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

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Health Care Data

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

Engagement

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

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!

Research Question: CD Control

Are LHD expenditures on **immunization** impacting VPD & immunization completeness?
## Data Harmonization of EH Services

<table>
<thead>
<tr>
<th>FL (Service Code)</th>
<th>NY (Service Code)</th>
<th>WA (Service Code)</th>
<th>MH</th>
<th>OH</th>
</tr>
</thead>
</table>
| • 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) | • pub wtr sup prot (19)  
• indiv wtr(37)  
• nyc watershed(57) | • drinking water quality(562.52)  
• environmental water quality(562.60)  
• chemical & physical (562.57) | • tot_eh | • Local eh  
• State eh  
• Federal eh |
| • solid waste disposal service(63)  
• individual sewage(61)  
• public sewage(62)  
• biomedical waste services(64)  
• water pollution(70) | • indiv wtr sewage(23)  
• indiv sewage(38)  
• reality subdiv(22)  
• DEC programs (56) | • solid & hazard waste(562.53)  
• OSS & land development(562.54) | | |
| • rabies surveillance(66)  
• arbovirus surveillance(67)  
• rodent/arthropod control(68) | • 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) | • vector(562.55) | | |
| • 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) | • EH hlth assess(25)  
• kead poisoning(4)  
• nuisances(24)  
• env radiation prot(20)  
• radioactive matter(33)  
• radiation equip(34) | • environmental health-other(562.59) | | |
| • body art(49)  
• group care facilities(51)  
• housing & pub bldg(53)  
• mobile home & park(54) | • comm sanit food (21)  
• housing hygiene(35) | • living environment(562.58) | | |
| • food hygiene(48) | • comm sanit food(21) | • food(562.56) | | |
| • general EH services(75)  
• gen enviro. engineering service: water, sewage & pollution(76)  
• EH surcharge(115) | • other env serv(36) | | |
### "Big Buckets" of Service Expenditures

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>EH total</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>EH food &amp; sanitation</td>
<td>?</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>CD total</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>CD immunization</td>
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<td>x</td>
</tr>
<tr>
<td>MCH total</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>WIC, FP, &amp; Maternal/Infant/Children</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
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
PHAST “2.0”

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

<table>
<thead>
<tr>
<th>PHAST “1.0”</th>
<th>PHAST “2.0”</th>
</tr>
</thead>
<tbody>
<tr>
<td>existing data</td>
<td>prospective data</td>
</tr>
<tr>
<td>harmonization</td>
<td>standardization</td>
</tr>
<tr>
<td>compare few states</td>
<td>compare many states</td>
</tr>
<tr>
<td>compare few measures</td>
<td>compare many measures</td>
</tr>
</tbody>
</table>
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
Measures 1.1

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)
- 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 cookbook 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

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

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

Input from practice
Support data-driven decisions
Meet demand for data
Optimize data demand
Provide evidence
Increase data utilization

High performing systems
------------------------
Healthier communities
High performing systems

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Healthier communities

Need it

Improve it

Meet demand for data

Optimize data demand

PHAST

DATA

Provide evidence

Increase data utilization

Input from practice

Support data-driven decisions

Use it
Data Visualization: WA Demo
1. Choose a category
   - Foodborne Illness Complaints Investigated
   - Healthy Eating FTE
   - Salmonella 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)

Notice that data from all other size categories are eliminated from the Individual LHJ Chart, while that data remains in the other charts but is not highlighted.

Individual LHJ Data

Average by LHJ Size Category
Why Me?

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