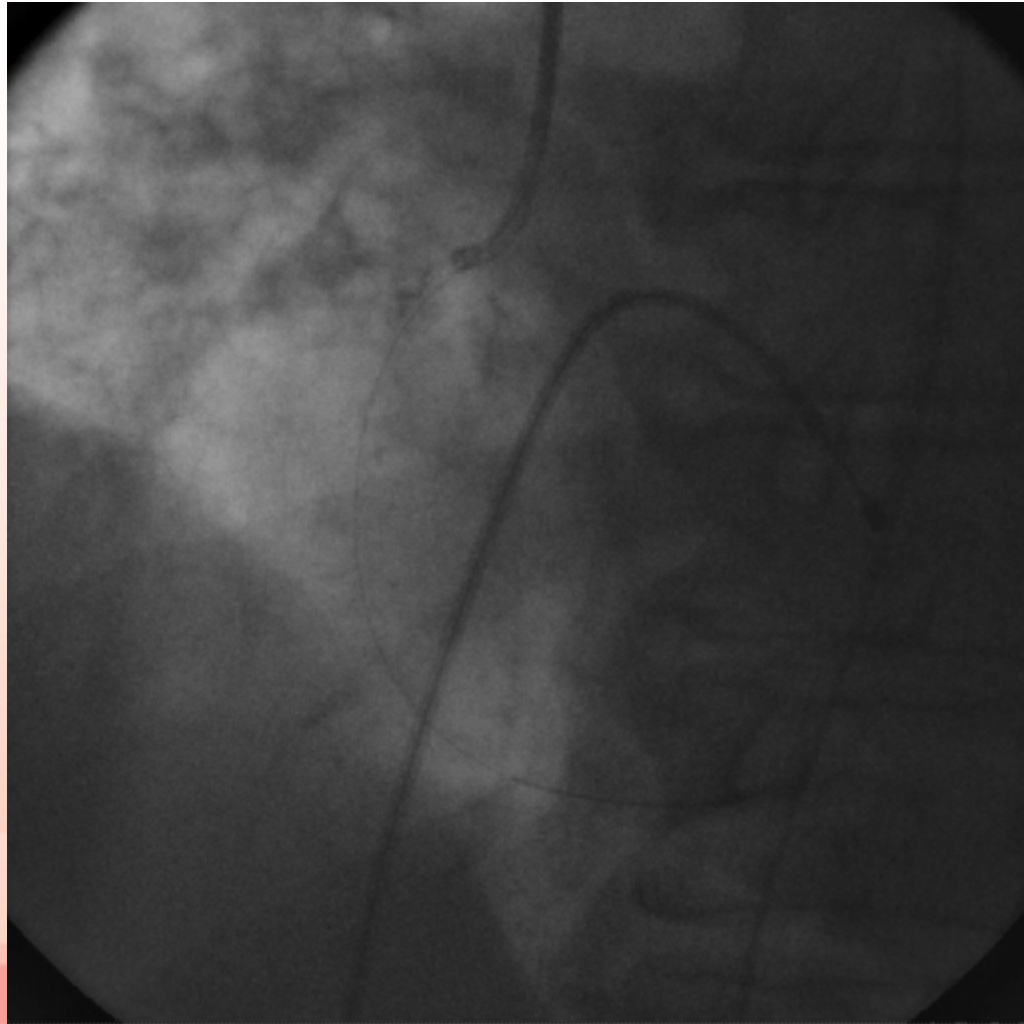


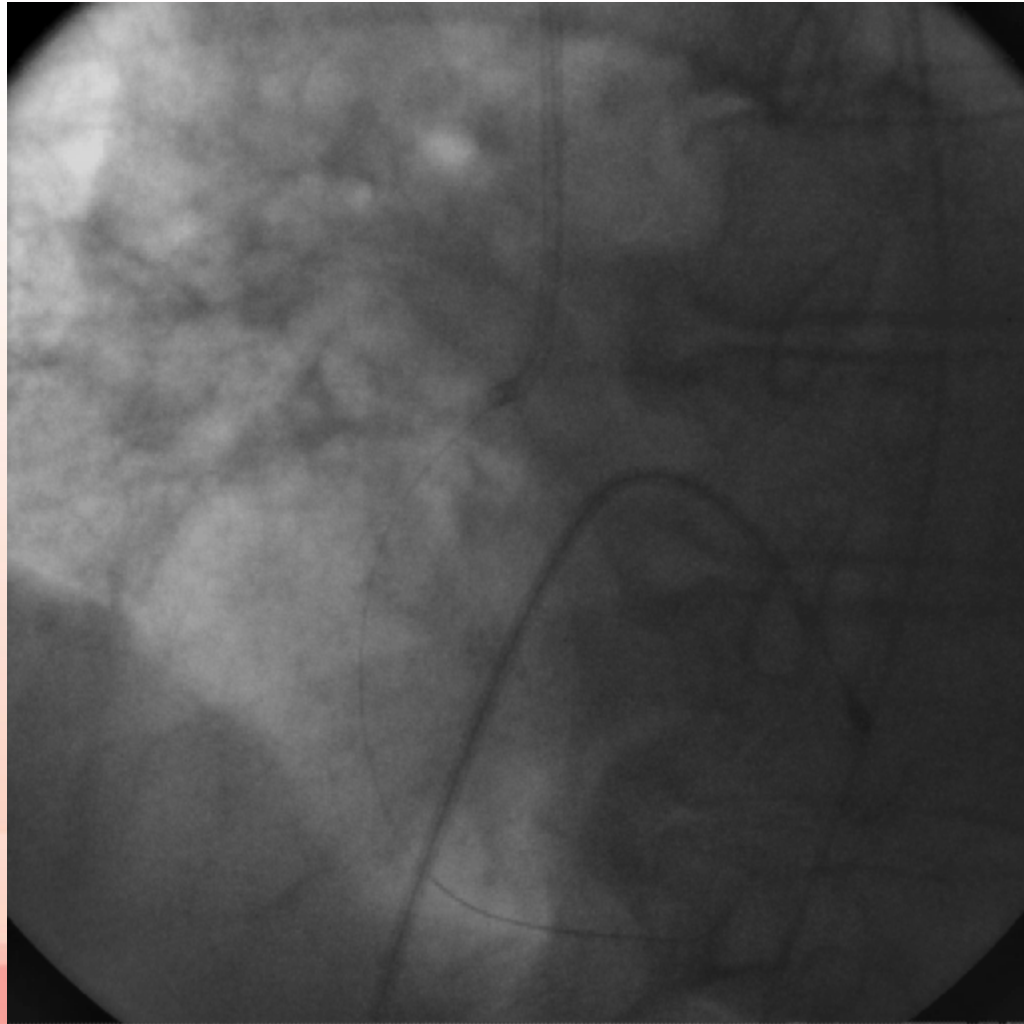


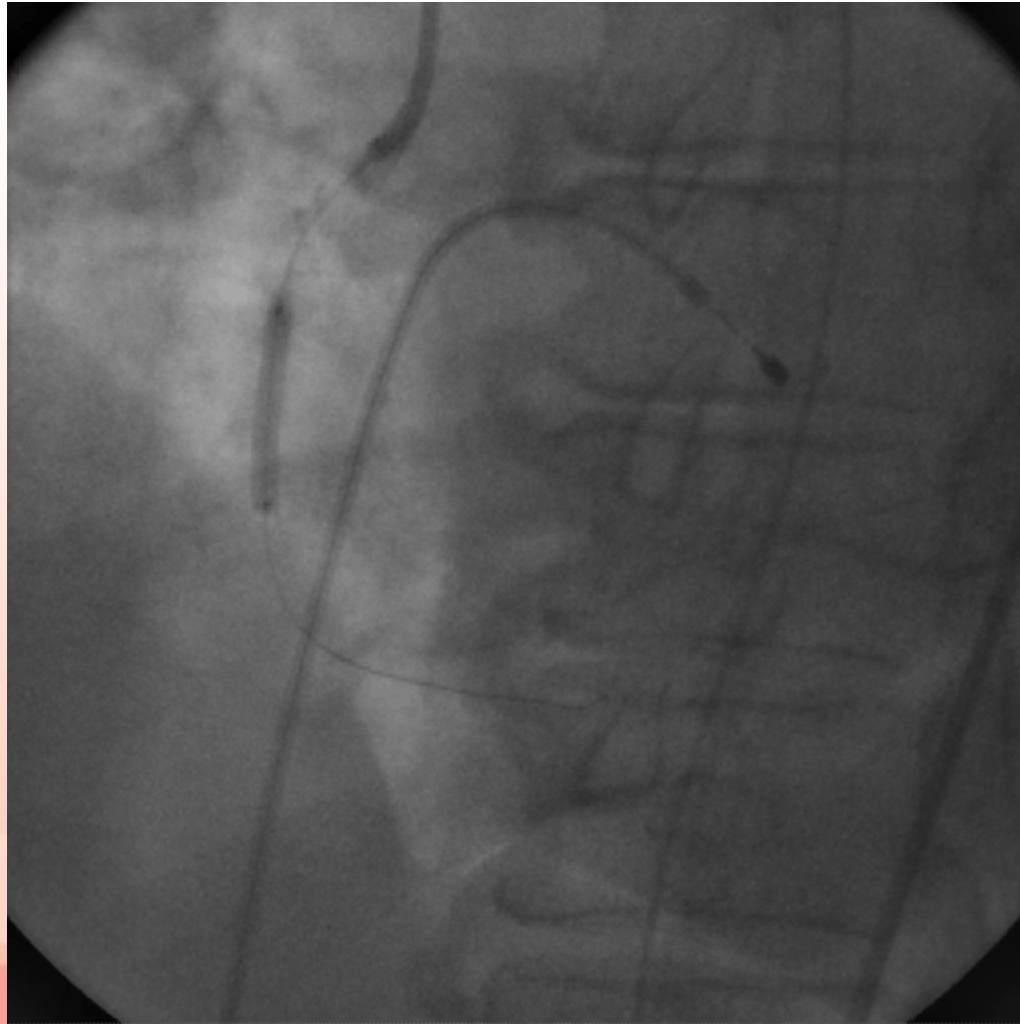
PATIENT

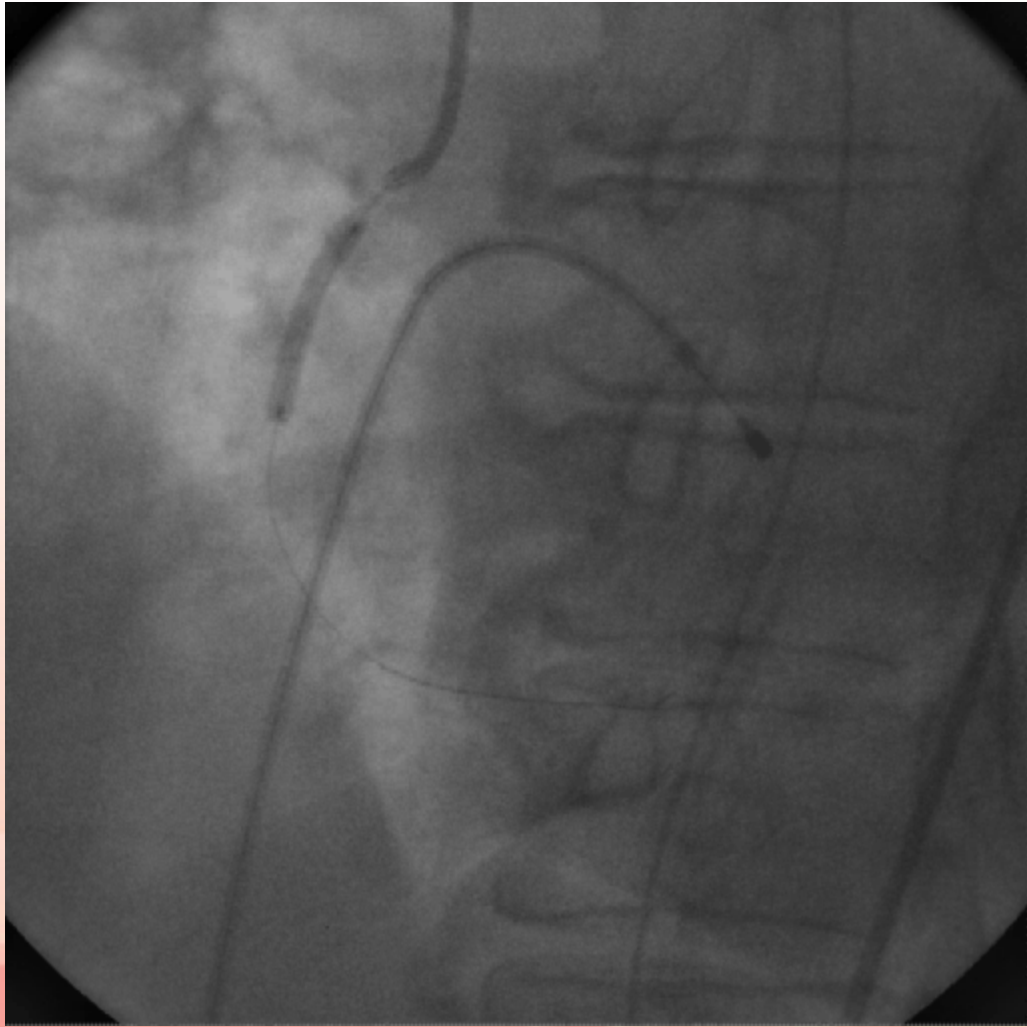
- **67 y.o. woman with crushing chest pain starting 30 minutes ago**
- **History of diabetes, hypertension, high cholesterol, and obesity**
- **Blood pressure 60s, heart rate 30, lethargic**
- **Required:**
 - **Intubation/ breathing machine**
 - **External pacing**
 - **Medications to increase blood pressure**
- **EKG showed an acute heart attack**

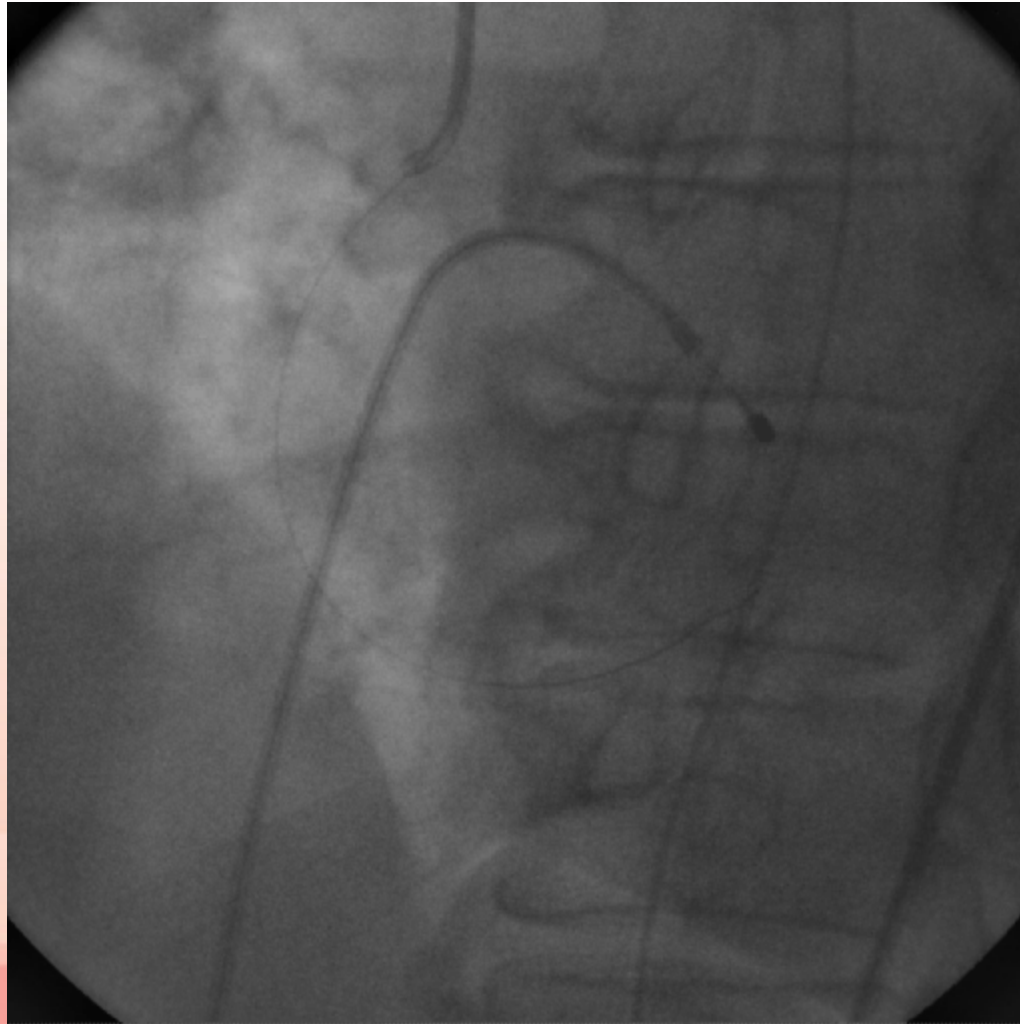


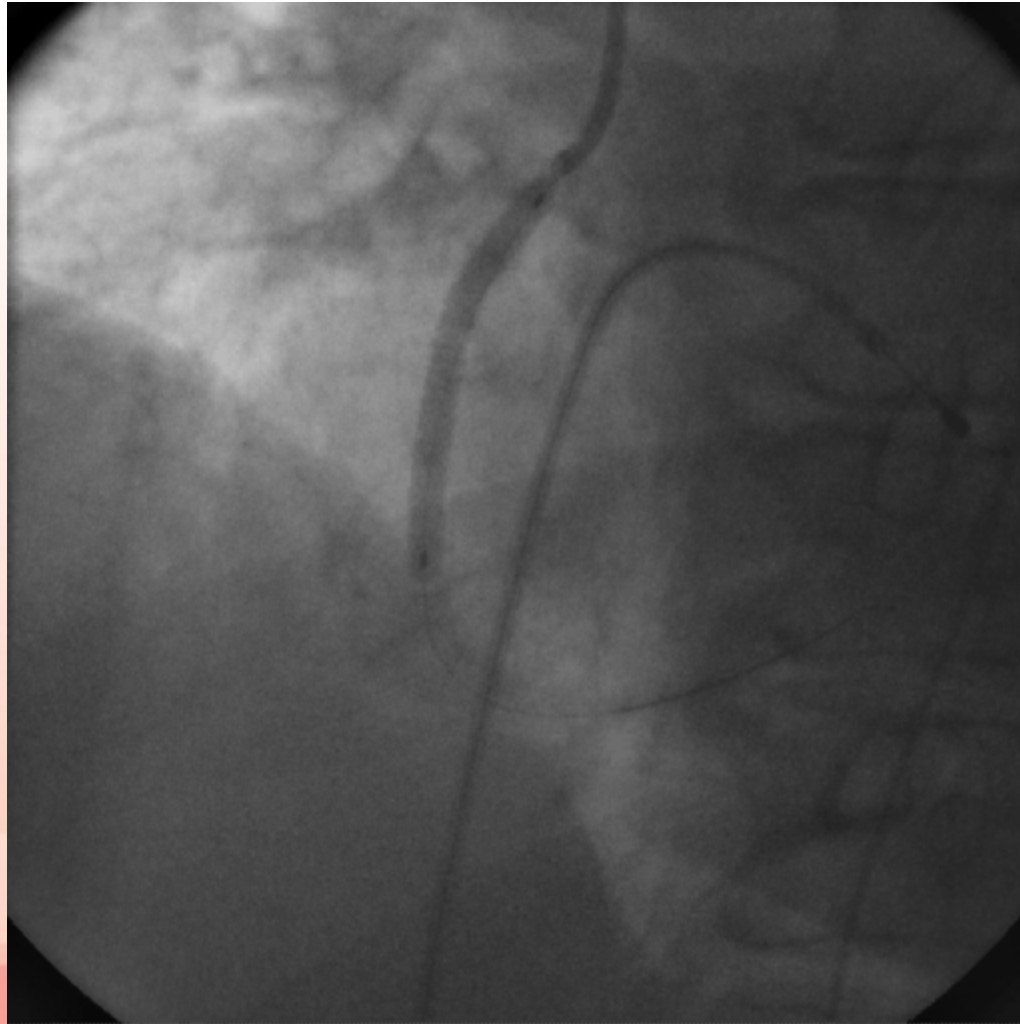


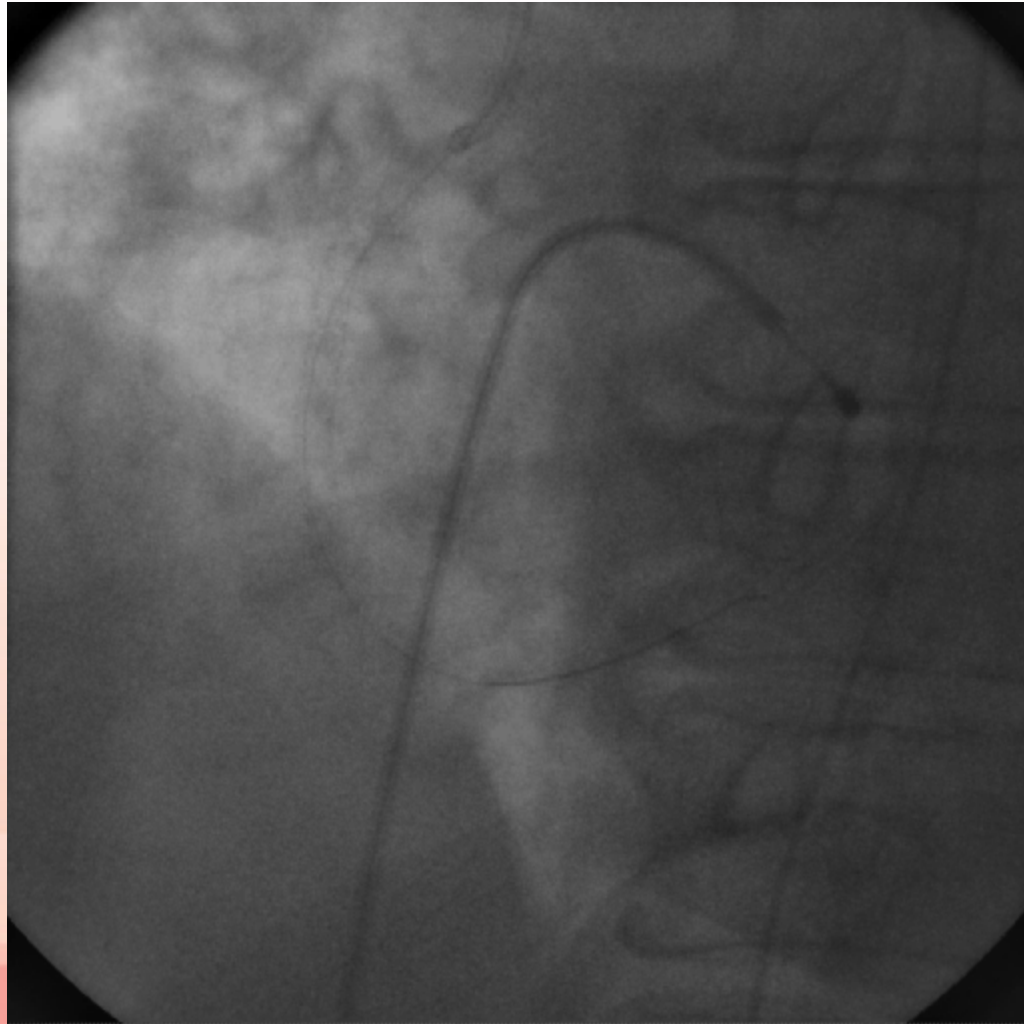












OVERVIEW

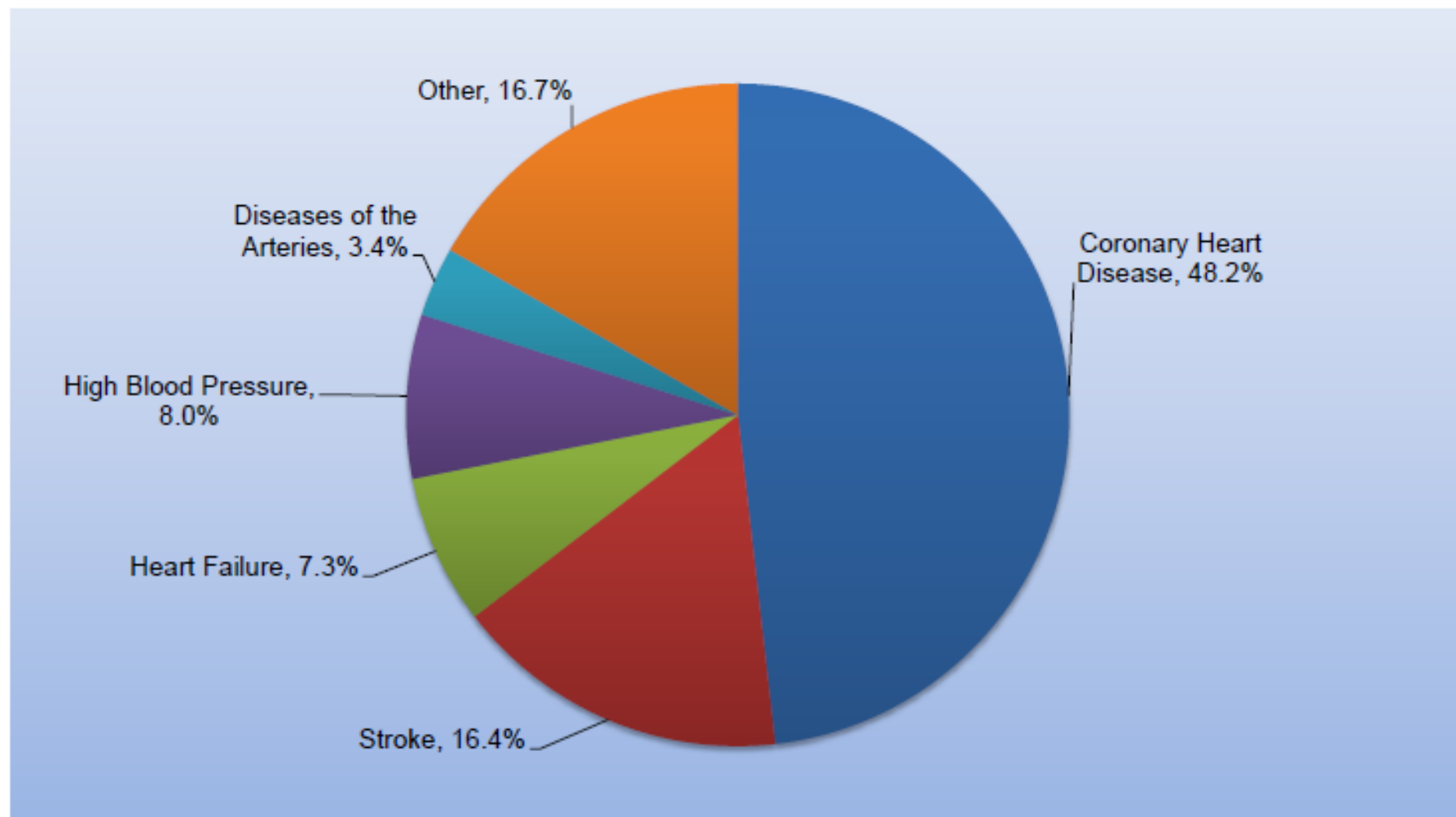
- **Case presentation**
- ***Impact of cardiovascular disease and disparities***
- **Prevention of cardiovascular disease**
- **Individual and community strategies to improve cardiovascular health**

A National Health Crisis



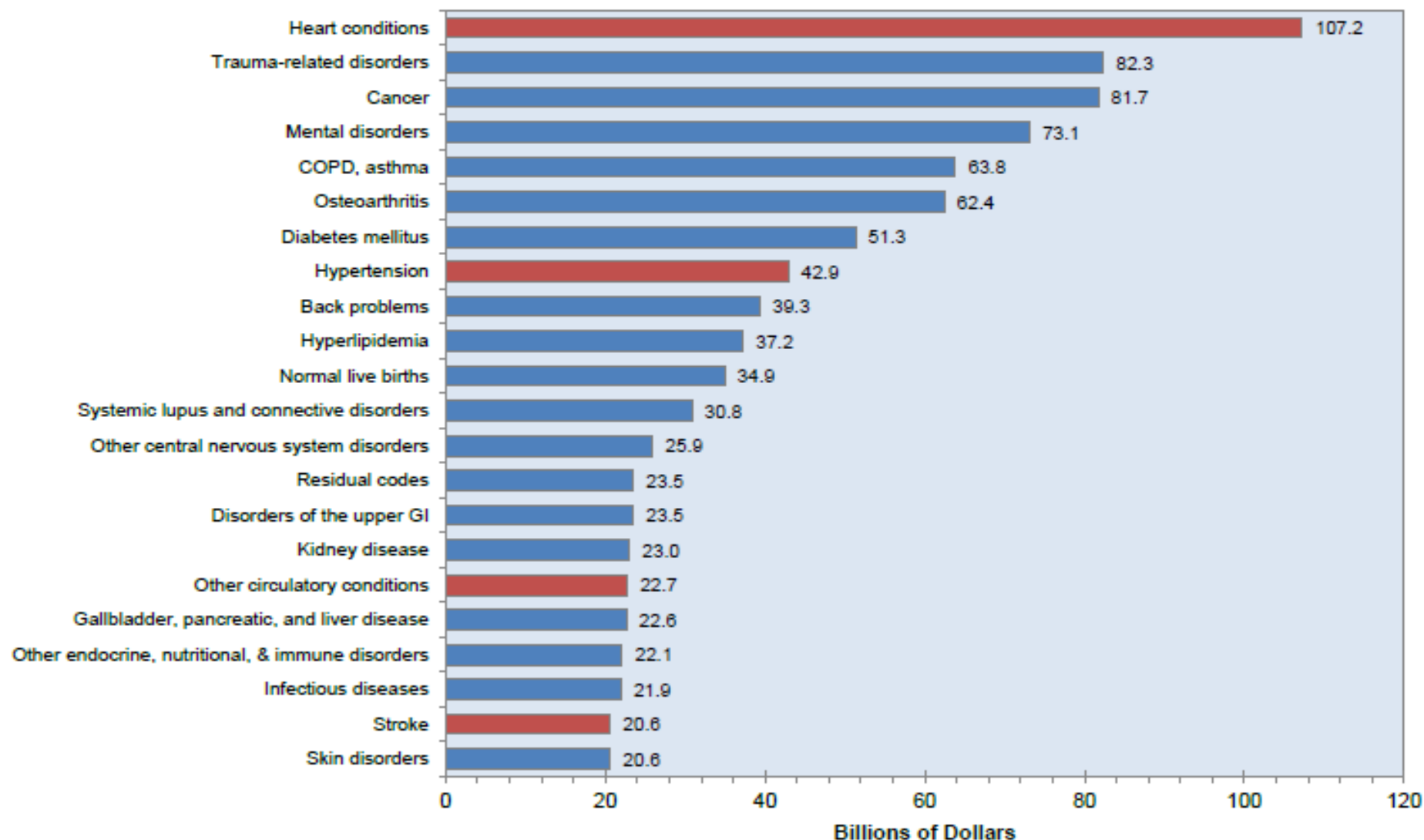
- Heart disease is the No. 1 killer of Americans, claiming a life about every minute.
- **Stroke is No. 5, and a leading cause of long-term disability.**
- 1 of every 3 deaths in the U.S. is caused by heart disease or stroke
- Every 25 seconds, an American will have a coronary event
- Every year, an estimated 785,000 Americans will have their first heart attack, and 470,000 will have another
- **Cardiovascular diseases cost our nation more money than any other diseases – in excess of \$312.6 billion a year.**

Percentage breakdown of deaths due to cardiovascular disease (United States: 2010)



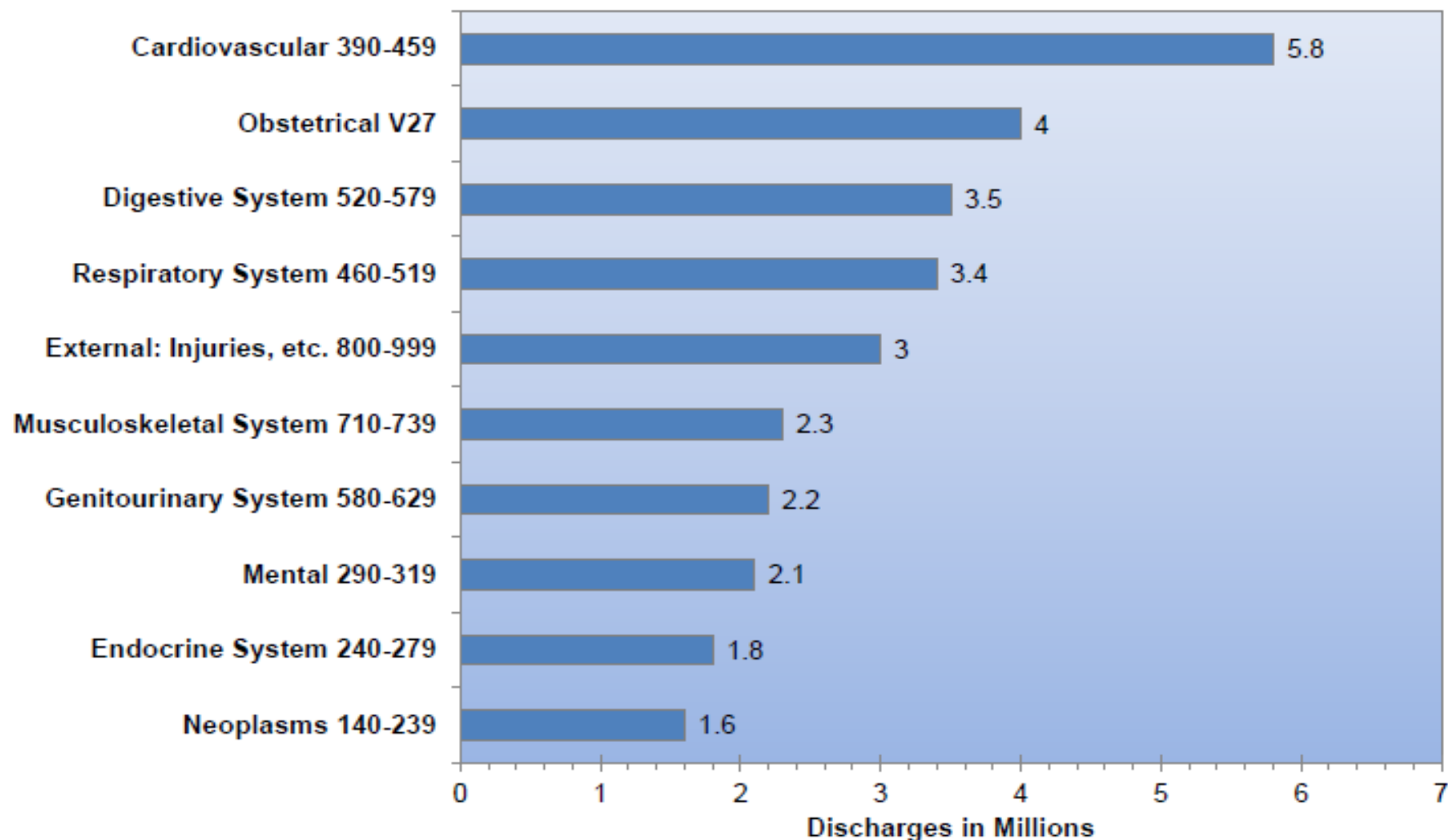
Source: National Heart, Lung, and Blood Institute from National Center for Health Statistics reports and data sets. *Not a true underlying cause. With any mention deaths, heart failure accounts for 35 percent of cardiovascular disease deaths. Total may not add to 100 because of rounding. Coronary heart disease includes ICD-10 I20-I25; stroke, I60-I69; heart failure, I50; high blood pressure, I10-I15; diseases of the arteries, I70-I78; other, all remaining ICD I categories.

The 22 leading diagnoses for direct health expenditures, United States, 2010 (in billions of dollars)



COPD indicates chronic obstructive pulmonary disease; GI, gastrointestinal. Source: National Heart, Lung, and Blood Institute; estimates are from the Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality, and exclude nursing home costs.

Hospital discharges for the 10 leading diagnostic groups (United States: 2010)



Source: National Hospital Discharge Survey/National Center for Health Statistics and National Heart, Lung, and Blood Institute.

Cardiovascular Health in African Americans

A Scientific Statement From the American Heart Association

Endorsed by the American College of Cardiology

African Americans live shorter lives due to heart disease and stroke

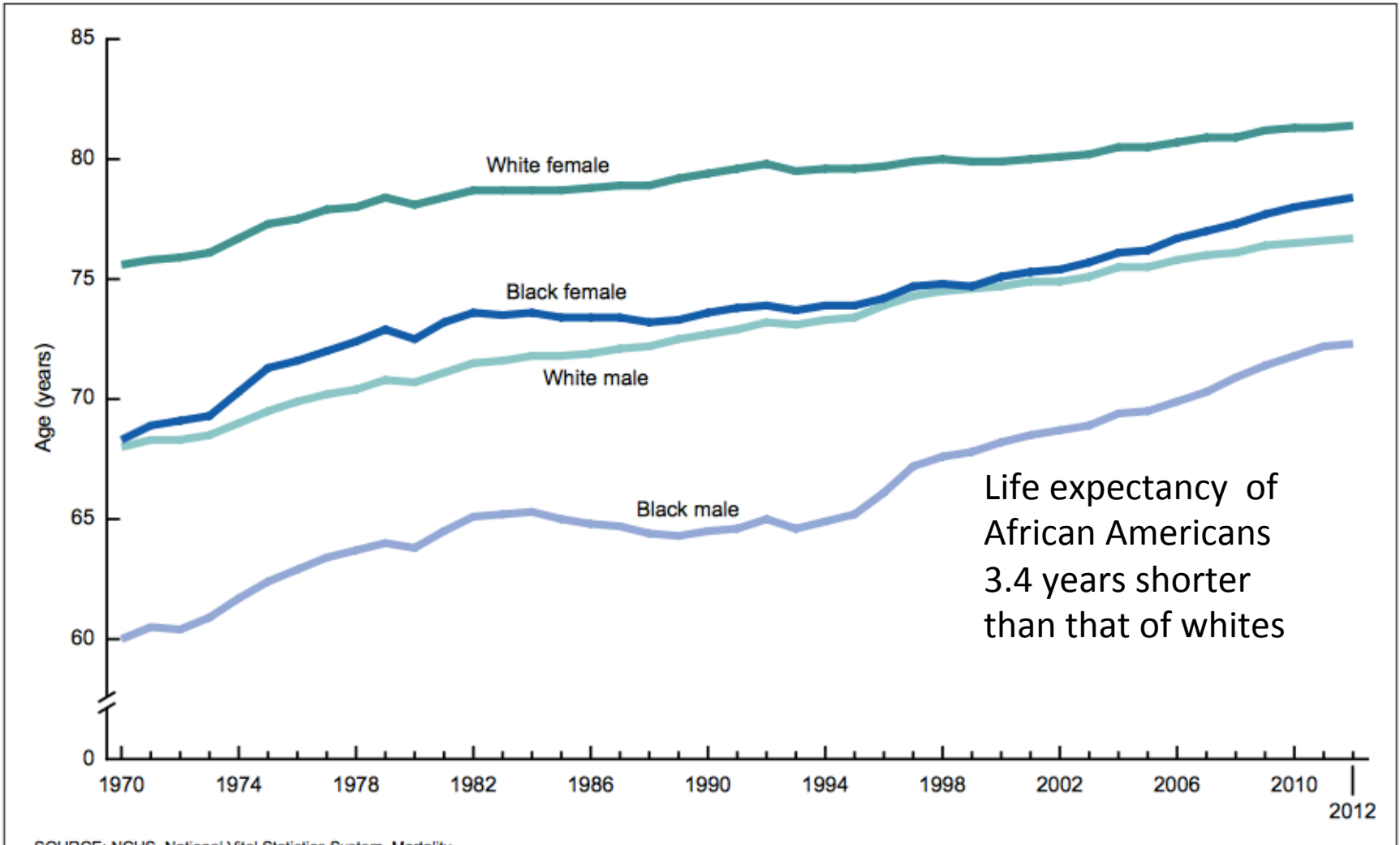
American Heart Association Scientific Statement

October 23, 2017 | Categories: Heart News, Stroke News, Scientific Statements/Guidelines

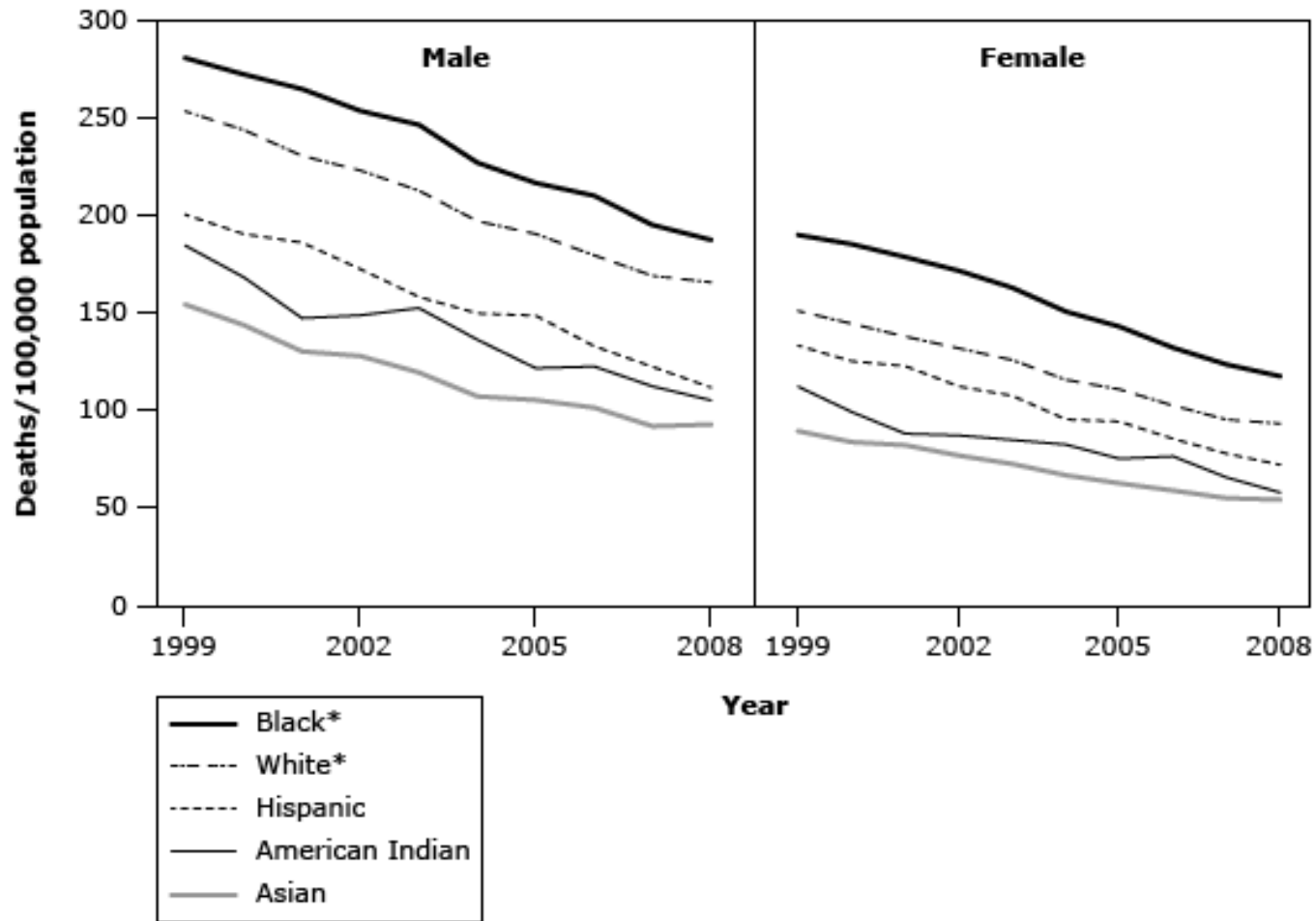
Statement Highlights:

- African Americans carry a higher burden of cardiovascular diseases compared with white Americans.
- Risk factors for heart disease appear earlier in African Americans than in whites.
- Social determinants of health, stress and cultural factors all play a role.

Life Expectancy at Birth by Race and Sex, 1970-2012



Age-adjusted death rates for CHD by race/ethnicity and sex in U.S., 1999-2008



* Non-Hispanic.

Reproduced from: NHLBI Fact Book, 2011. National Heart Lung and Blood Institute. Available at: <http://www.nhlbi.nih.gov/about/factbook/toc.htm>.

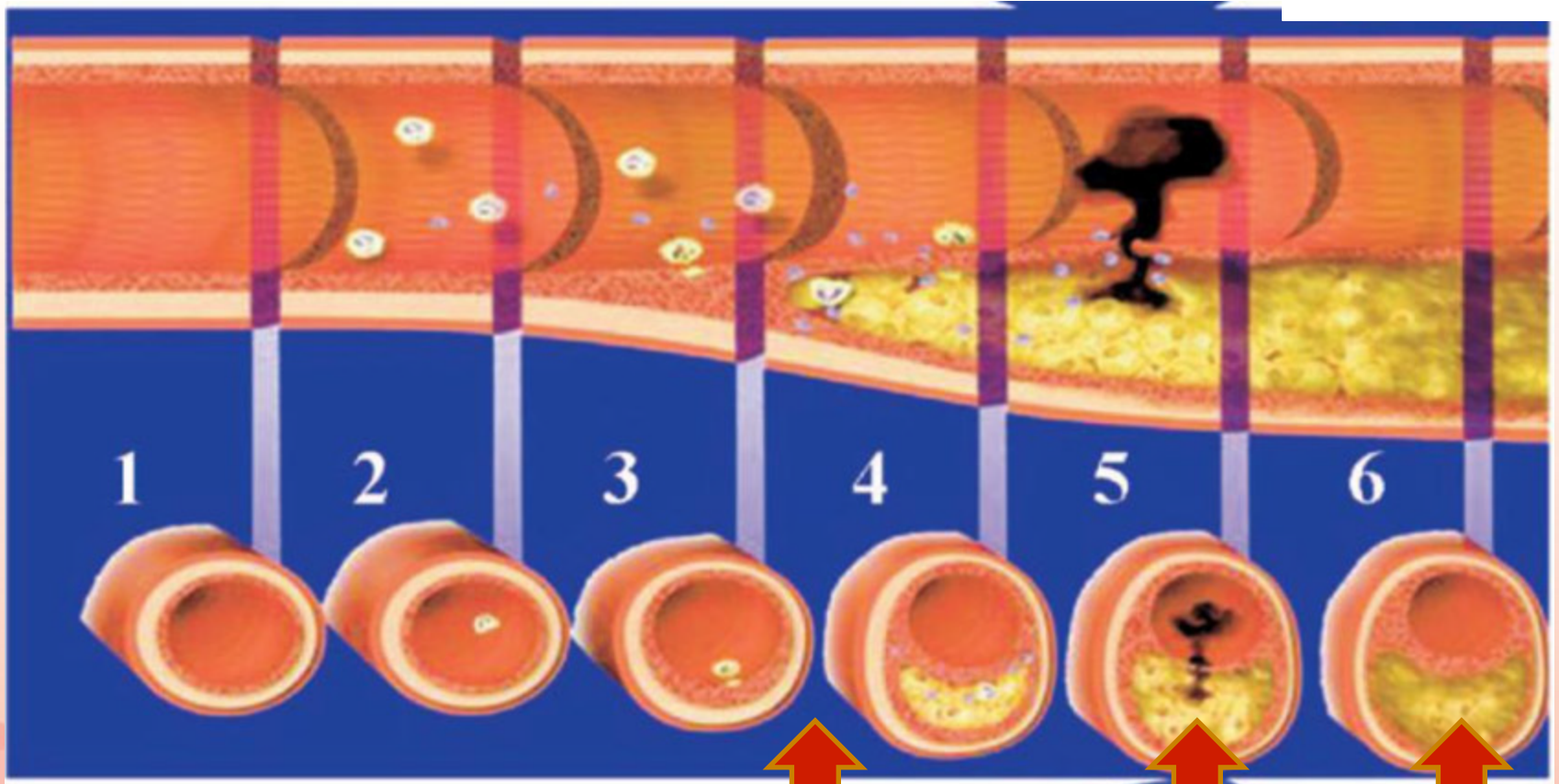
Cardiovascular Disease Disparities Explain Overall Mortality Disparities

- Mortality from all CVDs (including coronary disease, CHF, stroke, and cardiac arrest) significantly higher in African Americans compared to whites
- According to CDC report, in 2009 cardiovascular diseases were estimated to explain:
 - 32% of mortality difference between African American and white men
 - 43% of mortality difference between African American and white women

OVERVIEW

- Case presentation
- Impact of cardiovascular disease and disparities
- ***Prevention of cardiovascular disease***
- Individual and community strategies to improve cardiovascular health

THE SCIENCE



Primary
Prevention

Treatment

Secondary
Prevention

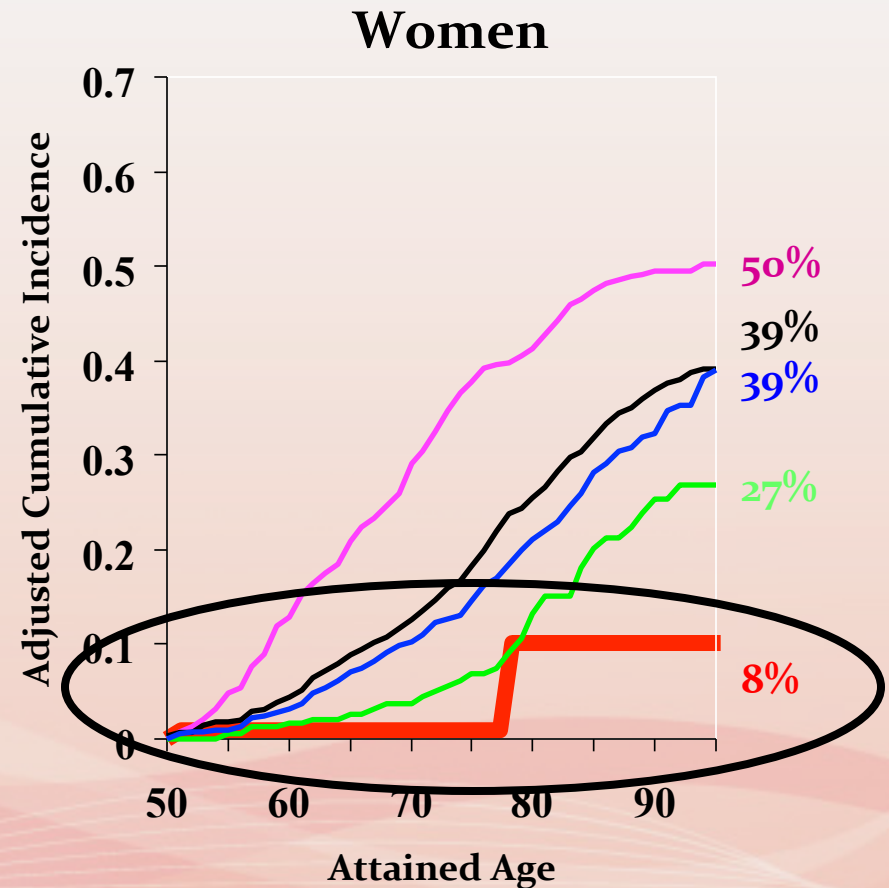
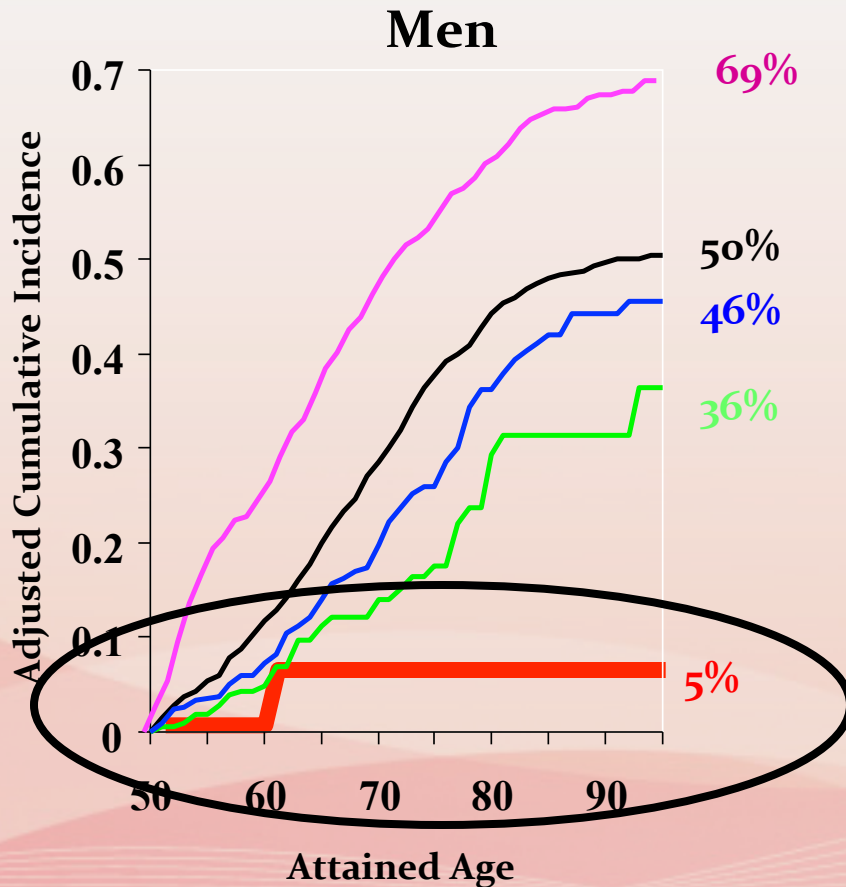
CV RISK FACTORS

Life's Simple 7™

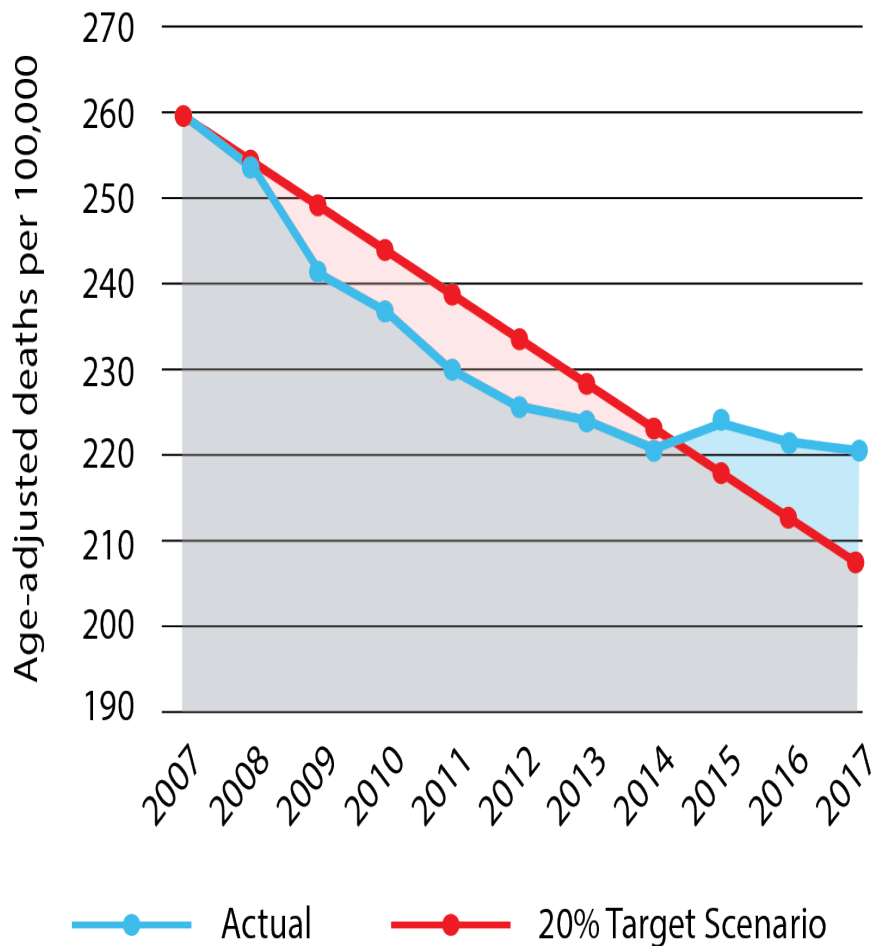


- ≥ 2 Major RFs
- 1 Major RF
- ≥ 1 Elevated RF
- ≥ 1 Not Optimal RF
- Optimal RFs

Lifetime Risk: Age 50



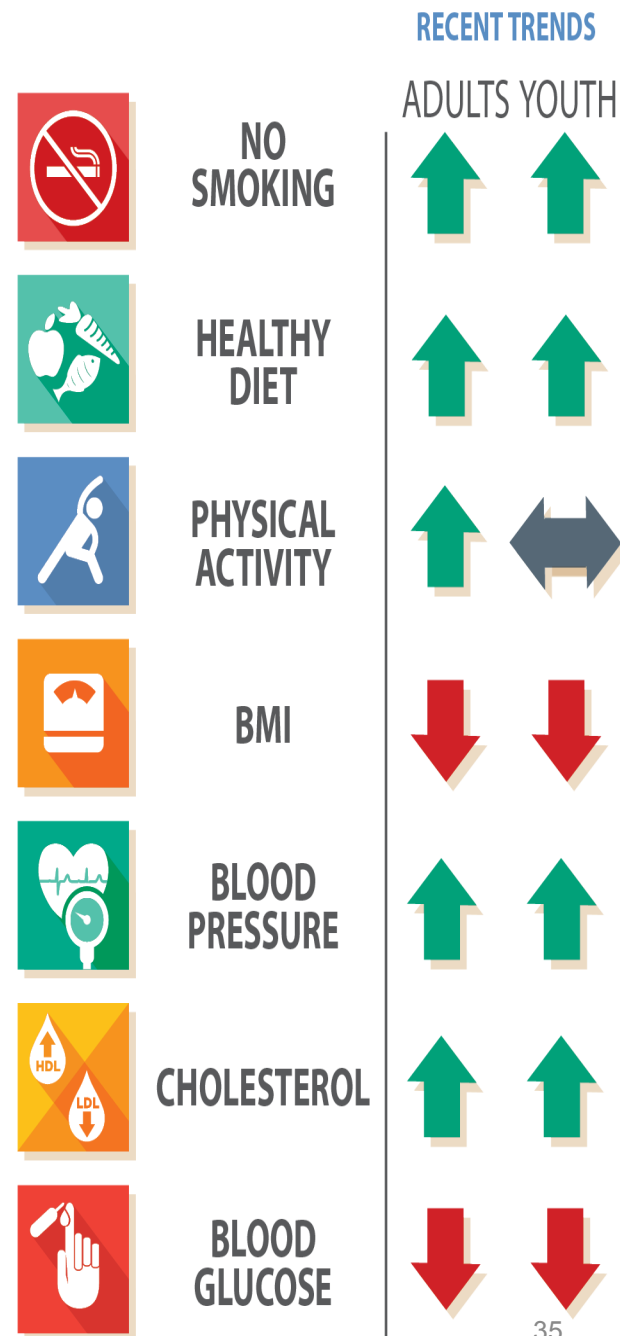
Fewer people are dying from cardiovascular diseases



**Total
Cardiovascular
Disease Deaths:
-15.1%**

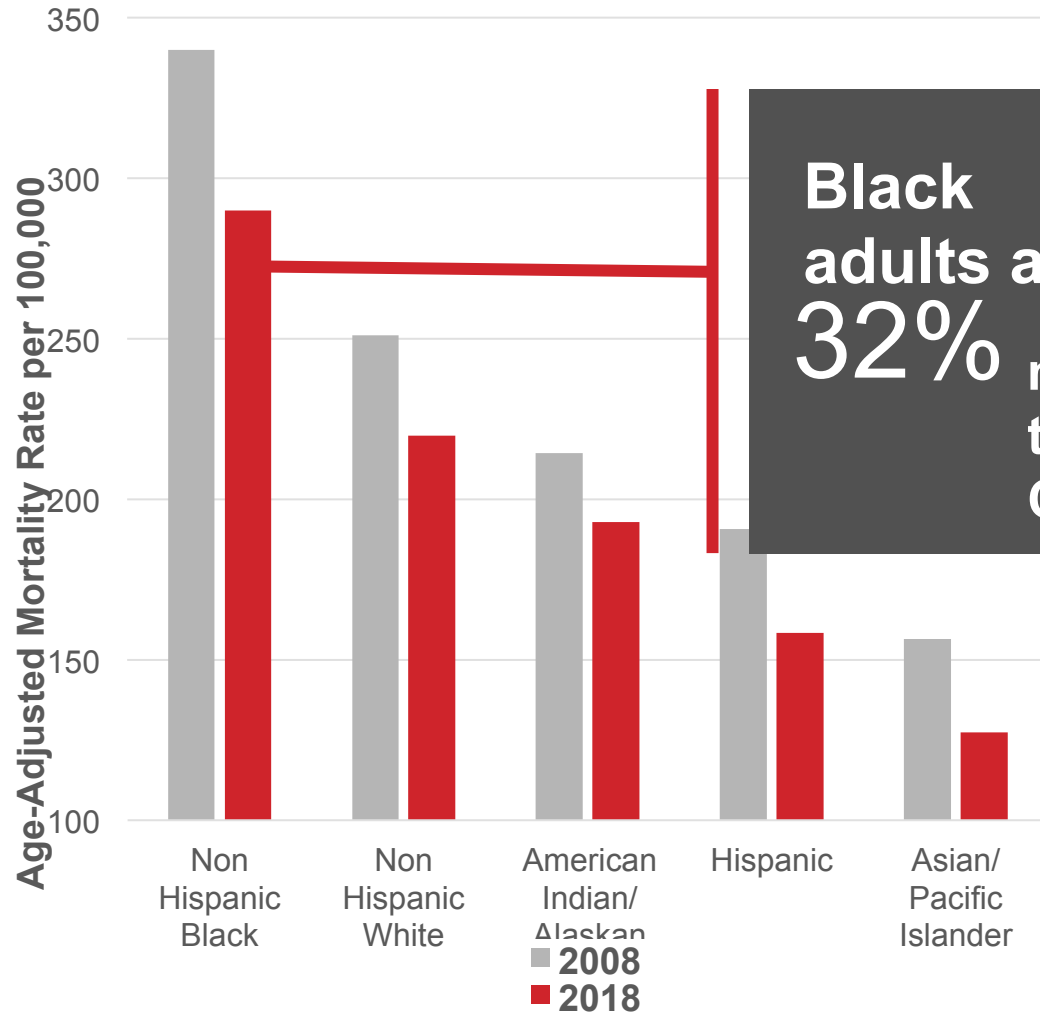
Trends in health improvements

- In adults, we are seeing improvements in smoking rates, healthy diet, physical activity, blood pressure, cholesterol and blood pressure.
- In kids, we see improvements in smoking rates, healthy diet, blood pressure and cholesterol.
- Our work in these areas is being offset by issues such as BMI and blood glucose.





AGE-ADJUSTED TOTAL CVD MORTALITY RATES by Race/Ethnicity



Black adults are 32% more likely to die from CVD

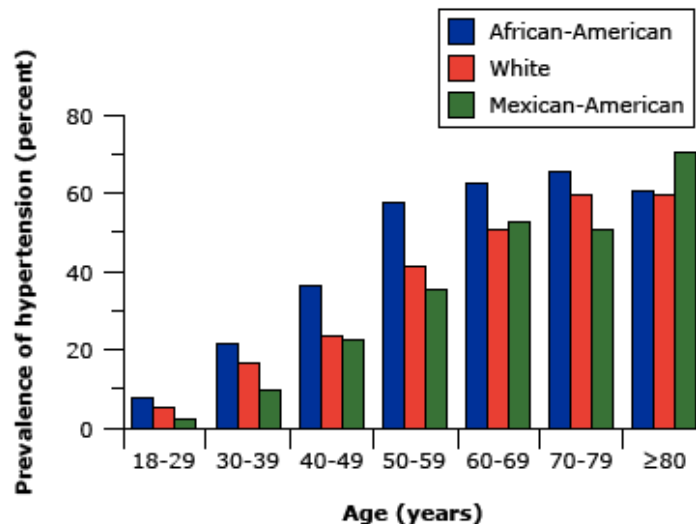
The overall death rate due to cardiovascular disease is down.

We know we've made a difference, but disparities remain.

CV Risk Factor Disparities: Hypertension

- Prevalence in African Americans in U.S. among highest in world
- 42.4% in African American men, 44% in African American women \geq age 20
- Otherwise, prevalence is highest in low to middle income countries, 29-31%
- Rates about 10-12% higher than whites and Mexican Americans
- 40% in Santa Clara County

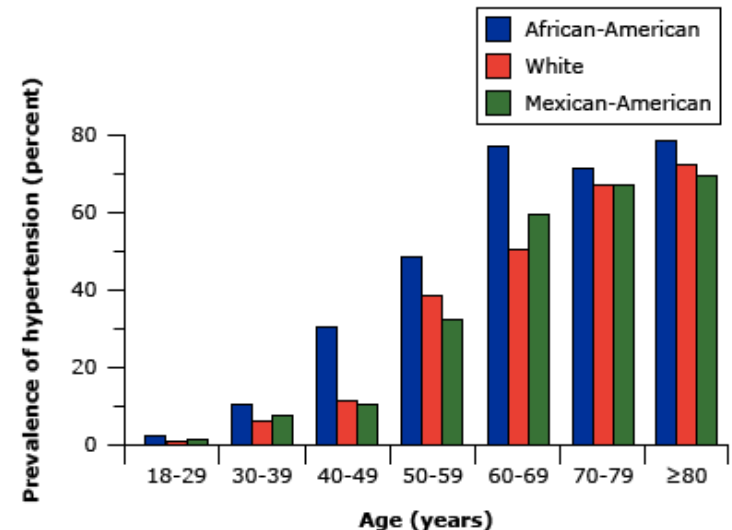
Prevalence of hypertension in men in the United States



Prevalence of hypertension in men according to age and race/ethnicity in the United States from the NHANES-III survey. Hypertension occurs earlier and more frequently in African-American men.

Data from: Burt VL, Whelton P, Roccella EJ, et al. Hypertension 1995; 25:305.

Prevalence of hypertension in women in the United States



Prevalence of hypertension in women according to age and race/ethnicity in the United States from the NHANES-III survey. Hypertension occurs earlier and more frequently in African-American women.

Data from: Burt VL, Whelton P, Roccella EJ, et al. Hypertension 1995; 25:305.

CV Risk Factor Disparities- Diabetes

- Prevalence 21.8% in African Americans, 11.3% in whites
- Prevalence in African Americans was 8% in 1988-1994
- African American adolescents are significantly more likely to develop diabetes than white adolescents

CV Risk Factor Disparities- Obesity

– Children

- 20% of African American children ages 2 to 19 years old, compared to 15% of whites
- Extreme obesity: 9% in African American children, 4% in white children

– Adults:

- 58% African American women
- 38% African American men
- 34% white men
- 33% white women
- Extreme obesity: 12.1% among African Americans, 5.6% whites

CV Risk Factor Disparities-

Physical Inactivity

- 20% of African American men and 12% of women achieved >150 min/week of moderate to vigorous physical activity, compared with 30% and 20% of white counterparts
- African Americans spent significantly more time engaged in sedentary behaviors compared to whites in REGARDS study

CV Risk Factor Disparities- Poor Diet Quality

- African Americans more likely to consume a “southern diet”
- In REGARDS study, strongest adherence to this diet was associated with higher incidence of CHD and stroke

CV Risk Factor Disparities- Smoking

- 25.4% in African Americans and 25.8% in whites
- Lower quit rates among African Americans
 - May be related to higher use of menthol smoking products (which enhance addictive potential of nicotine)- 71% of African American smokers vs 21% of white smokers
 - Tobacco companies target marketing of mentholated products to African Americans and youth

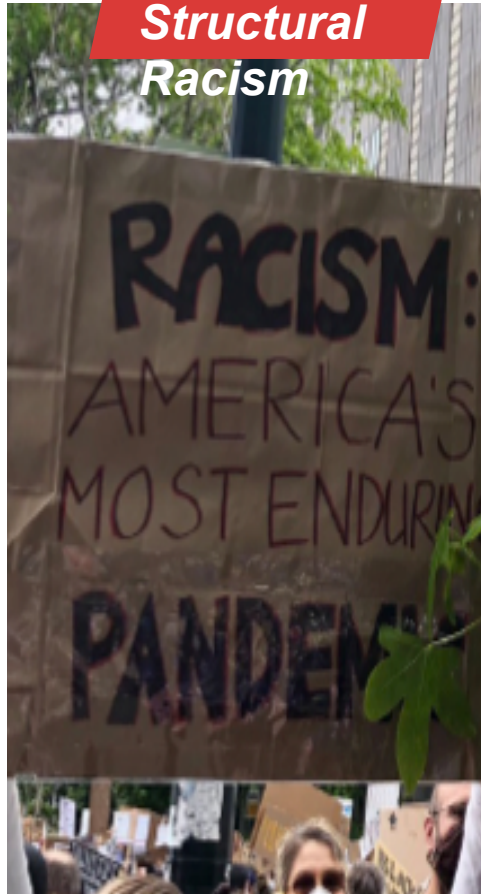
2024 IMPACT GOAL

Every person deserves the opportunity for a full, healthy life. As **champions for health equity***, by 2024, the American Heart Association will advance cardiovascular health for all, including identifying and removing barriers to health care access and quality.

Addressing the drivers of health disparities, including the social determinants of health, structural racism, and rural health inequities, is the only way to truly achieve equitable health and well-being for all.

Barriers to Health Equity

**Structural
Racism**



**Social
Determinants
of Health**



**Rural Health
Disparities**





American Heart Association | American Stroke Association

Learn and Live.



 ***Living Better with Life's Simple 7™***

**Personal
Health**

+

**Community
Health**

OVERVIEW

- Case presentation
- Impact of cardiovascular disease and disparities
- Prevention of cardiovascular disease
- **Individual and community strategies to improve cardiovascular health**



What if you had a guide ...

- ➔ To guarantee you a longer life?
- ➔ To prevent heart disease?
- ➔ To feel stronger and healthier now and later?
- ➔ To provide a better quality of life as you invest in your relationships and life goals?





My Life Check

➔ We've simplified healthy living -- 7 things to measure and track.

My Life Check™

HOW TO USE MY LIFE CHECK

STEP 1: Answer questions about your *Simple 7*

- Three measurements of your blood characteristics
- Four things you do every day that impact your health

STEP 2: Choose your action plan

- Compare your current *Simple 7* with what is recommended for you
- Select the actions for your *Simple 7* that are right for your health

STEP 3: Discover your heart score

- This number (0-10) is an indication of your overall cardiovascular health based on the information you've given.

STEP 4: Print or save your results

STEP 5: Return periodically to take the assessment again

- Compare your results to measure your improvement

Life's Simple 7

Blood Pressure

Blood Cholesterol

Blood Sugar

Smoking Status

Healthy Weight

Physical Activity

Healthy Diet

- [What you need to know to use this health assessment](#)
- [AHA Privacy Policy](#)
- [Terms and Conditions](#)

IDEAL HEART SCORE



If you can achieve an Excellent rating in all of the simple 7 areas, you will reach your "ideal" cardiovascular health.

[Tell me more](#)

EXIT

1 / 8

NEXT



Manage Blood Pressure



Why?

High blood pressure is the single most significant risk factor for heart disease!

1 out of every 3 American Adults have HBP, and many are unaware.



Take Action!

- Know your numbers
- Track your progress
- Learn healthy habits for eating well & staying active.





Get Active



Why?

People who exercise have better health than those who do not.



Take Action!

- Make your decision to get moving.
- Choose activities you can enjoy.





Control Cholesterol



Why?

When there's too much cholesterol in your blood, you are at major risk for heart disease and stroke.



Take Action!

- Follow your healthcare provider's advice.
- Make health food choices.
- Get active.





Eat Better



Why?

A variety of heart-healthy nutrition keeps you living at your best health potential.



Take Action!

Say yes to:

- Lots of fruits and vegetables
- Whole grain carbohydrates
- Fat-free and low-fat dairy products
- Fish with omega-3 fatty acids

Say no to:

- Foods and beverages with added sugar
- Products high in sodium





Lose Weight



Why?

A BMI of less than 25 is optimal for cardiovascular health.



Take Action!

For effective weight loss, start here:

- Choose to invest your energy on the task, not feeling guilty
- Know your BMI
- Know how many calories you need

The weight-loss plan:

- Reduce calories in: plan your food choices and stick with your plan
- Increase calories out: engage in regular physical activity, 30-45 minutes per day





Don't Smoke



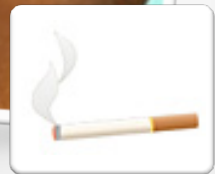
Why not?

Smoking is the number one modifiable cause of death.



Take Action!

- Talk with your healthcare provider
- Focus on the rewards
- Plan your response to roadblocks





Reduce Blood Sugar



Why?

High blood sugar encourages the growth of the plaque in your arteries and increases your risk for diabetes, heart disease, and stroke.



Take Action!

- Make good food choices
- Commit to regular physical activity
- Maintain a healthy weight

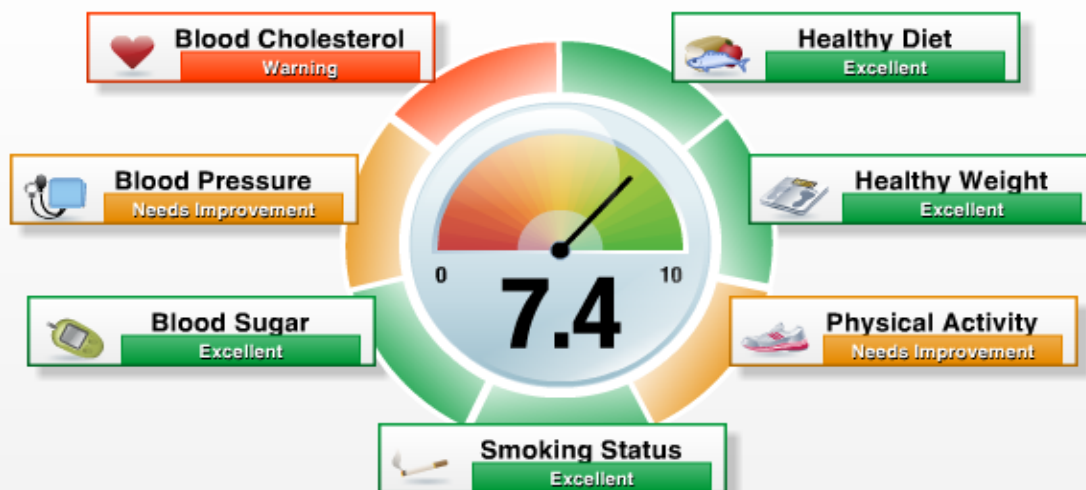


My Life Check Assessment

Find it at: www.mylifecheck.org

My Life Check™

YOUR HEART SCORE



You're doing well, but consider all the aspects of your behaviors that lead to good health.
Make adjustments to strengthen your position.

Result Report

Includes your Simple 7, your action plans, and heart score.



Note: Print or save a PDF of this report for your records.
Use your email program to send the PDF anywhere you want.

PRINT OR SAVE PDF



With a Success Plan, Every Step Counts Toward Your Goal

But with Life's Simple Seven, you can **KNOW** you're taking care of yourself to reach your best health potential for yourself and for those you love.

Together, we're building a **healthier future**, one heart at a time!



OVERVIEW

- Case presentation
- Impact of cardiovascular disease and disparities
- Prevention of cardiovascular disease
- ***Individual and community strategies to improve cardiovascular health***

Engage individuals and organizations to build a **sustainable culture of health** in communities so that all Americans live in environments that support healthy behaviors, timely and quality care, and well-being.

Accelerate the discovery, interpretation, and application of scientific knowledge to enhance cardiovascular health and treat cardiovascular diseases and stroke.



Impact Strategies



What is a "Culture of Health"



Web

Images

Maps

Shopping

More

Search tools



Treadmills keep up energy in this conference room at Oberon, LLC, a professional staffing company in Minneapolis.





Culture of Health

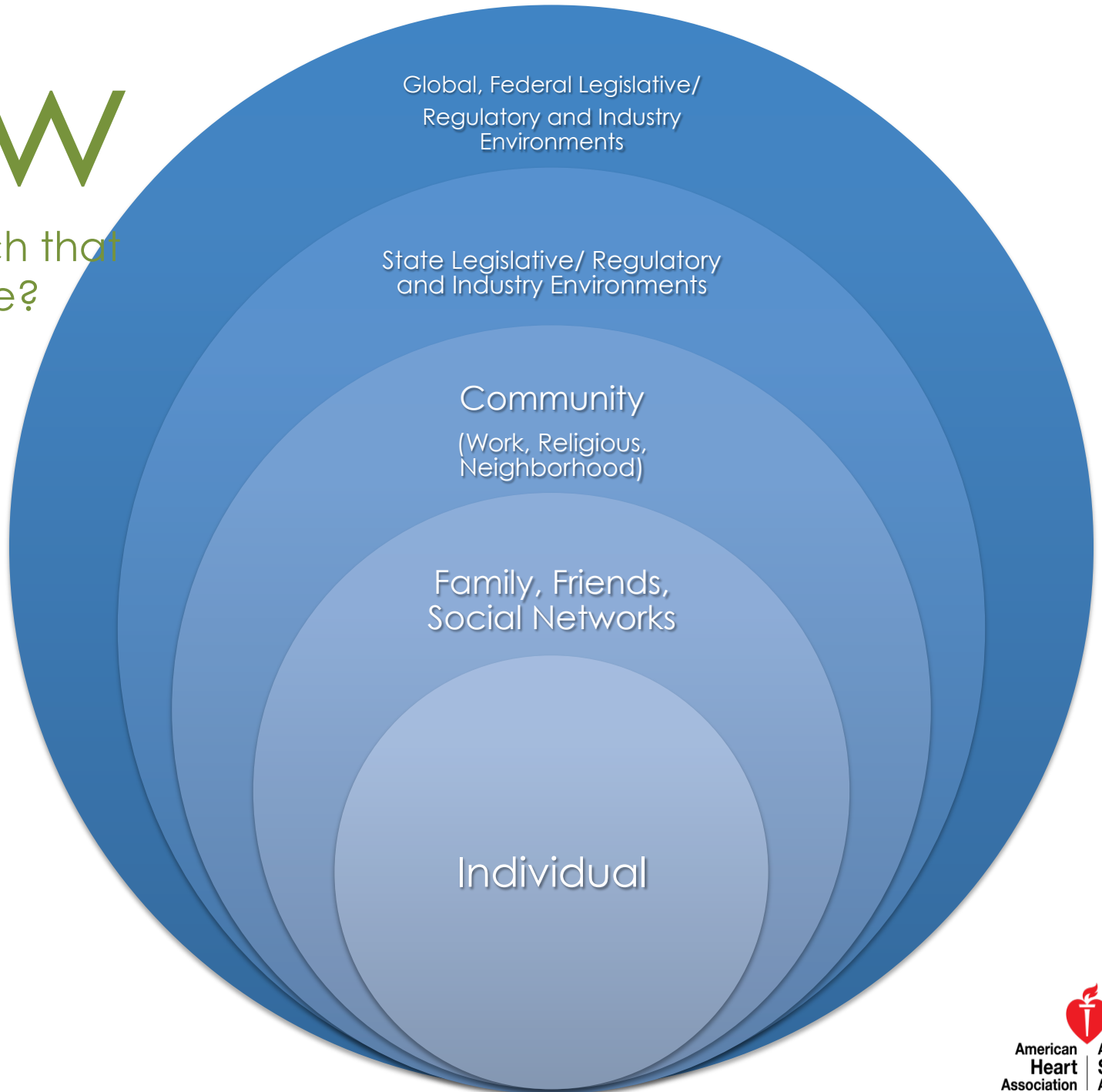
A culture in which people live, work, learn, play and pray in environments that support healthy behaviors, timely quality care and overall well-being.



The healthy choice is the easy choice!

How

can we reach that many people?



Global, Federal Legislative/
Regulatory and Industry
Environments

State Legislative/ Regulatory
and Industry Environments

Community
(Work, Religious,
Neighborhood)

Family, Friends,
Social Networks

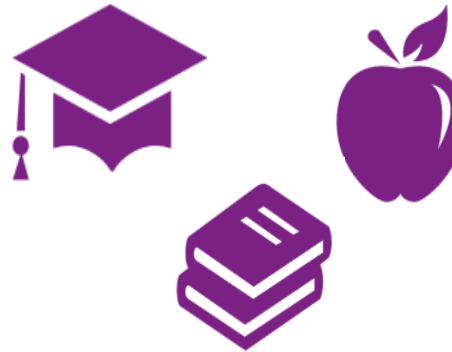
Individual

Channel Partners

Workplace



Schools



Faith Based





Building a culture of health in the Bay Area through community programs and advocacy

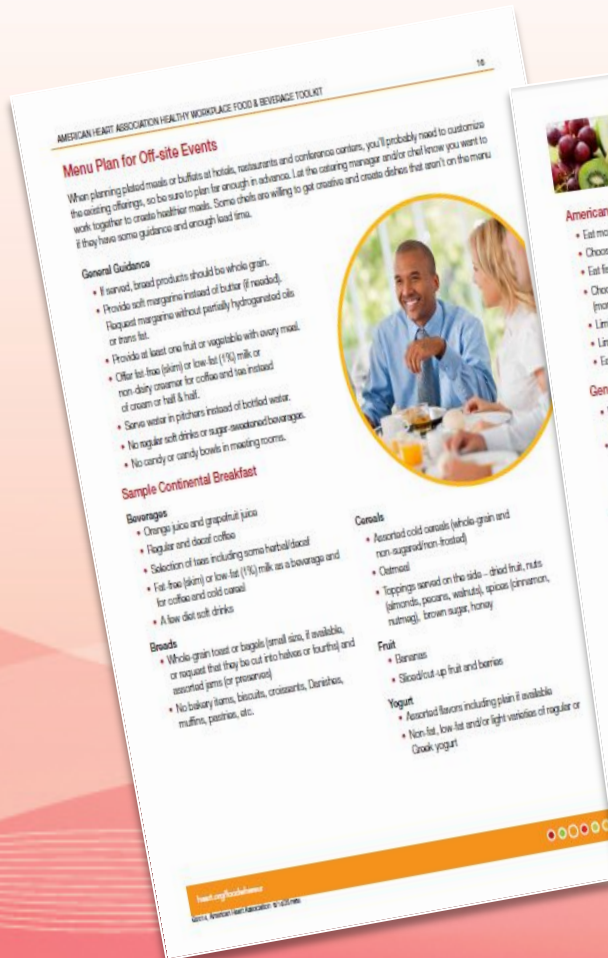
Promoting a Culture of Health:

HEALTHY EATING



Healthy Workplace Food and Beverage Toolkit

Meal Planning Tools



- Action Plan for On-site Meals
- Menu Plan for Off-site Events
- Guidance for Caterers and Food Vendors

Companies Choose 1 of 5 Goals

1. Reduce and ultimately eliminate sugar-sweetened beverages from **vending machines**.
2. Offer healthier snacks in office **vending machines**.
3. Improve **meeting and event meals** paid for by the company.
4. Improve “**office food**” – ie, snacks provided at no charge.
5. Implement an **innovative idea** – must be in addition to one of the above.



YOUR LOCAL BRANCH: IRVING, TX | LANGUAGES | CAREERS | VOLUNTEER | [DONATE](#)

Search


GETTING HEALTHY | CONDITIONS | HEALTHCARE / RESEARCH | CAREGIVER | EDUCATOR | CPR & ECC | SHOP | CAUSES | ADVOCATE | GIVING | NEWS

Nutrition Center | Fats & Oils | Physical Activity | Healthier Kids | Weight Management | Stress Management | Quit Smoking | Workplace Wellness

Healthy Workplace Food and Beverage Toolkit

[Share](#) 1 | [Like](#) 1 | [Tweet](#) 2 | [+1](#) 0 | [Share](#) | Updated: Jul 3, 2014

The American Heart Association's Healthy Workplace Food and Beverage Toolkit is a practical resource to help organizations improve their food environment and promote healthy eating. It provides practical action steps and suggestions that are easy to understand and apply.



What's in it for you?

In addition to specific guidance and nutrition standards for beverages, snacks and meals, topics addressed in the toolkit include healthy eating, creating a culture of health, how leadership and management can be involved, special events, meetings, vending machines, healthier cooking methods, resources and links, and a glossary of terms.

Who should use the toolkit?

Anyone involved with procuring, providing or planning food and beverages in an organization/workplace – from vending machines to catered special events – can use this resource to learn how to make healthy changes. You can easily modify the guidance offered to fit the specific needs of your organization.

While the toolkit was originally designed for workplaces and employers, we recognize its applicability to other settings. A version of the toolkit is being created for other types of organizations and communities, including faith-based organizations and multicultural audiences, who would like to improve their food environment.

This toolkit is an evolving, evergreen resource that will continue to be updated. Check back with us periodically to see what's new.

GET THE TOOLKIT NOW
(Registration Required)

Workplace Wellness

- Workplace Wellness Home
- Workplace Wellness Resources
 - * Wellness in the Workplace
 - * Guide for Organization Leaders
 - * Get Employees Moving
 - * Worksite Wellness Kit
 - * Get Employees Registered
 - * On-Demand Reporting Center
- Fit-Friendly Worksites
 - * Fit-Friendly Worksites Recognition
 - * Recognition Levels and Requirements
 - * Apply or Renew Online
 - * Fit-Friendly Resources
- Heart At Work E-news
- Activity Tracker

YOUR LOCAL BRANCH: IRVING, TX | LANGUAGES | CAREERS | VOLUNTEER | [DONATE](#)

Search

GETTING HEALTHY | CONDITIONS | HEALTHCARE / RESEARCH | CAREGIVER | EDUCATOR | CPR & ECC | SHOP | CAUSES | ADVOCATE | GIVING | NEWS

Nutrition Center | Fats & Oils | Physical Activity | Healthier Kids | Weight Management | Stress Management | Quit Smoking | Workplace Wellness

Healthy Workplace Food and Beverage Toolkit Resources

[Share](#) 16 | [Like](#) 2 | [Tweet](#) 2 | [+1](#) 0 | [Share](#) 8 | Updated: Jul 30, 2014

Thank you for registering!

All toolkit resources may be accessed from this page. Please bookmark this page now so you'll be able to return in the future without registering again.

As a registered toolkit user you'll receive notification of updates and additions.

To contact us about the toolkit, please email workplacefood@heart.org. We welcome your feedback, suggestions, success stories and challenges. They will help guide future enhancements.

toolkit for workplaces

- Toolkit (includes the 9 documents below) (PDF)
- Quick Start Guide (PDF)
- Guidance for Leadership and Management (PDF)
- Guidance on Meetings and Events (PDF)
- Guidance on Vending Machines (PDF)
- Guidance for Caterers and Food Vendors (PDF)
- Guidance by Food Category (PDF)
- Glossary (PDF)
- Healthier Sandwiches (PDF)
- Healthier Cooking Methods (PDF)

additional resources

- Pledge (for print/display) (Editable PDF)
- Q and A (PDF)
- Vending Machine Inventory Worksheet – Food (PDF)

Workplace Wellness

- Workplace Wellness Home
- Workplace Wellness Resources
 - * Wellness in the Workplace
 - * Guide for Organization Leaders
 - * Get Employees Moving
 - * Worksite Wellness Kit
 - * Get Employees Registered
 - * On-Demand Reporting Center
- Fit-Friendly Worksites
 - * Fit-Friendly Worksites Recognition
 - * Recognition Levels and Requirements
 - * Apply or Renew Online
 - * Fit-Friendly Resources
- Heart At Work E-news
- Activity Tracker

www.heart.org/foodwhereur

Local Advocacy Priorities- Healthy Eating

- **Healthy Default Beverages in Kids' Meals**
 - Milk or Water offered first.
 - Passed in Daly City in January, 2018
- **Sugary Drink Taxes**
 - SF, Oakland, Berkeley & Albany
 - decrease consumption and create sustainable fund for community health prevention (education and environmental changes)
- **Banned marketing of junk food and drinks in schools**
- **Healthy vending on government property**
- **Local program: Kids Cook Program in schools**

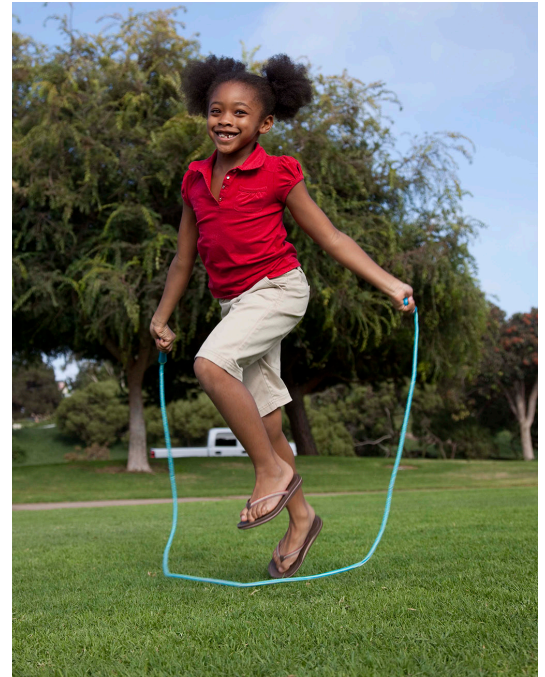


Promoting a Culture of Health:

PHYSICAL ACTIVITY

Advocacy and Community Programs: Physical Activity

- PE in schools
- Safe streets
- NFL Play 60
- Jump Rope for Heart
- Hoops for Heart



Promoting a Culture of Health:

TOBACCO CONTROL

Local Advocacy Wins: Tobacco Control

- Passage of Proposition 56, CA's \$2 tobacco tax increase
- Passage of CA's Landmark Tobacco Prevention Legislation:
 - Minimum age 21 to purchase tobacco products
 - E-cigarettes added to existing tobacco products definition
 - Tobacco cessation coverage under Medi-Cal

Local Advocacy: Tobacco Control

- Restricting the sale of flavored tobacco products
 - Includes menthol cigarettes, candy-flavored cigarillos, cigars, smokeless tobacco and vaping (e-cigarettes)
 - Oakland (in effect July 1, 2018), San Leandro (excludes menthols), Contra Costa County
 - San Francisco Prop E – June 5, 2018
 - RJ Reynold funded referendum on unanimous County Supervisor ordinance
 - YES on E to uphold the restriction



Promoting a Culture of Health:

HYPERTENSION

CONTROL

What is Target BP?

TARGET:BP™



- ✓ A call to action motivating medical practices, practitioners and health service organizations to prioritize blood pressure control
- ✓ Recognition for healthcare providers who attain high levels of blood pressure control in their patient populations, particularly those who achieve 70 percent or higher control
- ✓ A source for tools and assets for healthcare providers to use in practice, including the AHA/ACC/CDC Hypertension Treatment Algorithm and the AMA's M.A.P. Checklist



Check. Change. *Control.*[®] Self-Monitoring Blood Pressure Control



Check.
Change.
Control.[®]

CHECK. CHANGE. CONTROL.®

Evidence-based high blood pressure management program that utilizes a tracker to empower patients to take ownership of their cardiovascular health.



CHECK
for high blood
pressure and
symptoms.

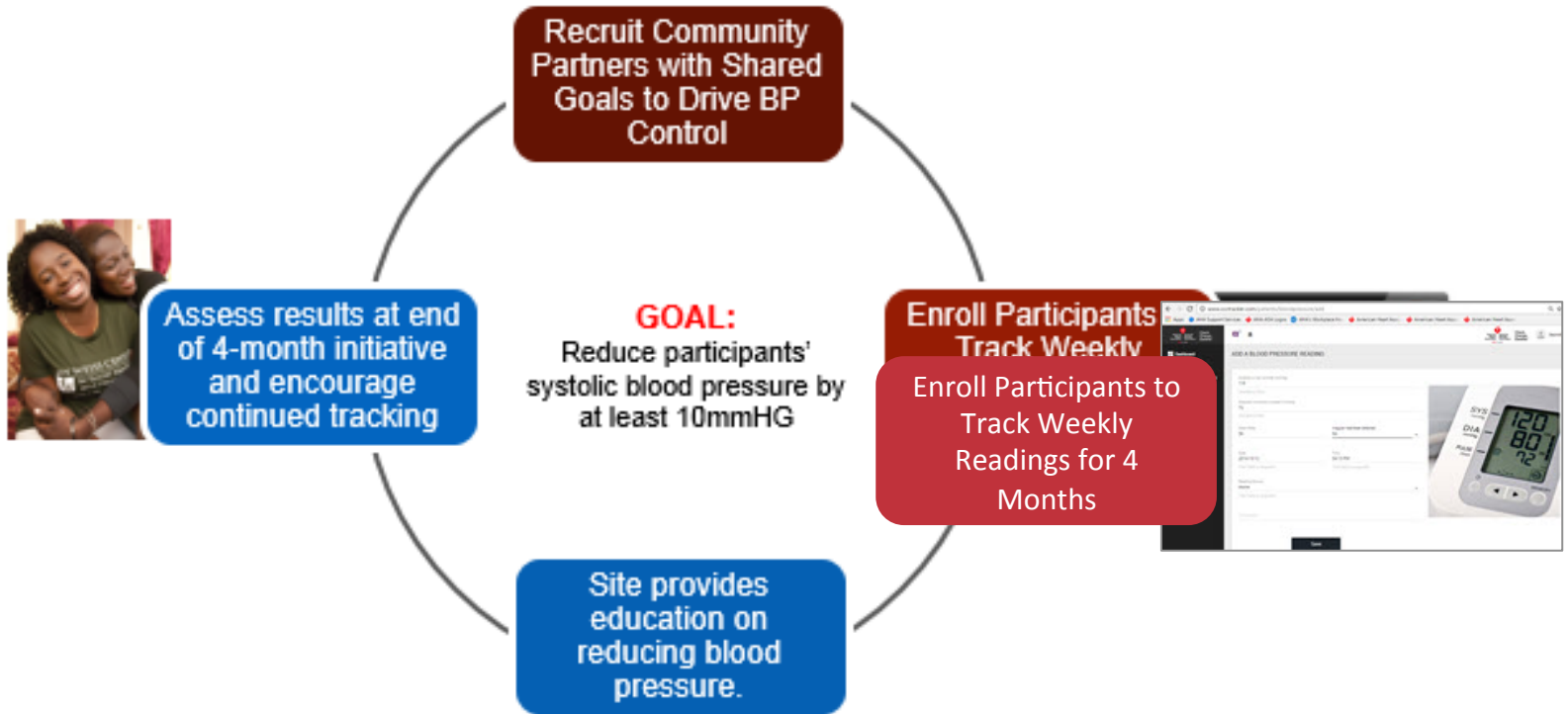


CHANGE
lifestyle and seek
treatment.



CONTROL
hypertension by
taking
preventative
measures.

Check. Change. Control.® Lifecycle



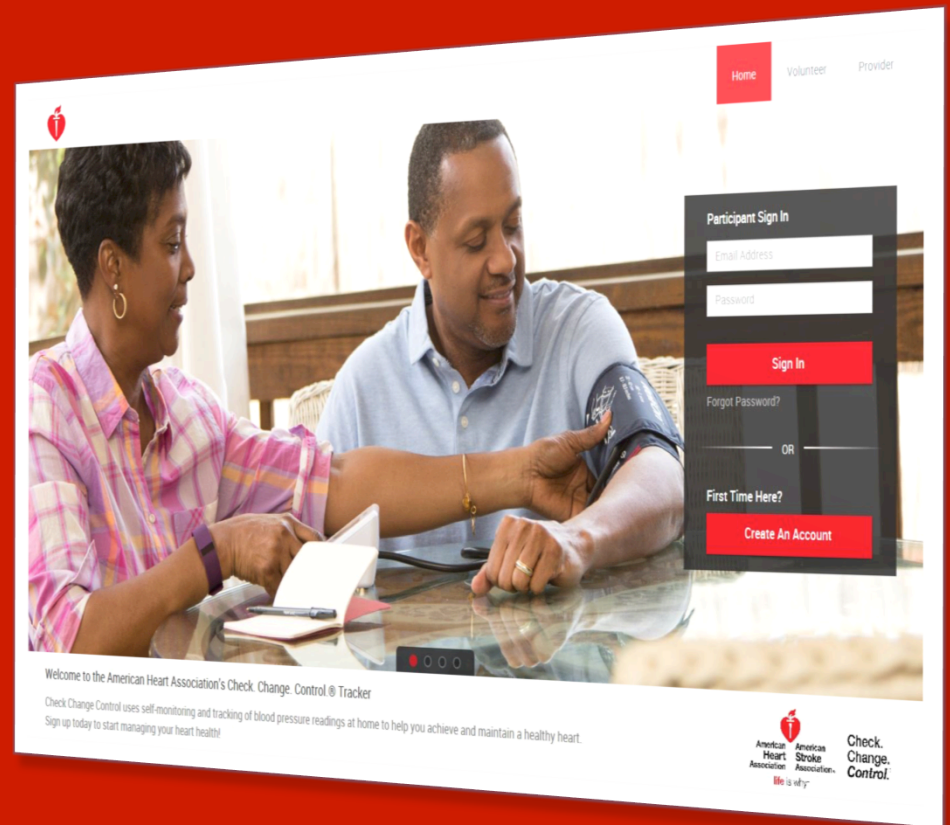
Focus groups: Corporate and School-site Employees, patients in clinics focusing on HBP control, community sites with opportunity to reach individuals on a continuous basis

CHECK. CHANGE. CONTROL.® TRACKER

Easy to use tracking tool for participants and volunteers. There is an admin site with real time reporting on participant enrollment and blood pressure improvement. Unique campaign codes can be created for each site to use for enrolling participants.



heart.org/cc



Promoting a Culture of Health:

CPR TRAINING

CPR IN SCHOOLS

- Since May 2015, Bay Area school districts have added CPR as a graduation requirement
- State law passed mandating CPR as a high school graduation requirement for school districts that have a health curriculum
- CPR-7 through Alameda Public Health Department
- Hands only CPR being taught by AHA to employees of school districts and local companies

CPR Kiosk

Get Trained in 5 Minutes or Less

The CPR Automated Training Unit or “Kiosk” features a touch screen with a video program that provides a brief introduction and overview of Hands-Only CPR, followed by a practice session and a 30-second test session.

With the help of a practice manikin, or a rubber torso, the unit gives feedback about the depth and rate of compressions and proper hand placement – factors that influence the effectiveness of CPR. The entire training takes about five minutes.



CPR Kiosk Location – Oakland International Airport

Imagine a world free of cardiac arrest

CPR KIOSK LAUNCH EVENT

Bay Area at 

CPR WEEK

Monday, June 4, 2:00 pm
Oakland International Airport
Terminal 2 | Baggage Claim

RSVP to Shea Overstreet by May 25
Shea.Overstreet@heart.org



OVERVIEW

- **Case presentation**
- **Impact of cardiovascular disease and disparities**
- **Prevention of cardiovascular disease**
- **Individual and community strategies to improve cardiovascular health**

**THANK
YOU!**

QUESTIONS?