



# Heart Disease and Stroke Prevention in the Workplace

*AHA's Workplace Health Achievement Index*

**ECCU Conference 2017**

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**Chris Calitz, MPP**

Director, Center for Workplace Health Research and Evaluation





Not life, but **good life**, is to be chiefly valued.

*Socrates*

# Agenda



1. AHA Impact Goal 2020
2. Measuring Optimal Cardiovascular Health (Life's Simple 7)
3. Cost of Poor Heart Health in the Workplace
4. CEO Roundtable on Workplace Health
5. AHA Workplace Health Achievement Index
6. CPR/AED Best Practices in the Index
7. Index 2016-2017 Results
8. Research and Publications
9. Discussion



# 20%<sup>2020</sup>

By 2020, improve the cardiovascular health of **all Americans** by 20% while reducing deaths from cardiovascular diseases & stroke by 20%.

# Causes of Death: USA (2015)



Disease Condition	Total Deaths (n, %)
<b>1. Heart disease</b>	<b>614,348 (31.7)</b>
2. Cancer	591,669 (30.5)
3. Chronic lower respiratory diseases	147,101 (7.6)
4. Accidents (unintentional injuries)	136,053 (7.0)
<b>5. Stroke (cerebrovascular diseases)</b>	<b>133,103 (6.9)</b>
6. Alzheimer's disease	93,541 (4.8)
<b>7. Diabetes</b>	<b>76,488 (3.9)</b>
8. Influenza and pneumonia	55,227 (2.8)
9. Nephritis, nephrotic syndrome, and nephrosis	48,146 (2.5)
10. Suicide	42,773 (2.2)

Source: CDC

**38.6% of annual deaths from heart disease & stroke**



AHA defines **ideal cardiovascular (“heart”) health** in terms of the **Life’s Simple 7** validated composite health construct:

1. Avoid tobacco smoke.
2. Eat healthy.
3. Move more.
4. Maintain a healthy weight.
5. Maintain healthy blood pressure.
6. Maintain a healthy blood glucose.
7. Maintain a healthy cholesterol.

# Life's Simple 7: Broad Benefits



**A high LS7 score ( $\geq 5$  ideal metrics) is associated with lower risk for:**

- **Heart disease and stroke** (Lloyd-Jones et al, 2010, Ford et al., 2012)
- **Diabetes** (Joseph et al, 2016)
- **Depression** (Kronish et al, 2012)
- **Improved cognitive function** (Reis et al, 2013)
- **Incident cancer** (Rasmussen-Torvik et al, 2013)
- **Incident dementia** (Gottesman et al, 2017)
- **Healthcare costs in Medicare population** (Willis et al 2015)
- **Healthcare costs in a young, ethnically diverse working population** (Osondu et al 2017)

# Why Heart Health in the Workplace?

Four of the 10 most expensive health conditions for **U.S. employers** are related to **heart disease** and **stroke**:



**HIGH BLOOD  
PRESSURE**



**HEART  
ATTACK**



**DIABETES**



**CHEST  
PAIN**

Source: CDC

## Employees with cardiovascular disease:

- Lost 56 hours more per year in productivity
- Cost \$1,119 more per year in health insurance
- Heart failure costs all payers \$8,332 a person a year

Source: AHA



# Workplace Cardiac Arrest Prevention

# 10,000

**Cardiac arrests occur in the workplace annually**



- Most U.S. employees are not prepared to handle cardiac emergencies in the workplace because they lack training in CPR and First Aid
- What are employers doing to raise awareness and provide more training in the workplace?

# CEO Roundtable: Learning Collaborative

KKR

macy's Inc

Johnson & Johnson

IBM Watson Health

DOW

AstraZeneca

MERCK

Weight  
Watchers

Nestlé

W

salesforce

CVS Health

Humana

nielsen

at&t

Morgan Stanley

EXPRESS  
SCRIPTS

KAISER  
PERMANENTE

Deloitte

vf

Boston  
Scientific

aramark

HCA  
Hospital Corporation of America

Booz | Allen | Hamilton

Leo Burnett

Bank of America

US  
FOODS  
KEEPING KITCHENS COOKING

Anadarko

SMUCKER'S

American Heart Association  
American Stroke Association  
life is why

# Measuring Culture of Health V1.0



**Launched:** 2007

**Criteria:** Leadership Support, Physical Activity, Nutrition & Tobacco Policies

**Recognition Tiers:** Gold & Platinum

**Reach:** > 4,000 Companies nation-wide

**Health Outcomes Assessed:** No

# Workplace Health Achievement Index

- Structure

- Process

“Workplace culture of health”  
Do I have a healthy **worksite**?

- Performance (Outcomes)

- Health outcomes

- **Life’s Simple 7**

- **My Life Check™**

Do I have a healthy **workforce**?

# Index 2016-2017 Growth



**900+**  
Participating  
companies

**800+**  
Completed  
companies

**5.5m**  
Employees  
reached

**200+**  
Companies with  
employee health data

**49%**  
YOY growth

**240%**  
YOY growth

**62%**  
YOY growth

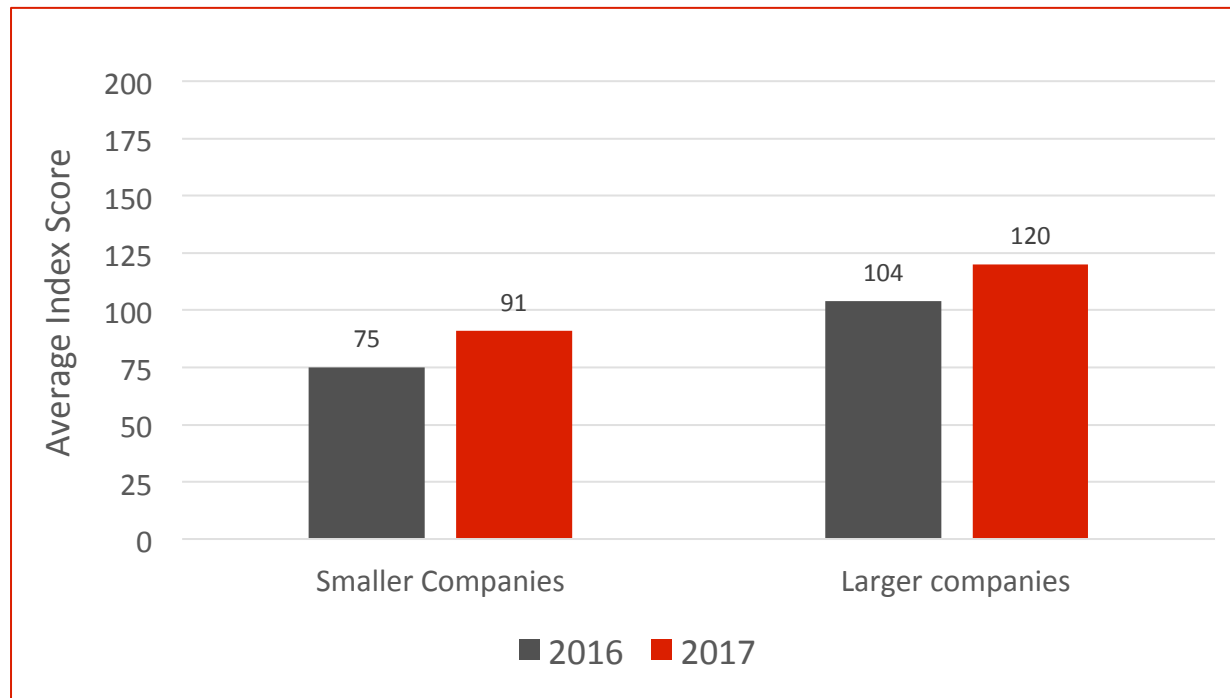
**1600%\***  
YOY growth

\*Increase from 13 to 222 companies with  $\geq 25\%$  employee health data

# Total Index Score (Longitudinal data)

- **Convenience sample of 155 companies that completed Index 2016 and 2017**
- Small and large companies improved their year-on-year performance ( $p < 0.05$ )

**Average Total Index Score, by Company Size (n=155)**  
Smaller (n=36) vs. Larger (n=119)



# Adoption of Best Practices (Longitudinal)

Statistical Difference at $p < 0.05$ Between 2016 vs. 2017			
Pillar	All	Small	Large
Leadership	✓	X	✓
Organizational Policies & Env.	✓	✓	✓
Communications	✓	X	✓
Programs	✓	X	✓
Engagement	✓	X	✓
Partnerships	X	X	X
Reporting Outcomes	✓	X	✓

- **Smaller companies improved in one domain, whereas larger companies improved in six domains**

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- **Smaller companies improved in one domain, whereas larger companies improved in six domains**



# Adoption of CPR/AED Best Practices



**D7 Heart Attack & Stroke.** In the last 12 months, did your organization provide information identifying the signs, symptoms, and need for emergency response to stroke, heart attack, and cardiac arrest through posters or flyers in the common areas of your worksite (such as bulletin boards, kiosks, break rooms), emails, newsletters, management communications, websites, seminars, or classes?

76%

☒ Yes

☐ No

**D8 Heart Attack & Stroke.** In the last 12 months, did your organization have an emergency response plan, which includes an emergency response team that addresses acute heart attack and stroke events?

72%

☒ Yes

☐ No

**D9 Heart Attack & Stroke.** In the last 12 months, did your organization have a policy that requires an adequate number of employees per floor, work unit, or shift, in accordance with pertinent state and federal laws, to be certified in Cardiopulmonary Resuscitation (CPR) including Automated External Defibrillator (AED) through a nationally-recognized training course?

67%

☒ Yes

☐ No

**D10 Heart Attack & Stroke.** In the last 12 months, did your organization have an adequate number of AED units in place such that a person can be reached within 3-5 minutes of collapse?

79%

☒ Yes

☐ No

# Adoption, By Company Size



- **Cross-sectional sample** of Index 2017 companies (N=813; excludes missing data)
- Very small companies (< 50 employees) had the lowest adoption in  $\frac{3}{4}$  questions
- This is consistent with the published literature on workplace health promotion
- Large companies (750-4,999) had the highest adoption in all questions
- Surprisingly, very large companies (>5,000) had similar adoption to medium-sized companies (250-749 employees)
- **Limitations:**
  - Data are from a convenience sample, so not nationally representative
  - Smallest companies (< 50 employees) are underrepresented in the overall Index sample

Company Size	D7 (n; %)	D8 (n; %)	D9 (n; %)	D10 (n; %)
<50 employees	18 (3)	17 (30)	15 (3)	12 (2)
50-249 employees	103 (17)	94 (17)	93 (18)	105 (17)
250-749 employees	150 (25)	131 (23)	125 (24)	146 (23)
750-4999 employees	194 (32)	191 (34)	174 (33)	216 (34)
>5000 employees	136 (23)	135 (24)	121 (23)	144 (23)
Total	601 (100)	568 (100)	528 (100)	628 (100)

# Adoption: By Industry Sector



- **Cross-sectional sample** of Index 2017 companies (N=813; excludes missing data)
- Educational and healthcare companies had the highest adoption in 100% of strategies
- Leisure and hospitality companies had the lowest adoption in 100% of strategies
- **Limitations:**
  - Data are from a convenience sample, so not nationally representative
  - Education and health companies are overrepresented in the total Index sample
  - Leisure and hospitality companies are underrepresented in the total Index sample

Industry	D7 (n; %)	D8 (n; %)	D9 (n;%)	D10 (n;%)
Goods Producing	91 (15)	93 (16)	82 (16)	93 (15)
Trade, Transportation & Utilities	55 (9)	53 (9)	48 (9)	55 (9)
Information, Professional, & Finance	114 (19)	95 (17)	87 (16)	108 (17)
Educational & Health	211 (35)	214 (38)	206 (39)	226 (36)
Leisure & Hospitality	15 (3)	12 (2)	10 (2)	18 (3)
Other	115 (19)	101 (18)	95 (18)	123 (20)
<b>Total</b>	<b>601 (100)</b>	<b>568 (100)</b>	<b>528 (100)</b>	<b>623 (100)</b>

# AHA Workplace Safety Training Initiative

## Americans unprepared for workplace cardiac emergencies



### Survey 1: Employees:

- Commissioned by AHA and conducted by Edelman Intelligence
- Conducted between February and April 2017
- 2,000 employees in corporate offices, hospitality, education and industry/labor

### Employees reported:

- More than half (55%) cannot get First Aid or CPR+AED training from their employer – and even if employers do offer this training, it's often either one or the other.
- Half of all U.S. workers (50%) cannot locate the AED at work. In the hospitality industry, that number rises to two-thirds (66%).

Source: 2017, AHA Mediagenic Survey Results; 2017, AHA with Edelman Intelligence; 2017, AHA with BLR Media; Postgrad Medical Journal, October 2007

# AHA Workplace Safety Training Initiative

## Survey 2: Safety Managers:

- OSHA survey: Commissioned by AHA and fielded by EHS Daily Advisor
- Conducted between February and April 2017
- 1,000 safety managers in industries regulated by the U.S. Occupational Safety & Health Administration (OSHA)

## Safety Managers reported:

- **One-third** reported lives **were saved at the workplace or home** due to workplace first aid, CPR and AED training.
- **Three-quarters** said **workplace injuries or medical conditions** were treated based on the training.
- **More than one-third** felt it would be valuable to have training more than every two years (the current requirement).
- **45 percent of younger workers** took first aid, CPR or AED training, they **were less likely** to do so than older workers.

Source: 2017, AHA Mediagenic Survey Results; 2017, AHA with Edelman Intelligence; 2017, AHA with BLR Media; Postgrad Medical Journal, October 2007

# CPR/AED/First Aid Goals



## AHA Mission Goals (2020)

- Build healthier lives, free of cardiovascular diseases and stroke
- Increase survival from in-hospital and out-of-hospital cardiac arrest
- Double out-of-hospital (OOH) CPR bystander response
- Train 20 million people in lifesaving CPR, AED and first aid\*

## Program Goals

- Generate placement of AEDs on common public properties (e.g., arenas, hotels, airports, etc.)
- Increase sales of AHA's Heartsaver training (AED and CPR)

## Marketing Communications Goals

- Generate awareness of the importance of CPR and AEDs in the chain of survival
- Reinforce AHA's leadership in science and health

**AHA has trained over 22 million people to date.**

# AHA Workplace Safety Training Initiative



[www.heart.org/workforcetraining](http://www.heart.org/workforcetraining)

# Acknowledgements



## **Eduardo Sanchez**

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## **Viola Gold**

Marketing Manager, ECC Global Marketing

## **Marie Manning**

Director, Communications and Marketing, ECC Global Marketing

**AHA Workplace Health Steering Committee** (Dr. Gregg Fonarow, Chair)

**AHA CEO Roundtable** (Co-Chairs: Macy's & KKR)



# Discussion



- Questions?

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es por la vida™

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