

PHSSR Research-In-Progress Series:

Predoctoral and Postdoctoral Research Awards

Wednesday, September 10, 2014

12noon -1pm EDT

Improving HIV/STD Partner Services in New York State: *A Performance Management Approach*

Conference Phone: 877-394-0659

Conference Code: 775 483 8037#

Please remember to mute your computer speakers during the presentation.

PHSSR NATIONAL COORDINATING CENTER AT THE UNIVERSITY OF KENTUCKY COLLEGE OF PUBLIC HEALTH

Agenda

Welcome: C. B. Mamaril, PhD, National Coordinating Center PHSSR

Presenter: *“Improving HIV/STD Partner Services Performance in New York State: A Performance Management Approach”*

- **Britney Johnson, MPH**, AIDS Institute, NYS Dep’t. of Health

Commentary:

- **Sylvia Pirani, MPH**, Office of Public Health Practice, NYS Dep’t. of Health
- **James Tesoriero, PhD**, AIDS Institute Division of HIV/STD/HCV Prevention, NYS Dep’t. of Health

Questions and Discussion

Future Webinars and Closing

PHSSR Research in Progress Series

2013-2014 Pre and Post Doctoral Research Awards (10)

- One-year mentored research awards with Center development support
- Four presentations completed to date
 - **May 14 -- Local Health Department–Hospital Collaborations in New York State: A Natural Experiment**
Chris Maylahn, MPH, Office of Public Health Practice, New York State Dept. of Health
<http://connect.uky.edu/p69fyfw4q3o/>
 - **June 18 -- Health Care Reform: Colorectal Cancer Screening Expansion and Health Disparities**
Michael Preston, MPH, PhD, Cancer Control, University of Arkansas for Medical Sciences
<http://connect.uky.edu/p4p2yumgzqp/>
 - **Aug 13 -- Quantifying the Value of Public Health Intervention**
Theresa Green, PhD, MBA, MS, Center for Community Health, U. of Rochester Medical Center
<http://connect.uky.edu/p806n4ek68a/>
 - **Aug 27 -- Priorities in Rural Health: Cost-effectiveness Analysis of Fungal Meningitis Outbreak in New River Health District**
Kaja Abbas, PhD, MPH, Assistant Professor, Dept. of Population Health Sciences, Virginia Tech
<http://connect.uky.edu/p1kczntxpq1/>

Presenter



Britney Johnson, MPH

Program Research Specialist

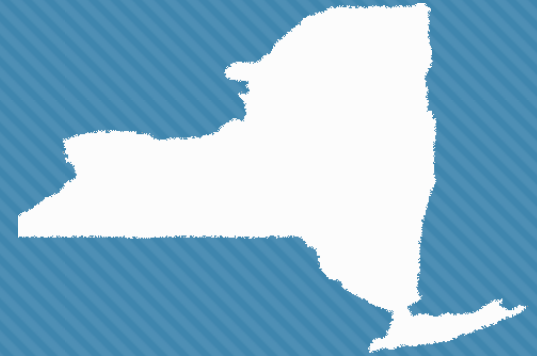
AIDS Institute of the New York State
Department of Health

Improving HIV/STD Partner Services in New York State

A Performance Management Approach

PHSSR Research in Progress Webinar

September 10, 2014



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Partner Services

PARTNER SERVICES are a broad array of services that should be offered to persons with HIV or other sexually transmitted diseases (STDs) and their sexual or needle-sharing partners. By identifying infected persons, confidentially notifying their partners of their possible exposure, and providing infected persons and their partners a range of medical, prevention, and psychosocial services, partner services can improve the health not only of individuals, but of communities as well.

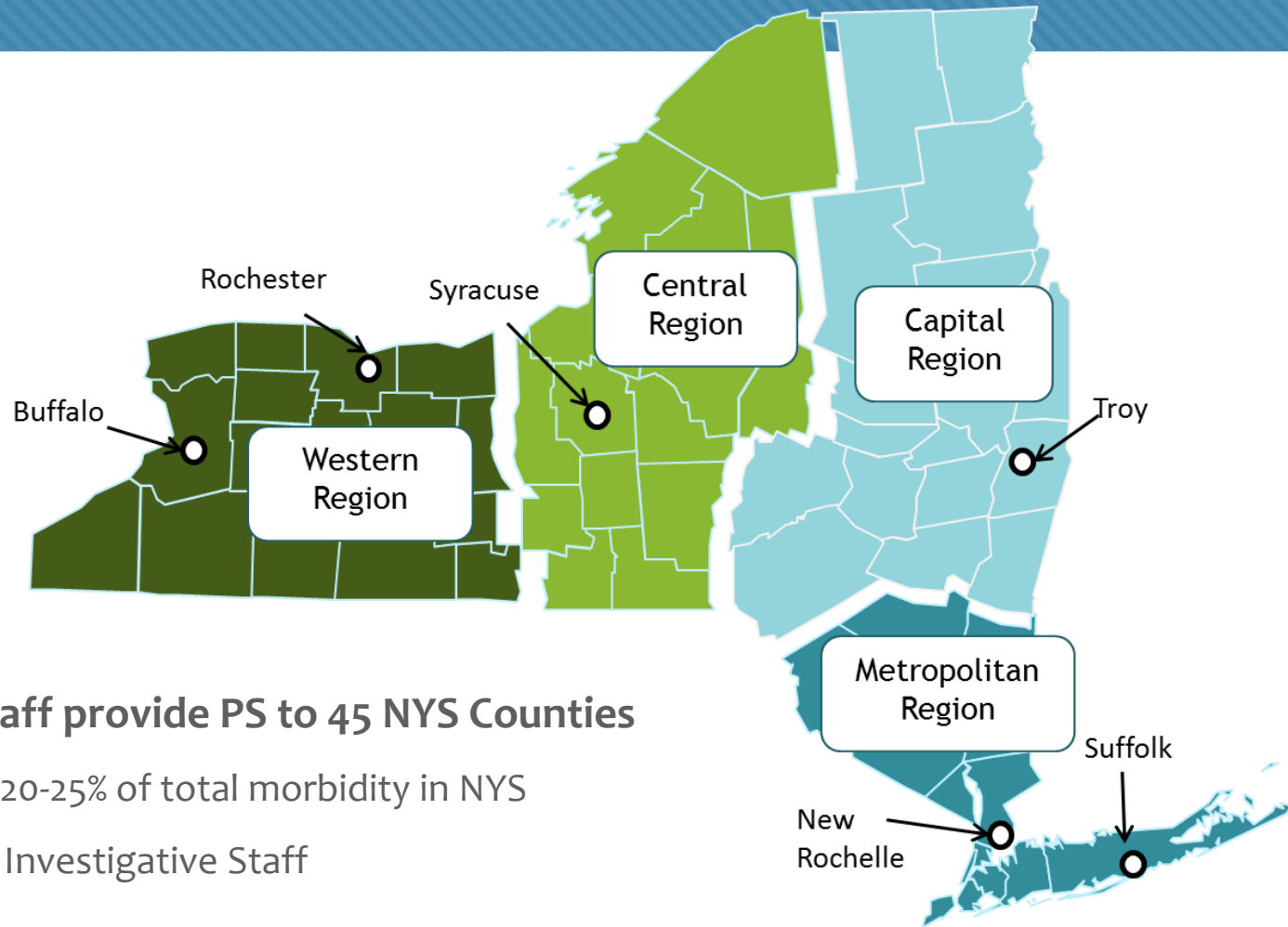
(AKA Contact Tracing, Partner Notification, Disease Investigation)

- **Health-department delivered PS strongly recommended for ALL newly diagnosed cases of HIV and early syphilis**
- Encouraged for gonorrhea and chlamydia as resources permit

Background and Research Context

- **Changes in CDC Guidelines and Priorities**
 - Integrated HIV / STD Partner Services Recommendations (2008)
 - Program Collaboration and Service Integration (2009)
 - High Impact HIV Prevention (2011)
- **NYS Integration of HIV and STD Field Services Staff (2010)**
 - NYS PBRN Research Implementation Award (2011)
 - Objective: *“identify valid, reliable, and practice-relevant measures of quality in response to a statewide initiative to integrate programs and services for HIV and STDs”*

NYS Department of Health Regional Office Structure



Regional Office Staff provide PS to 45 NYS Counties

- Represents 20-25% of total morbidity in NYS
- ~37 Disease Investigative Staff

Integration Research

- Mixed Methods Approach
- Primary Data Collected
 - Staff competency / job satisfaction surveys
 - Staff and supervisor focus groups
 - Survey of medical providers diagnosing HIV/STDs
- **Outcomes assessment**
- Economic evaluation

Integration Research Findings

HIV / STD PS Outcomes Assessment

- Challenges using surveillance data to measure integrated program performance
- Paper-based systems limited the ability to measure PS work process
- Lack of timely, reliable outcomes data to guide programmatic decision-making

Measuring Program Performance

Response: Development of HIV/STD Program Management Application (PMA)

- Identified quality metrics not easily captured by non-integrated systems
- Applied performance management concepts in design and implementation
- System built between Aug 2011-Aug 2012
- Training and Implementation in all Regional Offices during Fall 2012

Benefits of the PMA

- Regional control of case assignment and workload
- Easier to assess case allocation among PS staff
- Helps to track the HIV/STD Integration process
- Manage open, closed, and problem cases more effectively
- Provide real-time access to assigned HIV/STD cases to respond to queries
- Complements surveillance data systems

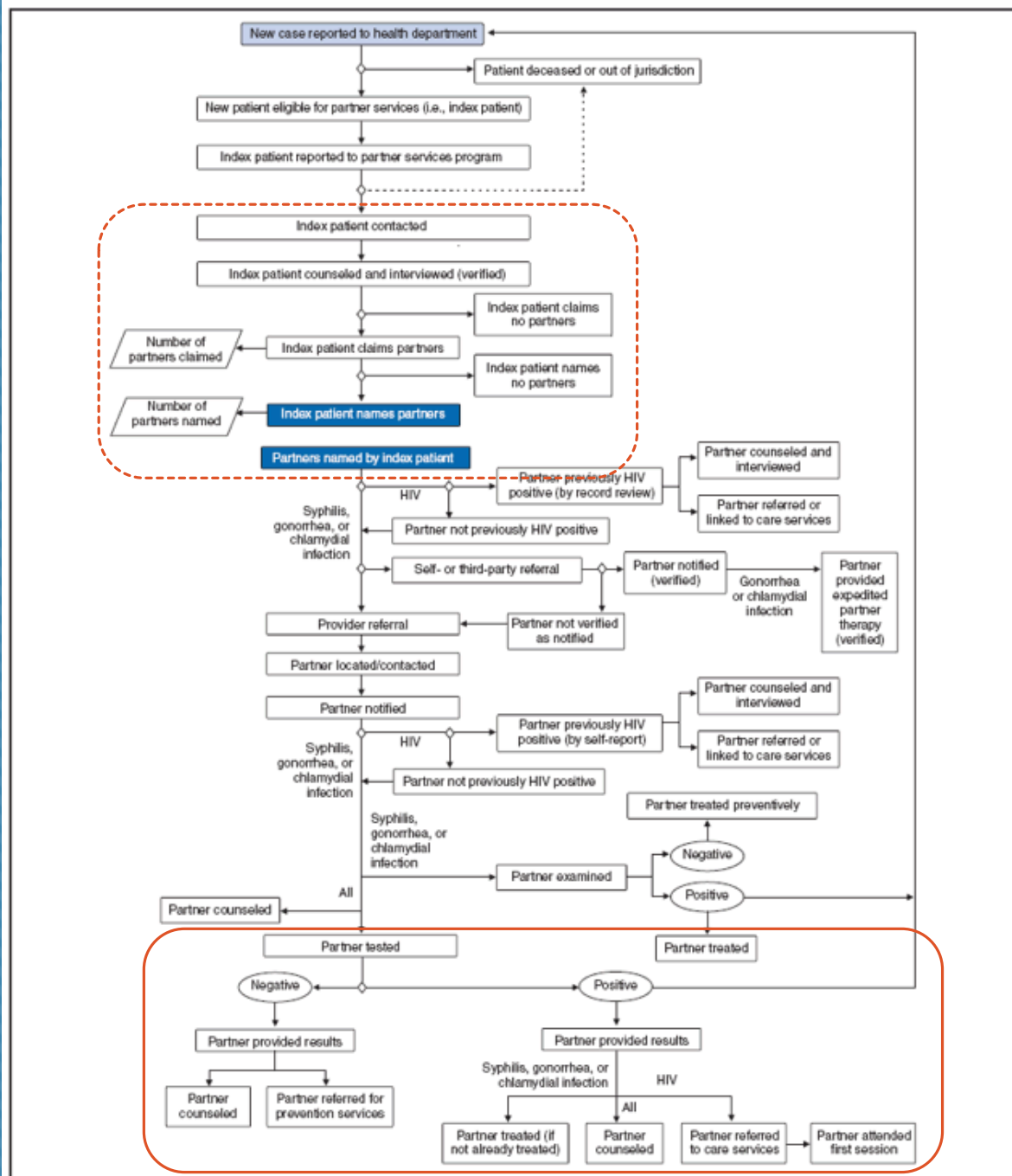
..... But more data leads to more questions!!

Follow up PBRN Research

- **RWJF Junior Investigator Award: Using PMA to Evaluate HIV/STD PS Performance**
 - Emphasis on process measures vs. outcome measures

- **Research Questions:**
 - 1) Is there a difference between the interview rates for HIV, syphilis, gonorrhea and chlamydia?
 - 2) Is there a difference in the timeliness of interviewed cases across diseases?
 - 3) How many partners are elicited per interviewed case, and how does this vary across disease?
 - 4) Does the interview method impact the number of partners elicited?

FIGURE 2. Steps in the process for partner services programs for human immunodeficiency virus (HIV) infection, syphilis, gonorrhea, and chlamydial infection

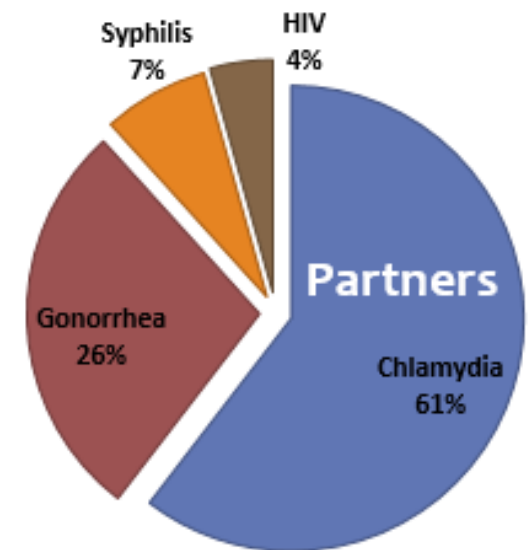
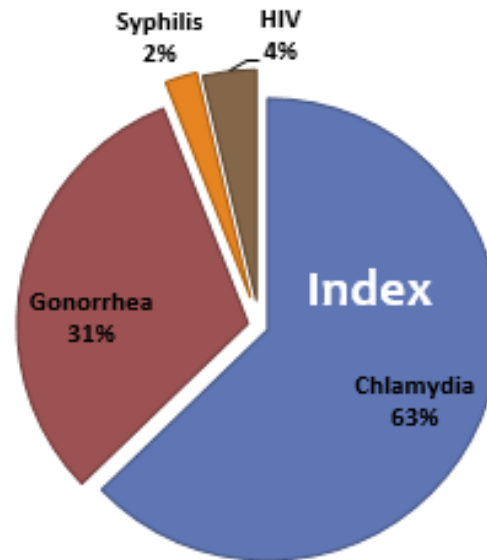


Methods

- All closed cases in PMA between 1/1/13 -12/31/13
 - Stratified by disease (HIV, Syphilis, Gonorrhea, Chlamydia), region, interview status, time frame, and method
 - Partners elicited from interviewed cases
 - Duplicates, dual diagnoses, non-matched partners excluded
 - Focus on Index-partner pairs to look at outcomes of cases
- Imported into SAS 9.2[®] for data cleaning and analysis

Analysis

- Resulted in 10,830 records
 - 5,518 Index Cases
 - 5,312 Partners
- Chi-square analyses were performed to identify statistically significant differences at the bivariate level



Results: Outcomes of HIV/STD Index Case Investigations

	HIV (%)	Early Syphilis (%)	Gonorrhea (%)	Chlamydia (%)	Total (%)	P ^a
Cases Assigned ^b	231 4.2%	99 1.8%	1421 25.8%	3767 68.3%	5518 100.0%	
Cases Interviewed ^c	127 55.0%	84 84.8%	1029 72.4%	2498 66.3%	3738 67.7%	P<.0001
Interview Time Frame ^d						P<.0001
1 Day or Less	24 18.9%	40 47.6%	416 40.4%	839 33.6%	1319 35.3%	
2-3 Days	3 2.4%	18 21.4%	128 12.4%	358 14.3%	507 13.6%	
4-7 days	26 20.5%	16 19.0%	238 23.1%	595 23.8%	875 23.4%	
More than 7 days	74 58.3%	10 11.9%	247 24.0%	706 28.3%	1037 27.7%	
Interview Method ^e						P<.0001
Field	86 67.7%	46 55.4%	138 13.7%	231 9.4%	501 13.6%	
Phone	32 25.2%	28 33.7%	823 81.6%	2204 89.3%	3087 96.9%	
Clinic	9 7.1%	9 10.8%	47 4.7%	33 1.3%	98 3.6%	
Total Partners Elicited	116	195	740	1605	2656	
Contact Index ^f	0.91	2.32	0.72	0.64	0.71	
# Partners per Interview						P<.0001
No partners	71 55.9%	23 27.4%	441 42.9%	1055 42.2%	1590 42.5%	
1 partner	36 28.3%	22 26.2%	479 46.6%	1309 52.4%	1846 49.4%	
2 or more partners	20 15.7%	39 46.4%	109 10.6%	134 5.4%	302 8.1%	

a - P-values were calculated using two-sided Pearson χ^2 test statistic for categorical variables

b – Based on unique index cases assigned; excludes dual-diagnosed cases. Percentages reflect number of cases relative to all HIV/STD PS cases assigned for interview

c – Percentages reflect number of assigned cases in each category interviewed

d – Based on the number of days between case assignment and date of interview (due to differences in diagnosis and result reporting systems, test date is an inconsistent measure across HIV and STD cases)

e – Excludes cases interviewed via other methods (e.g., private provider; n=52)

f – Contact Index = (number of partners elicited / number of interviews conducted)

Results: Partner Elicitation Success by Index Interview Type

	Field (%)	Phone (%)	Clinic (%)	P ^a
HIV				P<.0073
No partners	43 50.0%	25 78.1%	3 33.3%	
1 partner	30 34.9%	4 12.5%	2 22.2%	
2 or more partners	13 15.1%	3 9.4%	4 44.4%	
Early Syphilis^b				P<.0005
No partners	5 10.9%	14 50.0%	4 44.4%	
1 partner	19 41.3%	3 10.7%	0 0.0%	
2 or more partners	22 47.8%	11 39.3%	5 55.6%	
Gonorrhea^b				P<.0010
No partners	49 35.5%	376 45.7%	11 23.4%	
1 partner	68 49.3%	373 45.3%	26 55.3%	
2 or more partners	21 15.2%	74 9.0%	10 21.3%	
Chlamydia^b				P<.0001
No partners	110 47.6%	925 42.0%	10 30.3%	
1 partner	114 49.4%	1163 52.8%	13 39.4%	
2 or more partners	7 3.0%	116 5.3%	10 30.3%	

a - P-values were calculated using two-sided Pearson χ^2 test statistic for categorical variables

b - Excludes cases interviewed via other methods (e.g., private provider; n=52)

Adherence to NYS Tasks and Standards

	2013 Outcomes	Standard Met?
HIV		
Interview ALL Newly Diagnosed Cases Assigned	127/231 (55%)	NO
Interview a minimum of 80 percent within seven days of assignment	53/127 (42%)	NO
Syphilis		
Interview a minimum of 98 percent of the early stage cases assigned	84/99 (85%)	NO
Interview a minimum of 75 percent within seven days of assignment	74/84 (88%)	YES
Chlamydia		
Interview ≥ 65 per cent of priority cases assigned	2498/3767 (66%)	YES
Interview a minimum of 65 per cent of priority cases within seven days of assignment	1792/2498 (72%)	YES
Gonorrhea		
Interview ≥ 65 per cent of priority cases assigned.	1029/1421 (72%)	YES
Interview a minimum of 65 per cent of priority cases within seven days of assignment.	782/1029 (76%)	YES

Discussion

- Based on caseload, staffing resources are overwhelmingly dedicated to gonorrhea and chlamydia
- Across nearly all measures evaluated, HIV case investigations had worse outcomes than those for syphilis, gonorrhea, and chlamydia
 - Assigned HIV cases were significantly less likely to be successfully interviewed, and among those interviewed, they were significantly less likely to be interviewed in a timely manner or yield any partners for potential notification
- Tasks and Standards for HIV are not being met, despite 4+ years of integrated HIV / STD PS

Implications

- **Evaluation is only the first step.**
 - We know more about how these programs are performing, but we don't know **why** there are such significant differences between HIV and STD outcomes
- **Quality Improvement efforts should focus on identifying underlying causes of HIV PS underperformance**
 - Training of disease investigation staff ?
 - Updated, integrated manuals and field resources ?
 - Collaboration and communication with HIV Providers ?
 - Differences in HIV lab reporting ?

Limitations

- PMA was only in place for 4 months before sampling period presented
- Only includes HIV/STD PS conducted by Regional Offices, not LHDs (where most of statewide morbidity occurs)
- Does not reflect regional variation in PS case outcomes
- Confidentiality issues limit the ability to look at outcomes by patient characteristics
- Does not include partner notification outcomes (research ongoing)

Acknowledgements

New York State Department of Health

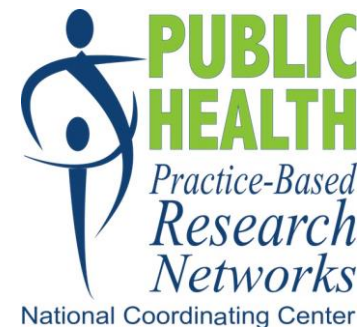
- James Tesoriero, PhD
- Mara San Antonio-Gaddy, MSN
- April Richardson-Moore, RN, MPH
- Sylvia Pirani, MPH, MS



Robert Wood Johnson Foundation

Robert Wood Johnson Foundation

PBRN National Coordinating Center



“If you can't describe what you are doing as a process, then you don't know what you're doing.”

- W. Edwards Deming



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NEW YORK
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Commentary

- **Sylvia Pirani, MPH**, Office of Public Health Practice, NYS Dep't. of Health
- **James Tesoriero, PhD**, AIDS Institute Division of HIV/STD/ HCV Prevention, NYS Dep't. of Health

Questions and Discussion

Future Webinars – PHSSR Research in Progress

All webinars from 12-1 pm, ET

Sept 24 - State Health Department Foodborne Disease Outbreak Reporting

Fanta Purayidathil, PhD, Health Economics and Outcomes Research,
Boehringer Ingelheim

Commentary: Jennifer Ibrahim, PhD, MPH, Dept. of Public Health, Temple University

Oct 8 – Variations in the costs of delivering public health services: An analysis of local health departments in Florida

Simone Singh, PhD, University of Michigan School of Public Health

Commentary: Patrick Bernet, PhD, Florida Atlantic University

Oct 22 – Relationship Between Public Health Workforce Competency, Provision of Services, and Health Outcomes in Tennessee

Robin Pendley, DrPH, *formerly* Health Services Management and Policy,
College of Public Health, East Tennessee State University

Future Webinars – PHSSR Research in Progress

All webinars from 12-1 pm, ET

Nov 5 – Response Willingness Among the Public Health Workforce and Emergency Preparedness Laws

Daniel Barnett, MD, MPH, Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health

Nov 12 – Trends and Characteristics of the State and Local Public Health Workforce

Angela J. Beck, PhD, MPH, Associate Director, Center of Excellence in Public Health Workforce Studies, University of Michigan

Dec 10 – Integrating Public Health and Healthcare: Lessons from One Urban County

Erik L. Carlton, DrPH, Health Systems Management and Policy, School of Public Health, University of Memphis

Commentary: Paul Erwin, MD, DrPH, Dept. of Public Health, University of Tennessee

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