PUBLIC HEALTH

SERVICES & SYSTEMS RESEARCH
PRACTICE-BASED RESEARCH NETWORKS

Public Health Services & Systems Research

KEENELAND CONFERENCE

2014

Hyatt Regency Lexington &
Lexington Convention Center

Lexington, Kentucky

APRIL 7-10

www.keenelandconference.org

PUBLIC HEALTH | SERVICES & SYSTEMS RESEARCH
PRACTICE-BASED RESEARCH NETWORKS

April 7, 2014

On behalf of the National Coordinating Center for Public Health Services & Systems Research and Public Health Practice-Based Research Networks and the Robert Wood Johnson Foundation, we are pleased and delighted to welcome you to the 2014 Keeneland Conference in Lexington, Ky.

Glen P. Mays, Ph.D., M.P.H.

As with other milestones in our own lives, the Keeneland Conference serves as an opportunity to reflect on the past and look toward the future, and what an exciting time to do so! The field of PHSSR is growing by leaps and bounds, reflected by the growth in our conference, as evidenced by a record number of abstract submissions. More than that number, though, we are impressed with the quality of the science in the submissions. The level of discourse in the field reflects how far we have come.

This year's program is designed to bring you the most current information in the field from a variety of different voices. We are extremely proud to be able to bring you the perspectives of our two prominent keynote speakers: Alonzo Plough, a new Vice President at the Robert Wood Johnson Foundation, and David Ross, Director of the Public Health Informatics Institute. Our plenary sessions will bring you up to speed on developments in Washington (moderated by Lisa Simpson of AcademyHealth) and Kentucky---the poster child for ACA (moderated by our own Julia Costich of the University of Kentucky College of Public Health).

F. Douglas Scutchfield, M.D.

On Thursday morning, we'll conclude with a lively and informative session focused on the importance of translating research findings for policymakers. After the session wraps up, we hope you will consider staying for lunch before heading home or out to the Historic Keeneland Race Course for an afternoon with some of the nation's top equine athletes.

Again, we welcome you to the Bluegrass. Our staff is committed to making your time with us both productive and enjoyable. We are excited about the opportunity to share our collective PHSSR successes and plan for tomorrow.

Thank you for joining us!

Sincerely,

Glen P. Mays , Ph.D., M.P.H. & F. Douglas Scutchfield, M.D.

111 Washington Avenue • Suite 201 • Lexington, Kentucky 40536
Tel. 859. 218. 0113 • Fax 859. 257. 3748 • www.publichealthsystems.org

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The 2014 Keeneland Conference on Public Health Services & Systems Research is made possible with support from the Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation (RWJF) and its partners have committed significant funding to further the field of Public Health Services & Systems Research (PHSSR). Under the Foundation's direction, the National Coordinating Center for PHSSR & Public Health PBRNs continues to build the evidence base, expand the research capacity, encourage translation of research into practice and expand the funding sources available to the community.

The Goals of this Conference

- Connect public health researchers, public health practitioners, and policymakers and provide a forum for them to exchange ideas about new research areas, meet new entrants to the discipline, and learn about data sources and methods
- Foster collaboration among scientists, practitioners and policymakers with common research agendas
- Highlight the work of junior PHSS researchers and encourage and support their mentors
- Recognize the recipients of PHSSR grants and their research efforts, and encourage mentoring of the new awardees
- Introduce several exciting developments indicative of the growth of the field of PHSSR
- Engage in a vital discussion of the future of the PHSSR research evidence and its role in practice, research and policy
- Focus on examples of successful translation of research to the field, both in practice and in policy

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Please consider following, friending or linking with us on our social media sites:

https://www.facebook.com/NCCforPHSSR

https://twitter.com/cphssr

http://linkd.in/PHSSR_LI

https://www.youtube.com/user/TheCenterForPHSSR

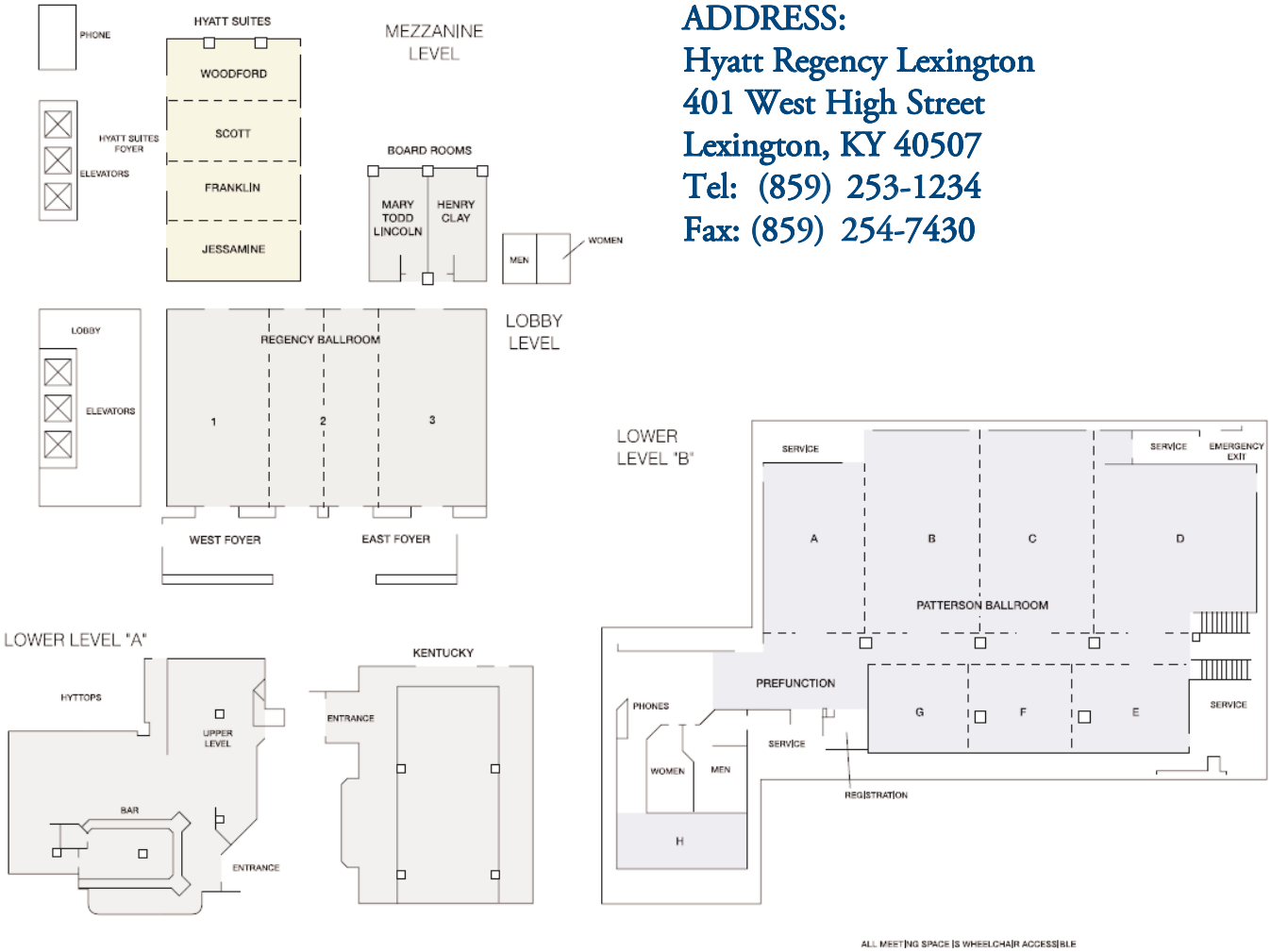
Have a scanner on your smartphone? Give this code a try.

When posting, please make sure to use the official conference hashtag:

#PHSSRKC14

111 Washington Avenue • Suite 201 • Lexington, Kentucky 40536
Tel. 859. 257. 5678 • Fax 859. 257. 3748 • www.publichealthsystems.org

HYATT REGENCY LEXINGTON



ADDRESS:

Hyatt Regency Lexington
401 West High Street
Lexington, KY 40507
Tel: (859) 253-1234
Fax: (859) 254-7430

GENERAL INFORMATION

Check-in and Check-out

- Check-in: 3 p.m.
- Check-out: Noon
- Express Check-in
- Express Check-out

Parking

- Complimentary on-site self-parking
- Valet parking: $20 per day

Airport Shuttle

- Free shuttle service to and from the Bluegrass Airport

Amenities

- Hyatt Grand Beds™
- iHome stereo w/ iPod® docks
- Indoor heated pool
- Outdoor sun deck
- The shops at Lexington Center
- 24 hour StayFit™ gym

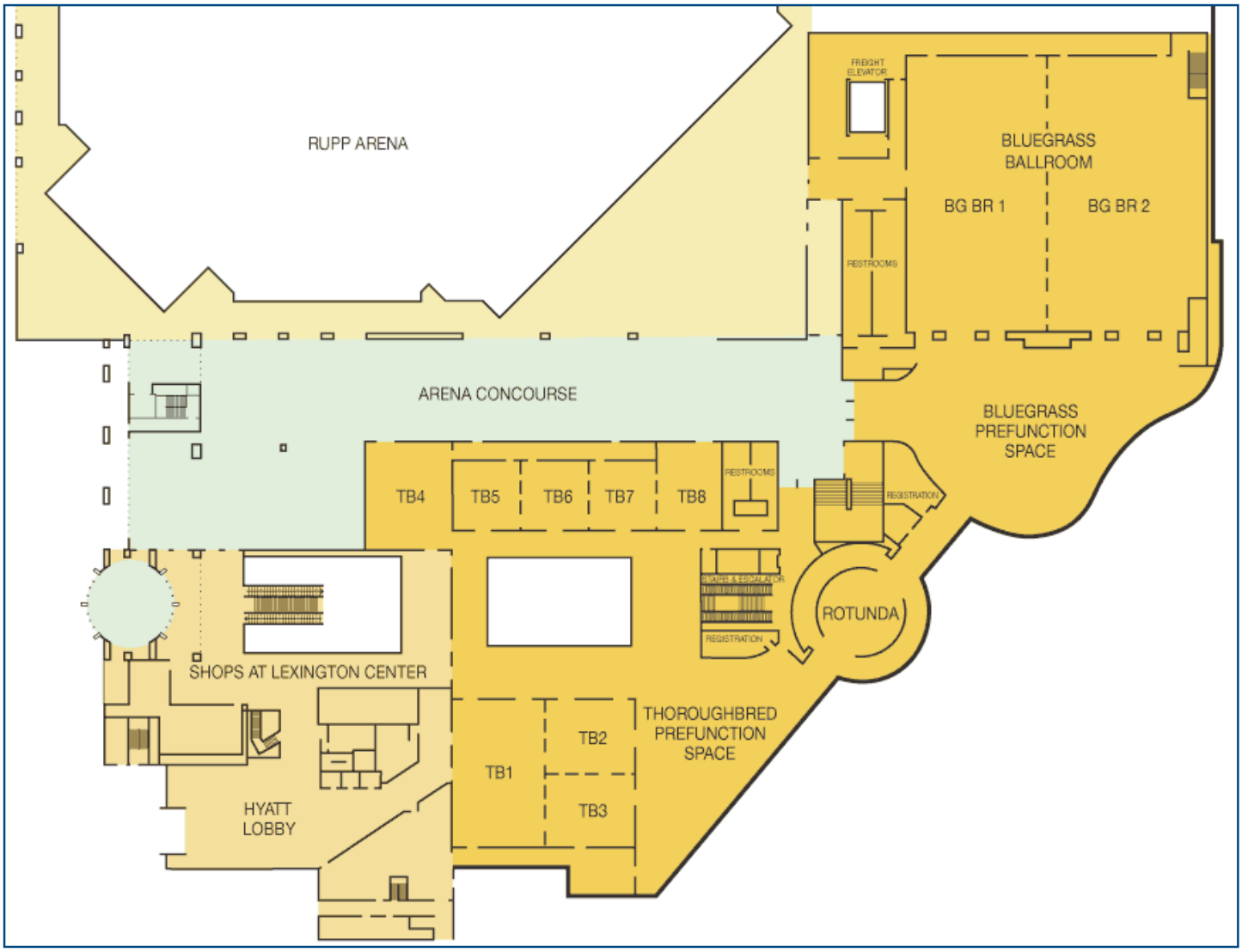
Internet Access

Locations & Connectivity

- Public Areas
  - *Wireless free for hotel guests*
- Guest Rooms
  - *Wireless is $9.99 per 24-hour period.*

LEXINGTON CONVENTION CENTER

Level 3



ADDRESS:
Lexington Convention Center
430 West Vine Street
Lexington, KY 40507
Tel: (859) 233-4567
www.lexingtoncenter.com

Contacts
Kim Page 859.608.0602
Kara Richardson 859.327.2825

Meeting Venue
Lexington Convention Center
430 W. Vine St.
Lexington, KY 40507
(859) 233-4567

Hotels
Hyatt Regency Lexington
401 W. High St.
Lexington, KY 40507
(859) 253-1234

Hilton Lexington/Downtown
369 W. Vine St.
Lexington, KY 40507
(859) 231-9000

Conference Registration/ Information Desk Hours

Monday, April 7
7:30 a.m.-4:00 p.m. – Hyatt Regency Lexington Lobby

Tuesday, April 8-Wednesday, April 9
7:30 a.m.-5:00 p.m. – Thoroughbred Prefunction Entrance (Convention Center)

Thursday, April 10
7:30 a.m.-11:00 a.m. – Thoroughbred Prefunction Entrance (Convention Center)

Exhibitor's Table
Located next to the registration table in the Thoroughbred Prefunction Entrance of the Convention Center, an exhibitor's table is available for conference attendees to place materials and other resources to share with other attendees.

Airport & Transportation
Lexington's Blue Grass Airport, a 10-minute drive from downtown, is located near Keeneland Race Course and surrounded by horse farms — creating one of America's most beautiful air approaches. A number of car rental companies have airport locations.

In the downtown area, many attractions, restaurants and shops are within walking distance of the Lexington Convention Center and major hotels. All of the buildings surrounding Triangle Park in the heart of downtown are connected by pedways. An intra-city bus system (Lextran: 859-253-4636 or www.lextran.com) and taxicabs (859-231-8294 or 859-381-1010) provide convenient transportation. "Colt," Lexington's downtown trolley system, is a free and easy way to get around.

Blue Grass Airport
www.bluegrassairport.com
Info: (859) 425-3114
4000 Terminal Dr.
Lexington, KY 40510

Transportation from Blue Grass Airport
Taxi: Approximately $18
City limousine: Approximately $9 per person

Hyatt Transportation
For Hyatt Regency Lexington guests, courtesy car service is available to and from the Hyatt on a complimentary basis from 6 a.m. to midnight daily. A courtesy phone is available near the baggage claim area. Return times must be arranged through the Hyatt's guest department at the hotel. A blue or grey van bearing the insignia of Hyatt Regency Lexington provides service to the hotel.

Lexington Visitors Information

Visit www.visitlex.com to view the virtual Visitor Planning Guide online, download the free epub for a phone or ereader, or stop by our conference registration/information table to pick up a copy.

Speaker Presentations & Other Conference Materials

Full conference materials, including speaker bios and presentations, will be available on our website, **www.keenelandconference.org.**

Meeting Evaluation

Shortly after our conference concludes, you will receive a survey asking for feedback about the 2014 Keeneland Conference. We thank you in advance for taking a few minutes to complete the survey to provide us with your valuable feedback.

Social Media

Tell the rest of the world what's happening at the Keeneland Conference! Please use the hashtag #PHSSRKC14 when posting on Twitter.

Parking

More than 10,000 parking spaces are available within a 10-minute walk of the Lexington Center. All surrounding parking lots and garages offer spaces for guests with disabilities. Additional details and directions can be found on the Convention Center's website, www.visitlex.com.

Free

The Lexington Center parking lot on Manchester Street is open on non-arena event days and is free to attendees.

Hourly

The Lexington Center parking lot on High Street is open on non-arena event days for $7.00 all day, or $1.00 for the first half-hour and $0.75 for each half hour after. Three hours of free parking are available with merchant validation in the Shops at Lexington Center (purchase necessary). On arena event days, fees vary.

Keeneland Race Course Information

In compliance with University of Kentucky and Keeneland Association Inc. policies, Keeneland Conference participants who wish to attend the races on Thursday afternoon must purchase tickets directly from Keeneland.

Ticket Types

- Grandstand
- General Admission
- Lexington/Kentucky and Phoenix Dining Rooms (These tickets sell out early, but may still be available.)

Dining Room Information

Dress Code

- No denim of any color, shorts or athletic attire.
- Gentlemen-Coat and tie are required.
- Ladies-Skirts, dresses, dress slacks, or capris are required.
- Any dressy shoes are permitted.

Arrival Time

Dining Room guests must arrive by 1:15 p.m., or their table will be resold and tickets will be invalid. Rooms open at 11:00 a.m. The buffet is available from 11:30 a.m.-3:00 p.m.

Transportation

- **Option 1:** If you have a dining room reservation, you may wish to drive or take a taxi directly to the Race Course to ensure that you do not risk forfeiting your reservation due to late arrival.
- **Option 2:** Bus A will leave the Lexington Convention Center at 12:30 p.m. The first stop will be at the Bluegrass Airport. Attendees can check their bags and get their boarding passes. The bus will leave the airport and go on to Keeneland by 1:30 p.m. At 4:30 p.m., the bus will leave Keeneland and go back to the airport. Your carry-on luggage may be stored on the bus while you are at the Race Course. NOTE: Bus A will NOT return to the hotel or convention center.
- **Option 3:** Bus B will leave the Lexington Convention Center at 12:30 p.m. The bus will go directly to Keeneland and should arrive by 1:00pm. At 4:30 p.m., the bus will leave Keeneland and return to the hotel and convention center.

Questions about the Keeneland Outing should be directed to Kim Page or Kara Richardson. Their contact information is provided on page 5 of the program.

Alonzo Plough, Ph.D., M.P.H., M.A.
Vice President for Research and Evaluation and Chief Science Officer
Robert Wood Johnson Foundation

Alonzo Plough, Ph.D., M.P.H., M.A. was appointed Vice President for Research and Evaluation and Chief Science Officer at the Robert Wood Johnson Foundation (RWJF) in January 2014. RWJF is one of the largest private funders of health and health care research in the nation with the aim of producing evidence that policymakers and practitioners can use to build a culture of health. One of the cornerstones of RWJF's mission is the support and evaluation of ground-breaking research aimed at solving the most pressing health issues facing Americans

Dr. Plough came to RWJF from the Los Angeles County Department of Public Health, where he served as director of emergency preparedness and response from 2009 to 2014. In that role, he was responsible for the leadership and management of the public health preparedness activities protecting the 10 million residents of Los Angeles County from natural disasters and threats related to disease outbreaks and other public health emergencies. He coordinated activities in emergency operations, infectious disease control, risk communication, planning and community engagement.

Prior to that position, Dr. Plough served as vice president of strategy, planning and evaluation for The California Endowment from 2005-2009. He was responsible for the leadership of The Endowment's strategic planning and development, evaluation, research and organizational learning. Dr. Plough also served 10 years as director and health officer for the Seattle and King County Department of Public Health, and professor of health services at the University of Washington School of Public Health in Seattle. He previously served as director of public health in Boston for eight years.

Dr. Plough earned his Ph.D. and M.A. at Cornell University, and his M.P.H. at Yale University School of Medicine Department of Epidemiology and Public Health. He did his undergraduate work at St. Olaf College, where he earned a B.A. He has held academic appointments at Harvard University School of Public Health, Tufts University Department of Community Medicine, and Boston University School of Management. He has been the recipient of numerous awards for public service and leadership and is the author of an extensive body of scholarly articles, books, and book chapters.

David A. Ross, Sc.D.
Director
Public Health Informatics Institute

Dr. David Ross is the Director of the Public Health Informatics Institute. He became the Director of All Kids Count; a program of the Institute supported by The Robert Wood Johnson Foundation (RWJF), in 2000, and subsequently began the Institute, also with funding from RWJF.

Dr. Ross' experience spans the private healthcare and public health sectors. Before joining the Task Force, he was an executive with a private health information systems firm, a public health service officer with the Centers for Disease Control and Prevention (CDC), and an executive in a private health system.

Dr. Ross holds a doctoral degree in Operations Research from The Johns Hopkins University (1980) where he was involved in health services research. After serving as Director of the Health Service Research Center, Baltimore USPHS Hospital, he became Vice President for Administration with the Wyman Park Health System. In 1983, he joined the CDC's National Center for Environmental Health. During his career at CDC, he worked in environmental health, CDC's executive administration, and public health practice.

Dr. Ross was founding director of the Information Network for Public Health Officials (INPHO), CDC's national initiative to improve the information infrastructure of public health. His research and programmatic interests reflect those of the Institute: the strategic application of information technologies to improve public health practice.

MONDAY, APRIL 7, 2014

7:30 am to 4:00 pm	Public Health PBRN Grantee Meeting *Breakout Sessions from 1 to 3 pm*	Lexington Convention Center *Thoroughbred Rooms 1, 2, 3*
1:00 to 6:30 pm	National Public Health Leadership Network Meeting	Hyatt-*Woodford/Scott/Franklin/Jessamine*
4:30 to 6:30 pm	National Advisory Committee Meeting	Hyatt-*Kentucky*
7:00 to 9:00 pm	National Advisory Committee Dinner	Offsite

TUESDAY, APRIL 8, 2014

8:30 to 9:30 am	Breakfast	Lexington Convention Center *Thoroughbred Rooms 1, 2, 3*
9:30 to 11:30 am	All Grantee Workshop *Open to all PHSSR, Public Health PBRN, & NNPHI Grantees*	Lexington Convention Center *Thoroughbred Rooms 1, 2, 3*
8:00 to 11:45 am	National Public Health Leadership Network Meeting	Hyatt-*Woodford/Scott/Franklin/Jessamine*
12:00 to 1:30 pm	 Lunch: *Keynote Speaker* **David A. Ross, Sc.D.** *Director* Public Health Informatics Institute	Lexington Convention Center *Bluegrass Ballroom 2*
2:00 to 3:15 pm	Concurrent Scientific Sessions See page 21 for full details	Lexington Convention Center
	1A: System Structure & Performance-Partners 1B: System Structure & Performance-Quality Improvement 1C: Workforce-Evidence-Based Decision Making 1D: Finance-Food Safety	*Thoroughbred 1* *Thoroughbred 2* *Thoroughbred 3* *Thoroughbred 4*
3:45 to 4:45 pm	Innovations and Evidence Needs for Governmental Public Health Practice See page 14 for full details	Lexington Convention Center *Bluegrass Ballroom 2*
5:30 to 6:30 pm	Poster Session	Lexington Convention Center *Bluegrass Prefunction Area*
6:00 to 7:00 pm	Networking Reception	Lexington Convention Center *Bluegrass Prefunction Area*
7:00 to 9:00 pm	Dinner	Lexington Convention Center *Bluegrass Ballroom 2*

WEDNESDAY, APRIL 9, 2014

7:30 to 8:30 am	Breakfast for All Attendees	Lexington Convention Center *Bluegrass Ballroom 2*
9:00 to 10:15 am	Concurrent Scientific Sessions See page 34 for full details	Lexington Convention Center
	2A: System Structure & Performance-Public Health Practice	*Thoroughbred 1*
	2B: System Structure & Performance-Capacity	*Thoroughbred 2*
	2C: Workforce-Data Collection & Analysis	*Thoroughbred 3*
	2D: System Structure & Performance Hospitals & Community Health	*Thoroughbred 4*
10:45 am to 12:00 pm	Concurrent Scientific Sessions See page 46 for full details	Lexington Convention Center
	3A: System Structure & Performance-Managing the CHA/CHIP Process	*Thoroughbred 1*
	3B: Information & Technology-Measurement & Evaluation	*Thoroughbred 2*
	3C: Workforce-Emergency Preparedness	*Thoroughbred 3*
	3D: Finance-Resource Management & Cost Containment	*Thoroughbred 4*
12:30 to 1:30 pm	 Lunch: *Keynote Speaker* **Alonzo Plough, Ph.D., M.P.H., M.A.** *Vice President & Chief Science Officer* Robert Wood Johnson Foundation	Lexington Convention Center *Bluegrass Ballroom 2*
2:00 to 3:15 pm	Concurrent Scientific Sessions See page 59 for full details	Lexington Convention Center
	4A: Finance-Return on Investment	*Thoroughbred 1*
	4B: System Structure & Performance-Effects of Policy Change	*Thoroughbred 2*
	4C: Workforce-Staffing Changes	*Thoroughbred 3*
	4D: System Structure & Performance-Service Sharing	*Thoroughbred 4*
3:45 to 4:45 pm	Implementing Health Reform in Kentucky See page 16 for full details	Lexington Convention Center *Bluegrass Ballroom 2*
5:00 pm	Adjourn for the Day Dinner on Your Own *Take a look at **BeyondGrits.com** for a list of recommended downtown restaurants.*	

THURSDAY, APRIL 10, 2014

7:30 to 8:30 am	Networking Breakfast	Lexington Convention Center *Thoroughbred 1, 2, 3*
9:00 to 11:00 am	Translation of Research Findings for Policymakers See page 18 for full details	Lexington Convention Center *Thoroughbred 1, 2, 3*
11:00 to 11:30 am	Break	On Your Own
11:30 am to 12:00 pm	Closing Luncheon	Lexington Convention Center *Thoroughbred 1, 2, 3*
12:30 to 4:30 pm	Historic Keeneland Race Course Outing** See page 6 for details	Offsite
12:30 pm	Buses depart at 12:30 pm • Bus A: Hyatt → Airport → Keeneland → Airport • Bus B: Hyatt → Keeneland → Hyatt	High Street Entrance

NOTES:

Acknowledgement

The National Coordinating Center for PHSSR & Public Health PBRNs is pleased to showcase the latest research and wishes to acknowledge the efforts of the inaugural Keeneland Conference Scientific Steering Committee members who helped shape this year's theme and content.

CHAIR

L. Michele Issel, Ph.D., M.S.N., B.N.
Professor and Director of the Ph.D. Program in Public Health Sciences
University of North Carolina Charlotte

MEMBERS

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Research Assistant Professor
Associate Director
Center of Excellence in Public Health Workforce Studies
University of Michigan School of Public Health
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American Journal of Preventive Medicine

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Assistant Professor
Washington University in St. Louis Brown School of Social Work
WUSTL Institute for Public Health

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Senior Director of Research & Evaluation
National Association of County and City Health Officials

Christopher Maylahn, M.P.H.
Program Research Specialist
New York State Department of Health

Katherine Froeb Papa, M.P.H.
Director of the Public Health Systems Research Project
AcademyHealth

Nikki Lawhorn Rider, Sc.D., M.P.P.
Associate Director of Research and Evaluation
National Network of Public Health Institutes

Katherine Sellers, Dr.P.H, CPH
Chief Science and Strategy Officer
Association of State and Territorial Health Officials

The National Coordinating Center also wishes to gratefully acknowledge the contributions of steering committee member Dr. Lynn Jenkins, who passed away in January of this year. As Senior Program Advisor for Program Integration in the Division of Unintentional Injury Prevention at CDC's National Center for Injury Prevention and Control, Dr. Jenkins was a tireless advocate of the potential for PHSSR to address key questions related to violence and injury prevention. We will continue honoring her vision through future PHSSR and Public Health PBRN endeavors.

TUESDAY, APRIL 8, 2014
3:45 TO 4:45 PM

Innovations and Evidence Needs for Governmental Public Health Practice
Lexington Convention Center-Bluegrass Ballroom 2

MODERATOR

Lisa Simpson, M.B., B.Ch., M.P.H., FAAP
President & CEO
AcademyHealth

Dr. Simpson is the president and chief executive officer of AcademyHealth. A nationally recognized health policy researcher and pediatrician, she is a passionate advocate for the translation of research into policy and practice. Her research focuses on improving the performance of the health care system and includes studies of the quality and safety of care, health and health care disparities, and the health policy and system response to childhood obesity. Dr. Simpson has published more than 75 articles and commentaries in peer-reviewed journals. Before joining AcademyHealth, Dr. Simpson was director of the Child Policy Research Center at Cincinnati Children's Hospital Medical Center and professor of pediatrics in the Department of Pediatrics, University of Cincinnati. She served as the Deputy Director of the Agency for Healthcare Research and Quality from 1996 to 2002. Dr. Simpson serves on the Robert Wood Johnson Foundation Clinical Scholars Program National Advisory Council, and on the editorial boards for the Journal of Comparative Effectiveness Research and Frontiers in Public Health Services and Systems Research. In October of 2013, Dr. Simpson was elected to the Institute of Medicine.

Dr. Simpson earned her undergraduate and medical degrees at Trinity College (Dublin, Ireland), a master's in public health at the University of Hawaii, and completed a post-doctoral fellowship in health services research and health policy at the University of California, San Francisco. She was awarded an honorary Doctor of Science degree by the Georgetown University School of Nursing and Health Studies in 2013.

PANELISTS

Paul E. Jarris, M.D., M.B.A.
Executive Director
Association of State & Territorial Health Officials (ASTHO)

Dr. Jarris was appointed Executive Director of ASTHO effective June 19, 2006. Prior to his appointment, Dr. Jarris served as State Health Official of the Vermont Department of Health from 2003 to 2006.

Dr. Jarris served as Medical Director for Vermont's largest nonprofit HMO, Community Health Plan, from 1992-1996. He was President and CEO of Vermont Permanente Medical Group from 1998-2000, as well as CEO of Primary Care Health Partners, Vermont's largest statewide primary care medical group, from 1999-2000. Throughout his career, Dr. Jarris has maintained an active clinical family practice, including work in federally qualified health centers and a shelter for homeless adolescent youth. He is certified by the American Board of Family Medicine and the American Board of Medical Management.

Dr. Jarris graduated from the University of Vermont and received his M.D. from the University of Pennsylvania School of Medicine in 1984. He interned at Duke-Watts Family Medicine Residency Program in Durham, NC and completed his residency at the Swedish Family Practice Residency Program in Seattle, WA. Following residency training, he received a Master's in Business Administration from the University of Washington.

Robert M. Pestronk, M.P.H.
Executive Director
National Association of County & City Health Officials (NACCHO)

As Executive Director for the National Association of County and City Health Officials (NACCHO) in Washington, DC, since November 2008, Mr. Pestronk represents the nation's local health departments and their staff who protect and promote health, prevent disease, and seek to establish the social foundations for wellness in nearly every community across the United States. Mr. Pestronk received an M.P.H. from the University of Michigan School of Public Health with concentrations in human nutrition and health planning and administration. He received an A.B. in politics from Princeton University.

Prior to his position at NACCHO, he served as Health Officer in Genesee County, Michigan for 22 years where, among other accomplishments, he was recognized for: *establishing* the 26,000 member Genesee Health Plan, some of Michigan's earliest public and work place tobacco control regulations, and Genesee County's Public Health week conference; introducing a culture of efficacy, efficiency, accountability, and quality improvement within his department; reducing infant mortality rates and the racial disparity among those rates; increasing foundation and federal funding for the department's work; involving local residents and his board in three five-year cycles of successful departmental strategic planning; and creating productive relationships with university and community-based organizations. His health department was fully accredited by the state of Michigan.

Mr. Pestronk is a member of the Board of Directors for the Ruth Mott Foundation. He is a past board member of NARSAD, the Mental Health Research Association, the Michigan Health Officers Association (of which he is a past president) and the Michigan Association for Local Public Health. He is a Primary Care Policy Fellow through the United States Department of Health and Human Services and trained as a Scholar through the Public Health Leadership Institute. He is Past President of the Primary Care Fellowship Society and Past President of the Public Health Leadership Society Council. He was a member of the Institute of Medicine Public Health Roundtable and of the National Advisory Committee for Turning Point: Collaborating for a New Century of Public Health. He was the first President of the Public Health Law Association. He served on the Board of the Greater Flint Health Coalition, the Rotary Club of Flint (Michigan), Priority Children, and Temple Bethel.

The University of Michigan School of Public Health honored him as a Distinguished Alumnus, and he was the first recipient of the John H. Romani Award from the Department of Health Management and Policy at the School of Public Health. The American Lung Association, Genesee Valley, has honored him as Professional of the Year and also as Health Advocate of the Year.

Mr. Pestronk's published work includes articles in the Journal of Public Health Management and Practice, the Journal of Law, Medicine & Ethics, the Journal of the American Public Health Association, Health Education and Behavior, Public Health Reports, and the Journal of the American Academy of Nurse Practitioners. Chapters in books include those published by the American Public Health Association and Oxford University Press.

WEDNESDAY, APRIL 9, 2014
3:45 TO 4:45 PM

Implementing Health Reform in Kentucky
Lexington Convention Center-Bluegrass Ballroom 2

MODERATOR

Julia Costich, J.D., Ph.D.
Professor of Health Management & Policy
University of Kentucky College of Public Health

Dr. Julia Costich is a professor in the Department of Health Services Management, and also serves as associate director of the Kentucky Injury Prevention and Research Center. Her current research focuses on legal and policy issues in public health and health care, health reform, and electronic health information exchange.

She served as department chair 2005-2012, director of the Master of Health Administration program 2010-2012, and director of the Kentucky Injury Prevention and Research Center 2003-2010. Before joining the UK public health faculty in 1998, she administered academic medical programs, practiced health care law, and served as a policy specialist and administrator for state health care programs.

PANELISTS

Rice C. Leach, M.D.
Commissioner of Heath
Lexington-Fayette County Health Department

Dr. Leach was born in Lexington, KY, and grew up there and in Louisville. He attended Amherst College in Amherst, MA, and received his medical degree from the University of Kentucky in 1966. He did his rotating internship as an officer of the United States Public Health Service and remained on active duty until 1993. During his Public Health Service career he was medical director of hospital staffs, hospital commander, community health physician, director of a multi-state program in the Indian Health Service, and served as chief of staff to the Surgeon General. He has had international health experience in Guatemala, Bolivia, and Panama and was a consultant to the Guam Memorial Hospital.

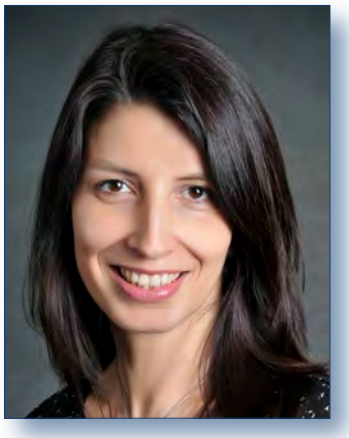
He served as Kentucky's Commissioner of Public Health from 1992 until 2004, where he worked to implement several public health initiatives ordered by the Kentucky General Assembly. He chaired the Attorney General's Task Force on Controlled Substance Abuse and participated in emergency responses and environmental clean-up activities. From 2004 until 2010 he was medical director and executive director of the primary care center at the Lexington-Fayette County Health Department. He was professor and preventive residency program associate director at the University of Kentucky, College of Public Health, Department of Preventive Medicine and Environmental Health until he became commissioner of health for the Lexington-Fayette County Health Department in March 2011.

He obtained his Master of Health Services Administration degree from the Harvard School of Public Health, is certified by American Board of Preventive Medicine, and is a fellow of the American College of Physician Executives. He has received numerous awards and has served on several state, local, and national committees during his career.

Bill Nold, J.D., B.S.
Deputy Executive Director
Office of the Kentucky Health Benefit Exchange

Mr. Bill Nold is a lifelong resident of Louisville. He graduated from the University of Kentucky in 1968 with a B.S. degree in Mechanical Engineering. He graduated from the University of Louisville in 1974 with a J.D. In 2001, after 26 years of private practice, he became employed with the legal division of the Kentucky Department of Insurance as a staff attorney. In this position, his job duties primarily related to issues involving health insurance and worker's compensation insurance. In 2008, he became the director of the Health and Life Division within the Department of Insurance, where his job duties involved all aspects of health and life insurance regulation.

In September 2012 Mr. Nold was appointed as the Deputy Executive Director of the Kentucky Office of the Health Benefit Exchange. The Office has been working over the last year to establish a state-based exchange that meets the requirements of state law and the ACA.



Gabriela Alcalde, Dr.P.H., M.P.H.
Health Policy Director
Foundation for a Healthy Kentucky

Dr. Alcalde is Health Policy Director at the Foundation for a Healthy Kentucky and works primarily in the Promoting Responsive Health Policy Initiative.

She has diverse public health experience in the government, nonprofit, academic, and community sectors. Her portfolio includes qualitative research, community engagement, policy analysis and development, program development and implementation, capacity building, advocacy, and writing for various audiences.

She has published on public health and health policy topics and has presented on these topics at the local, national, and international level. She has been active on boards and coalitions addressing public health policy, health equity, and communities of color. She currently serves as vice-chair on the Louisville Metro Board of Health.

She holds a Dr.P.H. in Health Administration from the Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill; a Master's in Public Health from Boston University; and a Bachelor's of Arts in Psychology from the University of Louisville.

THURSDAY, APRIL 10, 2014
9:00 TO 11:00 AM

Translating Research Findings for Policymakers: A Dialogue
Lexington Convention Center-Thoroughbred 1, 2, & 3

MODERATOR

Anna Goodman Hoover, Ph.D., M.A.
Deputy Director
National Coordinating Center for PHSSR & Public Health PBRNs

Dr. Anna Goodman Hoover is deputy director of the National Coordinating Center for Public Health Services and Systems Research and Public Health Practice-Based Research Networks, where she helps organize cross-cutting and multi-network research studies designed to evaluate and compare public health strategies implemented across diverse settings. Dr. Hoover, a communication scientist and research assistant professor in the University of Kentucky College of Public Health Department of Health Management and Policy, conducts research in such areas as dissemination and implementation science, participatory communication, and stakeholder engagement in support of evidence-based decision making. She also serves both as co-leader of research translation and as communications liaison for the University of Kentucky Superfund Research Program, where she works with stakeholder groups to improve mutual understandings of environmental health issues, supporting the advancement of research outcomes into practice at community, provider, and policy levels.

PANELISTS

Emily Holubowich, M.P.P.
Senior Vice President
Cavarocchi Ruscio Dennis Associates, LLC
Coalition for Health Funding

Ms. Emily J. Holubowich joined CRD Associates in 2009. She has more than thirteen years of experience in health and fiscal policy, government relations, strategic communications, and coalition management. As a senior member of the CRD Associates consulting team, Emily helps her clients promote and protect their interests in the nation's capital. She is frequently sought out by the media for her expertise on public health and fiscal policy, on record in USA Today, Washington Post, New York Times, Wall Street Journal, Reuters, Politico, MSNBC, CNN Money, National Public Radio, Huffington Post, Congressional Quarterly, Roll Call, The Hill, and other trade publications. She is also called upon by universities and national organizations to lecture on the policy environment and best practices in strategic communications and advocacy.

Previously, Ms. Holubowich served as the director of government relations for AcademyHealth and a senior health policy analyst with the U.S. Government Accountability Office (GAO). She holds a Master of Public Policy from The Johns Hopkins University and a Bachelor of Arts in Political Science and English from the University of Massachusetts Dartmouth.

Sara Love Rawlings, J.D.
Senior Public Policy Advisor
Baker Donelson

Ms. Sara Love Rawlings is a senior advisor in the Firm's Washington, DC office. Ms. Rawlings is a member of the Government Relations & Public Policy Group and has a broad range of experience in crafting and analyzing appropriations and health care policy issues. Prior to joining Baker Donelson, she worked as a staff member of the U.S. Senate Committee on Appropriations. Ms. Rawlings worked with the Subcommittee on Labor, Health and Human Services (HHS) and Education and Related Agencies, where she managed more than $30 billion in annual federal spending. Ms. Rawlings has particular experience with the Centers for Disease Control and Prevention (CDC), Center for Medicare and Medicaid Services (CMS), Health Resources and Services Administration, Administration for Children and Families, Substance Abuse and Mental Health Services Administration, and the Administration on Aging.

Ms. Rawlings began her career in Washington under the leadership of Senator Thad Cochran, the then-ranking member of the U.S. Senate Committee on Appropriations, in whose office she worked as a congressional health policy fellow. During her time with Senator Cochran's office, Ms. Rawlings fostered strong relationships with the congressional leadership, and the Senate Finance and Health, Education, Labor and Pension Committees.

Before her time in Washington, Ms. Rawlings spent four years working in biological research at the Texas Scottish Rite Hospital for Children and the University of Texas Southwestern Medical Center's Howard Hughes Medical Institute, Green Center for Reproductive Biological Sciences.

David J. Reich, J.D., M.A.
Former Democratic Staff Director, Subcommittee on Labor-HHS-Education
Committee on Appropriations
U.S. House of Representatives

Mr. David Reich spent 30 years working in various staff positions with the U.S. House of Representatives prior to his retirement in February 2014. Between 1997 and 2014 he was on the staff of the House Committee on Appropriations, where he has served as Democratic staff director for the Subcommittee on Labor, HHS and Education and the Subcommittee on Financial Services and as committee counsel, among other positions. He has worked extensively on appropriations for public health, medical research and health services programs.

Prior to joining the Appropriations Committee staff, Mr. Reich was chief counsel and then minority chief counsel for the House Committee on the Budget. He has also been an attorney with the Washington, DC law firm of Shea & Gardner and research director for the Democratic Study Group in the House of Representatives. He holds a law degree from Georgetown University, an M.A. in economics from American University, and a B.A. from the University of California at Santa Cruz.

SESSION 1-TUESDAY, APRIL 8, 2014, 2:00-3:15 PM

SESSION 1A: System Structure & Performance-Partnerships
Room: Thoroughbred 1

Moderator: Joan Reede, M.D., M.S., M.P.H., M.B.A.

Presenters:
Lea Ayers LaFave, Ph.D., M.S.N., B.A., RN

Use of Network Analysis to Understand Structures and Collaboration Among Regional Networks Providing Tobacco-Related Services

Co-Investigators: Jo Porter, M.P.H., & Stacey Gabriel, B.A.

Background & Research Objective: An emerging body of literature supports the application of systems science in addressing public health issues. Network analysis provides one approach to understanding the context within which public health interventions occur, suggesting that structural network characteristics, such as size and composition, connectivity among partners and positioning of network members can help understand network functionality. As part of a larger study examining how funding and allocation for tobacco-related services relate to connectivity among partner members of local public health systems, this descriptive study explores infrastructural differences among four local public health networks serving diverse geographical and demographic areas.

Data Sets and Sources: The Program to Analyze, Record, and Track Networks to Enhance Relationships (PARTNER), an online social network data collection and analysis tool, was used to collect data from fourteen regional public health networks providing chronic disease prevention services in April 2013. A 42-item survey addressing a broader set of public health issues was sent to 274 partners from regional, multiregional, state level and state governmental organizations, yielding a 64% response rate.

Design and Analysis: Data specific to organizations providing tobacco-related services within a purposive sub-sample of four distinct networks were abstracted from the larger data set providing specific regional tobacco service network descriptors. The four networks selected for this analysis were those that are part of a separate study focused on public health costs for tobacco-related services.

Principle Findings: Each regional network generated a unique set of network characteristics. Although similar in size (n= 7-10), tobacco networks revealed wide variation in other network metrics: density (25-46.7%), degree centrality (52.8-100%), trust (72.2-90.3%), and collaboration levels (cooperative 22.2-45.5%, coordinated 9.1-22.2%, integrated 33.3-55.6%).

Conclusions: These findings provide a lens with which to explore connections between network structure and function, and how those might relate to the delivery of public health services.

Implications: Decreasing resources for public health programming indicate an increasing need for collaboration and resource exchange among diverse public health. Identifying network characteristics and quantifying funding sources and resource exchange can help networks better understand their own infrastructures, and the functioning of local public health systems.

SESSION 1A: System Structure & Performance-Partnerships-Tuesday, April 8, 2014, from 2:00 to 3:15 pm

Sharla Smith, Ph.D., M.P.H., B.S.

Public Health System Partnerships: Examining the Association of Public Health Systems Partnerships and Infant Mortality

Co-Investigator: Michael Preston, Ph.D., M.P.H., B.S.

Background: Reducing the United States (US) Infant Mortality Rate (IMR) has been and continues to be recognized as an important public health objective. As of 2012, the US IMR was about 6 per 1,000 live births, a historically low rate in the US, but a rate that is still higher than other developing countries.

Research Objectives: The purpose was to examine specific partnership types among local public health systems as well as to explore the association of public health system partnerships (PHSPs) and IMR.

Data Set and Sources: This study used survey response data of local health departments (LHDs) that responded to all three waves (1998, 2006, and 2012) of the National Longitudinal Study of Public Health Agencies (NLSPHA). The NLSPHA data was merged with data from the NACCHO Profile Study, Area Resource File, and National Vital Statistics. Study Design A longitudinal, retrospective cohort research design was used to examine the association between infant mortality rates and PHSPs types among a sample of the nation's LHDs in 1998, 2006, and 2012.

Analysis: Multivariate regression panel analysis of questions from the NLSPHA (n = 947) was used to determine whether PHSPs were associated with IMRs. Principal Findings PHSPs density and centrality were significantly associated with an increase in infant mortality. A 1% increase in organizational density is associated with a 2.9% increase in infant mortality ($p < .05$) after controlling for all other factors in the model. In addition, a 1% increase in organizational centrality is associated with a .3 % increase in infant mortality after controlling for other factors in the model.

Conclusions: These findings suggest that public health systems should consider evaluating specific partners' motivations and expectations of their role in addressing infant mortality in the communities they serve.

Implications: This study and its findings provide guidance to public health policy makers in their efforts to promote population health through public health partnerships. It highlights opportunities to better engage partners through a community based participatory approach. This approach will assist practitioners in developing partnerships in which community organizations play a leadership role in the partnerships.

Susan German, M.P.H.

New Jersey Local Tobacco Control Activity from the MPROVE Study

Co-Investigators: Pauline Thomas, M.D., Natalie Pawlenko, M.S.W., Kevin Sumner, M.P.H., & Margy Jahn, M.P.H.

Background: Variation in the volume and reach of tobacco public health activity at the local level is known to exist. Less is known of the correlates and determinants of such variation.

Research Objective: In collaboration with the Public Health Practice-Based Research Network (PH PBRN) National Coordinating Center (NCC), we quantified and characterized tobacco prevention and control activities performed by New Jersey's local health departments (LHDs) as part of the Multi-Network Practice and Outcome Variation Examination (MPROVE) Study.

Data Sets and Sources: Measures of tobacco prevention and control activities were collected from local health departments via an online survey.

Study Design: The study sample, a subset of the multi-state MPROVE Study, launched in 2012, consisted of 69 (73%) of 95 LHDs in New Jersey. A REDCap survey with 18 questions including four regarding tobacco control activities was sent to all LHDs. Analyses included descriptive statistics and will assess relationships between tobacco control activities and demographic and LHD structural characteristics.

Analysis: Descriptive analyses were performed. Relationships between tobacco activities and demographic variables at the LHD jurisdictional level, as well as LHD structure will be assessed.

Principal Preliminary Findings: The most frequent activity pertaining to enforcement of the NJ Smoke-Free Air Act (NJSFAA) was the receipt of one or more complaints (59% of LHDs), followed by one or more inspections conducted (54% of LHDs). The two most common tobacco control activities performed by LHDs were development and dissemination of educational materials (80% of LHDs), and policy development (46% of LHDs); the least frequent activity was tobacco use surveillance (11% of LHDs). Several LHDs believed that they lacked the authority to enforce the NJSFAA.

Preliminary Conclusions: Just over half of the responding LHDs engaged in NJSFAA enforcement. This could indicate either compliance with the NJSFAA in many jurisdictions or a lack of education among the public and several LHDs regarding enforcement.

Implications of Preliminary Findings for Public Health Practice and Policy: There may be a need for increased education of the public and LHDs on NJSFAA enforcement procedures. The additional analytic analyses will be completed by the start of the Keeneland Conference.

SESSION 1B: System Structure & Performance-Quality Improvement
Room: Thoroughbred 2

Moderator: Carolyn Leep, M.S., M.P.H.

Presenters:
Kim Gearin, Ph.D., M.S.

Bringing Together Practice-Based Research and Performance Management: Maximizing Data for Multiple Purposes

Co-Investigator: Beth Gyllstrom, Ph.D., M.P.H.

Background: Since 2011, Minnesota's state/local Performance Improvement Steering Committee has led efforts to improve Minnesota's governmental public health system through the ongoing use of performance standards, measures and outcome reports that guide system-level quality improvement efforts and decision-making.

Research Objective: The objective of this study was to test the feasibility of engaging a public health practice-based research network (PBRN) to (1) develop and test performance measures for Minnesota's Local Public Health Act, (2) integrate those measures into a performance management system for all 52 Minnesota community health boards (CHBs), and (3) use those findings to conduct practice-based research.

Data Sets and Sources: The Planning and Performance Measurement Reporting System furnished all data used in this study. All CHBs in Minnesota use this electronic system annually to report on expenditures, staffing and performance. The system includes measures of local public health services and capacity (recently revised to align with the national standards and to reflect QI maturity and health equity measures developed through practice-based research). Data was collected in February-March 2013 on 2012 activities.

Study Design: Descriptive Analysis Frequencies and distributions were generated for each of the performance measures. These data are considered baseline measures for the newly revised system.

Principal Findings: System-level data highlighted variation in capacity and identified areas of notably strong performance, as well as areas for improvement (e.g., measures related to quality improvement, performance management and strategic planning). Findings were used to prioritize areas for improvement, establish system-level objectives, and inform practice-based research.

Conclusions: Minnesota's experience underscores the potential to bridge research and practice in system-level performance management. Tailored and system level baseline reports have spurred local and system level actions, produced data for a multi-state practice-based research project, and demonstrate that measures developed by this PBRN have been translated into routine practice.

Implications: Practice-based research networks can provide valuable insights into the development of ongoing, systematic data collection efforts aimed at characterizing the capacity of local public health systems. The information gathered through these efforts can then be maximized for research purposes, while minimizing the data collection demands on local agencies.

Carole Myers, Ph.D., M.S.N., B.S., RN

Exploring Reasons for Missed Appointments in a Local Health Department: A Practice-Based Research Example and Discussion of Lessons Learned

Co-Investigator: Kathy Brown, Ph.D., M.P.H., RN, (presenting)

Background: Hallmarks of practice-based research include questions that originate from practice, rapid cycle translation of findings into actionable recommendations, and meaningful collaborations between practitioners and academicians. The purpose of this presentation is to review findings from a study conducted at the Knox County Health Department (KCHD) by a team of KCHD professionals and faculty and students from the University of Tennessee (UT). The study was the first research collaboration conducted under the auspices of the KCHD/UT Academic Health Department (AHD) and served to advance specific goals of the AHD including bridging the practice/research gap, enhancing public health education, training, and research to improve community health.

Research Objective: The study aim was to gain insight into reasons for the high percentage of missed appointments in the KCHD Women's Clinic from the client perspective. Missed appointments are problematic for several reasons, including staffing, operational efficiencies, great demand for appointments, and consequences to women who miss appointments and do not re-schedule.

Study Design & Analysis: The mixed methods study entailed two phases: 1) Two years of detailed records kept daily were analyzed to describe the rate and type of missed appointments and 2) Twenty-eight semi-structured interviews were conducted. Interviews were analyzed and coded using conventional content analysis.

Findings: Variations in the number of missed appointments were due primarily to clinic-related factors such as staffing and hours and days of operation. Major themes identified from interviews include: challenges scheduling appointments, challenges in keeping scheduled appointments, and clinic barriers. Interviewees also identified what motivated them to not miss appointments and offered suggestions for decreasing missed appointments.

Conclusions: A major lesson learned from the study is that available data is not necessarily designed for research purposes. However major trends related to the adoption of electronic health records and public health accreditation are driving improved data elements, collection, and reporting which support process improvement and may contribute to improved population health.

Implications: Other lessons relate to the important work of relationship-building and creating a foundation for ongoing work. Both require major organizational and personal commitments. Insight from a practice and an academic PI will be shared.

SESSION 1B: System Structure & Performance-Quality Improvement-Tuesday, April 8, 2014, from 2:00 to 3:15 pm

Katherine Stamatakis, Ph.D., M.P.H.

Quantifying Local Public Health Infrastructure for Obesity Prevention through a Practice Inventory of US Local Health Departments

Co-Investigators: Allese Mayer, M.P.H., & Anna Hardy, B.S., RN

Background: The large geographic variation in obesity prevalence across localities underlies the importance of a locally-oriented response that includes changes to policy, systems and environment. Little is known about the breadth of practice in obesity prevention among local health departments (LHDs) across the United States.

Research Objective: The purpose of the study was to provide a snapshot of a broad cross-section of obesity prevention-related practices in US LHDs, using reliability-tested measures.

Data Sets and Sources: Recruitment was conducted among a random sample of US LHDs in February-April of 2014. Based on an expected response rate of 60%, 833 of the 2,565 enumerated LHDs were contacted. The sample was stratified based on size of population served (<50,000, 50,000-499,999, ≥500,000) and governance structure (local, state, shared). The survey, developed based on evidence-based and expert panel recommended practices, and with input from practitioner advisors, had two main parts: infrastructure (13 items) and activities (73 items).

Study Design: The study was a cross-sectional survey of a random selection of US LHDs. Analysis Analyses of the data include descriptive statistics and test-retest reliability, along with comparisons of complementary data from a census sample of LHDs.

Principal Findings: The final sample was n=394 LHDs, with a response rate of 52% after excluding those we were unable to confirm contact (n=75). The most prevalent practices related to healthy eating were encouraging usage of farmers markets among WIC participants (52%) and applying school-based nutrition interventions (56%). The most prevalent practices related to physical activity were promoting policies for daily school PA (42%), and increasing open spaces in communities (40%). Additional results include test-retest reliability and infrastructural characteristics related to patterns of obesity prevention practice.

Conclusions: The distribution of patterns of practice in obesity prevention among US LHDs provides insights into the extent to which LHDs are meeting targets for evidence-informed practice.

Implications for Public Health Practice and Policy: There is a need to improve obesity prevention through better utilization of the existing local public health infrastructure. These data provide a foundation for linking LHD activities with performance metrics, changes in policy and built environments, and community health indicators.

SESSION 1C: Workforce-Evidence-Based Decision Making (EBDM)
Room: Thoroughbred 3

Moderator: Christopher Maylahn, M.P.H.

Presenters:
Rebekah R. Jacob, M.P.H., M.S.W.

Training Needs and Supports for Evidence-Based Decision Making Among the Public Health Workforce

Co-Investigators: Elizabeth A. Baker, Ph.D., Peg Allen, Ph.D., M.P.H., Elizabeth A. Dodson, Ph.D., Katie Duggan, M.P.H., M.S., Robert Fields, M.P.H., Sonia Sequeira, M.P.H., M.S.W., Ross C. Brownson, Ph.D.

Background: Preparing the public health workforce to practice evidence-based decision making (EBDM) is necessary to improve practice. Despite growing supports for EBDM competencies and processes, there are remaining training needs and barriers for effective translation to practice and policy.

Research Objective: To identify and compare EBDM competency gaps among the U.S. public health workforce and identify strategies for reducing these gaps.

Data Sets and Sources: This study combines self-reported data from four nationally representative online surveys about EBDM with state and local health departments between 2008 and 2013. Survey participants were asked to rate perceived importance and availability of EBDM competencies. Additionally, participants in the state level 2013 survey ranked three items that "would most encourage you to utilize EBDM in your work" and items that "would be most useful to you in applying EBDM in your work" from a list of response options.

Study Design: Cross-sectional

Analysis: A competency "gap" score was calculated by subtracting the Likert scale rated availability of the EBDM competency from rated importance. Independent sample t-tests were used to compare state-level practitioners' competency gaps. Mean gaps were aggregated.

Principal Findings: The largest competency gap areas were consistent across the four samples: economic evaluation, communicating research to policy makers, evaluation designs, and adapting interventions. State level participants in 2013 reported significantly smaller mean gaps than those in 2008 ($p < 0.01$). Leaders prioritizing EBDM was most often ranked by participants to help encourage them to practice EBDM (67.9%). EBDM training for specific areas was most commonly ranked by participants to help them apply EBDM in their work (64.3%).

Conclusion: The findings suggest gaps in EBDM competencies may be narrowing. However, the largest competency gaps remain consistent over time and across local and state public health practitioners. Leadership support for EBDM and more tailored EBDM training may improve the practice of EBDM within health departments.

Implications for Public Health Practice and Policy: More EBDM capacity building efforts are needed, especially where the largest gaps are noted. These activities may include focused trainings along with ways to improve organizational practices (e.g. leadership support).

SESSION 1C: Workforce-Evidence-Based Decision Making (EBDM)-Tuesday, April 8, 2014, from 2:00 to 3:15 pm

Dayna Maniccia, Dr.P.H., M.S.

Evidence Based Decision Making by Local Health Departments in New York State

Co-Investigators: Collette Sosnowy, Ph.D., M.A., Nancy Katagiri, M.P.H., CHES, Christopher Maylahn, M.P.H., Sylvia Pirani, M.P.H., M.S.

Background: Evidence-based decision making (EBDM) is a valuable public health tool. The extent to which local health departments (LHDs) participate in EBDM is unknown. The New York State (NYS) Public Health Practice-Based Research Network developed a multi-part mixed-method study to assess EBDM in NYS LHDs.

Research Objective: To determine the use of EBDM by LHD programs and assess whether EBDM varied across programmatic areas and LHD characteristics.

Data Sets and Sources: Information about EBDM activities was collected from three program areas present in all NYS LHDs. LHD characteristics were obtained from the NACCHO 2010 Profile of LHDs survey.

Study Design: Staff responsible for childhood lead poisoning prevention, immunization, and physical activity and nutrition programs, program area common to all LHDs in NYS, were surveyed. Survey questions pertained to the decision-making processes used when developing or modifying a program or deciding which program to implement.

Analysis: Descriptive statistics of LHDs were calculated and responding and non-responding LHDs compared with chi-square analyses. A modified factor analysis approach was used to create an overall EBDM score. Frequency of use of EBDM steps was calculated and compared across program areas using Fisher's exact test. Overall EBDM scores by program area were compared using ANOVA.

Principal Findings: Most respondents reported their program conducted many EBDM activities. However, none reported using all activities at all times. Most frequently occurring activities included setting short-term objectives, identifying stakeholders, searching governmental websites for information, and identifying target populations; least frequently occurring included consulting The Community Guide, working with academic researchers, and publishing in academic or practice journals. EBDM facilitators included valuing community input, encouragement for using existing interventions, and collaborative decision making processes. Insufficient knowledge about evaluation methods was the most frequently cited barrier.

Conclusions: Routine EBDM should be encouraged and supported. Using all EBDM steps, especially evaluation and dissemination, should be emphasized. To facilitate EBDM and increase implementation of evidence-based strategies, program evaluation, and dissemination, linkages with academic researchers and other resources should be encouraged.

Implications for Public Health Practice and Policy: These findings can help policy-makers strengthen the capacity of LHDs to become ''evidence-based health departments."

Ross Brownson, Ph.D.

Building Evidence-Based Decision Making Capacity in Local Health Departments: An Evaluation of Training and Technical Assistance Efforts in Four U.S. States

Co-Investigators: Julie Jacobs, M.P.H., (presenting), Carson Smith, M.P.A., Robert Fields, M.P.H., Kathleen Duggan, M.P.H., M.S.

Background: Public health practitioners face increasing calls to 1) use the best available evidence in developing programs/policies and 2) contribute to the body of evidence. Evidence-based decision making (EBDM) training courses have been recommended to build practitioners' capacity to achieve these goals.

Research Objective: To test local-level EBDM capacity-building efforts in four states (Michigan, North Carolina, Ohio, Washington) with a quasi-experimental study design. The main capacity-building activity was an EBDM training course. States also received technical assistance in the form of grant writing, community needs assessment, intervention and evaluation design, and economic evaluation.

Data Sets and Sources: An online survey was delivered to a national sample of local health department directors, administrators and practitioners (n=849, 57% response rate). A subsample (n=228, 79% response rate) was retested six months later to serve as the control group. Course participants completed pre-test surveys prior to training and were retested six months after the course (n=112, 88% response rate). All survey respondents rated the importance and availability of 10 EBDM competencies. Course participants assessed how frequently they used EBDM skills, and they rated benefits and barriers to using course content.

Study Design: Quasi-experimental

Analysis: Difference in means and adjusted odds ratios were computed to assess EBDM competencies. EBDM skills were analyzed with descriptive statistics and Pearson's chi-square tests.

Principal Findings: Course participants reported a greater increase in the availability of 9 of 10 EBDM competencies at post-test, compared to the control group. Significant differences ($p<0.05$) were found in: evaluation design, quantifying the public health issue, action planning, and communicating research to policymakers. Benefits of the training included becoming better leaders and making scientifically informed decisions. The largest barriers to EBDM included lack of time for implementation, lack of funding to continue training, and co-workers not being similarly trained.

Conclusions: This training course increased practitioners' perception of the availability of EBDM competencies, and participants identified many benefits of the training.

Implications for Public Health Practice and Policy: EBDM training courses can be used to build practitioners' capacity to both use and create evidence. Further research is needed on how best to scale up these approaches.

SESSION 1C: Workforce-Evidence-Based Decision Making (EBDM)-Tuesday, April 8, 2014, from 2:00 to 3:15 pm

Kay Lovelace, Ph.D., M.P.H., B.A.

LHDs Increase Their Use of EBDM Practices from 2010 to 2013

Co-Investigators: Gulzar Shah, Ph.D., M.S., Carolyn Leep, M.P.H., M.S., Robert Aronson, Dr.P.H., M.P.H.

Background: An evidence-based approach is needed to effectively address the gap between population health goals in the United States and current morbidity and mortality rates. Recently, the authors developed an index to allow researchers to assess the frequency of evidence-based decision making (EBDM) practice in LHDs. The first descriptive analysis was conducted with data from the NACCHO 2010 Profile Study of Local Health Departments (LHDs). The current research was designed to assess changes in the percentage of LHDs using EBDM practices from 2010 to 2013.

Research Objective: To identify changes in the frequency with which LHDs carried out EBDM practices from 2010 to 2013. Data sets and sources: 2010 NACCHO Profile of LHDs Survey, 2013 NACCHO Profile of LHDs Survey. The NACCHO Profile Surveys are conducted every 2-3 years. All LHDs in the country are invited to respond.

Study Design: Cross-sectional survey

Analysis: The research reported here used an index of EBDM practices previously developed by the authors. Descriptive analysis was used to identify the frequency with which LHDs used each EBDM practice comprising the index and the frequency of the total number of practices they used in both 2010 and 2013.

Principal Findings: Overall, the percentage of LHDs using EBDM practices increased from 2010 to 2013. Specifically, in 2010, forty-five percent of LHDs used three EBDM practices or fewer; 41.5% used four or five EBDM practices; and 13.5% used six or seven practices. In 2013, thirty-seven percent of LHDs used three EBDM practices or fewer; 39% used four or five practices; and 23.7% used six or seven practices. The overall increase in numbers of EBDM practices used by LHDs was largely driven by increases in percentages of LHDs that use the County Health Rankings (37.8% to 66.5%) and that use The Guide to Community Preventive Services (26% to 41.2%)(Table 1).

Implications for PH Policy and Practice: The results reveal that there is an increase in the use of EBDM practices in LHDs from 2010 to 2013. More research is needed to understand details of how LHDs implement EBDM strategies and use them to innovate the practice of public health.

SESSION 1D: Finance-Food Safety
Room: Thoroughbred 4

Moderator: C.B. Mamaril, Ph.D.

Presenters:
Betty Bekemeier, Ph.D., M.P.H., B.S., RN

Local Public Health Food Safety Expenditures and Their Impact Health Outcomes: Findings from PHAST

Co-Investigators: Michelle Yip, M.S.N., B.S., RN, Matthew D. Dunbar, Ph.D., Tao Kwan-Gett, M.D., M.P.H.

Background: In connection with the Public Health Activities and Service Tracking (PHAST) study and in collaboration with Public Health Practice-Based Research Networks (PBRN), we examined annual Environmental Health (EH) Food Safety expenditures for 93 local health departments (LHDs) from 2000-2010.

Research Objective: Our objective was to investigate relationships between local-level Food Safety expenditures and related health outcomes.

Data Sets and Sources: Unpublished annual EH expenditures, obtained from state health departments in Washington (WA) and New York (NY), representing local-level Food Safety service provision were linked with control variables, including county-level socio-demographics, rural/urban setting, and per capita food establishments. Outcomes included annual infection rates for the seven most common notifiable enteric diseases.

Study Design: We used a multivariate panel time-series design to examine ecologic relationships between 2000-2010 local Food Safety expenditures on enteric diseases.

Analysis: Descriptive statistics were examined and analytic generalized estimating equation (GEE) models run for each enteric disease.

Principal Findings: With other factors controlled for, enteric disease rates were consistently in expected, beneficial directions across the sample of LHDs in both states. Preliminary findings from our models suggest that a significant beneficial inverse relationship between Food Safety expenditures and rates of two enteric disease (Salmonella and Cryptosporidiosis), indicating that higher LHD Food Safety spending was associated with lower incidence of Salmonellosis (WA) and of Cryptosporidiosis (NY).

Conclusions: Beneficial relationships appear to exist between local public health expenditures specific to Food Safety and certain related enteric disease outcomes.

Implications for Public Health Practice and Policy: Findings have policy implications suggesting that local public health expenditures on Food Safety services are important for their impact on certain health indicators. Our study also supports the need for detailed, program-specific public health service-related data to measure the cost, performance, and outcomes of public health prevention efforts to inform practice and policy-making.

SESSION 1D: Finance-Food Safety-Tuesday, April 8, 2014, from 2:00 to 3:15 pm

Fanta Purayidathil, Ph.D., M.P.H., B.S.

Comparison of Mandatory Notifiable Disease Lists for Food Safety Reporting Across the Fifty States

Co-Investigators: None Listed

Background: Pathogens responsible for foodborne illness vary in their inclusion in state health department notifiable disease lists. There is currently no law requiring states to report cases to the Centers for Disease Control and Prevention, or that notifiable disease lists at a minimum include the same pathogens as the national list, resulting in a potentially overly-conservative estimate of morbidity and mortality.

Research Objective: To characterize state health department foodborne disease outbreak reporting systems; specifically, investigate how state health departments deliver essential public health services in the form of reporting foodborne illness to the Centers for Disease Control and Prevention.

Data Sets and Sources: The Council of State and Territorial Epidemiologists database of reportable conditions, the Centers for Disease Control and Prevention Nationally Notifiable Disease List. Study Design- Copies of the most recent version of 50 state's lists were downloaded and compared to the 2011 Center for Disease Control and Prevention's List of Notifiable Conditions for collection of data on pathogens responsible for foodborne illness.

Analysis: Analysis focused on identifying gaps in surveillance of pathogens related to foodborne illness across states; pathogens that were consistently missing from state-level lists were tagged to investigate regional trends among lists. Descriptive analyses were conducted on state and pathogen data; chi square tests measured relationship between state and the presence of a pathogen on a notifiable disease list.

Principal Findings: All 50 states maintain a notifiable disease list. 53% (n=27) of states have updated the list within the past 3 years. 51% (n=26) of states collect data on incidence of a food outbreak in general. Analyses are ongoing and will be completed by the conference date.

Conclusions: While there are some pathogens that are consistently present on lists across states, others appear more sporadically. This appears to be linked to geography. Final comments will be available upon completion of analysis.

Implications for Public Health Practice and Policy: Understanding the consistency between state and federal systems will help to understand the impact of structural capacity (SC) on food safety surveillance at the state level, and provide insight the data quality improvement.

Scott Frank, M.D., M.S.

The Influence of Public Health Spending and Staffing on Variation in Process and Outcome of Local Health Department Food Safety Inspections

Co-Investigator: Michelle Menegay, M.P.H., B.A.

Background: Investigation of Local Health Department (LHD) food safety inspections has identified important variations in outcome based on differences in LHD and Sanitarian characteristics; and the food safety inspection process. Financing research has typically focused on structure and outcomes with little emphasis on process.

Research Objective: Describe how LHD spending and staffing influence variation in process and outcome of LHD food safety inspections.

Data Sets: Original data gathered through direct observation of food service establishment (FSE) inspections in 20 LHDs by 77 Registered Sanitarians (RS) conducting 551 inspections. Ohio Annual Financial Report provides public health spending and staffing data.

Methods: This comparative case study utilizes mixed methods, including direct observation, survey, interview, and publicly available data. RS are shadowed during food service establishment inspections, with a structured and validated direct observation protocol completed by trained student observers.

Analysis: Includes multivariable data integration between original data and LHD Annual Financial reports with variables focusing on public health spending and staffing.

Results: Citations were issued in 67% of inspections (2.19/FSE inspection); and verbal corrections given in 80% of inspections (1.93/inspection). Sanitarians frequently discussed improvement plans (87%) and offered food safety education (69%). Variations related to public health spending and staffing were common and often counter-intuitive. Low budget LHDs produced more citations; greater thoroughness; greater job strain; more negative attitudes toward FSE; yet showed higher professionalism and fewer encounters with negative interactions. High budget LHDs offered more verbal corrections; more food safety education; and more effective checkouts. Lower staffing levels were related to more citations; greater thoroughness; less effective checkouts; more job strain; more negative attitudes toward FSEs; yet more positive attitudes about their jobs; and greater expression of gratitude from FSEs.

Conclusion: Meaningful, paradoxical differences are noted based on public health spending and staffing. Low budget/staff demonstrate better performance on some food safety inspection characteristics; while high budget/staff perform better on others.

Implications for Public Health Practice and Policy: Food safety inspection process and outcomes demonstrate important variation based on public health spending and staffing. Opportunities for cross jurisdictional communication and training may enhance performance in all LHDs.

SESSION 2A: System Structure & Performance-Public Health Practice-Wednesday, April 9, 2014, from 9:00 to 10:15 am

SESSION 2-WEDNESDAY, APRIL 9, 2014, 9:00-10:15 AM

SESSION 2A: System Structure & Performance-Public Health Practice
Room: Thoroughbred 1

Moderator: Paul K. Halverson, Dr.P.H., FACHE

Presenters:
Alana Knudson, Ph.D.

Promising Rural Public Health Practices for the Post ACA Implementation Era

Co-Investigator: Michael Meit, M.P.H., M.A., (presenting)

Background: In 2001, the Centers for Disease Control and Prevention (CDC) published Health, United States, 2001 With Urban and Rural Health Chartbook. The CDC Chartbook was widely used in directing rural health policy and programming and has not been updated since 2001. The Rural Health Reform Policy Research Center, a partnership of the University of North Dakota Center for Rural Health and the NORC Walsh Center for Rural Health Analysis (NORC) sought to update the 2001 report to examine the current trends and disparities in urban and rural health.

Data Sets & Sources: For the Chartbook, researchers replicated the analyses conducted in 2001 using the most recent data available (2006-2011) from the Compressed Mortality File (National Vital Statistics System), Area Resource File (HRSA), and U.S. Census Bureau using SAS, STATA and SUDAAN, depending on the dataset. Output included aggregate data stratified by geographic region and level of rurality.

Findings and Conclusion: Findings suggest that rural residents fare worse than their urban counterparts on a number of measures, including rates for smoking, death from chronic obstructive pulmonary disease (COPD), and suicide. Overall, residents of rural areas have less access to physicians and dentists. While the nation's health has generally improved over the past decade, urban/rural disparities in health status and access to care persist across a variety of measures, and have grown for some measures (e.g., COPD). Concurrent with our efforts to demonstrate ongoing rural health disparities through the development of the updated Chartbook, NORC, in collaboration with the University of Minnesota Rural Health Research Center, sought to identify rural evidence practices for inclusion in toolkits designed to assist communities in the implementation of rural health initiatives. Researchers reviewed HRSA Office of Rural Health Policy-funded programs to identify promising approaches in the areas of obesity prevention, mental health, oral health, community health worker programs, health promotion, and care coordination. Each toolkit is composed of several modules that provide guidance to organizations on how to identify risk factors, convene partners, and apply successful strategies to impact the health of their communities. These toolkits are available through the Rural Community Health Gateway on the Rural Assistance Center (RAC) website at www.raconline.org.

Jonathon Leider, Ph.D.

ACA and Uncertainty in Big City Health Departments

Co-Investigators: Shelley Hearne, Dr.P.H., Brian Castrucci, M.P.H., Pamela Russo, M.D., M.P.H.

Background: In 2014, all eyes in public health are on the Affordable Care Act (ACA's). Despite its potential boon to population health through insurance expansion, significant uncertainty has accompanied ACA's passing and implementation.

Research Objective and Study Design: In order to better understand ACA's potential impact on urban public health, we conducted a mixed-methods study where we interviewed and surveyed multiple leaders from members of the Big Cities Health Coalition (BCHC) around ACA implementation and impact.

Analysis: Over the course of the interview and survey, each respondent was asked to describe the current impact of ACA on their health department, as well as potential burdens created by ACA, and potential opportunities created by ACA. Qualitative data were coded thematically by two researchers, and managed in NVivo. Survey data were managed and analyzed in Stata. Data from NACCHO's 2013 Profile were also incorporated.

Principal Findings: 45 respondents participated from 17/18 BCHC LHDs. These LHDs are responsible for the health of 40 million people in the United States. Respondents from 13 cities said they expected to provide more population-based prevention and epidemiology/surveillance due to the ACA by the end of 2014, respectively. Respondents from 12 cities said they expected to do more with chronic disease, and several said they expected to provide more immunization services (7 cities). However, many respondents said they expected to cut back on services due to ACA, as well, including fewer personal health services (8 cities), immunization (6), family planning (5), laboratory services (4), and comprehensive primary care (4). Significant uncertainty around the impact on clinical services was noted by respondents across jurisdictions.

Implications and Conclusions: Public health practitioners at some of the nation's largest LHDs expect significant impact from ACA in their communities. However, there is not agreement within or across the LHDs on exactly what that impact will be, except for likely funding cuts and challenges associated with the delivery of clinical services. Policymakers should be vigilant that budget cuts do not occur without expected concomitant added capacity by private industry or billing by LHDs, or new challenges may present in the US' already-patchwork safety net.

SESSION 2A: System Structure & Performance-Public Health Practice-Wednesday, April 9, 2014, from 9:00 to 10:15 am

Nathan Hale, Ph.D., M.P.H.

Rural Health Departments: Challenges and Opportunities

Co-Investigators: None Listed

Background: The South Carolina Department of Health and Environmental Control (SCDHEC), the state's public health agency, has transitioned from being a direct provider of EPSDT services to assuring their delivery in the larger healthcare system. These historical changes have created a natural experiment to examine differences in the impact of this transition among rural and urban communities.

Research Objective: To examine rural/urban differences in the level of EPSDT services provided to infants in South Carolina as local health departments (SCDHEC) transitioned from providing these services directly.

Data Sets and Sources: Data for the proposed research were derived from linked South Carolina Medicaid eligibility files, Medicaid billing claims, and birth certificate data.

Study Design: A longitudinal birth cohort of infants (0-12 months of age) continuously enrolled in Medicaid from 1995-2010 with normal birth weights (>2500 grams) was created for analysis. Receipt of any EPSDT visit and the ratio of observed to expected EPSDT visits were used as outcome measures. Change in the level of SCDHEC penetration over time by rural residence was the primary variable of interest.

Analysis: Growth curve models including both fixed and random effects were used for the multivariable analysis. Models included a three-way interaction between time, SCDHEC penetration, and rural residence to ident+6-ify systematic variation in the level of change by residence as time and the level of SCDHC penetration change.

Principal Findings: Fewer infants continuously enrolled in Medicaid received an EPSDT visit on average over time. In urban areas the system appears to have stabilized and improved in some communities. In rural counties dependent on SCDHEC at baseline, the level of EPSDT services has deteriorated over time and has yet to demonstrate clear improvement.

Conclusions: The impact of SCDHEC transitioning from being a direct services provider was markedly different in rural communities than in urban.

Implications: As healthcare reforms are implemented, local health departments operating in rural areas may face increased demand for direct services. At the same time, healthcare reform implementation may also provide a unique opportunity to transition away from providing these services by working collaboratively with Federally Qualified Health Centers.

SESSION 2B: System Structure & Performance-Capacity
Room: Thoroughbred 2

Moderator: Jessica Kronstadt, M.P.P.

Presenters:
Sarah Lampe, M.P.H.

Minimum Package of Public Health Services: Changes in Local Public Health Services as a Result of Core Service Implementation

Co-Investigators: Adam Atherly, Ph.D., Lisa VanRaemdonck, M.P.H., M.S.W., Julie Marshall, Ph.D., Melanie Mason, M.P.A., Kathleen Matthews, M.P.H., Sarah Schmiege, Ph.D.

Background: In October 2011, the Colorado State Board of Health promulgated into rule a list of seven core public health services that local public health agencies (LPHAs) would be required to provide or assure. These seven broad core services include Administration and Governance; Vital Statistics; Assessment, Planning and Communication; Communicable Disease (CD); Prevention and Population Health Promotion (PPHP); Emergency Preparedness and Response; and Environmental Health (EH). Soon after the Colorado Core Services were promulgated into rule, the Institute of Medicine (IOM) released, For The Public Health: Investing in a Healthier Future, which recommended that all public health departments provide 'a minimum package of public health services', similar to the seven required core services in Colorado.

Study Design: Using a longitudinal, pre-post study design, this research measures the impact of the core services rule change on the delivery of services by LPHAs. Baseline data were collected in summer 2011 and follow-up data collected in summer 2013. Means testing was conducted to analyze the change in core service delivery. Linear regression will be conducted to test for system structure effects on the implementation of core services. The linear regression analysis is still in process to be completed in January 2014. Statistically significant increases were observed in CD ($p=0.03$) including Tuberculosis ($p=0.03$) and Influenza ($p=0.005$); PPHP including Chronic Disease ($p=0.04$) and Nutrition ($p=0.01$); and EH including Summer Camps ($p=0.01$).

Findings: In addition to services and programs, specific activities were seen to have significant increases, namely CD System-Based Services ($p=0.01$); EH Outreach and Education ($p=0.0005$); and PPHP Policy Development and Implementation ($p=0.001$) and Cultural/Linguistic Specific Programs ($p=0.02$). The significant activity increases were especially of note as they were all population and systems based services rather than direct services. This trend has been noted throughout the country with little evidence supporting it.

Implications: It is expected that this work will be informative to other states as the public health system looks to a minimum package of public health services and to understanding how to measure the implementation of these services.

SESSION 2B: System Structure & Performance-Capacity-Wednesday, April 9, 2014, from 9:00 to 10:15 am

Emmanuel Jadhav, Dr.P.H., M.Sc., B.S.

Embracing Change: Kentucky Local Health Department Leaders as Change Agents

Co-Investigators: James Holsinger, M.D., Ph.D., Glen Mays, Ph.D., M.P.H., David Fardo, Ph.D.

Background: During the recent economic recession leaders of Kentucky's local health departments (LHDs) used innovative approaches to maintain or grow their budgets. Leader demography research in for-profit organizations has yielded valuable insights into leader behavior and agency performance. This study characterizes the associations between LHD leaders experiential and demographic characteristics and openness to change.

Research Objective: 1. Classify socio-demographic characteristics of LHD leaders by variation in their openness to change (ACQ) score, 2. Characterize the association between LHD characteristics and leader demographic and experiential attributes on leader's openness to change.

Data Sets & Sources: LHD leaders in the Commonwealth of Kentucky are the unit of analysis. Actual expenditures and revenues were available from the state health department. County level population estimates are from the national census data. Study-design: a cross-sectional survey of KY LHD leaders' observable attributes relating to age, gender, race, educational background, leadership experience and openness to change was performed. Spearman rank correlations test was used to determine correlations between leaders' ACQ score and leader and LHD characteristics. To identify differences in mean ACQ score the Wilcoxon-Mann-Whitney non-parametric test and the Kruskal Wallis test were used.

Analysis: The leaders had a generally high ACQ score with a mean of 20.46 (SD 2.70). Leader responses on the ACQ inventory did not vary widely. Other than the preceding year revenue, no other LHD characteristic appears to affect leader's mean ACQ score significantly whereas leader demographic and experiential characteristics significantly affected the mean ACQ score.

Principal Findings: Approximately 45% LHD leaders had a high ACQ score. The spearman correlation test for the LHD characteristic, preceding year revenue was statistically significant with a negative relationship. The Wilcoxon-Mann-Whitney test for gender and race, and the Kruskal-Wallis test for highest degree obtained were statistically significant.

Conclusion: There are strong underlying relationships between leader experiential and demographic attributes with their openness to change. LHD leaders would benefit from including change management in the essential public health leader competency framework.

Implications for Public Health Practice & Policy: Change oriented behaviors are known to have strong implications on agency effectiveness. Formal public health leadership development programs will benefit from developing skills to modify their leadership behaviors.

Valerie Yeager, Dr.P.H.

Factors Associated with Intent to Apply for Public Health Accreditation

Co-Investigators: Alva Ferdinand, Dr.P.H., Leslie Beitsch, M.D., Nir Menachemi, Ph.D.

Background: Factors that may influence the intent of Local Health Departments (LHDs) to apply for voluntary national accreditation by the Public Health Accreditation Board have not previously been studied empirically.

Research Objective: This cross-sectional study examines the relationship between local public health department organizational variables and the intention to apply for voluntary public health accreditation.

Data Sets and Sources: This study utilizes data available from the NACCHO 2010 profile survey.

Analysis: Two variables denoting intention to participate in accreditation (1. at some future point or 2. within the first 2 years of accreditation) were used as the dependent variables in two separate logistic regression models. Independent variables included: whether an LHD reported the use of any formal quality improvement, having conducted a community health assessment within the last 3 years, the presence of a local board of health with governing authority, whether the LHD provides comprehensive primary care services, the number of full time equivalent (FTE) employees, and governance.

Principle Findings: Findings indicate that there is a positive association between self-reported formal quality improvement (QI) activities occurring in LHDs and intent to apply for accreditation. Negative correlations were found between the intention to apply for accreditation and having recently conducted a community health assessment and the presence of governing boards of health.

Conclusions and Implications for Public Health Practice and Policy: Investments in developing and expanding QI capacity may increase the intent of LHDs to apply for accreditation. It may also be valuable to develop targeted outreach to local boards of health to facilitate a better understanding of accreditation and its benefits. Further research is needed to continue to examine the role of QI and the role other factors may play as the national accreditation program matures.

SESSION 2C: Workforce-Data Collection & Analysis
Room: Thoroughbred 3

Moderator: L. Michele Issel, Ph.D, M.S.N., B.N.

Presenters:
Kyle Bogaert, M.P.H.

A Longitudinal Analysis of State Health Agency Workforce Characteristics

Co-Investigators: Rivka Liss-Levinson, Ph.D., Katie Sellers, Dr.P.H., CPH, Paul Jarris, M.D., M.B.A.

Background: State health agencies (SHAs) serve an essential function in promoting and protecting the health of Americans. To most effectively perform this function, SHAs must have a sufficient workforce comprised of individuals with diverse backgrounds and expertise. Additionally, SHAs must recruit and retain qualified public health workers.

Research Objective: The current study's goal is to examine longitudinal trends in the SHA workforce using the results of the 2012 and 2010 ASTHO Profile Surveys. Data Sets and Sources: The Association of State and Territorial Health Officials (ASTHO) conducts an online survey of SHAs every two to three years to document their structure, functions, and resources. In the 2010 and 2012 surveys, respondents were asked about the number of employees in the SHA, salary and fringe benefits by occupational classification, demographic information about their workforce, and recruitment and retirement eligibility.

Study Design: The 2012 ASTHO Profile survey was administered to the 50 states, D.C., and U.S. territories and freely-associated states from October 2012-January 2013; the study is cross-sectional.

Analysis: Forty-eight states and D.C. responded to the 2012 survey. Data cleaning was completed and unusual values were clarified. Descriptive statistics were calculated using SPSS.

Principal Findings: While some characteristics of the SHA workforce have remained relatively consistent from 2010 to 2012, others have changed. Trends show increasing numbers of employees leaving SHAs and employees eligible for retirement, as well as increased recruitment. Enumeration of the public health workforce continues to be challenging.

Conclusions: Examining longitudinal trends in the SHA workforce provides insight into how SHAs continue to try and improve the quality of their workforce in the face of reduced resources. Results will be discussed in the context of challenges in enumerating and collecting certain data about the workforce.

Implications for Public Health Practice and Policy: A longitudinal analysis of the SHA workforce contributes to the PHSSR research agenda by utilizing current data to articulate changes in the supply and diversity of the workforce, and issues of recruitment and retention. The analysis identifies potential implications of the loss of institutional knowledge at SHAs with increasing proportions of the workforce eligible for retirement.

Rivka Liss-Levinson, Ph.D.

Results from Cognitive Interviews Exploring the Reliability of the ASTHO Profile Survey

Co-Investigators: Richard Ingram, Dr.P.H., M.Ed., Katie Sellers, Dr.P.H., CPH, Kyle Bogaert, M.P.H., Paul Jarris, M.D., M.B.A.

Background: State health agencies play a critical role in improving the health and well-being of Americans. Valid and reliable surveys that collect information on state health agency structure, finance, activities and workforce are integral to these efforts.

Research Objective: The goal of the current study was to explore the reliability of the questions on ASTHO's Profile Survey by conducting cognitive interviews with a variety of personnel from twenty state health agencies.

Data Sets and Sources: The data source for this study is the written transcripts of the interviews with the state health agency personnel from the twenty state health agencies.

Study Design: All state health agencies were invited to participate in cognitive interviews assessing the reliability of the ASTHO Profile Survey. Phone interviews with twenty state health agency representatives were conducted by researchers from ASTHO and the University of Kentucky using interview guides.

Analysis: All interviews were digitally recorded and transcribed, with the transcripts uploaded into qualitative software and a detailed summary created for each interview. Each interview summary was reviewed by two team members - a primary and a secondary reviewer. Each transcript was coded and the software program was used to generate themes and key findings from the set of interview transcripts.

Principal Findings: Several themes emerged from the interviews confirming that there are specific sections or questions on the ASTHO Profile Survey that can be further refined to increase the reliability of individual states' responses to the questions and the overall results for the survey.

Conclusion: By identifying questions in the survey that may be unclear to respondents or difficult for them to answer, ASTHO can continue to improve its ability to be the "go-to" resource on state public health.

Implications for Public Health Practice and Policy: This study contributes to the field of PHSSR by examining the reliability of a commonly-used instrument in the field of PHSSR. ASTHO's Profile Survey plays an integral role in describing the state public health agencies. Improvements to the reliability of the ASTHO Profile Survey will increase the credibility and value of the data to researchers and practitioners alike.

SESSION 2C: Workforce-Data Collection & Analysis-Wednesday, April 9, 2014, from 9:00 to 10:15 am

Adam Atherly, Ph.D.

Reliability and Validity of Self-Report Questionnaires Completed by Public Health Agency Staff

Co-Investigators: Sarah Lampe, M.P.H., Lisa VanRaemdonck, M.P.H., Julie Marshall, Ph.D., Melanie Mason, M.S.

Background: Much of what we know about governmental public health services is derived from self-report questionnaires completed by public health agency staff, such as the NACCHO Profile of Local Health Departments. Yet, little is known about the statistical reliability and validity of such data.

Research Objectives: The Colorado Public Health Practice-Based Research Network examined the reliability of data from a survey of Colorado local public health agencies conducted as part of a broader research project.

Data Sets and Sources: Two to four weeks after respondents completed the initial survey, they were asked to retake the survey. A total of 19 agencies participated in the reliability survey and were compensated for their time.

Study Design and Analysis: Test-retest reliability was examined using a Kappa statistic, with weighted Kappas for questions with more than two possible response categories. Kappas were calculated for a total of 167 different measures. Validity was tested using convergent and divergent validity.

Principal Findings: Results show variation in the reliability of individual service measures. Reliability for Communicable Disease activities was high except for questions about immunizations performed by others. For Population Health Promotion, reliability was high on questions about funding, tobacco programs and oral health, in the middle for pregnancy prevention and but lower for nutrition and physical activity. Some categories of measures showed higher reliability. For example, within Emergency Preparedness and Response, Kappas were high, with a median score of 0.61 and a range of 0.4 to .092. For Administration and Governance, all Kappas were above 0.71. For Assessment and Planning, only one Kappa out of eleven exceeded 0.45, with a median score of 0.40. Validity analysis will be completed in time for presentation.

Conclusions: Overall, reliability was highest for Administration and Governance and lowest for Assessment and Planning. Within other measures, capacity questions tended to have lower reliability while questions about the direct provision of services were higher.

Implications: As PHSSR continues to grow, and many researchers use survey methodology to collect data, it is important for us to embrace validity and reliability testing and to share its importance with practice partners.

SESSION 2D: System Structure & Performance-Hospitals & Community Health
Room: Thoroughbred 4

Moderator: Angela Carman, Dr.P.H., M.B.A.

Presenters:
Kate Beatty, Ph.D., M.P.H.

Missed Opportunities – Describing Collaboration Between LHDs and Hospitals Around a Community Health Assessment

Co-Investigators: Kristin Wilson, Ph.D., Amanda Ciecior, B.S.

Background: Hospitals and local health departments (LHDs) are under policy requirements from the Affordable Care Act and accreditation standards through PHAB. These have led to a renewed interest in hospitals and LHDs working together to achieve common goals.

Research Objective: To gain an understanding of the collaboration occurring between LHDs and hospitals around a community health assessment (CHA).

Data Sets and Sources: In 2012, the Missouri Department of Health and Senior Services conducted a survey of LHDs. From the LHDs, a subset were (was?) selected based on self-reported collaboration (n=26) or unsureness about collaboration (n=29) with a local hospitals around their CHA. LHDs were surveyed regarding their relationship with local hospitals.

Study Design: Our study design was observational, performing analysis on primary and secondary data from multiple sources.

Analysis: For LHDs currently collaborating with a hospital, a collaboration continuum scale was calculated. Appropriate non-parametric tests, chi-squares, and Spearman's rank correlations were conducted to determine differences between groups.

Principal Findings: A total of 44 LHDs responded to the survey (80.0%). LHDs currently collaborating positively correlated with aspects of the CHA and CHA process including having a CHA, how often the CHA is used during the year, and satisfaction with the hospital relationship. How often the health department uses the CHA was positively correlated with having current state-level accreditation and interest in PHAB accreditation.

Conclusions: Quantifying the collaboration between LHDs and local hospital(s) provides an opportunity to begin evaluating the extent of collaboration necessary for each LHD to achieve further accreditation. For LHDs seeking accreditation, there is also a positive correlation with using the CHA, not just obtaining one. Of the LHDs unsure about collaboration, many report being unsure about their local hospital's desire for collaboration or lacked any communication with the hospital on this subject, perhaps missing their opportunity for collaboration.

Implications for Public Health Practice and Policy: Understanding of the levels of joint action required may assist LHDs in making informed decisions regarding deployment of resources for accreditation. Additionally, best practices in collaboration could start the collaboration process for those LHDs not currently utilizing their local hospital(s).

SESSION 2D: System Structure & Performance-Hospitals & Community Health-Wednesday, April 9, 2014, from 9:00 to 10:15 am

Simone Singh, Ph.D., M.A., B.B.A.

Hospital Community Benefit: Are Hospitals' Charitable Activities Aligned With Community Health Needs?

Co-Investigators: None Listed

Background: A key provision of the Affordable Care Act (ACA) requires tax-exempt hospitals, which comprises most not-for-profit hospitals in the US, to conduct community health needs assessments (CHNA) once every three years. However, little is known about whether these hospitals take into account community health needs when making decisions about how much and what types of community benefits to provide.

Research Objective: While previous research has found no relationship between community need and hospitals' provision of community benefit, this study extends prior work by using a more comprehensive set of variables to characterize the health needs of a community.

Data: This study used data from hospital tax filings to the Internal Revenue Service, the American Hospital Association's Annual Survey, the Area Resource File, and the County Health Rankings. The study population comprised 1,525 hospitals that reported their community benefits at the individual hospital level in 2009.

Study Design: Univariate and multivariate analyses were conducted to examine the relationship between the health needs of communities and the provision of community benefits by tax-exempt hospitals controlling for select hospital and community characteristics.

Principal Findings: Consistent with prior empirical evidence, we found almost no relationships between the health needs of a community and the amount and types of community benefit provided by not-for-profit hospitals in these communities. Neither the level nor pattern of hospital community benefits was associated with community need.

Conclusions: Given the lack of a relationship between community need and community benefit, our findings indicate important opportunities for tax-exempt hospitals to improve the alignment between their community benefit activities and the health needs of the communities they serve.

Implications for Public Health Practice & Policy: The ACA requirement that tax-exempt hospitals conduct periodic CNHAs may be a first step in improving the alignment between community need and hospital-based community benefits. A detailed assessment of the health needs of their communities can enable hospitals to refocus their charitable activities to address the most pressing health needs. The IRS should closely monitor the implementation of th CNHA requirement and evaluate its impact on aligning hospital community benefits with community need.

Christopher Maylahn, M.P.H., B.A.

Organizational and Structural Characteristics of Local Health Department-Hospital Collaborations for Population Health

Co-Investigators: Sylvia Pirani, M.S.P.H., B.A., Priti Irani, M.S.P.H.

Background: In 2008, New York State DOH required that local health departments (LHDs) and nonprofit hospitals collaborate in conducting community health assessments and adopting an implementation strategy described in a community health improvement plan. These actions mirror the ACA requirements and PHAB standards now in place nationally. Hence, New York can serve as a natural experiment to examine these collaborations, how they vary across communities and their potential for sustainability.

Research Objective: Describe the variation in organizational and structural factors shown to be important in such collaborations. The project addresses questions 10 and 11 of the National PHSSR Research Agenda under Public Health System Structure and Performance.

Data Sets & Sources: Three sources were used: 1) A survey administered in 2011 to all LHDs and nonprofit hospitals to assess their progress in implementing strategies for health improvement after three years; 2) in 2013, both groups submitted reports updating their individual and collaborative efforts; and 3) in 2010 and 2013, the NACCHO Profile Series reported data from all LHDs about community collaborations, and relevant organizational and structural characteristics.

Study Design: Descriptive study to document relevant structural and organizational attributes of collaborations over time.

Analysis: Using 'county' as the unit of analysis, data about the structure and organization of the community collaborations were summarized in 2010, 2011 and 2013. Information was also obtained about the quality of their community health assessments and improvement plans; and how the plans are being implemented. County-specific changes over time will be documented. New York's LHDs will be compared with all other states represented in the NACCHO Profile.

Principal Findings: After three years, collaborations were occurring in most counties with interventions underway in many of them. Updated information for 2013 including their plans for the next four years will be available in February.

Conclusions: Preliminary analyses indicate considerable variation in organizational and structural characteristics of collaborations.

Implications for Public Health Practice & Policy: Results may shed light on how LHD-hospital collaborations will fare when implemented across the U.S. Insights gained from this knowledge can lead to recommended policies and practices that support sustainability of these required collaborations.

SESSION 3-WEDNESDAY, APRIL 9, 2014, 10:45 AM-12:00 PM

SESSION 3A: System Structure & Performance-Managing the CHA/CHIP Process
Room: Thoroughbred 1

Moderator: Susan Zahner, Ph.D., RN

Presenters:
Kimberley Shoaf, Dr.P.H.

Collaboration Between Public Health and Schools: A Case of Missed Opportunities

Co-Investigators: Michael Prelip, Ph.D., M.P.H., CHES, CPH

Background: School systems are an important component of the public health system as they represent more than 20% of the US population. Collaboration between public health and schools is vital to protecting and promoting the health of children and the community.

Research Objective: The Objective of this presentation is to explore the collaborative efforts between public health and schools to protect and promote the health of children and communities.

Data Sets and Sources: The data for this study come from a national survey of local health departments (LHDs) conducted by the UCLA Preparedness and Emergency Response Research Center to assess collaborative efforts between public health and schools for emergency preparedness and response.

Study Design: This study utilized a national sample of LHDs, stratified on size of jurisdiction served. A probability-proportional-to-size design was used to select 750 LHDs for the study. An online questionnaire measured collaboration between LHDs and schools for general health issues as well as emergency preparedness and response. Letters were mailed to the LHD director with instructions asking the individual responsible for emergency preparedness to complete the online survey.

Analysis: Analysis was performed using IBM SPSS v. 22 (IBM, 2013). Observations were weighted inversely to their probability of selection to adjust for sample design. Descriptive statistics were generated to identify the frequency LHDs reported a variety of collaborative efforts with schools to protect and promote health.

Principal Findings: A total of 159 LHDs completed the survey. Collaboration between public health and schools ranged from a high of 93% engaging around immunizations to a low 31% for family planning efforts. With the exception of immunizations, oral health and infectious disease surveillance, the majority of the collaboration was defined as only education or providing health education materials.

Conclusions: This represents missed opportunities for protecting and promoting the health of children. While education is laudable, it is not sufficient to improve the health status of this vulnerable population.

Implications for Public Health Practice and Policy: There needs to be an increased focus on interventions that extend beyond traditional health education to improve the health of children, families, and communities.

SESSION 3A: System Structure & Performance-Managing the CHA/CHIP Process-Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Gianfranco Pezzino, M.D., M.P.H.

Factors Affecting the Progress of Community Health Assessment and Improvement Activities in Kansas - Results from Focus Groups

Co-Investigators: Ruth Wetta, Ph.D., M.P.H, RN, (presenting), Frank Dong, Ph.D., Barbara LaClair, M.S.

Background: Community Health Assessment (CHA) and Improvement Planning (CHIP) are important functions for local health departments (LHDs), but may be challenging in rural settings.

Research Objective: The purpose of this two-year, mixed methods study was to identify factors that impede or promote the timeliness and quality of CHA-CHIP completion in Kansas.

Datasets and Sources: Data were collected through focus groups and a brief survey. The project's sampling frame was represented by Kansas counties that planned to conduct a CHA-CHIP during 2012 and/or 2013.

Study Design: Fifteen focus groups were conducted at baseline (2012), followed by 21 after one year (2013). Change in perceptions about CHA-CHIP inputs, process, outputs, outcomes and self-efficacy to perform CHA-CHIP activities were explored. There were 128 study participants (57 in 2012, 71 in 2013), who were predominantly female, older and lived in rural areas. In addition to traditional focus group procedures, a 12-item attitudinal survey that explored participants' confidence to perform CHA-CHIP activities was collected.

Analysis: Analysis of survey data was conducted using univariate and multivariate techniques. Information from focus groups was analyzed through standard qualitative method techniques.

Principal Findings: Substantial progress in CHA-CHIP activities was reported between 2012 and 2013. Most participants perceived the CHA-CHIP process as valuable and enhancing the local health department's visibility in the community. Rural participants more often reported completing the CHA while urban LHDs had progressed into the CHIP and implementation stages. Factors influencing the CHA-CHIP process included (1) parallel assessment activities conducted by other community organizations, and (2) for rural counties, a functioning, 501(c)3 community health coalition. Self-confidence items showed improvement between 2012 and 2013. A multivariate regression analysis revealed a significant time effect and rural-urban difference in perceived self-efficacy.

Conclusions: Uneven gains in the implementation of CHA-CHIP procedures and confidence to perform CHA-CHIP activities were observed.

Implications for Public Health Practice and Policy: Results can help define mechanisms to individualize CHA-CHIP training content to settings were the needs are greater, such as rural counties. Solutions appropriate for those settings can help reduce gaps in capacity and ability to complete timely, high-quality CHA-CHIP processes.

SESSION 3A: System Structure & Performance-Managing the CHA/CHIP Process-Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Gianfranco Pezzino, M.D., M.P.H.

Differences in Timeliness, Quality, and Impact of CHA-CHIP Processes Among Local Health Departments in Kansas

Co-Investigators: Barbara LaClair, M.S., **Ruth Wetta, Ph.D., M.P.H, RN, (presenting)**, Frank Dong, Ph.D.

Background: Community Health Assessment (CHA) and Improvement Planning (CHIP) are important aspects of public health core functions, but local health department (LHD) experience with and capacity for conducting CHA-CHIP activities is highly variable.

Research Objective: To identify progress of LHD in completing timely and high-quality CHA-CHIP processes in Kansas.

Data Sets and Sources: Quantitative data describing LHD characteristics, available resources to support CHA/CHIP efforts, and experiences with and results of CHA-CHIP activities were collected through two online surveys conducted in September 2012 and July 2013. Study Design: Prospective pre-post cohort study.

Analysis: Survey responses were summarized using descriptive statistics. Composite scoring methods were developed to measure community collaboration, self-reported quality of the completed CHA, and perceived impact of CHA-CHIP activities. Chi-square and t-test statistics were used to test for differences between subgroups of respondents.

Principal Findings: Substantial, but uneven progress with CHA-CHIP activities was observed during the study period. Many LHDs, particularly smaller agencies serving rural locations, reported facing challenges including lack of internal capacity, competing demands on staff time, and limited availability of local data, but continued to work through the CHA/CHIP process. Rural LHD were more likely to rely on external consultants to complete their CHA-CHIP. Although many LHDs had not yet completed their CHIP activities at the conclusion of this study, nearly all identified some positive impact related to early CHA-CHIP efforts. Increased community awareness of health issues, and strengthened community partnerships were most frequently identified as benefits of CHA-CHIP work.

Conclusions: During the study period, substantial progress with CHA-CHIP activities in Kansas was observed, but progress and challenges were uneven. Nearly all respondents (even those who had not completed their CHA-CHIP) identified some positive impact from early efforts.

Implications for Public Health Practice and Policy: CHA-CHIP processes require significant investments for successful completion. To be viewed as valuable, it is important that practitioners perceive the process as resulting in positive benefits. Early results in Kansas suggest that while difficulties and challenges were encountered, most LHDs are viewing the CHA-CHIP process as beneficial. Disparity in challenges and resources between urban and rural jurisdictions needs to be addressed.

SESSION 3B: Information & Technology-Measurement & Evaluation
Room: Thoroughbred 2

Moderator: Anna G. Hoover, Ph.D., M.A.

Presenters:
Britney Johnson, M.P.H.

What Gets Measured is What Gets Managed: Evaluating HIV/STD Partner Services Performance

Co-Investigator: April Richardson-Moore, M.P.H.

Background: Previous research by the New York State (NYS) Public Health Practice-Based Research Network into NYS's integrated HIV/STD Partner Services (PS) program indicated a need for quality evaluation assessment of PS intervention activities. In response, NYS designed and implemented a program management application (PMA) to better measure the processes and outcomes of HIV/STD PS work from a quality improvement perspective.

Research Objective: To utilize data collected through PMA to accurately assess staff workload, monitor program performance in relation to SMART objectives, and identify areas for improvement.

Data Sets and Sources: Eligible HIV, syphilis, gonorrhea, and chlamydia index cases worked by PS disease investigators (N=36) in five regional offices across NYS were selected for analysis. Data were collected and entered in the PMA by regional staff between January and December 2013.

Study Design: Preliminary analyses assessed the association between the rate of successful index patient interviews and the timeframe from case assignment to index patient interview. Program metrics were assessed against performance objectives established in the NYS Tasks and Standards for HIV/STD Partner Services.

Analysis: Eligible cases (N=5,676) were stratified by disease (HIV, early syphilis, gonorrhea, or chlamydia), interview status, and interview time frame. Chi-square analyses were conducted in SAS 9.2 to identify statistically significant differences at the bivariate level.

Principal Findings: HIV index cases were significantly less likely (P<.001) than syphilis or gonorrhea cases to be interviewed, and significantly more likely (P<.001) than all other cases to take longer than 7 days to interview. Among HIV assignments, 57% of cases were interviewed (45% of those within 7 days), compared to early syphilis, in which 83% of cases were interviewed (89% within 7 days).

Conclusions: HIV index cases assigned for PS had significantly worse outcomes than those for other STDs. Interventions to improve the quality of PS program delivery should focus on improving HIV case interview rates.

Implications: Despite operating under an integrated program, HIV/STD PS investigations still have disparate case outcomes. Identification of barriers to effective HIV PS are critical to improving program performance and reducing disease transmission.

SESSION 3B: Information & Technology-Measurement & Evaluation-Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Jenine Harris, Ph.D.

Local Health Department Engagement with Other Local Health Departments on Twitter

Co-Investigators: None Listed

Background: Local health departments (LHDs) using Twitter have few followers relative to jurisdiction size, reaching the equivalent of only approximately three in every 1,000 constituents living in the jurisdiction as of 2012. However, LHDs tend to be followed by other LHDs on Twitter at a relatively high rate, forming a large national network with the potential to facilitate information exchange among LHDs. Because follower relationships on Twitter are passive, it is unclear whether LHDs are engaging with information sent by other LHDs on Twitter.

Research Objective: To understand whether the network of LHDs on Twitter is facilitating active information sharing among LHDs.

Data Sets and Sources: All tweets sent by 284 LHDs across the United States were collected using the NVivo NCapture tool. Tweet data were integrated with NACCHO Profile Study data for LHD jurisdiction size, expenditures, and staffing.

Study Design: Mixed-methods were used to examine two things: (1) the structure and composition of the retweeting network among LHDs on Twitter, and (2) the content of LHD tweets retweeted by other LHDs.

Analysis: Descriptive, visual, and statistical network methods were used to examine the retweeting network. Thematic analysis was used to examine tweet content.

Principal Findings: Of 162,670 tweets and retweets sent by 284 LHDs as of August 2014, 1,124 were originally sent from one LHD and retweeted by another LHD. The network of retweets included 140 LHDs, 107 of which had retweeted from another LHD. This indicates that more than one-third of LHDs on Twitter are actively engaged with information other LHDs are sending.

Conclusions: Many LHDs are engaged with information sent by other LHDs on Twitter.

Implications for Public Health Practice and Policy: Given high rates of interconnectedness among LHDs on Twitter, and moderately high rates of engagement of LHDs with information tweeted by other LHDs, the current use of Twitter by LHDs to disseminate health behavior information to individuals may be inefficient. Instead, existing connections between LHDs could facilitate information-sharing about effective programming across a national network, providing LHDs with practice-based evidence from peer organizations to improve local public health.

Nancy Winterbauer, Ph.D., M.S.

Challenges to Local Health Department – Media Engagement for Health Promotion: The North Carolina County Health Rankings as a Case Example

Co-Investigators: Katherine Jones, Ph.D., Ann Rafferty, Ph.D., Mary Tucker-McLaughlin, Ph.D., Colleen Bridger, Ph.D.

Background: Media attention is a central component of the County Health Rankings (Rankings) logic model. However, the role traditional media play in health promotion is not well known. Constraints to media – local health department (LHD) engagement, using the North Carolina 2012/2013 Rankings as an example are explored.

Objectives: We sought to describe: 1. Statewide variation in media presence; 2. LHD capacity to engage media; 3. LHD interaction with media; 4. Media representations of the Rankings.

Data Sources: Media coverage was obtained from the NC Press Association and FCC. LHD data were obtained from an online survey of leadership (n=55). News stories were derived from the Standard Rate and Data Service media database.

Design: We used an integrated mixed-method approach and a cross-sectional study design.

Analysis: Media coverage was analyzed at the county level based on the presence of newspapers and television signal coverage areas, measured via static FCC maps and a GIS analysis of overlapping signal coverage areas. Descriptive statistics depicted LHD staff capacity and interaction with media. Multiple coders examined news stories through quantitative and qualitative content analysis.

Findings: 42% of counties have at least 1 daily and 76% have at least 1 weekly newspaper. 24% have no newspaper at all. Counties range from 2 to more than 10 television stations. 38% of LHDs attempted to engage media, 40% issued a press release and 36% gave interviews. 11% reported that media staff devoted half or more of their time to media relations. 25% of counties received no media coverage; 61% of news stories did not contain an interview with LHD staff. In the majority of stories (n=76%), personal responsibility for poor health was emphasized.

Conclusions: Variation in media density and under-resourced LHD staff capacity likely impacts the potential for LHD engagement with traditional media for successful health promotion efforts.

Implications: Traditional media can be a powerful ally in health promotion. LHDs should consider communication specialists as central to health promotion strategies. However, health communication is under-resourced at the local level and ought be considered in workforce development. LHDs in media-poor environments may need to emphasize non-traditional communication strategies.

SESSION 3B: Information & Technology-Measurement & Evaluation-Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Ramakanth Kavuluru, Ph.D.

Diffusion of Health Related Information in the Twitterverse

Co-Investigator: Gokhan Bakal

Background: The asymmetric network structure and the 140 character limit per tweet have made Twitter popular for spreading health related information online. Users can choose to 'retweet' and spread particular tweets from other users regardless of whether they follow them on Twitter. As such, a tweet can spread through the Twitter network using the follower-friend edges.

Research Objective: To quantitatively measure how health related tweets that contain URLs spread in the directed follower-friend Twitter graph using the retweet mechanism.

Datasets: Using a selected list of nearly 50 health related keywords and hashtags, we curated a large set of over 50 million tweets. However, not all tweets are relevant owing to polysemy, homonymy, and sarcasm. So we manually chose nearly 200 tweets that contain a URL (since URLs indicate the source) each with at least 25 retweets.

Study Design: For each tweet, we built the corresponding retweet graph with the original user and all users who retweeted it. The edges correspond to the follower-friend connections between these users where the retweet time of a follower is chronologically later than that of a friend in the graph.

Analysis: For each of these graphs, we computed node distributions and a diffusion metric at each level of the tree formed by using breadth first search. We also computed the proportion of nodes in the main connected component that involves the original tweet author.

Principal Findings: On average 30% of the retweets are NOT in the main connected component that involves the original tweet author which indicates that people sometimes seek health information on Twitter by searching for topics and then retweet essential information even if they are not following the person who tweeted it originally. Also, 98% of the retweets in the main connected component do not spread beyond the 2nd level and only 0.85% of followers retweet at the first level.

Conclusions and Implications for Public Health Practice and Policy: Users actively seek health related information on Twitter. A more automated way of identifying health related tweets can help generate strategies for health agencies in maximizing diffusion of health related information online.

SESSION 3C: Workforce-Emergency Preparedness
Room: Thoroughbred 3

Moderator: Shari Veil, Ph.D., M.B.A.

Presenters:
Lainie Rutkow, Ph.D., J.D., M.P.H., B.A.

Emergency Preparedness, State Laws, and Willingness to Respond Among the EMS Workforce

Co-Investigators: Jon Vernick, J.D., M.P.H., B.A., Carol Thompson, M.S., M.B.A., B.S., **Daniel Barnett, M.D., M.P.H., B.A., (presenting)**

Background: A growing body of research points to gaps in willingness to respond (WTR) among cohorts with response duties, including the EMS workforce. WTR becomes critical during an influenza pandemic, due to increased demands on emergency health workers and the potential for workforces to be depleted if responders contract influenza or stay home to care for sick dependents. State-level emergency preparedness laws offer one potential avenue to increase WTR.

Research Objective: We examined the association between three state-level emergency preparedness laws (ability to declare a public health emergency; requirement to create a public health emergency plan; and priority access to health resources for responders) and self-reported WTR among EMS workers during an influenza pandemic.

Data Sets or Sources: We studied 421 EMS workers from the National Registry of EMTs' May-June 2009 mid-year Longitudinal EMT Attributes and Demographics Study, which included questions about WTR to an influenza pandemic.

Study Design: Data from the mid-year survey were merged with data about the presence or absence of the three emergency preparedness laws in the 50 U.S. states.

Analysis: Unadjusted logistic regression analyses were performed with the presence/absence of each law and then were adjusted for respondents' demographic/locale characteristics.

Principal Findings: Compared to respondents in the states that did not allow the government to declare a public health emergency, those in states that permitted declarations had a larger percentage agreeing that they were WTR during an influenza pandemic. In adjusted and unadjusted analyses, however, this difference was not statistically significant. We found similar results for the other laws of interest.

Conclusions: While these laws show no relationship to WTR, recent research suggests that inconsistencies between the perceived and objective legal environments for EMS workers could be another explanation for our findings.

Implications for Public Health Practice and Policy: Educational efforts within the EMS workforce and more prominent state-level implementation of emergency preparedness laws should be considered. Such approaches are important steps toward determining whether state-level emergency preparedness laws are effective tools to promote WTR among EMS workers.

SESSION 3C: Workforce-Emergency Preparedness-Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Jim Bellamy, Ph.D., M.P.H.

The Uptake of Emergency Preparedness Training at the Local Level: The TRAIN Experience

Co-Investigators: Glen Mays, Ph.D., M.P.H., John Wayne, Ph.D.

Background: In recent years public health emergency preparedness (PHEP) has become a key competency for the public health workforce (PHWF). Consequently, emergency preparedness training has become essential. In response to the need for PHEP training, the Public Health Foundation (PHF) established a web-based learning management tool – TRAIN (TrainingFinder Real-time Affiliated Integrated Network).

Research Objective: This study investigated the effects of PHEP training for local health department (LHD) employees on the preparedness and response capacities of their LHDs.

Data Sources: This project used three data sources: (1) the 2005 and 2008 National Profile of Local Health Departments (NACCHO) and (2) training data from the TRAIN database. NACCHO's local profile surveys core questionnaire contains questions related to what can be termed discretionary emergency preparedness (EP) activities. The TRAIN data set provided individual-level data including course name/ID, zip code, and demographics (age, gender, ethnicity, and education-level)

Analysis: The first analysis is descriptive and cross-sectional measures of participation in discretionary EP activities by local public health agencies in 2005 and 2008. The second analysis includes the longitudinal effects of training using a random effects model with instrumental variables to account for autocorrelation and endogeneity. The longitudinal analysis examined changes in EP and response capacities by local public agencies from 2005 to 2008.

Principal Findings: Four discretionary EP activities were examined; three EP activities (changed/reviewed EP plan, reviewed relevant legal authorities, and participated in drills or exercises) had an approximate 2 percentage point increase from 2005 to 2008. Assessed EP competencies had a dramatic decrease of approximately 25 percentage points from 2005 to 2008. In 2005, approximately 1.3% of the 2300 LHDs completed at least one EP course while almost 45% of the LHDs in 2008 completed at least one EP course. Results from the multivariate analysis demonstrate that for all of the EP activities, a positive, statistically significant correlation exists with frequency/intensity of training.

Conclusions/Implications: The results suggest that a positive relationship exists between training and participation in EP activities, demonstrating the need for additional EP training. However, it is uncertain whether this training-performance relationship exists in other areas of public health activities.

Monica Schoch-Spana, Ph.D., M.A., B.A.

A National Survey on Health Department Capacity for Community Engagement in Emergency Preparedness

Co-Investigators: Fred Selck, Ph.D., Lisa Goldberg, M.P.H.

Background: Federal doctrine and national consensus statements assert that government alone cannot effectively manage public health emergencies. Rather, individuals, businesses, and community- and faith-based groups help the nation to withstand and recover from disasters and epidemics. Responsibility for integrating residents and non-governmental entities into the larger public health emergency preparedness (PHEP) enterprise rests with health departments. Little systematic knowledge exists about how public health integrates partners in PHEP and what can strengthen these interactions.

Research Objective: We investigated local health departments' (LHDs) adoption of federally-recommended participatory approaches to PHEP and identified LHD organizational characteristics associated with more intense community engagement (CE).

Data Sets & Sources: In 2012, a web-based survey was emailed to emergency preparedness coordinators for 754 randomly selected LHDs. Topics included CE-PHEP activities conducted in prior year, anticipated change in CE-PHEP level in coming year, and LHD resources for CE-PHEP.

Study Design: The randomized sample was drawn from the 2,565 LHDs invited to participate in the 2010 NACCHO National Profile. Sample selection was stratified by the size of population served and by geographic location based on DHHS region.

Analysis: Differences in survey responses were examined, and a multivariate analysis was used to test whether LHD organizational characteristics were associated with differences in CE-PHEP intensity.

Principal Findings: Response rate was 61%. The most common reported CE activity was disseminating personal preparedness materials (90%); least common was convening public forums on PHEP planning (22%). LHD characteristics most strongly associated with more intense CE were having a formal CE policy, allocating funds for CE, having strong support from community-based organizations (CBOs), and employing a coordinator with prior CE experience.

Conclusions: LHDs of all sizes are striving to integrate community partners into the PHEP enterprise, and agencies can further intensify their efforts through adopting a formal CE-PHEP policy, hiring staff with prior experience and training inexperienced staff, and strengthening and leveraging CBO ties.

Implications: Federal authorities should examine whether funding and technical support to LHDs are commensurate with the national value now placed on CE-PHEP and the task of improving the present baseline of CE-PHEP activity.

SESSION 3D: Finance-Resource Management & Cost Containment
Room: Thoroughbred 4

Moderator: Simone Singh, Ph.D.

Presenters:
Phaedra Corso, Ph.D., M.P.A.

Evaluating the Impact of Reallocating Georgia's Funding for Local Public Health Infrastructure

Co-Investigators: None Listed

Background: General Grant-in-Aid (GGIA) is the core funding allocation for public health (PH) infrastructure from Georgia's state health department to the 159 local county health departments (LHDs). The GGIA allocation formula was modified in fiscal year (FY) 2012 based on the 2010 county population and poverty rates. As a result, some LHDs (n=113) experienced an increase in GGIA funding whereas others (n=46) were kept constant at pre-GGIA formula change levels.

Research Objectives: The purpose of this study is to assess the impact of a modified GGIA allocation formula on PH infrastructure spending and consequently, on PH outcomes.

Data Sets and Sources: Five year budget data (FY2008 to FY2012) provided by the Georgia Department of PH. Study Design Quasi experimental (Pre/Post) study design.

Analysis: Separate logistic regressions were conducted for each infrastructure category. Independent variables consisted of the following revenue streams – Local, Federal, Fees, Other and GGIA. Dependent variables were the infrastructure categories – Personnel, Regular Operating and Equipment.

Principal Findings: Prior to FY2012, all 159 LHDs showed a significant relationship between GGIA funding and Personnel expenditures. In FY2012, there was a statistically significant ($p<0.05$) and positive association between GGIA funding and the Personnel and Regular Operating categories for all LHDs that experienced an increase in GGIA funding. There was a similar relationship between GGIA funding and the Equipment category only for LHDs with a greater than $10,000 increase in GGIA funding (n=24). No significant relationships were found for the LHDs that did not experience a change in GGIA funding.

Conclusions: The results indicate a transformation in PH infrastructure spending for FY2012. LHDs with an increase in GGIA due to the new funding formula continue to have a significant relationship with PH infrastructure spending (especially personnel expenditures), while the LHDs that did not experience an increase in GGIA failed to show a significant relationship between GGIA and PH infrastructure spending.

Implications for Public Health Policy and Practice: This study will continue to track the impact of the modified GGIA formula over the next several years and the results will help inform PH leaders and guide the consideration of future formula changes.

L. Michele Issel, Ph.D., M.S.N., RN

Using Cluster Analysis to Characterize LHD Responses to the Economic Downturn

Co-Investigators: Arden Handler, Ph.D., Allyson Holbrook, Ph.D.

Background: The population size of the LHD jurisdiction has been used as a key variable in understanding local differences in LHDs. We sought an alternative approach to grouping LHDs for comparative analyses.

Research Objectives: We sought to develop an empirically driven and meaningful approach to group LHDs based on LHDs' approaches/strategies to responding to the economic downturn.

Data: Primary data collected in spring 2012 using a questionnaire with items which asked about LHD characteristics, the essential public health services (EPHS), Maternal and Child and Adolescent Health (MCAH) processes, and strategies used to respond to the economic downturn.

Study Design: With NACCHO, we conducted an online survey using Qualtrics. A random sample of NACCHO members stratified by size of LHD was selected within strata. Of the 546 LHDs invited to participate, 269 (49%) MCAH program directors returned usable surveys.

Analysis: We conducted cluster analysis to develop a typology of strategies used by LHDs to respond to the economic downturn. We used the Ward's statistic to determine cluster similarity and assessed the extent to which each solution yielded differences on key variables (e.g., population size, number of FTEs). Ultimately, the 3 cluster solution for strategies provided the most meaningful distinctions. Using the clusters, LHD differences on various characteristics were tested by ANOVA.

Principal Findings: The three cluster solution for strategies used by LHDs to respond to the economic downturn are described as "staying the course" (n=51%) with minimal changes, "middle of the road" (n=27%) with a few changes, and "doing a lot of things" (n=22%). Based on ANOVA, LHD clusters differed significantly on jurisdiction size ($p<.001$), budget changes during the year of the questionnaire ($p=.004$), and mean score for 9 of the 10 essential public health services ($p=.03$ to $<.001$).

Conclusion: Use of cluster analysis provided distinct groupings of LHDs which yielded new insights into the ways that LHDs differ, particularly in terms of performance.

Implications: New analytic approaches can yield more nuanced insights which are useful in identifying LHDs exemplars in performance of the essential public health services. Such information has relevance to accreditation and other health policies affecting LHDs.

SESSION 3D: Finance-Resource Management & Cost Containment -Wednesday, April 9, 2014, from 10:45 am to 12:00 pm

Richard Ingram, Dr.P.H., M.Ed.

Roles for Local Health Departments in Accountable Care Organizations

Co-Investigators: Julia Costich, Ph.D., J.D., F. Douglas Scutchfield, M.D.

Background: Accountable care organizations (ACOs) have been established under the auspices of the Centers for Medicare and Medicaid Services (CMS) to serve Medicare and Medicaid beneficiaries. ACOs have the triple aim of improving health care and population health while containing costs. Medicare ACOs follow one of 3 models, while Medicaid ACOs are intentionally more diverse and innovative. The technical capacities and population health orientation required of ACOs have much in common with the work of public health agencies.

Research Objective: This study assesses the nature and extent of local health department (LHD) involvement in ACOs and identifies models for increased LHD-ACO relationships. Data Sets and Sources: CMS data on existing ACOs and detailed key informant interviews support a comprehensive assessment of LHD engagement with ACO initiatives.

Study Design: This study uses a cross-sectional design and a combination of semi- structured interviews and database analyses to determine the extent of LHD engagement with ACOs.

Analysis: Data and key informant interview findings were compiled to identify and classify the type and extent of current and prospective LHD involvement with ACOs.

Principal Findings: LHDs are involved with ACOs in relatively small numbers at present, but their diverse roles suggest options for future development. Distinct categories of LHD-ACO relationships include (1) contracted clinical service provider, (2) contracted non-clinical service provider, (3) governing board membership, and (4) strategic advisor. These roles appear almost exclusively in the context of Medicaid- and safety net-oriented ACOs.

Conclusions: LHD involvement in ACOs is very limited at present, but the handful of ACOs that include LHDs may provide useful models for broader future engagement.

Implications for Public Health Practice and Policy: LHDs are increasingly challenged to balance core public health services with potential new revenue streams. ACOs may provide an opportunity to expand funding options without compromising the core LHD mission, but participation options are currently limited to Medicaid- and safety net-oriented ACOs.

SESSION 4-WEDNESDAY, APRIL 9, 2014, 2:00-3:15 PM

SESSION 4A: Finance-Return on Investment
Room: Thoroughbred 1

Moderator: Adam Atherly, Ph.D.

Presenters:
Kaja Abbas, Ph.D., M.P.H.

Economic Evaluation of Public Health Interventions: Outbreak Responses of Pertussis, Tuberculosis and Fungal Meningitis in New River Valley, Virginia

Co-Investigators: Narges Dorratoltaj, M.S., Jennifer Samuels, Karina Platt, M.P.H., Paige Bordwine, M.P.H., Margarat O'Dell, M.D., Thomas Kerkering, M.D., Kerry Redican, Ph.D., M.P.H., M.S.P.H.

Background: A pertussis outbreak occurred at New River Valley in 2011, with an incidence of 72 confirmed cases. A tuberculosis outbreak occurred in a correctional facility at New River Valley in 2011, with a single case and tuberculosis exposure to other inmates and staff at the facility. New River Valley was the epicenter of the multi-state fungal meningitis outbreak during 2012-2013. New River Health District responded to these outbreaks and they were controlled.

Research Objective: The objective of this study is to compare the relative costs and epidemiological benefits of multiple outbreak responses in New River Valley, Virginia.

Data Sets and Sources: Data collected by the New River Health District, Virginia Department of Health, of the outbreak responses to pertussis, tuberculosis and fungal meningitis between 2011-2013 are used in this study.

Study Design: Cost-effectiveness analysis was carried out on each of the three outbreaks of pertussis, tuberculosis and fungal meningitis in New River Valley, Virginia.

Analysis: We estimated the incremental cost-effectiveness ratios for pertussis, tuberculosis, and fungal meningitis outbreaks to be $7,468/DALY averted, -15,461/DALY averted and $415/DALY averted.

Principal Findings: Tuberculosis pre-screening is a cost-saving intervention in correctional facilities and should be readily adopted.

Conclusions: While the tuberculosis pre-screening program is cost-saving, fungal meningitis outbreak response was comparatively more cost-effective to the pertussis outbreak response.

Implications for Public Health Practice and Policy: Comparative evaluation of multiple public health interventions assists the health department in prioritization and optimal allocation of limited resources.

SESSION 4A: Finance-Return on Investment-Wednesday, April 9, 2014, from 2:00 to 3:15 pm

Margaret Knight, Ph.D., M.P.H., M.S., B.A.

The Effects of the Changes in Section 317 Rules for Administration of Federally Purchased Vaccines

Co-Investigators: Anne Kershenbaum, M.D., M.P.H., Paul Erwin, M.D., Dr.P.H., Martha Buchanan, M.D., Janet Ridley, M.S.N., B.S.

Background: This completed research project focuses on the financing of immunizations in the US. Annual allocations for purchasing vaccines fluctuate from year to year as Congress responds to changes in national needs for immunizations. The Affordable Care Act (ACA), which requires first dollar coverage of immunizations and other preventive care led to changes in funding policy in fiscal year 2012. In Tennessee, the response was a policy change that redefined the population who would receive immunizations at health departments.

Research Objective: The research objective of this project was to determine the effect, if any, of this change in funding policy.

Data Sets & Sources: The data, spanning October 2012 to October 2013 were collected from the Patient, Tracking, Billing, and Management Information System (PTBMIS) used by Knox County Health Department (KCHD) and the East Tennessee Region (ETR) of the Tennessee Department of Health.

Study Design: Monthly immunization counts were used to calculate median monthly immunizations at each site for two age groups: birth to five years and six years to eighteen years from both KCHD and ETR.

Methods/Analysis: The Mann-Whitney test was used to determine the significance of the difference in numbers of vaccines administered year to year, producing p-values for each age group and each vaccine at a level of significance for statistical tests set at $p<0.05$.

Results: We found very little decrease in median monthly vaccines between the two fiscal years. Conclusions: The Tennessee Department of Health policy change in FY 2012 restricting vaccination of insured Tennesseans in response to the elimination of American Recovery and Reinvestment Act (ARRA) funding for the Vaccines for Children program.

Implications: Public health implications include a continued need for agility in responding to fluctuations in funding and continued monitoring of the effects of policy changes on access to preventive care as the PPACA effects unfold.

Paul Brown, Ph.D.

Economic Burden of Chronic Diseases in California

Co-Investigators: Mariaelena Gonzalez, Ph.D., **Ritem Sandhu, M.S., (presenting)**

Background: Information on the economic cost of chronic conditions is important for local public health departments to plan their prevention, treatment, and control efforts. While estimates of the cost of chronic conditions are available from the CDC at the state level, adapting county-level estimates requires controlling for regional differences in health services usage, cost of care, life expectancy, and rates of chronic conditions.

Research Objective: We report the results from a study funded by the California Department of Public Health to develop estimates of the cost of chronic conditions for counties in California.

Data Sets and Sources: The project uses data from a variety of sources: CDC Cost Calculator estimates for the cost of following conditions: arthritis, asthma, cancer, cardiovascular diseases (congestive heart failure, coronary heart disease, hypertension, stroke, and other cerebrovascular diseases), depression, and diabetes. Costs estimates by condition, age, ethnicity, and gender are combined with utility scores (from published literature), population estimates (census data), regional adjusters, and life expectancy. Regional adjusters incorporated health services usage (estimated from state hospital data and the California Health Information Survey data for differences in health services usage across counties) and prices (using Medicare's regional price adjuster).

Study Design/Analysis: We use a prevalence approach that i) identifies the number of people with chronic diseases in each county in California in a given year (2010); ii) estimates the health burden (lost QALYs) for each condition by age, gender, and ethnicity; iii) estimates the economic burden of chronic diseases in each county, and iv) reports both the individual and combined estimates of the cost of chronic conditions by county.

Principal Findings: The initial estimates suggest the overall cost of chronic conditions in California counties is $76.617 billion dollars. We report the estimates per county and identify relatively low and high cost counties.

Conclusions: The estimated cost of chronic conditions varies significantly across counties as a result of both differences in population, rates of conditions, and the regional adjusters.

Implications for Public Health Practice and Policy: These findings provide an indication to counties of both the current and future burden of chronic conditions.

SESSION 4B: System Structure & Performance-Effects of Policy Change
Room: Thoroughbred 2

Moderator: Katie Sellers, Dr.P.H.

Presenters:
Gulzar Shah, Ph.D., M.S., M.Sc., B.S.

LHDs' Implementation and Evaluation of Strategies to Target Psychological, Mental Health and Other Behavioral Healthcare Needs of the Underserved Populations

Co-Investigators: Huabin Luo, Ph.D., Carolyn Leep, M.P.H., M.S., Nancy Winterbauer, Ph.D., M.S.

Background: Underserved subgroups face barriers when accessing behavioral healthcare. Local health departments (LHDs) are charged with "linking people to needed personal health services and assure the provision of healthcare when otherwise unavailable".

Research Objectives: 1) To assess the extent to which LHDs implement and evaluate strategies to target the behavioral healthcare needs for the underserved populations; 2) To identify factors that are associated with these undertakings.

Datasets and Sources: Data were drawn from the 2013 National Profile of Local Health Departments Study conducted by National Association of County and City Health Officials The Module 2 questionnaire of the Profile contained question about strategies used by LHDs to target the behavioral healthcare needs of the underserved populations (N=505).

Study Design: Cross-sectional, quantitative survey.

Analysis: Factors associated with assuring access to behavioral health services were examined by using logistic regression analyses. Descriptive statistics were also computed. To account for complex survey design, we used SVY routine in Stata 11.

Principal Findings: About 30% of LHDs implemented or evaluated strategies to target the behavioral healthcare needs of underserved populations in their jurisdiction. Our multivariate analysis indicates that LHDs with city/multicity jurisdiction (AOR=0.16, 95% CI: 0.04-0.77), centralized governance (AOR=0.12, 95% CI: 0.02-0.85), and those located in the South Region (AOR=.0.25, 95% CI: 0.08-0.14) or the West Region (AOR=.0.36, 95% CI: 0.14-0.94) were less likely to have targeted the behavioral healthcare needs of the underserved. LHDs with higher per capita expenditures (AOR=1.85, 95% CI: 1.00-3.42), or those with greater number of activities to address health disparities (AOR=1.27, 95% CI: 1.08-1.49) had higher odds of having targeted the behavioral healthcare needs of the underserved.

Conclusion: Extent to which the LHDs implemented or evaluated strategies to target the behavioral healthcare needs of the underserved populations varied by centralization of governance, the degree to which LHDs were well-funded, health disparities reduction activities, geographic region, and jurisdiction type.

Implications for Public Health: Policy and practice focus on mental health issues in under-served populations is ever more critical, given the low proportion of LHDs targeting behavioral health needs, and the increased vulnerability of underserved population emanating from recent financial crises.

Erika Martin, Ph.D., M.P.H.

Quantifying the Public Health Impact of State Policies to Address Organ Shortages in the United States

Co-Investigators: Paula Chatterjee, M.P.H., Anitha Vijayan, M.D., Jason Wellen, M.D., M.B.A., Atheendar Venkataramani, M.D., Ph.D.

Background: The shortage in transplantable solid organs remains a critical public health challenge in the United States. States have enacted numerous policies aiming to increase organ supply, but their effectiveness is unknown.

Research Objective: We examined the impact of different state policies on organ donation rates from 1988 to 2010. Data Sets and Sources: Data on the number of live organ donors and the enactment of state policies came from the United Network for Organ Sharing and the Organ Procurement and Transplantation Network databases, state legislative websites, Westlaw, and other web sources.

Study Design: We used difference-in-differences regression analysis to compare pre- and post-legislation changes in living organ donation rates in states that enacted each policy (first-person consent laws, donor registries, dedicated revenue streams for donor recruitment activities, population education, paid leave for donors, and tax incentives) to those that did not.

Analysis: Descriptive analyses documented national trends. Multivariate analyses controlled for income per capita, percent uninsured, population with end-stage renal disease, state and year fixed effects, and state-specific time trends.

Principal Findings: The number of organ donors increased nationally from nearly 9,000 to 14,000 from 1988 to 2010. Establishing revenue policies was associated with an 11% increase in organ donation rates (95% CI: 3.0-19.6%). Policies establishing educational campaigns had a modest but insignificant effect (7.89% increase, 95% CI: -0.59–16.4%). No other state policy had a statistically significant impact on donation rates. Findings were robust to multiple regression model specifications.

Conclusions: Increases in national organ donation rates may be partially attributable to state-based dedicated revenue funds. Other policies had a minimal effect. The mechanism by which such funds lead to increased donation remains unclear, but may be due to greater allowance of specific resources for local, high-impact donation promotion activities.

Implications for Public Health Practice and Policy: Systematically evaluating the effectiveness of state policy solutions is critical to guiding future public health practice. Promoting the use of protected state funds for organ donation is promising, although understanding the pathway by which these policies increase donation requires more granular community-level data.

SESSION 4B: System Structure & Performance-Effects of Policy Change-Wednesday, April 9, 2014, from 2:00 to 3:15 pm

Michael Preston, Ph.D., M.P.H.

Health Care Reform: Colorectal Cancer Screening Expansion, Before and After the Affordable Care Act (ACA)

Co-Investigators: None Listed

Background: Colorectal cancer (CRC) is the third most common cancer found in men and women in the United States. In 2012, the American Cancer Society estimated as many as 143,460 new cases of colorectal cancer and approximately 51,690 deaths. Health care reform was introduced in 2010 and became the cornerstone for Americans seeking change in the health care system. Health care reform is a critical factor in increasing CRC screenings by increasing coverage rates for all Americans.

Research Objective: To estimate the effects of health insurance coverage expansions on overall CRC screening rates.

Data Sets and Sources: Secondary data were analyzed from the Behavioral Risk Factor Surveillance System and National Cancer Institute State Cancer Legislative Database from 1997-2012. The target population was a sample of U.S. adults age 50 to 74 that lived in a mandate or non-mandate states before and after health care reform.

Study Design: Retrospective cohort study using a strong quasi-experimental design to examine mandate variations and the effect on overall CRC screening from 1997-2012.

Analysis: A time-series analysis using a difference-in-differences approach was used to examine the effect of health care reform on non-mandate states.

Principal Findings: The adjusted average marginal effects from the difference-in-differences model indicates that health care reform increased the probability of being "up-to-date" relative to being non-compliant by 3.4 percentage points, suggesting that an estimated 2.87 million additional age-eligible persons would receive a screening after health care reform annually. Our findings are robust to different model specifications.

Conclusions: Health care reform that lowers out-of-pocket costs is an effective approach to increase colorectal cancer screenings.

Implications for Public Health Practice and Policy: With the introduction of the Affordable Care Act, responsive public health systems require strategies to determine which policies, systems, and administrative strategies are most effective in reducing health disparities. This research demonstrates that insurance mandates increased colorectal cancer screenings by reducing out-of-pocket costs. Future health care reforms that increase access to preventive services, such as CRC screening, are likely with low out-of-pocket costs and will increase the number of people who are "up-to-date".

SESSION 4C: Workforce-Staffing Changes
Room: Thoroughbred 3

Moderator: Angela Beck, Ph.D., M.P.H.

Presenters:
Patrick Bernet, Ph.D.

Determinants of Local Public Health Department Staffing Changes 2008-2010

Co-Investigators: None Listed

Background: The Great Recession precipitated many public health spending and staffing reductions. That same event has increased demand for public health services, compounding the challenge of dealing with staffing reductions..

Research Objective: The goal of this study is to better understand local health department (LHD) organizational and demographic characteristics associated with staffing changes between 2008 and 2010.

Data Sets and Sources: This study starts with 2008 and 2010 profile studies of LHDs conducted by the National Association of County and City Health Officials (NACCHO). These surveys contain information on the funding, staffing, governance, and activities of LHDs across the United States. LHD characteristics were paired with population demographics from the US Census and community health status indicators.

Study Design: In the first phase, staffing changes between 2008 and 2010 are computed and LHDs are classified by degree of resilience based on whether 2010 staffing staff levels were greater or less than expected. In the second phase, the change in staffing levels was modeled using multivariate regression to gauge the impact of independent variables across all levels of resilience. In the third phase, models were then re-run just among LHDs with greater-than-expected changes to determine if certain characteristics were more strongly associated with increases or decreases in staffing.

Analysis: Staffing change is modeled as a function of organizational characteristics (such as governance, administrator credentials, and structure), and demographic characteristics (such as population, poverty, age and race). We then add staffing characteristics (such as average salary levels and percent full-time) to determine if those add to our understanding.

Principal Findings: Resilient LHDs were more likely to have a physician or nurse administrator, smaller populations, fewer non-whites, poor and elderly. Resilient LHDs used more part time workers and had higher average spending per employee.

Conclusions: LHD staffing changes between 2008 and 2010 were significantly associated with a variety of organizational, demographic and staffing characteristics.

Implications for Public Health Practice and Policy: Understanding determinants of staffing changes can help LHDs prepare for resource allocation changes.

SESSION 4C: Workforce-Staffing Changes-Wednesday, April 9, 2014, from 2:00 to 3:15 pm

Jonathon Leider, Ph.D.

Undergraduate Public Health Conferrals in the US, 1992-2012

Co-Investigators: Brian Castrucci, M.P.H., Christine Pleppys, M.S., Emily Burke, M.P.H., Craig Blakely, Ph.D., James Sprague, M.D.

Background: Baccalaureates trained in public health could prove an important new input into the public health workforce, Since the early 2000s, several national initiatives and considerable national interest has made undergraduate public health a focal point in public health education.

Research Objective: Despite considerable interest in undergraduate public health, no enumeration exists as to how many undergraduate degrees have been conferred nationally. This presentation will address that gap.

Data Sources: The National Center for Education Statistics' (NCES) Integrated Postsecondary Dataset, which tracks graduation trends for colleges and universities in the US.

Study Design and Analysis: Twenty-one years of NCES data were cleaned and records for public health undergraduates were extracted. Next, classifications from the Association of Schools and Programs of Public Health (ASPPH) were incorporated. The final dataset comprises all undergraduate degree conferrals in the United States for 1992-2012, by gender and program specialization. Data on graduation trends by race were available between 2003 and 2012.

Principal Findings: In 2012, just under 6,500 students received undergraduate degrees in public health. NCES data show a significant yearly increase in conferrals beginning in 2005 (approximately 3,000 conferrals) and up from 1992 (750 conferrals). In 2012, the most common undergraduate specializations in public health were Public Health Education and Promotion (1,887 conferrals), Public Health-General (1,397 conferrals) and Community Health and Preventive Medicine (1,088 conferrals). In 2012, non-Hispanic white students received 53% of all undergraduate public health degrees, followed by non-Hispanic black students (18%), Asian students (12%), and Hispanic/Latino students (10%). Since 2003, non-Hispanic white students have decreased as a relative share of total conferrals. In 1992, women received 61% of all undergraduate public health degrees. This percentage increased to 78% of all undergraduate public health degrees in 2012.

Conclusions and Implications for Public Health Practice and Policy: Little information exists on the 6,500+ students graduating yearly in undergraduate public health. An important point for future research includes investigating whether these graduates end up in public health practice. If so, they could represent an important new source of relatively low-cost, skilled workers for governmental public health.

Virginia Mckay, M.A., B.S.

"My Job Was Already Two Jobs": The Impact of Personnel Changes on Implementation of an Evidence-Based HIV Prevention Program

Co-Investigators: None Listed

Background: Evidence-based interventions (EBIs) often require competent, trained staff for successful implementation. However, staff inevitably fluctuate over time, potentially influencing program implementation and ultimately program outcomes. The influences of staff changes on EBI implementation are relatively unexplored.

Research Objective: The current study qualitatively explored the impact of staff changes on implementation of RESPECT, an evidence-based HIV prevention program.

Data Sets and Sources: Data were collected as part of a longitudinal mixed-methods investigation, the Translation into Practice (TIP) study, a national survey of community-based organizations and public health departments delivering RESPECT (N=30).

Study Design: Semi-structured interviews were conducted with executive directors and supervisors at two time points (n=53, wave I; n=37, wave II) on topics such as implementation, adaptation, and program maintenance. Agencies with multiple staff dedicated to RESPECT were included in the current study (n=29).

Analysis: Interview questions related to staff changes were identified. Using Nvivo 8.0, questions were categorically coded to describe the kinds of staff changes that occurred and thematically coded to describe the impact of staff changes on RESPECT implementation.

Principal Findings: Agencies experienced increases, decreases, and turnover among staff. Staff changes impacted the number of clients receiving RESPECT, the skill and knowledge related to the program at the agency, workload for remaining employees, and created gaps in replacement and training. The majority of agencies experienced decreases and turnover among staff, leading to challenges in program implementation.

Conclusions: Staffing changes were common and highlight factors that may negatively impact program implementation. Lack of skill and knowledge, work overload, and limited ability to serve clients may influence priority EBI outcomes (e.g., fidelity, reach).

Implications for Public Health Policy and Practice: Although staff changes are common in public health agencies, successful implementation of EBIs will benefit from a focus on increasing staff retention. Additionally, policies that emphasize training throughout implementation have potential to address gaps that occur when inevitable staff turnover occurs.

SESSION 4D: System Structure & Performance-Service Sharing
Room: Thoroughbred 4

Moderator: Nikki Rider, Sc.D., M.P.P.

Presenters:
Gianfranco Pezzino, M.D., M.P.H.

A Roadmap to Successful Cross Jurisdictional Sharing Agreements: How Do We Get There?

Co-Investigators: Patrick Libbey, Grace Gorenflo, M.P.H., RN

Background: Cross-jurisdictional sharing (CJS) is the deliberate exercise of public authority to enable collaboration across jurisdictional boundaries to deliver essential public health services to solve problems that cannot be easily solved by single organizations or jurisdictions. The Center for Sharing Public Health Services (CSPHS) serves as a national resource on CJS, building the evidence and producing and disseminating tools, methods and models to assist public health agencies and policymakers as they consider and adopt CJS approaches.

Research Objectives: To identify factors for success in planning and implementing CJS initiatives.

Data Sets and Sources: Literature review and 16 demonstration projects in 14 states. Study Design A review of peer reviewed and other published documents was conducted to identify known factors of success for CJS initiatives. Through a competitive process, 16 demonstration projects were selected that encompass a diverse spectrum of CJS initiatives, from small-scale initiatives to full consolidation of health departments. Through continuous monitoring and feedback, site visits, and regular conference calls with the demonstration projects, CSPHS staff identified common themes and challenges.

Analysis: Using the information found in the literature review and generated through the demonstration projects we had created a Roadmap To Develop Cross-Jurisdictional Sharing Initiatives and a document describing common themes and challenges.

Principal Findings: The Roadmap describes three phases to guide jurisdictions through the CJS process:

- Explore
- Prepare and Plan
- Implement and Improve

During each phase, we propose a series of questions be answered before moving to the next phase. We also identify factors for success, which we group into prerequisites, facilitating factors, and project characteristics.

Conclusions: To be successful, CJS initiatives require careful consideration of multiple internal and external factors, as well as attention to the sequence in which certain steps are decided and implemented.

Implications for Public Health Practice and Policy: Implementing CJS initiatives may be resource-intensive and occasionally, if not done carefully, may lead to long-lasting damage in important relationships among partners. The empirical evidence being collected through a diverse set of demonstration projects complement a growing, but still scarce body of published material to assist in this endeavor.

Anne Kershenbaum, M.D., M.P.H.

A Case-Study of Cross-Jurisdiction Resource Sharing: The Merger of TB Clinics in East Tennessee.

Co-Investigators: Margaret Knight, Ph.D., M.P.H, M.S., B.A., Martha Buchanan, M.D., Janet Ridley, M.S.N., B.S., RN, Paul Erwin, M.D., Dr.P.H.

Background: Historically, Knox County Health Department (KCHD) and East Tennessee Regional Health Office (ETRO) have maintained two separate TB programs. In October 2011, the TB clinics merged. The incentive for the merger was a need to cover physician services, but the merger took place in the context of a lower burden of TB cases in the region.

Research Objectives: To determine whether the merging of the clinics resulted in changes in service provision efficiency, and to describe the problems and coping strategies adopted by staff as a result of the clinic merger.

Data Sets and Sources: Expenditures on the TB programs are collected from the local health departments. The charts of latent TB cases assessed in 2010-2012 are reviewed to extract time from positive test to practitioner consultation, and proportion starting and completing treatment. Staff opinions and perspectives are collected to investigate the effect of the merger on service provision, time required to provide services, problems encountered and methods used to solve them, and perceived advantages and disadvantages of the merger.

Study Design: Mixed methods approach combining qualitative data on processes and quantitative data on inputs and outcomes.

Analysis: Outcomes regarding latent TB are compared before and after the merger, using the Mann-Whitney test for continuous variables and the Chi-square for proportions. Data from staff interviews will be analyzed using qualitative data analysis methods.

Principal Findings: The total yearly expenditure on TB services did not show a decrease post-merger. Interim analysis of latent TB outcomes shows no decrease in the time from positive test to clinic assessment and a higher treatment initiation rate after the merger.

Conclusions: In the year following the merger, no improvements in efficiency measures were detected. Efficiency improvements may be difficult to achieve during a period of adoption of new working arrangements. Further follow up over the coming years could show how efficiency measures change with time since the merger.

Implications for Public Health Practice and Policy: Cross-jurisdictional mergers may be required to enable continuation of service provision, particularly when case numbers are decreasing. However, the period of change may require an initial increase in resources.

SESSION 4D: System Structure & Performance-Service Sharing-Wednesday, April 9, 2014, from 2:00 to 3:15 pm

Justeen Hyde, Ph.D.

Impact of a District Incentive Grant Program on Regional Cross-Jurisdictional Public Health Services in Massachusetts

Co-Investigators: Nazmim Bhuiya, M.P.H., (presenting), Maeve Conlin, M.P.H., Michael Coughlin, M.S., Geoffrey Wilkinson, M.S.W.

Background: In 2010, Massachusetts Department of Public Health (MDPH) received a grant from the Centers for Disease Control and Prevention through their National Public Health Improvement Initiative to develop regional public health districts that focus on cross-jurisdictional service sharing through a 5-year incentive grant program. After awarding one year planning grants to 18 prospective districts, MDPH chose five districts across the state to receive four year implementation grants through the Public Health District Incentive Grant (DIG) program. The districts encompass 57 municipalities that comprise nearly a sixth of the state's population. The Institute for Community Health (ICH), in collaboration with MDPH, is evaluating the process and outcomes associated with movement from independent to shared public health service delivery.

Data Sets and Sources: For this evaluation, ICH has focused on state mandated services such as food and beach inspection, Board of Health member training, and communicable disease management, lead screening capacity, sharps disposal access, governance, and workforce qualifications. Information was gathered from MDPH and through local input as well as district meeting minutes. An annual data dashboard was compiled for each district summarizing their progress to meeting key deliverables of the DIG program since baseline year 2010 (prior to program implementation). Additionally, a survey was distributed to all grantees to gather information about the perceived organization, leadership, resources, partnerships, and outcomes associated with the work of each DIG collaborative.

Findings: This paper will highlight preliminary findings from the data dashboards. The data demonstrates that there has been improvement in several domains from 2010 to 2012. There has been an increase in municipalities meeting state mandated food and beach inspectional requirements, an increase in number of trained local Board of Health members, an increase in access to sharps disposal sites, and improvements in communicable disease management.

Conclusions & Implications: This work is among first of evaluations to assess the impact of service sharing among local DPHs. The findings implicate that municipalities working together can improve the delivery of essential public health services.

TUESDAY, APRIL 8, 2014
5:30 TO 6:30 PM

Room: Bluegrass Prefunction Area

POSTER PRESENTERS

Board 1: Quality of Primary Care from the Patient Perspective in Saudi Arabia: A Multi-level Study
Khalid Alahmary, M.S.N., B.S.

Board 2: Variation in Preparedness Capacity among Local Health Departments: A Multi-Year Look (Co-PI Mary V. Davis, Dr.P.H., M.S.P.H. is presenting.)
Christine A. Bevc, Ph.D., M.A.

Board 3: Economic Evaluation of Tuberculosis Pre-Screening in a Correctional Facility of New River Valley, Virginia (Co-PI Narges Dorratoltaj, M.P.H./Ph.D. candidate is presenting.)
Jennifer Samuels

Board 4: Strategic Planning for Wisconsin's Public Health Practice Based Research Network
Tracy Mrochek, M.P.A., RN

Board 5: Clinical versus Public Health Perceptions of Burden regarding Notifiable Condition Disease Reporting
Debra Revere, M.L.I.S., MA

Board 6: The Cost of Select Communicable Disease Prevention Services: Evidence from Local Health Departments in Florida.
Simone Singh, Ph.D., M.A., B.B.A.

Board 7: A Method for Identifying Positive Deviant Local Health Departments in Maternal and Child Health
Tamar Klaiman, Ph.D., M.P.H., B.A.

Board 8: Pracademics: Connecting Public Health Practice and Academia
Nancy Winterbauer, Ph.D., M.S.

Board 9: Enhancing Quality Improvement Organizational Culture in Georgia's Local Public Health Agencies (Co-PI Angela Peden, M.P.H., is presenting.)
William Livingood, Ph.D.

Board 10: Building the Evidence Base Around Accreditation: Research Questions and the Data to Answer Them
Jessica Kronstadt, M.P.P.

Board 11: Developing a Research Initiative for Public Health Law: Notes from the Public Health Law Program
Tara Ramanathan, J.D., M.P.H.

Posters-Tuesday, April 8, 2014 from 5:30 to 6:30 pm

Board 12: Building Access and Understanding of Law in Public Health Practice in Nebraska
Jennifer Ibrahim, Ph.D., M.P.H.

Board 13: Rainy Day Funds: Current State and Associations with Structural and Budget Characteristics of Local Health Departments in the U.S.
Yelena Tarasenko, Dr.P.H., M.P.H., M.P.A.

Board 14: Trends and Characteristics of the State Public Health Workforce
Angela J. Beck, Ph.D., M.P.H.

Board 15: Exploring Funding Sources, Infrastructure, and Public Health Service Delivery in New Hampshire (Co-PI's Lea Ayers LaFave, Ph.D., RN & Stacey Gabriel, B.A., are presenting.)
Jo Porter, M.P.H.

Board 16: Intentions to Seek Accreditation through PHAB's National Voluntary Accreditation Program
Kate Beatty, Ph.D., M.P.H.

Board 17: Resources for QI in Public Health Practice: What Works and for Whom?
Deborah Porterfield, M.D., M.P.H.

Board 18: Weaving the Community into the Fabric of Public Health Governance
Scott Hays, Ph.D.

Board 19: Results from a Process Evaluation of the Task Force to Improve Public Health in Portage County
Aimee Budnik, M.S., B.S.

Board 20: The Kentucky Physician Assistant Workforce: 2013
Virginia Valentin, M.S., B.S.

Board 21: Public Health Practice Perceptions of Academic Public Health: An Analysis of Leadership across 3 States
Scott Frank, M.D., M.S.

Board 22: Racial Disparities in Access to Public Water and Sewer Service in North Carolina
Jacqueline MacDonald Gibson, Ph.D., M.S., B.A.

Board 23: Making Health Information Exchange Work for Public Health
Holly Jarman, Ph.D., M.A., B.A.

Board 24: Evaluating the Impact of Organizational Partnerships on Community Resilience
Malcolm Williams, Ph.D., M.P.P., B.A.

Board 25: Modeling Supply Chain System Structure to Trace Sources of Food Contamination: Early Results (Co-PI Abigail Horn is presenting.)
Stan Finkelstein, M.D., M.A., B.S.

Posters-Tuesday, April 8, 2014 from 5:30 to 6:30 pm

Board 26: Differences in Public Health Employee Satisfaction by Organizational Governance Structure
Valerie Yeager, Dr.P.H.

Board 27: Understanding Barriers to Colon Cancer Screening in Kentucky (Co-PI Sarojini Kanotra, Ph.D., M.P.H., is presenting.)
Jennifer Redmond, Dr.P.H.

Board 28: To What Extent Do Connecticut Chronic Disease Related Statutes Explicitly Reference Social Determinants of Health of Vulnerable Populations: A Legislative Policy Scan
Tiffany Cox, M.P.H., B.S.

Kaja Abbas
Blacksburg, VA
Public Health Professional

Mohamed Abdullah Abofaye
Lexington, KY
Student

Akosua Adu
Lexington, KY
Student

Khalid Alahmary
Louisville, KY
Student

Koya Allen
Kent, OH
Other

Jeanne Alongi
Sacramento, CA
Non-Healthcare Professional

Christopher Atchison
Coralville, IA
Health Administrator

Adam Atherly
Aurora, CO
Public Health Professional

Edward Baker
Chapel Hill, NC
Public Health Professional

Daniel Barnett
Baltimore, MD
Other

Jack Barnette
Louisville, KY
Public Health Professional

Kate Beatty
St Louis, MO
Student

Angela Beck
Ann Arbor, MI
Public Health Professional

Andrew Beckett
Paris, KY
Public Health Professional

Leslie Beitsch
Tallahassee, FL
Physician

Betty Bekemeier
Seattle, WA
Nurse

James Bellamy
Benton, AR
Adult Educator

Patrick Bernet
Boca Raton, FL
Public Health Professional

Kiran Bharthapudi
Arlington , VA
Non-Healthcare Professional

Nazmim Bhuiya
Cambridge, MA
Public Health Professional

Lori Bilello
Jacksonville, FL
Clinical Research

David Bishai
Hunt Valley, MD
Physician

Kyle Bogaert
Arlington, VA
Public Health Professional

Ricky Boggan
Florence, MS
Non-Healthcare Professional

Tyrone Borders
Lexington, KY
Public Health Professional

Terry Brandenburg
Milwaukee, WI
Public Health Professional

Douglas Branham
Lexington, KY
Student

Rick Brewer
Lexington, KY
Librarian

Colleen Bridger
Hillsborough, NC
Public Health Professional

Stephen Brown
Richmond, VA
Other

Margaret Brown
Lexington, KY
Student

Andrea Brown
Nicholasville, KY
Health Educator

Kathleen Brown
Knoxville, TN
Public Health Professional

Aimee Budnik
Kentq, OH
Student

Scott Burris
Philadelphia, PA
Non-Healthcare Professional

Kathryn Cardarelli
Lexington, KY
Public Health Professional

Erik Carlton
Memphis, TN
Non-Healthcare Professional

Angela Carman
Lexington, KY
Non-Healthcare Professional

Henry Carretta
Tallahassee, FL
Non-Healthcare Professional

Amanda Cash
Washington, DC
Other

Laura Cassidy
Milwaukee, WI
Non-Healthcare Professional

Crystal Caudill
Cynthiana, KY
Public Health Professional

Anjali Chainani
Downingtown, PA
Student

Patricia Checko
Berlin, CT
Public Health Professional

Lorie Chesnut
Lexington, KY
Public Health Professional

Amanda Ciecior
St Louis, MO
Student

Laura Conner
Rockwood, TN
Health Administrator

Kelly Cooper
Knoxville, TN
Physician

Phaedra Corso
Athens, GA
Health Educator

Julia Costich
Lexington, KY
Non-Healthcare Professional

Tiffany Cox
Washington, DC
Other

Mary Davis
Chapel Hill, NC
Public Health Professional

Laura Davison
Lexington, KY
Librarian

Linda Degutis
Atlanta, GA
Public Health Professional

Samir Desai
Athens, GA
Student

Brian Dixon
Indianapolis, IN
Health IT Professional

Narges Dorratoltaj
Blacksburg, VA
Student

Matthew Dunbar
Seattle, WA
Non-Healthcare Professional

Susan Dunlap
Louisville, KY
Other

Robert Edwards
Lexington, KY
Other

Gary English
Alvaton, KY
Health Educator

Paul Erwin
Knoxville, TN
Physician

Alva Ferdinand
College Station, TX
Other

Deborah Fillman
Owensboro, KY
Health Administrator

Lizeth Fowler
Lexington, KY
Non-Healthcare Professional

Scott Frank
Cleveland, OH
Physician

Stacey Gabriel
Durham, NH
Public Health Professional

Kim Gearin
Star Prairie, WI
Health Administrator

Susan German
Newark, NJ
Other

Angelica Geter
Lexington, KY
Student

Sarah Gillen
New Orleans, LA
Public Health Professional

Brandi Gilley
London, KY
Registered Dietitian

Kevin Gipson
Springfield, MO
Public Health Professional

William Goddard
Springfield, MO
Public Health Professional

Randy Gooch
Nicholasville, KY
Public Health Professional

Theresa Green
Rochester, NY
Other

Beth Gyllstrom
Minneapolis, MN
Public Health Professional

Nathan Hale
Columbia, SC
Public Health Professional

Melody Hall
Lexington, KY
Non-Healthcare Professional

Paul Halverson
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Health Educator

Elizabeth Harper
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April Harris
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Kenneth Harris
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Torrie Harris
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Jenine Harris
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Scott Hays
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Julia Heany
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Mark Hensley
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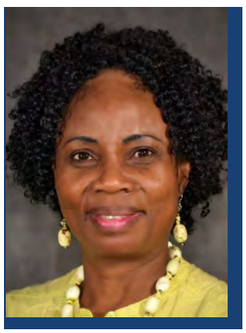

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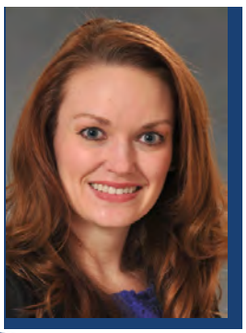

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