

EDUCATION AND POPULATION HEALTH

A Review of the Relationship and A Strategy for Working Together Toward Common Goals

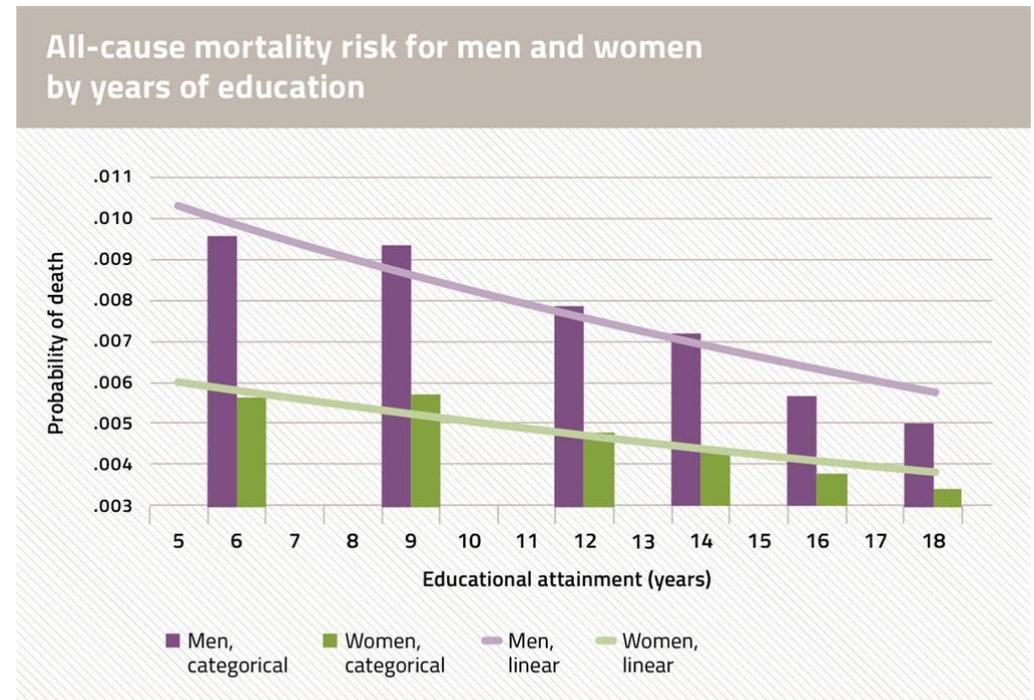


Roundtable on Population Health Improvement
Workshop on Health and Education
June 5, 2014

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Education and Life Expectancy

- Shorter life: At age 25, U.S. adults without a high school diploma can expect to die 9 years sooner than college graduates (NCHS, 2012)
- College graduates with only a Bachelor's degree are 26% more likely to die than those with a professional degree; those with less than a high school education are almost twice as likely to die (Ross et al., 2012)

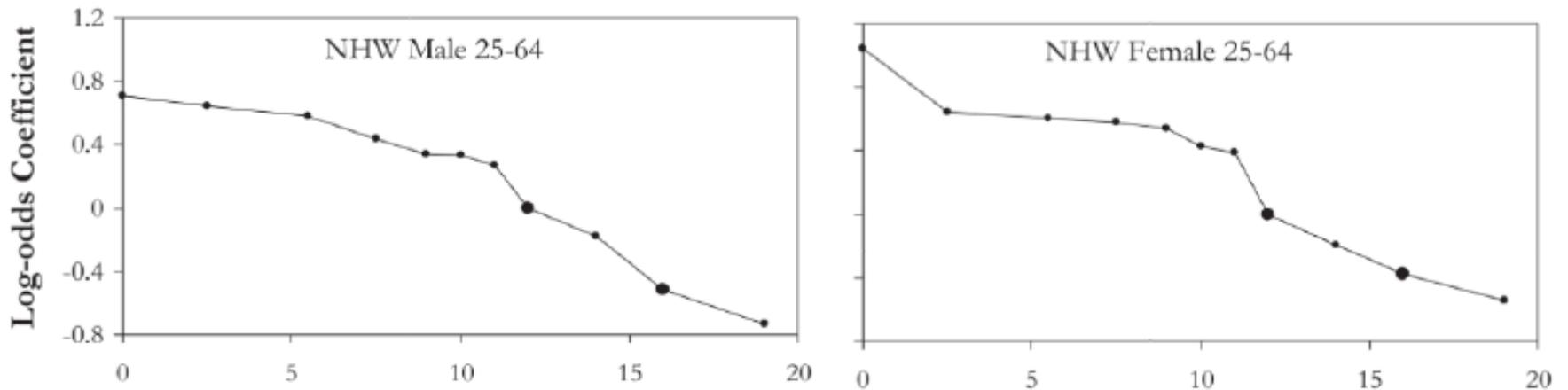


Data derived from regression modeling. Reprinted from Ross et al. Demography. 2012;49:1157-83.

The widening gap in life expectancy based on education

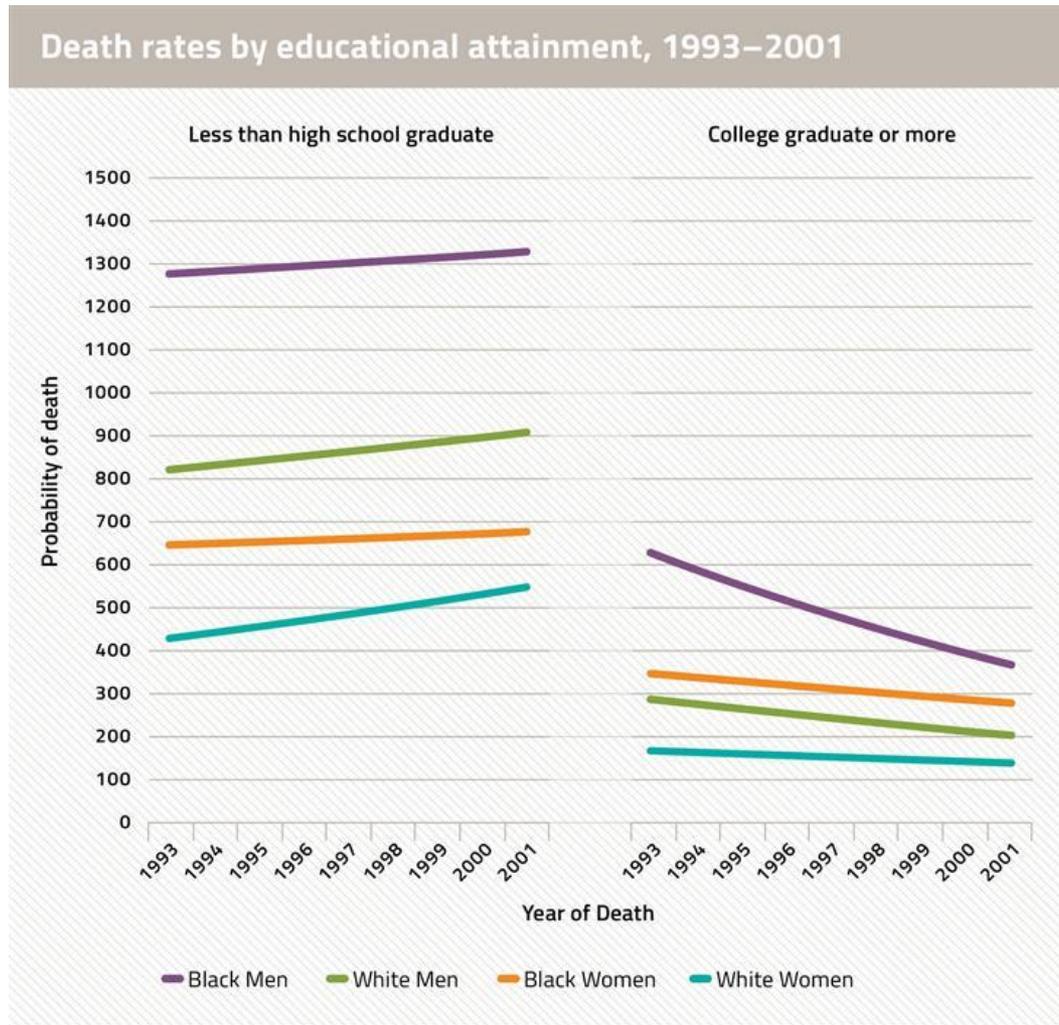
1989	Researchers at the National Center for Health Statistics saw the first signs: although there was little difference in the mortality rates recorded in 1960 for middle-aged and older men with different levels of education, by 1971-1984 they observed "substantial educational differentials." ²
1993	National Center for Health Statistics researchers, publishing in the <i>New England Journal of Medicine</i> , reported that the difference in death rates at different levels of educational attainment had continued to climb from 1960 through 1986. ³
2001	Crimmins and Saito reported a widening differential in death rates based on education when they compared data from 1960 and 1979-1989. They compared 1970 and 1990 and found that net increases in life expectancy were greater among those with 13 or more years of education than among those with 0-8 or 9-12 years of education. ^{4,1}
2002	Researchers at the National Institute for Occupational Safety and Health and the American Cancer Society reported widening differentials in death rates when they compared population cohorts from 1959-1972 and 1982-1996. ⁵
2008	American Cancer Society and National Center for Health Statistics researchers examined changes between 1993 and 2001 and noted a widening gap in specific causes of death: they saw "significant decreases in mortality from all causes, heart disease, cancer, stroke, and other conditions in the most educated and lack of change or increases among the least educated." ⁶
	Harvard University researchers examined changes in life expectancy between the 1980s through 2000 and concluded that life expectancy increases had occurred "nearly exclusively among high-education groups." Education-related gaps in life expectancy had increased by about 30%. ⁷ The results received widespread attention and were cited in a 2008 Congressional Budget Office report on the subject. ⁸
2011	The National Center for Health Statistics drew attention to the widening gap in life expectancy between those with less than a high school education and those with a Bachelor's degree or higher: the gap in life expectancy based on educational attainment at age 25 increased by 1.9 years for men and 2.8 years for women between 1996 and 2006. ⁹
2012	Researchers from seven institutions, publishing in <i>Health Affairs</i> , reported that the difference in life expectancy between the most and least educated Americans had increased between 1990 and 2008 from 13.4 years to 14.2 years among males and from 7.7 years to 10.3 years among females. ¹

The functional form of the relationship



From: Montez, Hummer, Hayward. *Demography*. 2012;49(1):315-36.

Selection: The Plight of High School Dropouts

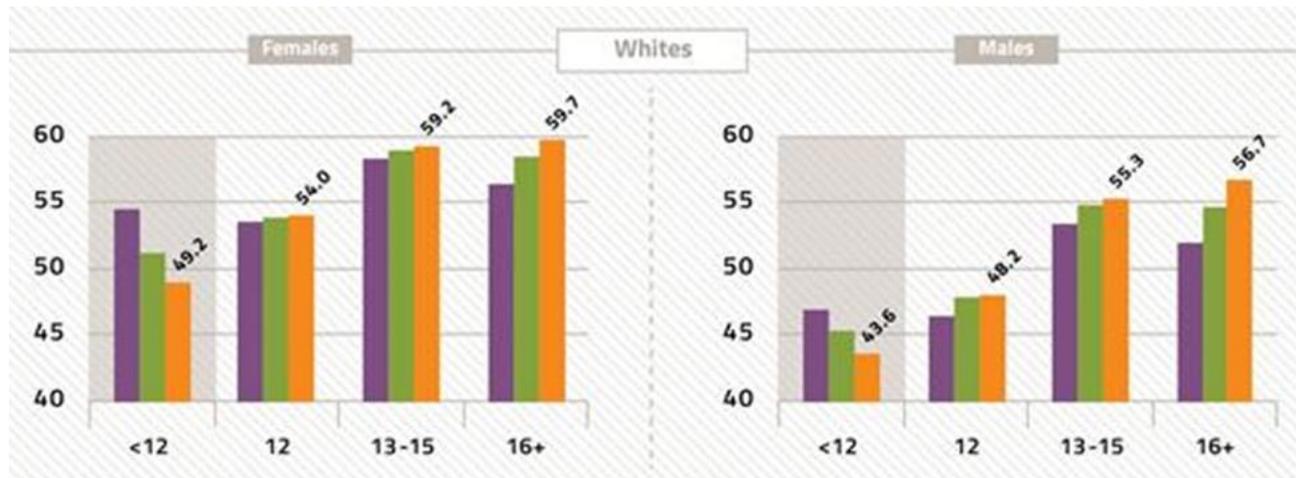


Death rates increased for those with less than a high school education. Data age-standardized for adults age 25-64 years. Reprinted from Jemal et al. Widening of socioeconomic inequalities in U.S. death rates, 1993-2001. PLoS One. 2008;3:e2181.

Life expectancy at age 25 (years) by educational attainment (years); 1990, 2000, 2008



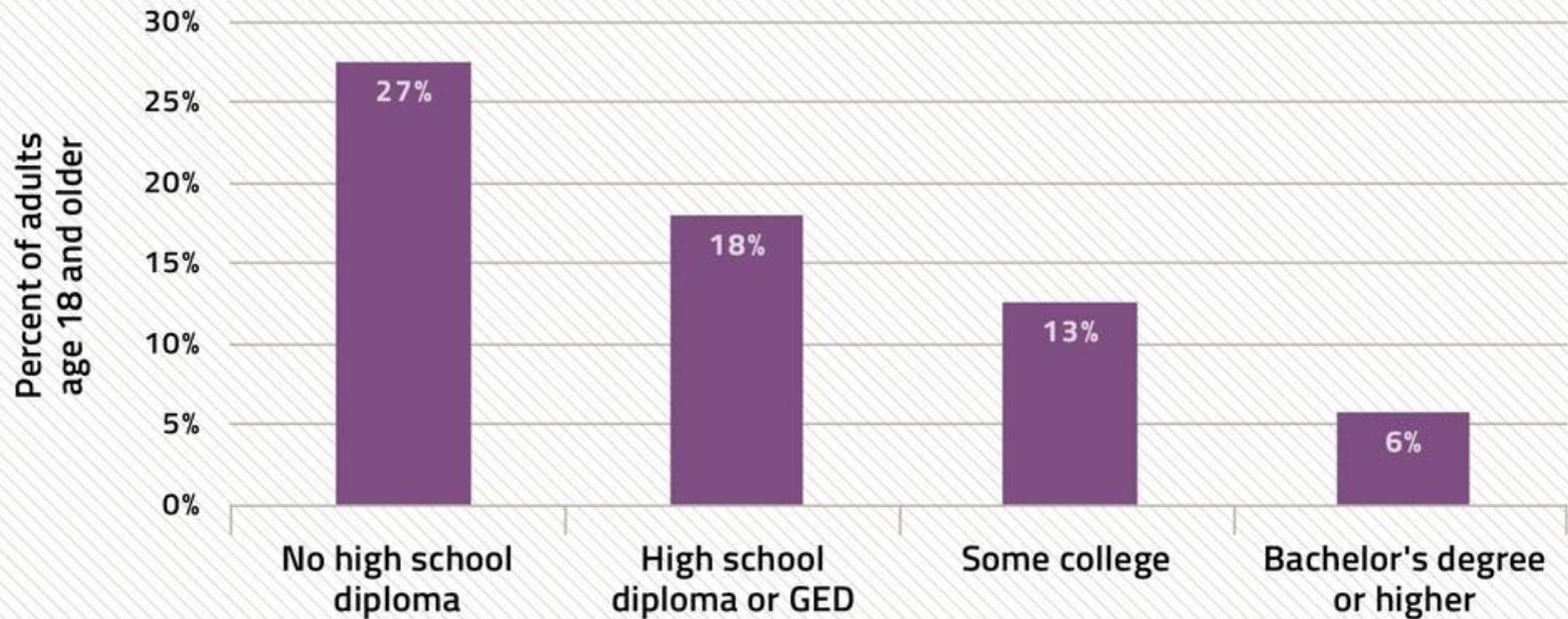
Source: Adapted from Olshansky et al. Health Aff (Millwood), 2012;31(8), Appendix.



In 2008, white males with less than 12 years of education had the life expectancy of US men born in 1972; white females with this level of education had the life expectancy of US women born in 1964.

Olshansky et al., 2012

Self-report of fair or poor health



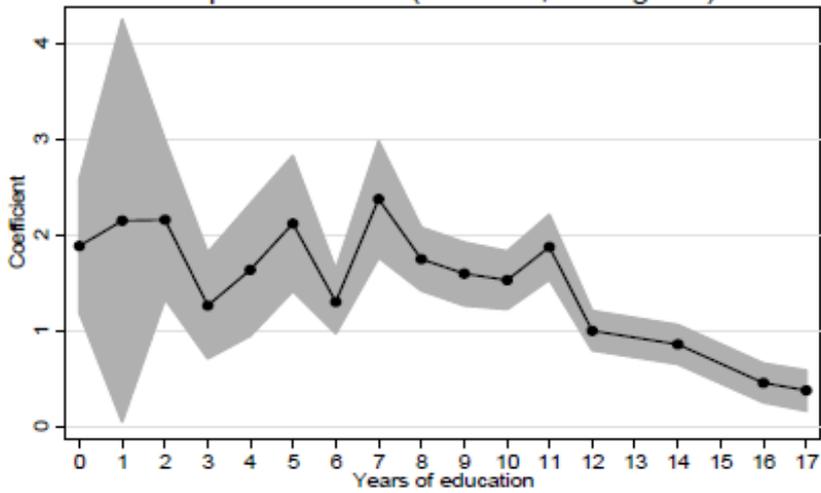
Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. Table 21. National Center for Health Statistics. Vital Health Stat 10(256). 2012.

Table 1. Prevalence of diseases among adults age 18 and older, 2011

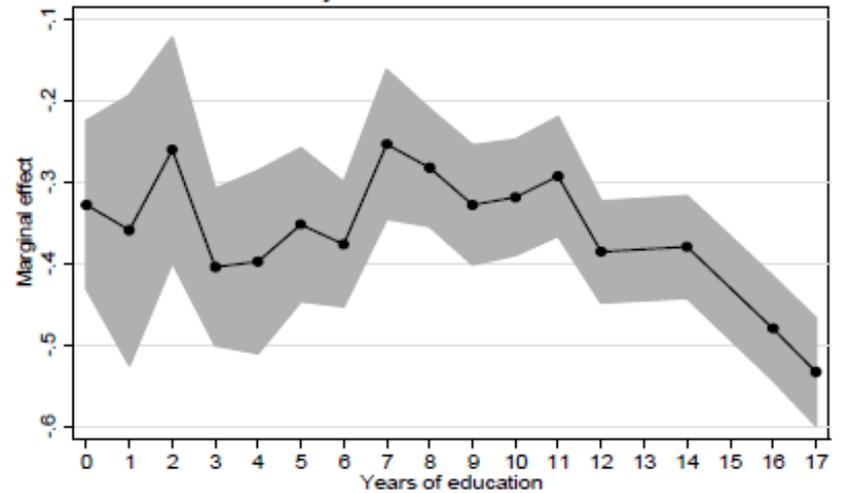
	Less than a high school diploma	High school diploma or GED	Some college	Bachelor's degree or higher
Coronary heart disease	10.2%	7.5%	7.4%	5.4%
Stroke	4.7%	3.4%	2.7%	1.7%
Emphysema	3.3%	2.5%	1.9%	0.7%
Asthma (current)	8.1%	8.3%	8.6%	7.1%
Chronic bronchitis	5.1%	5.2%	5.0%	2.3%
Diabetes	15.1%	10.5%	9.6%	6.5%
Ulcers	9.8%	7.4%	8.0%	5.0%
Kidney disease	3.8%	2.2%	2.1%	0.7%
Liver disease	2.4%	1.4%	1.5%	0.8%
Chronic joint symptoms	35.0%	33.3%	34.6%	25.2%
Hearing trouble	18.8%	19.3%	18.1%	13.5%
Vision trouble	14.0%	10.4%	9.5%	6.3%
No teeth	16.2%	9.6%	7.1%	3.6%

Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. National Center for Health Statistics. Vital Health Stat 10(256). 2012.

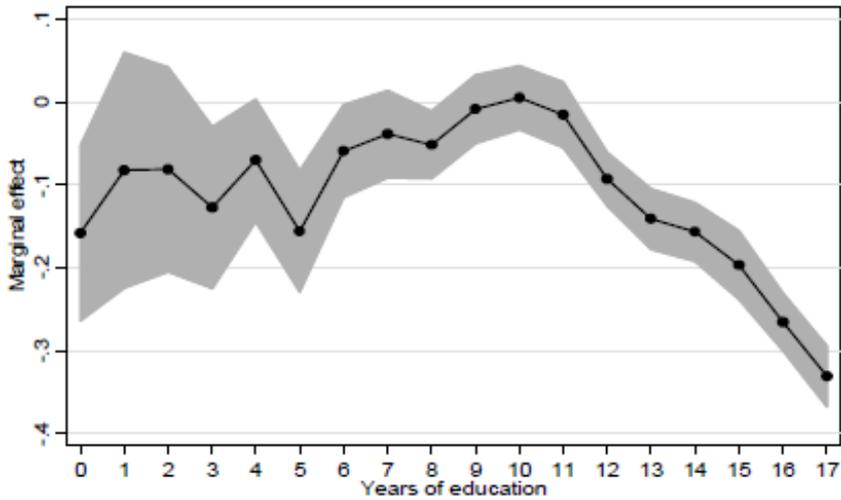
Depression scale (1=lowest, 16=highest)



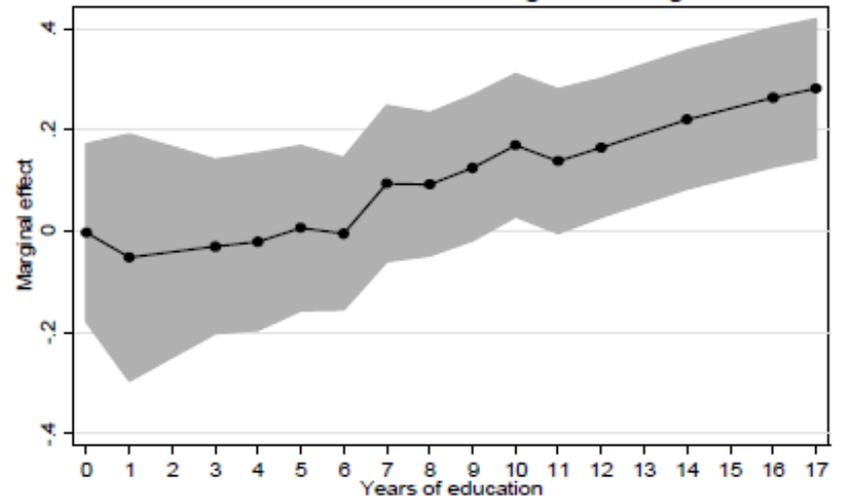
Any functional limitations



Current smoker



Ever had colorectal screening exam - age 40+



From: Cutler and Lleras-Muney 2006

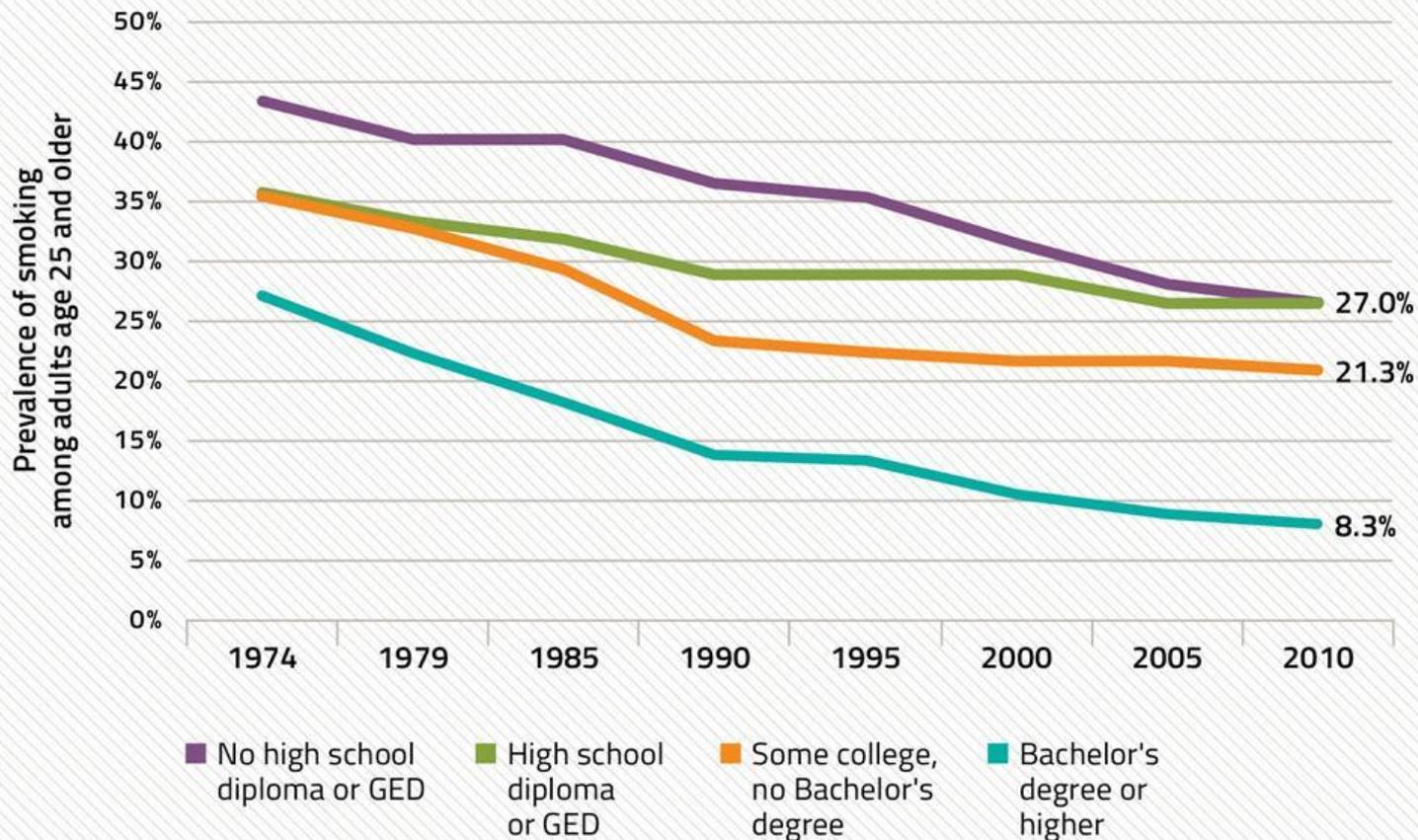
Widening prevalence of chronic conditions by educational attainment, 1978-2005

By 2011, the prevalence of diabetes had reached 15% for adults without a high school education, compared with 7% for college graduates (NHIS, 2011).



Dots portray prevalence of conditions for adults age 40-64 years with 0-11 years of education (green) and 16 or more years of education (purple). Shaded area between fitted lines shows that these differences widened over time. Reprinted with permission from Goldman and Smith. Soc Sci Med. 2011;72:1728-37.

Smoking rates by educational attainment



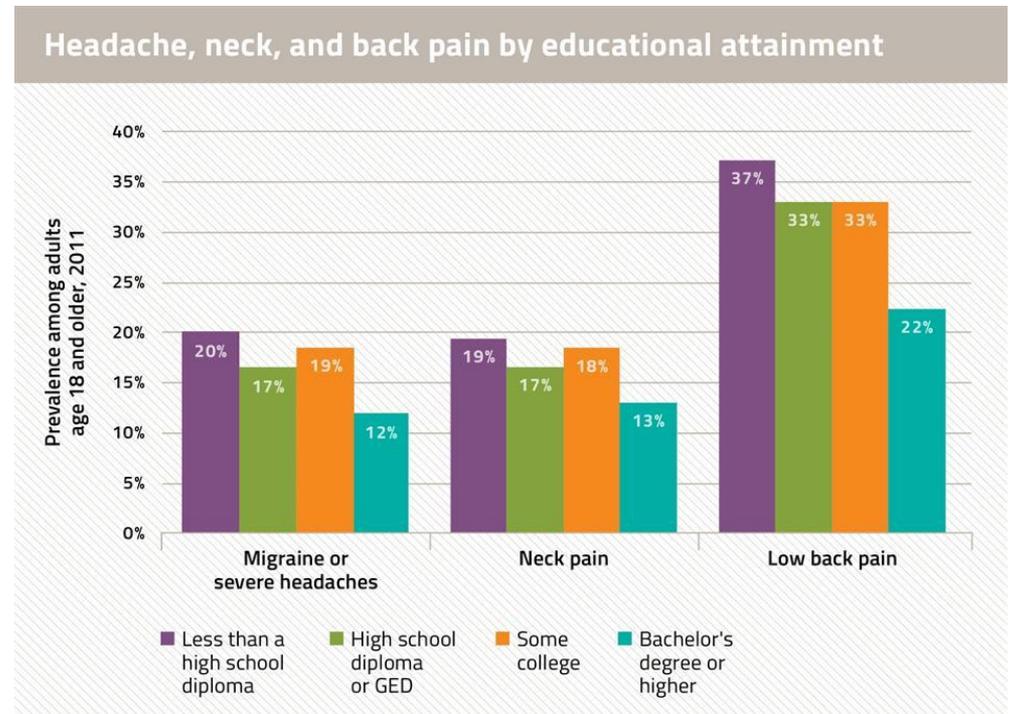
Data from: National Center for Health Statistics. Health, United States, 2011. Table 61. Hyattsville, MD. 2012.

Other health domains linked to education

- Other behaviors: seat belts, smoke detectors
- Biological risk factors: blood pressure, BMI
- Psychosocial assets
- Spillover effects for children, spouses, next generation

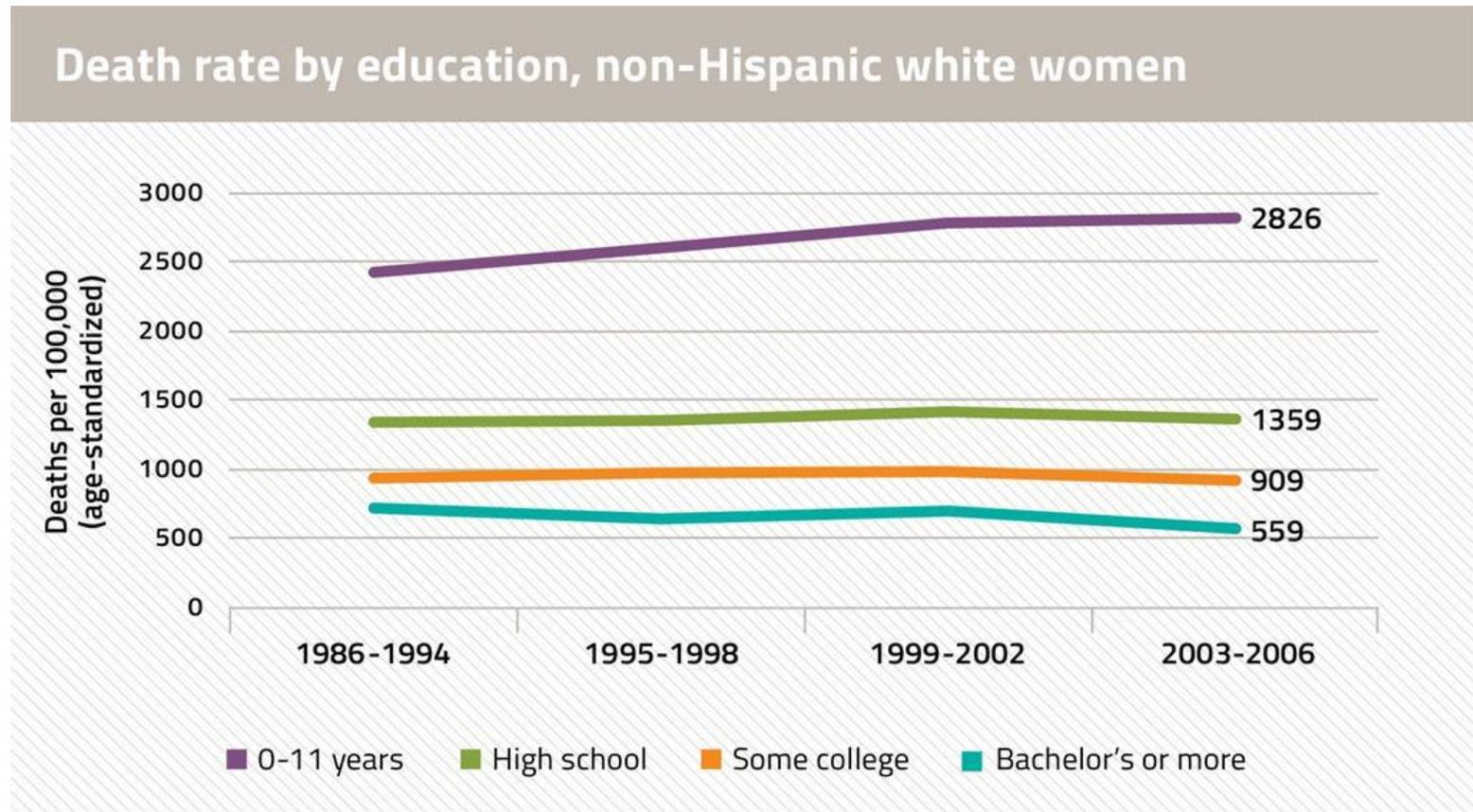
Education and Mental Health

- Stress is higher among poorly educated Americans.
- Compared to people with a Bachelor's degree, people without a high school diploma are more than 4 times as likely to report being nervous and 6 times as likely to be sad “all or most of the time” (NHIS, 2012)



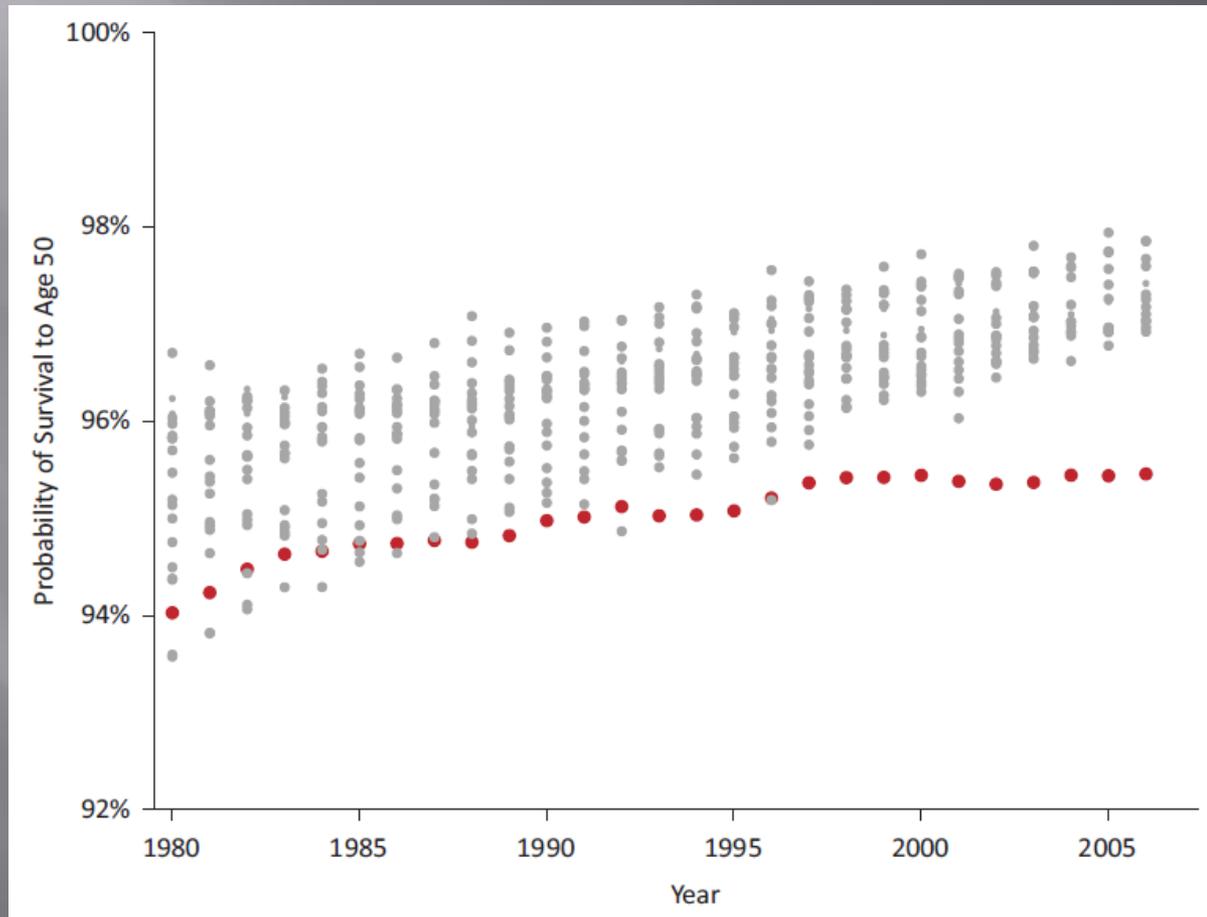
Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. Table 10. National Center for Health Statistics. Vital Health Stat 10(256). 2012.

A Women's Issue

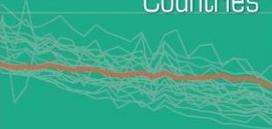


Data obtained from authors as used in Montez and Zajacova. Am J Public Health. 2013 103:473-9.

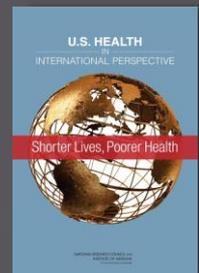
Probability of Survival to Age 50 in 21 High-Income Countries, 1980-2006



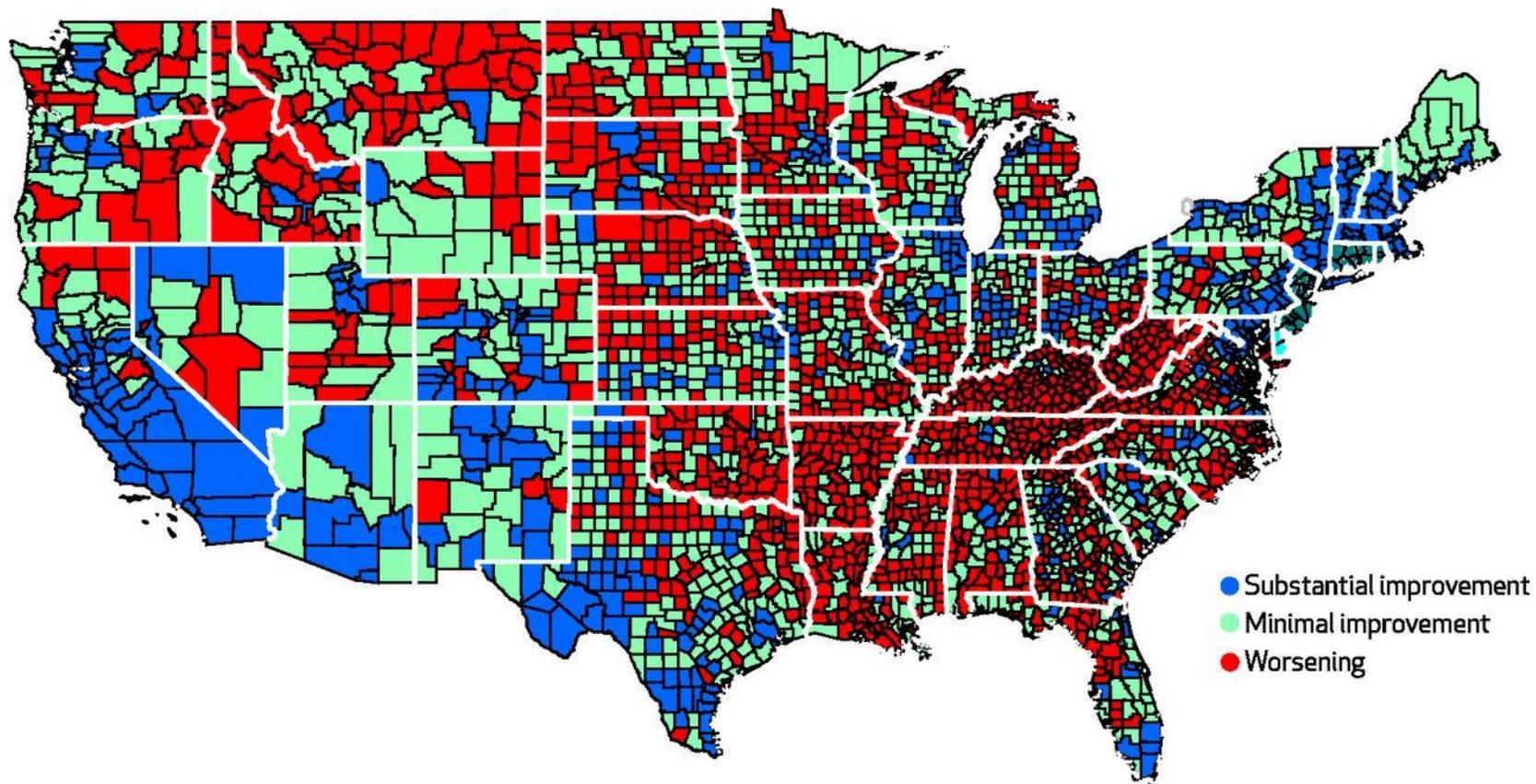
Explaining Divergent
Levels of Longevity
in High-Income
Countries



THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine



Change In Female Mortality Rates From 1992–96 To 2002–06 In US Counties.



Kindig D A , and Cheng E R Health Aff 2013;32:451-458

HealthAffairs

Why Education Matters to Health

Exploring the Causes

Education and Health: New Frontiers*
 Keck Center – Washington, D.C.
 Wednesday June 4, 2014
 National Institutes of Health
 Office of Behavioral and Social Sciences Research

Science Writer: Rose Li and Associates

8:45-9:00a.m. **Welcoming Remarks**
 Robert Kaplan, AHRQ

9:00-9:30a.m. **Keynote Address**
 “Education, Information, and Health”
 Flavio Cunha

9:30a.m.-12:00p.m. **Plenary Presentations**

9:30-10:05a.m. “Epidemiology of Education and Health”
 James House – presenter
 David Kindig – discussant

10:05-10:40a.m. “What Demographic Data and the Big-Pi
 of Patterns and Trends Adds to Our Under-
 Education and Health/Mortality in the U.S.”
 Robert Hummer – presenter
 Adam Gamoran – discussant

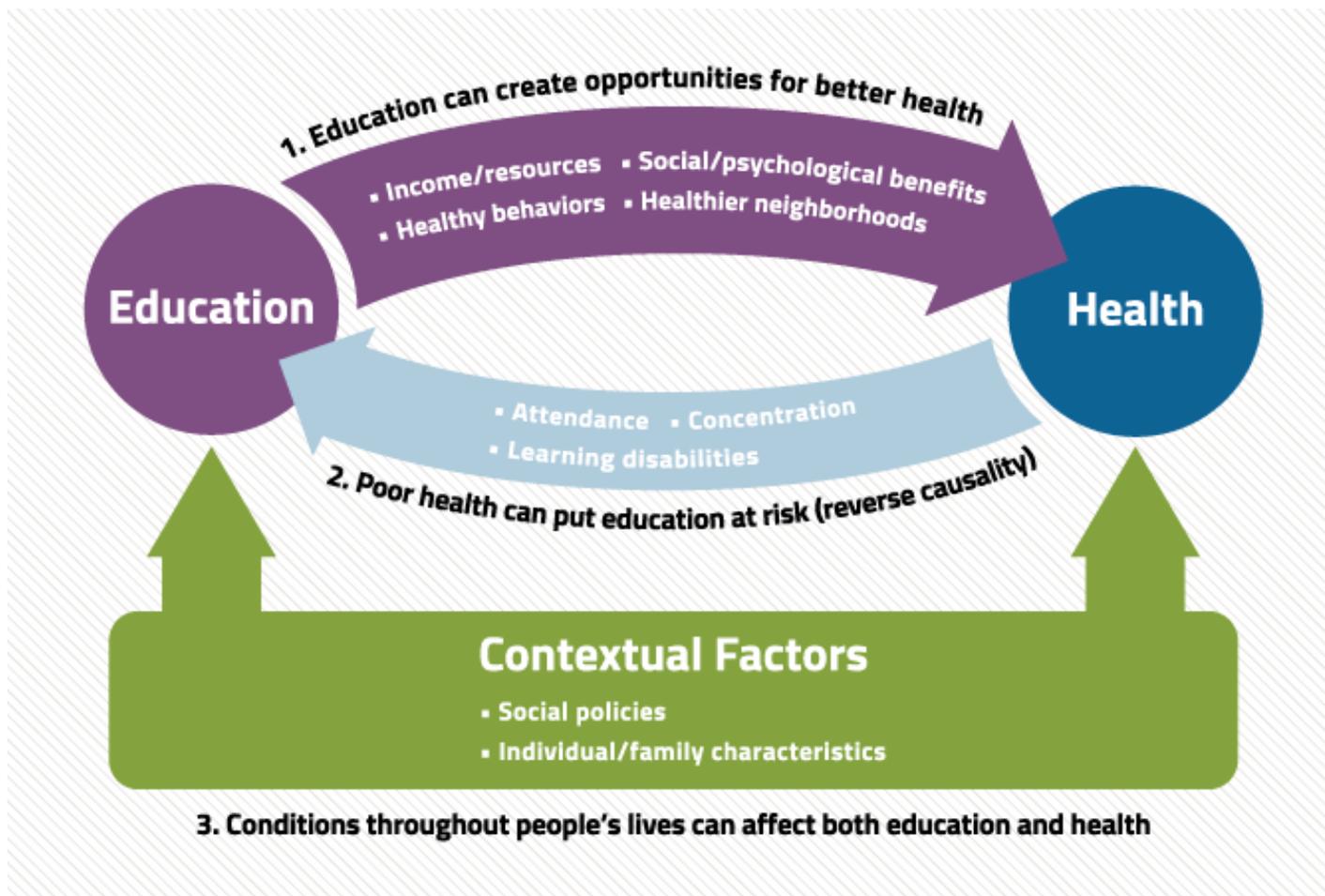
10:40-10:50 a.m. Break

10:50-11:25a.m. “Natural experimental studies of education on health”
 Mitchell Wong – presenter
 Thomas Brock, IES – discussant

2:15-3:45p.m.	Potential mechanisms: Three Hypotheses
2:15-2:45pm	“Neuroplasticity, Personality, and Habits” Gabriella Conti – presenter Jason Fletcher – discussant Janet Currie - discussant (<i>need to confirm</i>)
2:45-3:15pm	“Drug and alcohol use” Sandro Galea – presenter Wilson Compton, NIDA – discussant
3:15-3:45pm	“Mitigating the Health Consequences of Childhood Disadvantage through Educational Attainment” Jennifer Montez – presenter Eric Grodsky – discussant
3:45-4:00p.m.	Break
4:00-4:30p.m.	Outcomes “What are the educational outcomes? What are health outcomes?” Mark Hayward – presenter Robert Kaplan – discussant

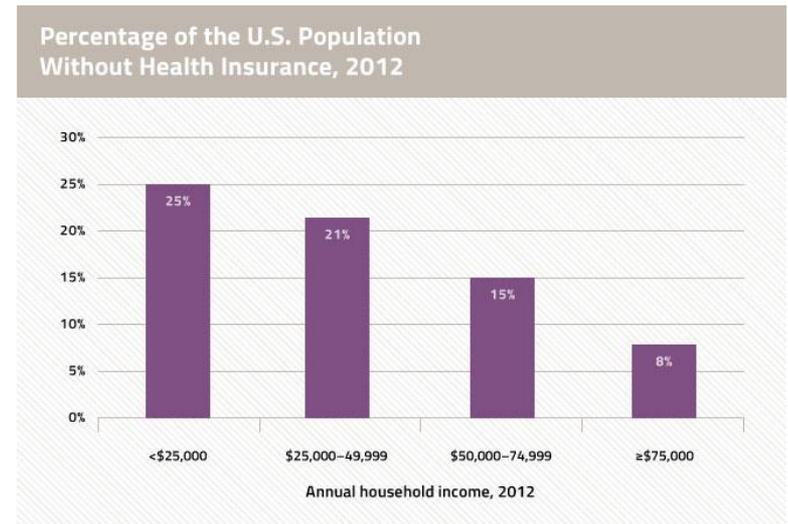
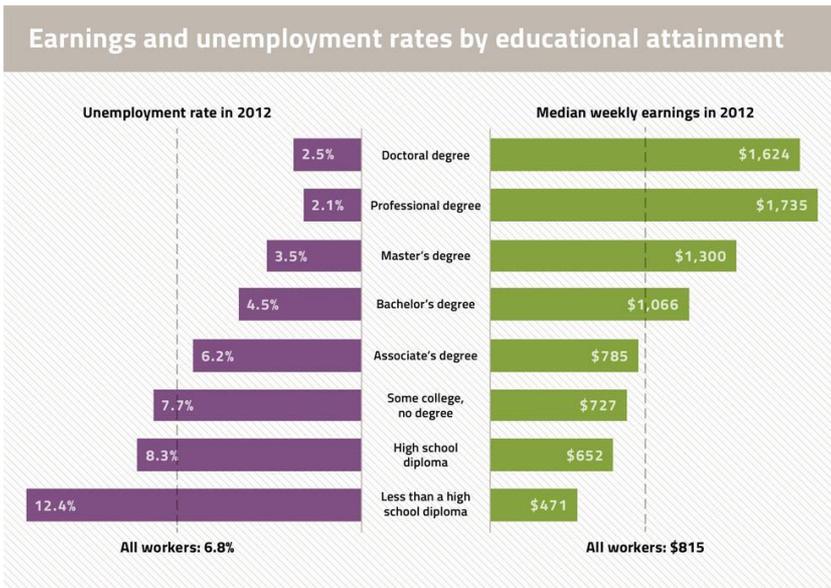
Why Education Matters to Health

Exploring the Causes



The Health Benefits of Education

- Income and resources
 - Better jobs
 - Higher earnings
 - Resources for good health
- Social/psychological benefits
 - Reduced stress
 - Social/psychological skills
 - Social networks and norms
- Health behaviors
 - Knowledge and information
 - Health skills
- Healthier neighborhoods
 - Access to foods, green space, clean air
 - Access to health care services
 - Lower crime and violence
 - Quality schools and job opportunities

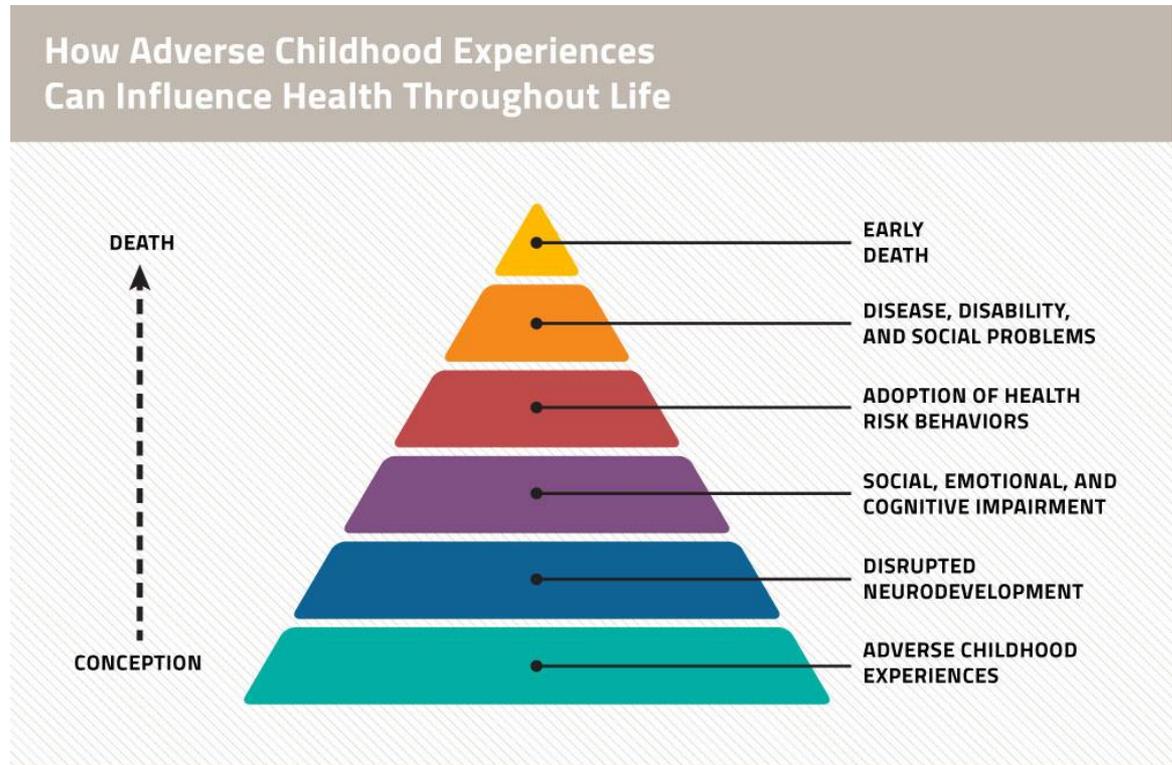


Data from DeNavas-Walt et al. U.S. Census Bureau. *Income, Poverty, and Health Insurance Coverage in the United States: 2012*. U.S. Government Printing Office, Washington, DC, 2013.

Data from: Bureau of Labor Statistics, Current Population Survey. http://www.bls.gov/emp/ep_chart_001.htm

Further Complexities to the Causal Web

- Reverse causality (selection)
- Factors that affect education and health throughout the life course



Adapted from Felitti et al., 1998 and Whitfield CL at <http://www.cbwhit.com/ACEstudy.htm>.

Contextual factors affecting the education-health relationship

- Gender
- Race-ethnicity
- Immigrant status
- Early biological-environment interaction
 - Genetics and epigenetics
 - Gene expression
 - Brain development
 - Telomere changes
 - Etc.
- Childhood health, nutrition
- Stress
- Acute traumas (e.g., divorce)
- Adverse childhood events (ACEs)
- Parental/maternal health
- Socioeconomic status
- Birth cohort
- Demographic trends
- Social capacity for population health
- Political economy
- Selection
- Exposure
- Credentialism

More than an academic question

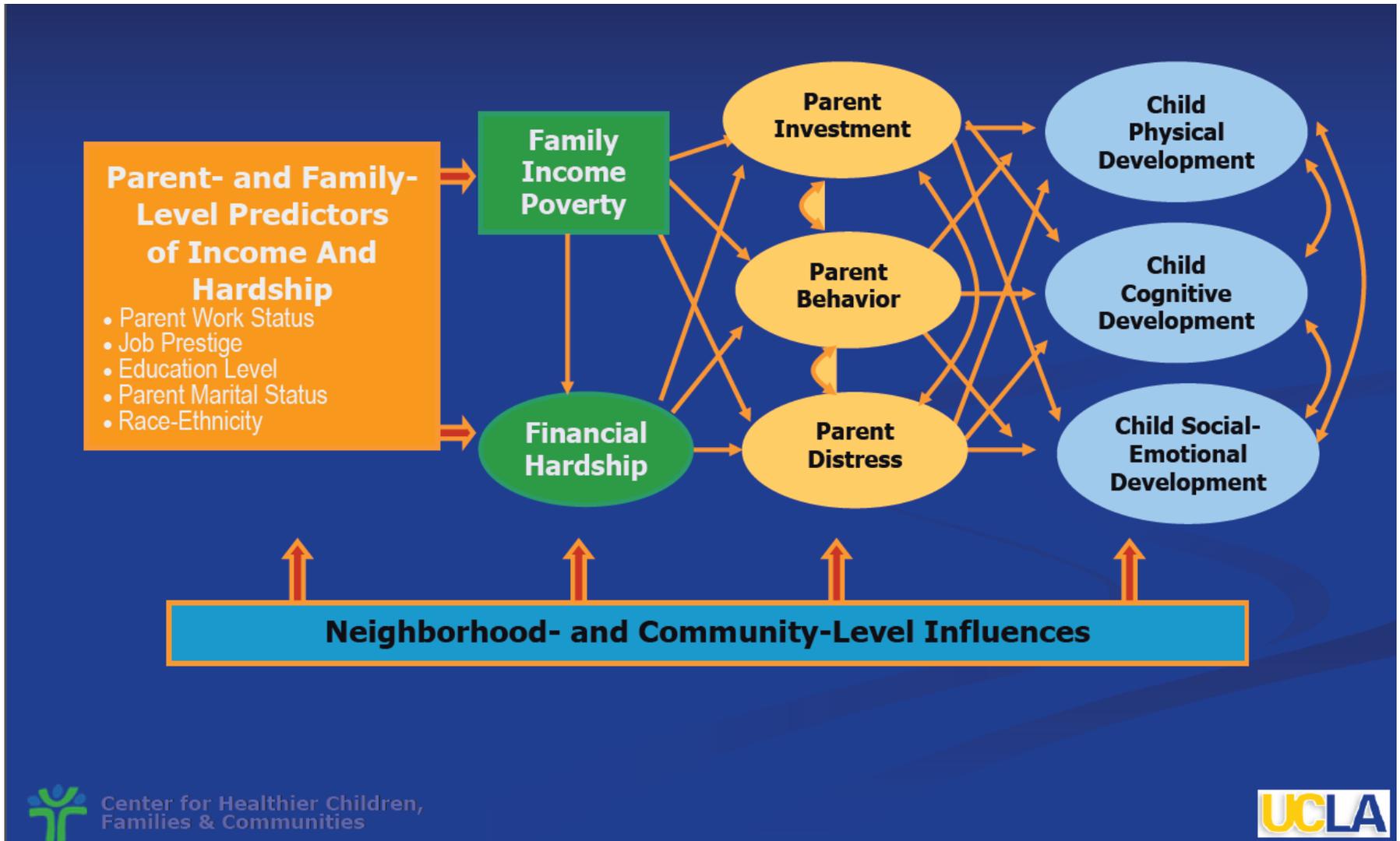
- Other policy sets beyond *education reform* and *health care reform*
- Social and economic policy, jobs and unemployment, community development, income inequality, the opportunity agenda
- The hazard of the academic question

How important is education to health?



The association between the jet engine and successful flight is confounded by a high degree of endogeneity with interrelated variables. The jet engine's influence is marginal in studies that adjust for the presence of wings, ailerons, fuel, and a cockpit staffed by pilots. Future research should examine the independent contribution of these endogenous variables to successful flight, but there is currently little evidence to suggest that engine performance is by itself important. Engines that originate in airplane manufacturing plants appear to be important, but the association holds up only for engines attached to wings. The role of the engine remains uncertain.

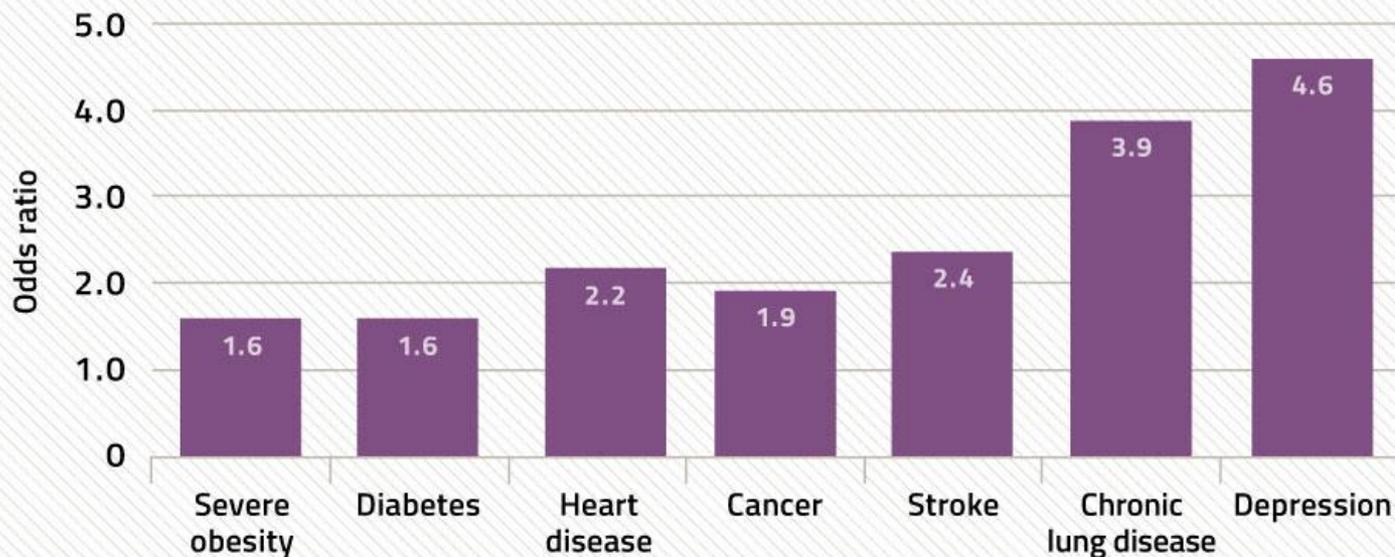




Policy Implications of Adverse Childhood Events

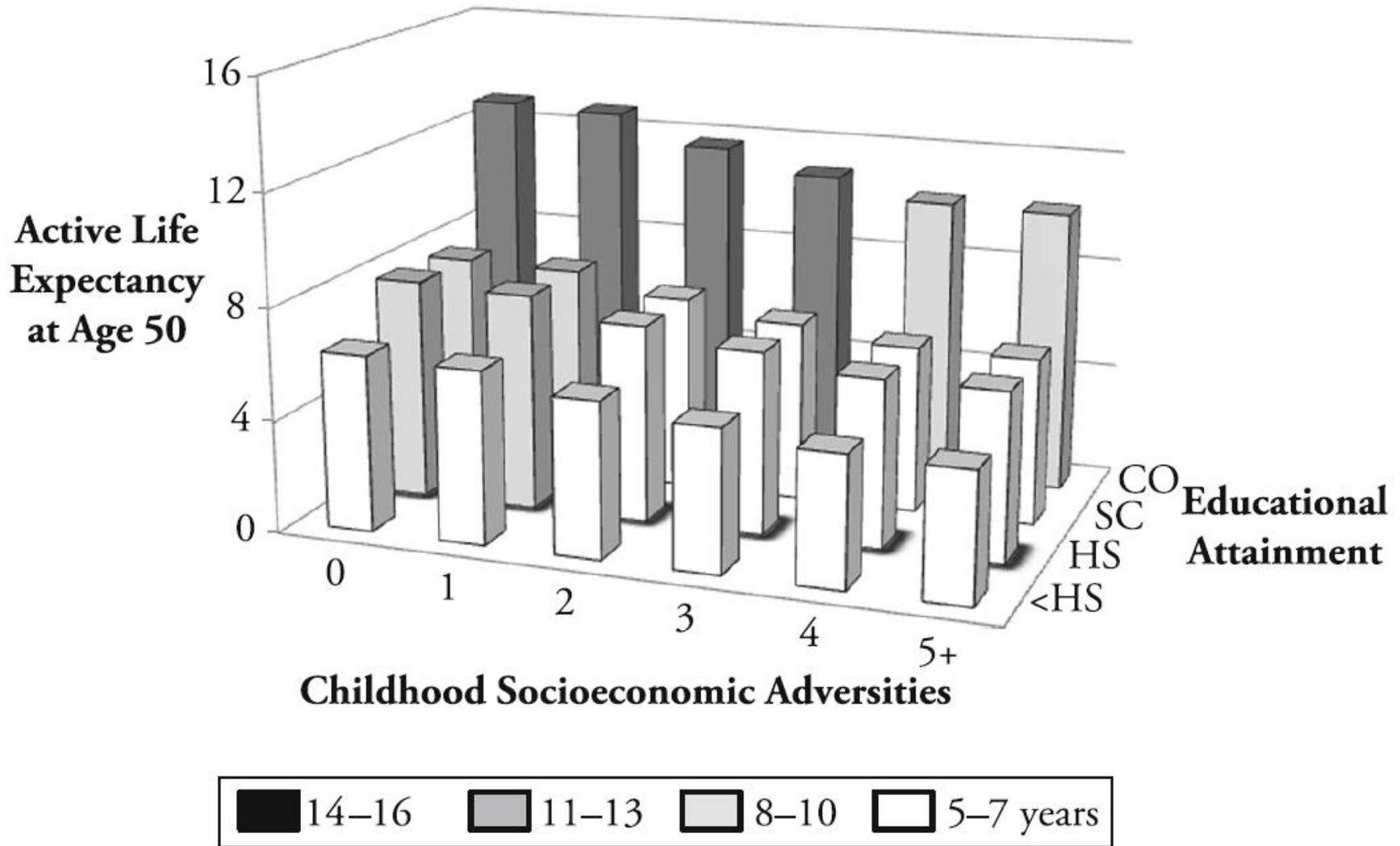
“The Body Doesn’t Forget” (Hayward)

Increased Odds of Adult Diseases After Experiencing Adverse Events* in Childhood



* Odds ratios after exposure to four or more adverse childhood events (see text for description). All odds ratios were statically significant. Data from Adverse Childhood Experiences (ACE) Study. Felitti et al. *Am J Prev Med* 1998;14:245-58.

Men Who Reported Fair or Poor Childhood Health



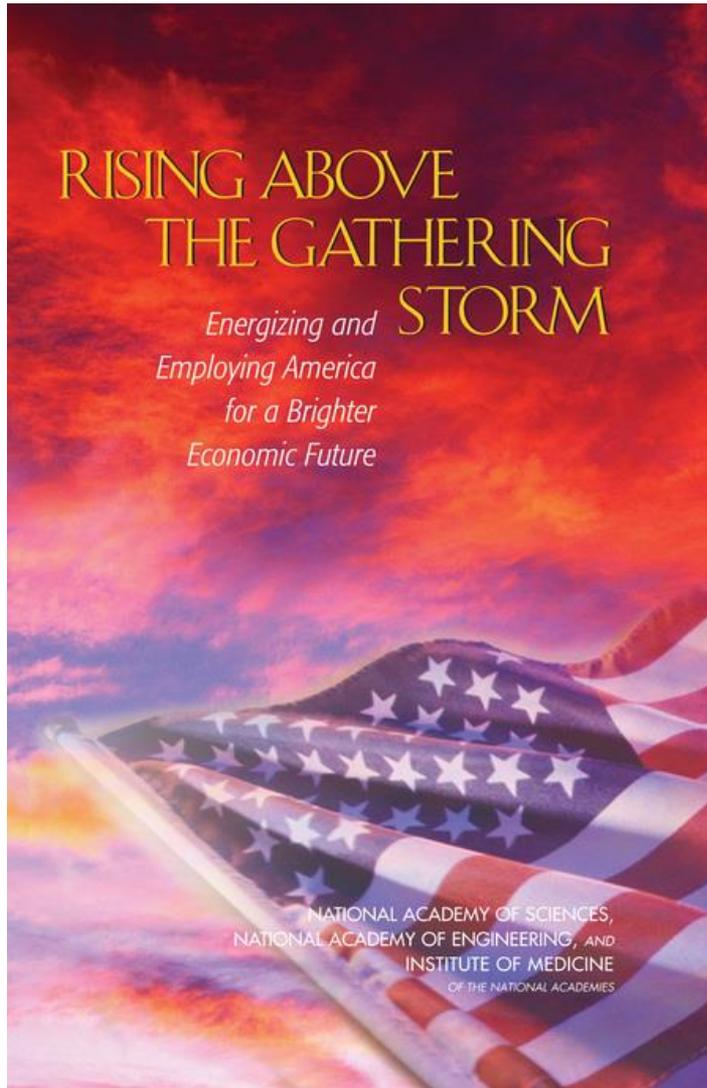
From: Montez and Hayward. *Demography*. 2014;51(2):413-35

Working Together Toward Common Goals

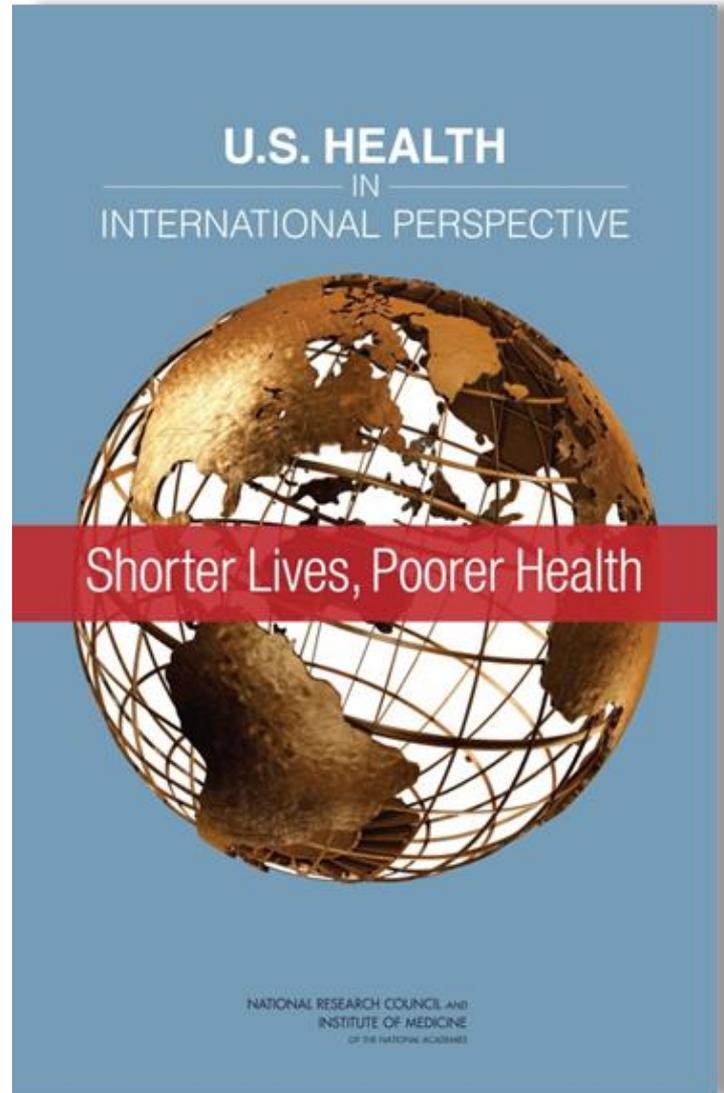


The Problem of Silos

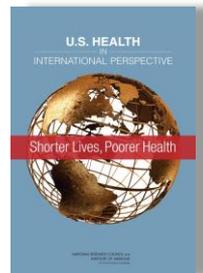
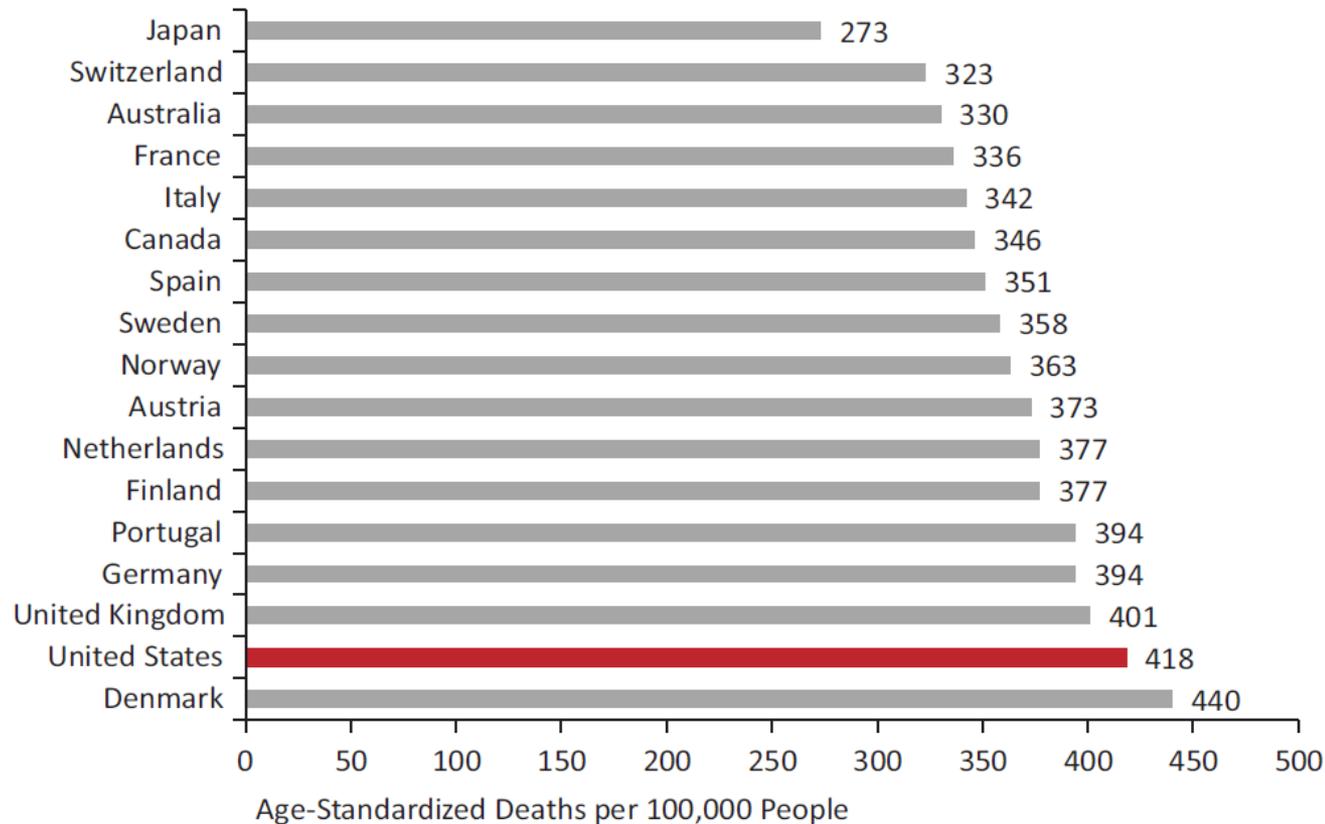
EDUCATION



HEALTH

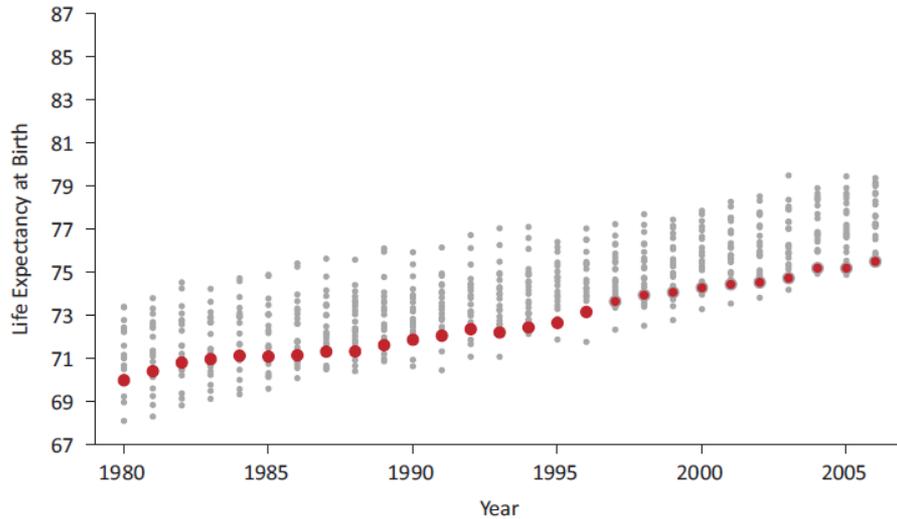


Mortality from Non-Communicable Diseases (NCD), 2008

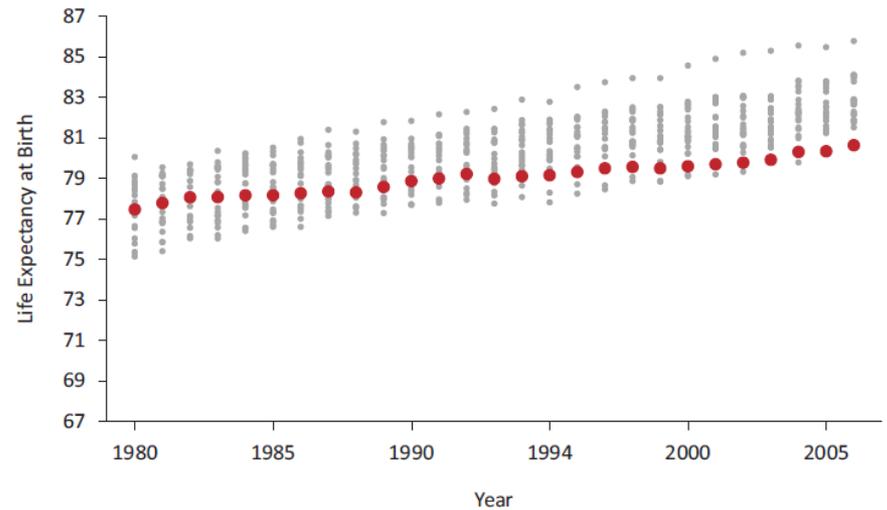


Life Expectancy at Birth in 21 High-Income Countries, 1980-2006

Males



Females

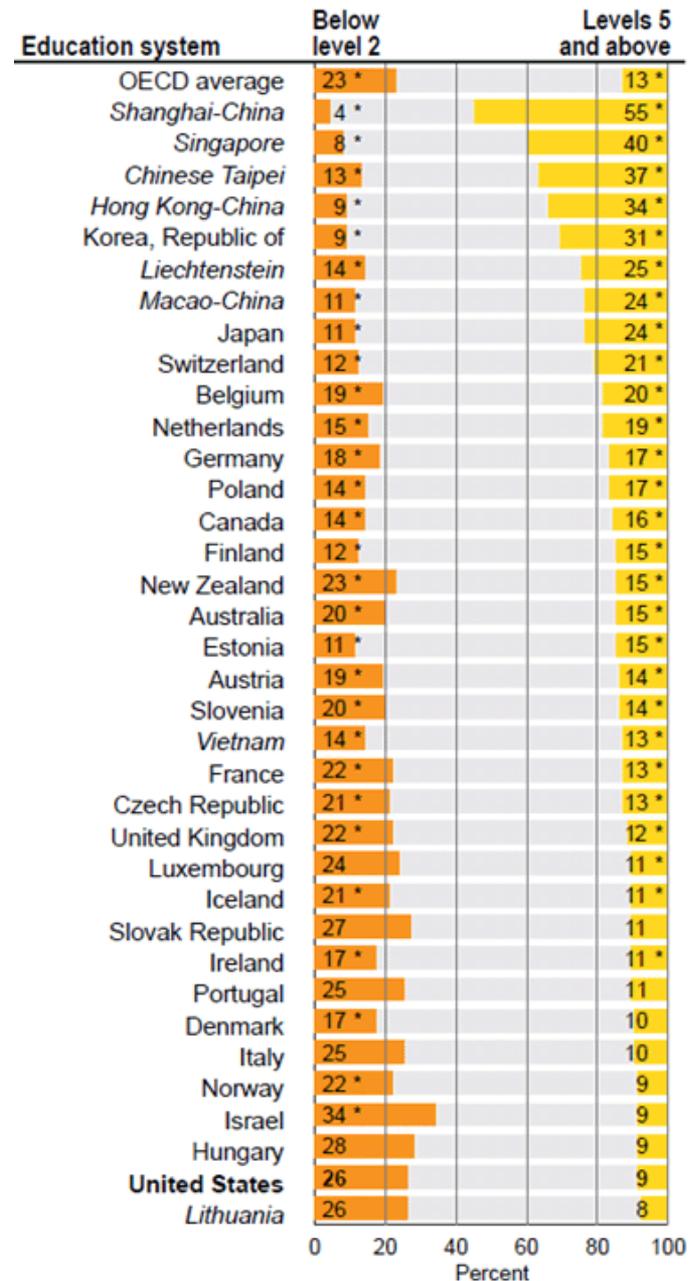


Explaining Divergent Levels of Longevity in High-Income Countries

U.S. Test Scores are Not Competitive

Percentage of 15-year-old students performing at PISA mathematics literacy proficiency levels 5 and above and below level 2, by education system: 2012

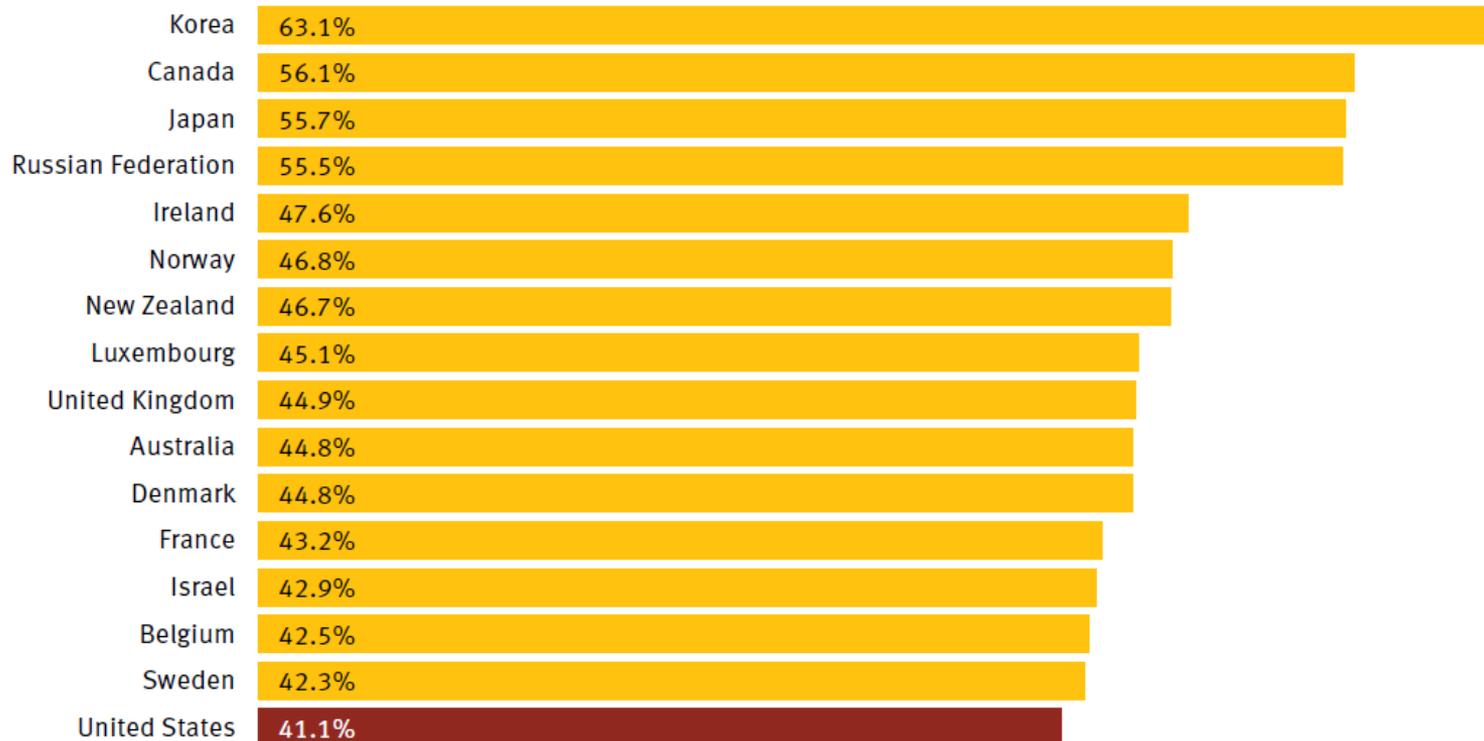
http://nces.ed.gov/surveys/pisa/pisa2012/pisa2012highlights_3_1.asp



A College Education is Less Accessible

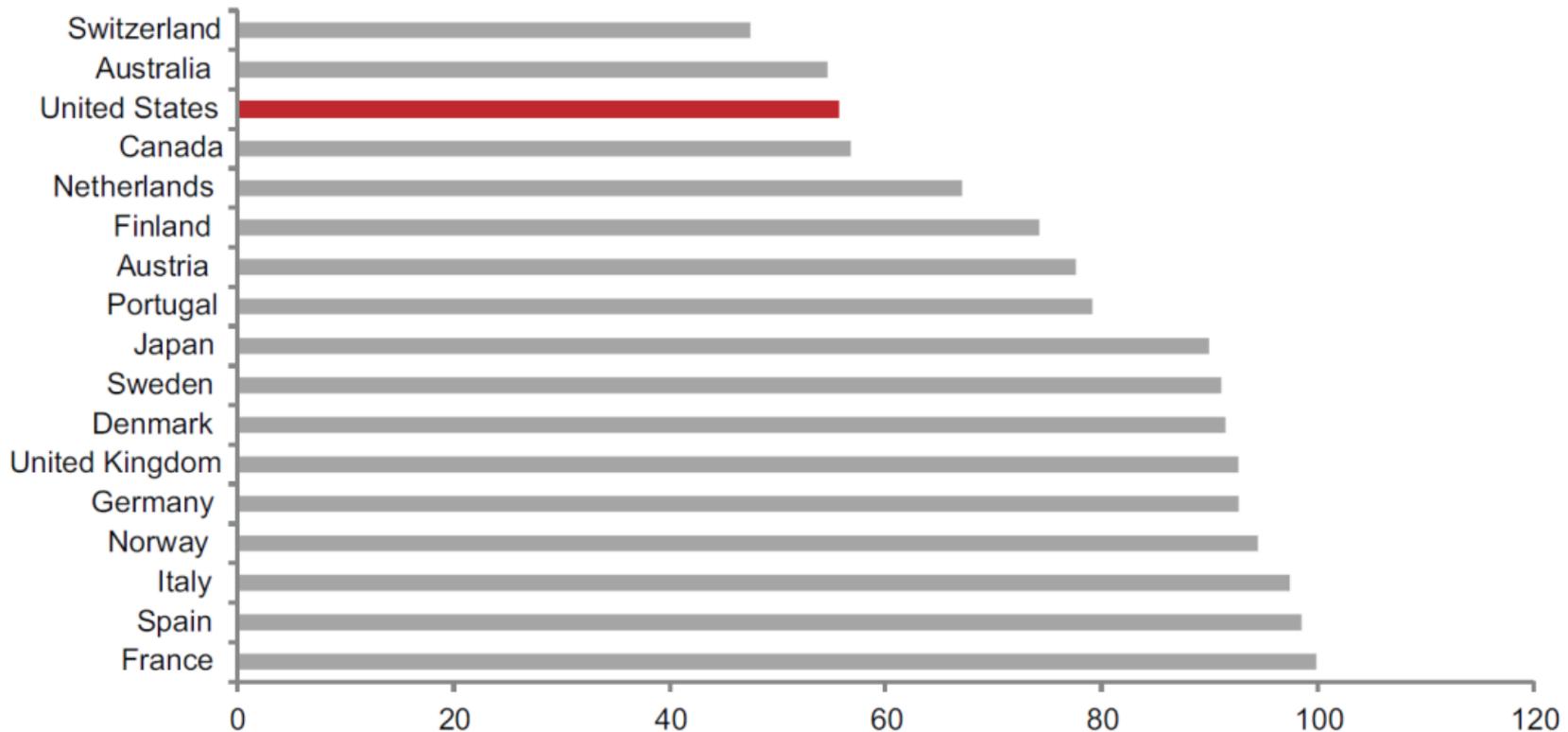
Percentage of 25-34 year-olds with college education, 2009

OECD countries



Source: Organisation for Economic Co-operation and Development (OECD), *Education at a Glance* (Paris: OECD, 2010).

Few U.S. Children Enrolled in Preschool



Source: OECD, 2008

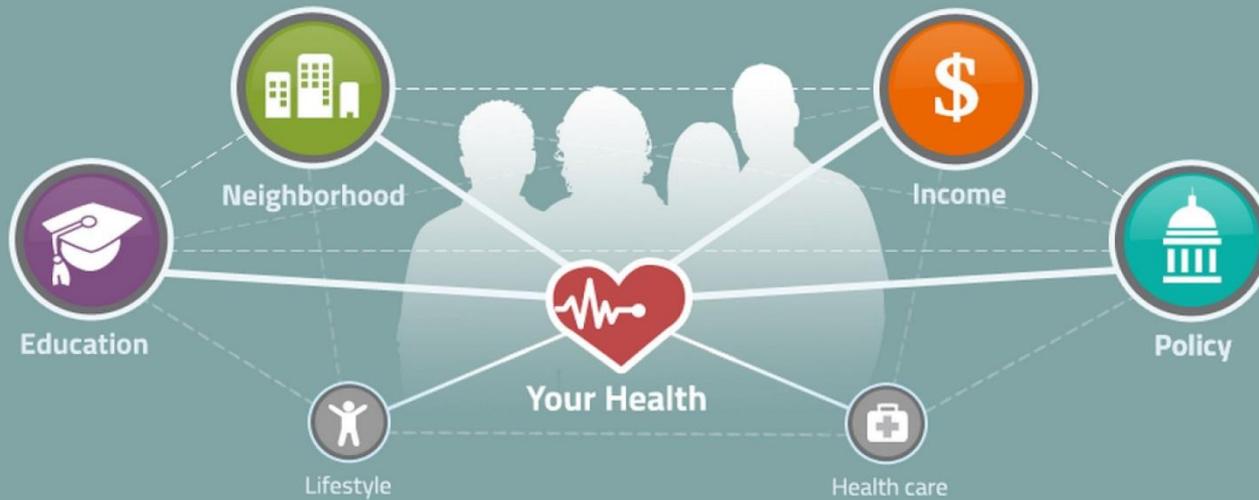


Center on Society and Health



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- What we do
- The Center in the News
- Our Products
- Contact us

CONNECT THE DOTS
and you'll see the bigger picture



The Education and Health Initiative

- Funded by RWJF (Grant No 70277, 2012-2014)
- Aims:
 - To raise awareness among policymakers in education and health about the health implications associated with educational attainment
 - To develop materials that are useful in “connecting the dots”
 - To elicit feedback from policymakers on how to improve the quality of the communication

Products

1. Education and Health: It Matters More Now
2. Unpacking the Relationship: A View from the Inner City
3. Necessary But Not Sufficient: Why Access to Health Care Alone...
4. The Return on Investment

“Connecting the Dots” Sweet Sauce



Building the Target List

The Matrix

	National	State	Local
Governmental	√	√	√
Private sector and community	√	√	√

Target Audiences

- Capitol Hill
- Executive branch
- National organizations
- Health care systems
- Businesses and employers
- Foundations
- Media
- Academia
- State and local outreach

Understanding the Policy World: Education Policy

Alliance for a Healthier Generation

- 7-11-13 meeting

American Federation of Teachers

- 7-11-13 meeting

Association for Supervision and Curriculum Development

- 7-11-13 meeting

Committee for Education Funding

- Meeting with executive director, 9-4-13
- Presentation to member organizations, 11-22-13

College Board

- Call with director of Federal Relations, 10-30-13
- Education and Health materials shared with team

Council of Chief State School Officers

- 10-11-13 call

Generations United

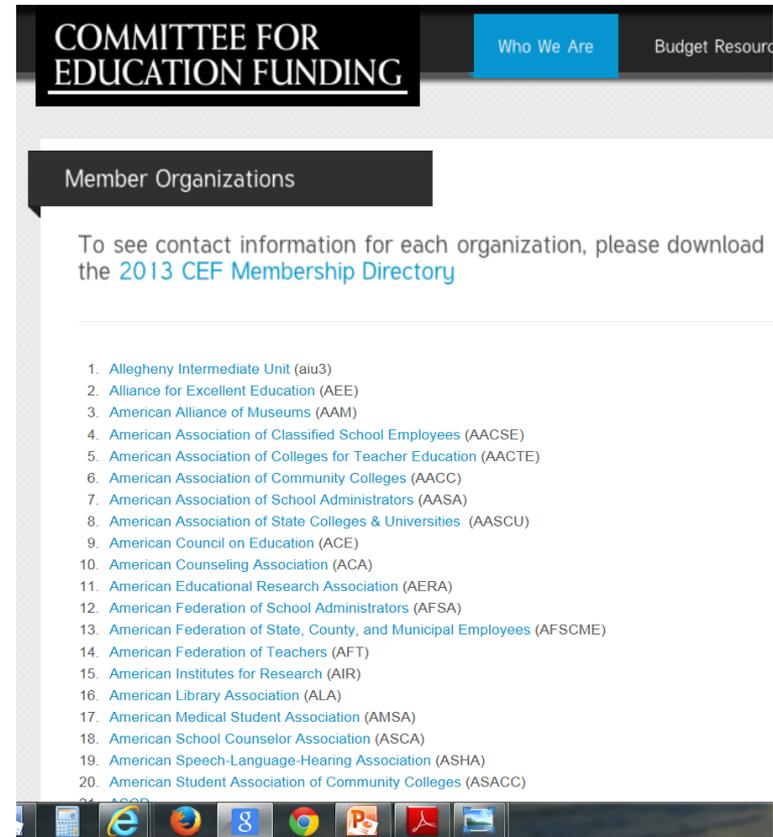
- 9-4-13 meeting

National Association of State Boards of Education

- 7-10-13 meeting

National Education Association

- Presentations, 7-11-13 and 11-22-13
- Manager of Programs NEA Health Information Network, 6-12-13 call



COMMITTEE FOR EDUCATION FUNDING

Who We Are Budget Resources

Member Organizations

To see contact information for each organization, please download the [2013 CEF Membership Directory](#)

1. Allegheny Intermediate Unit (aiu3)
2. Alliance for Excellent Education (AEE)
3. American Alliance of Museums (AAM)
4. American Association of Classified School Employees (AACSE)
5. American Association of Colleges for Teacher Education (AACTE)
6. American Association of Community Colleges (AACCC)
7. American Association of School Administrators (AASA)
8. American Association of State Colleges & Universities (AASCU)
9. American Council on Education (ACE)
10. American Counseling Association (ACA)
11. American Educational Research Association (AERA)
12. American Federation of School Administrators (AFSA)
13. American Federation of State, County, and Municipal Employees (AFSCME)
14. American Federation of Teachers (AFT)
15. American Institutes for Research (AIR)
16. American Library Association (ALA)
17. American Medical Student Association (AMSA)
18. American School Counselor Association (ASCA)
19. American Speech-Language-Hearing Association (ASHA)
20. American Student Association of Community Colleges (ASACC)

An Employer Perspective

BUSINESS CONCERNS

- Need for an educated and skilled workforce
- Rising health care costs
- Absenteeism
- Presenteeism
- Decreased workforce productivity
- Customers in economic distress

Table 2. Percentage of U.S. adults aged 18 and older with difficulties in physical functioning, 2011

Activities that are very difficult or cannot be done at all	Less than a high school diploma	High school diploma or GED	Some college	Bachelor's degree or higher
Any physical difficulty	28.0%	20.5%	17.7%	9.0%
Difficulty walking quarter of a mile	15.4%	9.9%	7.5%	3.6%
Difficulty climbing 10 steps	12.0%	6.8%	5.5%	2.3%
Difficulty standing for 2 hours	18.1%	12.4%	9.9%	5.5%
Difficulty sitting for 2 hours	7.0%	4.4%	3.5%	1.1%
Difficulty stooping, bending, or kneeling	16.8%	12.1%	10.1%	4.8%
Difficulty grasping or handling small objects	3.3%	2.4%	1.9%	0.9%
Difficulty lifting or carrying 10 pounds	10.2%	5.9%	4.3%	1.9%
Difficulty pushing or pulling large objects	14.1%	8.9%	6.9%	2.9%

Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. Table 19. National Center for Health Statistics. Vital Health Stat 10(256). 2012.

Virginia Chamber of Commerce Blueprint

Goal: Use innovation to transform Virginia’s health care system into a competitive advantage through improvements in population health, cost, access and quality.

Industry Council Chair: Tonya Mallory, President & CEO of HDL, Inc.

Population Health and Wellness	Quality, Access, and Cost	Health Workforce	Innovation
<ul style="list-style-type: none"> Focus on population health as it is among Virginia’s weakest attributes on Virginia Performs, ranking middle of the pack in most indicators. Use population health improvements as a key lever in cost containment and a driver for savings. Invest in data analytics to take advantage of Virginia’s emerging data infrastructure (HIE and APCD). This is necessary to ensure transparency, engaged consumers, cost-effective care, and accountability. Invest in prevention and pursue high-value treatment of chronic disease, behavioral health, and special needs populations. Promote public policy and private efforts to improve individual wellness and population health, including but not limited to managed care for public health program participants, employee wellness efforts, or community health efforts. 	<ul style="list-style-type: none"> Implement Medicaid reform and expansion to help reduce cost shifting onto insured patients and employers for the cost of treating the uninsured. Focus on improving the value of care – defined as quality and cost. Use payment reform as a key lever to improve value for both public and private payers. Empower health care consumers and/or their responsible decision-makers with information to enable appropriate and cost-effective care decisions in partnership with their providers. Support expanded access to care as a means for controlling costs and improving quality, recognizing that the hospital emergency room is the least appropriate and most expensive place to provide routine access to care. Strengthen the individual and small group insurance market through public and private innovation. 	<ul style="list-style-type: none"> Solving our growing health workforce challenges will improve the state’s competitiveness and strengthen our health care system. Address the need for additional clinical training slots - the key challenge to address short and long-term needs. Develop more team-based models of care to accommodate the needs of a population that is both growing and aging. Integrate returning veterans into the health workforce - a key opportunity to both strengthen and diversify it. 	<ul style="list-style-type: none"> Invest in efforts to drive multi-stakeholder, system-level reform, such as the Virginia Center for Health Innovation’s Health Innovation Plan. This is important for promoting long-term improvement in our health care system. Replicate best practice innovations within Virginia’s existing health care system. Recognize innovation as an important component in transforming our state’s health care system into a competitive advantage for Virginia. Encourage employer led health care coalitions on a regional basis.

Does the ROI Take Too Long?

RESEARCH ARTICLES

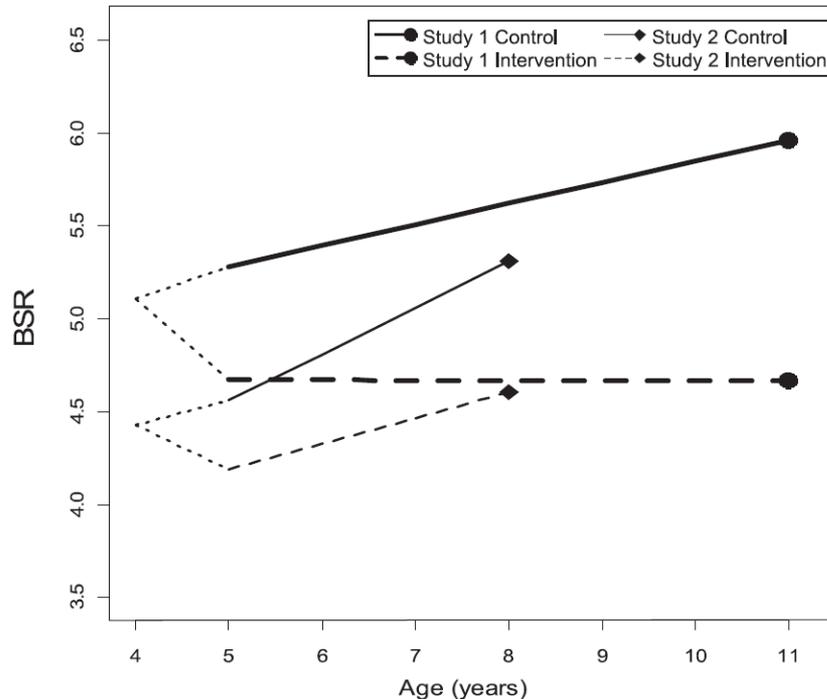
Early Childhood Investments Substantially Boost Adult Health

Frances Campbell,¹ Gabriella Conti,² James J. Heckman,^{3,4,5*} Seong Hyeok Moon,³ Rodrigo Pinto,³ Elizabeth Pungello,¹ Yi Pan¹

High-quality early childhood programs have been shown to have substantial benefits in reducing crime, raising earnings, and promoting education. Much less is known about their benefits for adult health. We report on the long-term health effects of one of the oldest and most heavily cited early childhood interventions with long-term follow-up evaluated by the method of randomization: the Carolina Abecedarian Project (ABC). Using recently collected biomedical data, we find that disadvantaged children randomly assigned to treatment have significantly lower prevalence of risk factors for cardiovascular and metabolic diseases in their mid-30s. The evidence is especially strong for males. The mean systolic blood pressure among the control males is 143 millimeters of mercury (mm Hg), whereas it is only 126 mm Hg among the treated. One in four males in the control group is affected by metabolic syndrome, whereas none in the treatment group are affected. To reach these conclusions, we address several statistical challenges. We use exact permutation tests to account for small sample sizes and conduct a parallel bootstrap confidence interval analysis to confirm the permutation analysis. We adjust inference to account for the multiple hypotheses tested and for nonrandom attrition. Our evidence shows the potential of early life interventions for preventing disease and promoting health.

Noncommunicable diseases are responsible for roughly two-thirds of worldwide deaths (1). Most policies that combat disease currently focus on treatment after disease occurs and on reducing risk factors in adult life. Recent discussions of effective ways of controlling the soaring costs of the U.S. health care system emphasize tertiary prevention—that is, reducing the worsening of the conditions of those already ill [see, e.g., (2)] and “bending the cost curve” for such treatments (2–5).

ABC was designed as a social experiment to investigate whether a stimulating early childhood environment could prevent the development of mild mental retardation in disadvantaged children. The study was conducted on four cohorts of disadvantaged children born between 1972 and 1977 who were living in or near Chapel Hill, North Carolina. The base sample included 109 families (111 children). Of these 111 children, 57 were assigned to treatment status and 54 were assigned to control status. The intervention consisted of a home visit treatment program to dif-



Brontman et al. Early Childhood Family Intervention and Long-term Obesity Prevention Among High-risk Minority Youth. *Pediatrics* 2012;129:e621–e628

Science, March 28, 2014, vol. 343

New Research and Tools Demonstrate Economic Importance of Early Childhood Programs

ReadyNews Issue 14(5)

New 60-Second Video Shows Support for Preschool from Unexpected Messengers

A business partnership for
early childhood and economic success

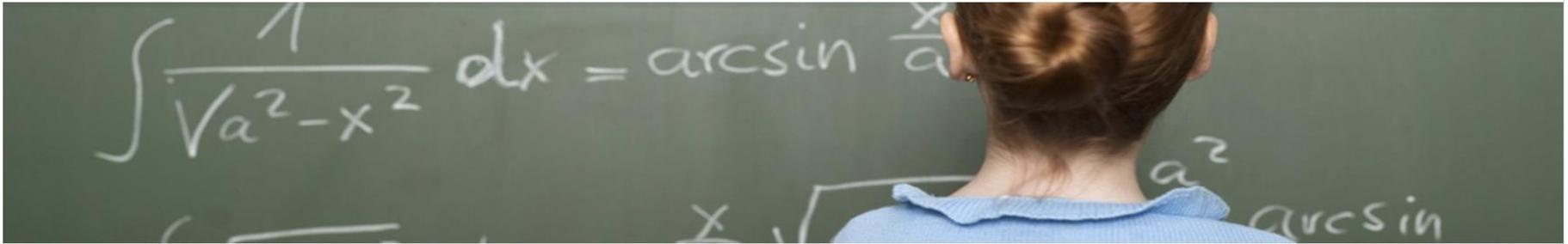
ReadyNation 

Championing Success: Business Organizations for Early Childhood Investments

Today more than ever, businesses need employees who are well prepared to succeed in the labor market. But the current workforce pipeline is not sufficient—not for businesses who need well-prepared employees, not for young people who need good jobs, and not for the nation that needs a growing economy.

Pennsylvania Businesses

Math and science › Change the Equation ›



Change the Equation

The Center on Education and the Workforce [reports](#) that by 2018 eight million U.S. jobs will be available in fields relating to science, technology, engineering and math (STEM).

Engagement of the Financial Industry



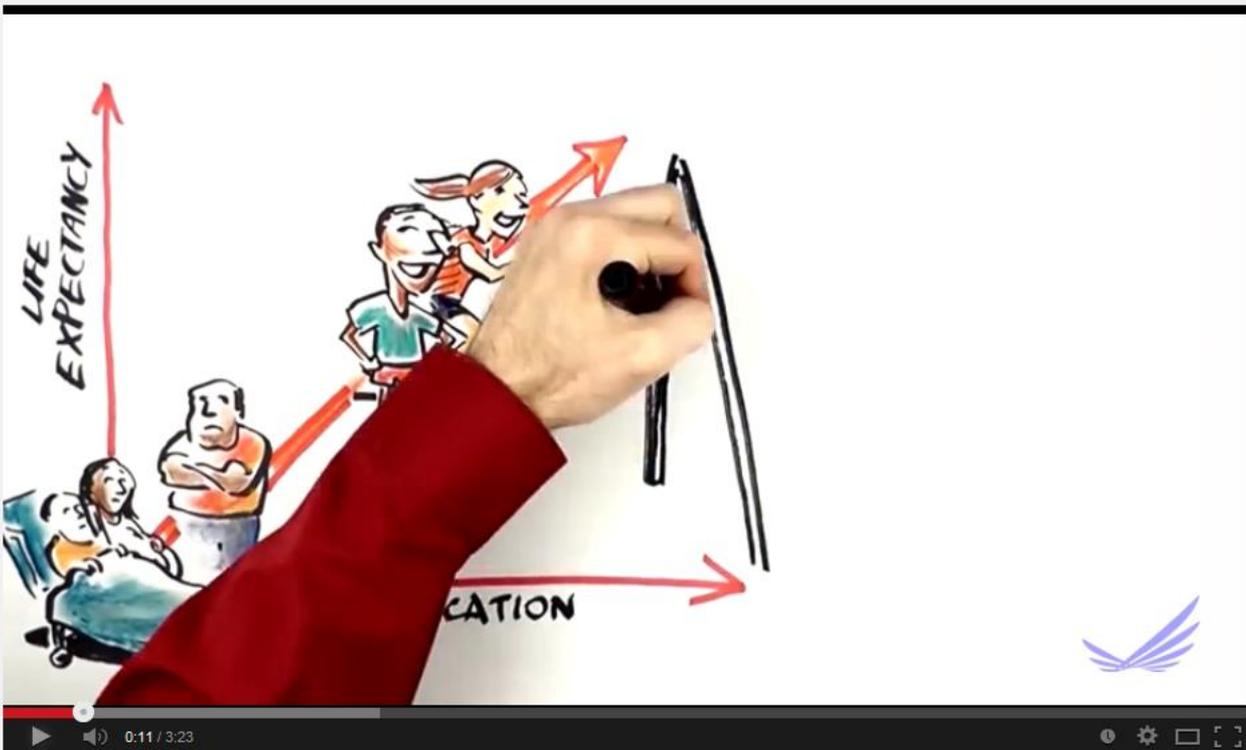
FEDERAL RESERVE BANK OF SAN FRANCISCO
& LOW INCOME INVESTMENT FUND

Strategic Communication



Framing the Message By Audience

1. Awareness: *is there a connection?*
2. Insight: *how much does it matter?*
3. Action: *what should I do?*



Education: It Matters More to Health Than Ever Before



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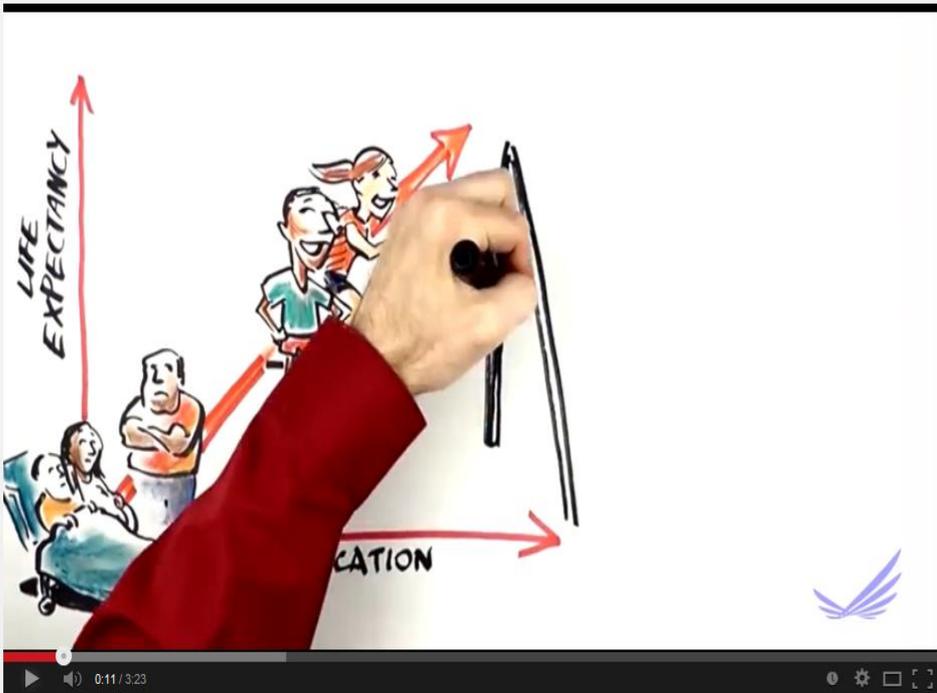
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Education: It Matters More to Health than Ever Before

Americans with fewer years of education have poorer health and shorter lives, and that has never been more true than today. In fact, since the 1990s, life expectancy has decreased for people without a high school education, especially white women.

Education is important not only for higher paying jobs and economic productivity, but also for saving lives and saving dollars.

JANUARY 2014



Robert Wood Johnson Foundation



This issue brief, created with support from the Robert Wood Johnson Foundation, is aimed at helping those working in education and those working in health understand the connections between the two. More detailed information, including references, is available on our website at www.societyhealth.vcu.edu.



Why Education Matters to Health: Exploring the Causes

Americans with more education live longer, healthier lives than those with fewer years of schooling (see [ISSUE BRIEF #1](#)). But why does education matter so much to health? The links are complex—and tied closely to income and to the skills and opportunities people have to lead healthy lives in their communities.

APRIL 2014



Robert Wood Johnson Foundation



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- **Greater disability:** Americans with less education are more likely to have diminished physical abilities for health reasons or to be disabled. [READ MORE +/-](#)

Americans without a high school diploma are at greatest risk:

- **Death rates are climbing:** Adults with fewer than 12 years of education have been dying sooner since the 1990s. While overall life expectancy has generally increased, it has decreased for whites with fewer than 12 years of education, especially white women. Among whites with less than 12 years of education, life expectancy at age 25 fell by more than three years for men and by more than five years for women between 1990 and 2008.¹ [READ MORE +/-](#)
- **Mortality trends for white women have reversed:** Life expectancy increased for other Americans but has fallen for whites with fewer than 12 years of education, especially white women. Among whites with less than 12 years of education, life expectancy at age 25 fell from 47.0 to 43.6 years for males and from 54.5 to 49.2 years for females.¹ [READ MORE +/-](#)



- **Greater disability:** Americans with less education are more likely to have diminished physical abilities for health reasons or to be disabled. [READ MORE +/-](#)

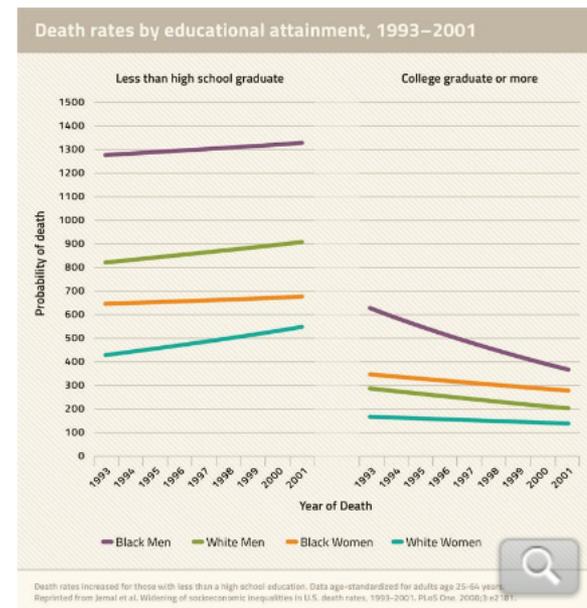
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High school dropouts: a population in declining health. Although health and life expectancy have improved for most Americans over time, the reverse is now happening among those who do not finish high school: *their health is declining*. Increasingly, the loss of a high school diploma marks the loss of a healthy life and matriculation into a population destined for greater illness.

The evidence is building:

- Death rates among adults with less than 12 years of education increased between 1993 and 2001—by about 0.5% among blacks, 1.3% among white males, and 3.2% among white



**UNDERSTANDING THE RELATIONSHIP BETWEEN EDUCATION AND HEALTH:
A REVIEW OF THE EVIDENCE AND AN EXAMINATION OF COMMUNITY
PERSPECTIVES**

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Amber Haley, MPH

Center on Society and Health
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Richmond, Virginia

Draft Manuscript

Prepared for Population Health Meeting

National Institutes of Health

Office of Behavioral and Social Sciences Research

March 26-27, 2014

Community Engagement



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- WCVE (the National Public Radio affiliate in Richmond, VA)
- Local NBC affiliate
- UPI
- *Education Week*
- *Nation Magazine*
- *Huffington Post*
- *Richmond Times- Dispatch*
- *Cincinnati Enquirer*
- NewPublicHealth.org
- Fritzwire, largest national education newsletter with an audience of more than 10,000.
- Bloomberg EDU, podcast
- *Politico* shared materials in morning email digest
- Coalition for Education Funding, brief sent to Hill and Administration contacts , materials shared with a mailing list of 350 contacts at 113 national education organizations, tweeted to 6,000 followers
- National Conference of State Legislatures (NCSL) circulated materials to listserv of education-focused state legislators and staff
- National Governors Association (NGA)
- Senate HELP Committee staff circulated materials to all Democratic legislative aides in the Senate
- American Public Health Association shared information in Public Health Newswire
- National Network of Public Health Institutes shared brief and video through a number of its wires.
- PolicyLink promoted release on social media and distributed information through its Promise Neighborhoods Institute, a network of almost 60 sites
- *Politico* cited in May 2 Morning Education Newsletter.
- Fritzwire announced the issue brief in its daily digest
- Bloomberg EDU and *Nation Magazine* indicated materials would likely be used in future stories
- First item in Trust for America’s Health weekly health reform digest
- Committee for Education Funding included brief in its weekly newsletter to 100+ education organizations
- Commitments for dissemination by
 - National Conference of State Legislatures (via its “Weekly Federal Update”)
 - United Way
 - Education Trust
 - National College Access Network
 - Coalition for Health Funding
 - National Association of Secondary School Principals,
 - Council of Chief State School Officers.
- Social media outreach:
 - RWJF (52,200 followers)
 - RWJF Commission to Build a Healthier America, which has 2,500+ followers
 - National Physicians Alliance (1,730 followers) and its communications VP (6,137),
 - National College Access Network (4,351)
 - Former Senate Majority Leader Bill Frist (8,716);
 - Doctors and advocates Phillip Lederer (3,077), Kat Ellington (3,412), and Dave Chokshi (525).

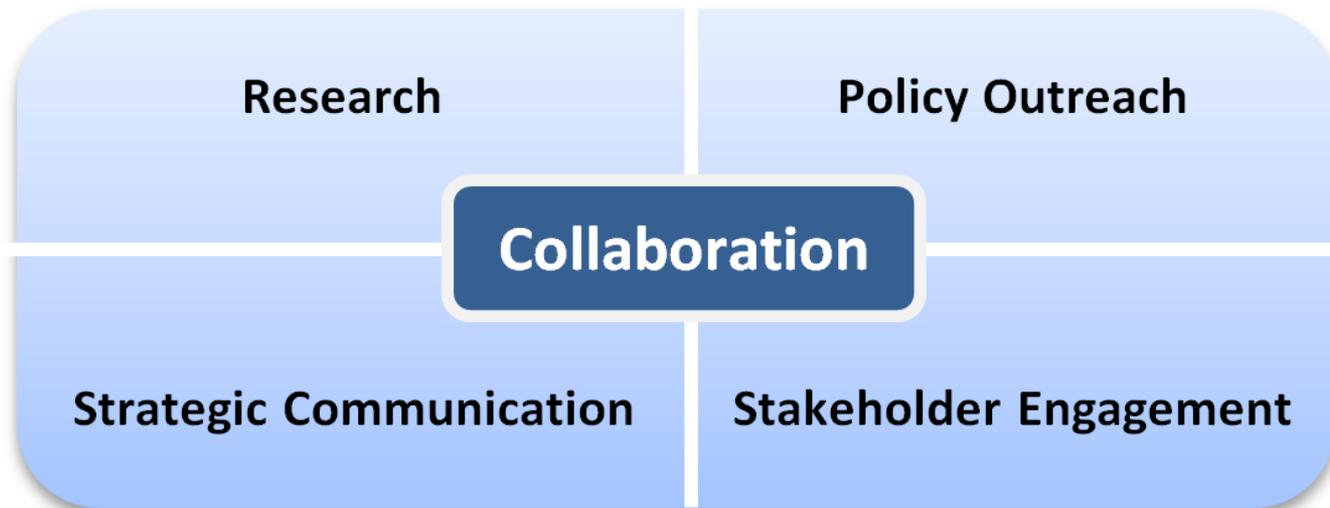
Coordination



Federal government
Data collection
Funding organizations
Research community



Integrated Plan



Contact Information

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- **Engaging Richmond**
 - Team Members

Join the discussion on our BLOG >>

Engaging Richmond

Funded in August 2011 by the National Institutes of Health, Engaging Richmond (ER) is a community-university partnership that was formed to identify and address the health priorities of residents in Richmond's East End. Its mission is to explore social determinants of health through mixed methods research in order to find and propose community-based solutions. Click [here](#) to learn about our team members.

The research team, comprised of community researchers and VCU Center on Society and Health staff

Blog Posts

- [Engaging Richmond Team Members Present at Eastern Sociological Society Annual Meeting in](#)