

Systems for Action

Systems and Services Research to Build a Culture of Health



Research Seminar

Friday, December 4, 2015

12:30 - 1:30 pm ET

Learning from Positive Deviant Local Health Departments in Maternal and Child Health

Agenda

Welcome: Rick Ingram, DrPH, Assistant Professor, U. of Kentucky
College of Public Health

“Learning from Positive Deviant Local Health Departments in Maternal and Child Health”

Presenter: Tamar Klaiman, PhD, MPH, University of the
Sciences in Philadelphia t.klaiman@uscience.edu

Questions and Discussion

Presenter



[Tamar Klaiman, PhD, MPH](#)

Assistant Professor

Health Policy and Public Health

University of the Sciences in Philadelphia

PHSSR Mentored Researcher

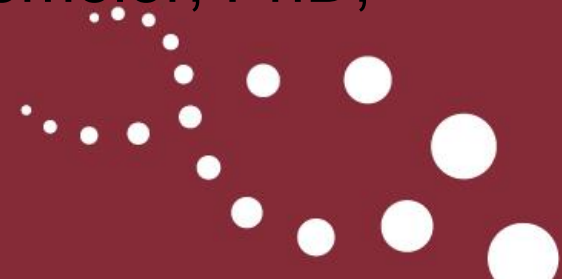
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Learning from Positive Deviant Local Health Departments in Maternal and Child Health December 4, 2015

Tamar Klaiman, PhD, MPH; Athena Pantazis,
MPH; Anjali Chainani, MPH; Betty Bekemeier, PhD,
MPH, FAAN



Acknowledgement

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Research Objective

To identify and learn from LHDs in that perform better than expected in MCH outcomes compared to peers



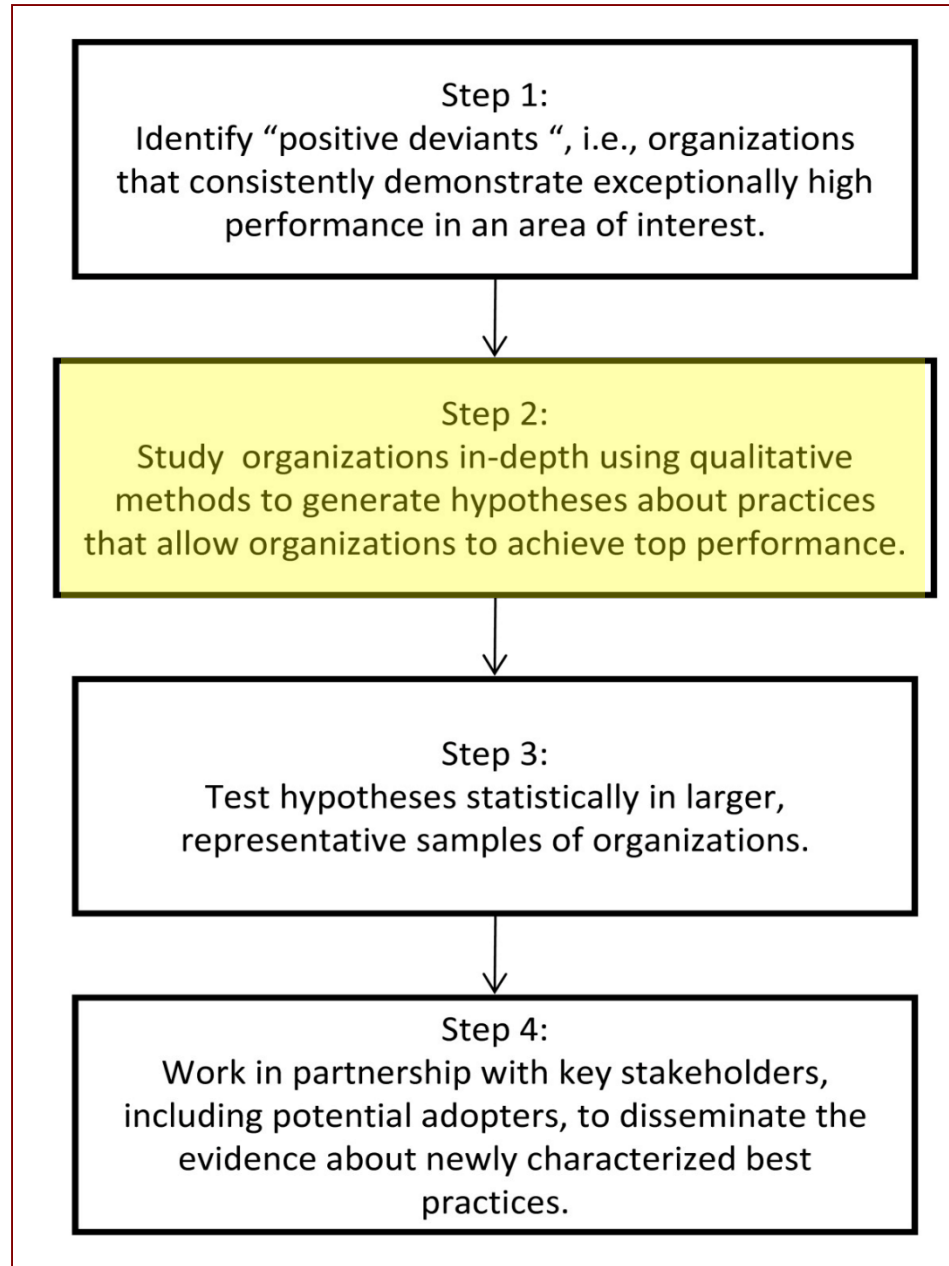
Framework: Positive Deviance

- Used to identify and learn from units that perform beyond expectations
- Defined by context
- Performance Improvement

Context
is Everything



Framework: Positive Deviance Method



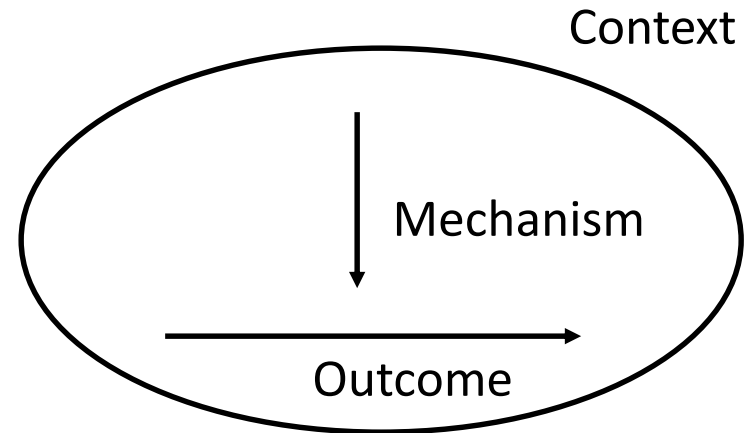
Framework: Realist Evaluation (Pawson and Tilley)

Context: LHD environment
(budget, population, geography)

Mechanisms: leadership,
partnerships, service provisions

Outcomes:

- Teen pregnancy rates
- Low birth weight
- Pre-natal care
- Infant mortality rate



$$C + M = O$$

Methods



- 1) Quantitative: ID Positive Deviants
- 2) Qualitative: In-depth interviews with Positive Deviants



Methods - Quantitative

- 2009-2010 Public Health Activities and Services Tracking (PHAST) data
 - WA (n=35), FL (n=67), NY [n=48 (excluded NYC & 8 others)] uniquely detailed and matched annual MCH-related county-level expenditure data



Multiple Regression: Contextual Factors & Modifiable Activities

- Types of factors:
 - (Z) = Variables over which LHDs have no control, (population size, geography, budgets)
 - (X) = Variables over which LHD leaders and boards have some internal control (X) (assuring service through alternative providers in the community, having a clinician as an LHDs “top executive,” types of services the LHD provides)
 - (Y) MCH health outcomes (county-level rates of teen births, late or no prenatal care, infant mortality, percent of low weight births)



Methods: Quantitative

- **Step 1:** Regressed $Y=a+b^1(Z)+e$ to assess variance explained by factors outside of LHD control (Context)
- **Step 2:** Added X variables $Y=a+b^1(Z)+b2(X)+e$ to assess variance explained by LHD-controlled variables (Mechanism)
- **Step 3:** Likelihood ratio test to determine whether the internal control variables improved the explanatory power of the model

See: Klaiman, T.; Pantazis, A.; Bekemeier, B. (2014). "A Method for Identifying Positive Deviant Local Health Departments in Maternal and Child Health." *Frontiers in Public Health Systems and Services Research*. 3(2): Article 5. Available at <http://uknowledge.uky.edu/frontiersinphssr/vol3/iss2/5/>

Results

- 50 positive deviant LHDs across 3 states:




10 (29%)



16 (33%)



24(36%)

- 45 of 50 LHDs (90%) had better than expected MCH outcomes over 2 years,
 - 25 LHDs (50%) had 2 or more exceptional outcomes in a single study year
- 

Results: MCH Expenditures – PDs and non-PDs

State	LHDs	PDs (%)	Total Maternal Child Health Expenditures*		WIC Expenditures		Family Planning Expenditures		Maternal, Infant, Child and Adolescent Health Expenditures		
			<i>non-PDs</i>	<i>PDs</i>	<i>non-PDs</i>	<i>PDs</i>	<i>non-PDs</i>	<i>PDs</i>	<i>non-PDs</i>	<i>PDs</i>	
FL	Rural	18 (27%)	7 (29%)	\$ 5.78-35.67 (19.68)	\$ 7.64-33.26 (22.71)	\$ 0-21.20 (1.91)	\$ 0-0.89 (0.22)	\$ 4.49-15.42 (9.35)	\$ 2.38-16.03 (8.49)	\$ 0.01-23.60 (8.42)	\$ 4.48-22.41 (14.00)
	Micro	10 (15%)	2 (8%)	\$ 8.56-46.36 (20.80)	\$ 28.05-36.26 (32.98)	\$ 0.02-11.45 (4.80)	\$ 0.02-11.05 (5.52)	\$ 4.01-15.84 (6.27)	\$ 9.12-20.72 (14.13)	\$ 0.06-30.82 (9.73)	\$ 10.57-16.09 (13.33)
	Metro	39 (58%)	15 (63%)	\$ 7.26-27.69 (15.49)	\$ 7.49-56.38 (16.93)	\$ 0-11.89 (5.40)	\$ 0.02-15.01 (5.15)	\$ 1.22-9.59 (4.06)	\$ 1.97-10.87 (4.33)	\$ 0.26-16.85 (6.02)	\$ 0.32-32.04 (7.44)
NY	Rural	9 (19%)	4 (25%)	\$ 0.25-14.06 (5.77)	\$ 1.18-16.61 (7.94)	\$ 0-8.70 (1.76)	\$ 0.26-7.48 (2.42)	\$ 0-13.87 (2.54)	\$ 0.03-8.77 (4.46)	\$ 0.10-6.13 (1.47)	\$ 0.04-3.03 (1.06)
	Micro	13 (27%)	5 (31%)	\$ 0.30-12.90 (2.56)	\$ 1.38-20.55 (9.92)	\$ 0.01-8.05 (1.40)	\$ 0.12-10.12 (3.28)	\$ 0-6.52 (0.43)	\$ 0.04-17.37 (4.75)	\$ 0.08-2.41 (0.72)	\$ 0.24-3.62 (1.89)
	Metro	26 (54%)	7 (44%)	\$ 0.02-13.70 (4.81)	\$ 1.07-20.39 (7.50)	\$ 0-7.77 (2.28)	\$ 0-6.54 (3.71)	\$ 0-3.11 (0.30)	\$ 0-3.18 (0.62)	\$ 0-8.31 (2.22)	\$ 0.86-11.14 (3.17)
WA	Rural	11 (31%)	3 (30%)	\$ 3.44-32.20 (15.16)	\$ 17.17-25.95 (21.22)	\$ 0-8.68 (3.96)	\$ 4.98-8.97 (7.31)	\$ 0-17.86 (3.84)	\$ 0-10.27 (5.55)	\$ 2.36-18.83 (7.37)	\$ 3.14-11.81 (8.36)
	Micro	11 (31%)	3 (30%)	\$ 1.21-9.40 (5.77)	\$ 2.36-6.21 (4.48)	\$ 0-5.33 (2.90)	\$ 0-3.43 (1.55)	\$ 0 - 0.64 (0.08)	\$ 0-0.01 (0)	\$ 1.02-4.67 (2.79)	\$ 1.09-5.11 (2.92)
	Metro	13 (37%)	4 (40%)	\$ 0.82-27.52 (9.30)	\$ 0.73-11.71 (7.32)	\$ 0-4.71 (1.78)	\$ 0-4.98 (2.76)	\$ 0-10.09 (2.15)	\$ 0-2.87 (1.14)	\$ 0.82-18.78 (5.36)	\$ 0.73-5.36 (3.42)
Combined	Rural	38 (25%)	14 (28%)	\$ 0.25-35.67 (15.44)	\$ 1.18 - 33.21 (17.68)	\$ 0-21.20 (2.56)	\$ 0-8.97 (2.34)	\$ 0-17.86 (6.18)	\$ 0-16.03 (6.61)	\$ 0.01-23.60 (6.71)	\$ 0.04-22.41 (8.73)
	Micro	34 (23%)	10 (20%)	\$ 0.30-46.36 (9.72)	\$ 1.38 - 35.26 (13.05)	\$ 0-11.45 (3.00)	\$ 0-11.05 (3.21)	\$ 0-15.84 (2.31)	\$ 0-20.72 (5.23)	\$ 0.06-30.82 (4.40)	\$ 0.23-16.09 (4.62)
	Metro	78 (52%)	26 (52%)	\$ 0.17-27.69 (10.50)	\$ 0.73 - 56.37 (13.00)	\$ 0-11.87 (3.64)	\$ 0-15.01 (4.40)	\$ 0-10.09 (2.36)	\$ 0-10.87 (2.86)	\$ 0.01-18.78 (4.50)	\$ 0.32 - 32.04 (5.75)

Interviews



24 PDs identified; 18 interviewed
(75% response rate)



10 PDs identified; 7 interviewed
(70% response rate)



16 PDs identified; 14 interviewed
(88% response rate)



Characteristics of LHD Jurisdictions

Community Type	# Identified	# Interviewed	% Interviewed
Rural	14	10	71%
Micropolitan	10	9	90%
Metropolitan	26	20	77%
Total	50	39	78%



Results – Partnerships



“One of our other goals is to stay operating. We work with partners to maximize resources.”

“Community partnerships only become more important when our direct resources are limited...We want to and are working with partners to use resources we have in a coordinated way to implement models that are collaborative in nature.”

“Build community partnerships, not advocates for your programs ... Partnership is where peers come together and develop strategies to reach specific goals...Prevention is not when you already have someone enrolled in a program.”

Results: Clearly Defined Goals

“The opportunities in a local health department for data driven decision making are the exception rather than rule. There’s been an upsurge of interest in assessment and it’s getting more notice.”

“We look at the data. Track the data. When we see a problem in the data, we go for it.”



Challenges



Funding



Variations in
Data Collection



Staff Turnover

“When it came to basic budget decisions about what to preserve it wasn’t a matter of local assessment data. It was more a question about basic public health interventions for the public.”

Implications for Policy and Practice

- Establishing Partnerships
 - Technical expertise
 - Data analysis
 - Referral and administrative services
- Data-driven Activities
 - Invest in robust data systems
 - Community priorities
 - Population-based services

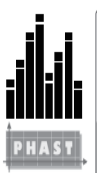


Translation and Dissemination

- 3 infographics
- 3 manuscripts (2 under review)
- 1 research brief

resources may be associated with better health outcomes, there are some LHDs that maintain exceptional performance, even with limited budgets. Our goal was to identify and learn from high performing local health jurisdictions in maternal and child health in Washington State.

METHODS



Using data from the Public Health Activities and Services Tracking (PHAST) database as a resource for identifying *Positive Deviant LHDs* in MCH outcomes in terms of 4 areas:


- Teen Births
- Late or No Prenatal Care
- Infant Mortality
- Percent of Low Weight Births

Semi-Structured Interviews

"Community partnerships only become more important when our direct resources are limited. We want to explore working with partners to use resources we have in a coordinated way to implement models that are collaborative in nature!"
—Survey Participant

Primary data were collected through hour-long phone interviews with staff in 7 out of 10 (70%) Washington LHDs:

- 4 Metro (31%)
- 3 Micro (27%)
- 3 Rural (28%)



3 FOCUS AREAS WERE EXAMINED

FINDINGS

Themes

Positive Deviant LHDs focus on assuring their communities have access to needed services, even when that means changing their roles and responsibilities.

Importance of Community Partnerships:

- Community Based Organizations
- Schools
- Internal

Importance of Clearly Defined Goals:

- Coordination and Administration
- Population Based
- Data-Define

Challenges

- Funding**
- Variations in Data Collection**

IMPLICATIONS

LHDs can establish and maintain strong partnerships by providing:

- Technical Expertise
- Data Analysis
- Referral and Administrative Services for Community Agencies

Many LHDs have shifted their focus to data-driven bas public health activities and population-based services to cast the widest net with limited resources. Other LHDs can use many of the practices described here to improve their practice and health outcomes.

Feedback


PARTNERSHIPS
"Build community partnerships!
Not advocates for your programs which is what public health does. Partnership is where peers come together and develop strategies to reach specific goals."

DATA
"The opportunities in a local health department for data driven decision making are the exception rather than rule. There's been an upsurge of interest in assessment and its action."

Lessons Learned from Exceptional Florida Local Health Departments in Maternal and Child Health

Local health departments (LHDs) are under increasing pressure to improve performance with limited resources. While research has found that financial resources may be associated with better health outcomes, there are some LHDs that maintain exceptional performance, even with limited budgets.

METHODS



Using data from the Public Health Activities and Services Tracking (PHAST) database as a resource for identifying *Positive Deviant LHDs* in MCH outcomes in terms of 4 areas:

- Teen Births
- Late or No Prenatal Care
- Infant Mortality
- Percent of Low Weight Births

Semi-Structured Interviews


"People ask what is public health—it is whatever the legislation says it is. A lot of times decisions are made and you are required to pull personnel to address the issue of the day and it becomes a challenge to provide services."
—Survey Participant

3 FOCUS AREAS WERE EXAMINED

- Assessment & Policy Development
- Research & Evaluation
- Regulatory Oversight

Primary data were collected through hour-long phone interviews with staff in 18 out of 24 (75%) Florida LHDs:

- 12 Metro (67%)
- 1 Micro (5%)
- 5 Rural (28%)



Next steps

- Validate positive deviance method
- Apply PD to other areas of inquiry
- Learn from PD LHDs in other areas



Thank you!

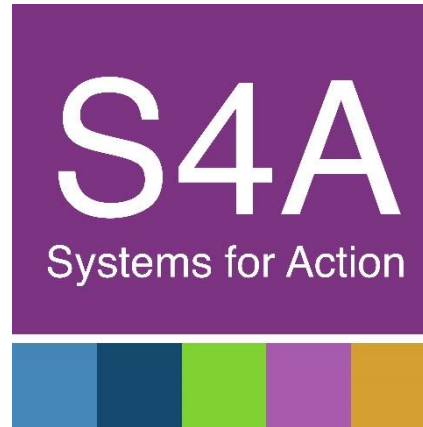
- Robert Wood Johnson Foundation
- Research Assistants
 - Anjali Chainani, MPH, MSW & Athena Pantazis, MA, MPH
- Interviewees
- Advisory Council
 - Betty Bekemeier, PhD, MPH, FAAN
 - Barry Kling, MSPH
 - Michael Stoto, PhD
 - JoAnne Fischer
 - Carol Brady



Questions and Discussion



Thank you for participating in today's seminar



For more information about the webinars, contact:

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