



HEALTH **IMPACT** IN 5 YEARS

Health Impact in 5 Years: Stories from public health innovators

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Office of the Associate Director for Policy and Strategy
Centers for Disease Control and Prevention

October 15, 2019



Six in ten adults in the US have a chronic disease and **four in ten adults** have two or more.



HEART
DISEASE



CANCER



CHRONIC LUNG
DISEASE



STROKE



ALZHEIMER'S
DISEASE



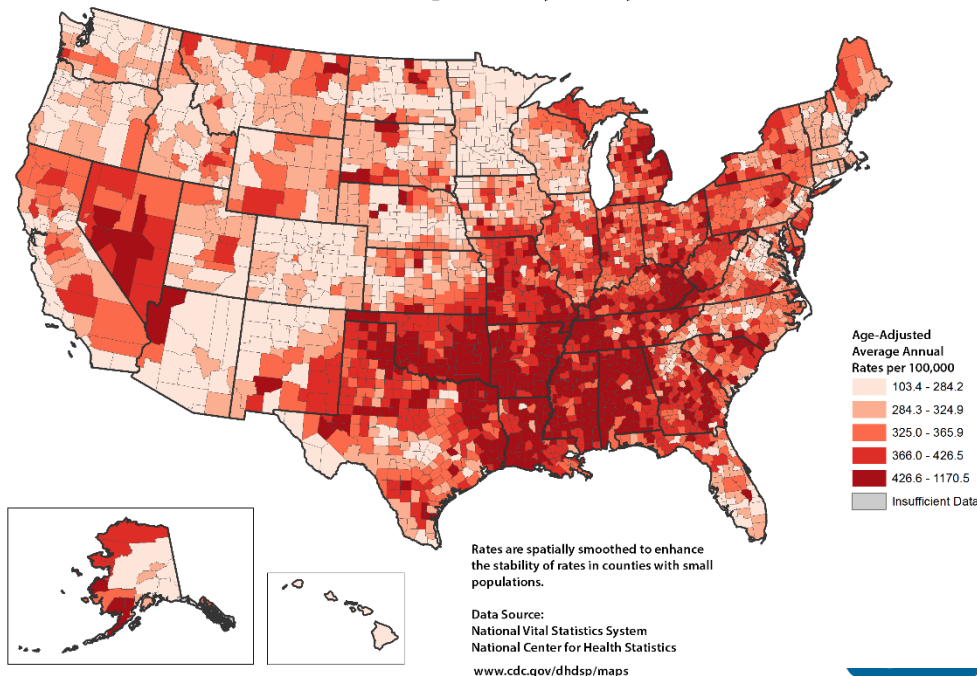
DIABETES



CHRONIC
KIDNEY DISEASE



Heart Disease Death Rates, 2014-2016
Adults, Ages 35 +, by County



The Changing Health System

An opportunity to decrease cost & promote health

Emerging Clinical Care Models

Person

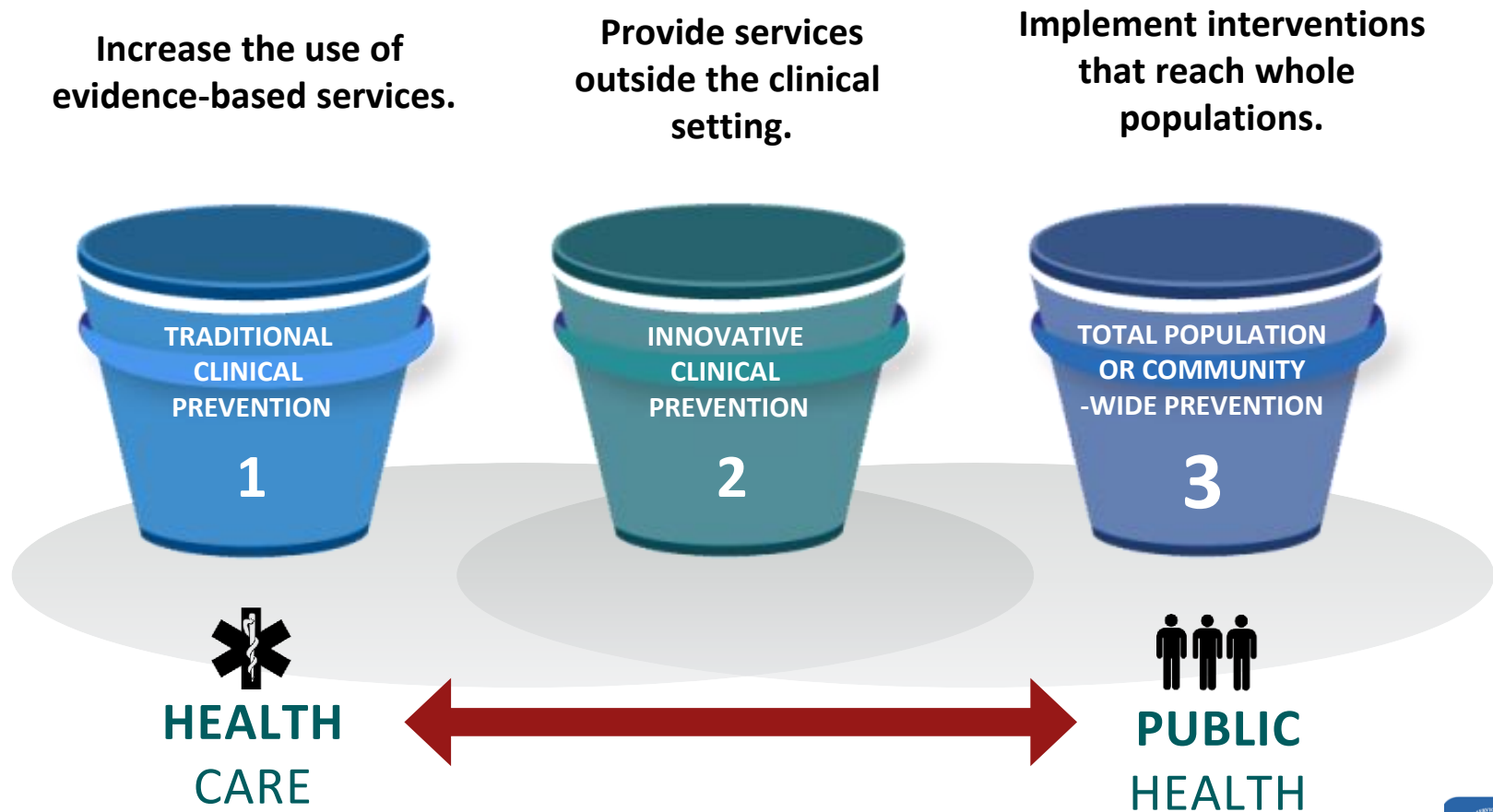


Population



Increased focus on prevention and wellness

The "BUCKETS" of Prevention Framework



Auerbach, J. The 3 Buckets of Prevention. *J Public Health Manag Pract.* 2016 May-Jun; 22(3): 215–218.

Buckets 1 & 2

Traditional Clinical / Innovative Clinical

SIX WAYS TO SPEND SMARTER FOR HEALTHIER PEOPLE



REDUCE
TOBACCO USE



CONTROL
BLOOD PRESSURE



IMPROVE
ANTIBIOTIC USE



CONTROL ASTHMA



PREVENT UNINTENDED
PREGNANCY



PREVENT TYPE 2
DIABETES

www.cdc.gov/sixteen



HEALTH **IMPACT** IN 5 YEARS

Bucket 3

Community-Wide Prevention

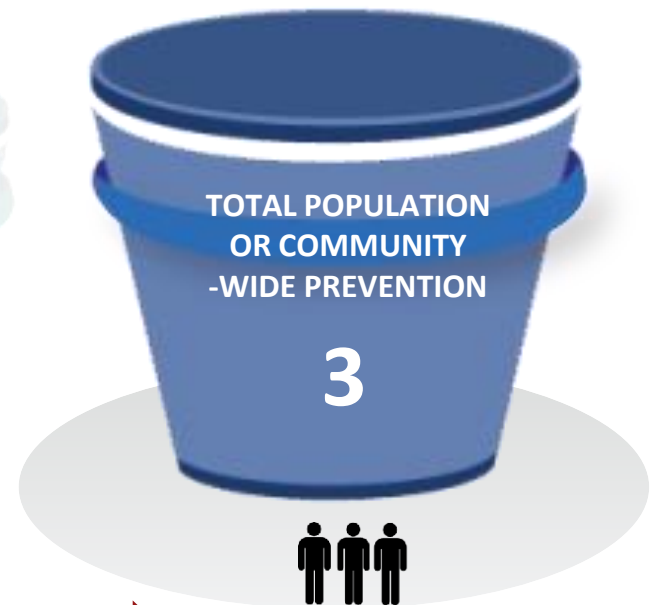
- Improve population health
- Evidence-based approaches
- Health impact and good value



**HEALTH
CARE**



**PUBLIC
HEALTH**



Improving health **where it begins.**



LIVE



LEARN



WORK

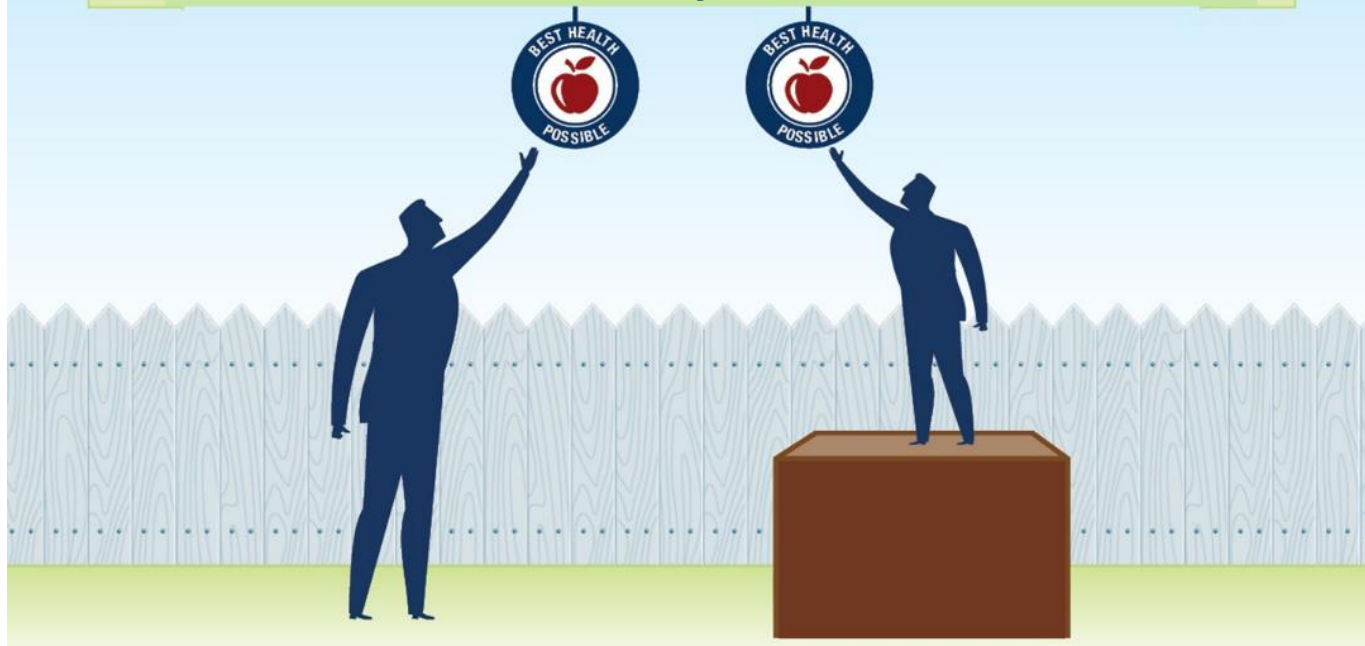


PLAY

Healthy communities are a good value for all

— REACHING FOR — *Health Equity*

A world where all people have the opportunity to attain the best health possible.



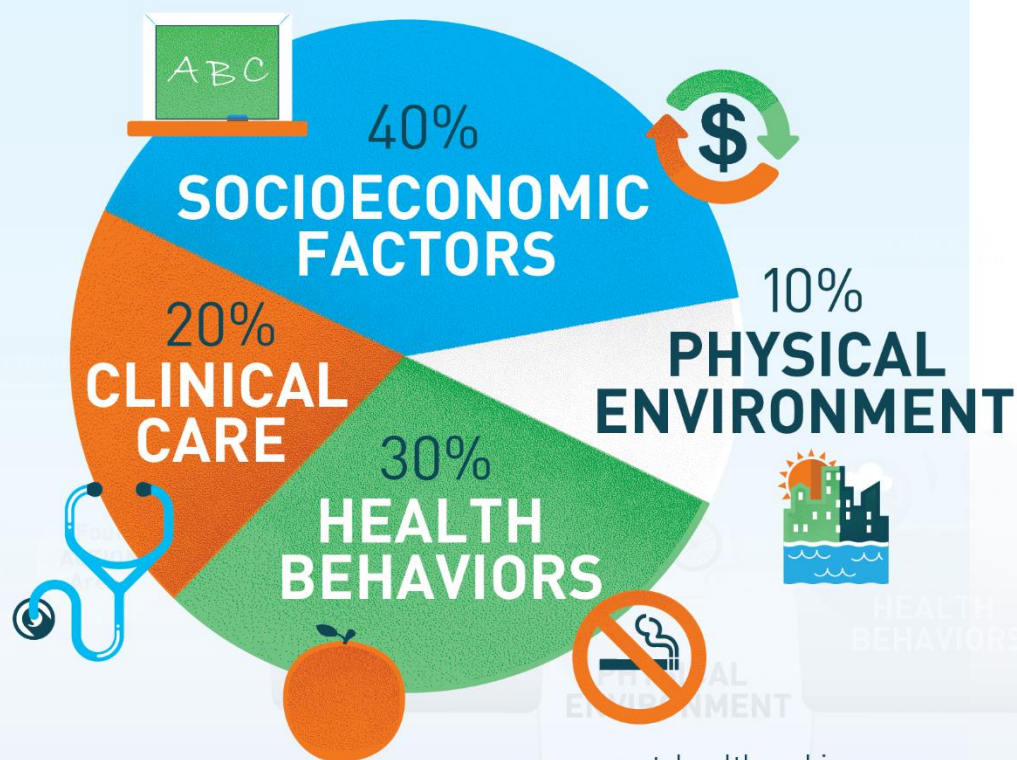
INVEST IN YOUR COMMUNITY

4 Considerations to Improve Health & Well-Being for All

WHAT Know What Affects Health

WHAT

Know What Affects Health



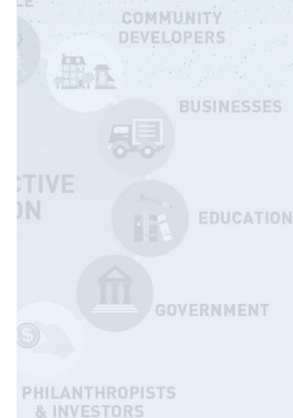
www.countyhealthrankings.org

HOW

Use a Balanced Portfolio

- Action in one area may produce positive outcomes in another.
- Start by using interventions that work across all four action areas.
- Over time, increase investment in socioeconomic factors for the greatest impact on health and well-being for all.

How to Maximize Efforts



VISIT www.cdc.gov/CHInav FOR TOOLS AND RESOURCES TO IMPROVE YOUR COMMUNITY'S HEALTH AND WELL-BEING



NATIONAL
PREVENTION
STRATEGY

Robert Wood Johnson Foundation

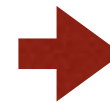
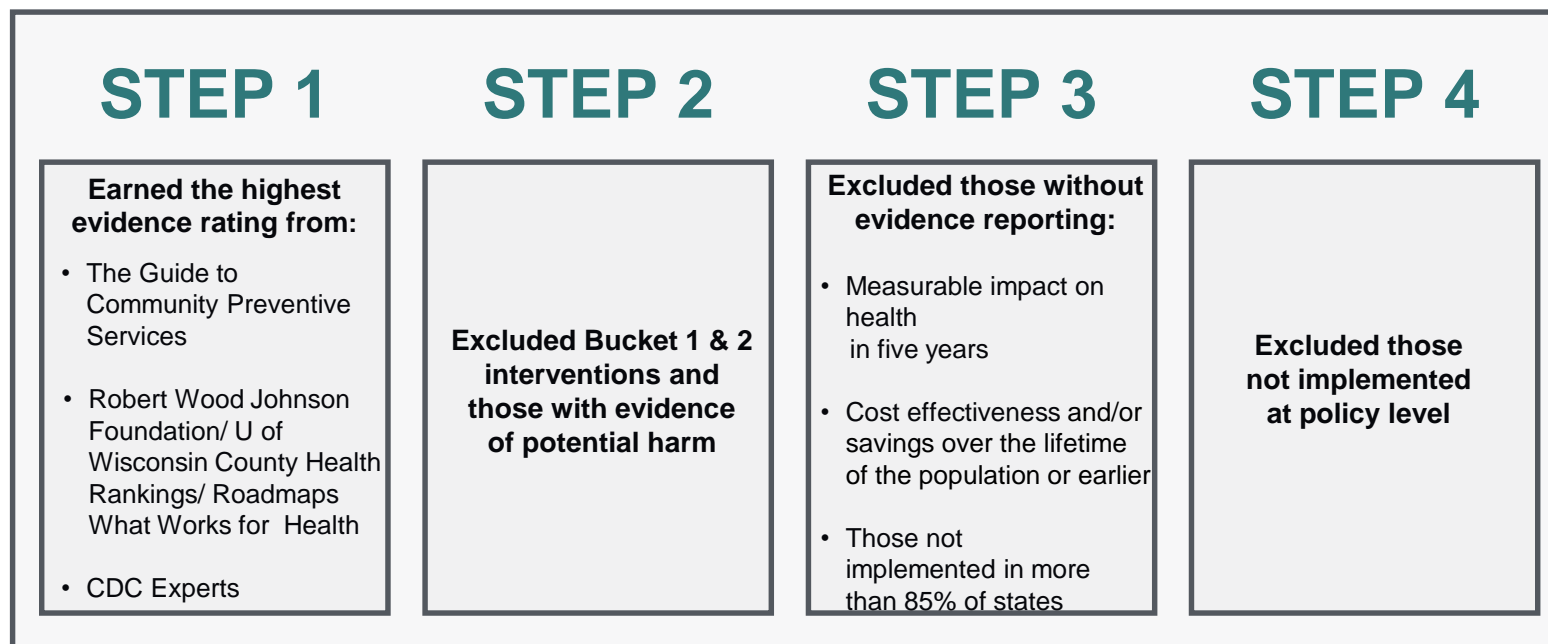


MARCH 2015



HEALTH **IMPACT** IN 5 YEARS

How was the **HI-5** List Developed



Result: 14 interventions that earned the highest evidence ratings, show positive health impact within 5 years, and report cost effectiveness/saving over the lifetime of the population or earlier.

- School-Based Programs to Increase Physical Activity
- School-Based Violence Prevention
- Safe Routes to School
- Motorcycle Injury Prevention
- Tobacco Interventions
- Access to Clean Syringes
- Pricing Strategies for Alcohol Products
- Multi-Component Worksite Obesity Prevention

Counseling
and Education

Clinical Interventions

Long Lasting
Protective Interventions



Changing the Context

Making the healthy choice the easy choice

- Early Childhood Education
- Clean Diesel Bus Fleets
- Public Transportation System
- Home Improvement Loans and Grants
- Earned Income Tax Credits
- Water Fluoridation



Social Determinants of Health

HI-5



HEALTH **IMPACT** IN 5 YEARS

www.cdc.gov/hi5



14 Evidence-based, Community-Wide Interventions

Change the Context: ***Making the Healthy Choice the Easy Choice***

- School-based Programs to Increase Physical Activity
- School-based Violence Prevention
- Safe Routes to School (SRTS)
- Motorcycle Injury Prevention
- Tobacco Control Interventions
- Access to Clean Syringes
- Pricing Strategies for Alcohol Products
- Multi-Component Worksite Obesity Prevention

Address the Social Determinants of Health

- Early Childhood Education
- Clean Diesel Bus Fleets
- Public Transportation System Introduction or Expansion
- Home Improvement Loans and Grants
- Earned Income Tax Credits
- Water Fluoridation





SOCIAL DETERMINANTS OF HEALTH

KNOW WHAT AFFECTS HEALTH

<https://www.cdc.gov/socialdeterminants/index.htm>

Early Adversity has Lasting Impacts



<https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html>



Preventing and Mitigating the Effects of Adverse Childhood Experiences Health

NATIONAL CONFERENCE *of* STATE LEGISLATURES | AUG 2018



Earned **Income** Tax Credits



Description

- A benefit for working people with low -to moderate income
- Can be a refundable income tax credit at the federal, state and local level
- Acts as addition source of income

Health Impact

- Infant mortality dropped by 23.2 per 100,000, each time an EITC increased by 10 percent
- Low birth-weight rate reduction by 6.7-10.8 % with an increase of \$1,000

Economic Impact

- EITC in California found that EITC payments to state residents contributed more than \$5 billion in business sales in the state (output) and helped add nearly 30,000 jobs



Office of the Associate Director for Policy

AD for Policy Home

Health System Transformation

6|18 Initiative

Health Impact in 5 Years

The HI-5 Interventions

HI-5 14 Evidence-Based Community-Wide Interventions Slides

HI-5 Stories from Public Health Innovators

School-Based Programs to Increase Physical Activity

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Safe Routes to School (SRTS)

Motorcycle Injury Prevention

Tobacco Control Interventions

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Earned Income Tax Credits



Improve the health of working people by increasing their income



What is an Earned Income Tax Credit (EITC)?

An earned income tax credit (EITC) is a benefit for working people with low- to moderate-income.^[1] It is a refundable income tax credit that can be levied at the federal, state, and local levels in order to reduce the tax burden for low- to moderate-income working people.^[2, 3] As a refundable credit, EITC also can act as an additional source of income; if eligible participants qualify for an EITC benefit larger than the taxes they owe, they will receive a tax refund check for the difference.^[2] For example, the EITC could give a minimum wage worker with two kids up to 40 percent more income.^[4] Federal, state, and local EITCs may be claimed by tax filers when filing an annual tax return.^[1, 5]

Selected Resources

- Internal Revenue Service (IRS) [table](#) of state and local EITCs
- IRS Partner [Toolkit](#) to help spread the word about EITC
- Kaiser Family Foundation state [poverty](#) estimates



Contents lists available at [ScienceDirect](#)

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed



Effects of state-level Earned Income Tax Credit laws in the U.S. on maternal health behaviors and infant health outcomes



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Early **Childhood** Education



Description

- Teaches literacy, numeracy, cognitive development, emotional development and/or motor skills to children ages 3-4
- Some offer recreation, meals, health care, and social services
- Greater benefit for children in poverty

Health Impact

- Improves cognitive and emotional development
- Healthier weight
- Reduced maltreatment
- Protective factor against onset of adult disease and disability

Economic Impact

- Benefit-cost ratios ranging from 3:1 to 5:1



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Early Childhood Education



Helping children develop to their full potential and live healthier lives



What is early childhood education?

Early childhood education (ECE) aims to improve the cognitive and social development of children ages 3 or 4 years.^[1,2] ECE interventions can improve all children's development and act as a protective factor against the future onset of adult disease and disability.^[3] Children disadvantaged by poverty may experience an even greater benefit because ECE programs also seek to prevent or minimize gaps in school readiness between low-income and more economically advantaged children.^[4]

All ECE programs must address one or more of the following: literacy, numeracy, cognitive development, socio-emotional development, and motor skills.^[4] Some programs may offer

Selected Resources

- [HHS: Administration for Children & Families: Head Start](#) [↗](#)
- [HHS: Administration for Children & Families: The Family Room Blog](#) [↗](#)
- [The Center for Public Education: The Research on Pre-K](#) [↗](#)



HELPING YOUNG CHILDREN THRIVE

HEALTHY PRACTICES

IN THE EARLY CARE AND EDUCATION (ECE) SETTING

<https://www.cdc.gov/obesity/strategies/childcareece.html>



Public Transportation System Introduction or Expansion



Description

- Includes a variety of transit options such as buses, light rail, and subways
- Increases both access to and use of public transit and to reduce traffic

Health Impact

- Reductions in health risk factors such as motor vehicle crashes, air pollution, and physical inactivity
- Increases in 8 to 33 minutes of walking per day

Economic Impact

- Typical American public transit service improved to high quality urban rail or bus rapid transit service would result in annual health benefits of \$354.86 per person

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Public Transportation System: Introduction or Expansion



Increasing access to safer and healthier modes of transport



What is the public transportation system?

Public transportation systems include a variety of transit options such as buses, light rail, and subways. These systems are available to the general public, may require a fare, and run at scheduled times. The purpose of introducing or expanding public transportation is to increase access to and use of public transit while, at the same time, reducing motor vehicle miles driven and traffic congestion.^[1]

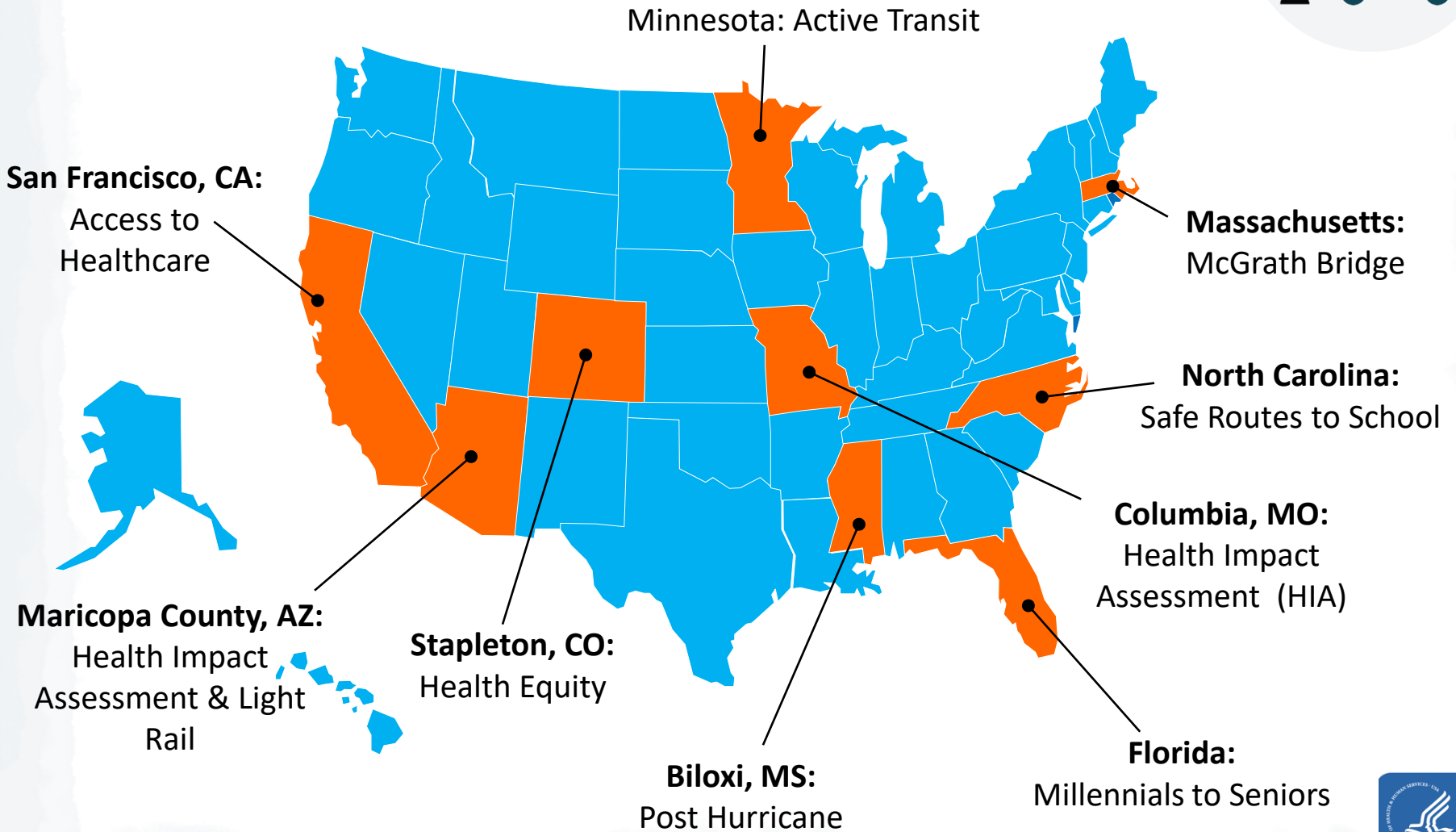
Public transportation systems are often implemented at the local or regional level and can be supported by federal initiatives, such as the Fixing America's Surface Transportation (FAST) Act.
[1,2] Los Angeles County is one example of a region that expanded its public transportation

Selected Resources

- CDC and U.S. Department of Transportation: [Transportation and Health Tool](#)
- CDC's Transportation Health Impact Assessment [Toolkit](#)
- American Public Health Association

<https://www.cdc.gov/policy/hst/hi5/publictransportation/index.html>

Transportation Stories from Public Health Innovators



Transportation as a Vehicle to **Health Improvement**

Gulf Coast Mississippi



Coastal Transit Authority -
Bus and trolley system

“Wave finder” links residents
and tourists to the beach
and shopping destinations

Increased **physical activity**
and jobs for local economy
through tourism

Breathing easier



<https://www.cdc.gov/asthma/default.htm>

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Social Determinants of Health

HI-5



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www.cdc.gov/hi5



Tobacco Cessation: HI-5 Intervention

Description

- Tobacco price increases
- High-impact anti-tobacco mass media campaigns
- Comprehensive smoke-free policies

Economic Impact

- Smoke-free indoor policies reduce hospital admissions by 5-20%
- Mass-media campaigns have a benefit-to-cost ratio of up to 74:1
- Raising prices by 20% can have healthcare savings of up to \$90 per person per year

Health Impact

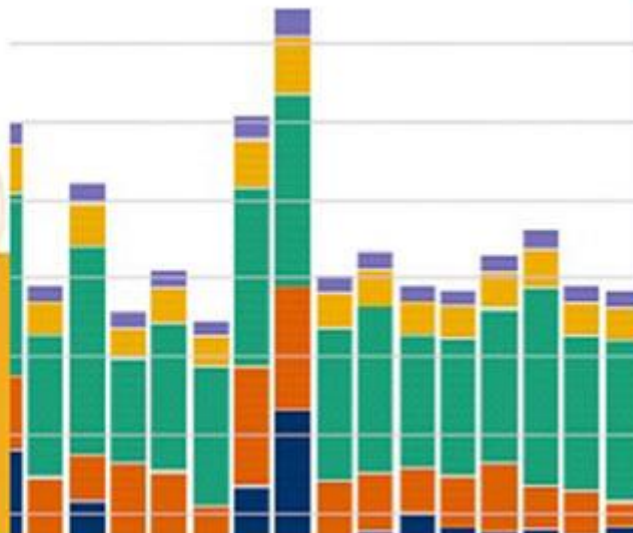
- Reductions in tobacco use
- Reductions in tobacco initiation
- Reductions in cardiovascular events and asthma morbidity
- Decreased exposure to second-hand smoke
- Increases in quitting



Best Practices

for Comprehensive
Tobacco Control
Programs

2014



Best Practices

Evidence-based
guide for states

<https://www.cdc.gov/tobacco>

<https://www.cdc.gov/tobacco/stateandcommunity/index.htm>

School-based Programs to Increase Physical Activity (PA)

Description

- Increase PA for children at school: before, during and after class
- Expand or enhance physical education programs; include PA in classroom
- Implemented at the state or local school district level

Health Impact

- Increased PA
- Positive effects on BMI and obesity prevention

Economic Impact

- Benefit-to-cost ratio of \$33:1
- Decreased health care costs due to reductions in obesity





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School-based Programs to Increase Physical Activity



Helping students become more physically active



What are school-based programs to increase physical activity?

School-based programs to increase physical activity can include programs to expand school-based physical education (PE)^[1, 2] and incorporate physical activity into regular classroom curricula.^[3] Physical education may be expanded by increasing the length of PE classes and increasing the number of fitness activities during PE classes.^[1, 2] Physical activity also may be incorporated into academic classes through physically active lessons or classroom activity breaks.^[4] Programs may be combined with other school- and community-based interventions

Selected Resources

- Public Health Innovators Story: [Increasing Physical Activity in Schools](#)
- CDC: [Physical Education Curriculum Analysis Tool \(PECAT\)](#)
- CDC: [Comprehensive School Physical Activity Program \(CSPAP\)](#)



- Statewide multi-faceted, multi-sector childhood obesity prevention initiative
- *Power Up for 30*: integrates 30 minutes of physical activity into each school day
- Championed by Governor, led by Georgia Public Health Department and supported by private-public partnerships
- Builds upon 2009 state law requiring annual student fitness assessment



ht www.cdc.gov/healthyschools/index.htm

Multi-component **worksite obesity** prevention

Purpose

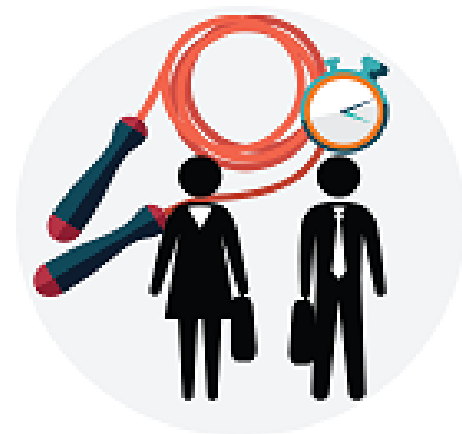
- To improve health-related behaviors and health outcomes among employees

Approach

- Employers may offer worksite weight control interventions separately or as part of a comprehensive wellness package

Health Impact

- Increased physical activity
- Reductions in weight
- Reductions in percentage of body fat
- Reductions in BMI



Economic Evidence

Costs:

More absenteeism and reduced productivity resulting in over \$73 billion annually in medical costs for full-time employees

Benefits:

Good return on investment: 5% weight loss for overweight and obese employees



\$90 savings in medical & absenteeism costs

CDC Workplace Health Resource Center

www.cdc.gov/whrc



**CDC Workplace Health
Resource Center**
Make Wellness Your Business



Case studies



Emerging Issues
(e.g., Sleep)



Workplace health
strategies for small
business



Evidence-based
summaries and issue
briefs



Library of webinars
and videos

Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

Surveillance Summaries / Vol. 66 / No. 18

October 6, 2017

**Suicide Trends Among and Within Urbanization
Levels by Sex, Race/Ethnicity, Age Group, and
Mechanism of Death — United States, 2001–2015**



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Leading Causes of Death (1/13/17)
Reducing Potentially Excess Deaths (1/13/17)
Health-related Behaviors (2/3/17)
Children's Mental Health (3/17/17)
Diabetes Self-Management Education (4/28/17)
Air and Drinking Water Quality (6/23/17)
Cancer (7/7/17)
BRCA Genetic Testing (9/8/17)
Passenger Vehicle Deaths (9/22/17)
Suicide (10/6/17)
Illicit Drug Use (10/20/17)
Occupational Air Quality (11/3/17)
Racial/ethnic disparities (11/17/17)



CDC Rural Resources

- Rural Health Portal - <https://www.cdc.gov/ruralhealth/index.html>
- POLARIS (Policy Analysis and Research Information System) -
<https://www.cdc.gov/policy/polaris/>
 - Rural Health Page - <https://www.cdc.gov/policy/polaris/healthtopics/ruralhealth.html>
- *MMWR* - <https://www.cdc.gov/mmwr/index.html>
 - Rural Health Series - https://www.cdc.gov/mmwr/rural_health_series.html
- Email: ruralhealth@cdc.gov

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Thank you!

<https://www.cdc.gov/policy/index.html>

www.cdc.gov/hi5

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For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

