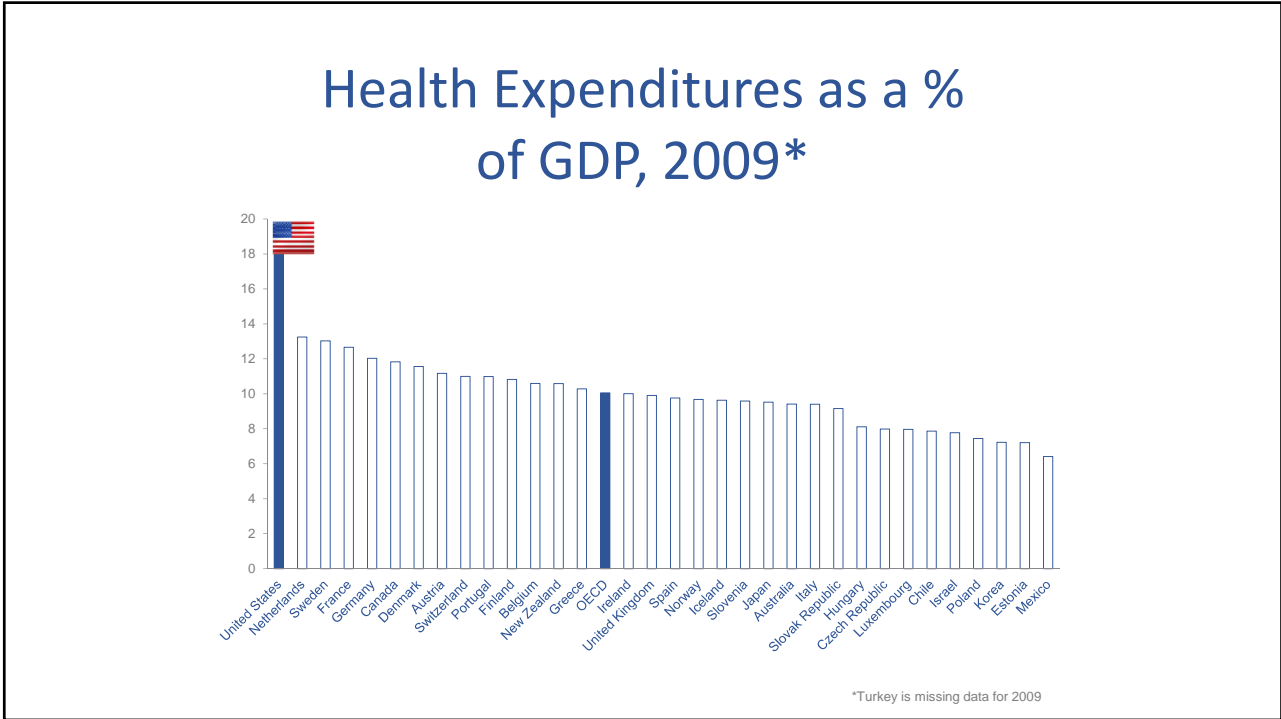
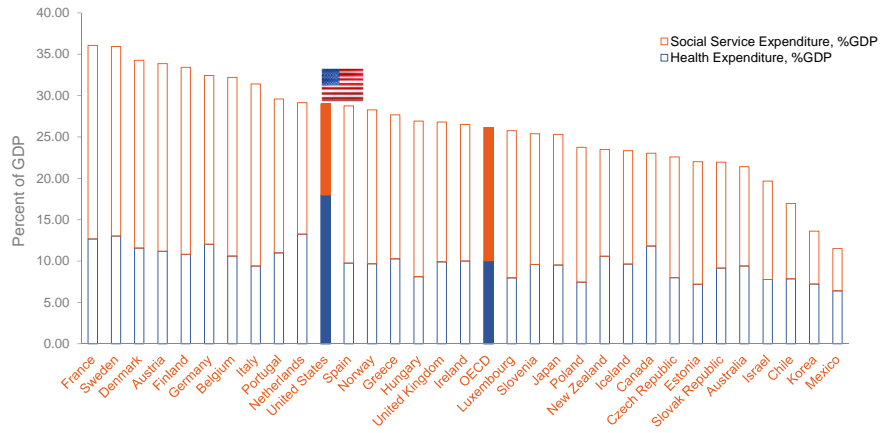


Social Determinants and Policy: Why Shifting the Care Paradigm is Good for Population Health and Health Care

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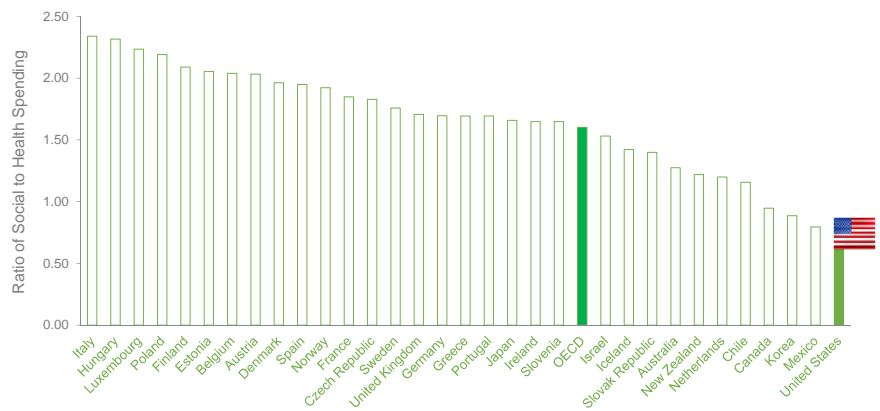


Total Expenditures as a % GDP, 2009*



*Switzerland and Turkey are missing data for 2009

Ratio of Social to Health Expenditures, 2009*



*Switzerland and Turkey are missing data for 2009

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Original research

Health and social services expenditures: associations with health outcomes

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Objective: To examine variations in health services expenditures and social services expenditures across Organization for Economic Co-operation and Development (OECD) 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 gross 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 Organization for Economic Co-operation and Development (OECD) 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 healthcare care compared with an average of 9% spent by other OECD countries, and in 2006, the USA ranked 21st in life expectancy, 29th in

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 over-reliance on private financing,^{5,6} disparities in quality of care,⁷ high medical prices,⁸ and too few primary care providers.⁹ 10-14 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 recognized the importance of socioeconomic, environmental and behavioral determinants of health, healthcare reform has focused largely on spending for health services, with less attention focused on spending in potentially important social policy areas.¹⁵ 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 investments, 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.¹⁶ Findings from our analysis can contribute to the current debate in the USA and other countries about how best to direct limited resources to promote population health outcomes.

METHODS

Study design and sample

We conducted a pooled, cross-sectional analysis of OECD countries (n=30 countries) 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*

HIGHEST QUINTILE

MEDIAN QUINTILE

LOWEST QUINTILE

*Medicare and Medicaid spending; Data from Bradley et al, Health Affairs, May 2016.

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POPULATION HEALTH

By Elizabeth H. Bradley, Maureen Canavan, Erika Rogan, Kristina Tabert-Sigle, Chima Ndiamele, Lauren Taylor, and Leslie A. Cary

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

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 but also in social services and public health—is warranted.

Elizabeth H. Bradley is the Bradley-Johnson Professor of Global Strategy and a professor of public health at the Yale School of Public Health, in New Haven, Connecticut.

Maureen Canavan is an associate research scientist in health policy and management at the Yale School of Public Health.

Erika Rogan is a director and associate professor of public health at the Yale School of Public Health.

Kristina Tabert-Sigle is a senior research officer and lecturer at the Yale School of Public Health.

Chima Ndiamele is an associate professor of health policy and management at the Yale School of Public Health.

Lauren Taylor is a clinical scholar at the Harvard Business School in Boston, Massachusetts.

Leslie A. Cary is a senior research scientist at the Yale School of Public Health.

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?

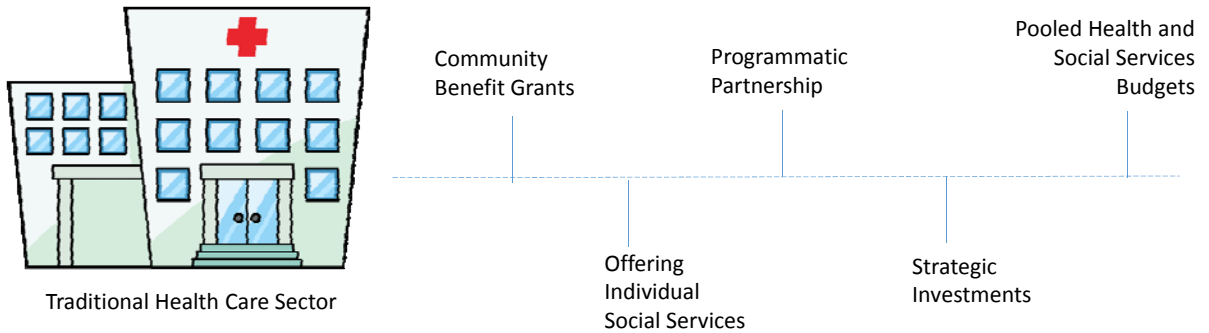
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Maureen Canavan, Leslie Curry, and Elizabeth H. Bradley

Yale Global Health Leadership Institute

Which social services produce better health and save dollars?

Evidence Exists for Various Integration Models



Is this all
"good for
health care"?

Historical
& Current Fee-For-
Service

Value-Based
Payment &
Population Health
Management

Is it all worth it?

"It really was a coordinated intervention. And that was satisfying. I think it was an experience where [I really got to be a physician](#). I think a lot of times here we are sort of playing social worker, playing psychiatrist when we're not necessarily trained to do that. We do medical care, you know? And so it was very refreshing. The patient needed an internist and she got an internist."

- Physician Interviewee

[The American Health Care Paradox](#)

Looking forward to learning from you. Questions?

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