

Public Health Opportunities for Transit

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Rail~Volution, October 2012

National Center for Environmental Health (NCEH)

Division of Emergency and Environmental Health Services (EEHS)



Healthy Community Design Initiative (HCDI):

- ❑ **Mission: To understand and improve the relationship between community design and public health through:**
 - Surveillance
 - Health impact assessment and other mechanisms to improve policies
 - Research, evaluation and best practice dissemination

Case Patient – “Pete”

- ❑ **40 year old male sees his physician for a physical**

Problem List

- ❑ **Difficulty concentrating at work**
- ❑ **Overweight – BMI 29**
- ❑ **BP 137/89 (pre-hypertensive)**
- ❑ **Impaired fasting glucose (pre-diabetic)**
- ❑ **No exercise**
- ❑ **Symptoms of depression, but not meeting criteria**
- ❑ **Near daily intake of 20oz cola**



Images:

<http://managetheunmanageable.blogspot.com/2011/03/students-who-are-easily-distracted.html>

<http://catherinelramstetter.wordpress.com/research-on-school-recess/>

Treatment Plan

- ❑ Join a gym
- ❑ Meet with nutritionist



Three Month Follow-Up

- ❑ No major improvements**
- ❑ Gym requires 40 minutes more driving per day. Lack of time leads to fast food consumption**

15 Years Later

- ❑ On multiple medications for hypertension, diabetes, cholesterol**
- ❑ Recently was hospitalized for angina**

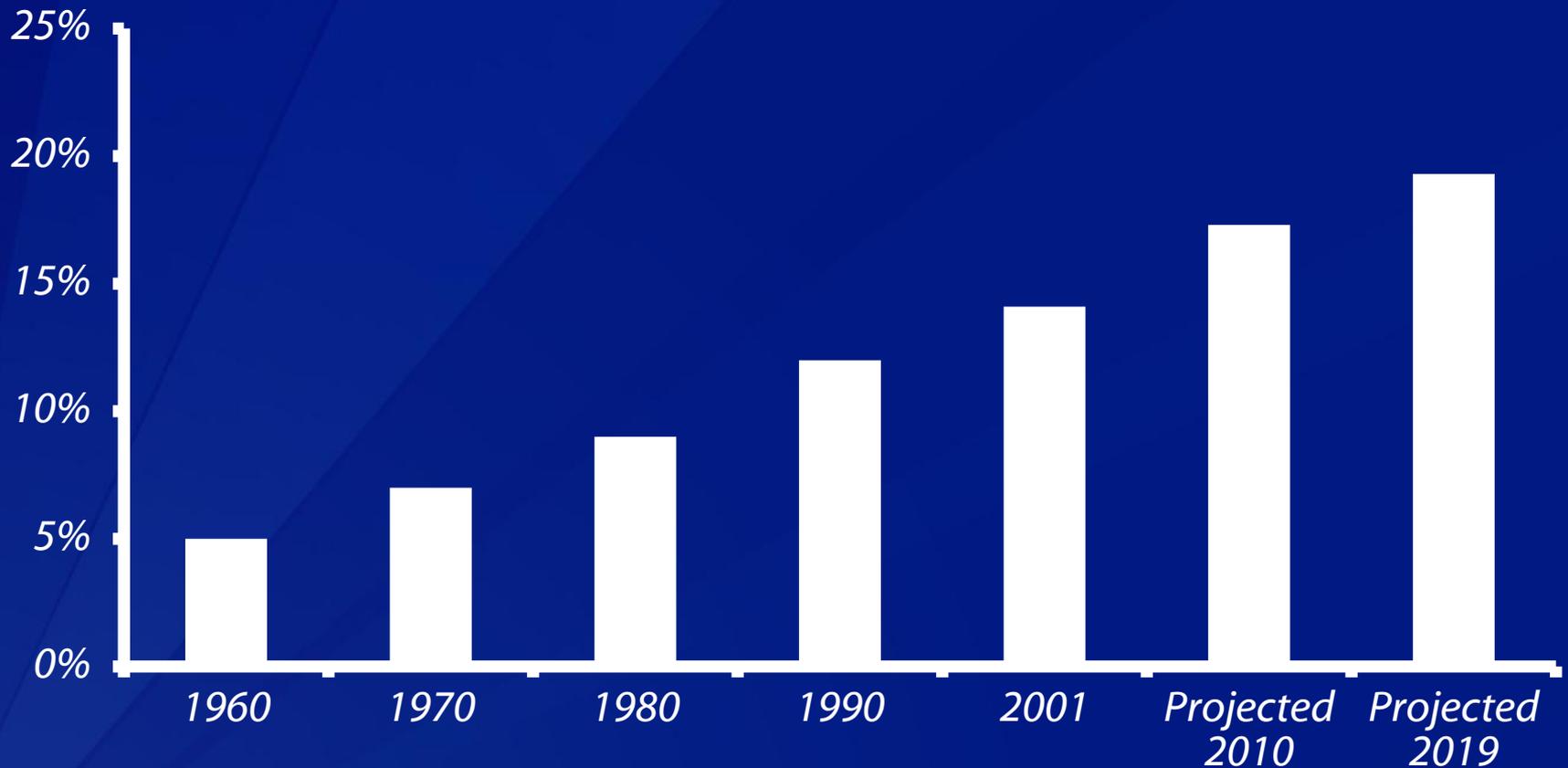
Turning Back Time: Transportation and Public Health Intervention

- ❑ A light rail station was constructed a mile from his home**
- ❑ Pete decides to walk to the station for his commute to work**

15 Years Later – Alternative Scenario

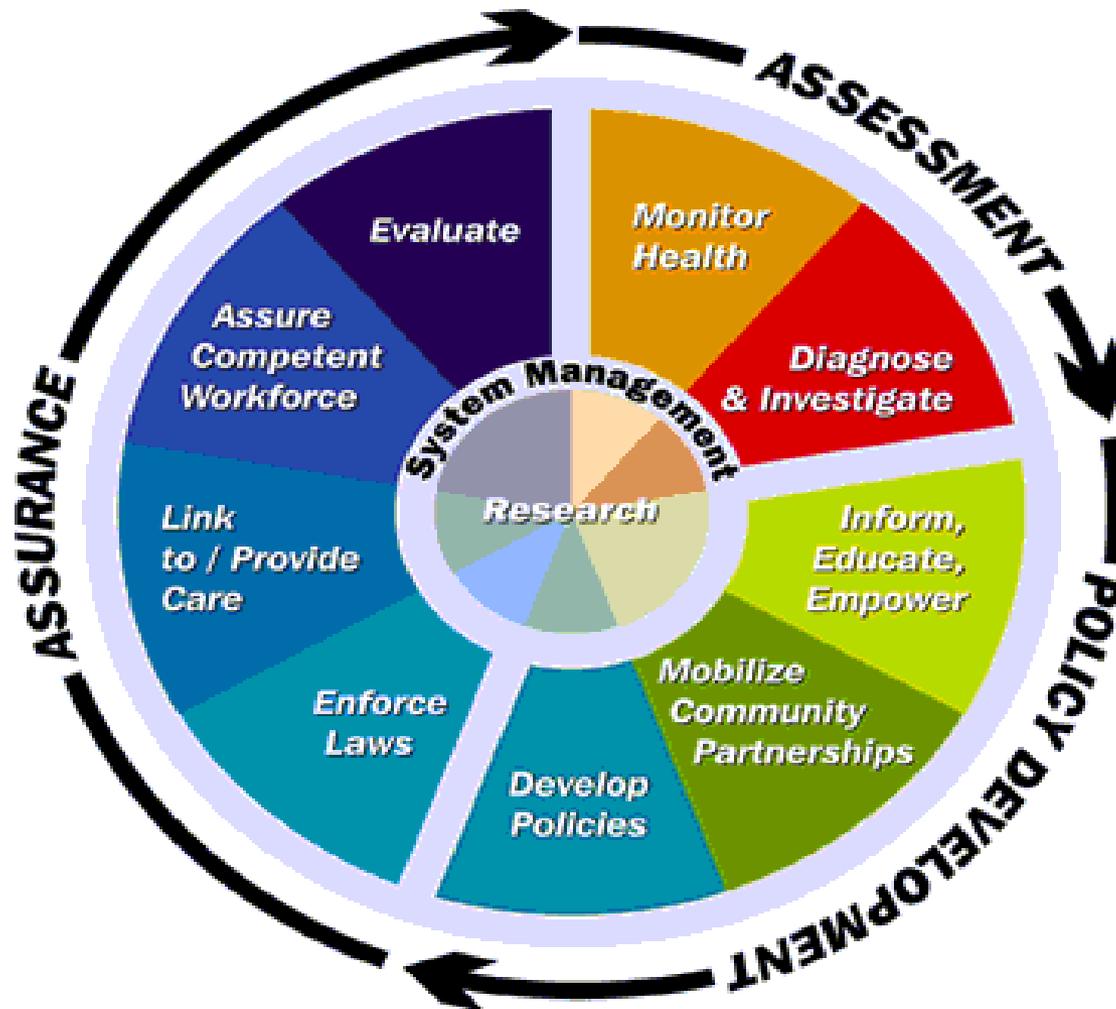
- ❑ Pete walks 5 days per week to transit and rides to work**
- ❑ Longer total daily commute time is 20 minutes longer, but Pete does not have to go to the gym**
- ❑ BMI 26**
- ❑ Regular check-ups indicate no need for medications**

Percent of U.S. GDP spent on Health Care



https://www.cms.gov/NationalHealthExpendData/25_NHE_Fact_Sheet.asp

The 10 Essential Public Health Services



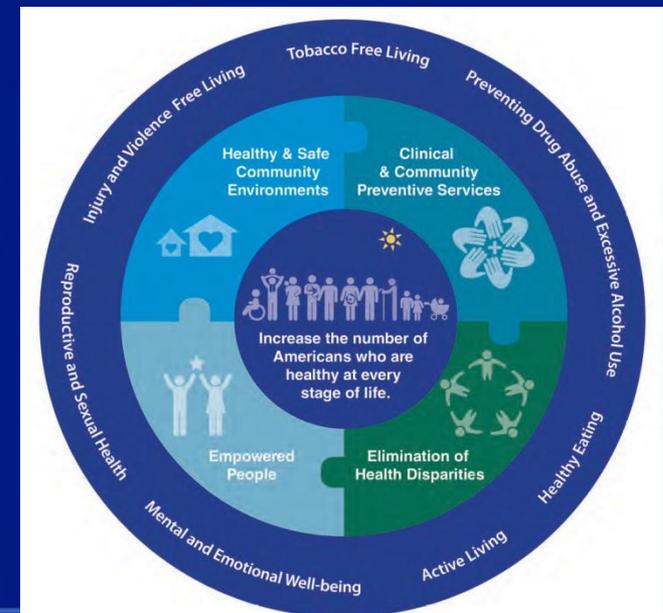
Concordant Health Strategies

❑ CDC's Winnable Battles

- Motor vehicle injuries
- Nutrition, physical activity, and obesity

❑ National Prevention Strategy

- Creating safe and healthy community environments
- Active living
- Healthy eating
- Injury- and violence-free living



www.cdc.gov/winnablebattles

www.healthcare.gov/prevention/nphpphc/strategy/report.pdf

Research

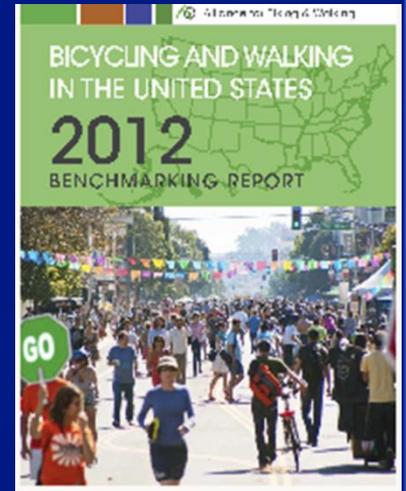
❑ Transit-walking changes between 2009 and 2001

- 28% increase in transit-walkers
 - 2001: estimated 7.5 million people
 - 2009: estimated 9.6 million people
- 830,000 more people walk ≥ 30 minutes per day due to transit-walking
 - 2001: estimated 2.6 million transit-walkers
 - 2009: estimated 3.4 million transit-walkers

❑ Transit-walking associated with rail

Surveillance

- ❑ **Benchmarking Report**
- ❑ **Transportation and Health Tool**



Education

❑ APA – Healthy Planning

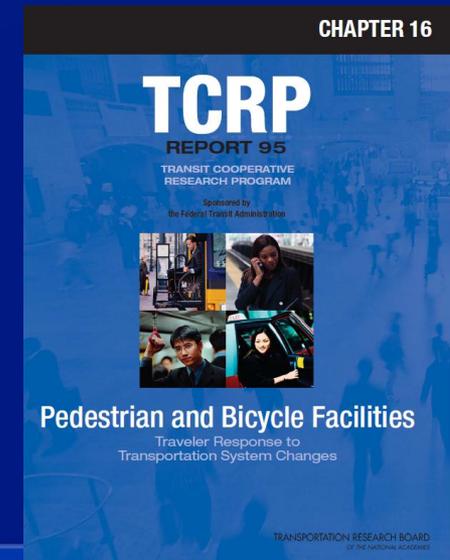
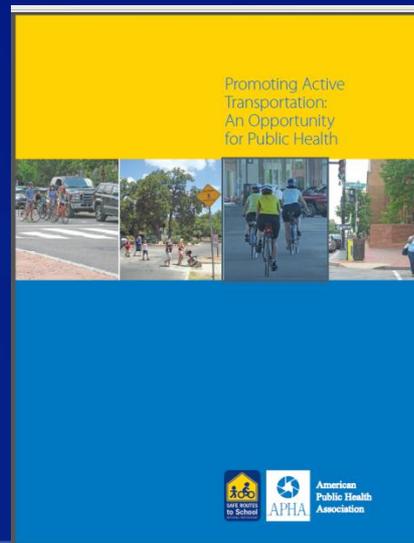
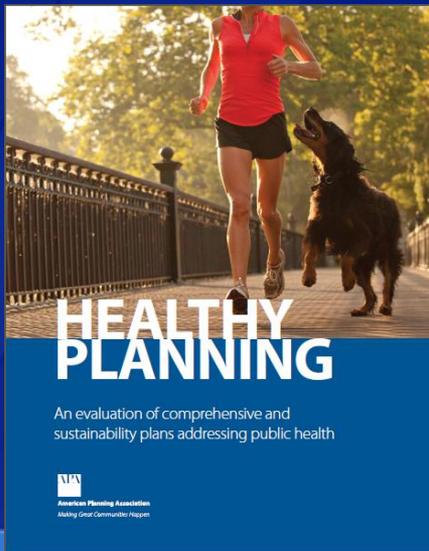
- <http://www.planning.org/research/publichealth/pdf/evaluationreport.pdf>

❑ APHA/SRTSNP – Promoting Active Transportation

- http://www.apha.org/NR/rdonlyres/42FBB4CA-4E2A-4C74-BDD7-317E7C814F9B/0/Links_Final_Active_Primer_singles.pdf

❑ TCRP – Pedestrian and Bicycle Facilities

- onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c16.pdf



Aligned Solutions

❑ Injury: Proven Safety Countermeasures (FHWA)

- Medians and Pedestrian Refuge Areas in Urban and Suburban Areas
- Pedestrian hybrid beacons
- Corridor access management
- Road diets

❑ Physical Activity: Recommended Strategies from the Community Guide

- Street scale urban design and land-use policies are recommended
 - Infrastructure projects to increase safety of street crossings
 - Use of traffic calming approaches (e.g., speed humps, traffic circles, road diets)

<http://safety.fhwa.dot.gov/provencountermeasures/>

<http://www.thecommunityguide.org/pa/environmental-policy/index.html>

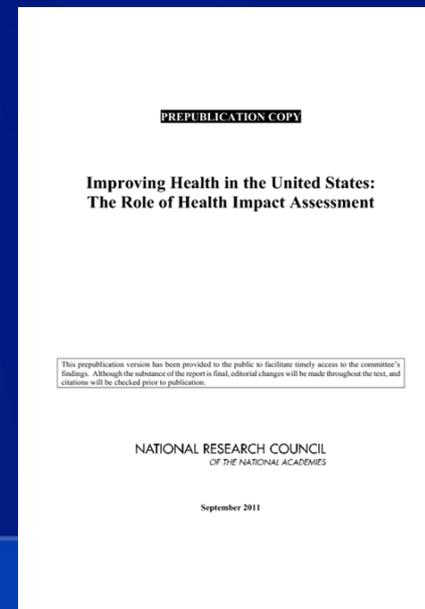
Health Impact Assessments

□ Health Impact Assessment (HIA)

- HIA is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.
 - National Research Council, 2011

□ Steps

- Screening
- Scoping
- Risk Assessment
- Recommendations
- Reporting
- Evaluation



Other Types of Health-Related Assessment

- ❑ **Public Health Assessment**
- ❑ **Health Risk Assessment**
- ❑ **Cost-Benefit Analysis**
- ❑ **Environmental Impact Assessment**

Why HIA?

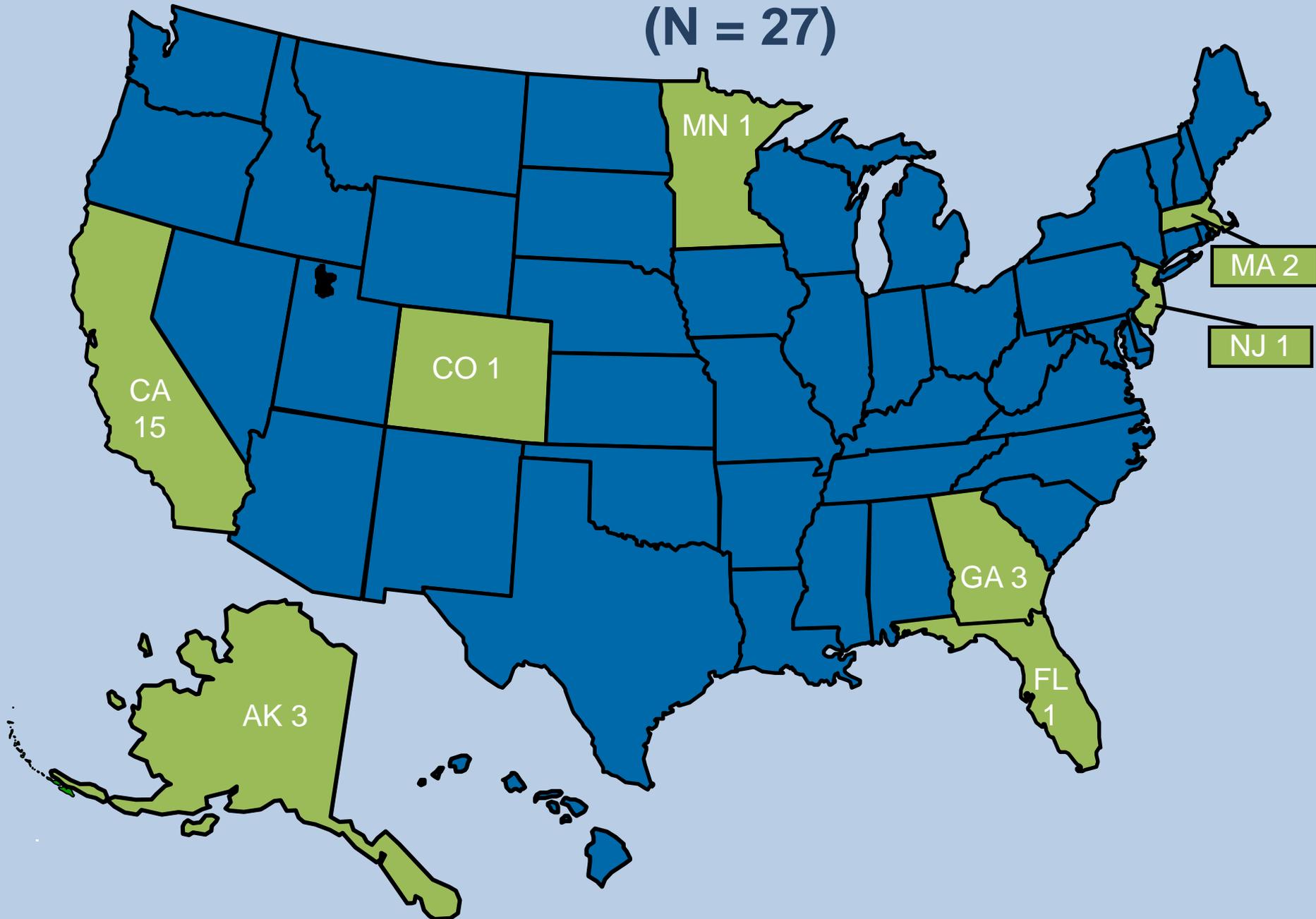
- ❑ **HIA holds promise for incorporating aspects of health into decision-making**
 - Applicability to a broad array of policies, programs, plans, and projects.
 - Consideration of adverse and beneficial health effects.
 - Ability to consider and incorporate various types of evidence.
 - Engagement of communities and stakeholders in a deliberative process.

NCEH's Current HIA Work

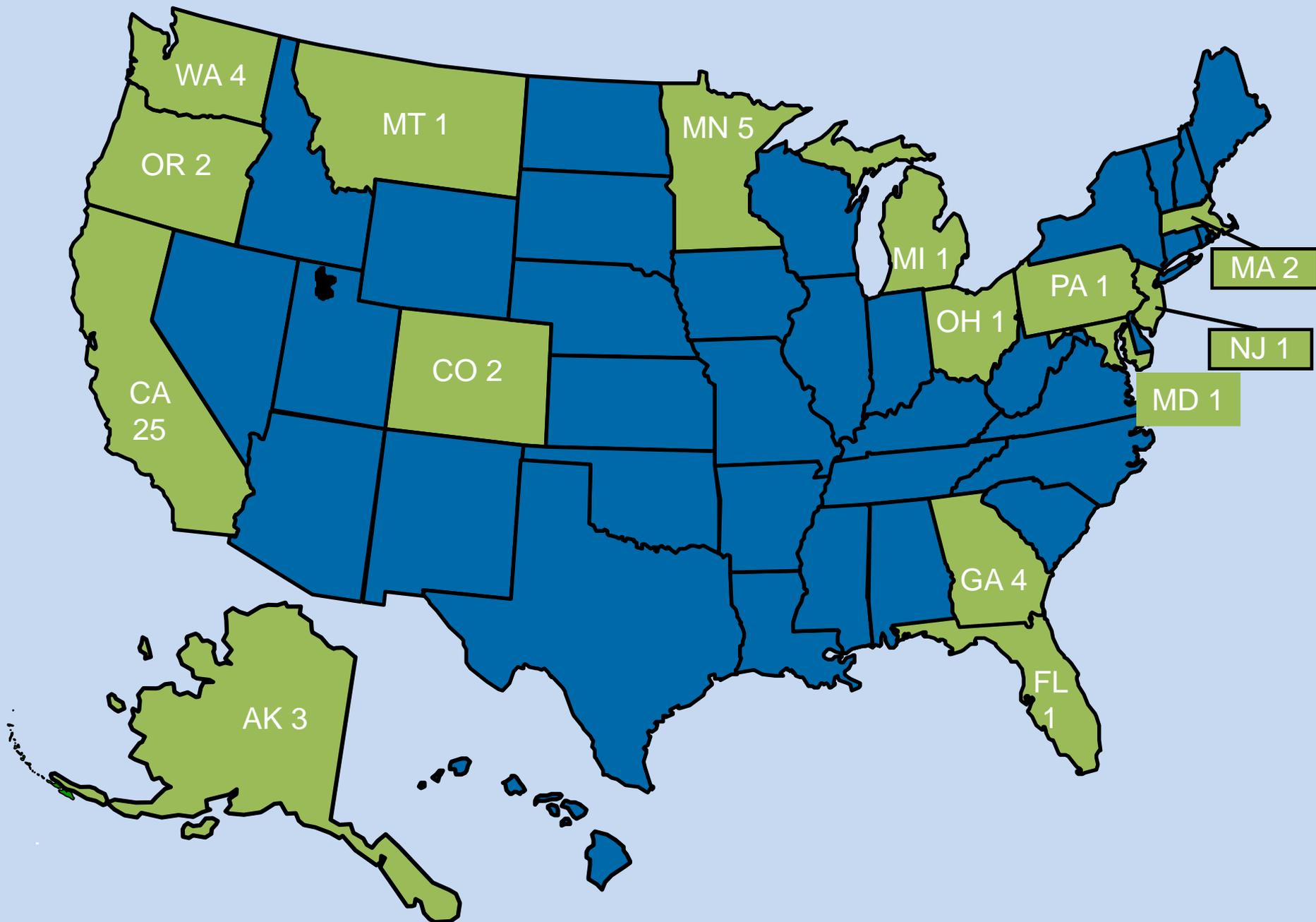
- ❑ **Cooperative agreement with 6 entities to train and conduct HIAs on built environment issues**
 - At least 18 local or state HIAs per year
 - 600 professionals reached per year
 - Engage with other sustainability efforts
 - Develop an HIA website with regional data and tools
 - Awards range from \$110K-180K per year
- ❑ **Training and toolkit development, including on-line training module**
- ❑ **Tracking completed U.S. HIAs with partners**
- ❑ **Connecting with initiatives and supportive policies**
- ❑ **HIA practice research**

Completed HIAs 2007

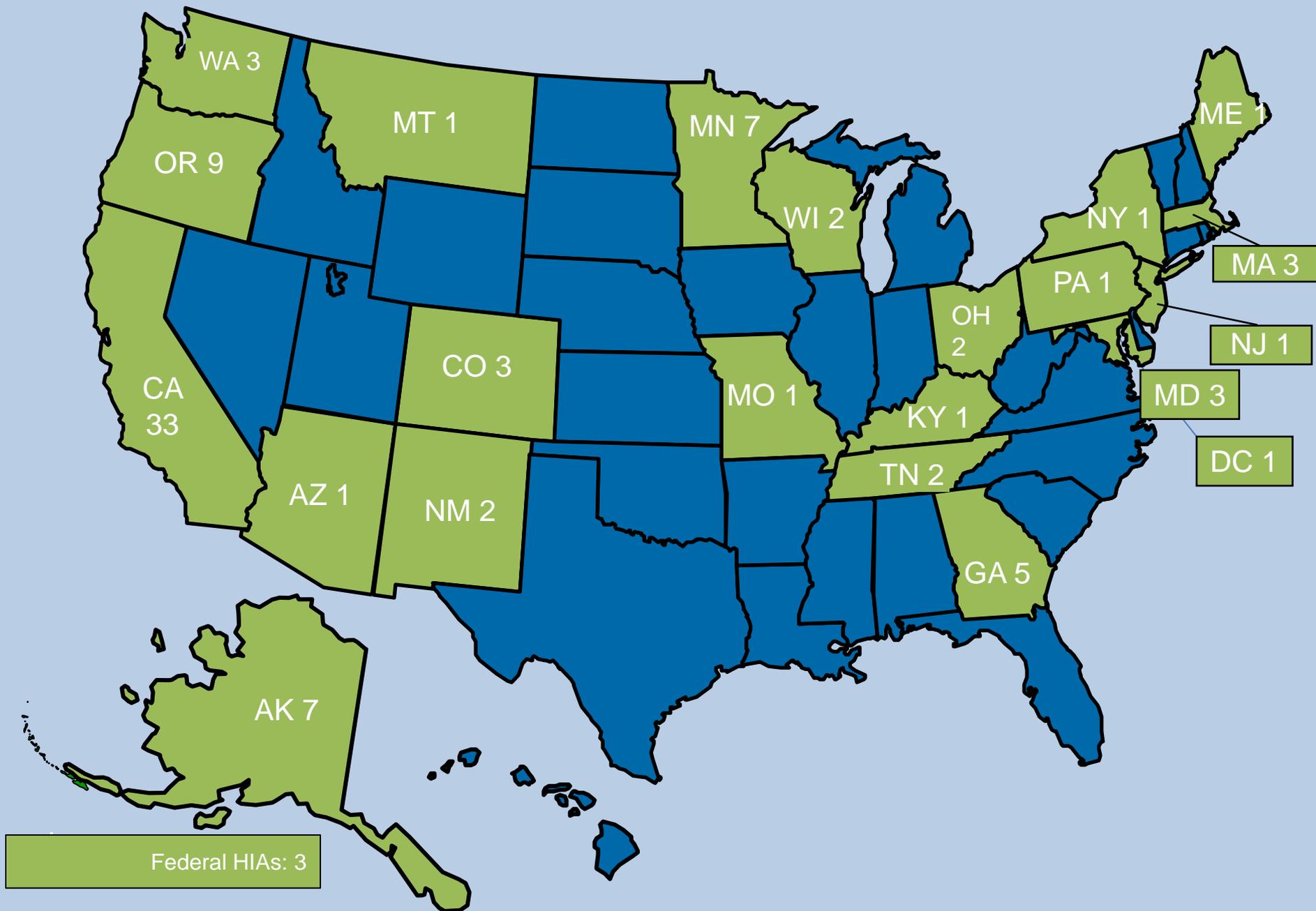
(N = 27)



Completed HIAs 2009 (N = 54)

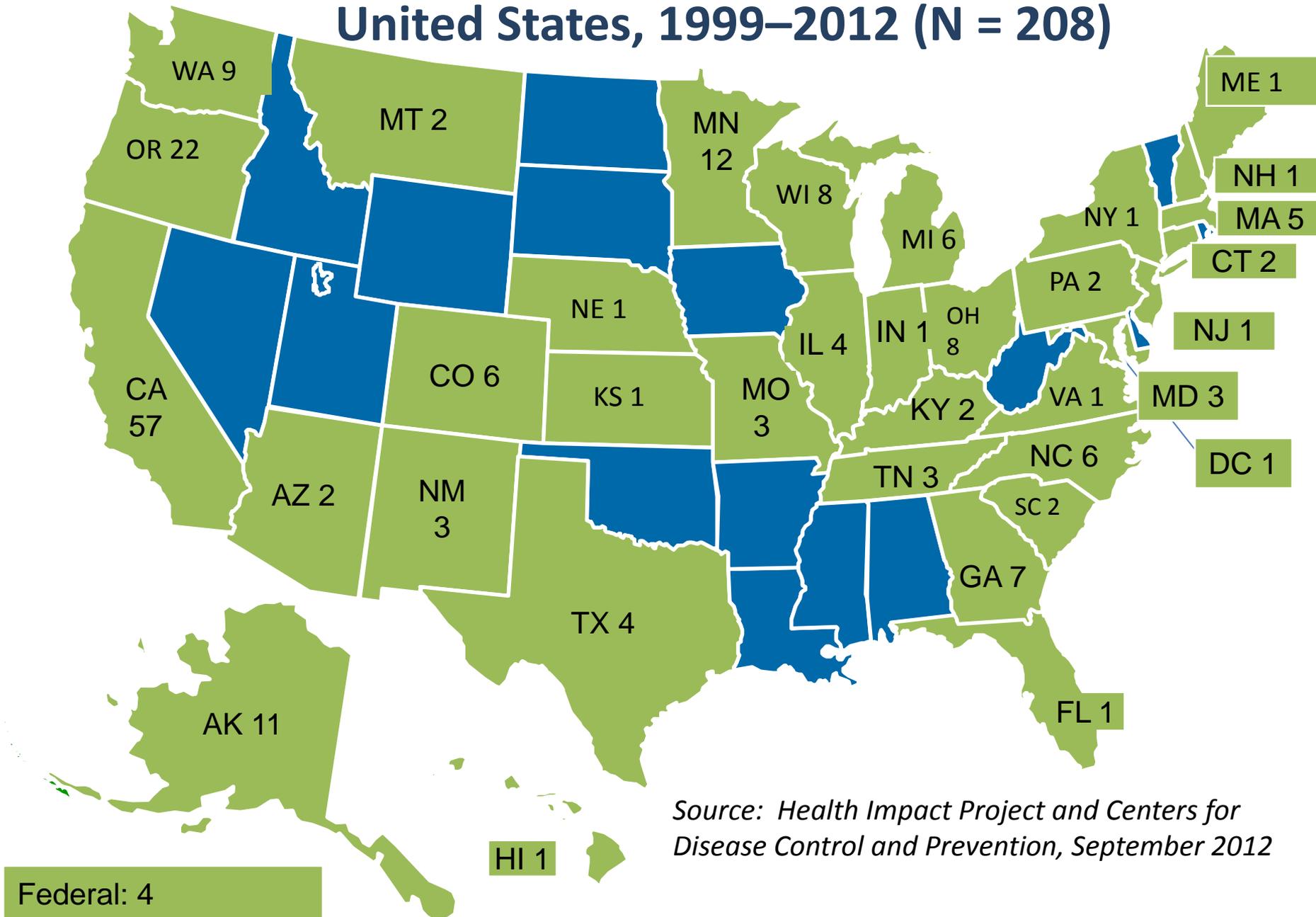


Completed HIAs April 2012 (N = 91)



Completed and In Progress HIAs

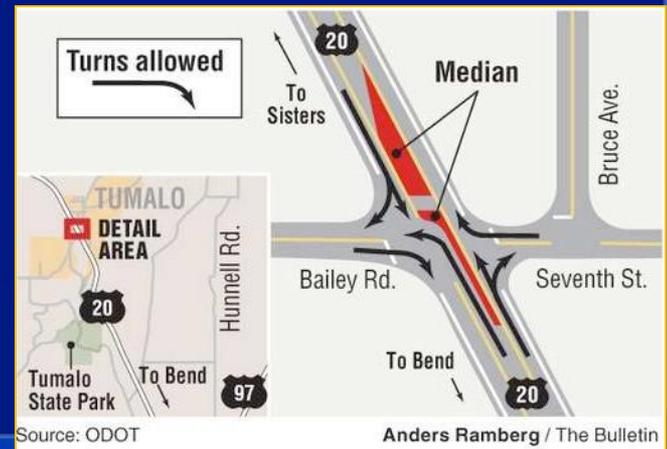
United States, 1999–2012 (N = 208)



Source: Health Impact Project and Centers for Disease Control and Prevention, September 2012

HIA of the Tumalo Community Plan Deschutes County, OR (2010)

- ❑ **Examined:** Health impacts of the draft Tumalo Community Plan, which was a part of the County Comprehensive Plan Update
- ❑ **Recommendations:**
 - Need to implement safety measures for pedestrians/bicyclists crossing US Hwy 20 and to decrease traffic collisions
 - Development of trail system linking recreational areas would decrease environmental pollution, preserve natural areas, and increase physical activity
- ❑ **Impact:** Revised plan was adopted by the Board of County Commissioners; temporary recommendations started
- ❑ **Notable:** Worked closely with transportation to ensure recommendations were feasible



Atlanta Beltline

Atlanta, GA (2007)

- ❑ **Examined:** Effects of building a 22-mile trail and transit system loop around the city of Atlanta. Process included outreach events and a survey to gauge opinions of affected individuals
- ❑ **Findings:** Beltline generally supportive of health; specific recommendations to made to maximize health

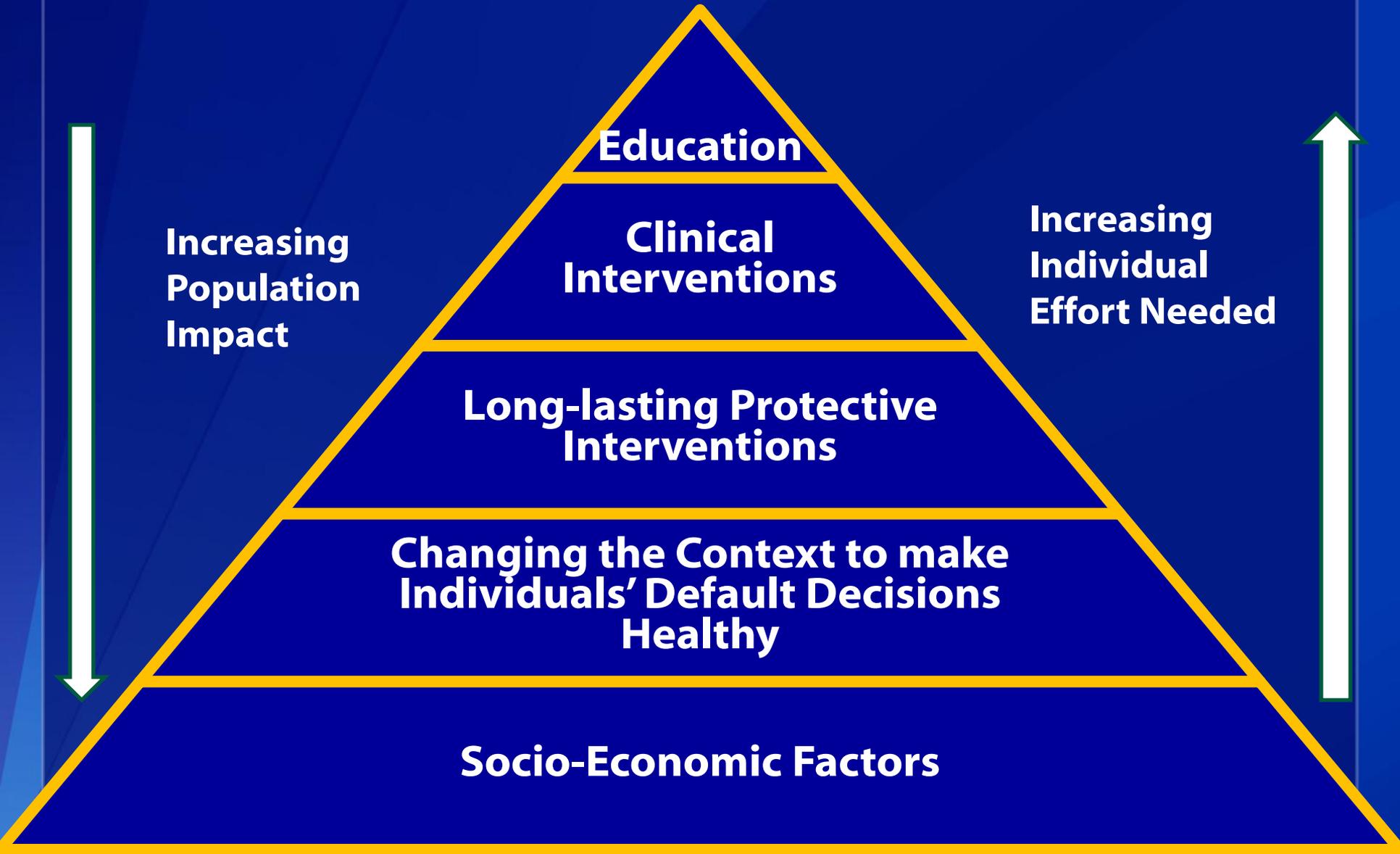


- ❑ **Impact:** 11 major recommendations incorporated into Beltline implementation plan
- ❑ **Notable:** Recommendations tracked to determine impact on project

HIA Resources for more information

- ❑ Online course, built in partnership with APA:
<http://professional.captus.com/Planning/hia>
- ❑ Minimum Elements and Practice Standards for Health Impact Assessment: <http://www.humanimpact.org/doc-lib/finish/11/9>
- ❑ National Research Council report on HIAs in the US:
http://www.nap.edu/catalog.php?record_id=13229
- ❑ Health Impact Project: <http://www.healthimpactproject.org/>
- ❑ Healthy Community Design Initiative:
<http://www.cdc.gov/healthyplaces/hia.htm>

Health Impact Pyramid



Thank You

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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.