



***What works? For Whom?
Under what conditions?:
Contributing the data to
inform & improve practice***

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OPHA Nursing & the Public's Health Conference

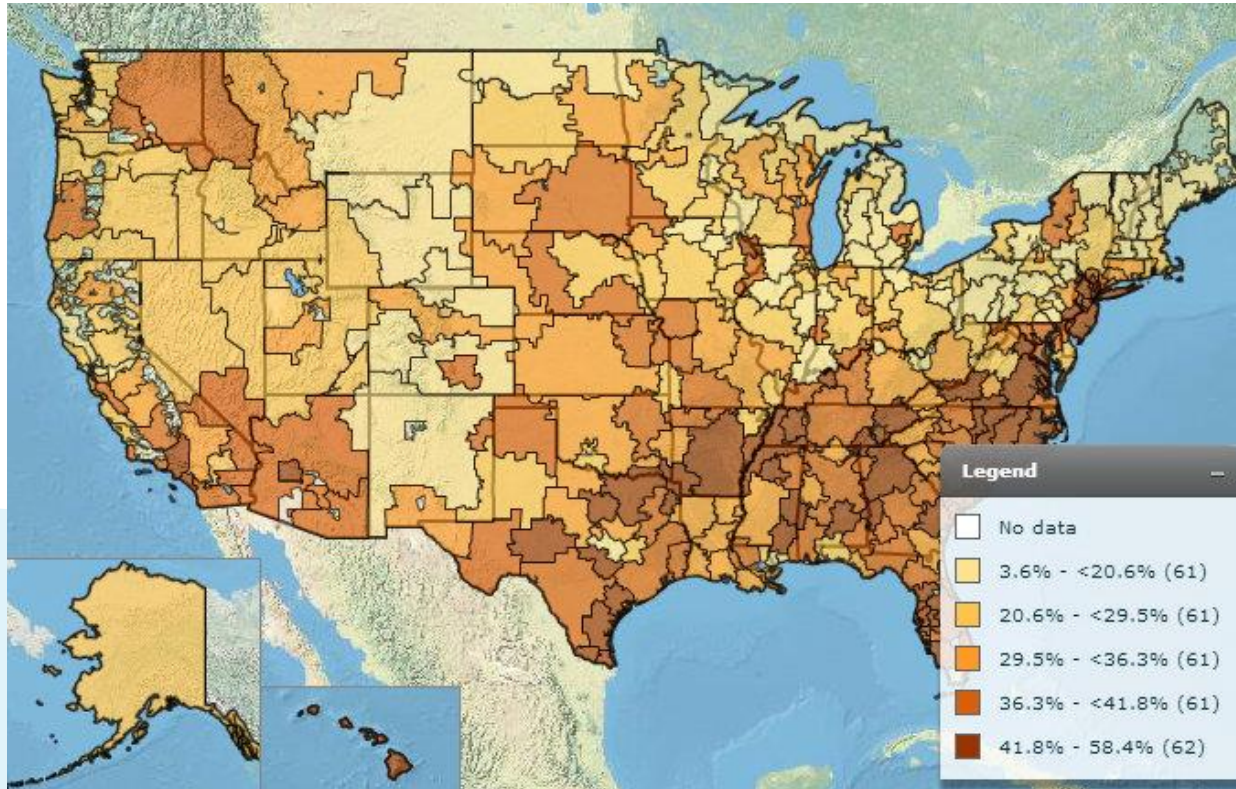
The Robert Wood Johnson Foundation



SCHOOL OF NURSING
UNIVERSITY of WASHINGTON

Health Care Data

Percent of Male Medicare Beneficiaries Age 68-74
Receiving PSA Test (Year: 2010)



THE DARTMOUTH INSTITUTE
FOR HEALTH POLICY & CLINICAL PRACTICE



Burden of Disease

Life expectancy

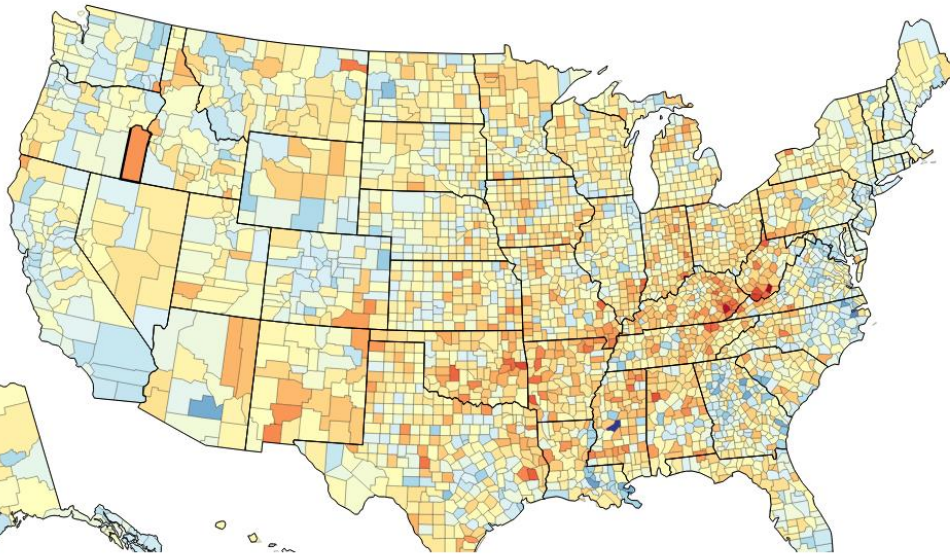
Malheur County

Oregon

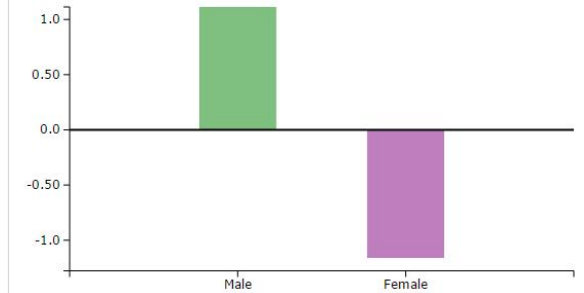
View profile

Change in life expectancy of females at birth, 2005-2013

Change in Female life expectancy for Oregon counties 2005-2013



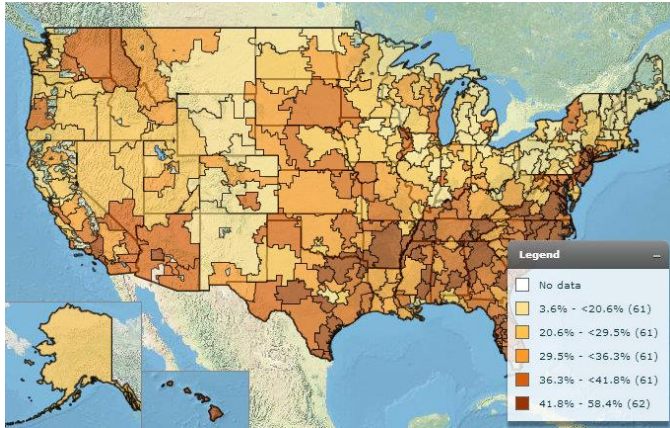
Change in Male and Female life expectancy in Malheur County, Oregon 2005-2013



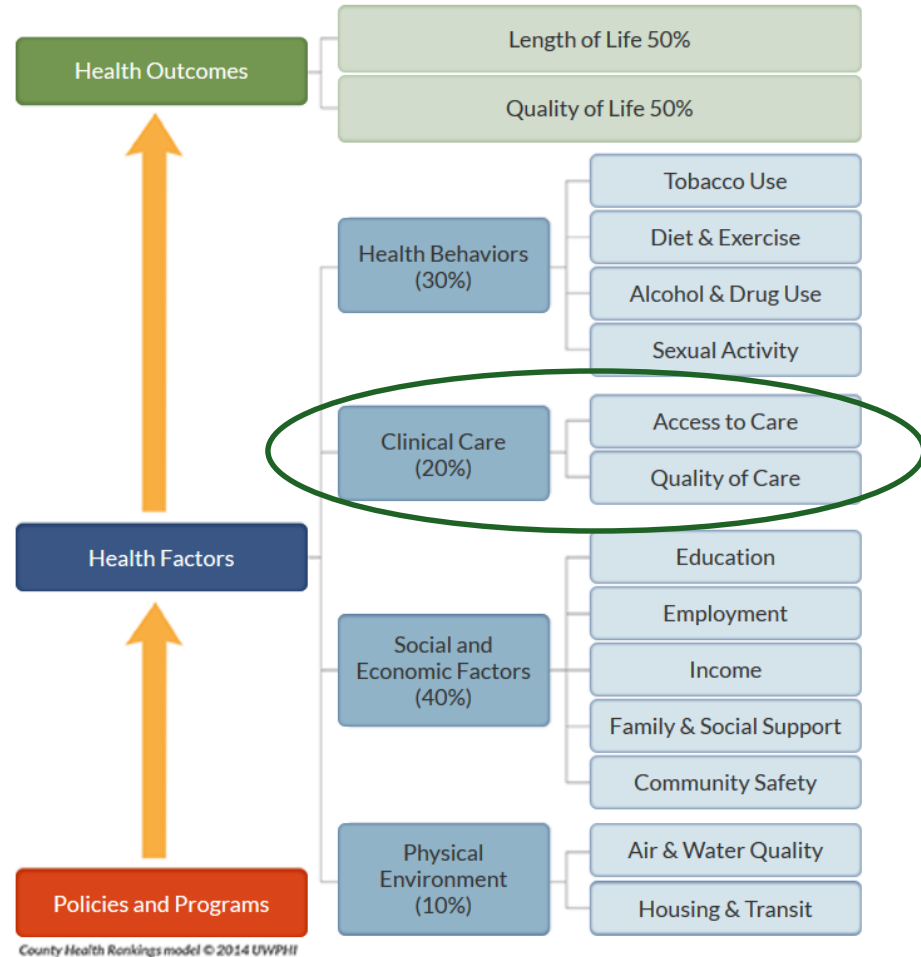
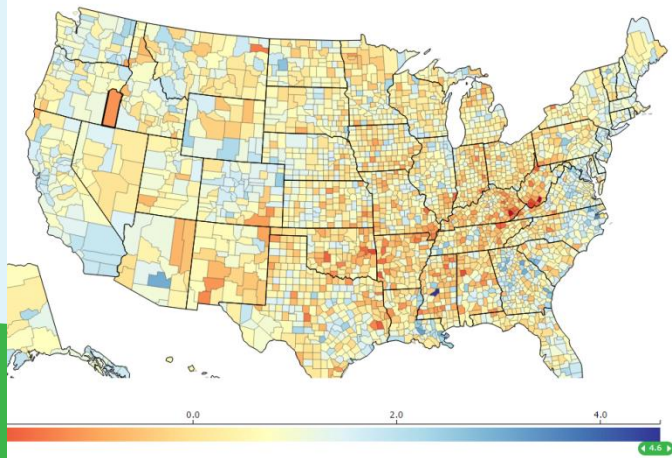
Display: Value Change Year: 2005 2013 Sex: Male Female Lock scales: Uncertainty:

The Missing 80%

Percent of Male Medicare Beneficiaries Age 68-74 Receiving PSA Test (2010)



Change in Life Expectancy of Females (2005-2013)



Our Public Health System



“...assuring the conditions in which people can be healthy.”

(The Institute of Medicine)

Practice Leaders ...

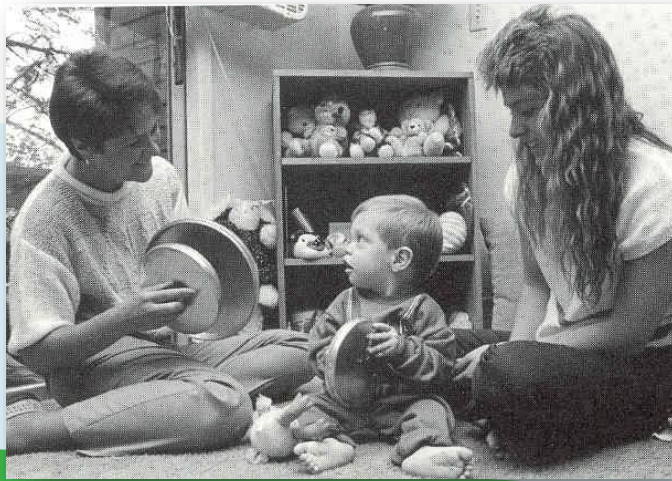


- ▶ **Strongly value data for decision making**
- ▶ **Have “limited access” to & little “capacity for interpreting” data**

(Bekemeier, et al, 2013)

- ▶ **Using “conventional wisdom”**

Individually-focused



Population-focused





PHAST

(Public Health Activities & Services Tracking)

Data
Repository

Resource
(harmonization,
standardization)

Evidence
Production

What works?
For what populations?
Under what conditions?

PHAST-Key Features

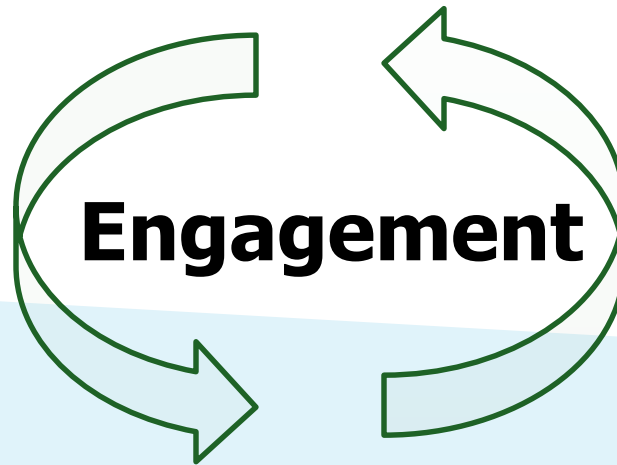
- Generating data & evidence
 - For research (to guide practice, policy-making)
 - For practice (to improve performance)
- Assuring relevance
- Increasing data access, utilization



A Collaborative Process

Practice

- ▶ Data “owners”
- ▶ Interested state-wide workgroups
- ▶ Local knowledge
- ▶ Priorities for decision-making
- ▶ Specific data needs



Academia

- ▶ PHAST database
- ▶ Data management resources
- ▶ Analytic expertise
- ▶ Links to research resources
- ▶ Facilitating data standardization

PHAST Finance:

The value of public health services to the public's health



Research Question - MCH

Are LHD expenditures on MCH activities impacting health outcomes for populations at risk?



YES

MCH Findings/Discussion

- LHD MCH expenditures have an independent impact on low birth weight...especially in high poverty areas

Implications

- Findings of interest to policy & practice!
- Policy briefing on Capitol Hill
- NPR Story

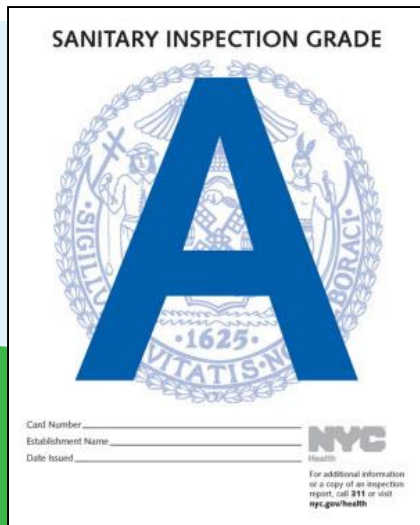
Bekemeier, B., Yang, Y., Dunbar, M.,
Pantazis, A., & Grembowski, D.
(2014, AJPM).



Research Question: Food Safety

Are LHD expenditures on food safety & sanitation impacting enteric disease morbidity?

YES



Food Safety Findings



- Significant benefits
- Higher LHD Food & Sanitation spending significantly associated with lower incidences of
 - Salmonellosis
 - Cryptosporidiosis
- Useful to practice & policy-makers!

Bekemeier, B., Yip, M. P., Dunbar, M., Whitman, G., & Kwan-Gett, T. (2015, AJPH).

Research Question: CD Control

Are LHD expenditures on **immunization** impacting VPD & immunization completeness?



???

Data Harmonization of EH Services

FL (Service Code)	NY (Service Code)	WA (Service Code)	MH	OH
<ul style="list-style-type: none"> • limited use public water(57) • public water system(58) • private water system(59) • coastal beach monitoring(47) • SUPER Act Services(56) • pools/bathing places(60) • storage tank compliance service(55) 	<ul style="list-style-type: none"> • pub wtr sup prot (19) • indiv wtr(37) • nyc watershed(57) 	<ul style="list-style-type: none"> • drinking water quality(562.52) • environmental water quality(562.60) • chemical & physical (562.57) 	<ul style="list-style-type: none"> • tot_eh 	<ul style="list-style-type: none"> • Local eh • State eh • Federal eh
<ul style="list-style-type: none"> • solid waste disposal service(63) • individual sewage(61) • public sewage(62) • biomedical waste services(64) • water pollution(70) 	<ul style="list-style-type: none"> • indiv wtr sewage(23) • indiv sewage(38) • reality subdiv(22) • DEC programs (56) 	<ul style="list-style-type: none"> • solid & hazard waste(562.53) • OSS & land development(562.54) 		
<ul style="list-style-type: none"> • rabies surveillance(66) • arbovirus surveillance(67) • rodent/arthropod control(68) 	<ul style="list-style-type: none"> • cd_rabies(11.1) • emergency vector(50) • vector sc gphw(28) • cd_vector sc(11.2) • cd_arthropod vector(11.3) • cha vector sc(17.1) • he vector sc(16.1) • mosq vect cont(46) 	<ul style="list-style-type: none"> • vector(562.55) 		
<ul style="list-style-type: none"> • occupational health services/ tattoo facility services(44) • community EH project(45) • lead monitoring service(50) • sanitary nuisance(65) • tanning facility service(69) • air pollution(71) • radiological health(72) • toxic substances(73) 	<ul style="list-style-type: none"> • EH hlth assess(25) • lead poisoning(4) • nuisances(24) • env radiation prot(20) • radioactive matter(33) • radiation equip(34) 	<ul style="list-style-type: none"> • environmental health-other(562.59) 		
<ul style="list-style-type: none"> • body art(49) • group care facilities(51) • housing & pub bldg(53) • mobile home & park(54) 	<ul style="list-style-type: none"> • comm sanit food (21) • housing hygiene(35) 	<ul style="list-style-type: none"> • living environment(562.58) 		
<ul style="list-style-type: none"> • food hygiene(48) 	<ul style="list-style-type: none"> • comm sanit food(21) 	<ul style="list-style-type: none"> • food(562.56) 		
<ul style="list-style-type: none"> • general EH services(75) • gen enviro. engineering service: water, sewage & pollution(76) • EH surcharge(115) 	<ul style="list-style-type: none"> • other env serv(36) 			

“Big Buckets” of Service Expenditures

Domain/ Sub-domain	FL 2000-10	WA 1998-2011	MN 2005-10	OH 2000-11	NY 2000-10
EH total	X	X		X	X
EH food & sanitation	?	X			X
CD total	X	X	X		X
CD immunization		X			X
MCH total	X	X			X
WIC, FP, & Maternal/Infant/Children	X	X			X

PHAST Finance: Implications

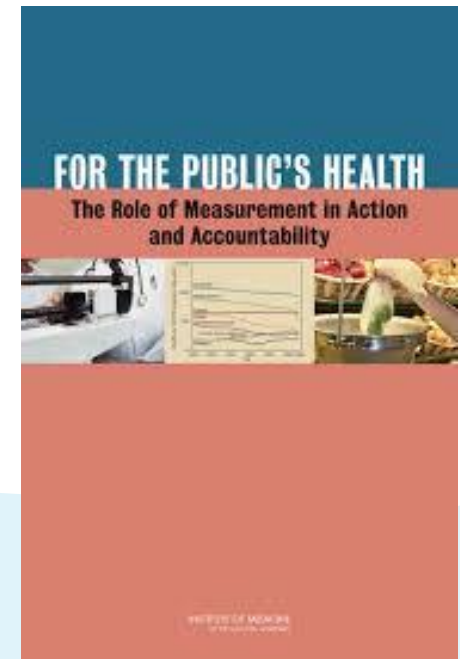
Proof of Concept

- LHDs make critically valuable contributions
- The potential of detailed data
 - Detailed **administrative data** can help answer critical questions about the value of these activities
- There is value (& effort!) in a data repository

PHAST Finance: Implications

Limitations!

- Data limitations inhibit measurement of costs, performance, & outcomes of prevention efforts
- **Standardized data** needed about public health services & activity



Data
Repository

Resource
(harmonization,
standardization)

PHAST "2.0"

Developing & supporting systems to collect a uniform set of shared data that depict public health system activity in communities.



Big Picture



PHAST "1.0"

PHAST "2.0"

existing data

prospective data

harmonization

standardization

compare few states

compare many states

compare few
measures

compare many
measures

PHAST: Facilitating Standardization of Public Health Activity Data

- Working with 6-state **MPROVE** measures
- Supporting states interested in data collection
- Refining measures
- Assuring relevance for
 - Accreditation,
 - Performance improvement,
 - Data-driven decisions,
 - Demonstrating use of resources



Home » Measures 1.1

Measures 1.1

All Measures:

[Download full descriptions](#)

CHRONIC DISEASE PREVENTION (Click each name below to view measures for that bundle)

- Tobacco Prevention & Control
- Obesity Prevention
- Oral Health

COMMUNICABLE DISEASE CONTROL (Click each name below to view measures for that bundle)

- Immunization**
 - M152** Childhood immunization completeness (community)
Percentage of children 19-35 months who are up-to-date on immunizations per Advisory Committee on Immunization Practices (ACIP).
 - M154** Childhood immunizations administered by agency (agency) [Read More](#)
 - M201** Confirmed vaccine-preventable disease cases (community) [Read More](#)
- Enteric Disease
- Sexually Transmitted Infections
- Tuberculosis Control

ENVIRONMENTAL HEALTH PROTECTION (Click each name below to view measures for that bundle)

- Lead Protection
- Food Protection
- Water Protection

[Appendix: Disease Case Classification](#)

Measures 1.1 Notes

- The label "community" in parentheses after the measure name indicates a community-level measure that is intended to capture all services and activities performed in the community, regardless of which entity or entities perform the action. The label "agency" in parentheses after the measure name indicates an agency-level measure that is intended to capture the services/activities performed directly by the local health department in the community. The geographical boundaries of the community should be the same as the local health department's jurisdiction.
- An Appendix is available to assist with classification of "reported" vs "probable" cases of disease for M201, M167, and M165.
- Measures as specified in this document are intended for prospective data acquisition efforts. This document is not a codebook for the original MPROVE Study dataset.
- "Local Health Department" is abbreviated as "LHD" in the measure definitions.

Measures Background

Learn about the development of these measures, and their origin in the Multi-network Practice and Outcome Variation Examination (MPROVE) Study.

PHAST

Data Demand

- Measures linked with other systems
- Relevance
- Need for policy & planning

Meet demand for data



Optimize data demand



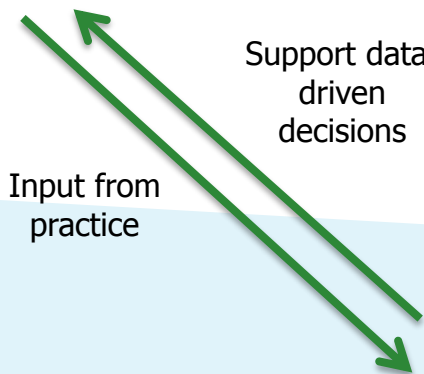
Standardized Measures

- Integration into standard reporting systems
- Valid & reliable
- High quality
- Alignment with FPHS & CoA
- Strict data management procedures

Data Access & Use

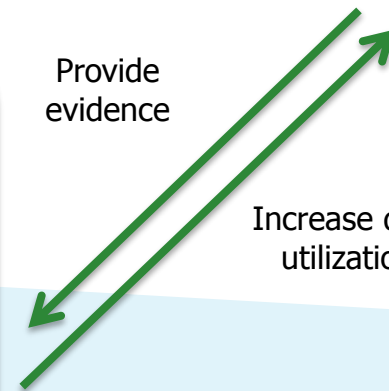
- Web access
- Data Visualization
- Evidence generation for practice & research

Support data-driven decisions



Input from practice

Provide evidence



Increase data utilization

High performing systems



Healthier communities

PHAST

Need it

Meet demand for data

Optimize data demand

Improve it

DATA

Support
data-driven
decisions

Input from
practice

Use it

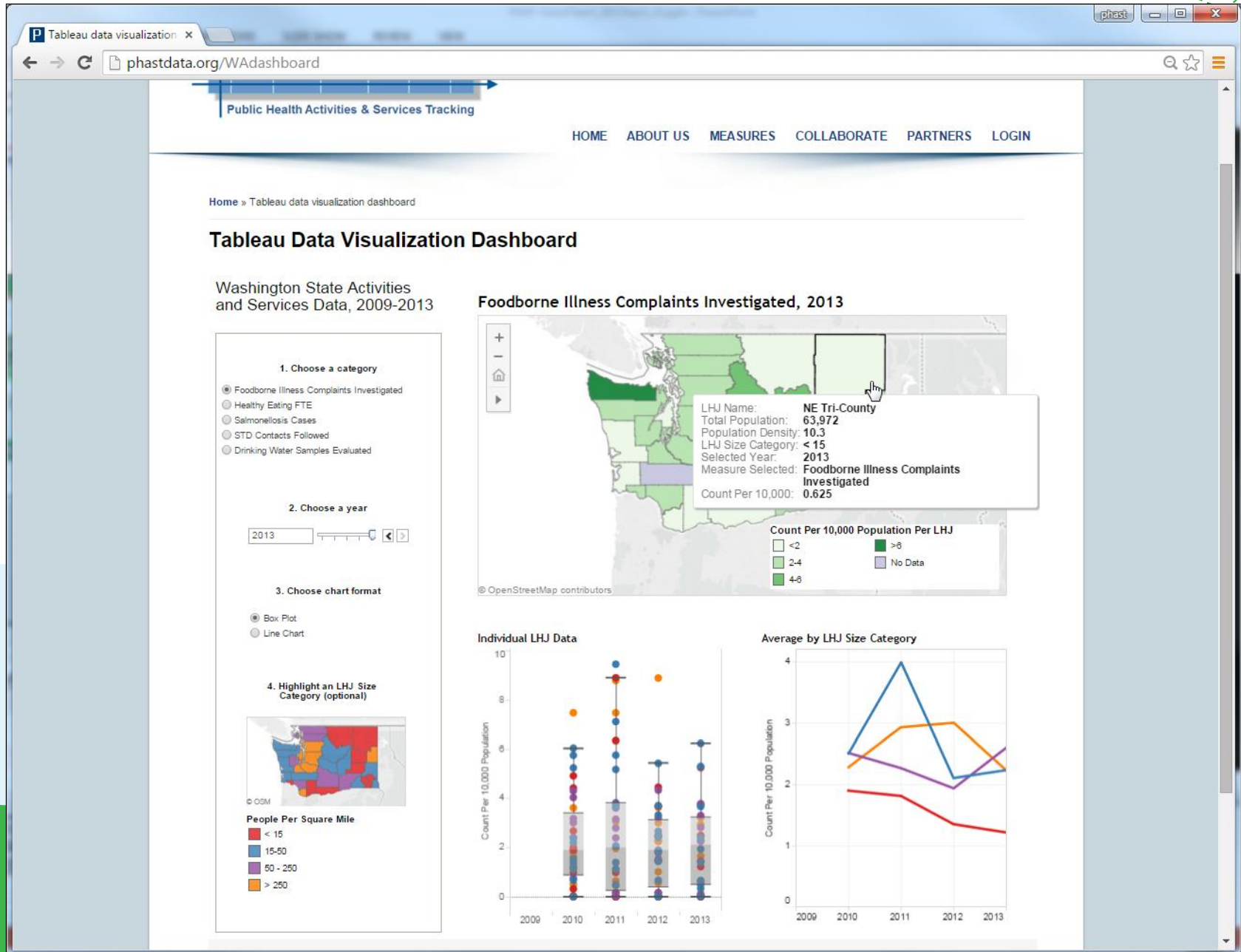
Provide
evidence

Increase data
utilization

High performing systems

Healthier communities

Data Visualization: WA Demo



Tutorial

Adjust the data display with the Selection Menu.

Try it yourself!

Focus on a specific LHJ size category.

Exploring your size category.

Explore data on a single LHJ.

Compare LHJs.

Explore other functions.

Washington State Activities and Services Data, 2009-2013

1. Choose a category

- Foodborne Illness Complaints Investigated
- Healthy Eating FTE
- Salmonellosis Cases
- STD Contacts Followed
- Drinking Water Samples Evaluated

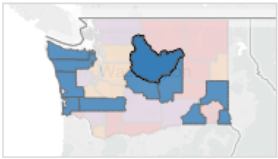
2. Choose a year

2011

3. Choose chart format

- Box Plot
- Line Chart

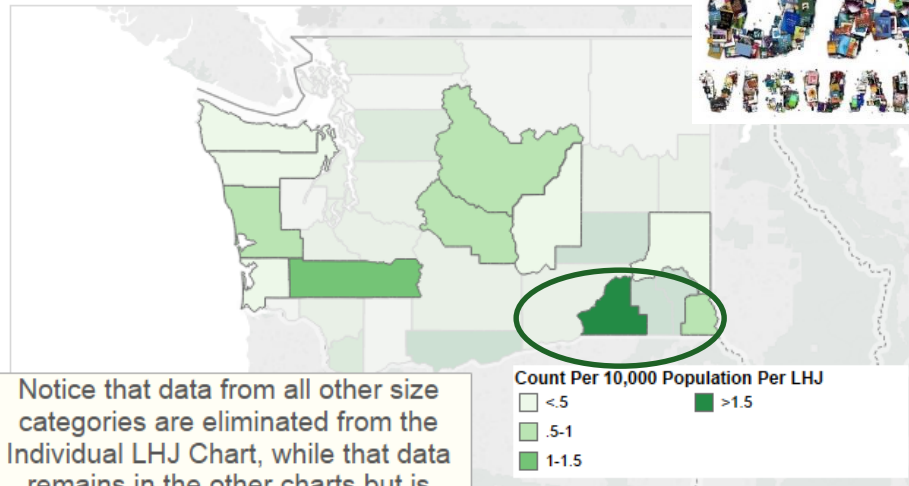
4. Highlight an LHJ Size Category (optional)



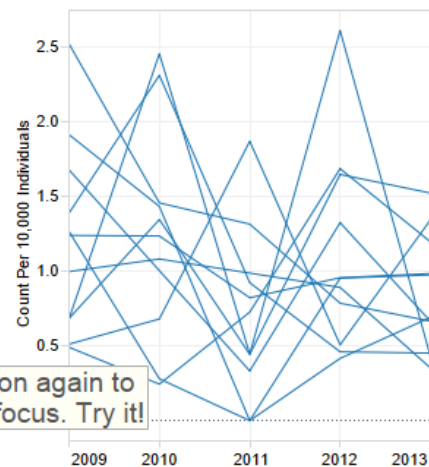
People Per Square Mile

- < 15
- 15-50
- 50 - 250
- > 250

Salmonellosis Cases, 2011

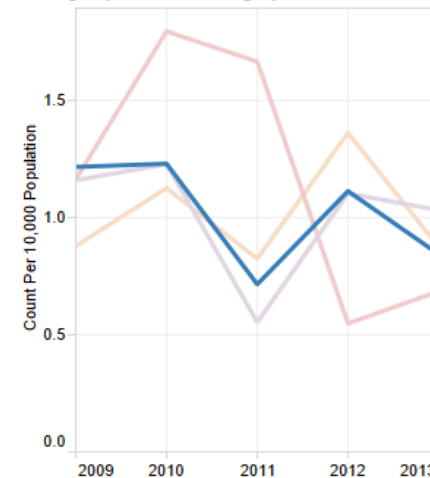


Individual LHJ Data



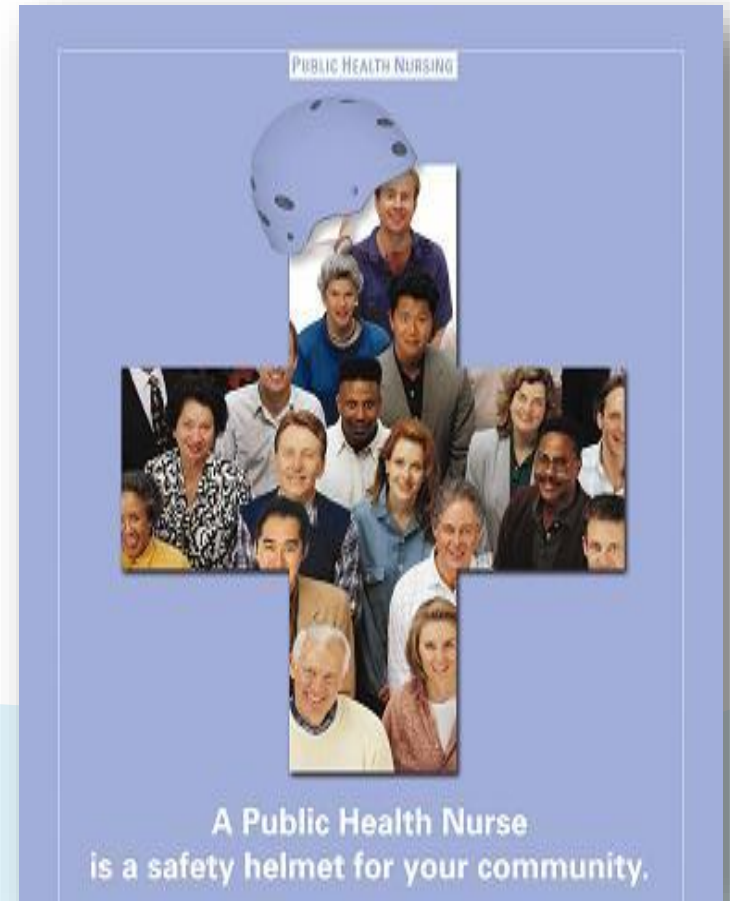
Click on your selection again to remove the regional focus. Try it!

Average by LHJ Size Category



Why Me?

- Population-focus
- Highest level of scope of practice
- Social justice & nursing
- Public health leadership/expectation
- Competency



Public Health Nursing
prepare | inform | assist

PHAST-related Papers

- ▶ Bekemeier, B., Yip, M. P., Dunbar, M., Whitman, G., & Kwan-Gett, T. (2015, Feb 17:e1-e8. [Epub ahead of print]). *Local Health Department Food Safety & Sanitation Expenditures & Reductions in Enteric Disease*.
- ▶ Bekemeier, B., Pantazis, A., Dunbar, M., & Herting, J. R. (2014). Classifying local health departments on the basis of the constellation of services they provide. *American Journal of Public Health*, 104(12):e77-82.
- ▶ Bekemeier, B., Yang, Y., Dunbar, M., Pantazis, A., & Grembowski, D. (2014). Targeted Health Department Expenditures Benefit Birth Outcomes at the County Level, *American Journal of Preventive Medicine*, 44(6), 569-577.
- ▶ Klaiman, T., Pantazis, A., & Bekemeier, B. (2014). A Method for Identifying Positive Deviant Local Health Departments in Maternal & Child Health. *Frontiers in Public Health Services & Systems Research*, 3(2), Article 5. <http://uknowledge.uky.edu/frontiersinphssr/vol3/iss2/5>
- ▶ Bekemeier, B. (2012). Tracking local public health services to inform decision making. *Northwest Public Health*, Spring/Summer 29(1),14-16. <http://www.nwpublichealth.org/archives/s2012/tracking-local-public-health-services-to-inform-decision-making>.
- ▶ Bekemeier, B., Bryan, M., Dunbar, M., & Fowler, C. (2012). Local health department provision of WIC Services relative to local “need”— examining 3 states & 5 years. *Frontiers in Public Health Services & Systems Research*, 1(1), Article 2. <http://uknowledge.uky.edu/frontiersinphssr/vol1/iss1/2>
- ▶ Bekemeier, B., Chen, A, Kawakyu, N., & Yang, Y. (2013). Local public health resource allocation—Limited choices & strategic decisions. *American Journal of Preventive Medicine*, 45(6), 769-775.
- ▶ Bekemeier, B., Dunbar, M., Bryan, M., & Morris, M. (2012). Local health departments & specific Maternal & Child Health expenditures: Relationships between spending & need. *Journal of Public Health Management & Practice*, 18(6), 615-622.