PHSSR Research-In-Progress Series:

Cost, Quality and Value of Public Health Services

Thursday, August 6, 2015 *1-2pm ET/ 10-11am PT*

Population Health Investments: Relationships between Governmental Public Health and Hospital Community Benefit Spending

To download today's presentation & speaker bios, see the 'Resources' box in the top right corner of the screen.

Agenda

Welcome: C. B. Mamaril, PhD, National Coordinating Center for PHSSR, and Research Assistant Professor, U. of Kentucky College of Public Health

"Population Health Investments: Relationships between Governmental Public Health and Hospital Community Benefit Spending"

Presenter: Simone R. Singh, PhD, Assistant Professor, Health Management and Policy, U. Michigan School of Public Health

Commentary: Glen P. Mays, PhD, MPH, Director, National Center for PHSSR, and Professor, U. College of Public Health

Chara Stewart Abrams, MPH, Administrative Director, Department of Psychology, St. Jude Children's Research Hospital, Memphis

Kevin Barnett, DrPH, MCP, Senior Investigator, Public Health Institute, Oakland

Questions and Discussion

Presenter

Simone R. Singh, PhD, MA
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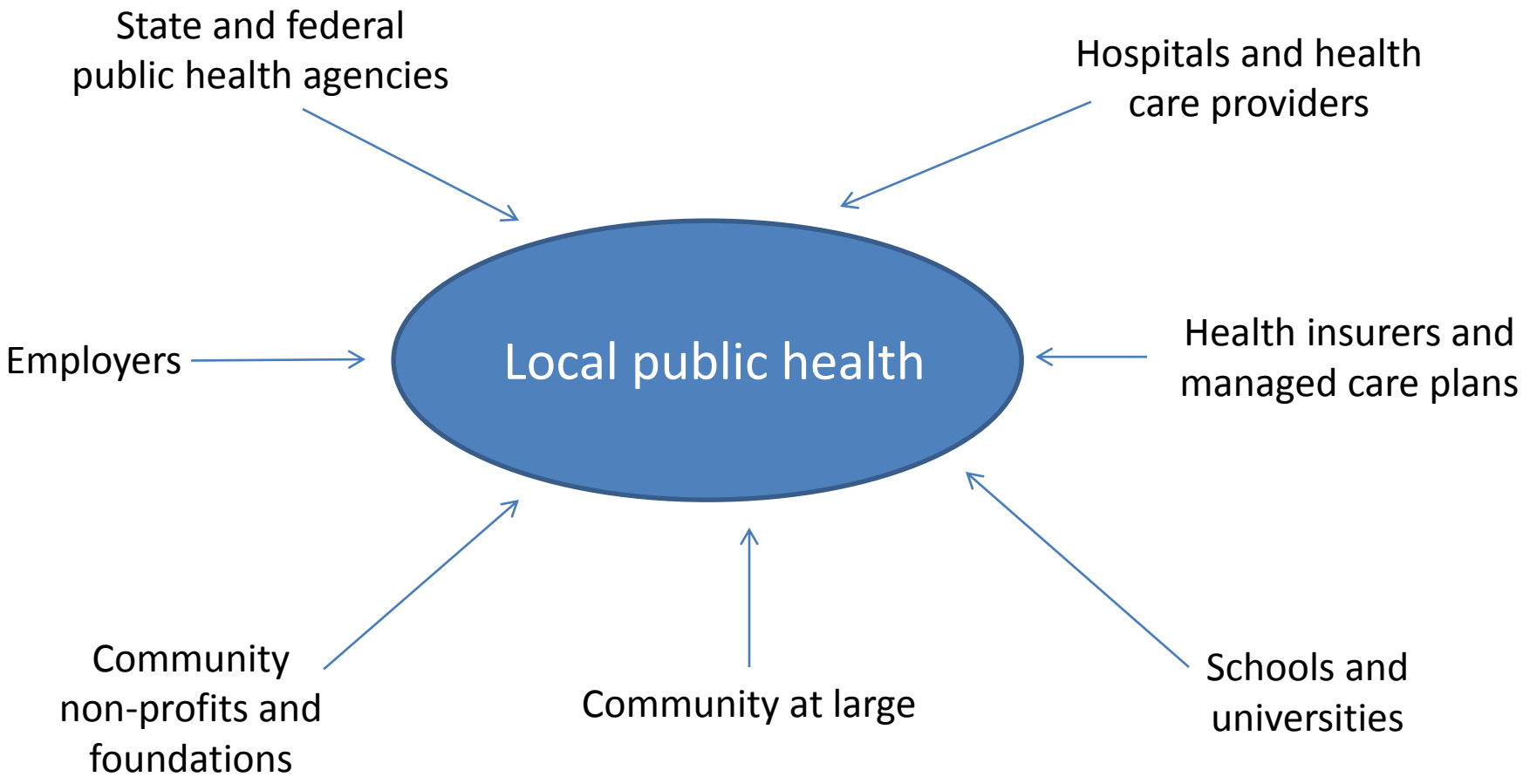
Population Health Investments: Relationships between Governmental Public Health and Hospital Community Benefit Spending

Simone R. Singh[1] and Gary J. Young[2]

1 University of Michigan Department of Health Management and Policy

2 Northeastern University Center for Health Policy and Healthcare Research

Context


State and federal public health agencies
Hospitals and health care providers
Employers
Local public health
Health insurers and managed care plans
Community non-profits and foundations
Community at large
Schools and universities

Conceptual Framework

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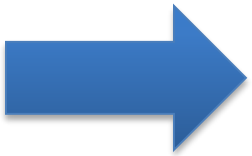
- Economic theory of "crowd out"



Increased public sector spending may reduce private sector investment, e.g., in health insurance market

- Does "crowd out" occur in other areas, such as population health investments?

Empirical Evidence

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Hospital Community Benefit in the Context of the Larger Public Health System: A State-Level Analysis of Hospital and Governmental Public Health Spending Across the United States

Simone R. Singh, PhD; Erik Bakken, MPAff; David A. Kindig, MD, PhD; Gary J. Young, JD, PhD

Context: Achieving meaningful population health improvements has become a priority for communities across the United States, yet funding to sustain multisector initiatives is frequently not available. One potential source of funding for population health initiatives is the community benefit expenditures that are required of nonprofit hospitals to maintain their tax-exempt status. **Objective:** In this article, we explore the importance of nonprofit hospitals' community benefit dollars as a funding source for population health. **Design:** Hospitals' community benefit expenditures were obtained from their 2009 IRS (Internal Revenue Service) Form 990 Schedule H and complemented with data on state and local public health spending from the Association of State and Territorial Health Officials and the National Association of County & City Health Officials. Key measures included indicators of hospitals' community health spending and governmental public health spending, all aggregated to the state level. Univariate and bivariate statistics were used to describe how much hospitals spent on programs and activities for the community at large and to understand the relationship between hospitals' spending and the expenditures of state and local health departments. **Results:** Tax-exempt hospitals spent a median of $130 per capita on community benefit activities, of which almost $11 went toward community health improvement and community-building activities. In comparison, median state and local health department spending amounted to $82 and $48 per capita, respectively. Hospitals' spending thus contributed an additional 9% to the resources available for population health to state and local health departments. Spending, however, varied widely by state and was unrelated to governmental public health spending. Moreover, adding hospitals' spending to the financial resources available to governmental public health agencies did not reduce existing inequalities in population health funding across states. **Conclusions:** Hospitals' community health investments represent an important source for public health activities, yet inequalities in the availability of funding across communities remain.

KEY WORDS: **community benefit, governmental public health agencies, population health, public health spending, tax-exempt hospitals**

Achieving meaningful population health improvements has become a priority for communities across the United States, yet funding to sustain multipronged initiatives is frequently not available. Improving population health requires communities to simultaneously address a wide range of factors known to determine health. Besides medical care resources, these factors include aspects of community members' individual

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Partial funding for this study was provided by the Robert Wood Johnson Foundation. The authors declare no conflicts of interest.

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- Prior evidence limited
- State-level analysis found no relationship between public and private spending on population health

Research Aim

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- Examine relationship between governmental public health spending and population health investments of tax-exempt hospitals

- Test hypothesis of “crowd out”:

Is greater governmental public health spending associated with reduced hospital community benefit spending?

Data Sources

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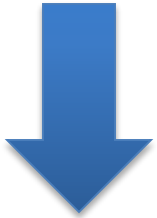
- Data sources:
  - IRS Form 990 Schedule H
  - NACCHO Profile Study
  - ASTHO Profile of State Public Health
  - American Hospital Association's Annual Survey
  - Centers for Medicare and Medicaid Services
  - Area Health Resource File

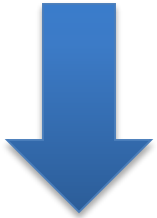
- All data were for the years 2009/2010.

Sample Derivation

1,832 (of 2,894) private, tax-exempt general hospitals completed Form 990 Schedule H at the individual hospital level



1,512 (83%) of these hospitals were merged with data for the corresponding LHD from the 2010 NACCHO Profile Study



1,127 (62%) of hospital-LHD pairings had complete information, including local and state health department spending

Sample Hospitals vs. All Tax-Exempt Hospitals

Characteristic	Sample hospitals	All private, tax-exempt general hospitals
Number of beds		
100 and less	44.2%	44.9%
101-299	37.1%	34.6%
300 and more	18.7%	20.5%
System affiliation		
System affiliated	49.7%	55.8%
Teaching status		
Teaching hospital	5.8%	7.3%
Geographic area		
Rural	40.4%	40.9%
Urban	59.6%	59.1%

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Population Health Investments (1)

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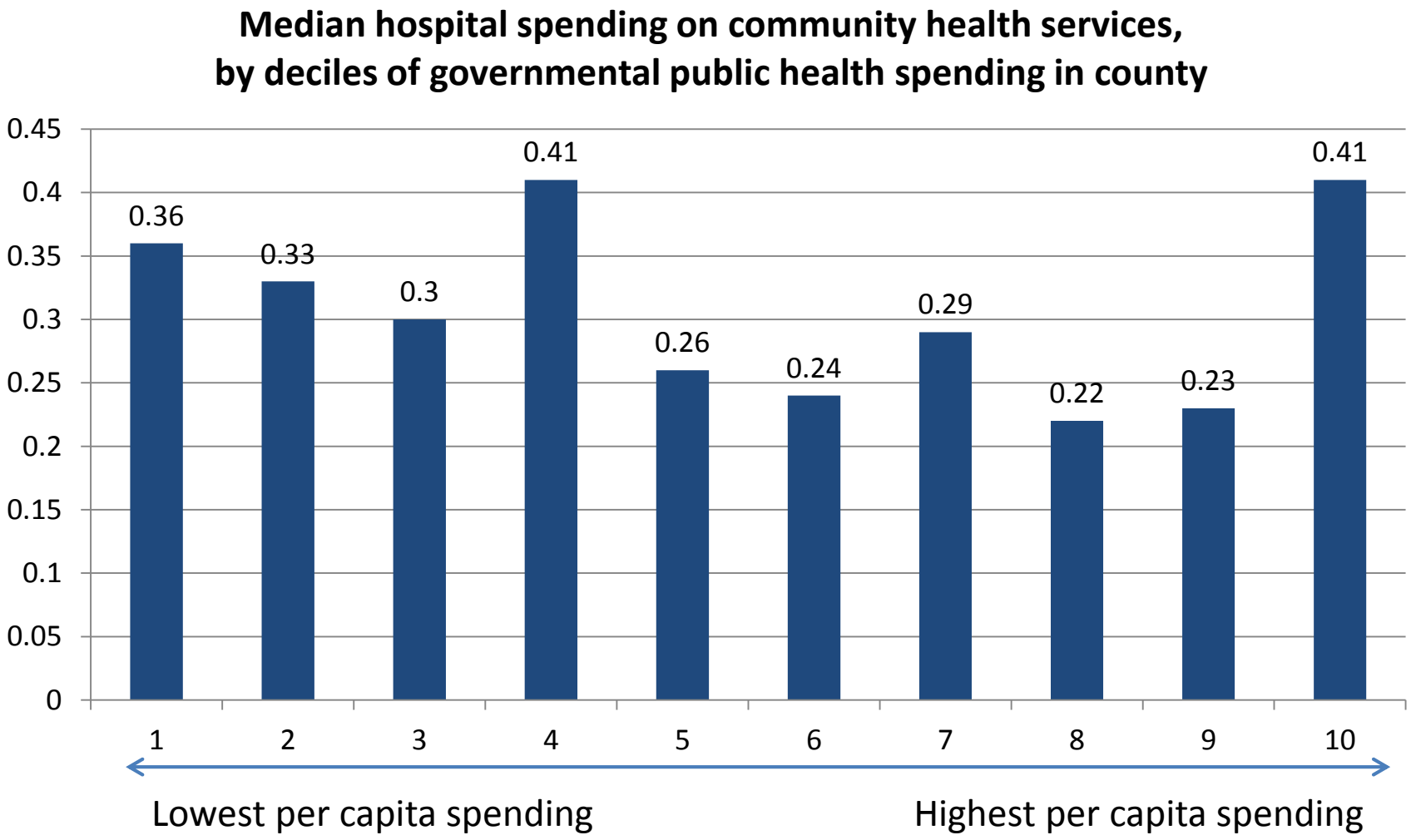
	Total	Per capita	% of op exp
Governmental public health			
Local health departments	$4.7 million	$39	
State health departments	$451 million	$70	
Combined local and state health departments		$93	
Tax-exempt hospitals			
Total community benefit	$6.9 million		6.4%
Community health services	$0.3 million		0.3%

Notes: Table shows median spending for all categories shown.

Population Health Investments (2)



Population Health Investments (3)

	LHD spending	SHD spending	Combined LHD and SHD spending
Total community benefit spending	0.04 (0.16)	-0.08** (0.01)	0.01 (0.80)
Community health services spending	0.01 (0.76)	0.02 (0.51)	0.02 (0.58)

Note: Table shows Pearson's correlation coefficients with p-values in parentheses. ** p<0.01.

Multivariate Model

$$CommBenefit_i = \beta_0 + \beta_1 * GovPHSpending_i + \beta_2 * X_i + \varepsilon$$

- Generalized linear regression models
- Separate models for two dependent variables, total community benefit spending and community health services spending
- All regressions included a set of hospital, LHD, SHD, and community-level control variables

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Multivariate Findings

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	Community health services	Total community benefit
Key independent variable		
Combined LHD and SHD spending	0.0003 (0.0019)	-0.0015 (0.0031)
Significant control variables		
Number of beds	0.0014 (0.0010)	0.0041* (0.0017)
Teaching hospital	0.13 (0.65)	2.54* (1.07)
Sole community provider	1.33** (0.47)	0.79 (0.77)
State-level CB reporting requirement	0.49 (0.29)	1.32** (0.48)

Notes: Table shows regression coefficients with standard errors in parentheses. *p<0.05; **p<0.01. None of other hospital, LHD, SHD, and community-level control variables was statistically significant with the exception of geographic region.

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Key Findings

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Study found no evidence of “crowding out” of hospital investment in population health by public sector.

- ✓ Size and composition of hospital community benefit portfolios were unrelated to level of governmental public health spending.
- ✓ More generally, none of the LHD and SHD-level characteristics was a significant predictor of hospital community benefit spending.

Major Limitations

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- Data for this study was limited to one year (2009).
- Hospitals were merged to LHDs based on the county they are located in.
- Unit of analysis was hospital-LHD pairing, rather than the community.
- Community benefits were measured in terms of net cost incurred by hospital.

Implications

- Governmental public health spending does not appear to crowd out investments of hospitals in population health improvement.
- Lack of relationship may not be surprising but raises questions about extent of communication among community stakeholders.
- Opportunities exist for public health to more actively engage with private sector to ensure public spending complements private investment.
- Joint CHA/CHNAs by hospitals and local public health may be first step toward joint community health improvement planning.

Commentary

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Questions and Discussion

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http://www.publichealthsystems.org/phssr-research-progress-webinars

Upcoming Webinars – August 2015

Wednesday, August 12 (12-1pm ET)

Building Access & Understanding of Law in Public Health Practice in Nebraska

Jennifer K. Ibrahim, PhD, MPH, MA, Associate Dean for Academic Affairs, College of Public Health, Temple University

Thursday, August 20 (1-2p ET)

Public Health & Primary Care Integration through Enhanced Public Health Information Technology (PHIT) Maturity: Behavioral Health

Ritu Agarwal, PhD, Kenyon Crowley, MBA, Health Information and Decision Systems, Robert H. Smith School of Business, University of Maryland

Thank you for participating in today's webinar!

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https://redcap.uky.edu/redcap/surveys/?s=B2TenV5YaJ

For more information about the webinars, contact:

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