Life's Simple 7

RHP9&10 Learning Collaborative

February 9, 2016

Eduardo Sanchez, MD,MPH,FAAFP

Chief Medical Officer for Prevention

American Heart Association

2012 Leading Causes of Death in the Texas

1. **Diseases of the Heart**
2. Malignant Neoplasms (Cancer)
3. Chronic Lower Respiratory Diseases
4. **Cerebrovascular Disease (Stroke)**
5. Accidents (Injuries)
6. Alzheimer's Disease
7. **Diabetes Mellitus**
8. Septicemia (Blood Poisoning)
9. Nephritis, Nephrotic Syndrome, Nephrosis
10. Influenza and Pneumonia

The Health Status of Texas 2014

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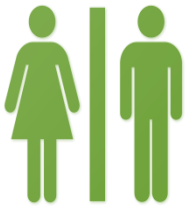
Burden of disease attributable to leading risk factors, 2013



1. **Dietary risks**
2. **High body mass index**
3. **Tobacco smoke**
4. **High** blood pressure
5. **Alcohol and drug use**
6. **High fasting plasma glucose**
7. **High total cholesterol**
8. Low physical inactivity
9. Low glomerular filtration rate
10. Occupational Risks

http://www.healthdata.org/united-states

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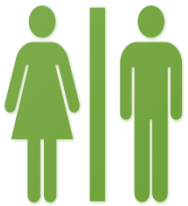
Rates of premature death in United States versus comparison locations, 2013



1.	Ischemic heart disease	Higher
2.	Lung cancer	Higher
3.	Road injuries	Higher
4.	Self-harm	Same
5.	COPD	Higher
6.	Cerebrovascular disease	Lower
7.	Alzheimer disease	Higher
8.	Drug use disorders	Higher
9.	Diabetes	Higher
10.	Congenital anomalies	Higher

http://www.healthdata.org/united-states

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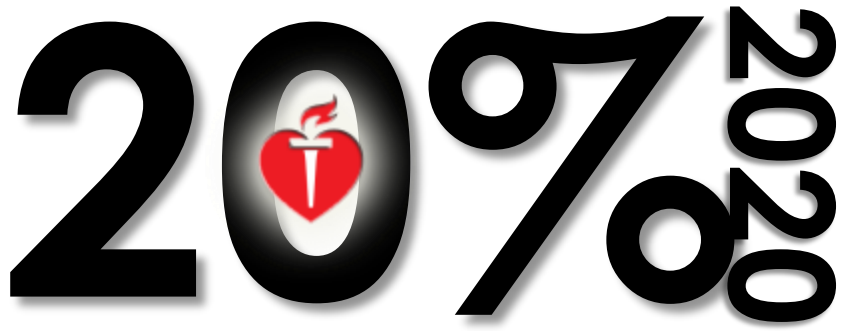
Multiple Chronic Conditions (MCC)

- One in four (25%) Americans has multiple chronic conditions(MCC), including one in 15 children
- Among Americans aged 65 years and older, as many as three out of four persons (75%) have MCC.
- People with MCC are at increased risk for mortality and poorer day-to-day functioning.
- Approximately 66 percent (66%) of total health care spending in the U.S. is associated with care for Americans with MCC.

HHS Initiative on Multiple Chronic Conditions, hhs.gov

American Heart Association 2020 Impact Goal



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

Ideal Cardiovascular Health: Life's Simple 7

- Smoking Status
- Physical Activity
- Healthy Diet
- Healthy Weight
- Blood Pressure
- Cholesterol
- Blood Glucose

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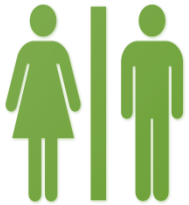
A Framework for Producing Health

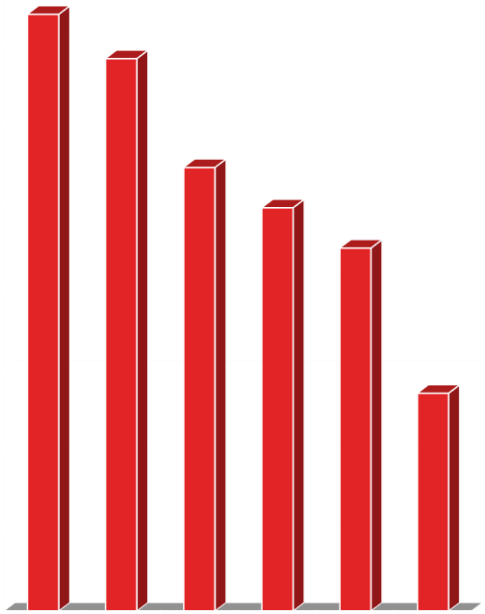
LIFE'S SIMPLE 7	POOR	INTERMEDIATE	IDEAL
Smoking Status			
Adults >20 years of age	Current Smoker	Former ≤ 12 mos	Never /quit ≥ 12 mos
Children (12–19)	Tried prior 30 days		
Physical Activity			
Adults > 20 years of age	None	1-149 min/wk mod or 1-74 min/wk vig or 1-149 min/wk mod + vig	150+ min/wk mod or 75+ min/wk vig or 150+ min/wk mod + vig
Children 12-19 years of age	None	>0 and <60 min of mod or vig every day	60+ min of mod or vig every day
Healthy Diet			
Adults >20 years of age	0-1 components	2-3 components	4-5 components
Children 5-19 years of age	0-1 components	2-3 components	4-5 components
Healthy Weight			
Adults > 20 years of age	≥30 kg/m^2	25-29.9 kg/m2	<25 kg/m^2
Children 2-19 years of age	>95th percentile	85th-95th percentile	<85th percentile
Blood Glucose			
Adults >20 years of age	126 mg/dL or more	100-125 mg/dL or treated to goal	Less than 100 mg/dL
Children 12-19 years of age	126 mg/dL or more	100-125 mg/dL	Less than 100 mg/dL
Cholesterol			
Adults >20 years of age	≥240 mg/dL	200-239 mg/dL or treated to goal	<170 mg/dL
Children 6-19 years of age	≥200 mg/dL	170-199 mg/dL	
Blood Pressure			
Adults >20 years of age	SBP ≥140 or DBP ≥90 mm Hg	SBP120-139 or DBP 80-89 mm Hg or treated to goal	<120/<80 mm Hg

Why

focus on Simple 7?



Number of Ideal Heart Health Behaviors or Factors and Mortality



Yang, et al, JAMA, Vol 307, No.12, March 28, 2012

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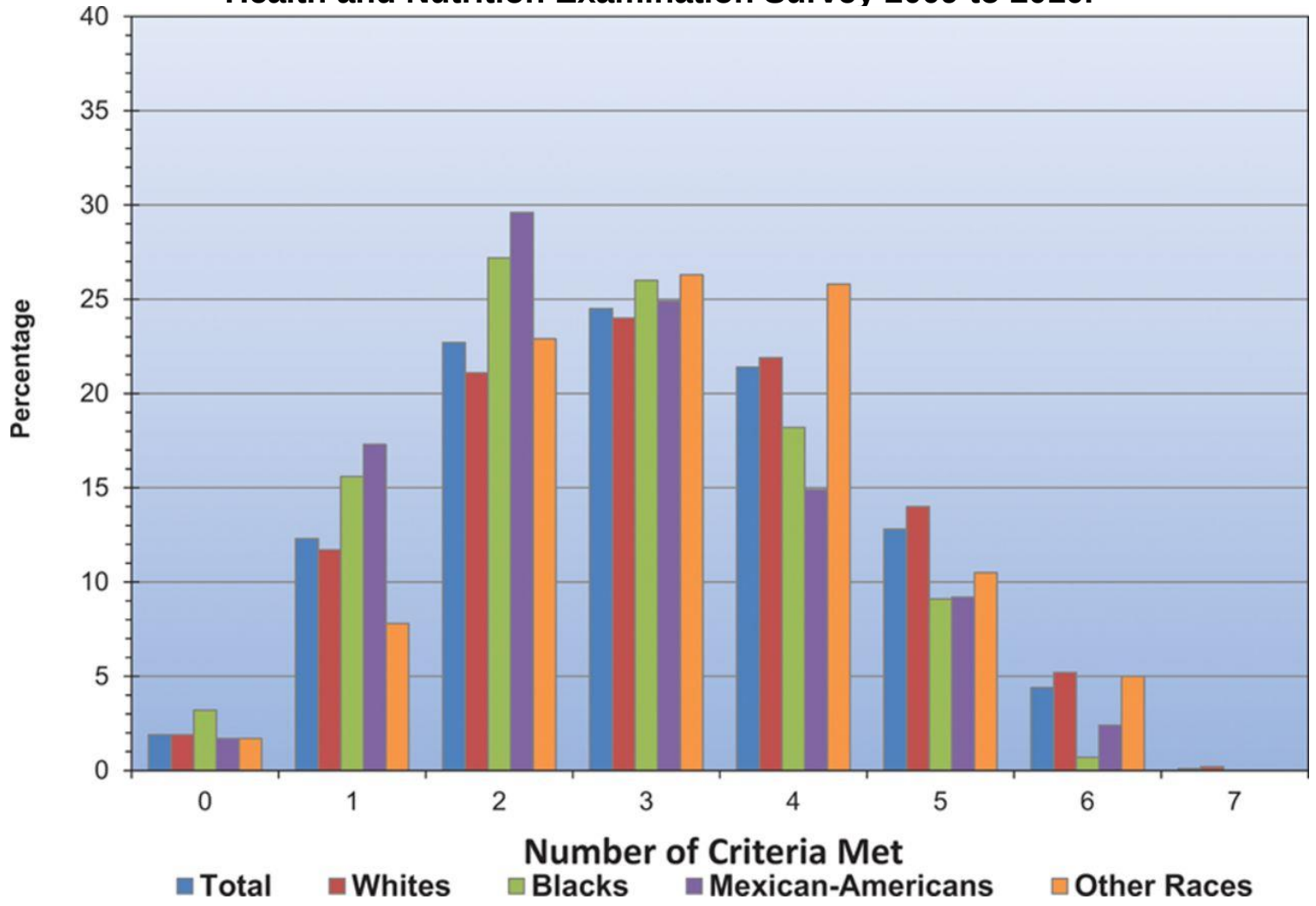
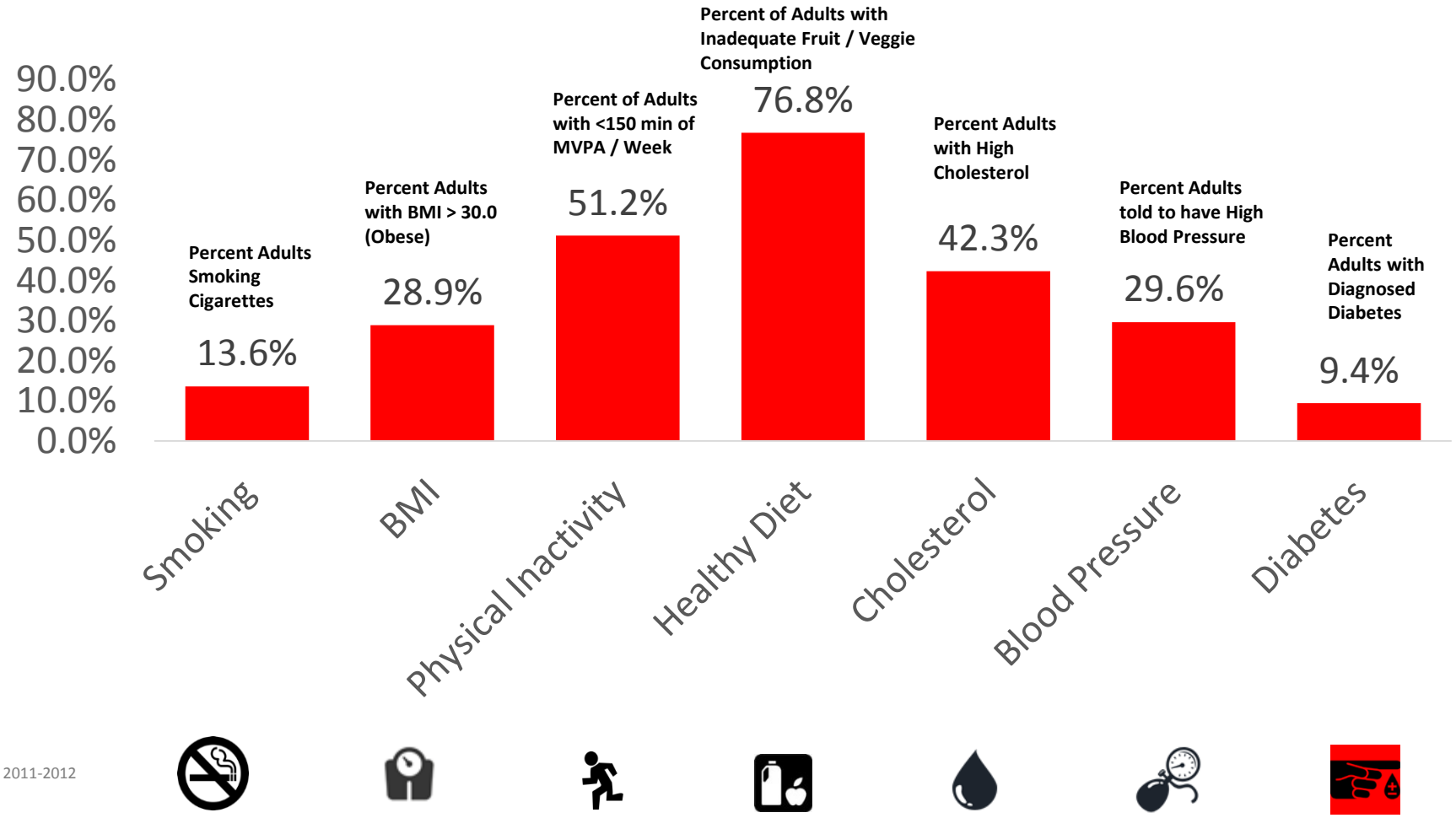
Age-standardized prevalence estimates of US adults aged ≥20 years meeting different numbers of criteria for ideal cardiovascular health, overall and in selected race subgroups from National Health and Nutrition Examination Survey 2009 to 2010.



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

American Heart Association.

Simple 7 Prevalence in Adults: Dallas, TX



BRFSS 2011-2012

MVPA – moderate to vigorous physical activity

Health of Texas

RHP 9

- Dallas
- Denton
- Kaufman

RHP 10

- Ellis
- Erath
- Hood
- Johnson
- Navarro
- Parker
- Somervell
- Tarrant
- Wise

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Texas Public Health Challenges (2005)

- Exploding costs
- Highest rate of uninsured
- Rapid population growth
- Low immunization rates
- Threat of bioterrorism
- An epidemic of obesity
- Challenges of border region
- Sharp health disparities
- Mental health challenges
- Substance abuse challenges

It’s like déjà vu all over again.

-Yogi Berra

Texas Public Health Challenges (2016)

- Exploding costs
- Highest rate of uninsured
- Rapid population growth
- Better ~~Low~~ immunization rates
- Threat of ~~bioterrorism~~ emerging infectious diseases and other public health challenges
- An epidemic of obesity
- Challenges of border region
- Persistent health disparities
- Mental health challenges
- Substance abuse challenges

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National Healthcare Quality and Disparities Report 2014

- Texas is a **weak** performer in its balance of below average, average, and above average measures compared to all states. (continuum – very weak, weak, average, strong, very strong)
  - Texas is 3rd from last.
  - Healthy living – weak
  - Diabetes – very week
  - Prevention – weak
  - Chronic – at intersection of very weak and weak

National Healthcare Quality and Disparities Report 2014

Texas

- Strongest measures
  - 3 of 5 related to vaccinations in 13 to 17 year olds
- Weakest measures
  - ESRD due to diabetes per 1,000,000
  - Lower extremity amputations due to diabetes per 1000
  - Admissions for uncontrolled diabetes without complications per 100,000
  - Avoidable admissions for high blood pressure per 100,000
  - New AIDS cases per 100,000

Code Red 2015 Recommendations

- **Obtain a greater share of federal tax funding to expand health insurance coverage so more Texans have access to primary care**
- **Extend/renew the current Medicaid 1115 Waiver.**
- Create an appropriate state health plan, such as Texas Prescription **TxRx**
- Develop robust local and regional health care delivery systems with increasing emphasis on wellness and prevention programs.
- Continue to expand behavioral health care and integrate with primary care.
- Expand the health care workforce in response to community need.
- Support continued federal funding of FQHCs.

Code Red Task Force on Access to Health Care in Texas;
http://www.coderedtexas.org/files/2015-code-red-report.pdf

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Underinvestment in Public Health

3%

Of real national health care expenditures since 1980s

"*Prevention* requires tools that are often unfamiliar because educational, behavioral, and social interventions, not usually considered to be part of medicine, may be most effective for many diseases." – Moses et. al. (JAMA, 2013)

Moses et al. The anatomy of health care in the United States. JAMA. 2013

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Public Health Spending Linked to Declines in Preventable Deaths

Mortality rate	% decrease per 10% spending increase
Infant deaths per 1000 live births	6.85
Heart disease deaths per 100,000	3.22
Diabetes deaths per 100,000	1.44
Cancer deaths per 100,000	1.13
Influenza deaths per 100,000	0.25

Mays and Smith, Health Affairs. Aug 2011;30(8).

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1115 Waiver in Texas

- Social Security grants HHS Secretary the authority to approve projects **aimed at furthering the objectives of Medicaid**.
- Texas' five-year Waiver through September 2016.
- Two funding pools
  - Uncompensated care – to hospitals - $17.6 billion
  - Delivery System Reform Incentive Program – regional health system reform to achieve the triple aim – $11.4 billion
- $12 billion local dollars that serves as leverage to draw down $17 billion federal dollars
- Deadline for extension request – September 30, 2015

Delivery System Reform Incentive Program (DSRIP)

- 25% behavioral health
- 20% access to primary care
- 18% chronic care management and health system navigation

Prevalence of psychiatric disorders in low-income primary care patients

Psychiatric disorder	General Primary care population	Low-income patients
At least one psychiatric disorder	28%	51%
Mood disorder	16%	33%
Anxiety disorder	11%	36%
Alcohol abuse	7%	17%
Eating disorder	7%	10%

Mauksch, L. B., et al. (2001). Journal of Family Practice, 50(1), 41-47.

Delivery System Reform Incentive Program (DSRIP)

- Report by Texas Academy of Family Physicians and Texas Association of Community Health Centers concludes that…**Texas leaders must adopt and execute a plan for the 115 waiver renewal that includes drawing down all available federal funds to expand health coverage for low-income Texans.**

Some numbers

- 27,000,000 (27 million) Texans
- Estimating 5,000,000 uninsured
- $29 Billion over 5 years = $5.8 B per year
- Then the waiver represents a spend of $1160 per uninsured Texan per year over 5 years
- U.S. health care spending reached $9,255 per person in 2013.

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More numbers

- $ 3.3 billion annual budget for DSHS
- 27,000,000 (27 million) Texans
- Then the state spends $122.22 per Texan per year through DSHS
- 8% of DSHS funding identified as spending for public health = $9.78 per Texan per year

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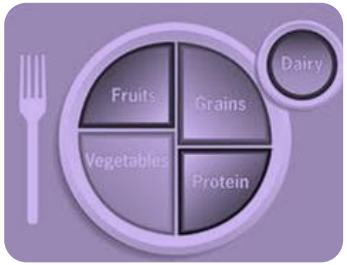
Learn and Live.

Building a Healthy Community

Tobacco
Increase percentage of Americans who live in environments that support smoke-free air and smoking cessation



Nutrition
Improve environments that support healthy eating and improve quality of foods available

Physical Activity
Increase percentage of Americans who live in environments that support active lifestyles

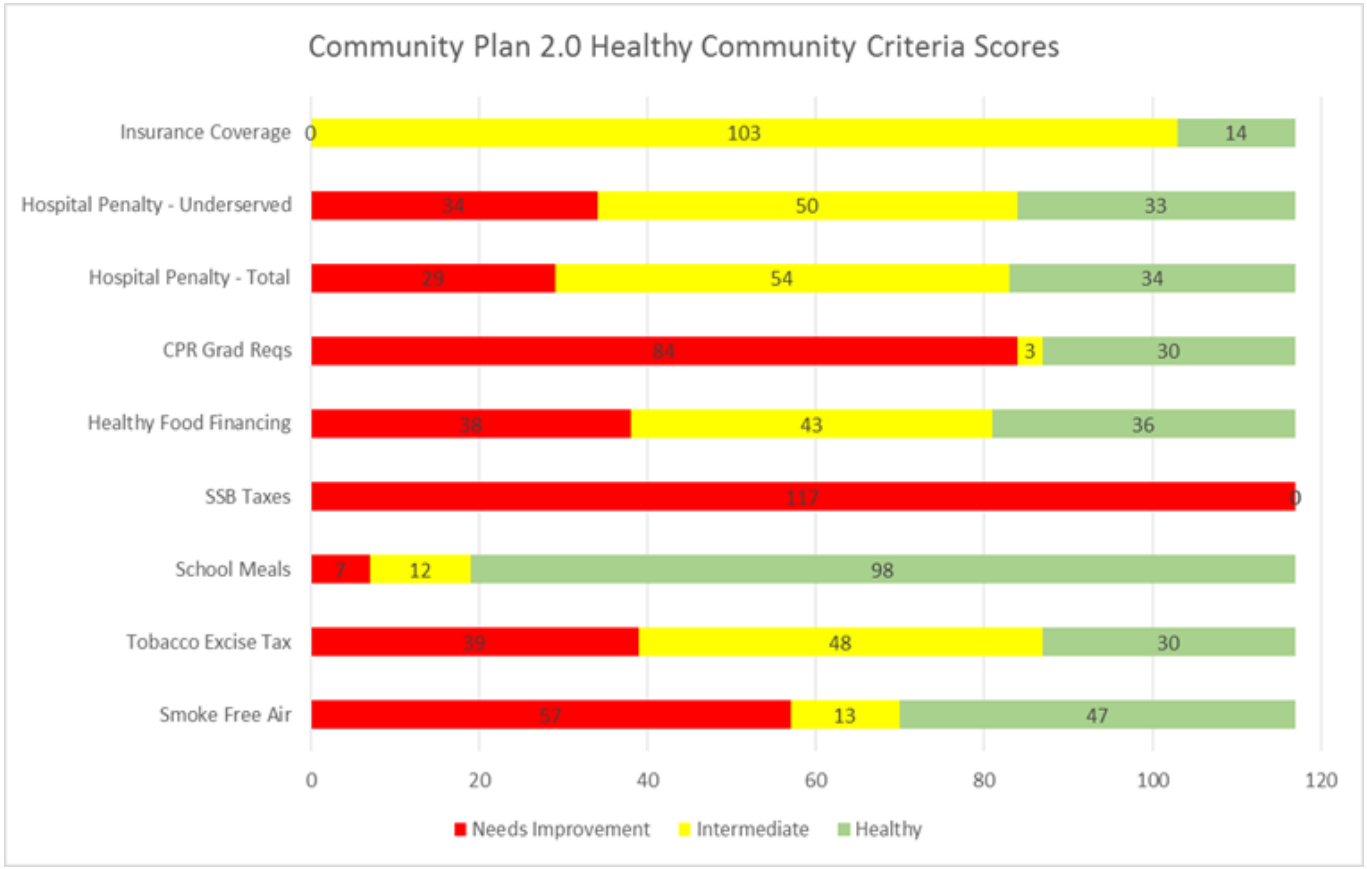
Health Factors
Improve environments that support healthy weight, blood pressure, glucose and cholesterol

CPR/Chain of Survival
Increase percentage of Americans who live in environments that support emergency response for cardiac arrest

Acute Care & Emergency Response
Increase percentage of Americans who live in environments that support decreased cardiovascular disease mortality and improved quality of life

Post-Event Care
Increase percentage of Americans who receive the support and education needed after acute events

Social Determinants
Ensure safe places to work, play, and get care are available for all Americans



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Example: Tobacco

	Outcome	Good	Intermediate	Poor
Reduce Tobacco 	***Increase percentage of Americans who live in environments that support smoke-free air and smoking cessation.***	• 100% of community covered by clean indoor air legislation in all restaurants/ bars/ workplaces	• 100% of community covered by clean indoor air legislation in all restaurants/bars	• Community covered by clean indoor air legislation below intermediate level
		• Excise tax=$1.85 or > per pack	• Excise tax=$1 or > per pack	• Excise tax= <$1 per pack
		• Access to smoking cessation and prevention campaign	• Access to smoking cessation and prevention campaign	• Access to smoking cessation and prevention campaign

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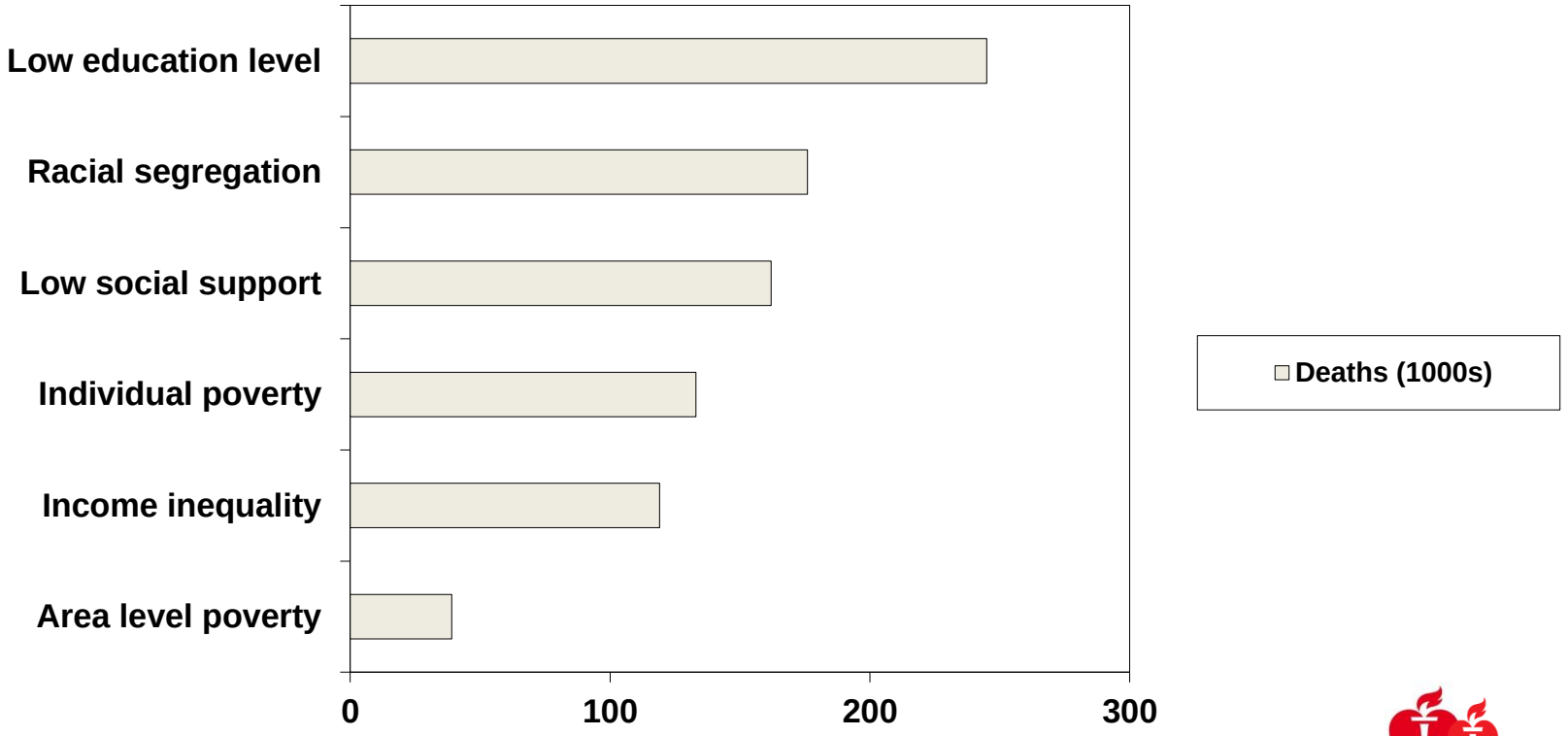
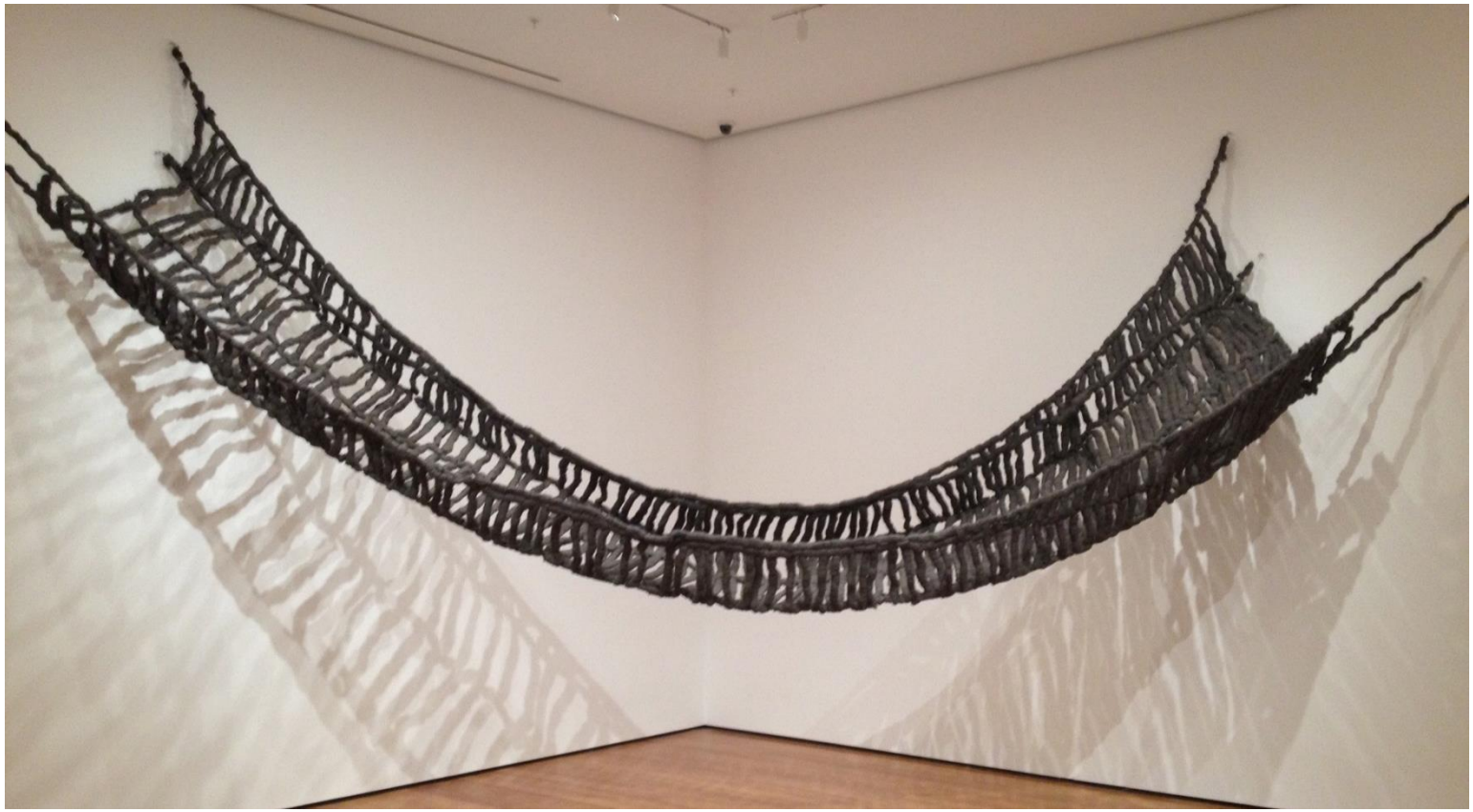
Relationship Between Social Determinants and Mortality (2000)



Galea et al, Estimated Deaths Attributable to Social Factors in the United States , AJPH, August 2011, Vol 101, No. 8.

Bridging Community and Clinical Care



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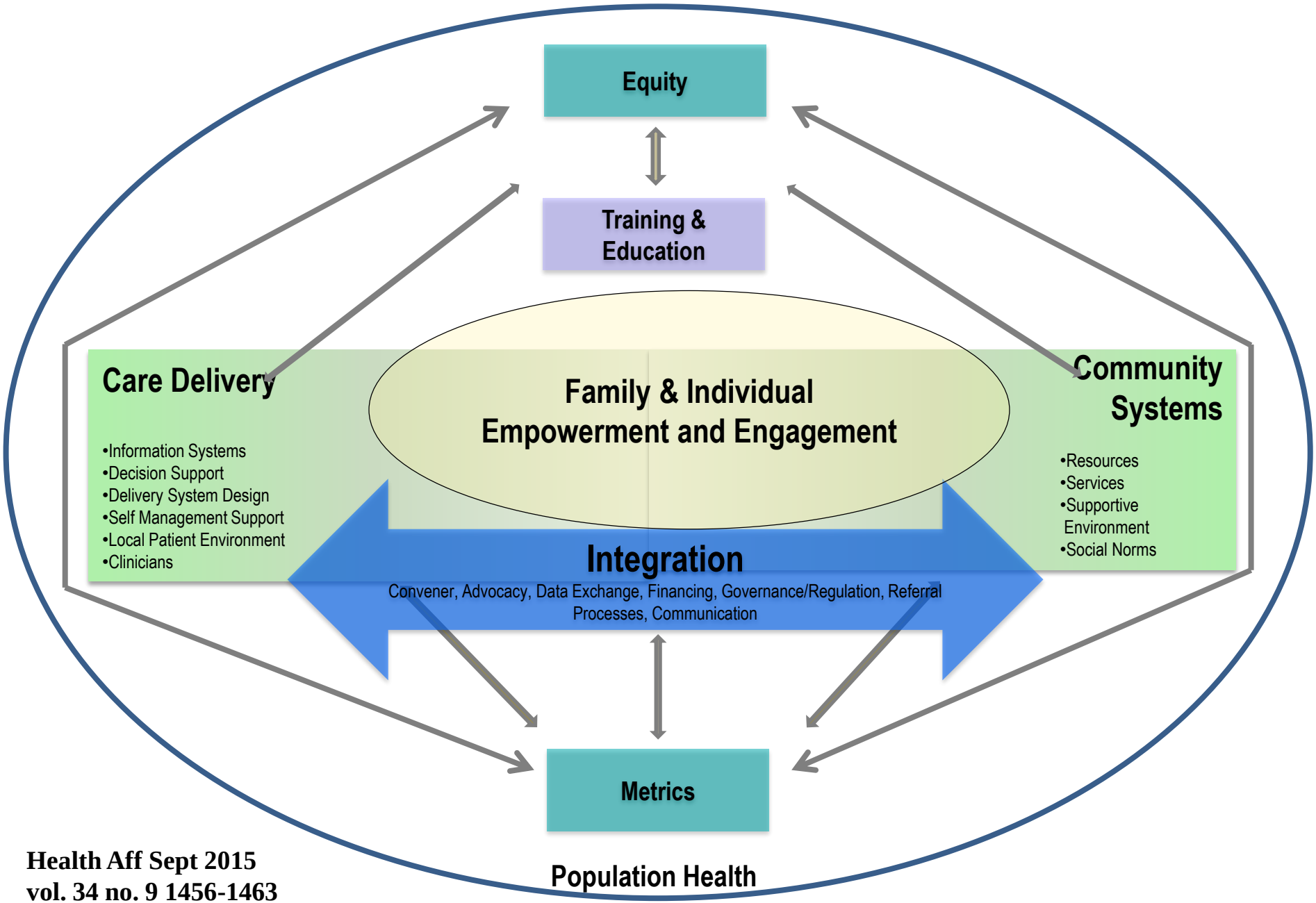
Framework for Integrated Clinical and Community Systems of Care



Health Aff Sept 2015
vol. 34 no. 9 1456-1463

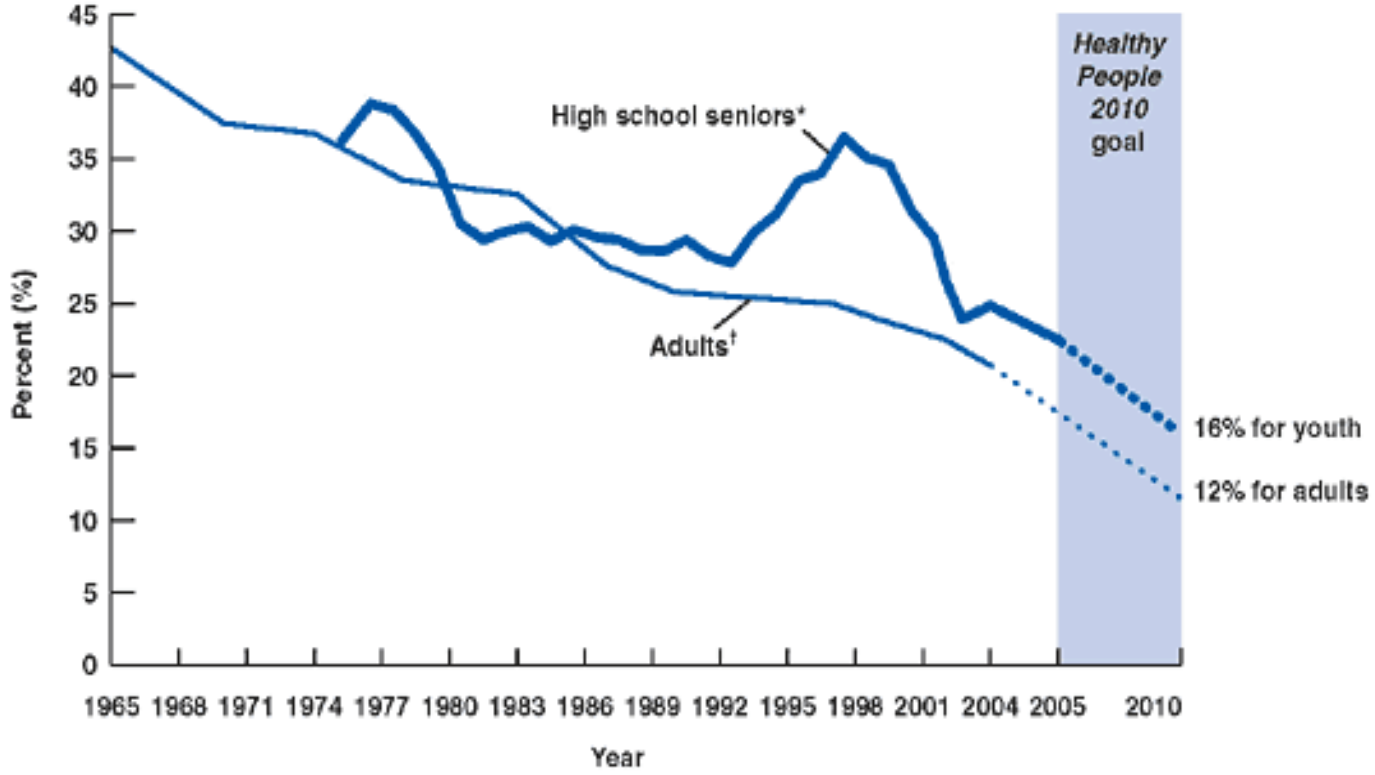
Public Health and Medical Care

Primary Care and Public Health: Exploring Integration to Improve Population Health

- **A broad definition of integration: the linkage of programs and activities to promote efficiency and effectiveness and achieve gains in population health.**
- **Integration of primary care and public health could enhance the capacity of each to carry out their missions and link with other stakeholders to produce health**

IOM (Institute of Medicine). 2012. *Primary Care and Public Health: Exploring Integration to Improve Population Health.* Washington, DC: The National Academies Press.

US Smoking Trends—High School Seniors and Adults (1965–2004)



DSHS

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Diabetes Prevention Program (DPP)

	Placebo	Metformin	Lifestyle
Incidence of diabetes (percent per year)	11.0%	7.8%	4.8%
Reduction in incidence compared with placebo	–	31%	58%
Number needed to treat to prevent 1 case in 3 years	–	13.9	6.9

The DPP Research Group, *NEJM 346*:393-403, 2002

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TARGET:BP™

Motivating Millions to Lower Blood Pressure

Blood Pressure Control Evades Us

One in three American adults — about 80 million people — have high blood pressure

High blood pressure contributes to heart attack and heart failure, stroke, kidney failure, and other deadly consequences

New data supports recommendations for keeping blood pressure low

SPRINT: An Opportunity to Elevate the Message

Data from the Systolic Blood Pressure Intervention Trial (SPRINT) supports lowering blood pressure and generated significant attention at AHA Scientific Sessions

The New York Times

HEALTH

Data on Benefits of Lower Blood Pressure Brings Clarity for Doctors and Patients

NBC NEWS

Study Details Confirm Lower Blood Pressure Is Better

by MAGGIE FOX

MENU TIME Health

HEALTH

Why Your Blood Pressure Might Actually Be Too High

Target: BP launched at Sessions on November 9 to leverage the momentum of SPRINT and draw attention to how we can fight high blood pressure

What is *Target: BP*?

TARGET: BP™

- A call to action motivating hospitals, medical practices, practitioners and health services organizations to prioritize blood pressure control
- A source for tools and assets for healthcare providers to use in practice, including the AHA/ACC/CDC Hypertension Treatment Algorithm
- Recognition for healthcare providers who attain high levels of blood pressure control in their patient populations, particularly those who achieve 70, 80 or 90 percent control

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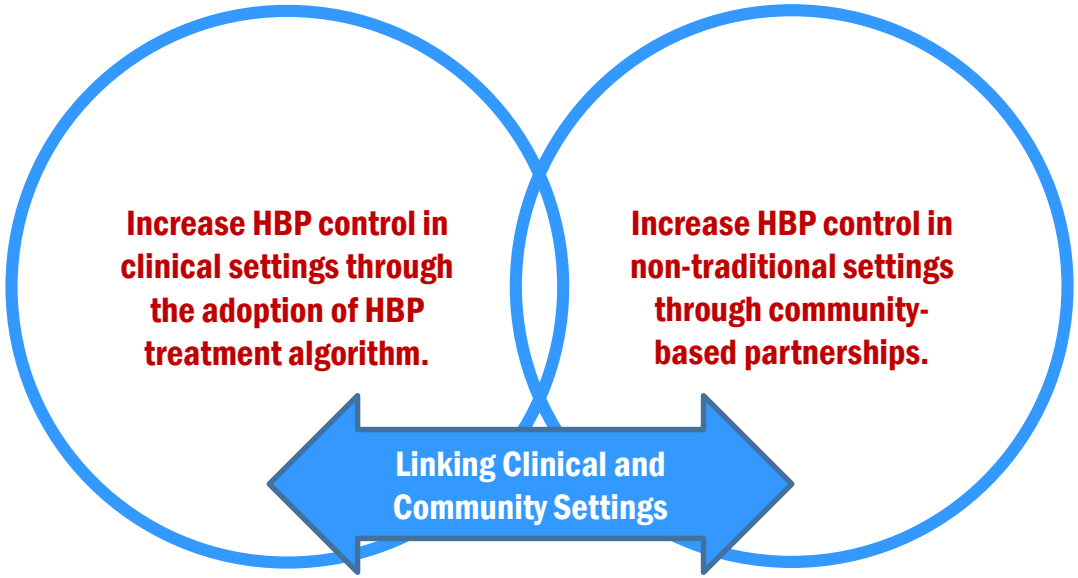
Tackling High Blood Pressure

Improve blood pressure control in traditional and non-traditional settings.



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Check. Change. Control.™

Improving Hypertension Control Particularly in Blacks and African Americans

Community to Clinic, Clinic to Community (C2C2)

COMBINING UNIQUE ASSETS

Bringing together strategic AHA assets directed toward a key national and local issue.

- **Science** (evidence-based guidelines)
- **Life's Simple 7** (evidence-based health measures)
- **Check.Change.Control.** (community HBP program)
- **Heart360** (online personal health tracking tool)
- **Empowered To Serve** (faith-based mega community)
- **The Guideline Advantage** (HCP quality improvement)
- **Communications** (infrastructure & media partnerships)

Check. Change. Control.™

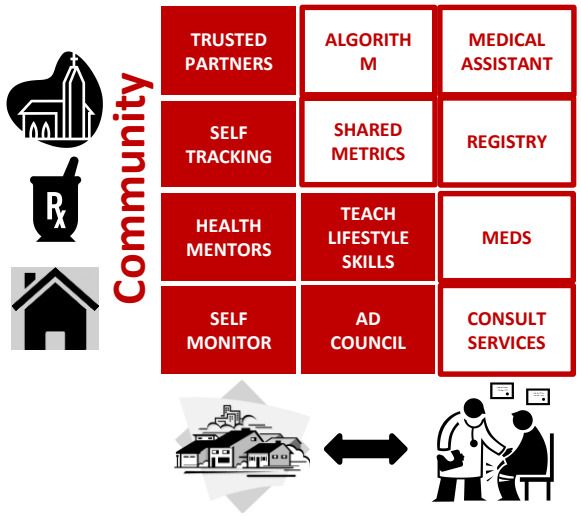
THE GUIDELINE ADVANTAGE™

EmPOWERED To Serve

Ad Council

INTEGRATED APPROACH

Leadership, shared tools, protocols, resources and training to deliver improved care, resulting in new, reciprocal connectivity and targeted support between the patient, the clinic, and the community.



INNOVATION

- Transformative care delivery mechanism
- Lean management principles to iterate the model
- Surround-sound communication campaign
- Registry to connect the community and clinical settings
- Learning Collaborative

2 CITIES 1 **ATLANTA**

3 YEARS 2 **SAN DIEGO**

The AHA and Kaiser Permanente have a unique opportunity to co-create a scalable, groundbreaking model which establishes and maximizes clinical care and community stakeholder assets, competencies, and partnerships.

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The Role of Health Care in Population Health

Barriers that must be overcome for health system-based efforts to contribute to optimized population health

1. **Misaligned stakeholder interests and population health investments**
2. **Inadequate information transfer**
3. **Inadequate service integration between health care and other sectors**
4. **Designing and functioning within a sustainable budget**
5. **Difficulties addressing health disparities**

Eggleston & Finkelstein. JAMA 2014;311(8); 2/26/14

Challenges Associated with Establishing and Maintaining Population Health Initiatives

- **Public health benefits are dispersed and delayed, and success is when "nothing happens"**
- **Public health practitioners are not celebrities – not since C Everett Koop**
- **Public health programs are taken for granted (think indoor plumbing, water quality, food safety)**
- **Approaches that may involve regulation or fees or taxes can generate fierce opposition**
- **Public health sometimes clashes with moral values (think HPV, needle exchange, family planning)**
- **Population health improvement requires actions and resources outside of public health [and medical care]**

Mayes and Oliver, *Journal of Health Politics, Policy and Law*, Vol. 37, No. 2, April 2012

Accountable Care as a Strategy for Achieving Population Health Goals

To meet the responsibility to improve health outcomes for those under their care and society at large, health systems will need to:

1. **Take responsibility for the health of their patient populations [and their communities]**
2. **Create and expand partnerships with other entities with the potential to influence health**
3. **Respond to social demands for equity and value**

Eggleston & Finkelstein. JAMA 2014;311(8); 2/26/14

Accountable Health Organizations (AHOs)

- **Manages the health investment portfolio for a community**
- **“Health in All Policies” to produce health**
- **All services - retail, government, other private (the business sector), social, health (including public health, medical, dental, mental health care) services associated with a defined population – that should be held accountable for the health status and outcomes for that population.**
- **Attribution methodologies for accountability (credit for contribution to health for allocation of resources and charges to fund and sustain the system).**
- **A system whose performance is measured by progress towards achieving highest health status (= economic competitiveness)**

Accountable Health Communities (AHC)

- Announced January 5, 2016
- The Accountable Health Communities (AHC) model addresses a critical gap between clinical care and community services in the current health care delivery system by testing whether systematically identifying and addressing the health-related social needs of beneficiaries' impacts total health care costs, improves health, and quality of care. In taking this approach, the Accountable Health Communities model supports the Center for Medicare & Medicaid Service's (CMS) "better care, smarter spending, and healthier people" approach to improving health care delivery.
- CMS will award a total of 44 cooperative agreements ranging from $1 million (per Track 1 site) to $4.5 million (per Track 3 site) to successful applicants .
- The Model aims to identify and address beneficiaries' health-related social needs in at least the following core areas:
  - **Housing instability and quality;**
  - **Food insecurity;**
  - **Utility needs;**
  - **Interpersonal violence; and**
  - **Transportation needs.**

http://www.hhs.gov/about/news/2016/01/05/
first-ever-cms-innovation-center-pilot-project-test-improving-patients-health.html

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Accountable Community for Health (ACH)

… a collaborative of the major health care systems, providers, and health plans, along with public health, key community and social services organizations, schools and other partners serving a particular geographic that is responsible for improving the health of the entire community, with particular attention to reducing health disparities. The goals of an ACH are to:

1) improve community-wide health outcomes and reduce disparities with regard to particular chronic diseases;
2) reduce costs; and,
3) through a Wellness Fund, develop **financing mechanisms** to sustain the ACH and provide ongoing investments in prevention and other system-wide efforts to improve population health.

http://www.chhs.ca.gov/PRI/CalSIM%20Accountable%20Communities%20for%20Health%20Webinar%20slides.pdf

Accountable Community for Health (ACH)

Portfolio of interventions

- Policy and systems
- Environments
- Community resource and social services
- Community-Clinical Linkages
- Clinical Services

http://www.chhs.ca.gov/PRI/CalSIM%20Accountable%20Communities%20for%20Health%20Webinar%20slides.pdf

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Source of funds: Hospital Community Benefit Programs to Increase Benefits to Communities

Principles to guide the development of a strategy for leveraging community benefit

1. Define mutually agreed-on regional geographic boundaries to align both community benefit and AHC initiatives,
2. Ensure evidence-based “community benefit” funded interventions
3. Increase the scale and effectiveness of community benefit investments by pooling resources
4. Establish shared measurement and accountability for regional population health improvement

Corrigan, Fisher, and Heiser. JAMA 2015;313(12); March 24/31, 2015

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The Dollars are There
The Healthcare Imperative: Lowering Costs and Improving Outcomes

Annual US health care waste costs $765 billion

- $210 billion Unnecessary services (services used too frequently)
- $190 billion Insurance/bureaucratic costs (unproductive documentation)
- $130 billion Inefficient services (uncoordinated care, errors)
- $105 billion Prices that are too high
- $75 billion Fraud
- $55 billion Missed prevention opportunities

Workshop Summary, IOM, Feb 24, 2011

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Real "Health Reform"

- Healthy, safe, and affordable housing
- Quality education (preschool to high school) – 100% graduation rates
- Employment with living wage income or better
- Comprehensive indoor smoking laws/policies including housing units
- Affordable food and physical activity
- Access to health - equitably funded public health and population health
- Access to medical care – health insurance and quality primary care

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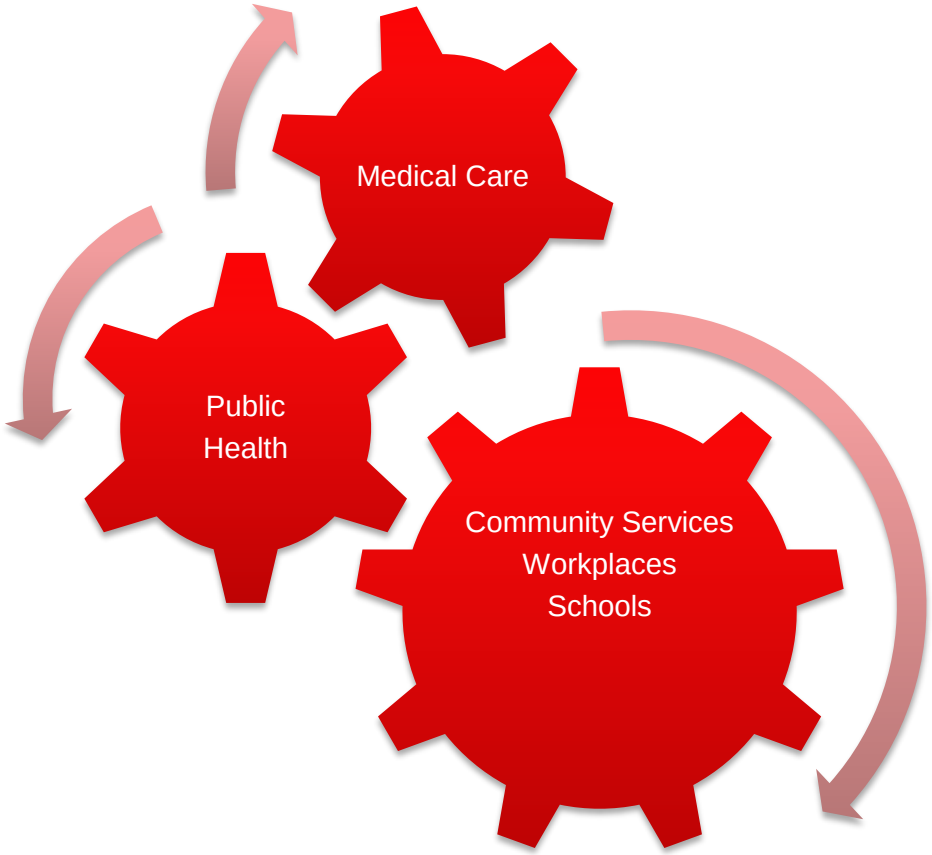
An Integrated Health System



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