

PHSSR Research-In-Progress Series:

Predoctoral and Postdoctoral Research Awards

Wednesday, September 24, 2014

12noon -1pm EDT

State Health Department and National Food Safety Surveillance Concordance: *A Pilot Study*

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

PHSSR Research-In-Progress Series

Agenda

Welcome: CB Mamaril, PhD, National Coordinating Center PHSSR

Presenter: *“State Health Department and National Food Safety Surveillance Concordance: A Pilot Study”*

- **Fanta Purayidathil, PhD, MPH**, Manager, Health Economics and Outcomes Research, Boehringer Ingelheim

Commentary:

- **Jennifer Ibrahim, PhD, MPH**, Associate Professor, Department of Public Health, Temple University

Questions and Discussion

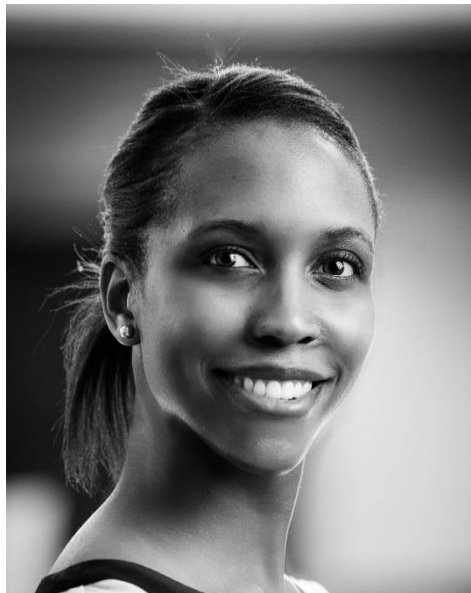
Future Webinars and Closing

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

One-year mentored research award -- 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/p4p2yumqzqp/>
- **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/>
- **Sept 10 – Improving HIV/STD Partner Services in New York State: A Performance Management Approach**
Britney Johnson, MPH, Research Specialist, AIDS Institute of the New York State Department of Health, and NY Public Health PBRN
<http://connect.uky.edu/p1b57fpwd0q/>

Presenter



Fanta Purayidathil, PhD, MPH

Manager, Health Economics and
Outcomes Research,
Boehringer Ingelheim



**State Health Department and
National Food Safety Surveillance
Concordance: A Pilot Study**

Fanta Purayidathil, PhD, MPH

PHSSR Research in Progress Webinar
September 2014

+ Systems for Food Safety Surveillance Require Evaluation

The Washington Post

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Salmonella outbreaks expose weaknesses in USDA oversight

By [Kimberly Kindy](#) and [Brady Dennis](#), Published: February 6

The Agriculture Department inspector showed up at Rick Schiller's home in November to collect potential evidence from his freezer: three pounds of chicken thighs, wrapped in plastic and stamped with a Foster Farms label.

Schiller, a 51-year-old California advertising executive, had recently returned from a five-day stay in the hospital prompted by severe vomiting, diarrhea and an infection that left his joints throbbing and his right leg purple and twice its normal size.

"I've been around the block. I've had some painful things," he said. "But nothing like this."

State lab tests run on Schiller had already confirmed the diagnosis: a [salmonella infection](#) linked to Foster Farms chicken, part of a widespread outbreak that has food-safety advocates and some public health officials warning about the potential for food-borne illnesses to become more and more severe in the age of antibiotic-resistant "superbugs."

Federal regulators and poultry companies are scrambling to find new ways to reduce salmonella contamination, which sickens a million Americans annually. And the Agriculture Department is planning to expand rules to limit salmonella on chicken parts, not just whole birds.

But food-safety groups say this doesn't go far enough and that the USDA should ban the most perilous salmonella strains from poultry altogether, just as it did with other dangerous bacterial strains in many beef products.

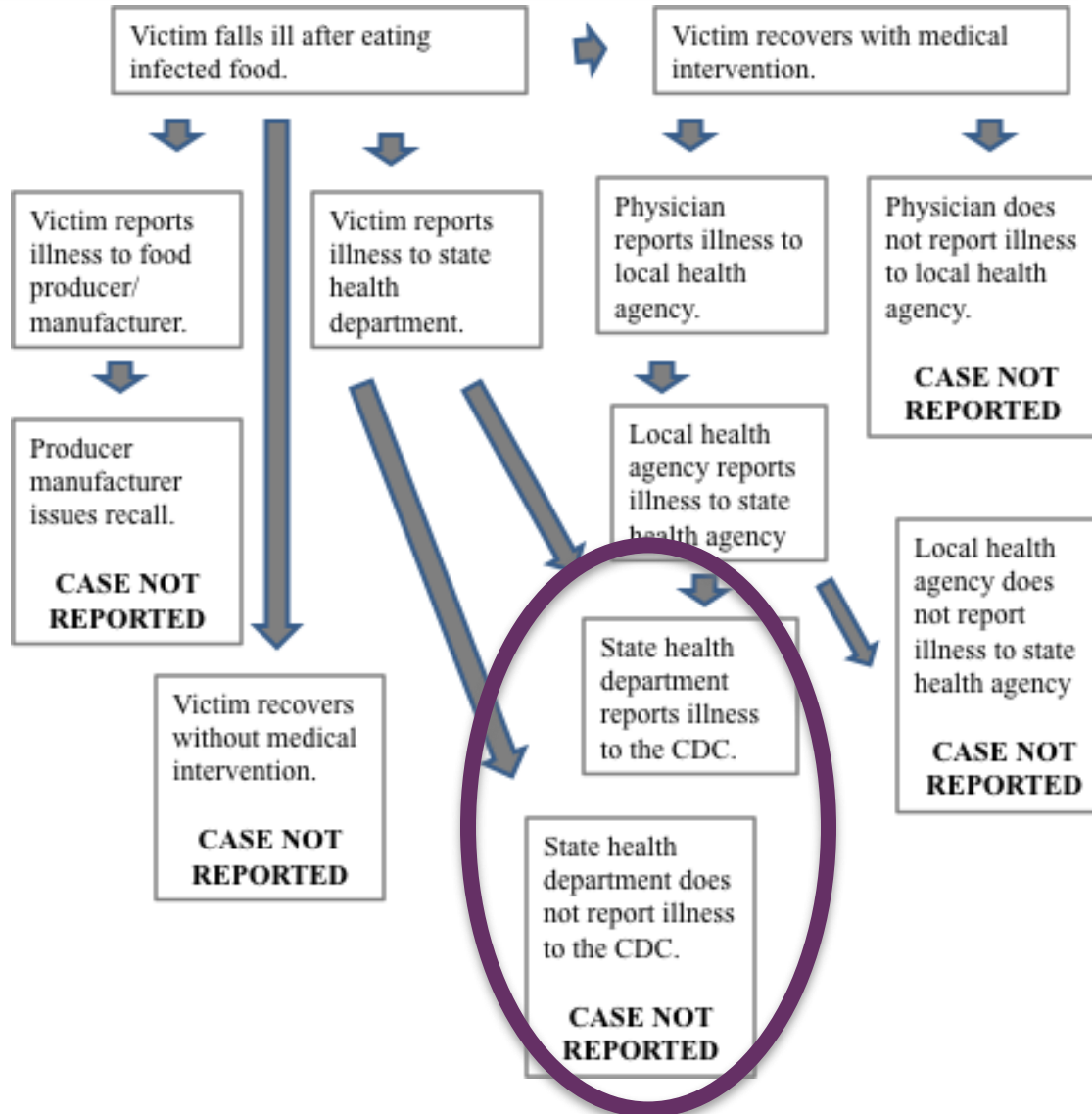
Poultry processors have resisted such an approach, arguing that it would be expensive and ultimately futile because salmonella is so pervasive.

The salmonella strain that sent Schiller to the hospital — a type known as Heidelberg — has been linked to numerous outbreaks in recent years, including the one at Foster Farms, which [officially has sickened](#) 430 people in 23 states but [probably has harmed many more](#). The pathogen has sent double the usual rate of victims to hospital emergency rooms, one reason the Centers for Disease Control and Prevention [called dozens of experts and investigators back to work](#) during the government shutdown this past fall to more closely track the outbreak. Some strains of Heidelberg also have proven resistant to several types of commonly prescribed antibiotics.

"This isn't your grandmother's salmonella," said Sarah Klein, an attorney for the Center for Science in the Public Interest (CSPI), a nonprofit health watchdog group.



System for Reporting Incidence of Foodborne Illness



Adapted from Centers for Disease Control Description of Process for FBDO Reporting

+ Study Objective

To characterize the informational and organizational structural capacity of state health department foodborne illness reporting systems through comparison of a single channel for food safety surveillance and data collection:
state and national notifiable disease lists.



+ Methodology

- Copies of the most recent version of each state's notifiable disease list were obtained using the State Reportable Conditions Website maintained within the Council of State and Territorial Epidemiologists' (CSTE) online database.
- The 2011 CDC List of Notifiable Conditions was used as a checklist by which state-level lists were compared for collection of data on pathogens responsible for foodborne illness.
- State lists were also analyzed for the presence of food-related pathogens associated with the greatest amount of hospitalization and resulting in the highest costs by the CDC; these include Salmonella, Norovirus, Campylobacter spp., Toxoplasma gondii, and E.coli (STEC) O157.

Food Outbreak
Botulism (Foodborne)
Botulism (Infant)
Botulism (Other)
Brucella
Campylobacter
EColi157
EColi157H7
Ecoli (AnySerotype)
Giardia
Hepatitis A
Hepatitis E
Listeria
Salmonella
Shigella
Strep A
Strep B
Strep_AB
Strep_ToxicShock
Strep_Pneumona
Trichinella
Vibrio_paraahaemolyticus
Vibrio_Other
Vibrio_Vulnificus
Vibrio_OnCholera
Yersinia

+ Analysis

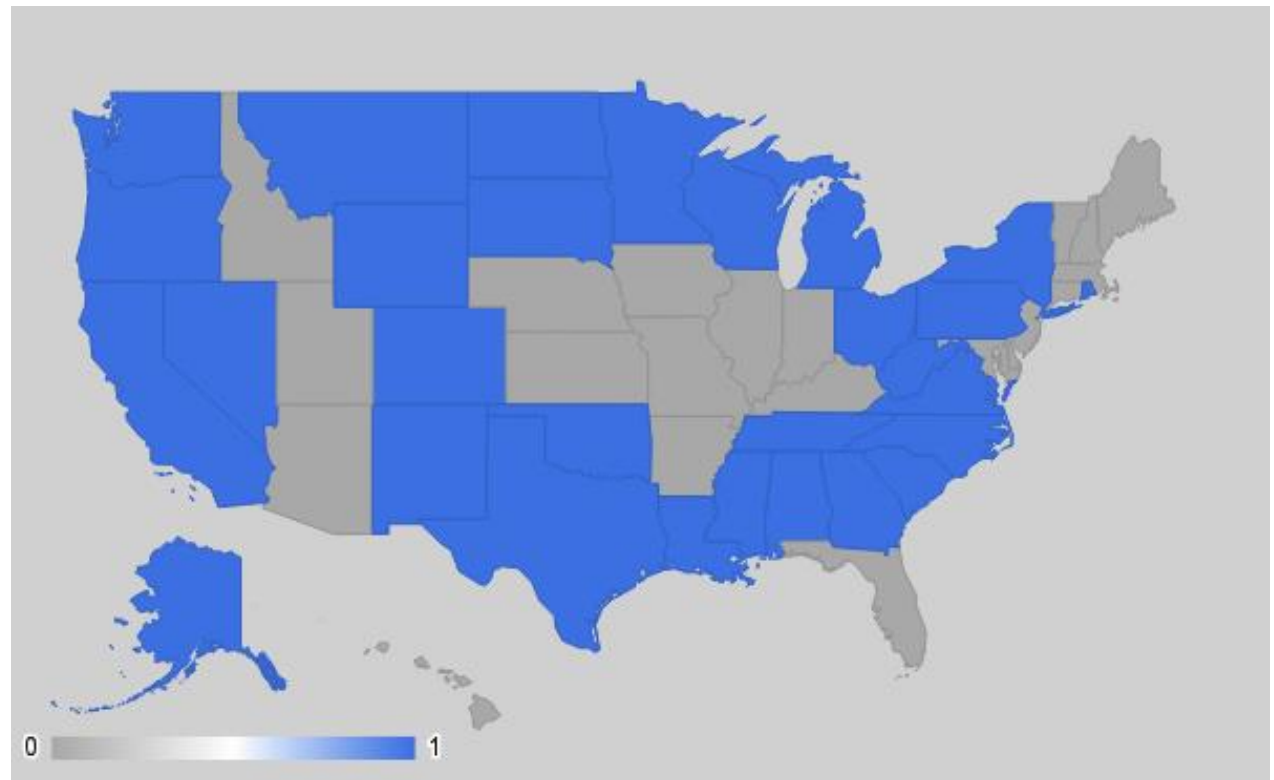


1. Existence of list, list type
2. Frequency of foodborne illness-related pathogen on the lists
3. Year in which each state list was most recently updated.
4. Presence of “food outbreak” as a general category
5. Tracking of geographical patterns
6. Concordance with national list
7. Link to pathogens linked to increased healthcare resource utilization (i.e., hospitalizations)

+ Results



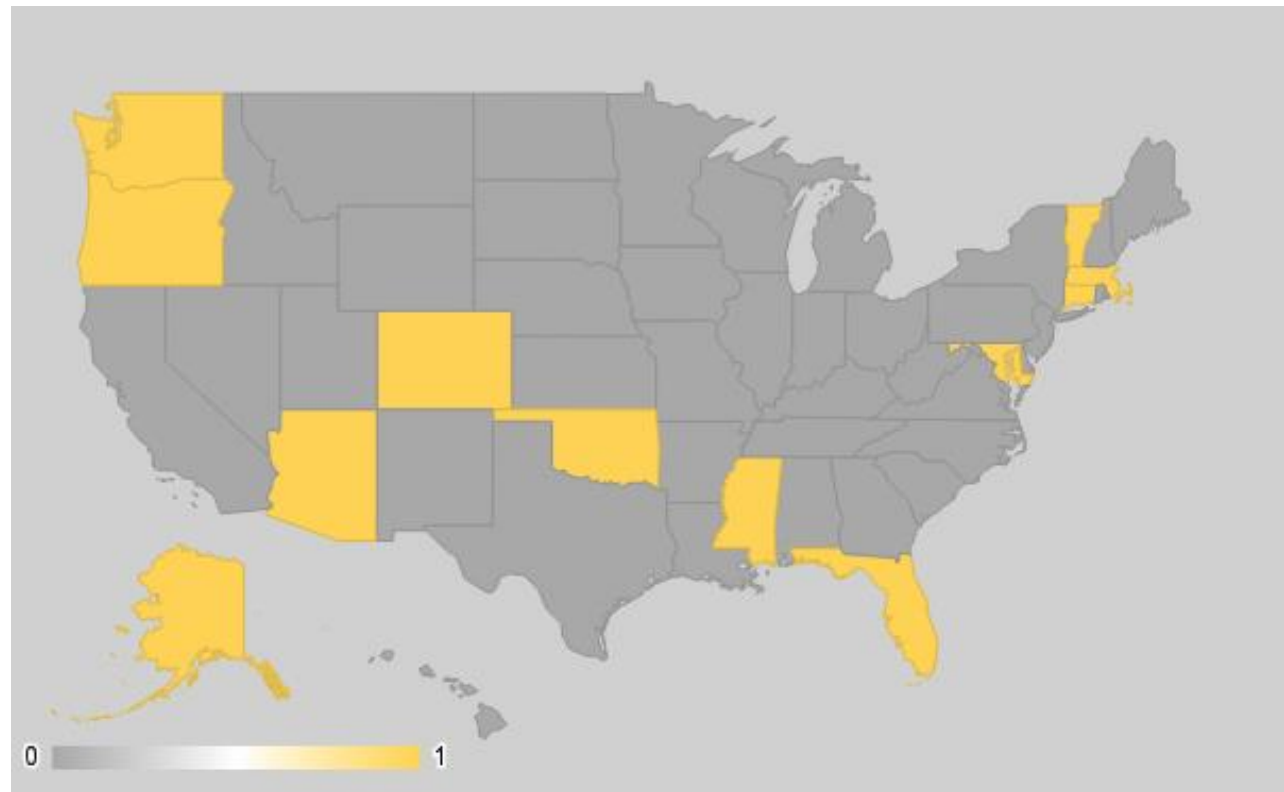
- All 50 states and the District of Columbia maintain a notifiable disease list
- Only 26 (52%) states were updated between 2011 and 2013.
- Twelve states maintain a separate list for healthcare providers and laboratories: Alaska, Arizona, Colorado, Connecticut, Florida, Maryland, Massachusetts, Mississippi, Oklahoma, Oregon, Vermont and Washington.
- Fifty-one percent (n=26) of states collect data on incidence of a food outbreak in general.
- At least 70% concordance between the state and the CDC in only seven states: California (85%), Florida (78%), Ohio (75%), Rhode Island (75%), Connecticut (71%), Delaware (71%) and New Hampshire (71%).



+ Results



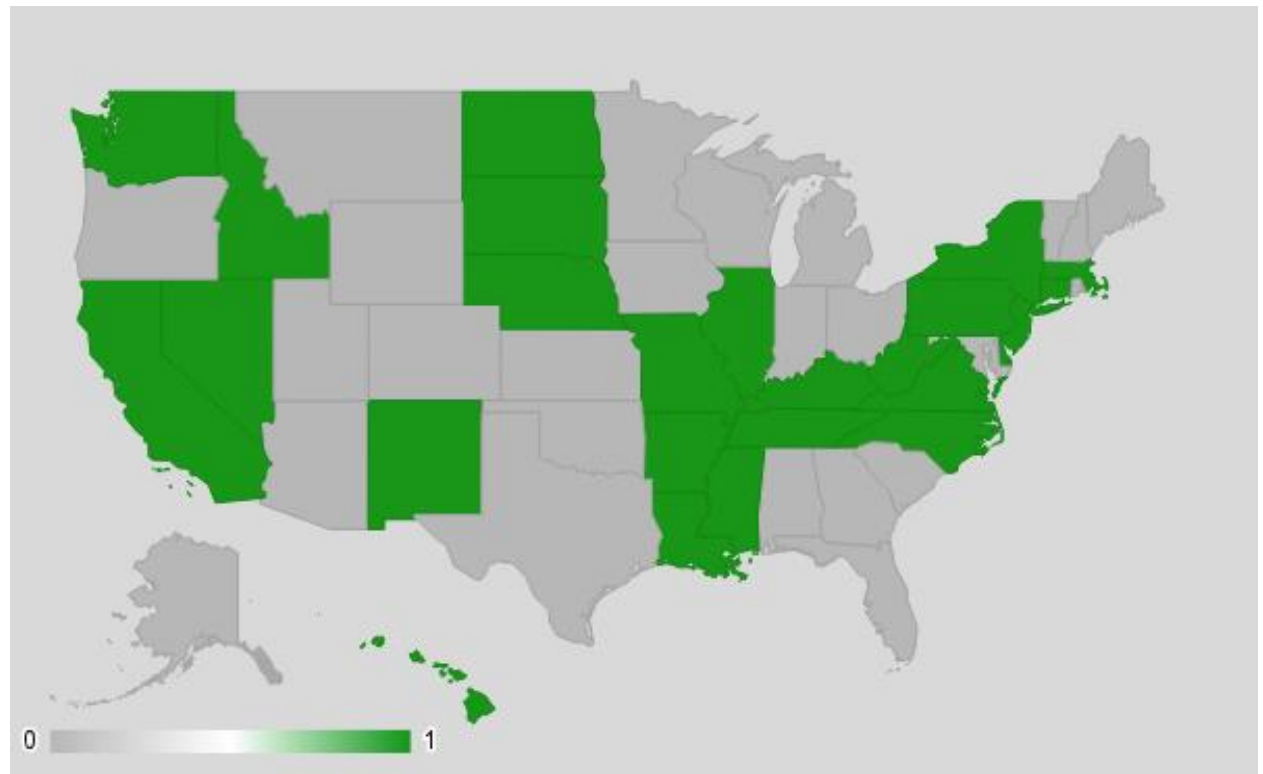
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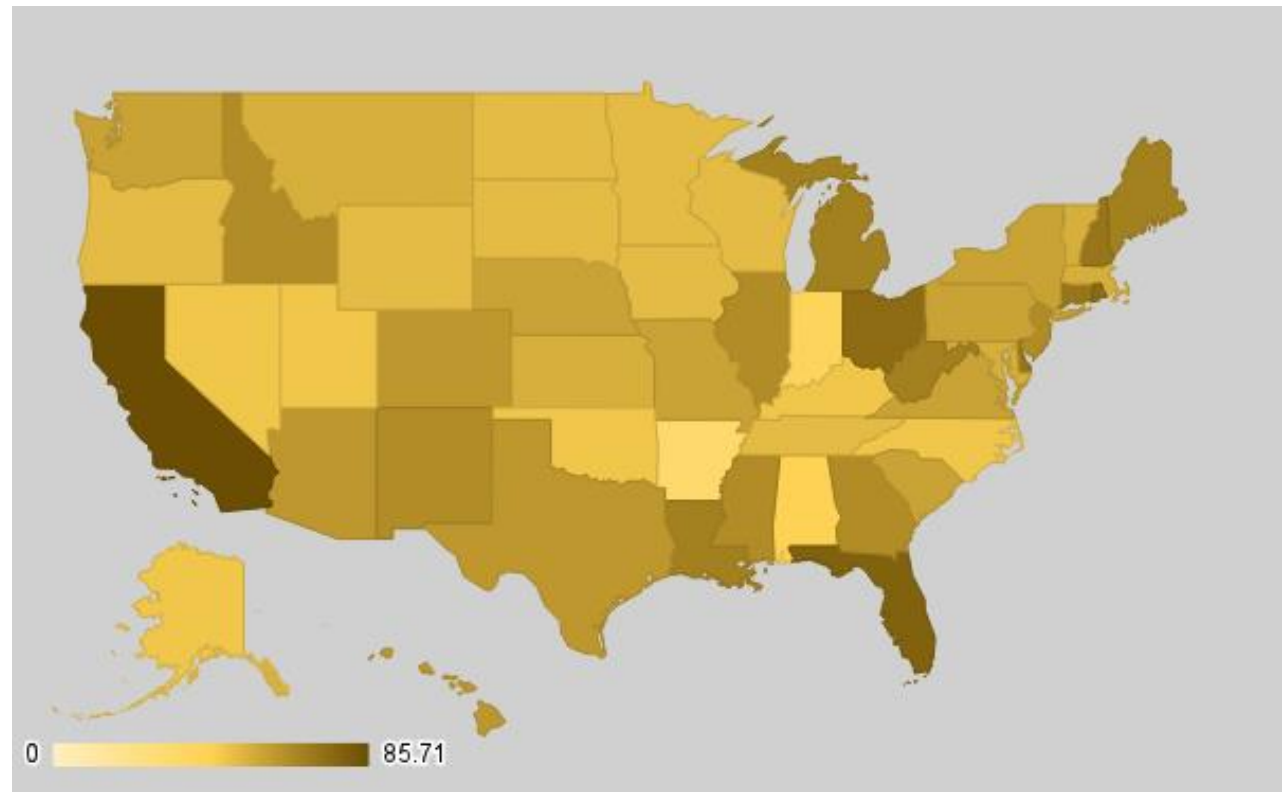


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+ Public Health Practice Perspective



- Processes for updating notifiable disease lists at the state level vary
 - Steering body consensus requirement
 - Legislation
 - Temporary high-profile conditions

+ Implications



“We should not wait until hundreds of deaths occur in a food crisis before we address the serious fragmentations in federal oversight of our increasingly global food supply chain.”

- Darrell Issa (R-CA)

+ Acknowledgements



Funding:

National Coordinating Center for Public Health Services and
Systems Research

Mentor:

Dr. Jennifer Ibrahim

+ Thank you



Fanta.purayidathil@gmail.com
@FPurayidathil

Commentary



Jennifer Ibrahim, PhD, MPH
Associate Professor
Department of Public Health,
Temple University

Questions and Discussion

Future Webinars – PHSSR Research in Progress

All webinars from 12-1 pm, ET

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, Louisiana State 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

Oct 29 – 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

Future Webinars – PHSSR Research in Progress

All webinars from 12-1 pm, ET

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

For more information contact:

Ann V. Kelly, Project Manager

Ann.Kelly@uky.edu

111 Washington Avenue #212 | Lexington, KY 40536

859.218.2317

www.publichealthsystems.org