

Evidence for Health Impact: CDC's 6|18 and HI-5 Initiatives

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

September 10, 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



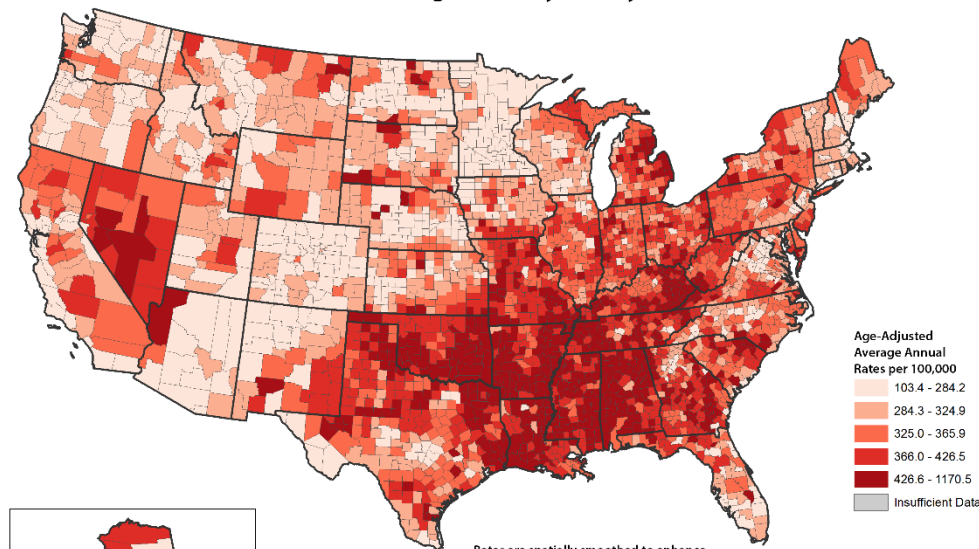
DIABETES



CHRONIC KIDNEY DISEASE



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



Age-Adjusted
Average Annual
Rates per 100,000

- 103.4 - 284.2
- 284.3 - 324.9
- 325.0 - 365.9
- 366.0 - 426.5
- 426.6 - 1170.5
- Insufficient Data

Rates are spatially smoothed to enhance the stability of rates in counties with small populations.

Data Source:
National Vital Statistics System
National Center for Health Statistics
www.cdc.gov/dhisp/maps



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

Increase the use of evidence-based services.




**HEALTH
CARE**

Provide services outside the clinical setting.



Implement interventions that reach whole populations.




**PUBLIC
HEALTH**

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

Evidence-based Interventions

REDUCE TOBACCO USE

- Increase access to tobacco cessation treatments, including individual, group, and telephone counseling, and Food and Drug Administration-approved cessation medications (in accordance with the 2008 Public Health Service Clinical Practice Guidelines and the 2015 U.S. Preventive Services Task Force recommendations).
- Remove barriers that impede access to covered cessation treatments, such as cost-sharing and prior authorization.
- Promote increased use of covered treatment benefits by tobacco users.

CONTROL HIGH BLOOD PRESSURE

- Implement strategies that improve adherence to anti-hypertensive and lipid-lowering prescription medications via expanded access to:
 - low cost medication copayments, fixed dose medication combinations, and extended medication fills;
 - innovative pharmacy packaging;
 - improved care coordination using standardized protocols, primary care teams, medication therapy management programs, and self-monitoring of blood pressure with clinical support.
- Provide home blood pressure monitors to patients with high blood pressure and reimburse for the clinical support services required for self-measured blood pressure monitoring.

IMPROVE ANTIBIOTIC USE

- Require antibiotic stewardship programs in all hospitals and skilled nursing facilities, in alignment with *CDC's Core Elements of Hospital Antibiotic Stewardship Programs* and *The Core Elements of Antibiotic Stewardship for Nursing Homes*.
- Improve outpatient antibiotic prescribing by incentivizing providers to follow *CDC's Core Elements of Outpatient Antibiotic Stewardship*.

CONTROL ASTHMA

- Use the 2007 National Asthma Education and Prevention Program as clinical practice guidelines.
- Promote strategies that improve access and adherence to asthma medications and devices.
- Expand access to intensive self-management education by licensed professionals or qualified lay health workers for patients whose asthma is not well-controlled with medical management.
- Expand access to home visits by licensed professionals or qualified lay health workers to provide intensive self-management education and reduce home asthma triggers for patients whose asthma is not well-controlled with medical management and self-management education.

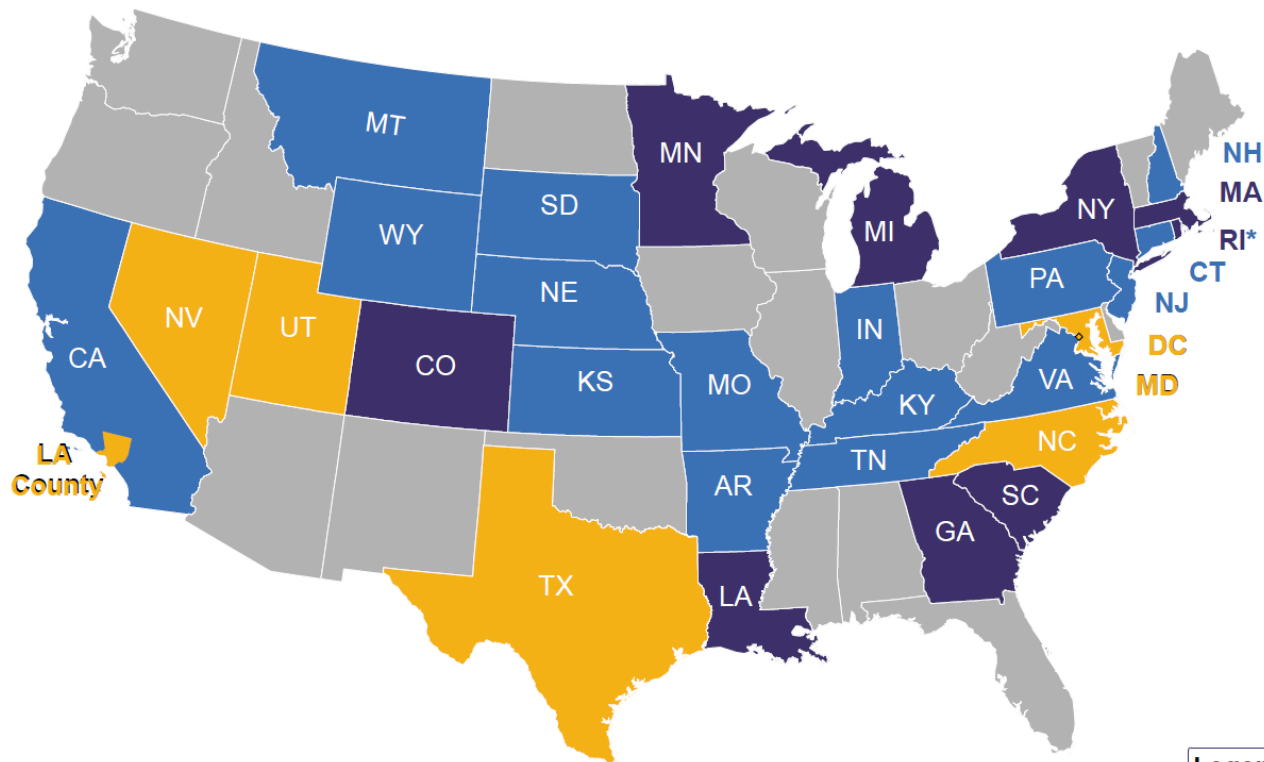
PREVENT UNINTENDED PREGNANCY

- Reimburse providers for the full range of contraceptive services (e.g., screening for pregnancy intention; counseling; insertion, removal, replacement, or reinsertion of long-acting reversible contraceptives, and follow-up) for women of childbearing age.
- Reimburse providers for the actual cost of FDA-approved contraceptive methods.
- Unbundle payment for long-acting reversible contraceptives from other postpartum services.
- Remove administrative barriers to receipt of contraceptive services (e.g., pre-approval step therapy restriction, barriers to high acquisition and stocking costs).

PREVENT TYPE 2 DIABETES

- Expand access to the National Diabetes Prevention Program, a lifestyle change program to prevent or delay onset of type 2 diabetes

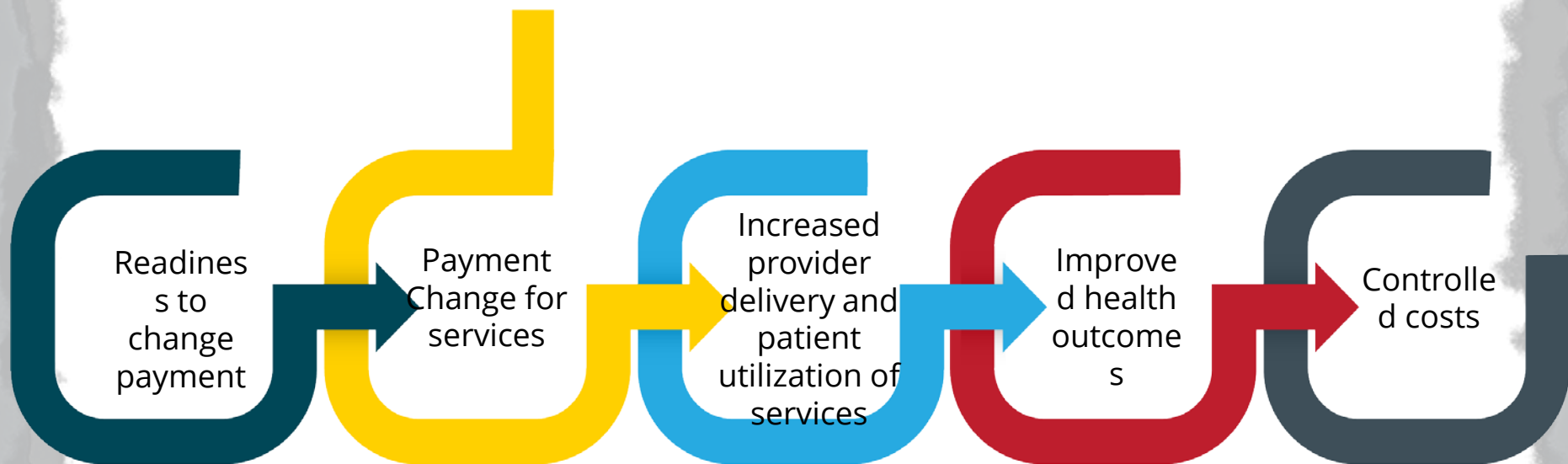
States, local jurisdictions and territories participating in CDC's 618 initiative: Medicaid



Theory of Change

THE 6|18
INITIATIVE

Accelerating
Evidence
into Action



Public Health & Health System Complementary Roles

PUBLIC HEALTH

- Contributed condition-specific subject expertise
- Translated epidemiologic evidence into benefits for coverage
- Developed awareness campaigns targeting providers and patients
- Promoted linkages with community services

MEDICAID AGENCY

- Developed a business case for chosen interventions
- Utilized available policy levers to improve coverage and promote increased uptake of services
- Engaged with Medicaid managed care plans to enhance benefits
- Engaged providers and members

Excerpted from: Seeff LC, McGinnis T, Heishman H. **CDC's 6|18 Initiative: A Cross-Sector Approach to Translating Evidence Into Practice**
Journal of Public Health Management and Practice: [February 22, 2018 - Volume Publish Ahead of Print - Issue - p](#)
doi: 10.1097/PHH.0000000000000782. Practice Full Report: PDF Only

SOUTH CAROLINA – Reducing Tobacco Use

THE 6|18
INITIATIVE

Accelerating
Evidence
into Action



- As of July 1, 2017, SC Medicaid has removed barriers to access to cessation treatment (for example, no co-pays and no prior authorizations)
- SC now provides consistent medication and cessation counseling coverage across all Medicaid Managed Care Organizations
- The SC 6|18 team is educating providers and consumers about cessation services
- SC received a 50% CMS administrative match for quitline services
- Leaders are aligning quitline and claims data to monitor the impact of their efforts

“Mid-Century Map Postcard – South Carolina” by Yesterdays- Paper is licensed under [CC BY 3.0](https://creativecommons.org/licenses/by/3.0/)

SOURCE: Tobacco Cessation Coverage. July 1, 2017: South Carolina Department of Health and Human Services.
<https://www.scdhhs.gov/press-release/tobacco-cessation-coverage>



RHODE ISLAND – Controlling Asthma

THE 6|18
INITIATIVE

Accelerating
Evidence
into Action



- RI Health Department is working closely with its two managed care organizations on the HARP (Home Asthma Response Program) program
- Uses community health worker and asthma educator to:
 - 1) deliver asthma self-management education
 - 2) assess home for triggers
 - 3) offer cost effective remediation
- HARP program has demonstrated strong health and cost returns
- RI Medicaid intends to make HARP a covered benefit for high utilizers (2+ asthma ER visits or an inpatient asthma hospitalization)

SOURCE: The Home Asthma Response Program (HARP). 2016: Rhode Island Department of Health;
<http://www.health.ri.gov/publications/programreports/HomeAsthmaResponseProgram.pdf>

Bucket 3

Community-Wide Prevention

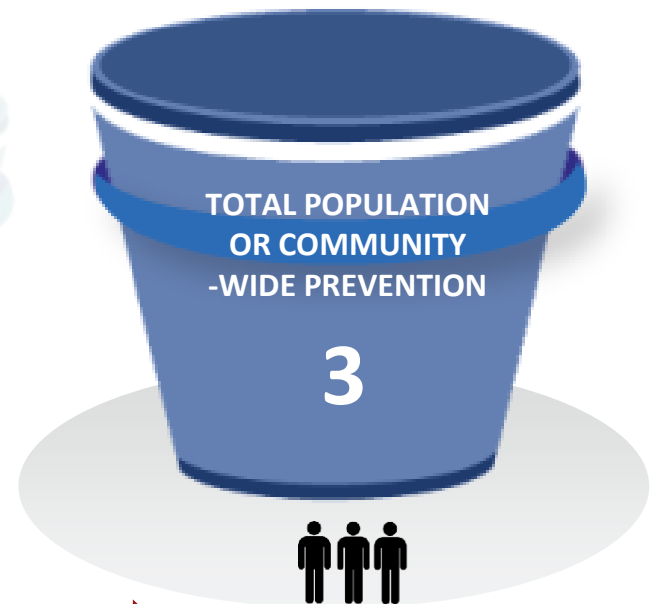
- Improve population health
- Evidence-based approaches
- Health impact and good value



**HEALTH
CARE**



**PUBLIC
HEALTH**



Improving health **where it begins.**



LIVE



LEARN



WORK

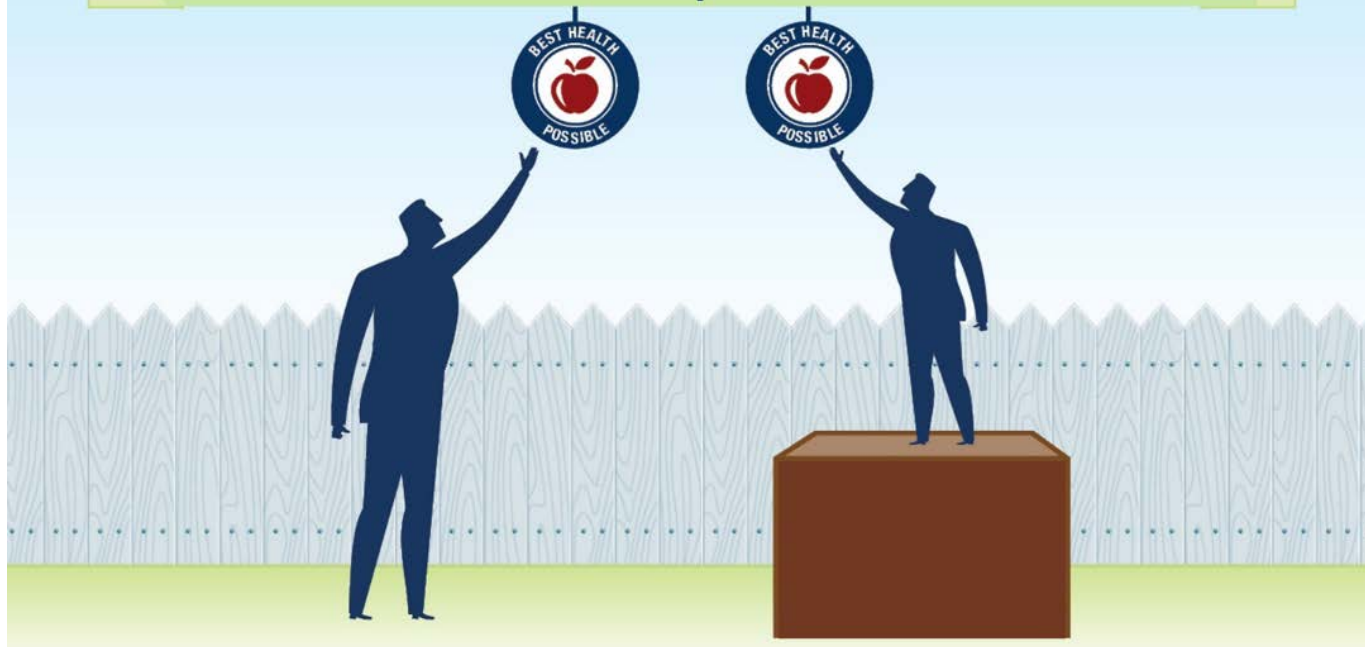


PLAY

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.

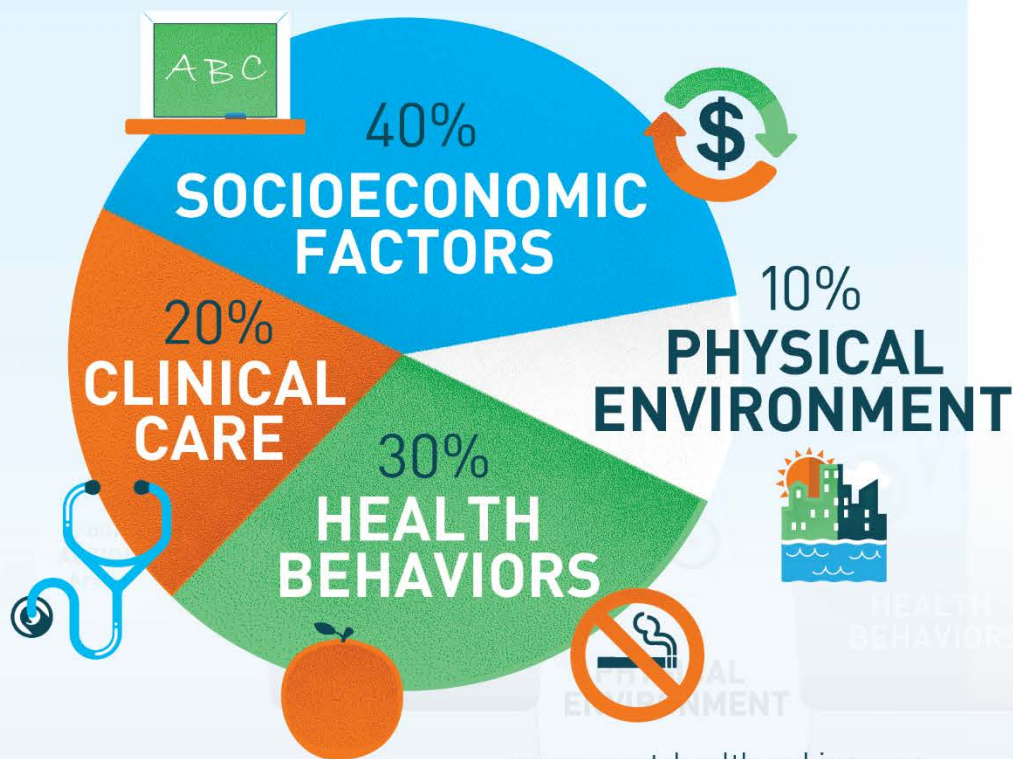


INVEST IN YOUR COMMUNITY

4 Considerations to Improve Health & Well-Being for All

WHAT

Know What Affects Health



www.countyhealthrankings.org

WHAT

Know What Affects Health

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



Robert Wood Johnson Foundation

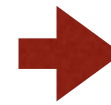
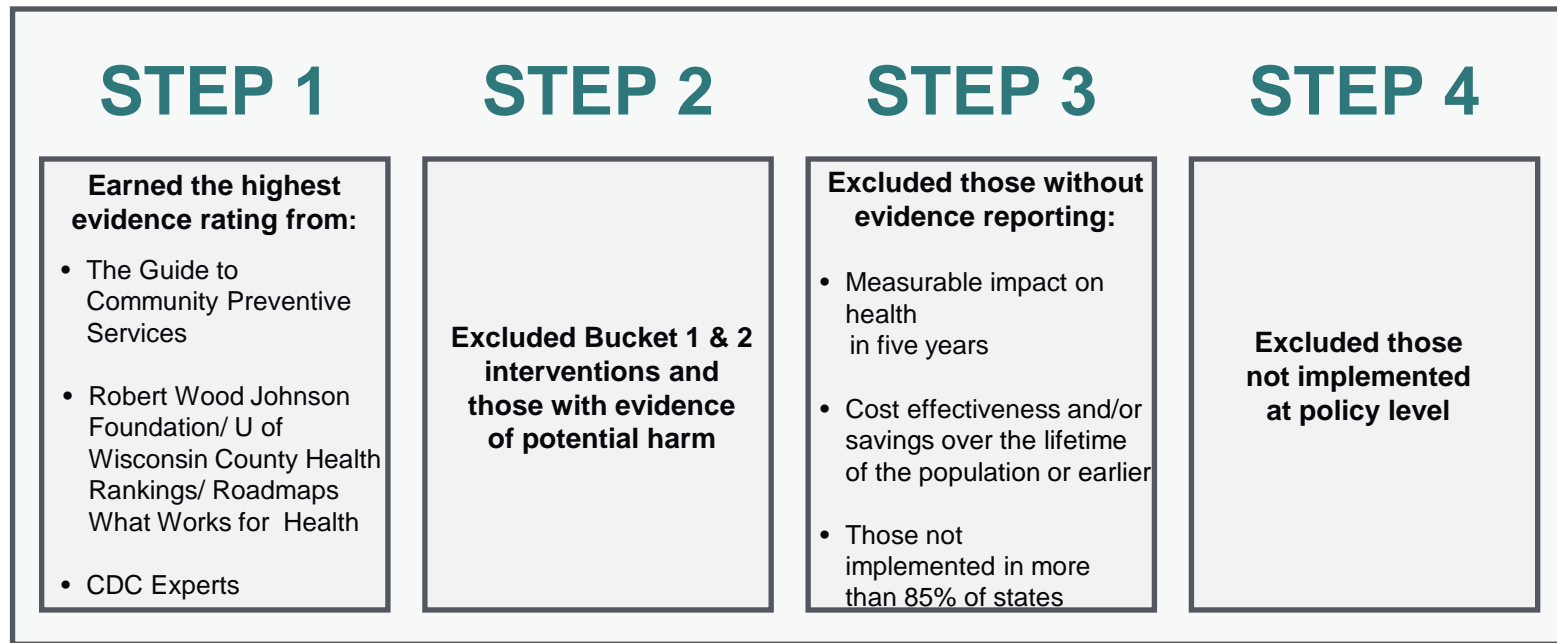
MARCH 2015



HI-5

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



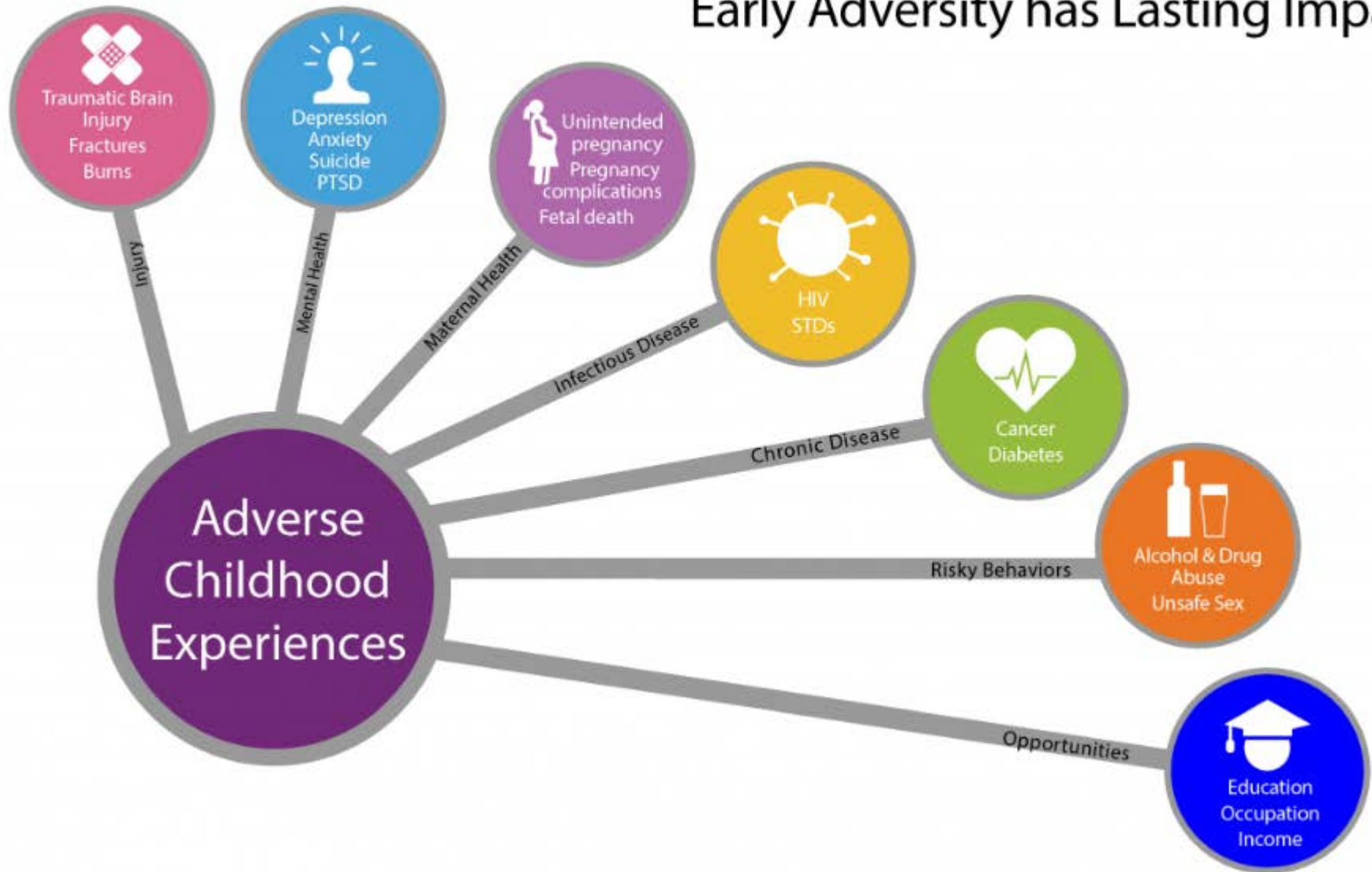


SOCIAL DETERMINANTS OF HEALTH

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

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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

School-Based Violence Prevention

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



ELSEVIER

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



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]

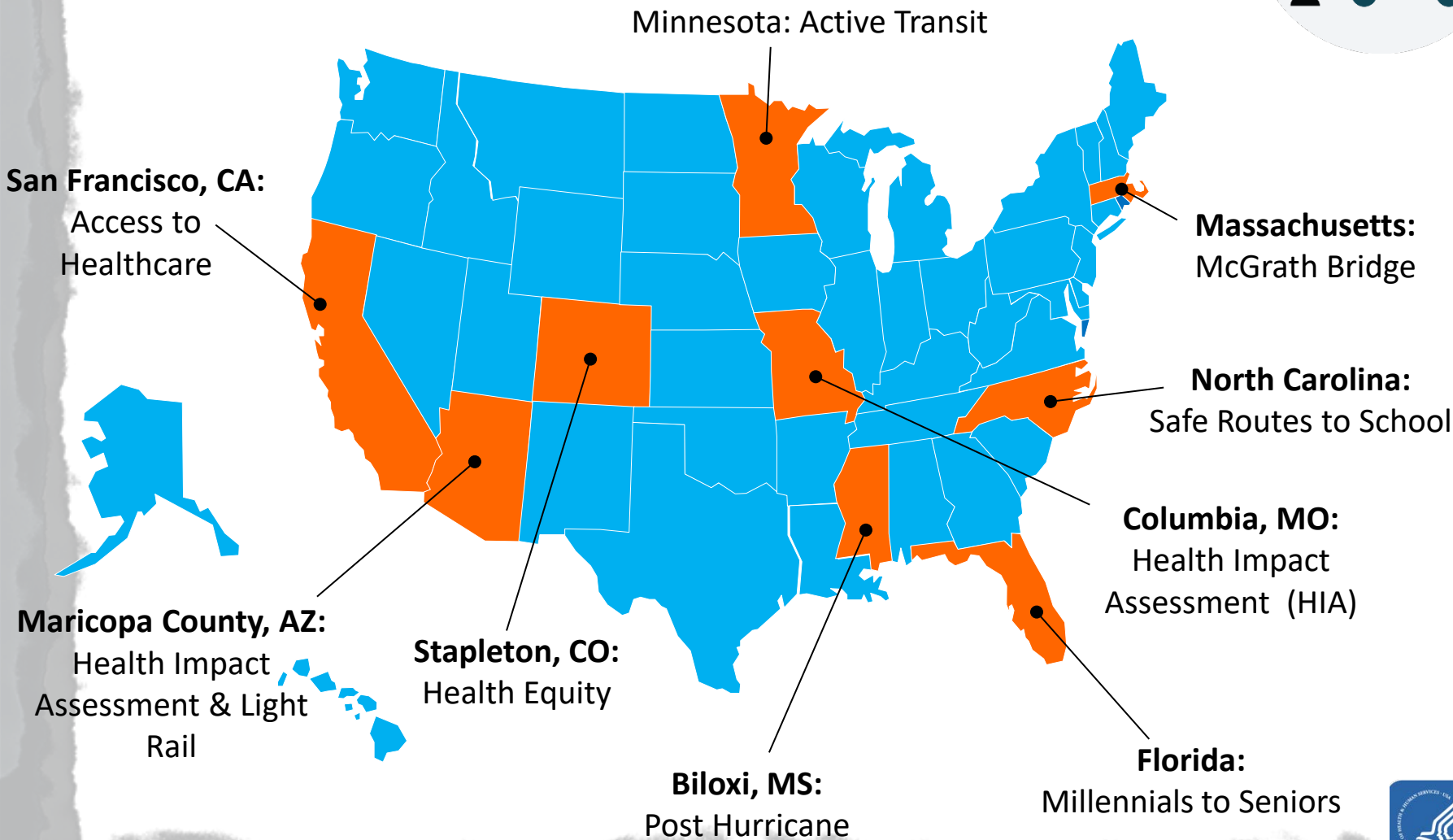
Public transportation systems are often implemented at the local or regional level and can be supported by federal initiatives, such as the Fixing America's Surface Transportation (FAST) Act.
[1,2] Los Angeles County is one example of a region that expanded its public transportation

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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Changing the Context

Making the healthy choice the easy choice

- Early Childhood Education
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- Public Transportation System
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- Water Fluoridation



Social Determinants of Health

HI-5



HEALTH **IMPACT** IN 5 YEARS

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

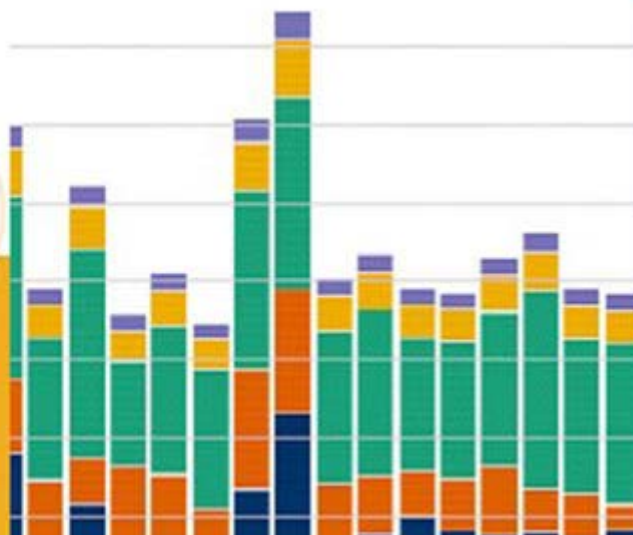
- Reductions in tobacco use
- Reductions in tobacco initiation
- Reductions in cardiovascular events and asthma morbidity
- Decreased exposure to second-hand smoke
- Increases in quitting



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



CDC Healthy Schools

Healthy Students, Ready to Learn

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



Multi-component **worksite obesity** prevention

Purpose

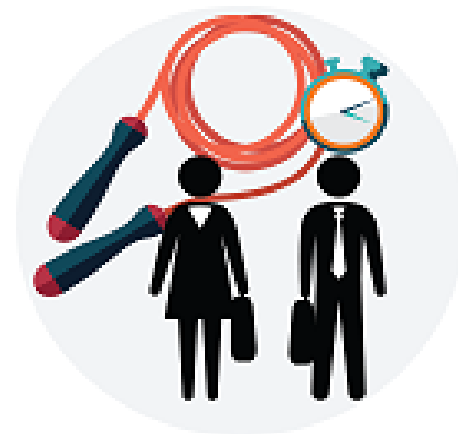
- To improve health-related behaviors and health outcomes among employees

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



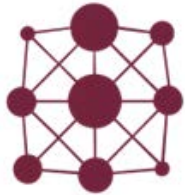
\$90 savings in medical & absenteeism costs

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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- **Diane Hall, CDC**
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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.

