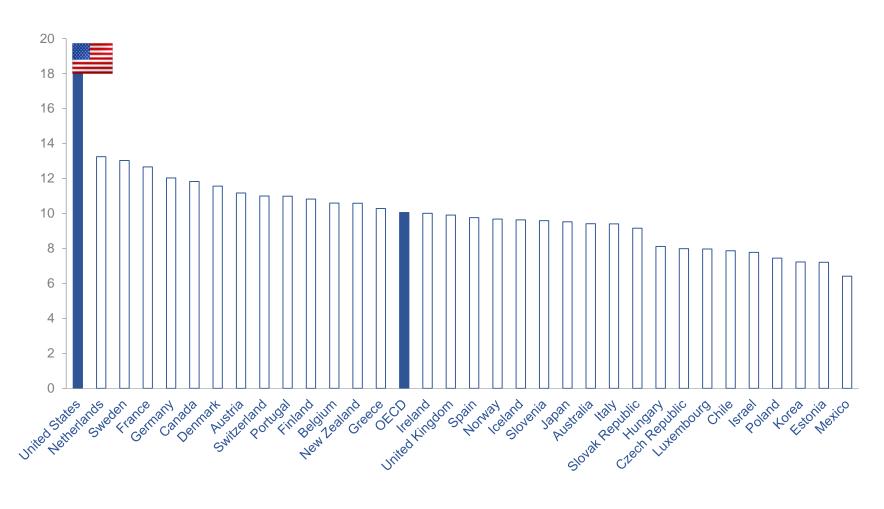
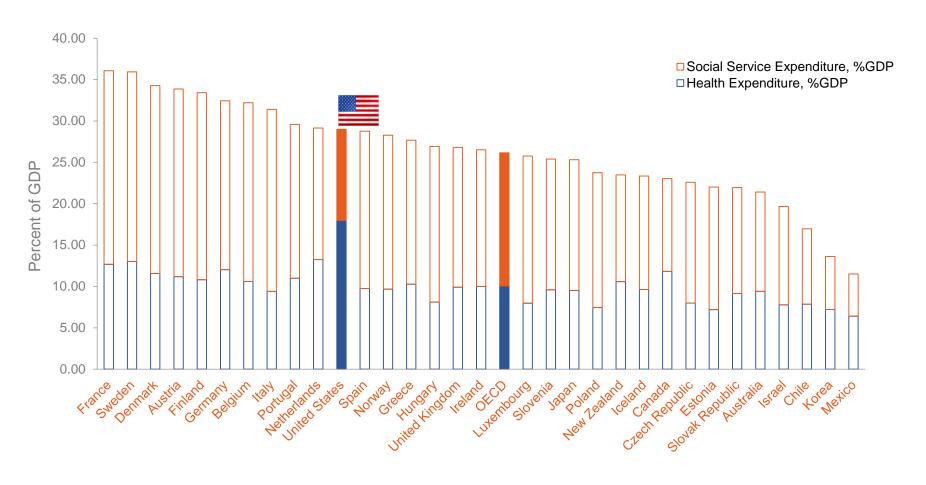
Lauren A. Taylor, MDiv, MPH Doctoral Candidate, Harvard Business School National Academy of Sciences July 19, 2018

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# Health Expenditures as a % of GDP



# Total Expenditures as a %GDP



### Original research

### Health and social services expenditures: associations with health outcomes

Elizabeth H Bradley, 1 Benjamin R Elkins, 1 Jeph Herrin, 2 Brian Elbel 2

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lective: To examine variations in health service expenditures and social services expenditures across Organisation for Economic Co-eceration and Development (DECD) countries and assess their association with five population-level health outcomes. Design: A pooled, cross-sectional analysis using data from the 2009 release of the OECD Health Data 2009 Statistics and Indicators and OECD Social Expenditure Database.

Setting: OECD countries (n=30) from 1995 to 2005. Main outcomes: Life expectancy at birth, infant mortality, low birth weight, maternal mortality and potential years of life lost.

Results: Health services expenditures adjusted for press domestic product (GDP) per capita were significantly associated with better health outcomes in only two of five health indicators; social services expenditures adjusted for GDP were significantly associated with better health outcomes in three of five indicators. The ratio of social expenditures to health expenditures was significantly associated with better outcomes in infant mortality, life expectancy and increased potential life years lost, after adjusting for the level of health expenditures and GDP.

Conclusion: Attention to broader domains of social policy may be helpful in accomplishing improvements in health envisioned by advocates of healthcare reform.

Many countries are increasingly confronting issues of rising healthcare costs with limited improvement in health outcomes. The issue is particularly acute in the USA, which ranks highest among Organisation for Economic Co-operation and Development (OECD) best to direct limited resources to promote countries in healthcare spending as a percentage of gross domestic product (GDP) while remaining among the lowest in key health indicators.1-3 As an illustration, in 2005 the USA spent 16% of GDP on health- Study design and sample care compared with an average of 9% spent. We conducted a pooled, cross-sectional by other OECD countries, and in 2006, the analysis of OECD countries (n=30 countries)

infant mortality and 24th in maternal mortality among the 30 OECD countries.4

Previous efforts to understand the paradox of higher health care spending without necessarily better health outcomes have implicated wer-reliance on private financing,3 6 disparities in quality of care, 7 8 high medical prices 9 and too few primary care providers. 3 10-13 What has been less examined is the role of spending on social services, which may be productive for health, Social spending includes such investments as income supplements, housing, unemployment coverage and other social policy targets. Although health professionals have long recognised the importance of socio-economic, environmental and behavioural determinants of health, healthcare reforms have focused largely on spending for health services, with less attention focused on spending in potentially important social policy areas.

Accordingly, we sought to examine the associations between social expenditures and health expenditures, and a set of common health outcomes across the OECD countries. As a measure of relative investment, we also examined the ratio of social expenditures to health expenditures and its association with life expectancy, infant mortality, low birth weight, maternal mortality and potential life years lost using the OECD Health Data 2009 Statistics and Indicators and the OECD Social Expenditure database. 4 14 Findings from our analois can contribute to the current debate in the USA and other countries about how population health outcomes.

USA ranked 25th in life expectancy, 29th in using data from the 2009 release of the

METHOD:

Multivariable regression using OECD pooled data from 1995-2007 on 29 countries and 5 health outcomes.

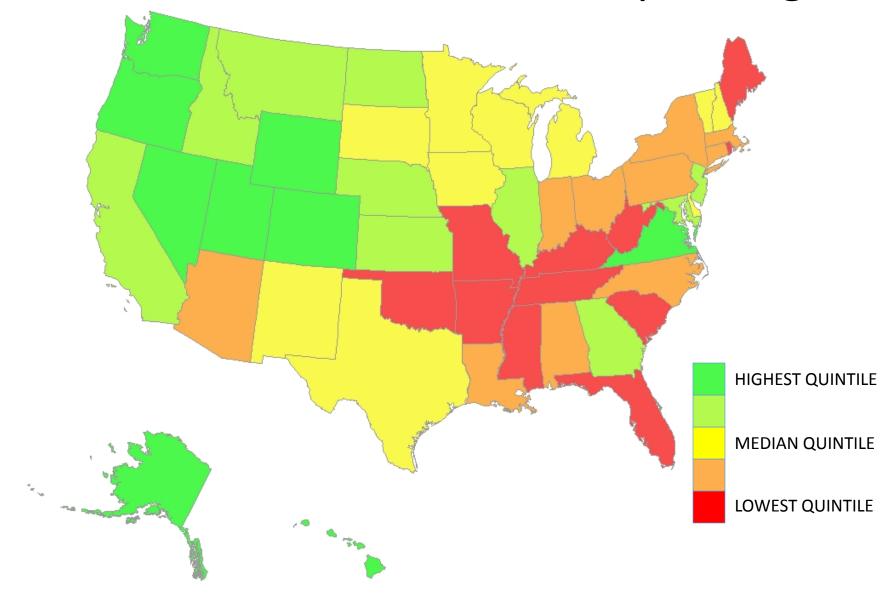
FINDING:

The ratio of social to health spending was significantly associated with better health outcomes: less infant, mortality, less premature death, longer life, expectancy and fewer low birth weight babies.

NOTE:

This remained true even when the US was excluded from the analysis.

# Ratio of social-to-health care spending\*



### POPULATION HEALTH

DOI: 10.1377/Nnte/0205.0014 HEALTH AFFARS 35. NO. 5 (2016) 760-768 e2016 Reject HDRE-The Respie-to-People Health Foundation, Inc.

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

# 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.

he high cost of health care remains programs—which themselves may influence disease, and 90 percent of cases of stroke.34

The potential for so cials ervices to be crowded a pressing concern for state policy out to some degree by rising health care costs is makers and taxpayers. During the of particular concern given health policy makers' period 1999-2009, health care growing interest in the role of social determicosts increased faster than infla- nants in influencing the health of individuals tion,1 and in many states Medicaid inflation- and populations. Extensive evidence demonadjusted spending has had a compound annual strates a clear relationship between a variety of growth rate of more than 5 percent since 2000.2 social determinants and health outcomes.34 Such increased spending may reflect greater in- Poor environmental conditions, low incomes, surance coverage and access to health case for and inadequate education have consistently the population. Nevertheless, greater invest- been associated with poorer health in a diverse ments in health care without equivalent econom- set of populations. Taken together, social, beic and tax revenue growth may result in fewer havioral, and environmental factors are estimatresources for state-funded social services, such ed to contribute to more than 70 percent of some as housing, mutrition, and income support types of cancer cases, 80 percent of cases of heart

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.

# LEVERAGING THE SOCIAL DETERMINANTS OF HEALTH: WHAT WORKS?

**JUNE 2015** 



prepared for the Blue Cross Blue Shield of Massachusetts Foundation by Lauren A. Taylor, Caitlin E. Coyle, Chima Ndumele, Erika Rogan, Maureen Canavan, Leslie Curry, and Elizabeth H. Bradley

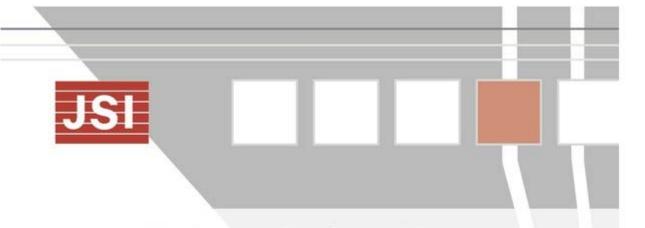
Yale Global Health Leadership Institute

# Which social services produce better health and save dollars?

- housing for chronically homeless individuals
   integrated housing and health care for homeless families
  - Women, Infants and Children (WIC)
- home-delivered meals for older Americans
- case management with home visitation by nurse practitioners for low-income individuals and low-income, first time moms

Highlights the wrong pocket problem.

# National Trends Incentivizing SDOH Investments





## **Accountable Communities for Health**

Strategies for Financial Sustainability



# Meet the RWJF Culture of Health Prize Winners













These six communities are beacons of hope and progress for healthier people and families. They were selected from more than 250 applicants, and are leading some of the nation's most innovative efforts to build a national Culture of Health.



U.S.

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U.S. 6 Portland Health Providers Give \$21.5M for Homeless Housing







# 6 Portland Health Providers Give \$21.5M for Homeless Housing

By THE ASSOCIATED PRESS SEPT. 23, 2016, 4:21 P.M. E.D.T.











PORTLAND, Ore. — Five major hospitals in Portland, Oregon, and a nonprofit health care plan said Friday they will donate a combined \$21.5 million toward the construction of nearly 400 housing units for the city's burgeoning homeless and low-income population — a move hailed by national housing advocates as the largest private investment of its kind in the nation.

The money from the private health care providers will be part of a larger \$69 million capital construction plan that comes as the booming Pacific Northwest city struggles with a seemingly intractable homeless problem that has become more visible in the past few years and poses a political quagmire for local leaders.

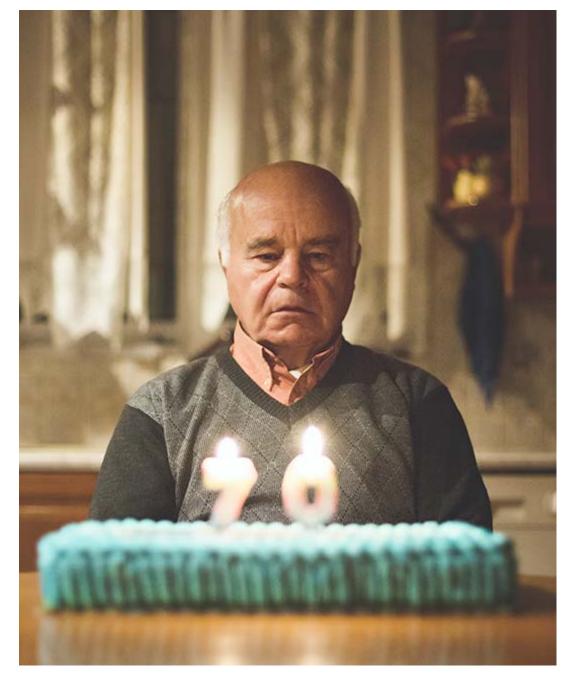
Earlier this month, hundreds of people were evicted from an informal tent camp on a nature trail on the city's east side, and the city has fielded thousands of complaints on a hotline for residents as leaders debate



Identified 1,100 members who've selfidentified as being either lonely or socially isolated across 7 states

# Interventions:

- team of three outreach workers to connect with folks regularly by phone
- waiting areas repositioned as social spaces where seniors can drop in and "just be there"
- senior-focused gyms called "Nifty After Fifty" at most of care centers, and a lot of the programs there are focused on creating social connection for seniors



# **Built for Healthcare**

Booking

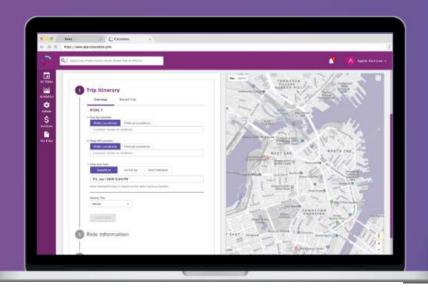
Analytics

Benefit Management

# Simplified ride ordering workflow that's designed for healthcare

Circulation's easy-to-use platform gives healthcare professionals the power to order on-demand rides for patients without the headache of paperwork, faxing or tracking down patients. One-way or round-trip rides can be scheduled days, weeks or months in advance – with the functionality to book recurring rides.

Patients receive notifications – either by text or voice message – with all the relevant details they need to complete their rides.





# Our Results

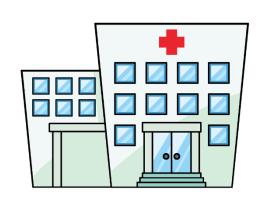
4.9/5
PATIENT SATISFACTION
Average rating

70%
COST SAVINGS
Possible savings on ride costs

91%
ON-TIME APPOINTMENTS
Including waiting for patients

68%
REDUCTION IN NO-SHOWS
On average

# Open policy question: How to fund "new" social service investments?



## Through health care delivery system

- Politically pragmatic
- Health care has a track record of responsiveness to financial incentives



# Through social service delivery system

- No one wants to be seen advocating for a larger "welfare state"
- Lack of faith in existing social service infrastructure

# Concerns re: a health care-centric strategy

(1) Valuation: what's improved nutrition "worth"?

(2) Feasibility: will money that goes into health care ever make it out?

(3) Efficiency: why endure all these transactions costs?

(4) Equity: will we be make the world more or less equitable?

# Looking forward to the conversation to come.

Contact: <a href="mailto:ltaylor@hbs.edu">ltaylor@hbs.edu</a>, @LaurenTaylorMPH