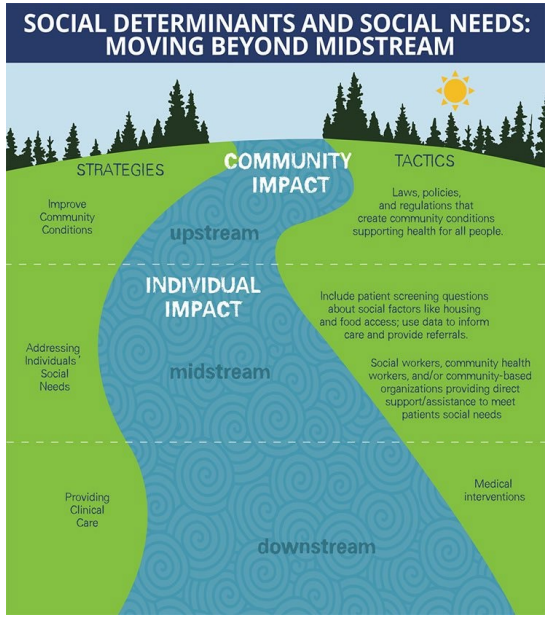


THINK UPSTREAM, ACT LOCALLY:

DO SOMETHING (!) ABOUT SDOH

Len M. Nichols, Ph.D.

Health Policy Institute of Ohio

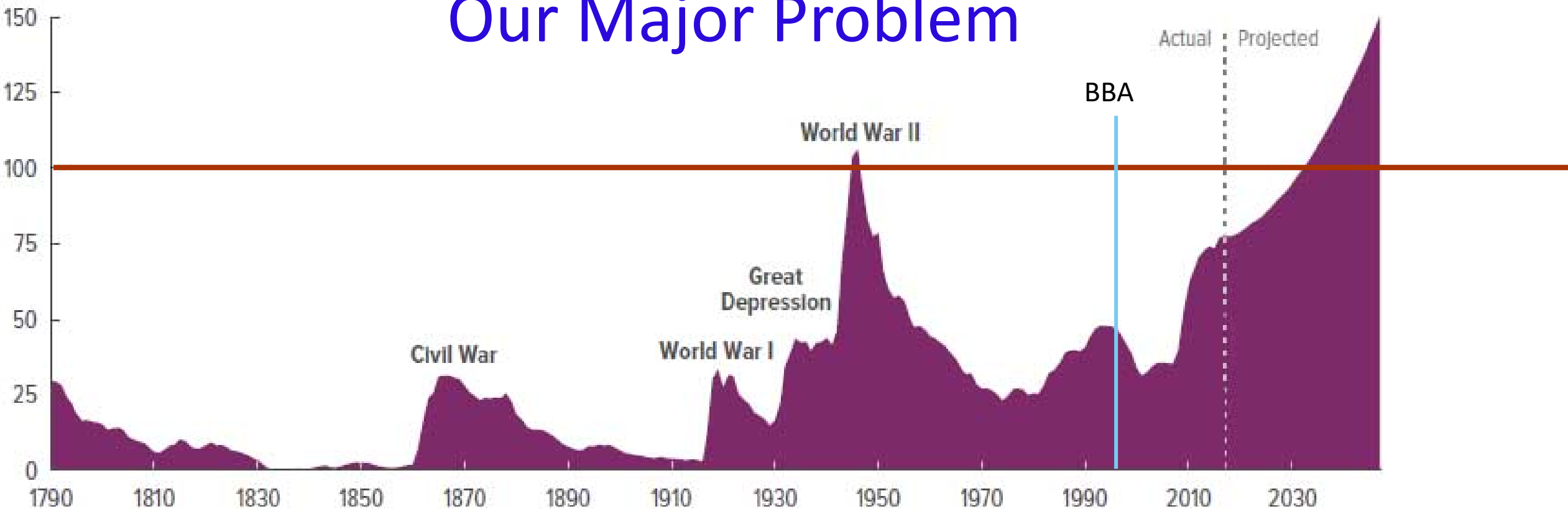
Grove City, OH

April 4, 2019

Overview

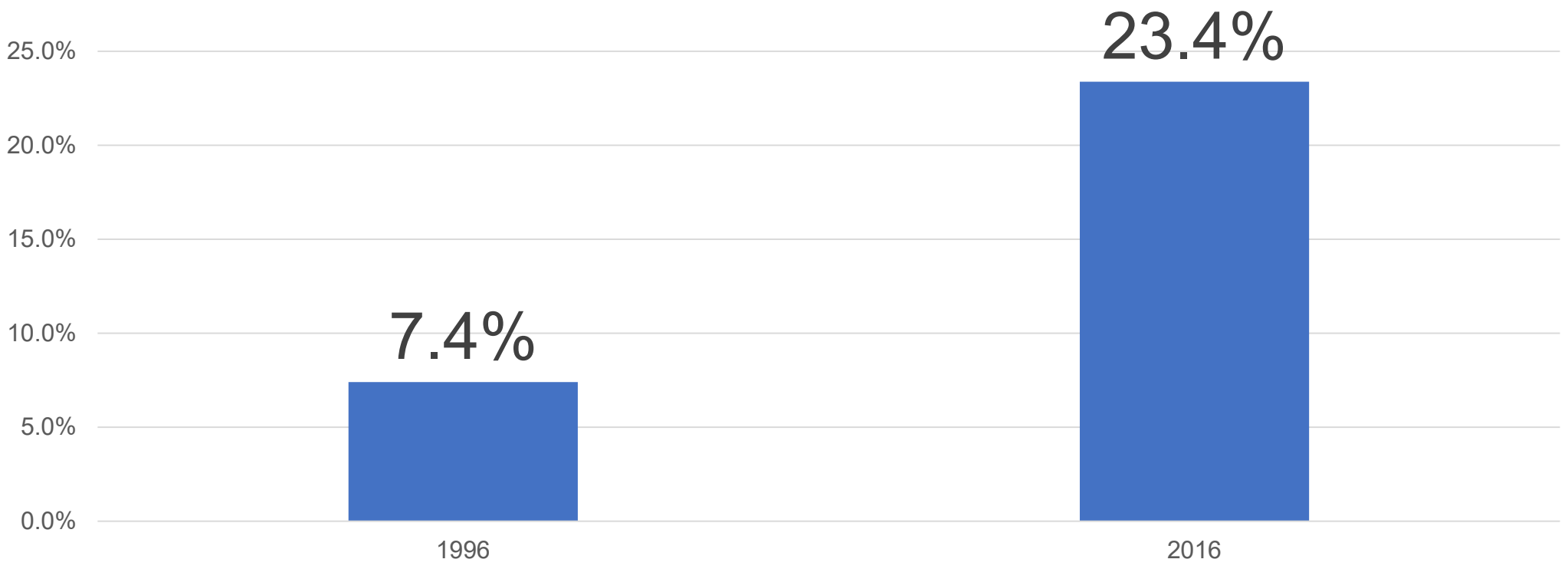
- Why addressing social determinants of health should be part of our policy mix
- Why an economic approach might work best in some communities
- How our suggested approach would work
- Challenges, Next Steps and Questions?

Our Major Problem



Source: Congressional Budget Office. For details about the sources of data used for past debt held by the public, see Congressional Budget Office, *Historical Data on Federal Debt Held by the Public* (July 2010), www.cbo.gov/publication/21728.

Our Major Problem driven home: Family Premium / Family Income



Pathways to Health Cost Reduction

- Reduce utilization
- Reduce prices
- Make patients pay more
- Eat better and exercise more
- Get smarter about advanced illness care
- Get smarter about social determinants of health = HEALTHY OPPORTUNITIES !

Figure 1

Social Determinants of Health (Healthy Opportunities)

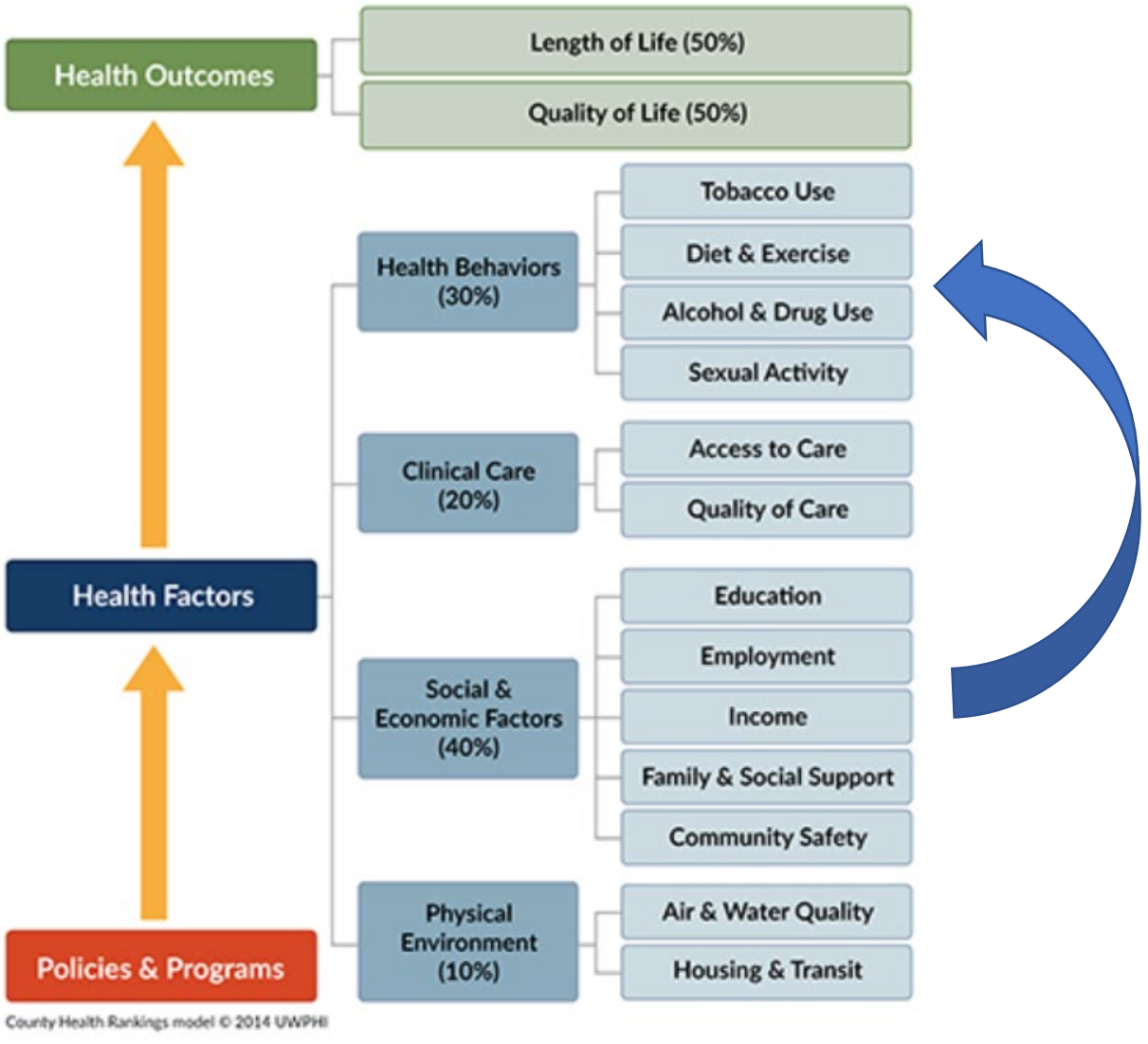
Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

KFF
HENRY J KAISER FAMILY FOUNDATION

Source: County Health Rankings http://www.countyhealthrankings.org/what-is-health



Behavior conditioned by social, economic, and physical context

Hard-headed Economist's View

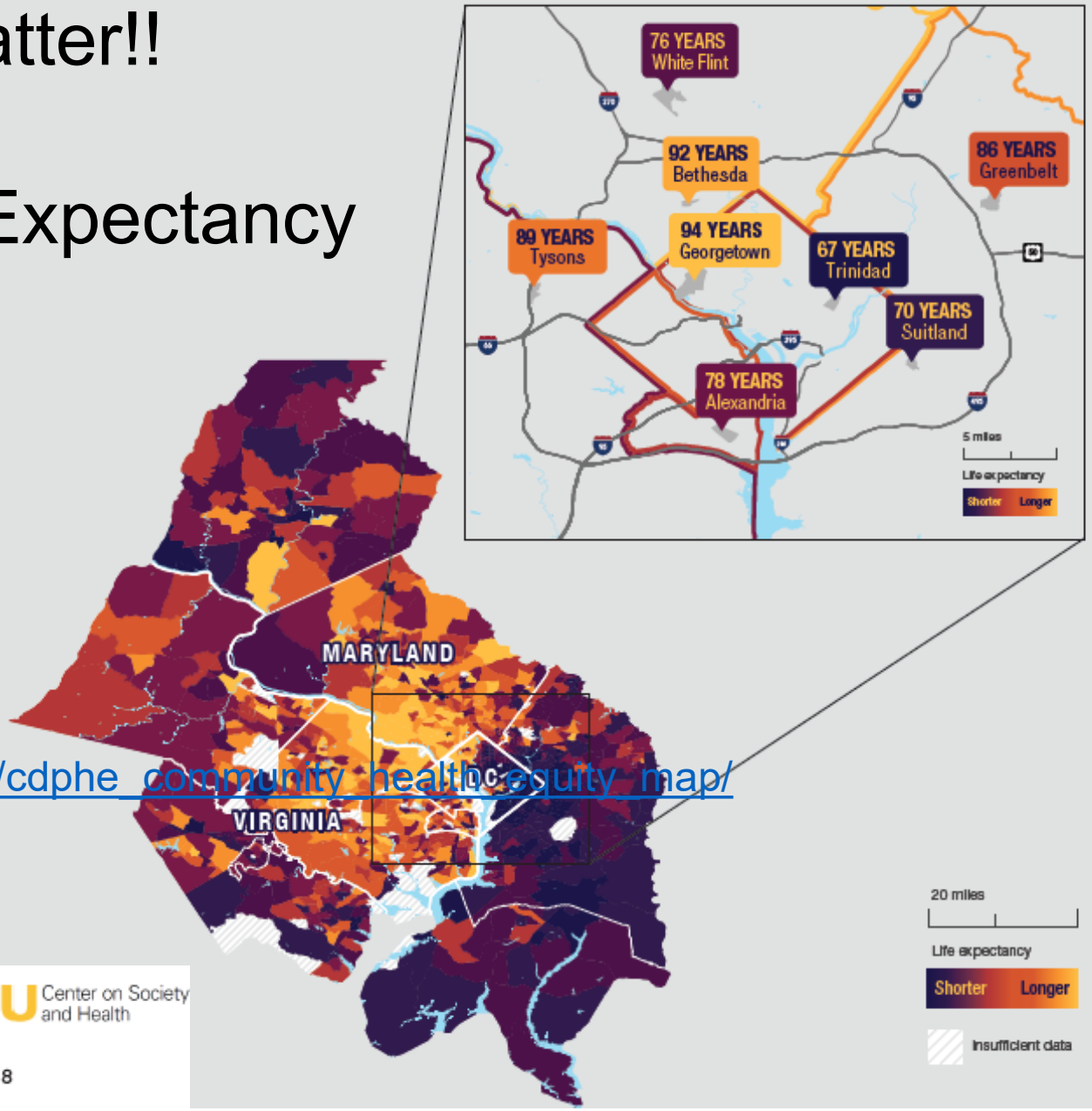
- Health is a product of *choices* – current and past – made subject to *constraints*, e.g., income, education, insurance, knowledge/expectations of future, physical and social environment (i.e., SDoH or Healthy Opportunities).

- Are choices more important than constraints? Philosophers and politicians will always differ

- Odds can be overcome, but, Odds can also be Changed

And Odds Matter!!

“ZIPCODE” → Life Expectancy



http://www.cohealthmaps.dphe.state.co.us/cdphe_community_health_equity_map/

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Derek Chapman, PhD
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Jong Hyung Lee, MS

VCU Center on Society and Health

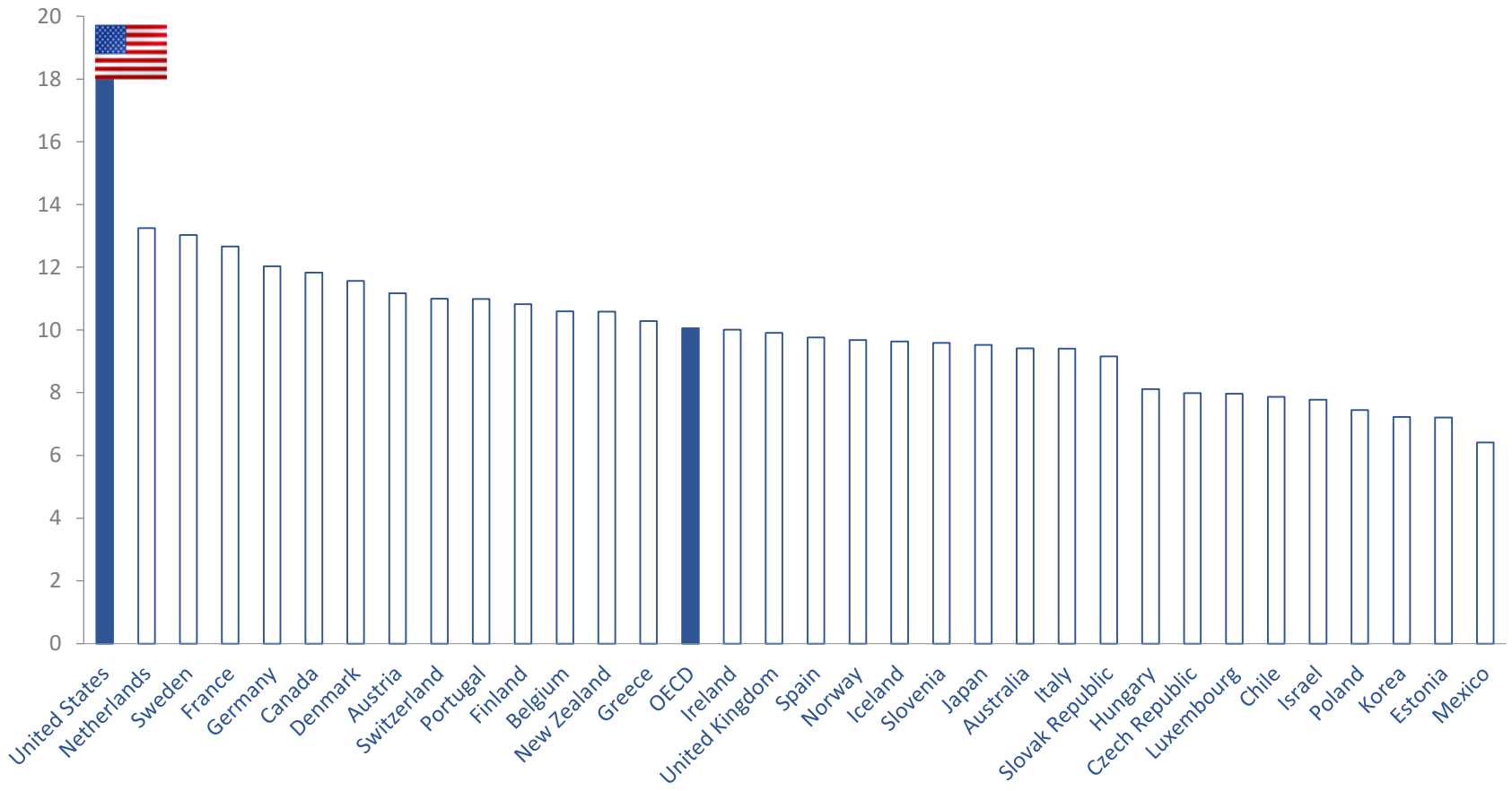
October 2018

Leveraging What Works?

- Evidence is strong that SDOH/HO affect health outcomes and spending
- Specific interventions – investments in HO -- have payoffs too (as your 2019 Dashboard makes clear!)
  - Housing First for SMI and SUD homeless
  - Food through WIC, SNAP, Meals on Wheels
  - Targeted case management for high need adults and children
  - Non-emergency transportation
  - SUD Treatment lowers crime costs

Health Expenditures as a % of GDP

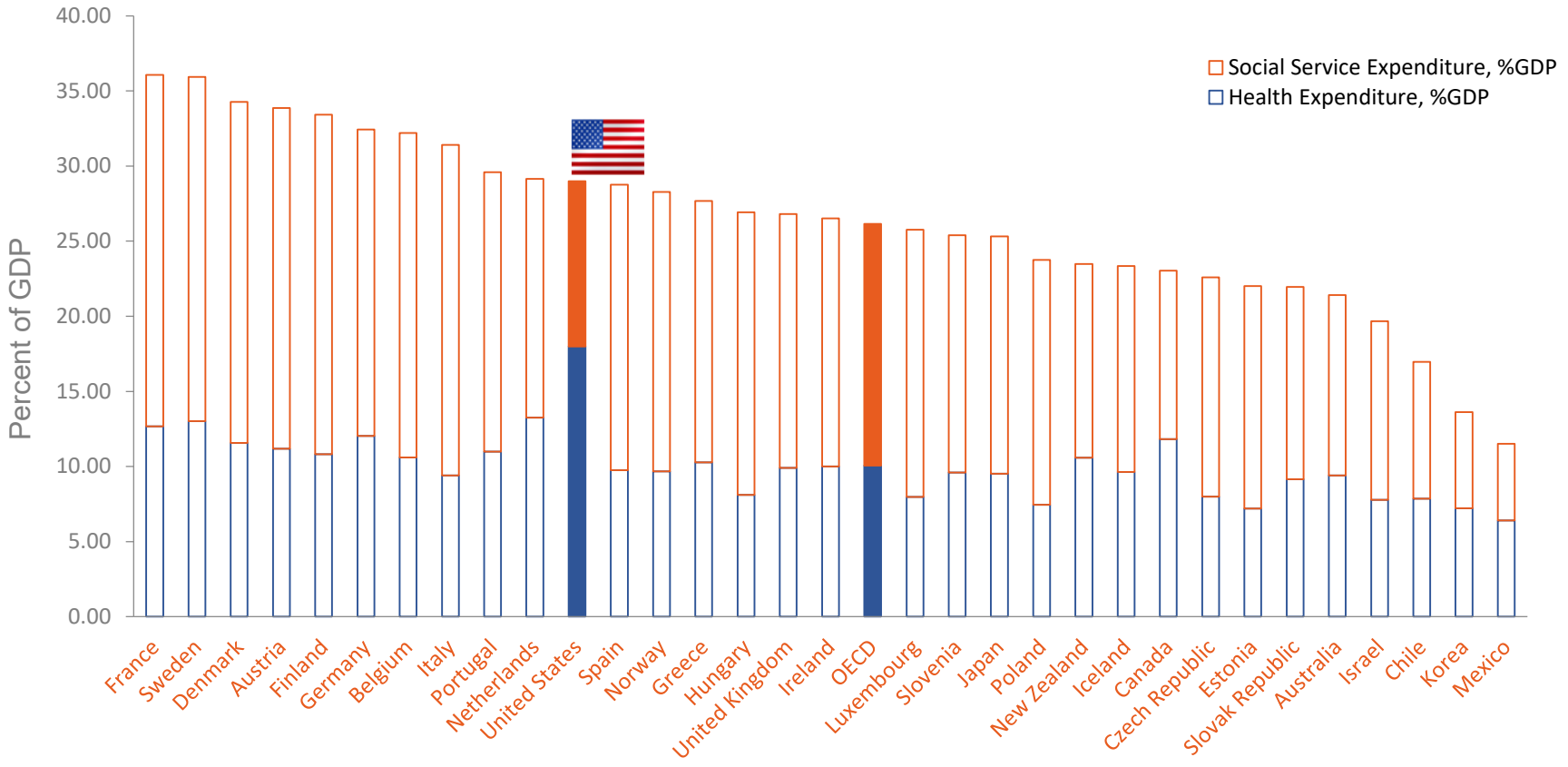
(Slide borrowed from Lauren A. Taylor)



*Turkey is missing data for 2009; Data from Bradley and Taylor, The American Health Care Paradox.

Total Expenditures as a %GDP

(Slide borrowed from Lauren A. Taylor)



*Turkey is missing data for 2009; Data from Bradley and Taylor, The American Health Care Paradox.

POPULATION HEALTH

By Elizabeth H. Bradley, Maureen Canavan, Erika Rogan, Kristina Talbert-Slagle, Chima Ndumele, Lauren Taylor, and Leslie A. Curry

doi: 10.1377/hlthaff.2015.0804
HEALTH AFFAIRS 35,
NO. 5 (2016): 760–768

Variation In Health Outcomes: The Role Of Spending On Social Services, Public Health, And Health Care, 2000–09

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ABSTRACT Although spending rates on health care and social services vary substantially across the states, little is known about the possible association between variation in state-level health outcomes and the allocation of state spending between health care and social services. To estimate that association, we used state-level repeated measures multivariable modeling for the period 2000–09, with region and time fixed effects adjusted for total spending and state demographic and economic characteristics and with one- and two-year lags. We found that states with a higher ratio of social to health spending (calculated as the sum of social service spending and public health spending divided by the sum of Medicare spending and Medicaid spending) had significantly better subsequent health outcomes for the following seven measures: adult obesity; asthma; mentally unhealthy days; days with activity limitations; and mortality rates for lung cancer, acute myocardial infarction, and type 2 diabetes. Our study suggests that broadening the debate beyond what should be spent on health care to include what should be invested in health—not only in health care but also in social services and public health—is warranted.

The high cost of health care remains a pressing concern for state policy makers and taxpayers. During the period 1999–2009, health care costs increased faster than inflation,[1] and in many states Medicaid inflation-adjusted spending has had a compound annual growth rate of more than 5 percent since 2000.[2] Such increased spending may reflect greater insurance coverage and access to health care for the population. Nevertheless, greater investments in health care without equivalent economic and tax revenue growth may result in fewer resources for state-funded social services, such as housing, nutrition, and income support programs—which themselves may influence health outcomes in states.

The potential for social services to be crowded out to some degree by rising health care costs is of particular concern given health policy makers' growing interest in the role of social determinants in influencing the health of individuals and populations. Extensive evidence demonstrates a clear relationship between a variety of social determinants and health outcomes.[3,4] Poor environmental conditions, low incomes, and inadequate education have consistently been associated with poorer health in a diverse set of populations. Taken together, social, behavioral, and environmental factors are estimated to contribute to more than 70 percent of some types of cancer cases, 80 percent of cases of heart disease, and 90 percent of cases of stroke.[3,5]

Furthermore, several studies have aimed to

METHOD: Multivariable regression using state-level repeated measures data from 2000-2009 with regional and time fixed effects.

FINDING: The lagged ratio of social to health spending was significantly associated with better health outcomes: adults who were obese; had asthma; reported fourteen or more mentally unhealthy days or fourteen or more days of activity limitations in the past thirty days and had lower mortality rates for lung cancer, acute myocardial infarction, and type 2 diabetes.

(Slide borrowed from Lauren A. Taylor)

COMMUNITY HEALTH

By Len M. Nichols and Lauren A. Taylor

DOI: 10.1377/hlthaff.2018.0039
HEALTH AFFAIRS 37,
NO. 8 (2018): 1223–1230

POLICY INSIGHT

Social Determinants As Public Goods: A New Approach To Financing Key Investments In Healthy Communities

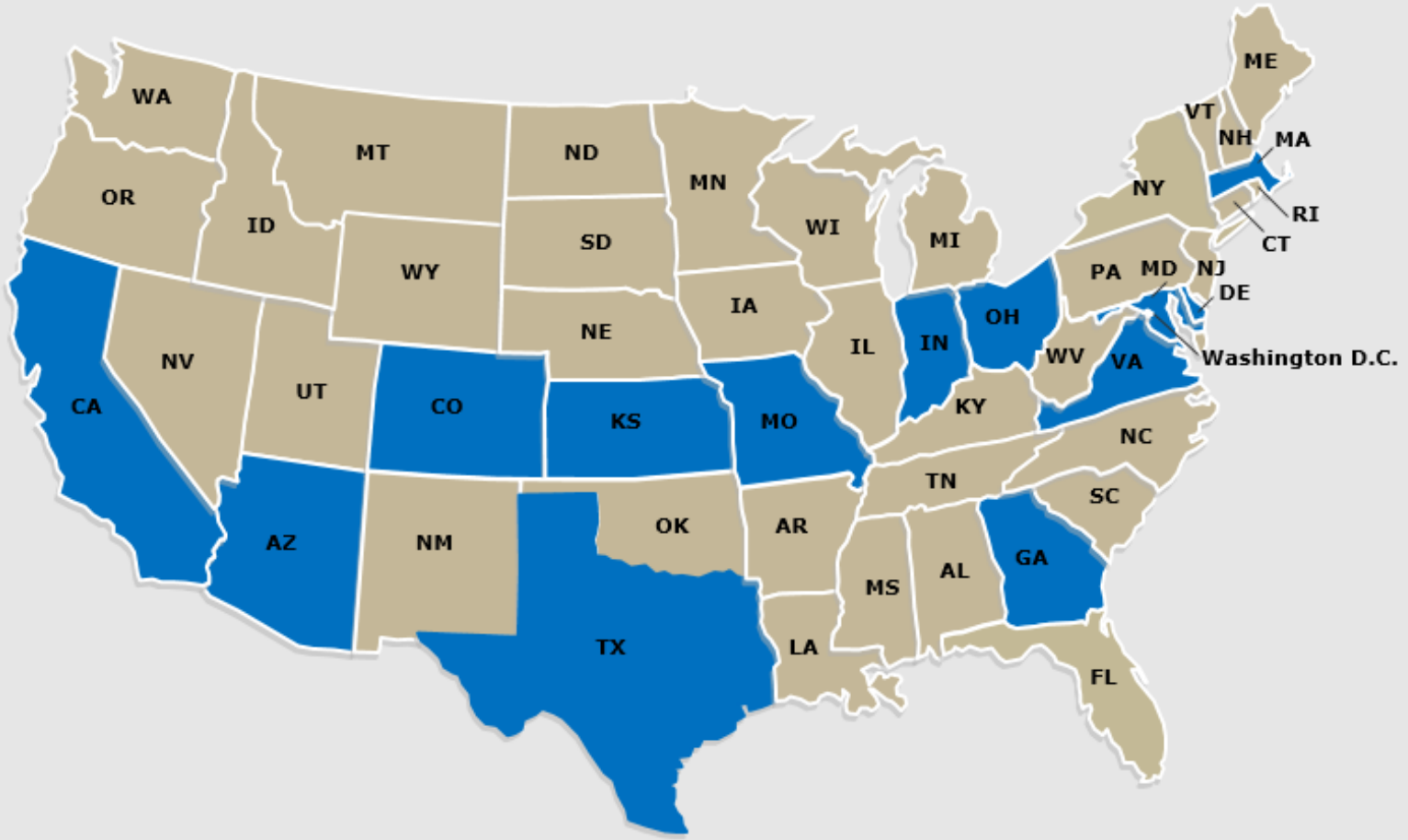
https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2018.0039

Motivations for the Work

- Overwhelming evidence that SDOH affects health, use, and costs
- Yet, underinvestment in SDOH is the norm
- Inequity and high cost are related and major problems in US
- Not many know or believe that financial self-interest could be aligned with the social interest in addressing SDOH
- Faith in possibility of local collaboration at scale has waned
- Response to our August 2018 *Health Affairs* paper has been inspirational
  - 15 communities / coalitions; 5 regional Foundations (EHF, MFFH, BSCAF, COHF, KCHF)

Community	*First Stakeholder to contact Len and Lauren*	*Contact*	*Notes*
Dallas, TX	Baylor, Scott and White Health System	Cliff Fullerton, Niki Shah, Jeff Zohar, BSW	Doing 41 DSRIPs for Texas, very invested in SDOH space across Metro-Plex
Communities in California: Stockton and Fresno? San Diego?	California Quality Collaborative	Melora Simon CQC, Peter Long and Carolyn Wong, BSCF	Could complement CACHI work already underway
Austin, TX	**Seton (part of Ascension system)**	**Ingrid Taylor, Seton, Elena Marks, EHF**	**EHF knows this community well**
Waco, TX	Elena Marks, Episcopal Health Foundation	Elena Marks, EHF	EH knows this community well
Kansas City, KA	Kansas Health Institute	Bob St. Peter	Have strong local collaborative, working on upstream investments
Springfield, MO	Missouri Fnd for Health	Ryan Barker	Foundation has played convener role in anti-poverty efforts in Springfield
Grand Junction, CO	Quality Health Network (HIE)	Dick Thompson, Steve Erkenbrack (Rocky Mountain Health Plan/United)	Reaching to CO Health Foundation on our behalf
Annapolis, MD/Anne Arundel Cnty.	County govt	Polly Pittman, GWU	Local political leaders very interested in VCG type-model for SDOH work
Tuscon, AZ	United Way of Tuscon	Sarah Ascher, Tony Penn	Called last week re: frail elderly
Cleveland, OH	United Way of Greater Cleveland	Ben Miladin	Would like to consider making VCG their CMMI ACH initiative for 2020
Atlanta, GA	GA St , Atlanta Regional Collaborative for Health Improvement	Kathryn Lawler and Karen Minyard	Think Atlanta is ready for this type of SDOH collaboration
Indianapolis, IN or Richmond, VA	Anthem; Virginia Center for Health Innovation	Mai Pham, MD, Anthem; Beth Bortz, CEO VCHI	Anthem would like to arrange for collective financing of SDOH work; VA VCHI has been approached to be TB
Cincinnati, OH	The Health Collaborative	Craig Brammer, MD	Have done AF4Q work and other collaborations, interested in SDOH models
Lawrence, MA	ACO + Mayor's Council	Alexandra Schweitzer, consultant	Strong local mayor's health office, collaborative hospital system

States with Communities Interested in using VCG to address their SDOH problems



Fundamental Insights

- SDoH investments have public good-like properties => free rider problems
- Economics profession worked out a functional solution to the free-rider problem in the 1970s, Vickrey-Clarke-Groves (VCG), which works under 2 conditions
  - “trusted broker” and operational local stakeholder coalition must exist
- Those conditions are likely to be present in many communities grappling with SDoH/HO deficits today
- Key elements of VCG auction model:
  - Winner’s curse solution
  - Revelation of willingness to pay to trusted broker *only*
  - Two part pricing ($p < v$ for all)

Suppose Cost of Health Opportunity = 180

Stakeholder	Value of Solution	Simple Cost Share	Tax or Side Payment	Net Price
Health Insurer	110	60	40	100
Hospital A	40	60	-25	35
Hospital B	50	60	-15	45
TOTAL	200	180	0	180

“magic” of VCG is that each P < V, so that self-interest drives, and will perpetuate, the solution

VCG Real World Example using NEMT

- Cost and benefit estimates, updated with M-CPI from 2005 NAS report, with updated prevalence estimates from Paul Hughes-Cromwick (of Altarum)
- Assume community of 300,000: estimate of transportation- challenged population = 7,000 (2.3%)
  - There are 162 MSAs in US with 300,000 or more residents
- Net Savings estimates of $2,200 per client per year
- Cost of transport = $750 per client per year
- Note: Providers LOSE margin when insured patients' utilization goes down (we assumed 20% of gross revenue decline)

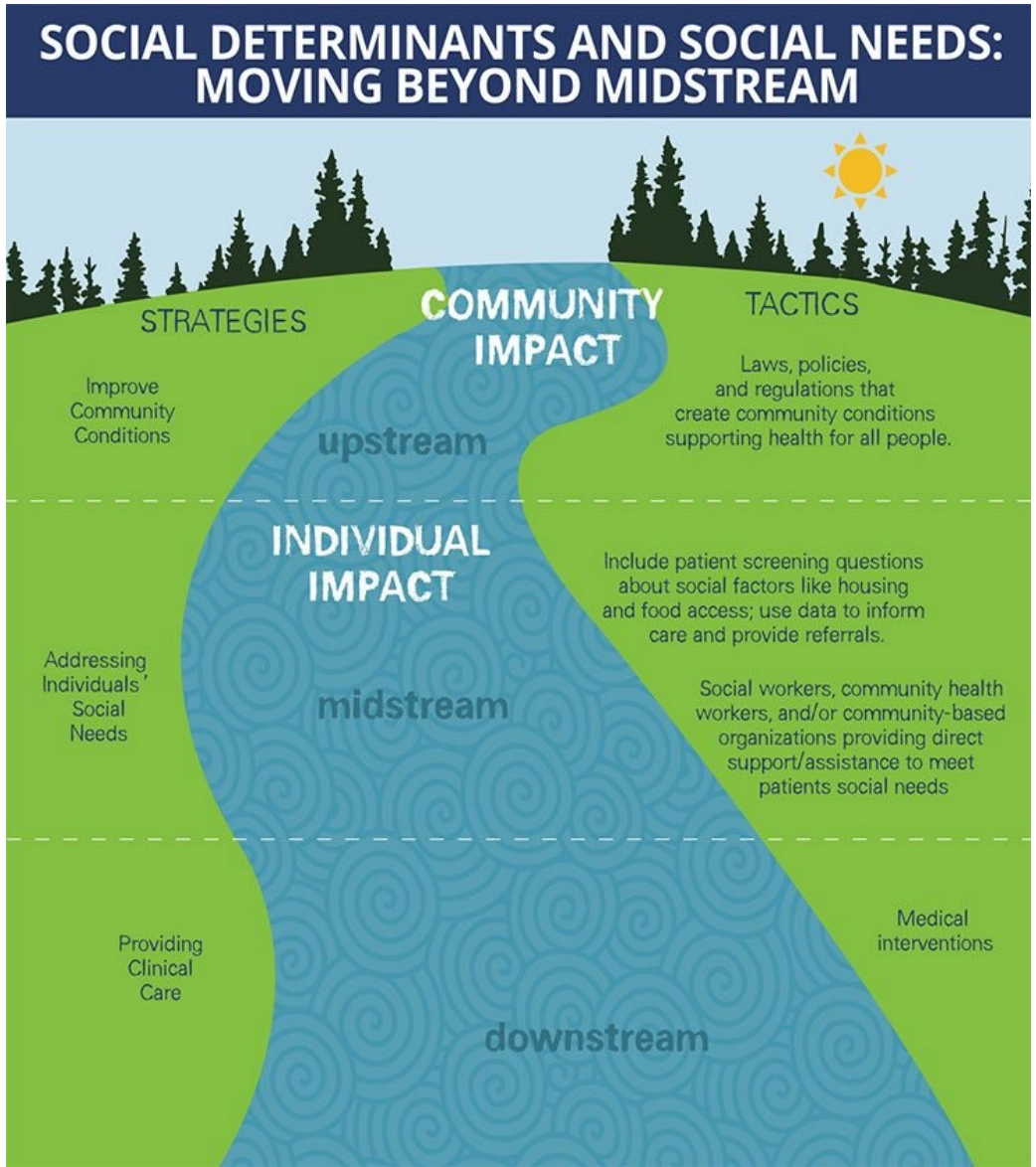
VCG Real World Example using NEMT

Community of 300,000, average prevalence of transportation challenged, cost and savings updated from NAS report

Stake-holder	Market Share of Target patients	Gross value of invest-ment	Loss from reduced care	Net Value, bid to trusted broker	Cost share	Tax or side payment	Net price
Medicaid	50%	7,700	0	7,700	1,312.5	500	1,812.5
Medicare	20%	3,080	0	3,080	1,312.5	200	1,512.5
Private insurer	10%	1,540	0	1,540	1,312.5	100	1,412.5
Providers/ uninsured	20%	3,080	2,464	616	1,312.5	-800	512.5
TOTALS	100%	15,400	2,464	12,320	5,250	0	5,250

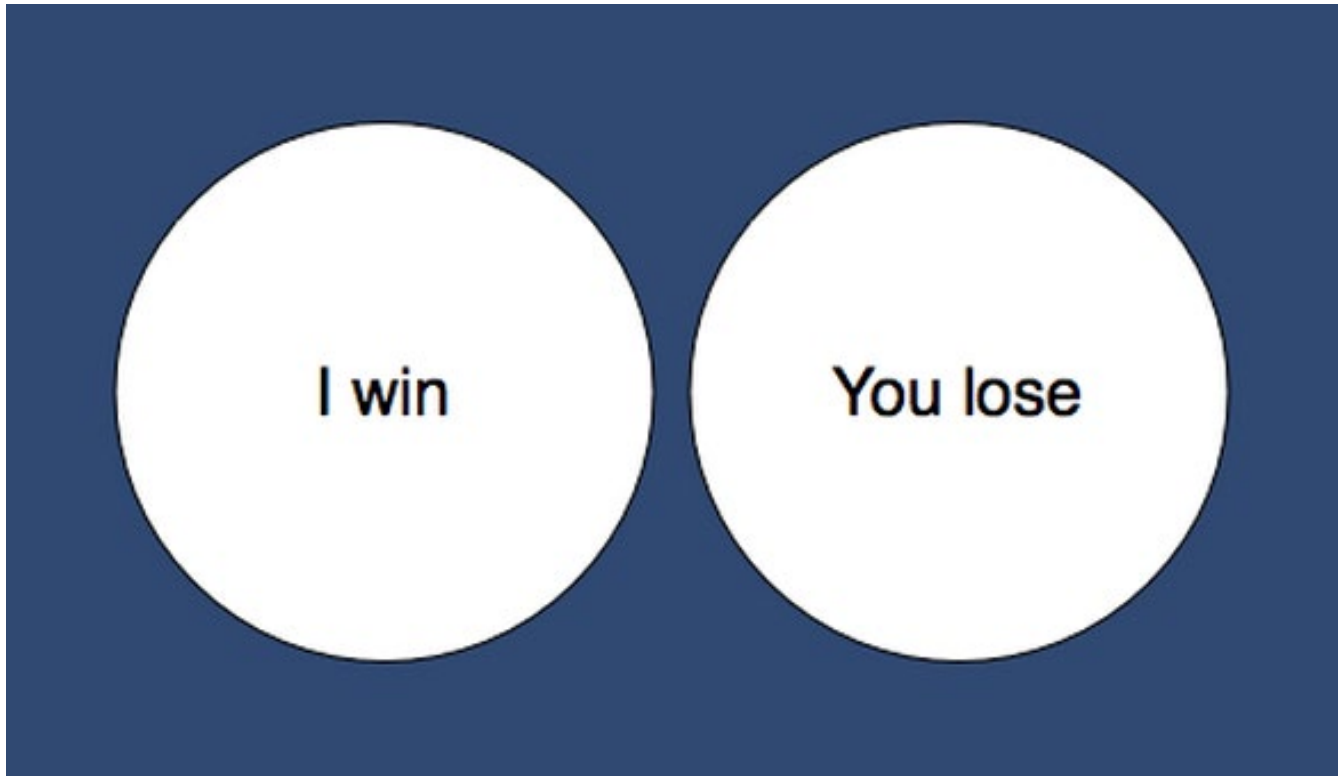
Criticism of this “economic” approach

- From the Left

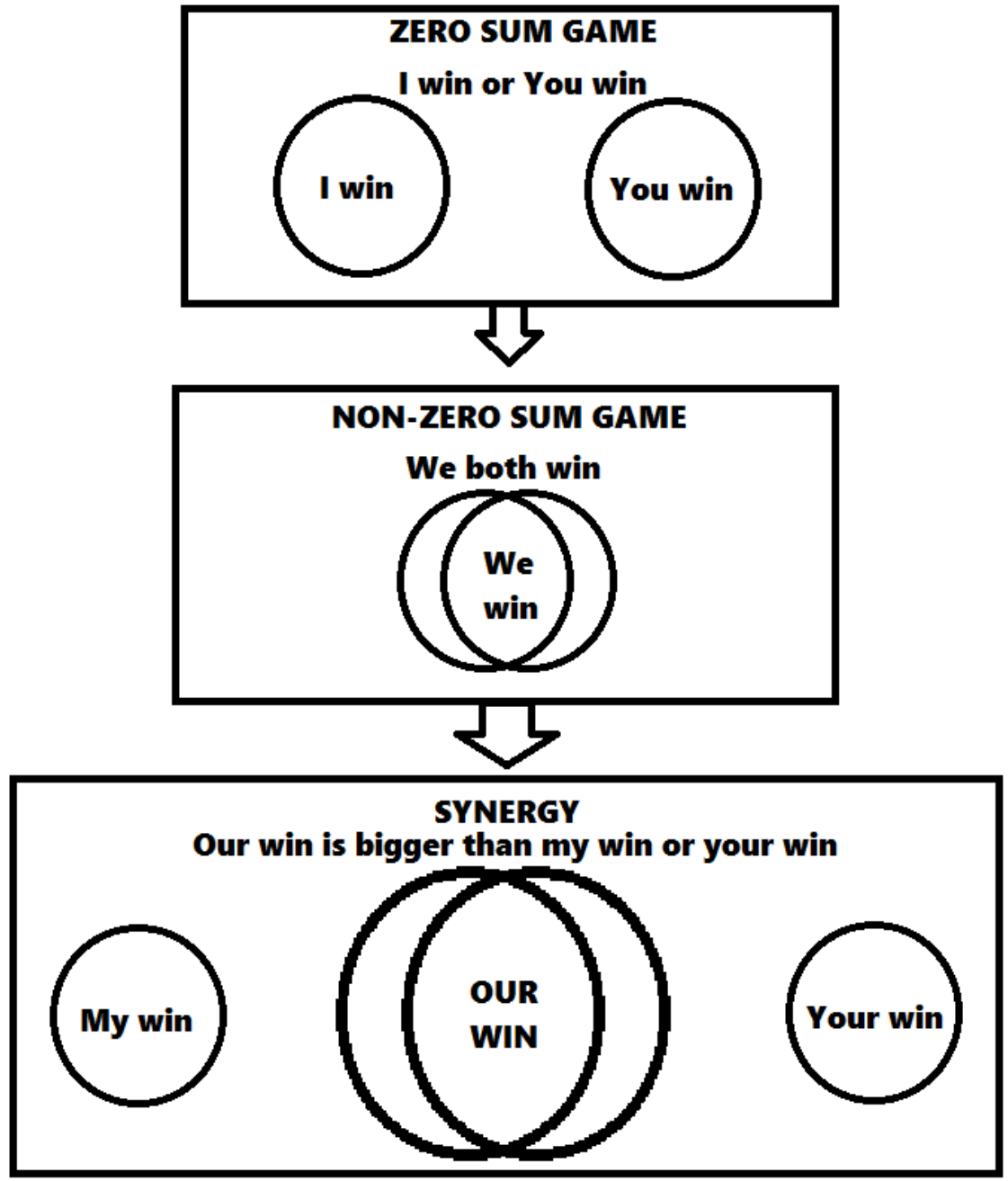


Criticism of this “collaborative” approach

- From the Right



CHANGE THE GAME: FROM ZERO TO SYNERGISTIC NON-ZERO SUM GAME



Challenges and Next Steps

- Convince funders to let us teach this through a learning collaborative or feasibility study to all willing communities / stakeholder coalitions
- Selecting sites and assembling a consortium of funders for implementation/testing/evaluation
- Is there sufficient local trust to make VCG-like collaboration happen?
  - Would Pay for Success or Community Development Financial Institutions be better suited for some communities' Healthy Opportunities?
- What we Believe: Collaboration and Trust can be re-learned