



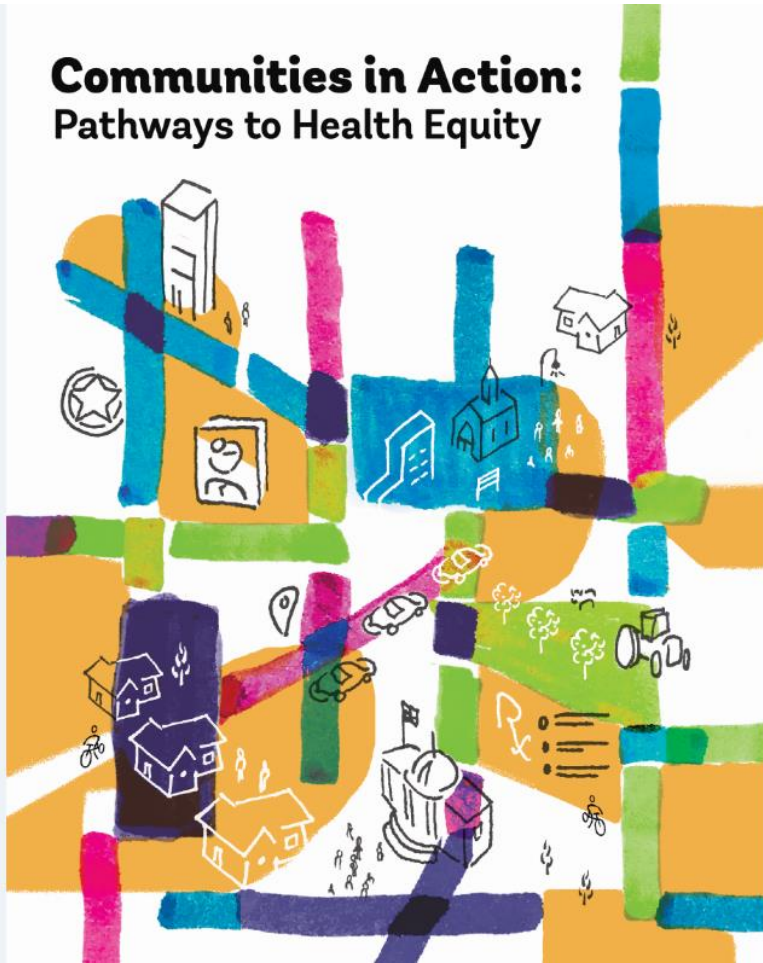
A Health Equity Foundation

Health Equity For All Coloradans Ethics and Ecologic Economics Forum Iliff School of Theology

*Ned Calonge, MD, MPH
President and CEO*

HEALTH EQUITY *Creates* **HEALTHY COMMUNITIES**

**Communities in Action:
Pathways to Health Equity**



Communities in Action: Pathways to Health Equity

Report Released Jan. 2017

#PromoteHealthEquity

Key terms

- Health equity
- Health disparities
- Social determinants of health

Health equity

- Attainment of the highest level of health for all people
- Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities

Healthy People 2020

Health disparities

- A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage
- Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on:
 - racial or ethnic group
 - religion
 - socioeconomic status
 - gender
 - age
 - mental health
 - cognitive, sensory, or physical disability
 - sexual orientation or gender identity
 - geographic location
 - other characteristics historically linked to discrimination or exclusion

Healthy People 2020



THE
COLORADO
TRUST

ISABELLA

50% ↑ risk of OBESITY

40% ↑ risk of DIABETES

**3-fold ↑ risk of DIABETIC
MORTALITY**

20% ↑ risk of STROKE MORTALITY

**30% ↑ risk of NO RECOMMENDED
BREAST CANCER
SCREENING**

**2-fold ↑ risk of CERVICAL
CANCER**

3-fold ↑ risk of TEEN PREGNANCY

**50% ↑ risk of INFANT MORTALITY
IN 1ST YEAR OF LIFE**



DEDICATED TO ACHIEVING HEALTH EQUITY FOR ALL COLORADANS



THE
COLORADO
TRUST

REBECCA

40% ↑ risk of **OBESITY**

2-fold ↑ risk of **DIABETES**

40% ↑ risk of **HIGH BLOOD PRESSURE**

14% ↑ risk of **STROKE MORTALITY**

45% ↑ risk of **CERVICAL CANCER**

75% ↑ risk of **CANCER MORTALITY**

25% ↑ risk of **TEEN PREGNANCY**

3-fold ↑ risk of **INFANT MORTALITY IN 1ST YEAR OF LIFE**

Colorado health disparities

- Perinatal and infant mortality
- Child and adult obesity
- Child oral health
- Teen fertility
- Diabetes mortality
- Liver disease mortality
- Motor vehicle injury fatality
- Homicide mortality
- Mental health
- Low birth weight
- Suicide
- Cervical cancer incidence and mortality
- Lung cancer incidence and mortality
- Prostate cancer mortality
- Diabetes incidence and mortality
- Infectious disease (HIV, TB, HBV)

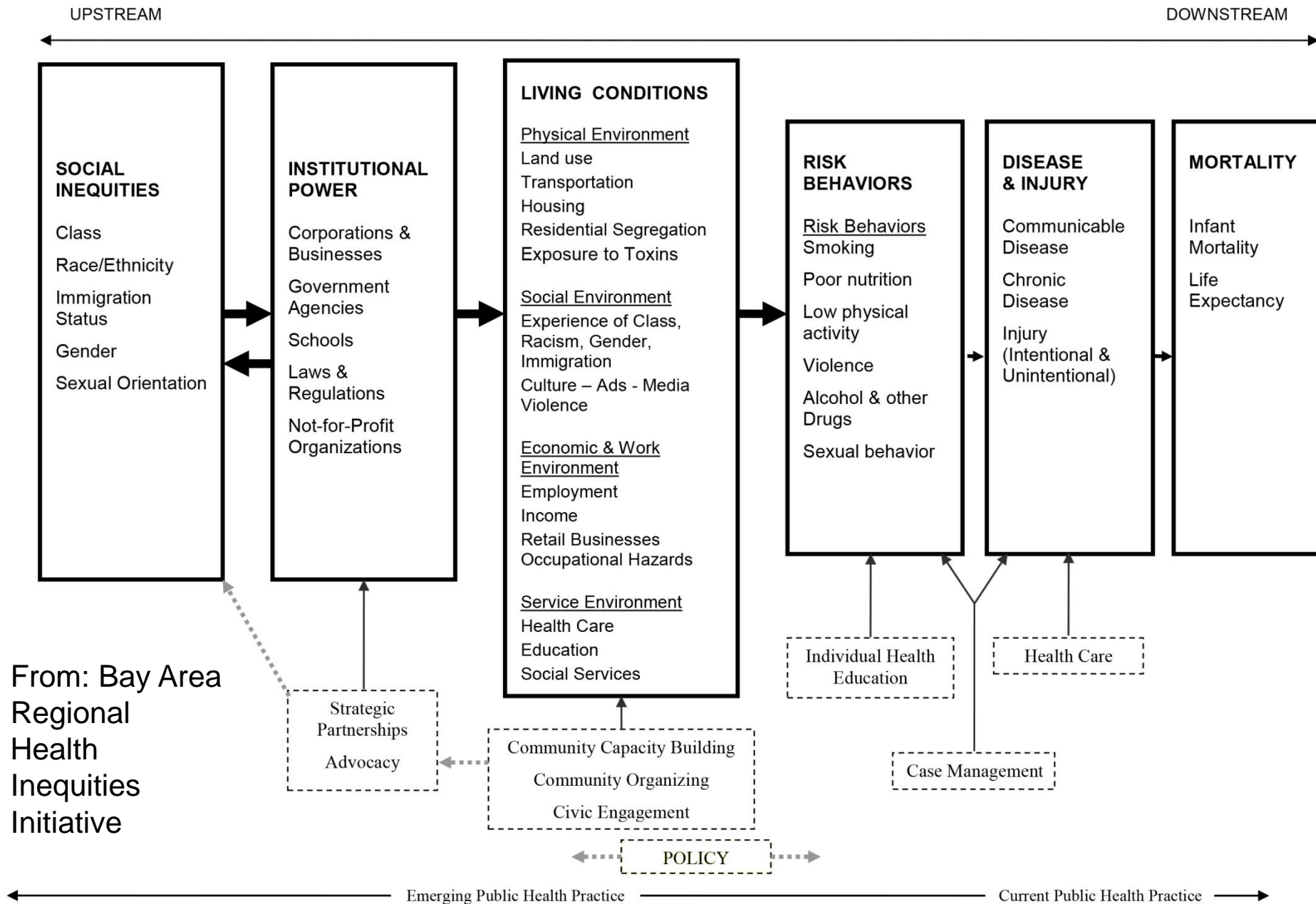
Social determinants of health

- The social determinants of health are the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness
- These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics

World Health Organization Commission on the Social Determinants of Health (2008)

Social determinants of health

- Think in terms of opportunities and barriers:
 - Early childhood development, schools, education, literacy
 - Economy, jobs, employment, occupation, working conditions, income, wealth
 - Housing, transportation, public safety, parks and recreation, healthy food access
 - Racism, social status, culture, social network, political clout, justice
 - Environment, pollution, hazards



Root causes of health inequities (National Academies report)

- **Unequal allocation of power and resources**—including goods, services, and societal attention—which manifests itself in unequal **social, economic, and environmental conditions**
- **Structural inequities** that organize the distribution of power and resources differentially across lines of race, gender, class, sexual orientation, gender expression, and other dimensions of individual and group identity

Will a rising tide lift all boats?

- Success in achieving health equity will require intention focus on the social determinants of health, which affect different subgroups of a community differently.

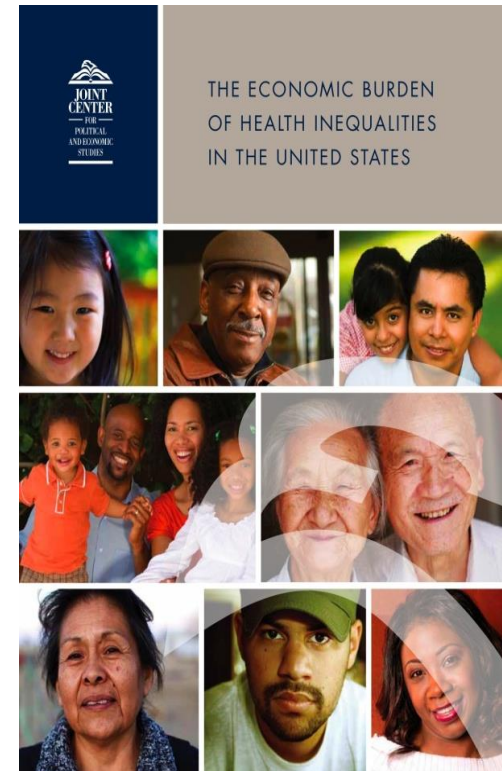
Is health equity a zero-sum gain?

- Improving the health of those most vulnerable in a population will improve the health of everyone in the population.

Economics and health equity

Economic burden

- Direct medical costs of health inequalities
- Indirect costs of health inequalities
- Costs of premature death



Joint Center for Political and Economic Studies; www.jointcenter.org/hpi

Economic burden of health inequalities in the United States

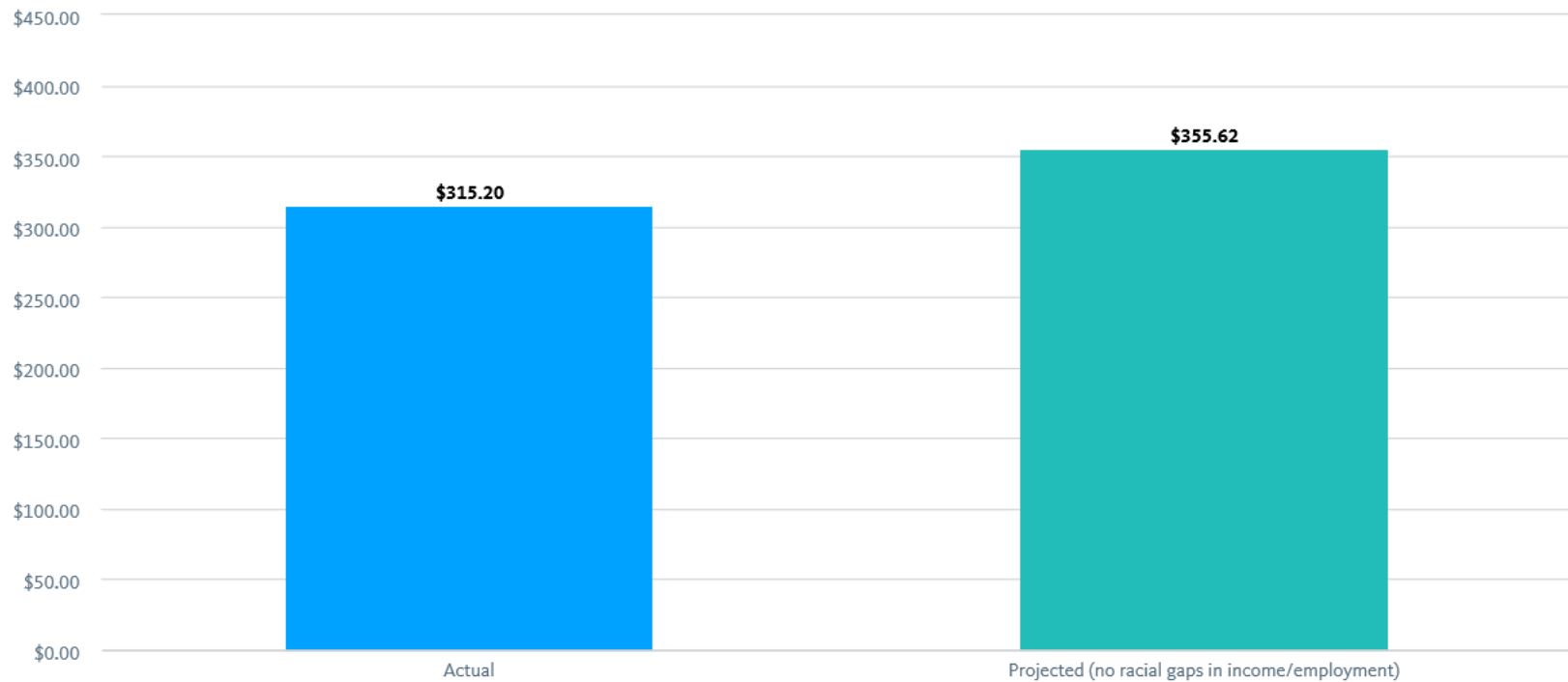
- Between 2003 and 2006, 30.6% of direct medical care expenditures for African Americans, Asians, and Hispanics were excess costs due to health inequalities
- Eliminating health inequalities for minorities would have reduced direct medical care expenditures by \$229.4 billion for the years 2003-2006.
- Between 2003 and 2006 the combined costs of health inequalities and premature death were \$1.24 trillion

Economic benefit of addressing racial equity in Colorado

GDP gains with racial equity ? Colorado

Breakdown:

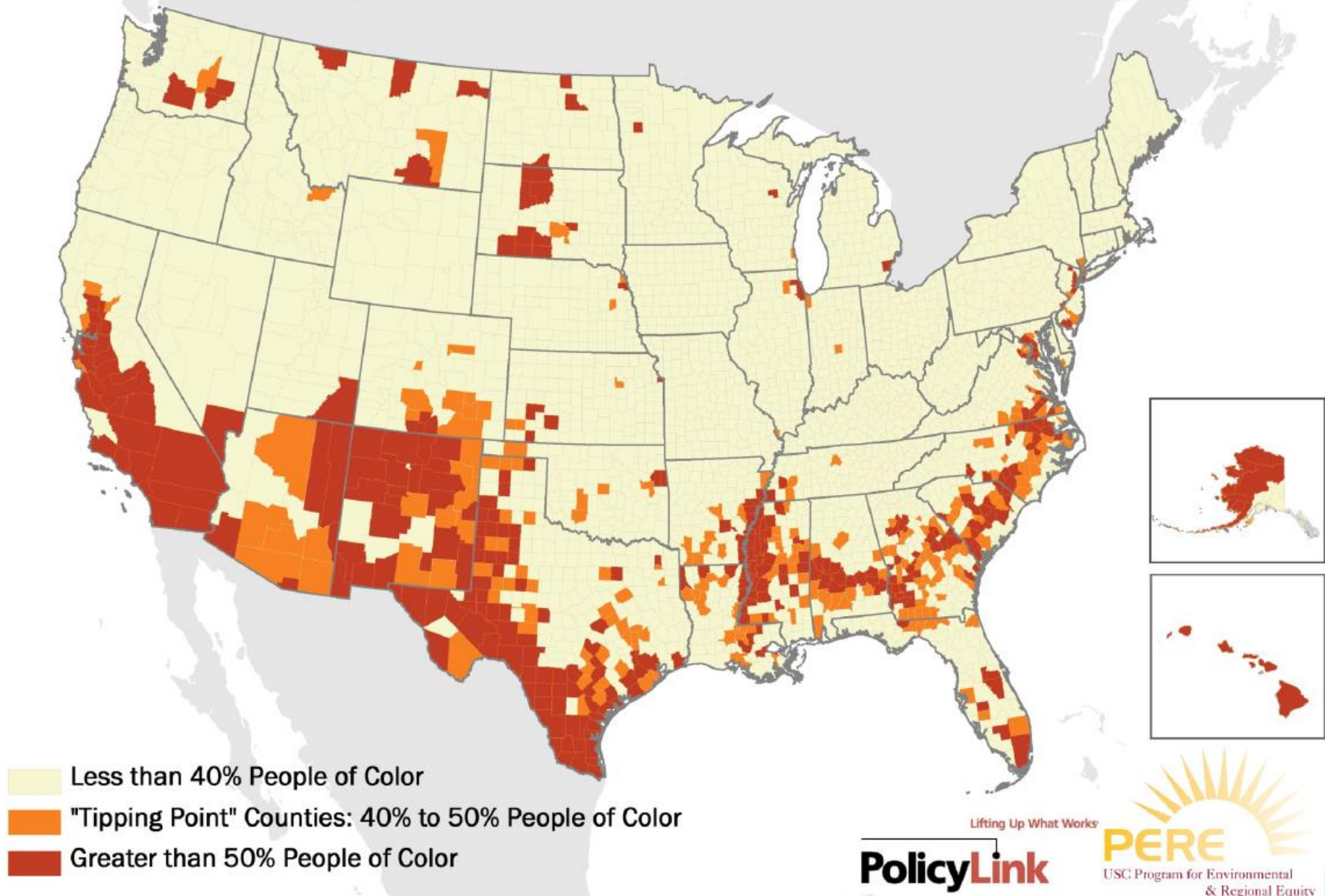
Actual GDP and estimated GDP with racial equity in income (billions): Colorado vs. CO, 2015



Bureau of Economic Analysis; IPUMS; PolicyLink

Demographics and health equity

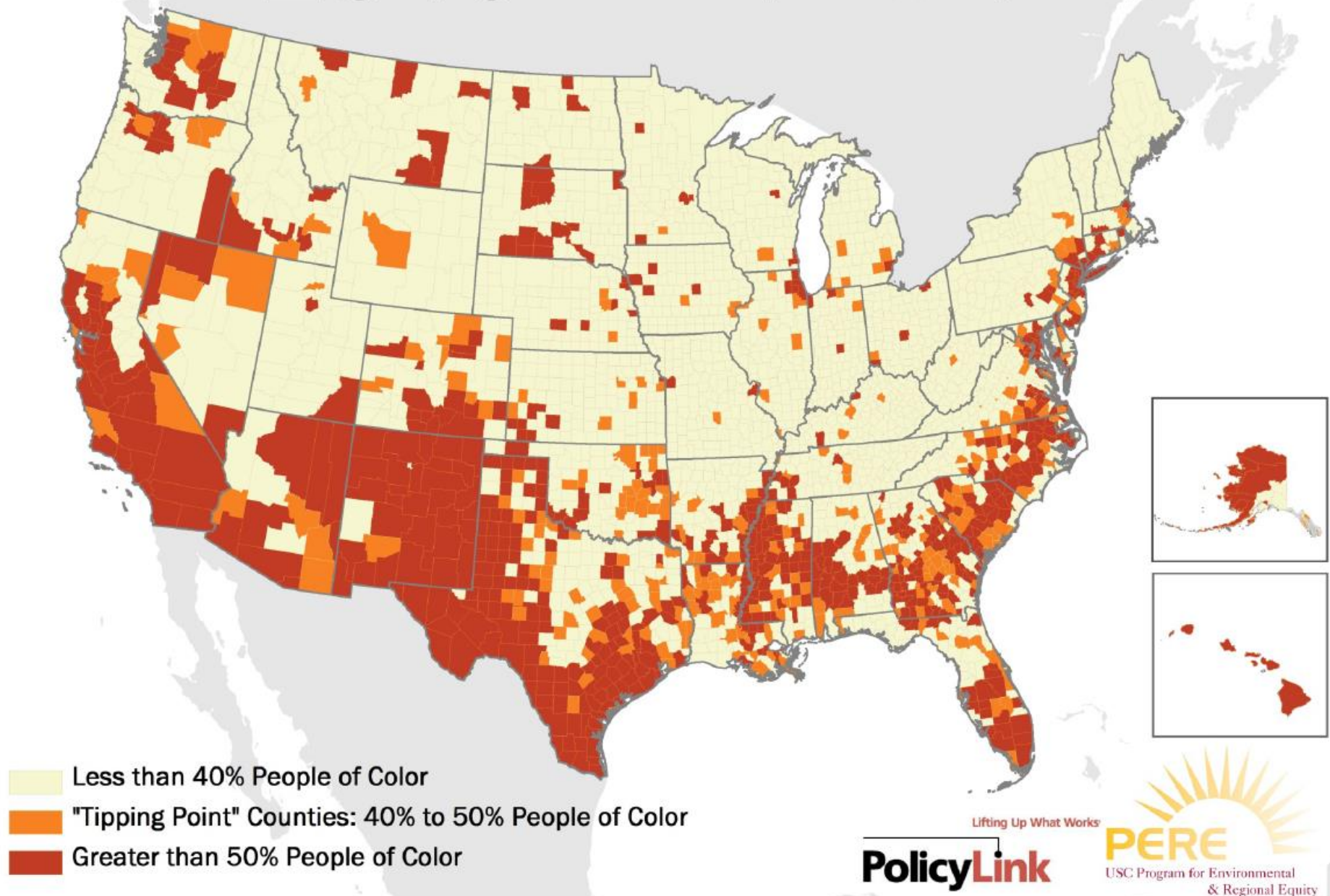
2010 Percent People of Color by County



Sources: 2010 Census, Census TIGER/Line, NHGIS, and ESRI.

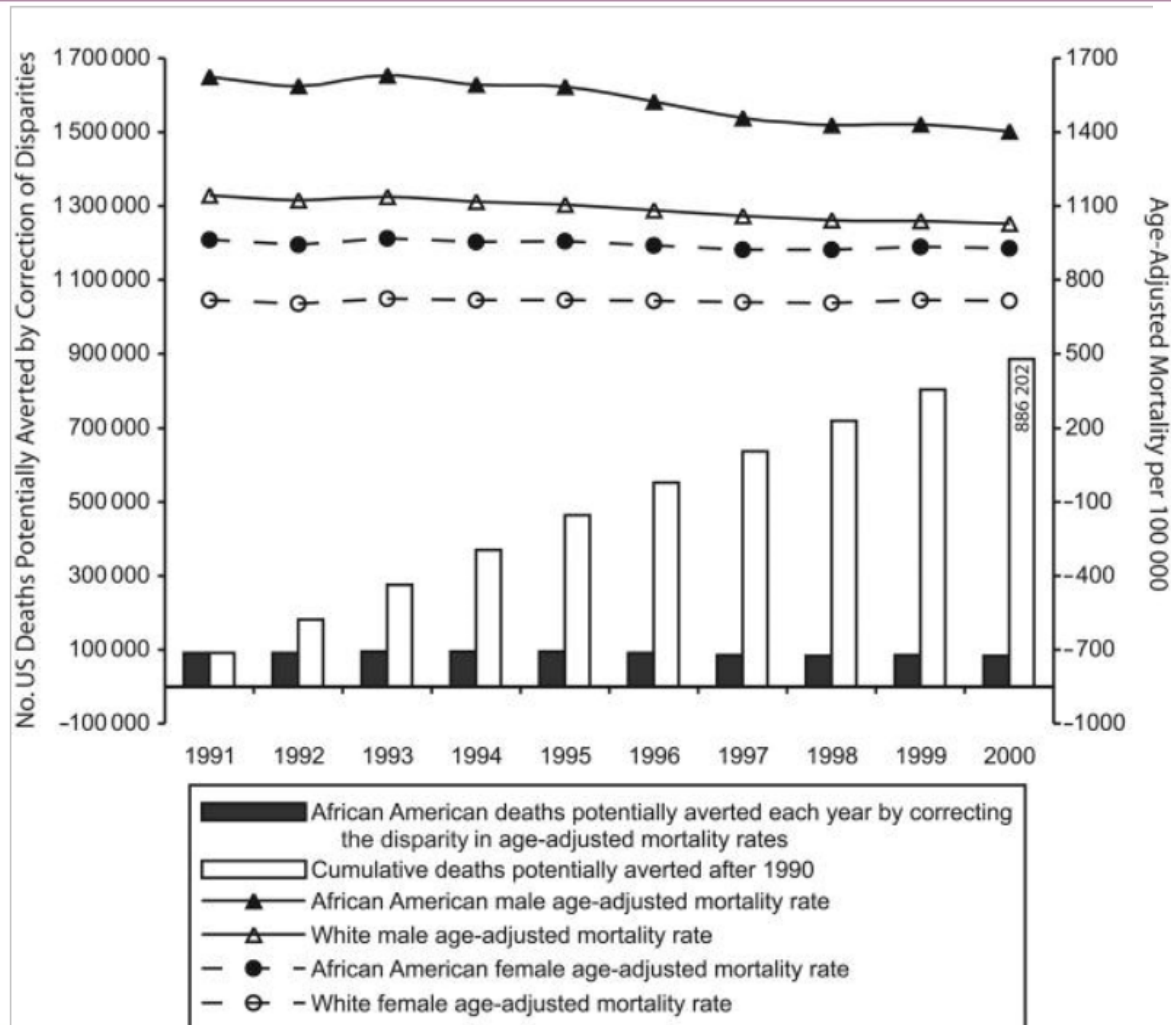
Copyright ©2011 PolicyLink and PERE

2040 Percent People of Color by County



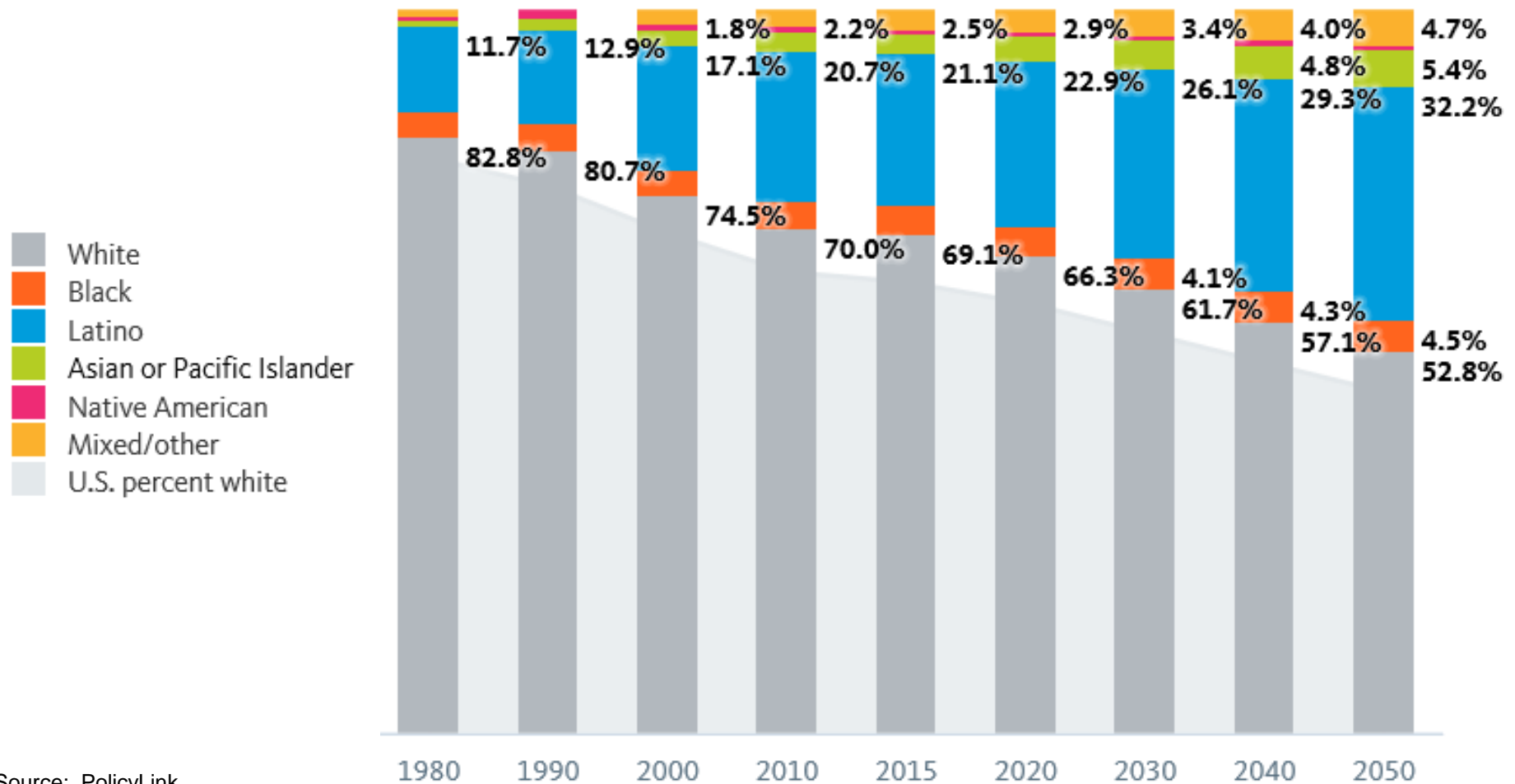
Sources: Woods & Poole Economics projections data (adjusted using the 2010 Census), Census TIGER/Line, NHGIS, and ESRI.

Impact of resolving racial disparities in the U.S., 1991-2000



Woolf et al, Am J Public Health 2004

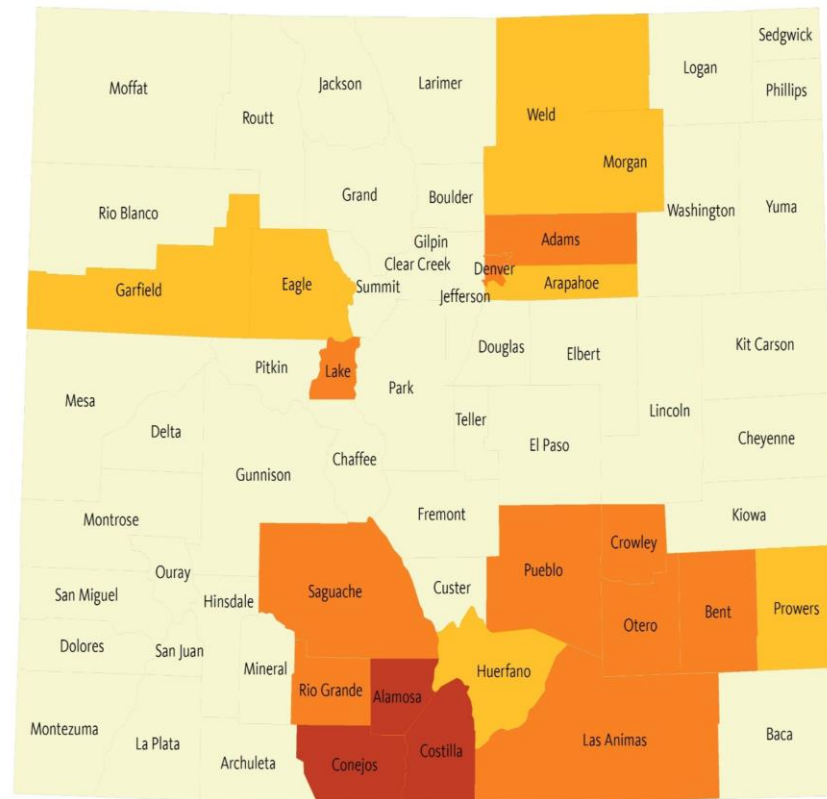
Demographic change in Colorado 1980-2050



Source: PolicyLink

Colorado 2010

Source: U.S. Census Bureau; Woods & Poole



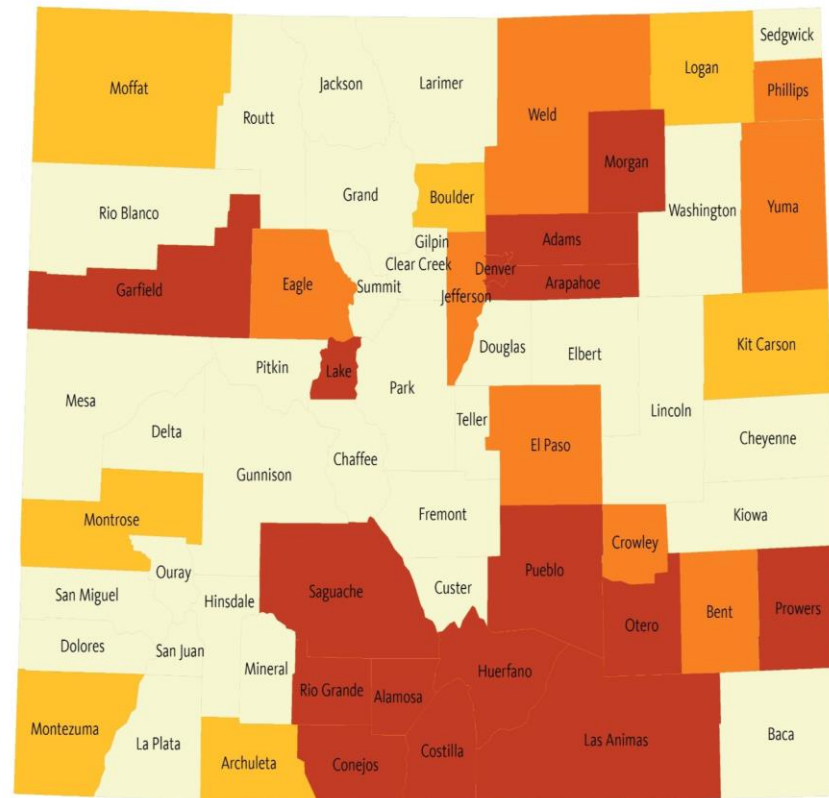
Percent People of Color by County

0 30 40 50%



Colorado 2040

Source: U.S. Census Bureau; Woods & Poole



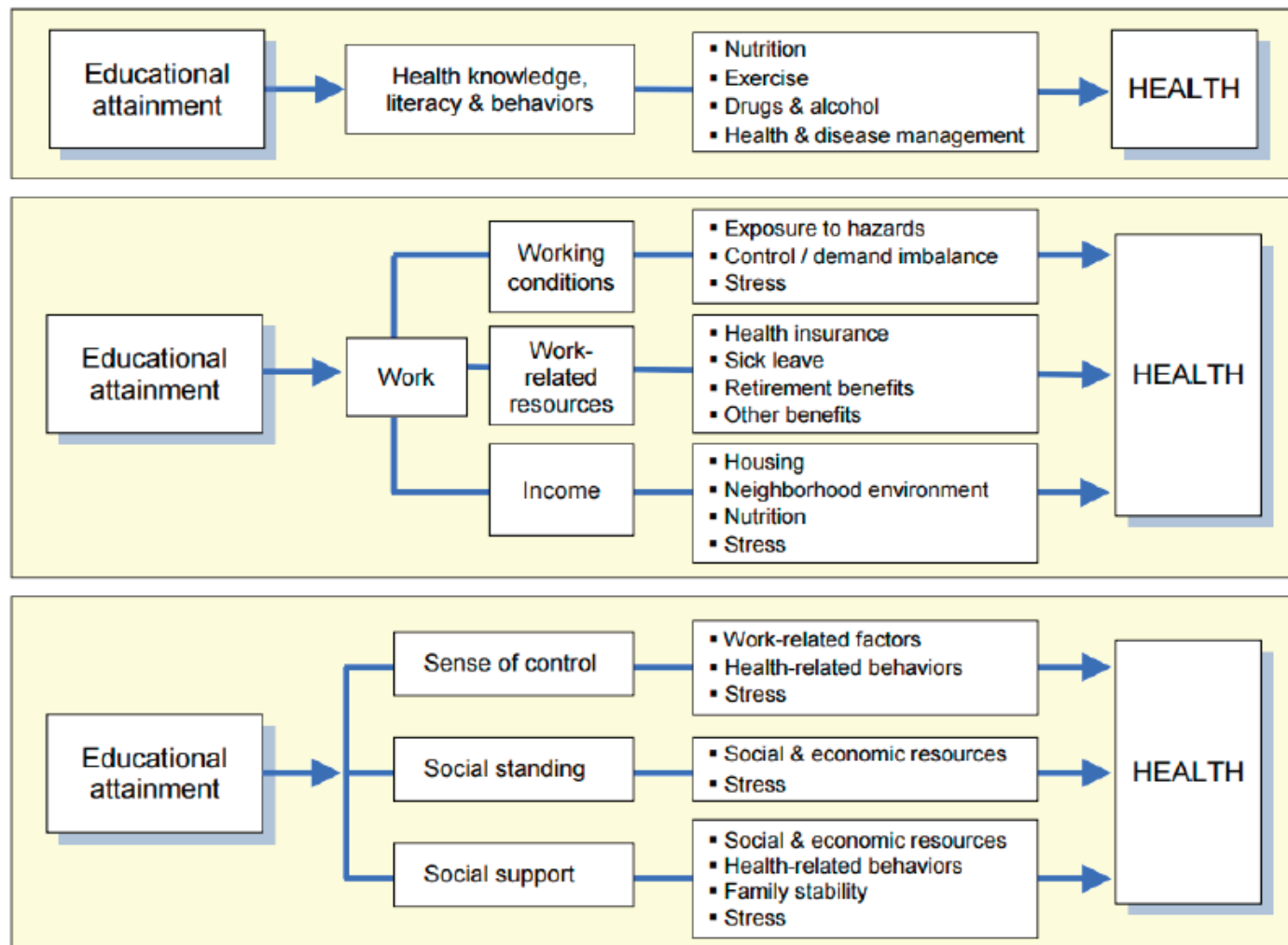
Percent People of Color by County

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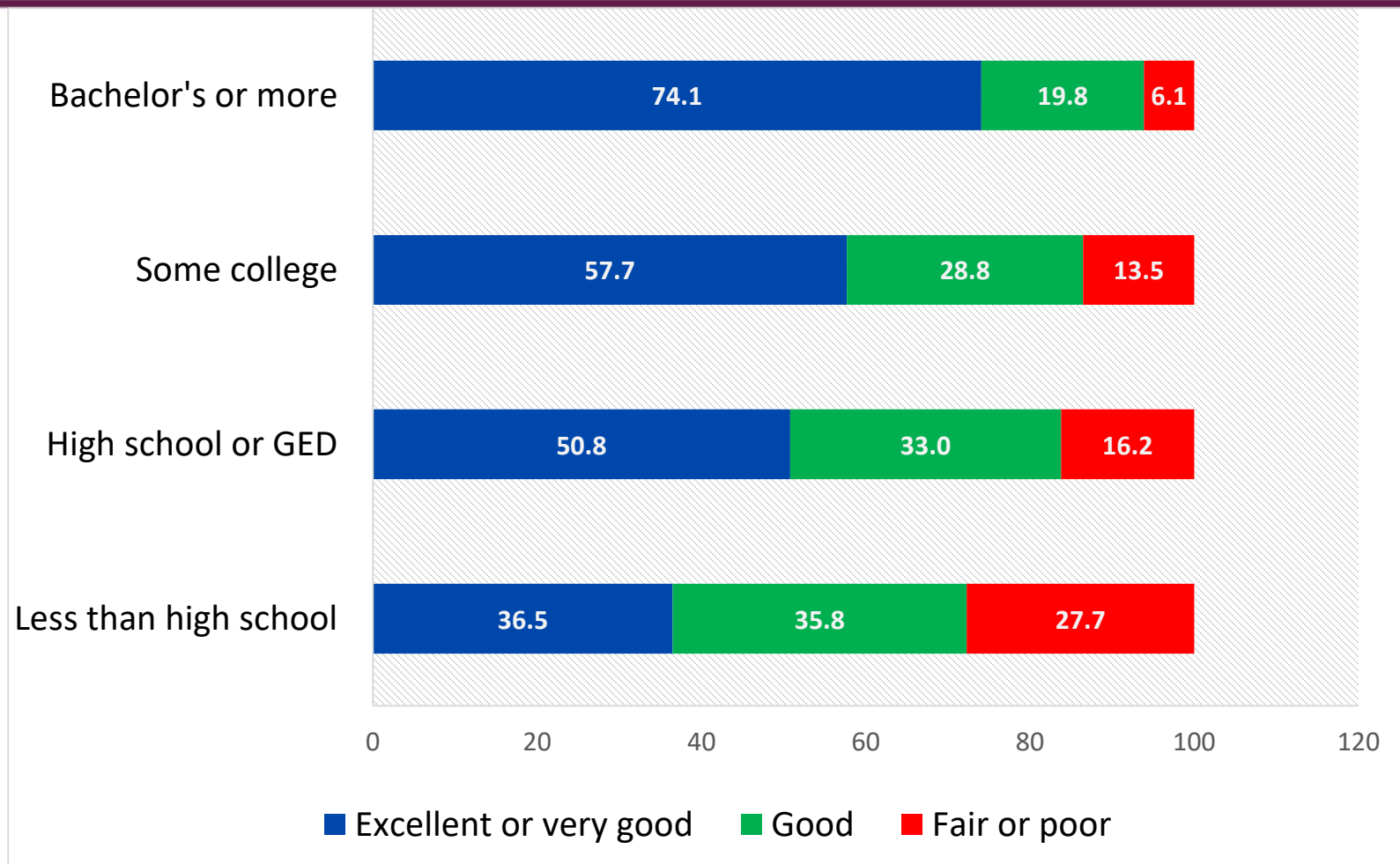
Education and health

Education and health



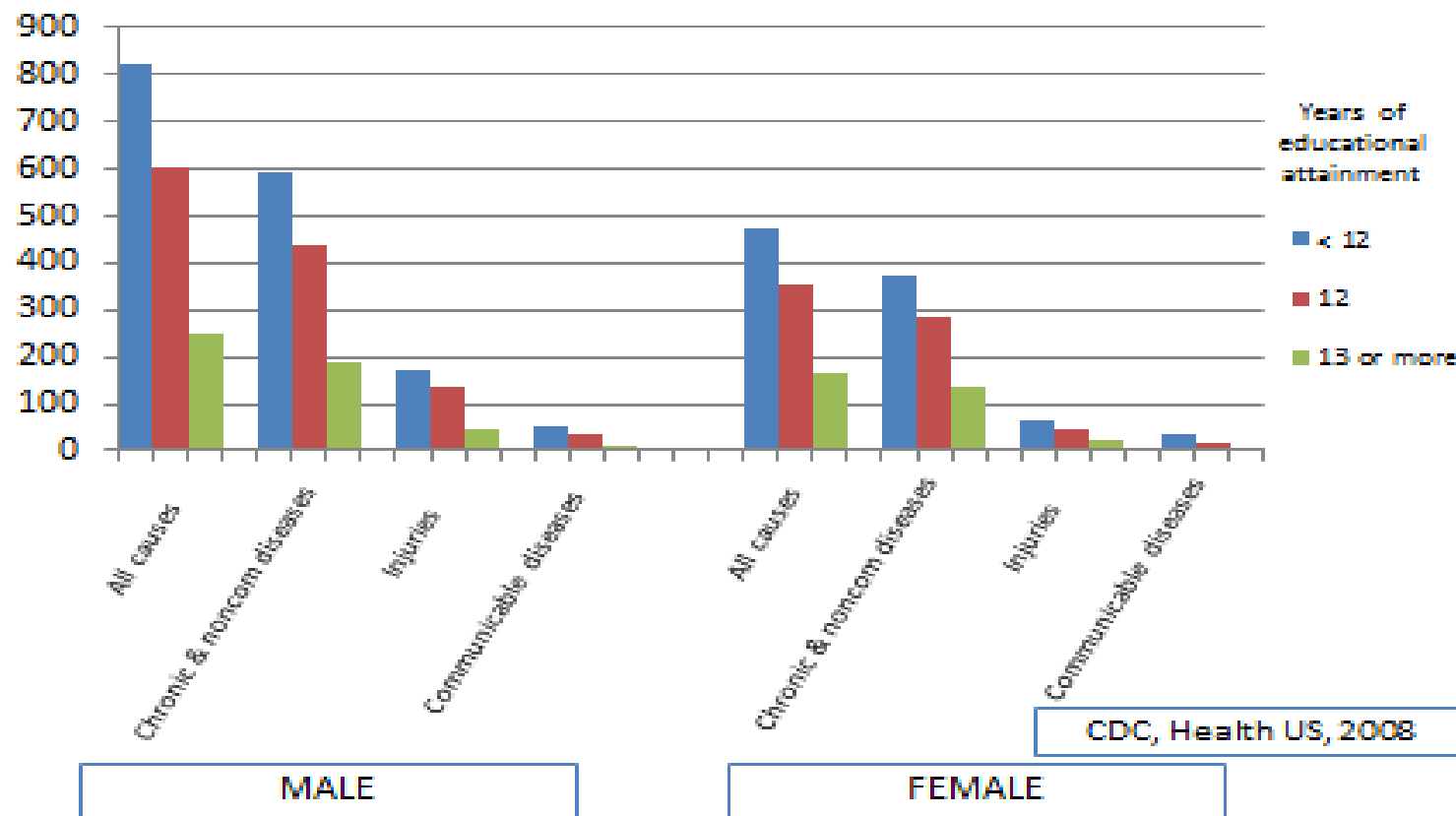
Egerter et al.,
2011

Self-Assessed Health by Educational Attainment, US, 2015

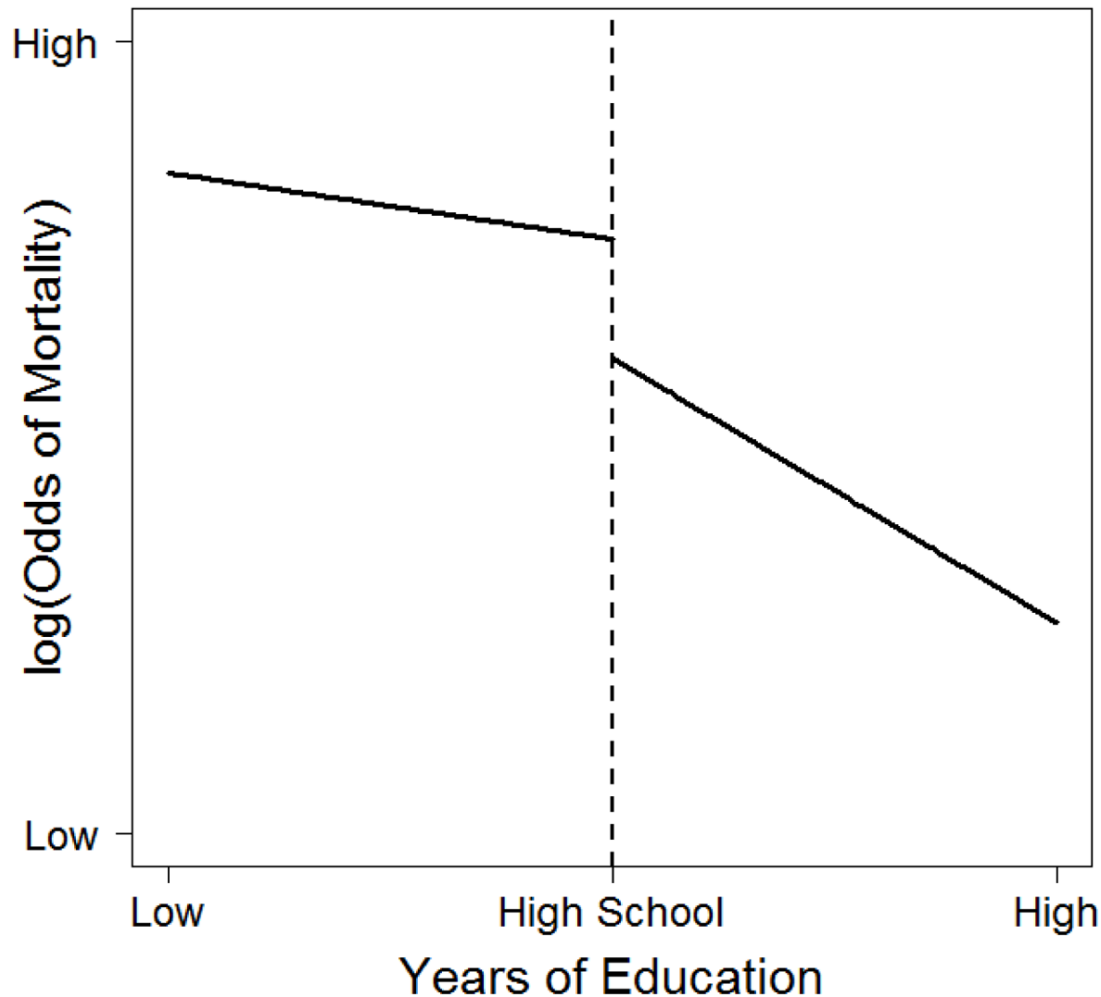


CDC; National Center for Health Statistics. Summary Health Statistics: National Health Interview Survey, 2015

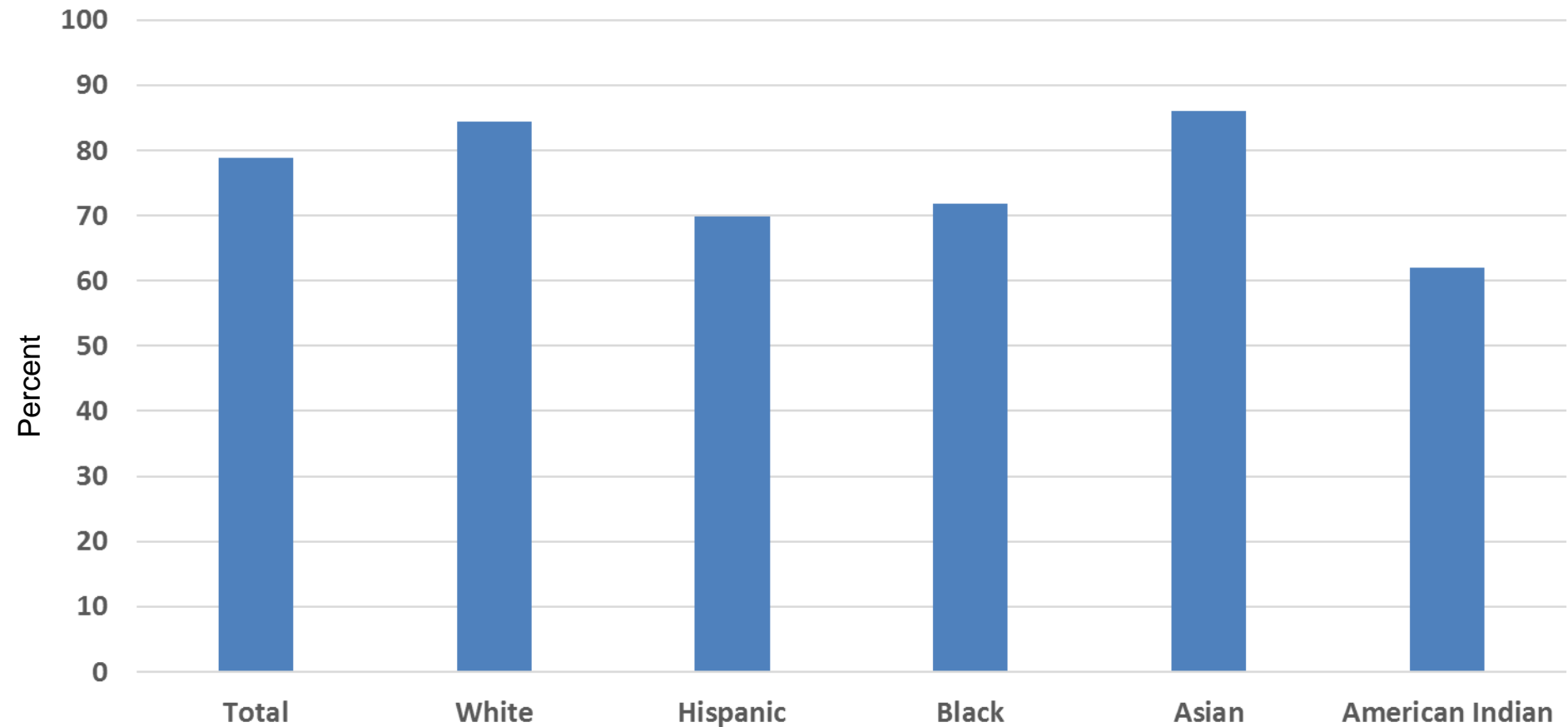
Age-adjusted death rates among persons 25-64 years of age for selected causes of death, by sex and educational attainment: selected states, 1994-2005



Educational attainment, high school graduation and mortality

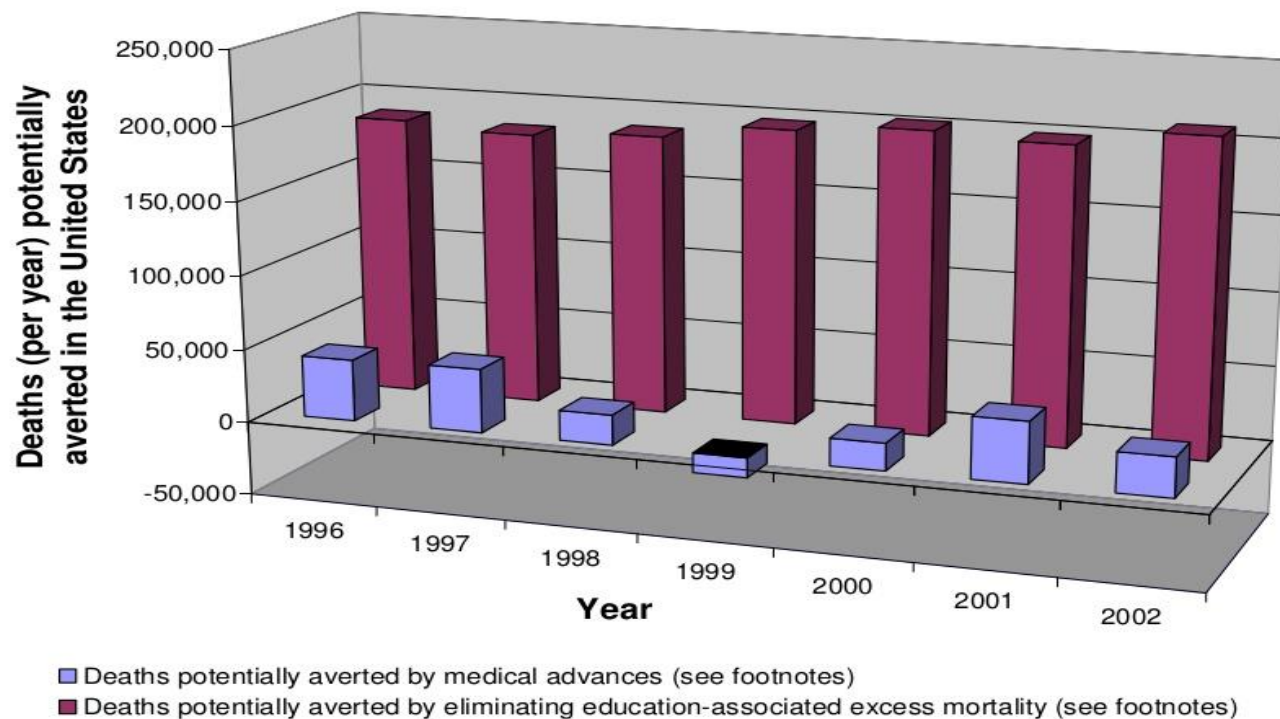


Colorado high school graduation rates 2015-16



Source: Colorado Department of Education

Potential health impact of improving education



Am J Public Health. 2007;97:679–683



Income and health

How income impacts health

- Pollack et al., 2013
 - Wealth can have mechanisms not necessarily monetary, such as power and prestige, attitudes and behavior, and social capital
- Evans and Kim, 2010
 - “Multiple risk exposure” --the convergence among populations with low socioeconomic status of multiple physical and psychosocial risk factors such as poor housing and neighborhood quality, pollutants and toxins, crowding and congestion, noise exposure, and adverse interpersonal relationships
- Woolf et al., 2015
 - Provides access to health care services and health insurance
 - Supports a healthy lifestyle and provides access to place-based benefits in terms of other social determinants of health
 - Avoids the economic disadvantage and hardship that leads to stress and harmful physiological effects on the body

Household income and life expectancy at age 40 years



1 month longevity/1 percentile household income

Chetty, Raj, et al. "The association between income and life expectancy in the United States, 2001-2014." *JAMA* 315.16 (2016): 1750-1766.

Income and health

- Income is directly associated with life expectancy
- Gap in life expectancy for the richest and poorest 1%: men = 4.6 years; women = 10.1 years
- Place matters: the effect of the income gradient varies with four- to five-fold differences
- Temporal trends in life expectancy varied geographically, some areas improving, others declining

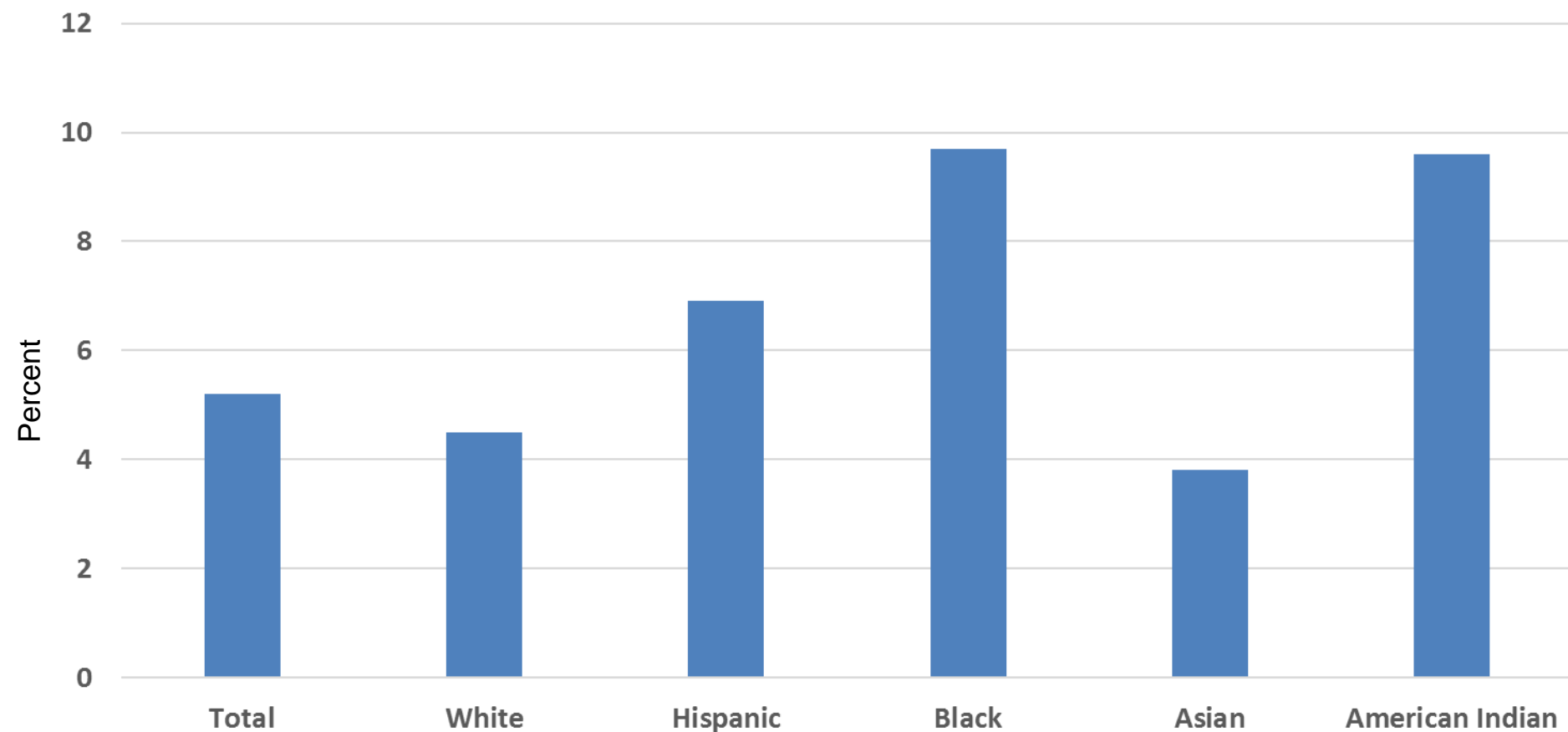
Chetty et al 2016

Income and health, and race

- African American men below poverty status had 2.66 times higher risk of mortality than African American men living above poverty status
- White men below poverty status had approximately the same risk as white men living above poverty status
- Both African American women and white women living below poverty status were at an increased mortality risk relative to those living above poverty status

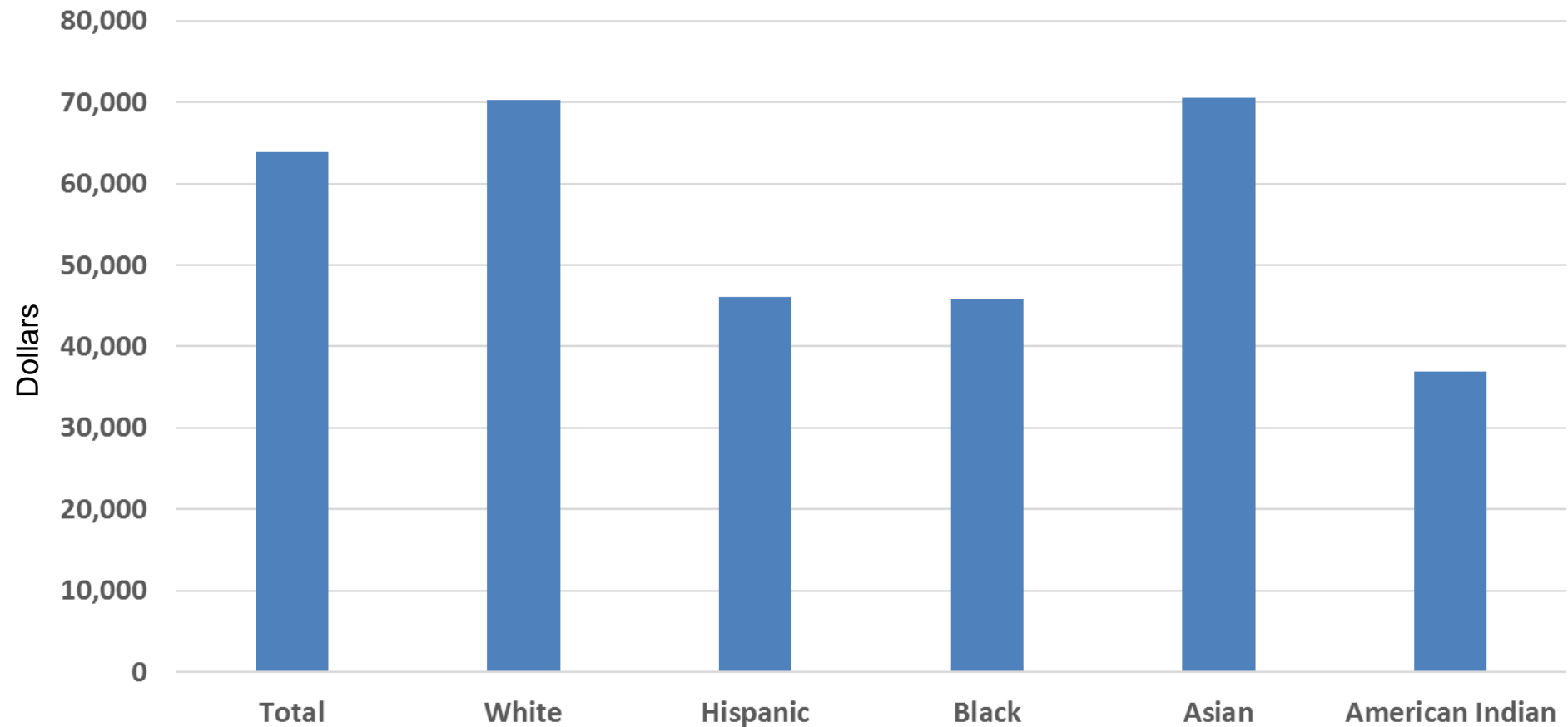
Zonderman et al., 2016

Colorado unemployment rate 2015



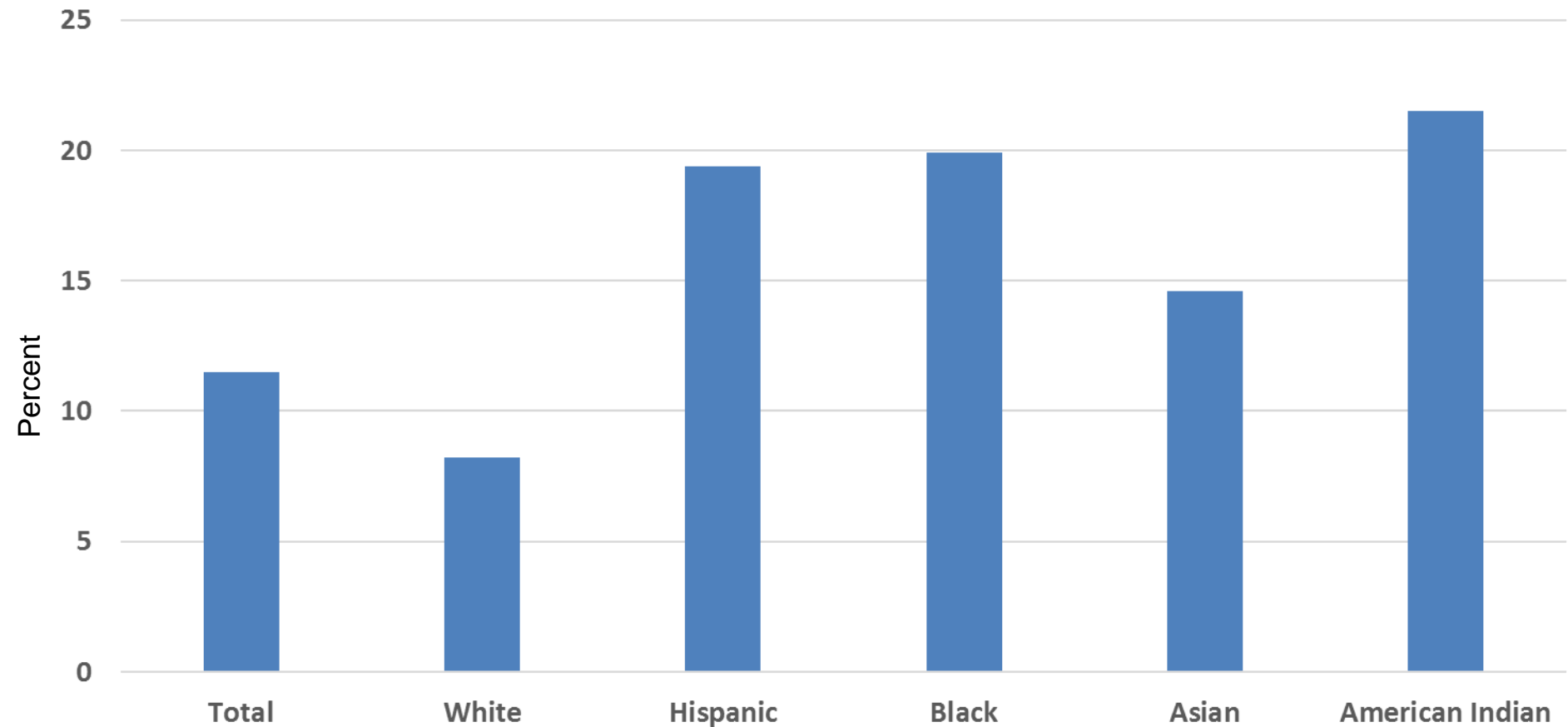
Source: U.S. Census, American Community Survey

Colorado median household income 2015



Source: U.S. Census, American Community Survey

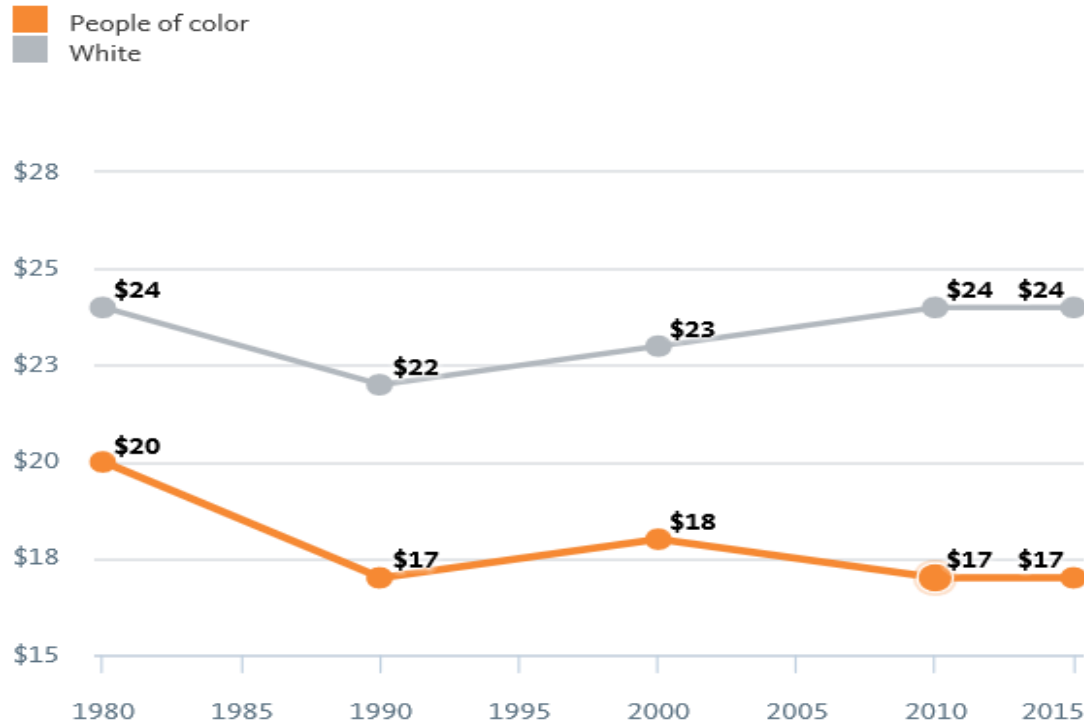
Colorado poverty rate 2015



Source: U.S. Census, American Community Survey

Median hourly wage by race/ethnicity: Colorado 1980-2015

Median hourly wage by race/ethnicity: Colorado, 1980-2015



Current educational attainment and projected state/national-level job education requirements by race/ethnicity and nativity: Colorado, AA degree or higher, 2015

Source: PolicyLink

Estimated deaths attributable to social factors in the US

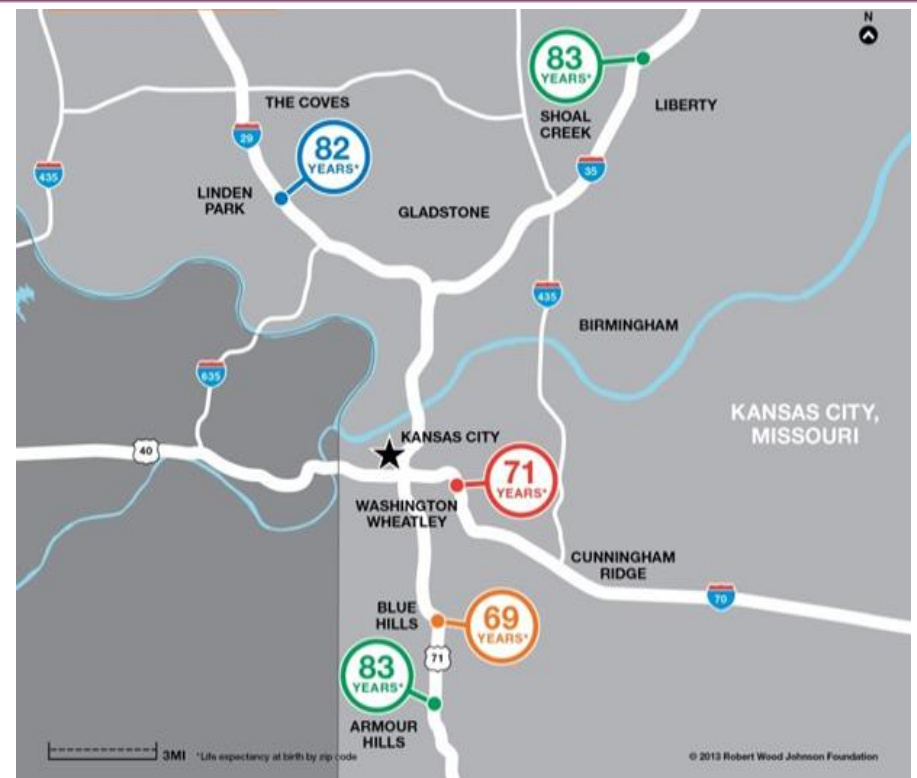
Calculation of the Number of US Deaths in 2000 Attributable to Each Social Factor

| Social Factor and Age Group | RR (95% CI) ^a | Prevalence, % ^b | PAF, % ^c | Total Deaths, ^d No. | Deaths Attributable to Social Factor, ^e No. |
|---------------------------------------|--------------------------|----------------------------|---------------------|--------------------------------|--|
| Individual-level factors | | | | | |
| Low education | | | | | |
| Aged ≥25 y | | | | | 244526 |
| Aged 25–64 y | 1.81 (1.64, 2.00) | 16.1 | 11.5 | 972645 | 112209 |
| Aged ≥65 y | 1.23 (0.86, 1.76) | 34.5 | 7.4 | 1799825 | 132317 |
| Poverty | | | | | |
| Aged ≥25 y | | | | | 133250 |
| Aged 25–64 y | 1.75 (1.51, 2.04) | 9.5 | 6.7 | 972645 | 64692 |
| Aged ≥65 y | 1.40 (1.37, 1.43) | 9.9 | 3.8 | 1799825 | 68558 |
| Low social support | | | | | |
| Aged ≥25 y | | | | | 161522 |
| Aged 25–64 y | 1.34 (1.23, 1.47) | 21.0 | 6.7 | 972645 | 64819 |
| Aged ≥65 y | 1.34 (1.16, 1.55) | 16.7 | 5.4 | 1799825 | 96703 |
| Area-level factors^f | | | | | |
| Area-level poverty | 1.22 (1.17, 1.28) | 7.8 | 1.7 | 2331261 | 39330 |
| Income inequality | 1.17 (1.06, 1.29) | 31.7 | 5.1 | 2331261 | 119208 |
| Racial segregation | 1.59 (1.31, 1.94) | 13.8 | 7.5 | 2331261 | 175520 |

Note. CI=confidence interval; PAF=population attributable fraction; RR=relative risk.

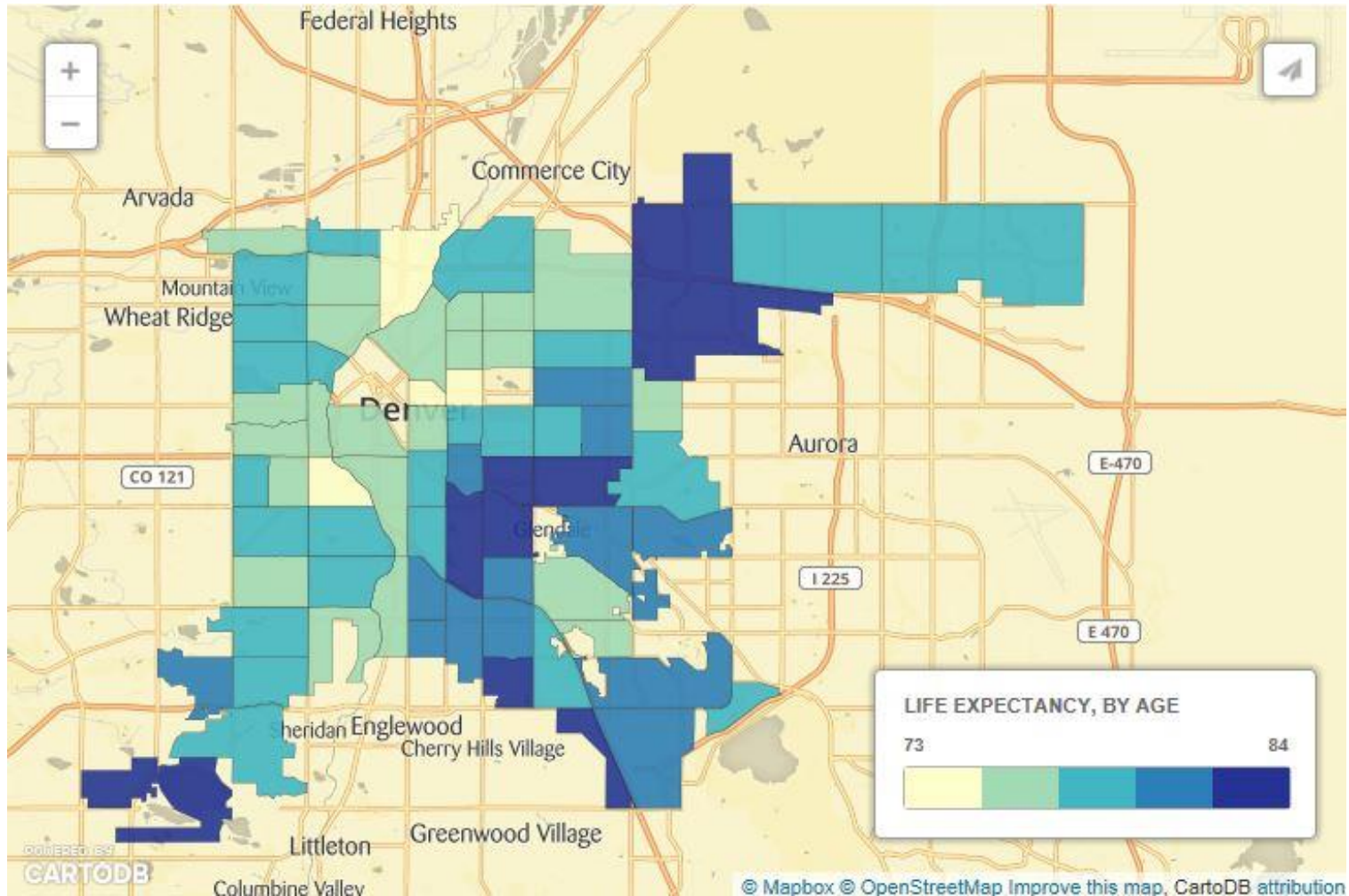
Galea, et al, Am J Public Health, 2011

Impact of social determinants of health

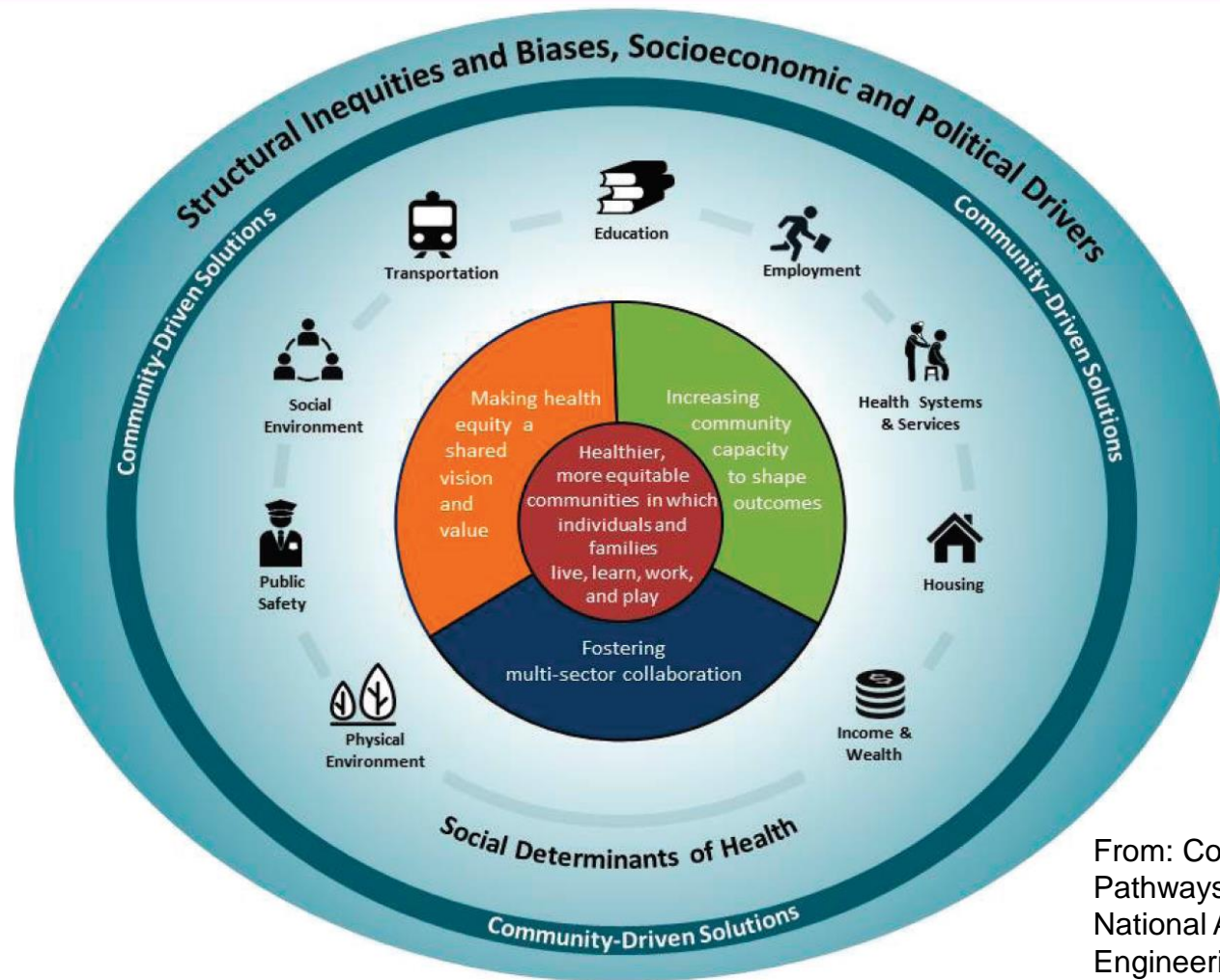


Life expectancy disparities in New Orleans, LA and Kansas City, MO
SOURCE: RWJF, 2013.

Denver life expectancy







Conceptual model for community-based solutions to promote health equity









From: Communities in Action,
Pathways to Health Equity,
National Academies of Sciences,
Engineering and Medicine 2017

Communities promoting health equity

| Name <i>Location</i> | Primary Social Determinant(s) of Health Targeted, Data on outcomes * |
|--|---|
| Blueprint for Action <i>Minneapolis, MN</i>  | Public safety 2007 -2015 Preventing youth violence: Results = Reductions reported 62% in youth gunshot victims; 36% youth victim crimes; 76% youth arrest with guns |
| Delta Health Center <i>Mound Bayou, MS</i>  | Health systems and services From 2013 -2015 Low birth weight babies decreased from 20.7% to 3.8% |
| Dudley Street Neighborhood Initiative <i>Boston, MA</i>  | Physical environment 2014 -2015 % HS students at or above grade level : Math from 36% to 63% Graduation Rate 51% to 82% Percent enrolled in college 48% to 69% |
| Eastside Promise Neighborhood <i>San Antonio, TX</i>  | Education Child care available 80% to 100% Work with others to improve neighborhood 58% to 83% Safe places for Kids 48% to 67% |

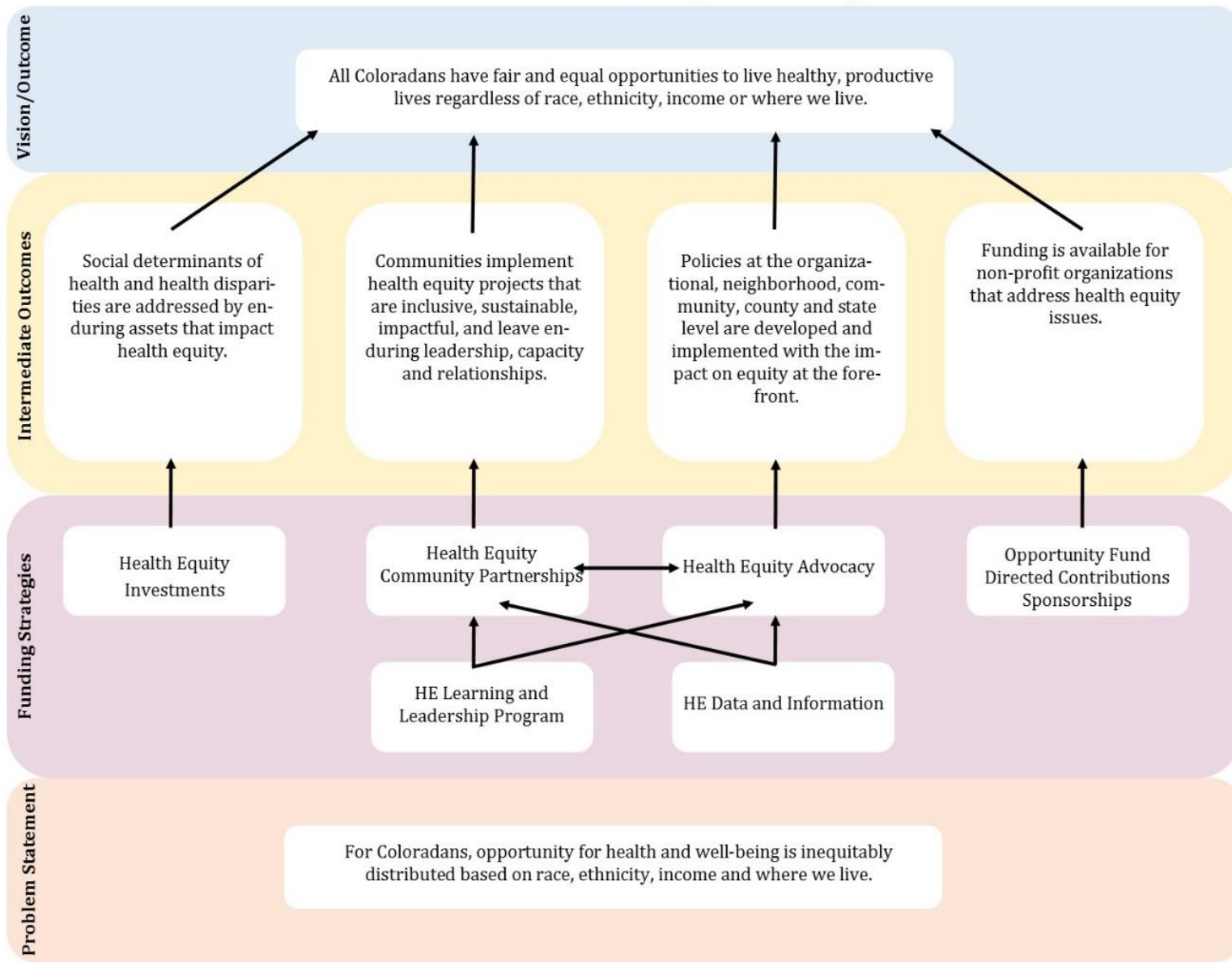
Communities promoting health equity

| Name Location | Primary Social Determinant(s) of Health Targeted, Data on outcomes* |
|---|--|
| Indianapolis Congregation Action Network <i>Indianapolis, IN</i>  | Employment; Public safety 76% more civic duty than avg. resident Reduction in incarceration and increased jobs |
| Magnolia Community Initiative <i>Los Angeles, CA</i>  | Social environment 2016 57% children 0-5 had access to place vs ER 78% graduated from H.S. ; 45% College 75.7% report feeling safe, to and from school |
| Mandela Marketplace <i>Oakland, CA</i>  | Physical environment 641,000 lbs. of produce; 76%  consumption \$5.5 M new revenue; 26 + job ownership opportunities---sustainability |
| People United for Sustainable Housing <i>Buffalo, NY</i>  | Housing Regional mapping process: # of employed workers, # housing units for redeveloped, carbon emission reduction; utility bills |
| WE ACT for Environmental Justice <i>Harlem, NY</i>  | Physical environment New policies around air quality, use of harmful chemicals, pesticides, flame retardants |

The Colorado Trust

- The Colorado Trust is a health foundation dedicated to achieving health equity
- To create health equity, we believe all Coloradans should have fair and equal opportunities to lead healthy, productive lives regardless of race, ethnicity, income or where we live
- Good health depends on more than medical care; it's affected by where we live, the education we receive, the work we do, the wages we earn and by our opportunities to make decisions that improve our own and our family's health
- Partnering with communities, we can advance fair opportunities for all Coloradans to be healthy

Colorado Trust Theory of Change



All Coloradans should have fair
and equal opportunities to live
healthy, productive lives
regardless of race, ethnicity,
income, or where we live