National Coordinating Center for PHSSR

# Public Health Services & Systems Research

# KEENELAND CONFERENCE 2013

Hyatt Regency Lexington &
Lexington Convention Center

Lexington, Kentucky

**APRIL 8-11**

www.keenelandconference.org

National Coordinating Center for PHSSR

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

www.facebook.com/NCCforPHSSR

www.twitter.com/cphssr **or** www.twitter.com/keenelandconf

www.publichealthsystems.org/blog/default.aspx

www.youtube.com/thecenterforphssr

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

The official conference hashtag is **#PHSSRKC13** please make sure to use it when posting!

121 Washington Avenue • Suite 212 • Lexington, Kentucky 40536
Tel. 859. 257. 5678 • Fax 859. 257. 3748 • www.publichealthsystems.org

National Coordinating Center for PHSSR

April 8, 2013

On behalf of the National Coordinating Center for Public Health Services and Systems Research, Public Health Practice-Based Research Networks National Coordinating Center and the Robert Wood Johnson Foundation, we are pleased and honored to welcome you to the 2013 PHSSR Keeneland Conference in Lexington, Ky.

*F. Douglas Scutchfield, M.D.*

Like 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, which is reflected by the growth in our conference. We experienced a record number of abstract submissions for this year's conference, corresponding with a record number of presentations and sessions. But more than the number, 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. Now we are celebrating PHSSR's coming of age, as reflected in the outstanding presentations, plenaries, posters and roundtables that we have in store for you.

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 three prominent keynote speakers: Paul Kuehnert, Robert Wood Johnson Foundation; Joe Selby, Patient-Centered Outcomes Research Institute; and William Roper, UNC Health Care System. Our plenary sessions will bring you up to speed on developments in Washington (moderated by Lisa Simpson of AcademyHealth) and Quality Improvement in PHSSR, a formative evaluation from the Urban Institute. Also, for the first time this year, you'll have the opportunity to learn about various research topics through an informal "Breakfast Roundtable" on Wednesday morning.

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

On Thursday morning, we'll conclude with a lively and informative session featuring teams of researchers and practitioners who will share their real-life stories of successful collaborations – proof positive that we're making a difference in public health practice. After the session wraps up, consider staying with us for a visit to Lexington's historic Keeneland Race Course for lunch and a memorable afternoon at a Kentucky gem.

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

Thank you for joining us!

Sincerely,

F. Douglas Scutchfield, M.D.

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

111 Washington Avenue • Suite 212 • Lexington, Kentucky 40536
Tel. 859. 257. 5678 • Fax 859. 257. 3748 • www.publichealthsystems.org


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National Coordinating Center for PHSSR

PUBLIC HEALTH Practice-Based Research Networks
National Coordinating Center

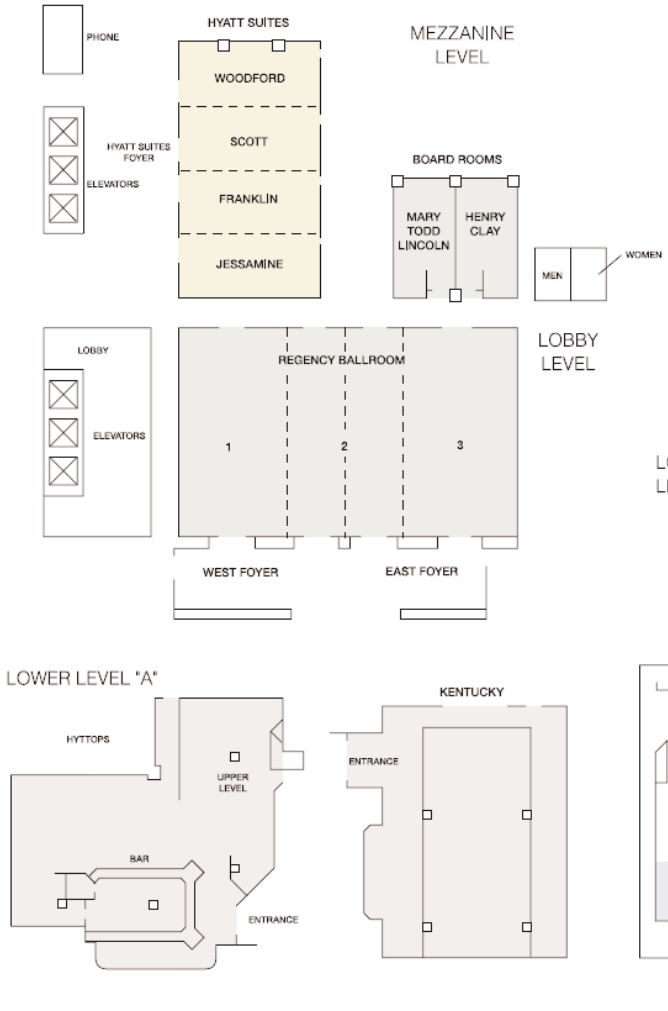
## The 2013 Keeneland Conference on Public Health Services & Systems Research made possible with support from the Robert Wood Johnson Foundation

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 continues to build the evidence base, expand the research capacity, encourage the 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 policy-makers 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 policy-makers with common research agendas
- Highlight the work of junior PHSS researchers and encourage and support their mentors
- Recognize the recipients of PHSSR grantees, 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

# 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
Vikki Y. Franklin 859.230.8052
Rebecca Brown 859.437.0034
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 8
7:30 a.m.-4 p.m. – Hyatt Regency Lexington Lobby

### Tuesday, April 9-Wednesday, April 10
7:30 a.m.-5 p.m. – Thoroughbred Prefunction Entrance (Convention Center)

### Thursday, April 11
7:30 a.m.-11 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 new 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, or 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 2013 Keeneland Conference. We ask that you please take a few minutes to complete the survey to provide us valuable feedback, and we thank you in advance.
Link: **http://bit.ly/keeneland2013**

## Social Media

Tell the rest of the world what's happening at the Keeneland Conference! Please use the hashtag #PHSSRKC13 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 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

### Lexington Room

Located on the 4th floor and overlooking the racetrack, the Lexington and Kentucky rooms offer non-smoking, buffet dining in a business formal setting.

### 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.

### Menu

Keeneland offers famous corned beef, roast sirloin, chicken entree, vegetables du jour, potato du jour, salad bar, dessert, iced tea and coffee. Alcoholic beverages, juice and soft drinks are not included.

### Arrival Time

Guests must arrive by 1:15 p.m. on the day of their reservation or their table will be resold and tickets will be invalid. Room opens at 11 a.m. The buffet is available from 11:30 - 3:00 p.m.

### Transportation

Both buses will be located at the High Street entrance of the Lexington Convention Center.

*Bus A*

Bus A will leave the Lexington Convention Center at 11:30 am. 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 12:15 p.m. At 3 p.m., the bus will leave Keeneland and go back to the airport.
NOTE: Bus A will NOT return to the hotel or Convention Center.

*Bus B*

Bus B will leave the Lexington Convention Center at 11:30 a.m. The bus will go directly to Keeneland and should arrive by noon. At 4 p.m., the bus will leave Keeneland and return to the Hyatt.

# KUEHNERT

**Paul L. Kuehnert, D.N.P., R.N.**
*Senior Program Officer and Team Director, Public Health*
Robert Wood Johnson Foundation

Paul Kuehnert is a senior program officer and the team director for the Public Health team. Coming of age in the 1960s with parents who were faith community-based activists for peace and justice, it wasn't that big of a surprise to anyone in his family when Paul decided to flout gender norms and become a nurse. What started as a bit of a dare and a way to make ends meet transformed into a vocation when he became a public health nurse early in his career. Serving children and parents in St. Louis' Head Start Program ignited his passion for community-focused health promotion and advocacy—a passion that just won't quit.

As an executive leader for the past 20 years, Paul has led both governmental and community-based organizations in order to help people lead healthier lives. In the late 1980s he was a founder and later CEO of Community Response, Inc., one of the Chicago area's largest housing, nutrition and social service providers for people living with HIV/AIDS. He moved to Maine in 1999 and served in the state health department, leading the development of a regional public health system, and becoming deputy director of the department in 2005. Most recently Paul was the county health officer and executive director for health in Kane County, Ill., a metro Chicago county of 515,000, where he initiated and led "Making Kane County Fit for Kids," a public-private partnership to reverse the epidemic of childhood obesity.

Paul is a pediatric nurse practitioner and holds a master of science degree in public health nursing from the University of Illinois at Chicago. He was named a Robert Wood Johnson Foundation Executive Nurse Fellow in 2004.

# ROPER

**William L. Roper, M.D., M.P.H.**
***Chief Executive Officer***
UNC Health Care System

William L. Roper is Dean of the School of Medicine, Vice Chancellor for Medical Affairs and Chief Executive Officer of the UNC Health Care System at the University of North Carolina at Chapel Hill. He also is Professor of Pediatrics in the School of Medicine and Professor of Health Policy and Administration in the School of Public Health.

From 1997 until March 2004, Dr. Roper was Dean of the School of Public Health at UNC. Before joining UNC in 1997, Dr. Roper was senior vice president of Prudential HealthCare. He joined Prudential in 1993 as president of the Prudential Center for Health Care Research.

Before coming to Prudential, Dr. Roper was director of the Centers for Disease Control and Prevention (CDC), served on the senior White House staff, and was administrator of the Health Care Financing Administration. Earlier, he was a White House Fellow.

He received his M.D. from the University of Alabama School of Medicine, and his M.P.H. from the University of Alabama at Birmingham School of Public Health. He completed his residency in pediatrics at the University of Colorado Medical Center.

Dr. Roper is a member of the Institute of Medicine of the National Academy of Sciences. He is a member of the board of directors of DaVita, Inc., a member of the board of directors of Medco Health Solutions, Inc., a member of the Scientific Management Review Board of the NIH, a member of the board of directors of the Partnership for a Healthier America, and chairman of the board of directors of the National Quality Forum.

# SELBY

**Joe V. Selby, M.D., M.P.H.**
*Executive Director*
Patient-Centered Outcomes Research Institute (PCORI)

Joe Selby is the first Executive Director of the Patient-Centered Outcomes Research Institute (PCORI). A family physician, clinical epidemiologist and health services researcher, Dr. Selby has more than 35 years of experience in patient care, research and administration. He is responsible for identifying strategic issues and opportunities for PCORI and implementing and administering programs authorized by the PCORI Board of Governors.

Dr. Selby joined PCORI from Kaiser Permanente, Northern California, where he was Director of the Division of Research for 13 years and oversaw a department of more than 50 investigators and 500 research staff working on more than 250 ongoing studies. He was with Kaiser Permanente for 27 years. An accomplished researcher, Dr. Selby has authored more than 200 peer-reviewed articles and continues to conduct research, primarily in the areas of diabetes outcomes and quality improvement. His publications cover a spectrum of topics, including effectiveness studies of colorectal cancer screening strategies; treatment effectiveness, population management and disparities in diabetes mellitus; primary care delivery and quality measurement.

Dr. Selby was elected to membership in the Institute of Medicine in 2009 and was a member of the Agency for Healthcare Research and Quality study section for Health Care Quality and Effectiveness from 1999-2003. A native of Fulton, Missouri, Dr. Selby received his medical degree from Northwestern University and his master's in public health from the University of California, Berkeley. He was a commissioned officer in the Public Health Service from 1976-1983 and received the Commissioned Officer's Award in 1981.

## MONDAY, APRIL 8, 2013

| | | |
|---|---|---|
| 7:30 am to 4 pm | Public Health PBRN Grantee Meeting<br>*Breakout Sessions from 1 to 3 pm* | Hyatt Regency Lobby Level<br>*Regency Ballroom* |
| 4 to 6 pm | PHSSR Grantee Networking Reception | Hyatt Regency Lower Level "A"<br>*Kentucky* |

## TUESDAY, APRIL 9, 2013

| | | |
|---|---|---|
| 7:30 to 8:30 am | PHSSR Grantees Breakfast<br>• *Junior Investigators*<br>• *Mentored Research Scientist Development Awardees*<br>• *Brown Scholars* | Hyatt Regency Lobby Level<br>*Regency Ballroom 1* |
| 7:30 to 8:30 am | Public Health PBRN Grantees Breakfast | Hyatt Regency Lobby Level<br>*Regency Ballroom 2 & 3* |
| 7:30 to 8:30 am | NNPHI Grantees Breakfast | Hyatt Regency Lower Level A<br>*Kentucky* |
| 9 to 11 am | PHSSR Grantee Workshop:<br>Translation and Dissemination<br>*Open to all PHSSR, PBRN, & NNPHI Grantees* | Hyatt Regency Lobby Level<br>*Regency Ballroom 1, 2 & 3* |
| 10:00 to 11:30 am | PHSSR National Advisory Committee Meeting | Hyatt Regency Lower Level A<br>*Kentucky* |
| 12 to 1:30 pm | Opening Lunch:<br>**Paul L. Kuehnert, D.N.P., RN**<br>*Team Director and Senior Program Officer*<br>Robert Wood Johnson Foundation | Lexington Convention Center<br>*Bluegrass Ballroom 2* |
| 2 to 3:15 pm | Concurrent Scientific Sessions<br>See page 23 for full details<br>1A-Workforce I<br>1B-Consolidation<br>1C-Finance<br>1D-Partnerships<br>1E-Technology & Data I | Lexington Convention Center<br>• *Thoroughbred 1*<br>• *Thoroughbred 2*<br>• *Thoroughbred 3*<br>• *Thoroughbred 5 & 6*<br>• *Thoroughbred 7 & 8* |
| 3:45 to 4:45 pm | Washington Update<br>See page 15 for full details | Lexington Convention Center<br>*Bluegrass Ballroom 2* |
| 5:30 to 6:30 pm | Poster Session A<br>See page 87 for full details | Lexington Convention Center<br>*Thoroughbred Prefunction Area* |
| 6 to 7 pm | Networking Reception | Lexington Convention Center<br>*Thoroughbred Prefunction Area* |
| 7 to 9 pm | Dinner:<br>**Joe V. Selby, M.D., M.P.H.**<br>*Executive Director*<br>Patient-Centered Outcomes Research Institute (PCORI) | Lexington Convention Center<br>*Bluegrass Ballroom 2* |

# WEDNESDAY, APRIL 10, 2013

| | | |
|---|---|---|
| 7:30 to 8:30 am | Breakfast-Roundtable Session<br>See page 16 for list of topics | Lexington Convention Center<br>*Bluegrass Ballroom 2* |
| 9 to 10:15 am | Concurrent Scientific Sessions<br>See page 39 for full details<br>2A-Preparedness<br>2B-Translation I<br>2C-Organization<br>2D-Quality Improvement I<br>2E-Technology & Data II | Lexington Convention Center<br>• *Thoroughbred 1*<br>• *Thoroughbred 2*<br>• *Thoroughbred 3*<br>• *Thoroughbred 5 & 6*<br>• *Thoroughbred 7 & 8* |
| 10:45 am to 12 pm | Concurrent Scientific Sessions<br>See page 55 for full details<br>3A-Technology & Data III<br>3B-Workforce II<br>3C-Translation II<br>3D-Quality Improvement II<br>3E-Social Network Analysis | Lexington Convention Center<br>• *Thoroughbred 1*<br>• *Thoroughbred 2*<br>• *Thoroughbred 3*<br>• *Thoroughbred 5 & 6*<br>• *Thoroughbred 7 & 8* |
| 12:30 to 1:30 pm | Lunch:<br>**William L. Roper, M.D., M.P.H.**<br>*CEO*<br>UNC Health Care System | Lexington Convention Center<br>*Bluegrass Ballroom 2* |
| 2 to 3:15 pm | Concurrent Scientific Sessions<br>See page 71 for full details<br>4A-Accreditation<br>4B-Workforce III<br>4C-Food Safety<br>4D-Disparities<br>4E-Technology & Data IV | Lexington Convention Center<br>• *Thoroughbred 1*<br>• *Thoroughbred 2*<br>• *Thoroughbred 3*<br>• *Thoroughbred 5 & 6*<br>• *Thoroughbred 7 & 8* |
| 3:45 to 4:45 pm | A Formative Evaluation of PHSSR<br>See page 19 for full details | Lexington Convention Center<br>*Bluegrass Ballroom 2* |
| 5:30 to 6:30 pm | Poster Session B<br>See page 89 for full details | Lexington Convention Center<br>*Thoroughbred Prefunction Area* |
| 6 to 7 pm | Networking Reception | Lexington Convention Center<br>*Thoroughbred Prefunction Area* |
| 7 to 10 pm | Dine-A-Round Lexington | Various Local Restaurants |

# THURSDAY, APRIL 11, 2013

| | | |
|---|---|---|
| 7:30 to 8:30 am | Breakfast for All Attendees | Lexington Convention Center<br>*Thoroughbred 1, 2 & 3* |
| 9 to 10:30 am | Closing Session on Translation and Dissemination<br>See page 20 for full details | Lexington Convention Center<br>*Thoroughbred 1, 2 & 3* |
| 11 am to 4 pm | Historic Keeneland Race Course Outing | Buses will be outside of the High Street Entrance of the Lexington Convention Center. |

# TUESDAY, APRIL 9, 2013
# 3:45 TO 4:45 PM

## Washington Update: PHSSR and Policy Translation — Bluegrass Ballroom 2

Find out the inside scoop on what's happening inside the Beltway - from sequestration to the Affordable Care Act – and how it directly and indirectly affects PHSSR from those who know. AcademyHealth is the National Coordinating Center for PHSSR's partner in Washington. The moderator and panelists will share their insight regarding issues to watch on the federal level.

### MODERATOR

**Lisa Simpson, M.B., B.Ch., M.P.H.**
*President and CEO*
AcademyHealth

### PANELISTS

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

ASTHO is the national nonprofit organization representing public health agencies in the United States, the U.S. Territories, and the District of Columbia, and over 100,000 public health professionals these agencies employ. ASTHO members, the chief health officials of these jurisdictions, formulate and influence sound public health policy and ensure excellence in state-based public health practice. ASTHO's primary function is to track, evaluate, and advise members on the impact and formation of public or private health policy that may affect them and to provide them with guidance and technical assistance on improving the nation's health.

**Jeff Levi, Ph.D.**
*Executive Director*
Trust for America's Health (TFAH)

TFAH is a non-profit, non-partisan organization dedicated to saving lives by protecting the health of every community and working to make disease prevention a national priority. By focusing on prevention, protection, and communities, TFAH is leading the fight to make disease prevention a national priority, from Capitol Hill to Main Street.

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

NACCHO's vision is health, equity, and security for all people in their communities through public health policies and services. NACCHO's mission is to be a leader, partner, catalyst, and voice for local health departments in order to ensure the conditions that promote health and equity, combat disease, and improve the quality and length of all lives.

# WEDNESDAY, APRIL 10, 2013
# 7:30 TO 8:30 AM

## Breakfast Roundtables — Bluegrass Ballroom 2

**1: Organization**
Lisa Lang, M.P.P., Head, National Information Center on Health Services Research, and Assistant Director, Health Services Research Information
National Library of Medicine, National Institutes of Health

**Additional presenters:**
- Karen Dahlen, M.L.S.
- Paul C. Erwin, M.D., Dr.P.H.
- Paul Halverson, M.D., M.H.S.A., FACHE

**2. Finance**
Patrick Bernet, Ph.D., Associate Professor of Healthcare Finance
Florida Atlantic University College of Business

**Additional presenters:**
- Simone R. Singh, Ph.D.
- Jonathon Leider, Ph.D.

**3: Technology & Data**
Eduardo Simoes, M.D., Chair, University of Missouri School of Medicine Department of Health Management and Informatics; National Advisory Committee for PHSSR Member

**Additional presenters:**
- Susan Cahn, M.P.H., M.A.
- Roland Gamache, Ph.D., M.B.A.
- Brian Dixon, Ph.D., M.P.A.

**4: Governance**
Anne Drabczyk, Ph.D., M.A., Chief Executive Officer
National Association of Local Boards of Health

**Additional presenters:**
- Anne Drabczyk, Ph.D., M.A.
- Scott Hays, Ph.D.
- Elizabeth Harper, M.P.H.

**5: Reducing Health Disparities**
Francisco Sy, M.D., Dr.P.H., Director of Extramural Activities and Scientific Programs
National Institute on Minority Health and Health Disparities, National Institutes of Health

**6: PARTNER Network Analysis Tool**
Danielle Varda, Ph.D., Assistant Professor
School of Public Affairs, University of Colorado Denver; secondary appointment in the Colorado School of Public Health, Department of Health Systems, Management, and Policy

**7: State and Local Health Surveys**
A.J. Scheitler, M.Ed., Coordinator of Stakeholder Relations and
Coordinator of the National Network of State and Local Health Surveys
UCLA Center for Health Policy Research

**8: Sharing Public Health Services**
Gianfranco Pezzino, M.D., M.P.H., Co-Director
Center for Sharing Public Health services, Kansas Health Institute

**9: Conducting PHSSR Translation with Health Departments and Practice**
Ross Brownson, Ph.D., Co-Director
Prevention Research Center, Washington University and St. Louis University
Public Health PBRN National Advisory Committee Member

**10: Research Translation for Policy-Makers**
Lisa Simpson, M.B., B.Ch., M.P.H., President and CEO, and Kate Papa, M.P.H., Director
AcademyHealth

**11: Enhancing the Profile Survey**
Carolyn Leep, M.S., M.P.H., Senior Director of Research and Evaluation
National Association of County & City Health Officials

**12: Brainstorming With "Pracademics"**
Robert Pestronk, M.P.H., Executive Director
National Association of County & City Health Officials
Public Health PBRN National Advisory Committee Member

**13: Measuring Health Equity**
Katie Sellers, Dr.P.H., CPH, Senior Director, Survey Research, Association of State and Territorial Health Officials

**14: Public Health Laboratory Data for PHSSR**
Eric Blank, Dr.P.H., Senior Director, Public Health Systems, and
Deborah Kim, M.P.H., Director, Institutional Research
Association of Public Health Laboratories

**15: Opportunities for Integration of PHSSR & PHLR**
Scott Burris, J.D., Director
National Advisory Committee for PHSSR Member
Jennifer Ibrahim, Ph.D., M.P.H., Associate Director
Public Health Law Research program

**16: Core Competencies for Public Health**
Kathleen Amos, MLIS, Project Manager
Council on Linkages Between Academia and Public Health Practice, Public Health Foundation

**17: PHSSR & Accreditation**
Jessica Kronstadt, M.P.P., Director of Research and Evaluation
Public Health Accreditation Board

**18: Injury Prevention**
Linda Degutis, Dr.P.H., MSN, Director
National Center for Injury Prevention and Control, Centers for Disease Control and Prevention

**19: Measuring Capacity of a Membership Network**
Brittany Bickford, M.P.H., and Sarah McKasson, M.P.H., Evaluation Coordinators
National Network of Public Health Institutes

# WEDNESDAY, APRIL 10, 2013
# 3:45 TO 4:45 PM

## A Formative Evaluation of PHSSR — Bluegrass Ballroom 2

Researchers from the Urban Institute present results from their assessment of RWJF's portfolio of PHSSR projects commissioned by the Foundation. Data sources include an environmental scan of published and unpublished materials; surveys of public health practitioners, public health PBRN network partners, and PHSSR grantees; site visits to PBRNs; and key informant interviews. Insights and recommendations will be sought from the audience.

## PANELISTS

**Randall R. Bovbjerg, J.D.**
Bovbjerg is a Senior Fellow in the Health Policy Center of the Urban Institute in Washington, DC. He has acquired an unusual combination of research and practical skills during a long career in health policy, including many RWJF projects, numerous evaluations, and many case studies. His specialties include public and private health insurance and reform, public health and workforce issues, the uninsured and the health care safety net, and administrative and legal issues in health care, such as liability and patient safety reform. Other current projects than the PHSSR work to be described at Keeneland include an assessment of opportunities for Community Health Workers under health reform and a case study of recent changes in medical professional regulation in Washington state. His and Hatry's close collaboration began with a 1990s project on nursing regulation, and they recently co-authored "Managing and Delivering Performance," for the *Journal of Nursing Regulation*. Bovbjerg also lead-authored "What Directions for Public Health under the Affordable Care Act?" and has served as a site-visit assessor for Harvard's Innovations in Government Awards.

**Harry P. Hatry, M.S.**
Mr. Hatry is a Distinguished Fellow and Director of the Public Management Program at the Urban Institute in Washington, DC. He pioneered tools for measuring program outcomes four decades ago and since then has worked on many public and private sector projects in performance measurement, performance management, and evaluation. Much of his work actively promotes a results focus for local, state, and private nonprofit organization sector. He has contributed to such national efforts as the International City/County Management Association's comparative performance measurement effort; the Governmental Accounting Standards Board's Service Efforts and Accomplishments efforts; the United Way of America's work to bring outcome measurement into the nonprofit sector; and the "Legislating-for-Results" initiative of the National Conference of State Legislatures and the National League of Cities. He is a member of the National Academy of Public Administration and the American Evaluation Association, and he received the 1996 Washington Evaluators Award as Evaluator of the Year and the 1985 Elmer B. Staats Award as the year's outstanding contributor to management science. He has also written two seminal books on outcome measurement and evaluation, both now in their second editions.

# THURSDAY, APRIL 11, 2013
# 9 TO 10:30 AM

## Closing Session: Translation and Dissemination — Thoroughbred 1, 2 & 3

One of the main goals of the Keeneland Conference is to encourage the growth of Evidence-Based Public Health (EBPH), either through translation and dissemination of research into practice or practice-based research.

## MODERATORS

**Ross Brownson, Ph.D.**
Prevention Research Center/Washington University and St. Louis University
Public Health PBRN National Advisory Committee Member

**Paul Erwin, M.D., Dr.P.H.**
University of Tennessee
Co-Investigator of the National Coordinating Center for PHSSR

Drs. Paul Erwin and Ross Brownson will co-moderate the closing session, with Dr. Brownson leading off with an overview of his multi-pronged LEAD-PH research project on EBPH, including early results. The Robert Wood Johnson Foundation has funded Dr. Brownson and his team at Washington University in St. Louis to explore evidence-based decision-making in local health departments.

## PRESENTERS

**Practitioner: Beth Gyllstrom, Ph.D., M.P.H., Minnesota Department of Health**
**Researcher: Bill Riley, Ph.D., University of Minnesota**

All Minnesota local health departments (LHDs) received funding in 2009 to implement policy, systems and environmental (PSE) change interventions within their communities. This study examines factors at the LHD level that contribute to success in implementing these strategies. The primary study hypothesis is that increased local public health capacity and performance (as measured by authority level of the top local public health official, maturity of organizational quality improvement (QI), readiness for accreditation and participation in intervention-specific QI activities) improves LHD performance on PSE strategies (ability to meet stated goals; depth of implementation; sustainability of strategies).

**Practitioner: Marie Flake, M.P.H., Washington State Department of Health**
**Researcher: Betty Bekemeier, Ph.D., M.P.H., RN, University of Washington**

Through partnerships with practitioners and Public Health Practice-Based Research Networks (PBRN), the Public Health Activities and Services Tracking (PHAST) study is providing a comprehensive, accessible database for answering practice-based research questions. In a Washington (WA) partnership, we compiled annual LHD financial data from 1993 to 2010, to examine trends over time and differences among Washington's 35 LHDs and in relation to other local characteristics. Specific visual displays of data were collaboratively created between researchers and practitioners to maximize relevance and accessibility for practice leaders. These existing detailed data have thus become a meaningful planning tool to support effective health policy and data-driven financial planning.

**Practitioner: Chris Maylahn, M.P.H., New York State Department of Health**
**Researcher: Britney Johnson, M.P.H., The State University of New York at Albany, School of Public Health**

Integrated HIV/AIDS and STD Service Delivery in New York: A Natural Experiment: The New York PBRN aims to identify and test valid and reliable measures of quality associated with delivery of HIV/AIDS and STD services by local public health agencies, and then use these measures as part of a natural experiment to evaluate the impact of a statewide initiative to integrate the delivery of these two service lines. This project will assess the impact of the integration process on staff attitudes and job satisfaction, client awareness and utilization of services, and service quality based on adherence to evidence-based practices. Results of this study will yield validated measures for assessing the quality of HIV and STD service delivery, as well as other efforts to integrate public health service programs.

**Practitioner: Colleen Bridger, Ph.D., Orange County Health Department, North Carolina**
**Researcher: Lisa Harrison, M.P.H., Vance District Health Department, North Carolina**

Last year the North Carolina Institute of Medicine (NC IOM) established the Task Force on Implementing Evidence-Based Strategies in Public Health and completed their report in September 2012. The Task Force "was charged with developing recommendations to assist public health professionals in the identification and implementation of evidence-based strategies within their communities to improve population health." Dr. Bridger and Ms. Hill both served on the Steering Committee for this Task Group, and as local health department directors are now working to implement the recommendations described in the report. One of the recommendations called for local health department directors to select two evidence-based strategies for implementation, and this recommendation is in the state-LHD agreement documents. Thus, we will hear from the front-lines on what may be the first experience with "codifying" EBPH for use in LHDs. View the report, (http://bit.ly/EBPH100912.).

# SESSION 1-TUESDAY, APRIL 9, 2013 FROM 2 TO 3:15 PM

## SESSION 1A: Workforce I — Room: Thoroughbred 1

**Moderator: Angela Carman, Dr.P.H., M.B.A.**
**Research Assistant Professor**
**University of Kentucky College of Public Health**

### Robert Aronson, Dr.P.H., M.P.H.

***Using Expert Panels to Elicit Potential Indicators and Predictors of EBPH in Local Health Departments***

**Co-Investigators:** Kay Lovelace, Ph.D., M.P.H.; Gulzar Shah, Ph.D.

**Research Objective:** To identify appropriate indicators of local health department (LHD) use of Evidence-Based Public Health (EBPH) strategies and factors that influence their use.

**Data Sets and Sources:** Transcripts of interviews with 12 members of an expert panel representing researchers and practitioners working in PHSSR and EBPH.

**Study Design:** Participants responded to a series of questions regarding: their definition of EBPH; ways to identify and assess the use of EBPH strategies; and perceived barriers/enablers to the use of these strategies at the state and local levels.

**Analysis:** Content analysis performed using QSR NVivo V. 9. Data matrices were created highlighting each participant's comments related to EBPH strategies and factors influencing the use of EBPH strategies (including state level, local health department level and community level factors). Strategies were categorized based on definitions of EBPH used by participants.

**Principal Findings:** Two basic definitions of EBPH emerged, with one reflecting the use of data in decision-making processes, and the other reflecting the adoption of scientifically tested interventions. Factors at the state, local health department and community levels that influenced EBPH depended, in part, on the definition of EBPH used by participants.

**Conclusion:** LHD use of EBPH was influenced by health officer training and leadership, characteristics of the workforce, and training and technical assistance provided at the state and local levels. Familiarity with resources on tested interventions was key for one definition of EBPH. Community partnerships and competency in using data were key for others.

**Implications for the Field of PHSSR:** PHSSR and practice related to EBPH need to include precise definitions of terms to have meaningful discussions regarding how to encourage the use of EBPH strategies.

*SESSION 1A: Workforce I-Tuesday, April 9, 2013, from 2 to 3:15 pm*

## Jeanette Kowalik, M.P.H., B.S., CHES

### *Can't Get No Satisfaction: An Exploratory Review of the Local Public Health Workforce and Job Satisfaction as a Predictor of Sustainability*

**Co-Investigators:** None named.

**Research Objective:** The purpose of this study is to examine job satisfaction of the local Public Health Workforce (PHW) in Milwaukee, Wisc., by analysis of multiple variables. The study will answer two primary research questions: 1) what is the composition of the PHW in the target area; and 2) what variables significantly impact job satisfaction.

**Data Sets and Sources:** Primary data were obtained via utilization of the Job Satisfaction Survey (JSS) (Spector, 1994). The self-administered JSS was disseminated via web/email to 145 adult, public health staff employed at LHDs in Milwaukee County to obtain JS indices per independent variable. The JSS included 17 demographic and 36 job satisfaction questions.

**Study Design:** The following assumptions were met for this exploratory, cross-sectional study of convenience: 145 adults (=power .80) employed at LHDs in Milwaukee County completed a self-administered survey online through email invite or hard copy/mail anonymously in 2012. The survey took less than 30 minutes to complete; no incentives were provided.

**Analysis:** The survey was coded, and statistical software was used for analysis. The significance of the research was determined by analysis of cross-tabulations, average mean JSS scores per variable, chi-square, one-way ANOVA(alpha.05), post hoc analysis (Tamhanes) and effect size (adjusted R squared greater than .04). The confidence interval was 95 percent.

**Principal Findings:** Overall, JSS was not significant for independent variables; however, four JSS subscales were significant for the PHW. The differences were detected between administrators and PHNs for promotion; administrators and support staff for operating conditions; PHNs and other professional staff for coworkers and administrators and support staff for contingent rewards.

**Conclusion:** Job satisfaction is a key variable that impacts employees daily regardless of title or role in the agency, which was demonstrated in the research. More research is needed to widen the frame of understanding of what constitutes average JSS and subscales for the PHW locally, statewide and nationally.

**Implications for the Field of PHSSR:** The study suggests that JSS can be used to gather information about the PHW for human resources (HR) and accreditation (PHAB) purposes. For HR: diversity, needs, professional development and training. For PHAB: domains 5- development of PH policies and plans; 8- maintenance of a competent PHW, and 11- maintenance of human resources.

## Carson Smith, M.P.A.

### *Factors Influencing the Spread of Evidence-based Decision Making in Local Health Departments in the United States*

**Co-Investigators:** Robert Fields, B.S.; Kathleen Duggan M.P.H., M.S.; Rodrigo Reis, Ph.D., M.Sc.; Katie Stamatakis, Ph.D., M.P.H.; Paul Erwin, Dr.P.H., M.D.; Carolyn Leep, M.P.H., M.S.; Jenine Harris, Ph.D.; Ross Brownson, Ph.D.

**Research Objective:** To identify the factors that influence the spread (diffusion) of Evidence-Based Decision Making (EBDM) in local health departments (LHDs) in the United States. These factors are based in part on Rogers' Diffusion of Innovations theory.

**Data Sets and Sources:** Data were gathered from a national survey about EBDM among LHDs. The online survey was distributed to LHD directors and administrators (n = 517) (54% response rate). A section of questions (refined with cognitive and reliability testing) covered diffusion attributes of LHDs and the decision-making process influencing EBDM among LHDs.

**Study Design:** Cross-sectional

**Analysis:** We conducted Pearson's chi-square tests to analyze associations between characteristics of LHDs (e.g., governance structure) and diffusion attributes (e.g., fit with agency mission, ease of implementation). LHD characteristics were analyzed in relation to 10 diffusion attributes.

**Principal Findings:** In nine of 10 questions on diffusion attributes, the majority of respondents reported barriers to EBDM. For example, 85% disagreed that implementing EBDM would involve minimal financial cost. LHD characteristics associated with diffusion attributes were population size served, governance structure of the LHD, and region of the country.

**Conclusion:** Characteristics of LHDs, specifically size of population served, governance structure, and region of the country, appear to influence the use of EBDM. These results indicate that several key diffusion properties need attention among LHDs. Future analyses should use mixed-effects modeling methods.

**Implications for the Field of PHSSR:** Use of EBDM can help LHDs build competencies for accreditation, enhance efficiency, and strengthen capacity to improve population health. Identifying and enhancing LHD characteristics that support the use of the EBDM process can influence the uptake of these practices.

*SESSION 1B: Consolidation-Tuesday, April 9, 2013, from 2 to 3:15 pm*

## SESSION 1B: Consolidation — Room: Thoroughbred 2

**Moderator: Gianfranco Pezzino, M.D., M.P.H.**
**Co-Director**
**Center for Sharing Public Health Services**

### John Hoornbeek, Ph.D., M.P.A.

***Insights and Issues Relating to Assessing the Impacts of Health Department Consolidation***

**Co-Investigators:** Aimee Budnik, M.S.; Tegan Beechey, M.P.A.; Josh Filla, M.P.A.

**Research Objective:** To document perceived outcomes associated with the consolidation of health departments in Summit County, Ohio, one year after its implementation. The information presented can assist local public health systems in understanding the impacts of consolidation and researchers in conducting evaluative studies of health department consolidation.

**Data Sets and Sources:** The study team reviewed literature and documents on the Summit County health department consolidation, interviewed public health stakeholders, and surveyed employees of the newly consolidated health department. In total, feedback on the consolidation and its impacts was solicited from about 300 individuals with knowledge and experience relating to the consolidation.

**Study Design:** The study presents descriptive information on challenges in implementing the consolidation, the impacts of the consolidation, and variations in perceptions among stakeholders, managers, and employees. The data collected are designed to lend insights on the process and impacts of consolidation and variations in perceptions of those involved in the process.

**Analysis:** The data collected are analyzed qualitatively to identify key challenges, and quantitatively to describe likely impacts and variations in perceptions relating to these impacts. While the analyses completed to date are primarily descriptive, additional statistical analyses may be conducted to identify predictors of support for consolidation across key audiences.

**Principal Findings:** The consolidation saved $1.5 million during its first year of implementation. While the study revealed multiple perspectives, it generally suggested that baseline services had been maintained during the transition to a consolidated department, and that the consolidation holds the potential to improve public health services and capacities in the future.

**Conclusion:** Consolidating health departments is difficult, but Summit County has made progress in addressing operational and strategic challenges, saving money, and re-examining strategies for public health services in the county. In addition, many of those contacted expressed optimism about the potential for future improvements in public health capacities and services.

**Implications for the Field of PHSSR:** The analyses presented offer helpful insights to other researchers undertaking efforts to understand health department consolidation, as well as to practitioners who may be involved in considering or implementing consolidations. The presentation will discuss the analytical processes undertaken by the project team and the challenges associated with its methodologies.

## Aimee Budnik, M.S., B.S.

### *Presentation: Describing and Evaluating the Feasibility Assessment Process for Local Health Department Consolidations*

**Co-Investigators:** Ken Slenkovich, M.A.

**Research Objective:** The purpose of the research was to evaluate the effectiveness of a methodology used to assess feasibility of consolidating multiple health districts into one organization for two communities in Ohio.

**Data Sets and Sources:** The research team reviewed and evaluated the Feasibility Study Methodology from two counties in Ohio. Other data sources included the meeting minutes from the task force of one county; key informant interviews from a Retrospective Evaluation Report of another county; and survey data from the task force members.

**Study Design:** The study design was a mixed methods approach including key informant interviews, review of project implementation documents, and survey of task force members.

**Analysis:** Mixed methods approach to analysis was used to evaluate qualitative and quantitative data. Descriptive analysis and bivariate relationships were examined. Content analysis to identify emerging themes from meeting minutes and interviews was conducted.

**Principal Findings:** To our knowledge, there is not a standard methodology to assess feasibility for consolidating local public health departments, and this methodology provides a starting point. There is a need for the measurement of other critical areas such as political will, capacity, readiness to change, and baseline data.

**Conclusion:** This methodology provides communities with tools to systematically determine the potential feasibility of consolidating multiple health districts into one. The current eight critical areas need to be expanded to include measures to assess organizational readiness to change specifically grounded in theory (Diffusion of Innovation), political climate and baseline organizational data.

**Implications for the Field of PHSSR:** As the funds for providing public health services decrease, there is an increasing need to collaborate and find ways to increase efficiency. Potential consolidators could benefit from using a methodology where communities can systematically assess the feasibility of consolidating multiple health departments into one.

## Gene Nixon, M.P.A., B.S.

### *From Evidence to Practice: How a Public Health District Utilized Data in its Organizational Decision-Making Before, During and After its Consolidation*

**Co-Investigators:** None named.

**Research Objective:** The purpose of the research was to describe how one public health district used data from both its merger Feasibility Study and a subsequent evaluation of its consolidations to affect change in the administration and the delivery of public health services in the county.

**Data Sets and Sources:** The research team utilized the Merger Feasibility Study Report, data from SCPH, and survey data from the Retrospective Evaluation Report.

**Study Design:** The design of the study was a process evaluation examining internal and external documents, data sources and reports.

*SESSION 1B: Consolidation-Tuesday, April 9, 2013, from 2 to 3:15 pm*

**Analysis:** A mixed methods approach to data analysis using qualitative and quantitative data. Financial analysis and qualitative content analysis of job descriptions, organizational structures and Ohio public health law were completed. Internal and external satisfaction surveys were analyzed.

**Principal Findings:** The Feasibility Study identified a proposed governing structure; fiscal requirements; personnel and programmatic disparities of the new organization; importance of obtaining community input; and staff participation in the process. The retrospective analysis of the consolidation identified disparities in perceptions among the workforce. The financial analysis identified a cost savings.

**Conclusion:** The use of data can be informative as well as a significant catalyst for change. The results from the Feasibility Study provided evidence that was needed to successfully move forward in a consolidation. The data from the Retrospective Evaluation provided areas for the leadership to focus its attention.

**Implications for the Field of PHSSR:** There is a need for these types of collaborations among public health departments, academic institutions, and political and community organizations to improve the public health system. The use of data can be an important part of organizational decision-making when public health departments are considering the need to consolidate within communities.

## Michael Morris, Ph.D., M.P.H., C.P.H.

### *Consolidation in Ohio Local Public Health: Differences in Expenditures, Staffing & Service*

**Co-Investigators:** Matthew Stefanak, M.P.H.; John Hoornbeek, Ph.D.; Rohit Pradhan, Ph.D., M.P.A.; Joshua Filla, M.P.A.; Sharla Smith M.P.H.

**Research Objective:** The central objectives of this study are to develop evidence regarding the effect of consolidation on expenditures, workforce and services of local health departments (LHD) in Ohio and to deliver actionable and timely findings to inform consolidation policy decisions both in Ohio and around the nation.

**Data Sets and Sources:** Data sources include Ohio's Annual Financial Report (AFR) system and original data collected from interviews of stakeholders involved in LHD consolidation in Ohio since 2000. Financial, organizational and community characteristics will be incorporated from the PHAST database, which has merged sources like NACCHO's Profile and HRSA's Area Resource File.

**Study Design:** This study utilizes a mixed methods approach. Quantitative analyses will use a longitudinal design while qualitative analyses will utilize cross sectional semi-structured phone interviews with health commissioners and others who have participated in LHD consolidations occurring since 2000.

**Analysis:** Influence of consolidation on LHD expenditures and staffing will be derived using two approaches: a difference in difference model with matched control group and a second using Munkin and Trivedi's (2003) self selection model. Data from the qualitative component of the study will be analyzed using thematic coding techniques.

**Principal Findings:** Preliminary findings from the analysis conducted on a partial sample of consolidations indicate that there may be some savings associated with consolidation, particularly in the area of administrative costs.

**Conclusion:** Forthcoming.

**Implications for the Field of PHSSR:** When completed, this study will provide evidence to inform the consolidation debate in Ohio and around the nation.

## SESSION 1C: Finance — Room: Thoroughbred 3

**Moderator: Patrick Bernet, Ph.D., M.B.A.**
**Associate Professor of Healthcare Finance**
**Florida Atlantic University**

**Betty Bekemeier, Ph.D., M.P.H., M.S.N., RN**

### *Local Health Department Expenditures on Maternal/Child Health Impact Health Outcomes: Findings From PHAST and for Advancing Policy Discussions*

**Co-Investigators:** Youngran Yang, Ph.D., M.P.H., RN; Michael Morris, Ph.D., M.P.H.; Matthew Dunbar, Ph.D.; David Grembowski, Ph.D., M.A.

**Research Objective:** 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 maternal/child health (MCH) expenditures for 102 LHDs from 2000-2010. Our purpose was to investigate the relationship between LHD expenditures on MCH services and related health outcomes.

**Data Sets and Sources:** Unpublished annual LHD expenditures, obtained from state health departments in Washington and Florida, represented financial investments in three MCH service areas. These data were linked with county-level socio-demographic controls and MCH outcomes. Outcomes included no/late prenatal care rates, births to females age 15-19, low birth weight, and infant mortality (IMR).

**Study Design:** We used a multivariate panel-time series design using robust standard errors to statistically estimate the ecologic associations between these MCH expenditures by LHDs and related outcomes over 11 years, while controlling for other factors. Three-year smoothed rates of each outcome variable were compared to the previous year's expenditures.

**Analysis:** Three-year smoothed rates of each outcome were compared to previous year's expenditures and examined for relationships to health, while controlling for other factors. Stratified analyses were conducted with jurisdictions categorized as "poor" (among a state's top one-third most impoverished counties) and "non-poor" (the two-thirds counties with lower poverty rates).

**Principal Findings:** Outcomes were consistently in the expected, beneficial directions, but with the most significant relationships indicated in "non-poor" counties. The strongest beneficial relationships were indicated among the more targeted expenditures—i.e. each program-specific expenditure (such as for WIC and Family Planning). The least strong relationships existed with overall, total LHD expenditures.

**Conclusion:** Relationships exist between an LHD's MCH expenditures and outcomes. This relationship appears stronger in more affluent communities where targeted MCH services may have more of an impact on populations that already have greater health advantages, versus where other unmeasured community factors impede the effect of these services in impoverished jurisdictions.

**Implications for the Field of PHSSR:** Findings have policy implications suggesting that expenditures by LHDs on MCH-related services do have a beneficial relationship with important health indicators. Researchers using detailed, program-specific data may produce stronger, more focused findings for practice and policy decision-making.

*SESSION 1C: Finance -Tuesday, April 9, 2013, from 2 to 3:15 pm*

## Beth Resnick, M.P.H.

### *Executives' Reflections on Success in Priority-Setting*

**Co-Investigators: J.P. Leider, Ph.D. (presenting)**; Beth Resnick M.P.H.; Jessica Young, M.S.

**Research Objective:** As part of the Setting Budgets and Priorities project, we sought to understand how state public health leaders saw their successes and failures during budget- and priority-setting. This presentation will report out the results of this particular line of inquiry in this project.

**Data Sets and Sources:** 45 interviews and 207 survey responses from state public health leaders

**Study Design:** Using a mixed-methods process, we first interviewed 45 state health agency leaders around issues of resource allocation. Next, we fielded a complementary national survey to all state health agencies. We received 207 responses (66% response rate).

**Analysis:** We transcribed, cleaned, and coded the interview data and open-ended question on the national survey. Major themes were identified - one of which revolved around self-identified success (and failure) in budget- and priority-setting. A closely related theme was identified on how respondents would change the process, if they could.

**Principal Findings:** Respondents identified political acumen; good, sourced data; demonstrable results; established need; skilled staff; and organizational characteristics as drivers of success. Thirty-nine interviewees discussed changing priority-setting. Nine said they were satisfied with the process. The remainder said they wanted: greater flexibility, less political involvement, better data, and a more systematic approach.

**Conclusion:** Self-identified success is highly context-dependent. In these times of political scarcity, some respondents identified any service growth as a "win," where others viewed their success as relative to previous years and previous funding levels. Political influence is clearly a primary challenge of priority-setting.

**Implications for the Field of PHSSR:** More characterization of political influence on priority-setting at the state health agency level is needed. These data also suggest that success is context-dependent, but that universally accessible tools (like good epidemiological and comparative financial data) may aid practitioners during times of higher scrutiny and budget scarcity.

## Michael Meit, M.A., M.P.H.

### *The State of the States: Public Health Financing in the U.S.*

**Co-Investigators:** Amy Nevel, M.P.H.; Alana Knudson, Ph.D.; Ilana Dickman, M.P.H.

**Research Objective:** The limitations of available public health financing data affect the ability of public health practitioners, researchers, and policy-makers to define effective and efficient decision-making processes for resource allocations. This study explored how funding sources from federal, state, and local levels support the governmental public health system in the United States.

**Data Sets and Sources:** Quantitative revenue and expenditure data were collected through financing templates that were developed based on the ASTHO and NACCHO profiles. Qualitative data were collected through semi-structured interviews with public health system representatives such as health department program staff, state budget office staff, and other community organizations' staff.

**Study Design:** Seven case studies were conducted with states diverse in their health department structure, services provided, geography, size of population, and overall state and health department budgets. The study included data collection through financing templates and case studies, as well as a literature review and interviews with subject matter experts.

**Analysis:** Quantitative data collected through financing templates were explored for key themes and trends across program areas and localities. Qualitative data collected through semi-structured interviews were grouped by key theme.

**Principal Findings:** Study findings noted variation in how state and local public health agencies report expenditures and revenues, specifically variations in inclusion and exclusion criteria, among other issues. Examples include challenges defining public health and program areas; superagency structure issues; defining fiscal years and budgets; and distinguishing state money versus federal flow-through.

**Conclusion:** With increased demands for accountability of public resources, budget constraints resulting from the recent economic downturn, and shifting demands arising from the passage of the Affordable Care Act, it is imperative for public health stakeholders to understand and track financing processes and allocations to facilitate well-informed decision-making and resource prioritization.

**Implications for the Field of PHSSR:** These issues have important implications: Limitations of currently available financing data affect public health practitioners, researchers, and policy-makers as they define effective and efficient decision-making processes for public health resource allocations. Consistent terminology and clearly defined categories can help ensure that public health data be easily compared across jurisdictions.

## Maggie Paul, M.S.

### *Estimating the Impact of Public Health and Social Welfare Investment on Population Health in the United States*

**Co-Investigators:** None named.

**Research Objective:** This study compares overall and program-specific public health investment and associated population health outcomes across local jurisdictions to estimate: (1) impact of high public health investment on population health; (2) impact of high social welfare investment on population health; (3) impact of high investment in both policy areas on population health.

**Data Sets and Sources:** Data provided by the National Association of County and City Health Officials (NACCHO) will be used in the cross-sectional component of the study, whereas data from the Florida Public Health Administrative Data Collaborative (FADC) will be used for the longitudinal component.

**Study Design:** The study consists of a longitudinal component, using data from one state, Florida, to examine the investment-outcome relationship over the course of 10 years (2001-2011). A cross-sectional analysis performed using 2010 NACCHO finance data will be used to supplement the longitudinal study.

**Analysis:** Genetic matching will be used in the cross-sectional component of the study to compare spending and outcome levels across jurisdictional boundaries. Multilevel modeling will be used to examine the longitudinal, program-specific data from Florida.

**Principal Findings:** The analyses are forthcoming. Hypotheses: (1) Public health spending immediately affects communicable disease outcomes; (2) Social spending has a positive, lagged effect on all-cause mortality (strongest for poorest); (3) High spending in both areas produces more desirable health outcomes than the sum of the effects of independent high spending.

**Conclusion:** Forthcoming.

**Implications for the Field of PHSSR:** Results of this research have the potential to inform efforts to monitor the effects of changes in policy and funding in real-time. Research in this area is critical to formulating a public finance policy agenda rooted in a strong understanding of its effects on health.

*SESSION 1D: Partnerships-Tuesday, April 9, 2013, from 2 to 3:15 pm*

## SESSION 1D: Partnerships — Room: Thoroughbred 5 & 6

**Moderator: Carmen Nevarez, M.D., M.P.H.**
**Vice President for External Relations and Preventive Medicine Advisor**
**Public Health Institute**
**National Advisory Commttee for PHSSR Member**

### Kusuma Madamala, Ph.D., M.P.H.

***Shared Service Arrangements Among Local and Tribal Health Departments in Wisconsin***

**Co-Investigators:** Nancy Young, M.P.A.; Dustin Young, B.A.; Lieske Giese, M.S.P.H., B.A., RN; Dan Stier, J.D.; Terry Brandenburg, M.B.A., M.P.A.; Susan Zahner, Dr.P.H., RN

**Research Objective:** Explore current and future use of shared service arrangements as a management strategy to increase capacity to provide public health essential services in Wisconsin.

**Data Sets and Sources:** Select variables from the 2010 Wisconsin Local Health Department survey were merged. Other data sources included results from a Board of Health governance analysis and the Wisconsin Department of Health Services region data.

**Study Design:** Online cross-sectional survey of 99 local and tribal health departments in Wisconsin

**Analysis:** Ninety-one of 99 Wisconsin local and tribal health departments responded, yielding a 92% response rate. Descriptive analysis was performed of current and future shared service arrangements and the characteristics of the types of arrangements and agreements in place.

**Principal Findings:** Seventy-one percent of respondents share services with one or more LHDs, with more frequent arrangements in programmatic areas than in departmental operations. Motivators include making better use of resources, providing better services, and responding to program requirements. Findings indicate arrangements accomplished what was intended, with perceived gains in efficiency and effectiveness.

**Conclusion:** There is widespread use of shared services among health departments in Wisconsin. Extensive qualitative comments suggest participant satisfaction with what the arrangements have accomplished. Motivating factors in developing the arrangements and limited mention of expiration dates suggests continued study of how these arrangements may evolve.

**Implications for the Field of PHSSR:** Further examination of shared services as a potential mechanism to advance service effectiveness and efficiency is needed. Potential research questions include: How do shared service arrangements change over time? What are emerging drivers? What evidence exists to support the perception of gains in efficiency and effectiveness resulting from shared services?

### Paula Soper, M.P.H., M.S.

***Strengthening Public Health Information Infrastructure through Collaborations: Lessons From Beacon Communities***

**Co-Investigators:** None named.

**Research Objective:** The research objective was two-fold: understand the impact of the federally funded Beacon Communities Program (BCs) on public health agency information infrastructure in funded communities; identify and document methods and practices with demonstrated results for translation and dissemination to the public health practice community.

**Data Sets and Sources:** Qualitative data were collected through semi-structured interviews with key informants and focus groups with intervention participants. Additional artifacts were collected from sites, such as annual reports, advisory committee minutes and evaluation reports. Quantitative data on intervention outcomes were available from BCs through their evaluation activities.

**Study Design:** Mixed-methods nested case study design was used; six BCs included were determined to have substantive public health activities. Individual case studies and nested case studies were developed to draw conclusions within and across communities to ascertain impacts of public health agency involvement in BCs on their systems and infrastructure.

**Analysis:** NVIVO® software was used to organize, code and analyze qualitative data. Standard practices were used for codebook development and document coding. Additional analysis of quantitative data was not required. Data triangulation was employed to validate findings among data sources both within individual cases and across all cases.

**Principal Findings:** Public health agencies that had meaningful involvement in Beacon Community information technology (health IT) and health information exchange (HIE) initiatives led to improvements in public health systems and information technology infrastructure, reach of population health services, and coordination with health care providers in their communities.

**Conclusion:** Active participation of public health agencies in state and local health IT and HIE initiatives is vital to ensuring public health priorities are addressed. Involvement in these initiatives strengthens public health systems through enhanced ability to provide population health services and monitor health trends in communities.

**Implications for the Field of PHSSR:** Health IT and HIE offer significant opportunities for PHSSR both as important sources of population health outcomes data and as a field of study to understand how public health agencies can leverage these community resources to strengthen infrastructure and better communicate and collaborate with the health care system.

## Karl Ensign, M.P.P., B.A.

### *Where are State Public Health Agencies Headed? A Qualitative Review of Strategic Maps*

**Co-Investigators:** Paul Jarris, M.D., M.B.A.; Katie Sellers, Ph.D.; Tim Fallon, B.S.; Laurie Schulte M.P.A.; Alison Mendoza, M.P.H.

**Research Objective:** The objective is to determine the strategic directions identified by state public health agencies and their plans for implementation. The overarching goal is to improve the research and practice fields' understanding of state public health agency strategies to improve population health.

**Data Sets and Sources:** A content analysis of the strategic maps (graphical depictions of strategic plans) was conducted. The strategic maps were developed by state public health agency officials and staff through a structured, collaborative process facilitated by TSI, Inc. The maps and back-up documents for the time period 2008–2012 were analyzed.

**Study Design:** A content analysis was conducted of the strategic maps and back-up documents. Researchers adapted the grounded theory approach to qualitative analysis for this project. Key terms were identified and refined through an iterative process. A standard framework of key terms and categories was defined and identified.

**Analysis:** Researchers independently coded and compared content for: 1) What do state public health agencies (SPHAs) identify as their central challenges? 2) How do SPHAs define their strategic priorities? 3) Cross-cutting objectives identified? 4) What tracks of work did participants identify and prioritize? 5) Do differences emerge over time?

*SESSION 1D: Partnerships-Tuesday, April 9, 2013, from 2 to 3:15 pm*

**Principal Findings:** The analyses revealed that SPHAs focus on setting and achieving both internal and external strategic directions and priorities. In addition to improving internal processes and achieving outcomes, SPHAs focus on better outreach and communication to key constituents.

**Conclusion:** SPHAs are moving ahead and undertaking comprehensive, yet targeted strategic planning efforts in a challenging and changing environment. Effective communication and resource management and identification are key. Continued research in these areas would benefit these strategic efforts.

**Implications for the Field of PHSSR:** Identifying the priorities and strategies on which SPHAs are focused provides a framework against which researchers can relate and interpret accomplishments and outcomes they discover. This will also help guide and inform future directions for research. Explicitly making these connections in the research world will help inform SPHA strategic efforts.

## Sharla Smith, M.P.H., B.S.

### *The Impact of Economic Constraints on Public Health System Partnerships*

**Co-Investigators:** None named.

**Research Objective:** To document the degree of variation in public health system partnerships (PHSP) and change in network structural characteristics; and explore factors influence variation and change in public health system partnerships, especially with respect to financing LHDs.

**Data Sets and Sources:** The data include the 1998 and 2006 National Longitudinal Study of Public Health Agencies (NLSPHA). The NLSPHA is a survey that was administered to a randomized sample of the nation's 2,900 local health department directors to determine the availability of 20 common public health activities.

**Study Design:** A longitudinal cohort design will be used to examine economic constraints impact on structural changes in PHSPs among a sample of the nation's local health departments in 1998 and 2006.

**Analysis:** Multivariate analyses are used to examine the association between public health system partnership structural changes and economic constraints (revenue). Additionally, network analysis methods are used to assess changes in public health system partnerships and the factors that may explain variation and change.

**Principal Findings:** Results will document the degree of variation in public health system partnerships and identify the characteristics that may influence variation in public health system partnerships. These findings will suggest ways in which public health system partnerships serve as vehicles for addressing public health agencies' budget constraints.

**Conclusion:** Public health system partnerships may enhance and improve public health service delivery and activity performance. Findings may be used to develop policies and funding mechanisms to encourage partnerships.

**Implications for the Field of PHSSR:** Results from this study can be used by public health agencies and policy-makers to identify opportunities to enhance collaboration and capacities.

## SESSION 1E: Technology & Data I — Room: Thoroughbred 7 & 8

**Moderator: Michele Issel, Ph.D.**
**Clinical Professor in the Community Health Sciences Division of the School of Public Health**
**University of Chicago**

### Mary Jo Baisch, Ph.D., RN

***The Status of LHD Information Systems: A Critical Need for Coordination to Inform Meaningful Health Improvement Initiatives***

**Co-Investigators: Jeanette Olsen, M.S.N., RN (presenting)**; Nancy J. Kreuser, Ph.D., M.S.N., RN

**Research Objective:** The examination of information systems and standard terminologies among LHDs is critical for discerning priority public health informatics initiatives and interventions. A statewide study was conducted to identify information systems and standard terminologies used to describe public health practices in LHDs, and explore LHD leaders' perceptions of existing systems.

**Data Sets and Sources:** Adapted from the 2010 Oregon Health Information Technology Oversight Council's survey of LHDs, an electronic survey was disseminated to Wisconsin LHD health officers/directors (N=88) in December 2012. Response rate: 75% (n=66).

**Study Design:** Using a cross-sectional, descriptive design, the questionnaire was used to collect both quantitative and qualitative data: numbers and types of information systems utilized in local health departments and LHD staff's perceptions of their utility, respectively.

**Analysis:** Descriptive statistics were used to analyze the number of systems in use, level of satisfaction with current systems, and use of standard terminologies to describe practices. Qualitative, thematic analysis was used to analyze narrative survey responses regarding challenges, needs, priorities and plans.

**Principal Findings:** Eighty-five systems were used by one or more LHDs; only four were used by 94-100% of departments. Four standard terminologies were used: ICD9(25%), CPT(14%), ICD10(8%), and OMAHA(8%). Deficiencies and challenges: lack of system integration/intercommunication; need for outcomes data that captures public health work; and need for training and/or user-friendly systems.

**Conclusion:** Findings indicate that there is a clear and urgent desire among LHDs for integration and coordination of information systems, training and funding, so that they can provide state public health leaders with specific, meaningful data that can be used to guide informatics initiatives and interventions and influence state-level budget and policy decisions.

**Implications for the Field of PHSSR:** This study is aligned with the Public Health Information and Technology area of the National Research Agenda for PHSSR. Specifically, it contributes to the knowledge base needed to inform initiatives to advance capabilities, to assess and monitor health outcomes, and improve communication technologies.

*SESSION 1E: Technology & Data I-Tuesday, April 9, 2013, from 2 to 3:15 pm*

## Holly Jarman, Ph.D.

### *Implementing Health Information Exchange: Exchanging Immunization Data in Michigan*

**Co-Investigators:** None named.

**Research Objective:** The potential for Health Information Exchange (HIE) to improve population health outcomes is offset by several sizable implementation challenges. This project assesses the implementation of the State HIE Cooperative Program through the lens of public health delivery. Preliminary findings will be presented from a targeted case study of HIE implementation in Michigan.

**Data Sets and Sources:** The project utilizes original qualitative data: semi-structured interviews with key actors in sub-state and state-level HIOs in Michigan and two other comparator states. The interview data are analyzed in conjunction with existing state and federal surveys of HIOs, and a review of primary documents.

**Study Design:** The Michigan case is part of a wider project supported by the RWJF PHSSR Mentored Research Scientist Development Award program. The study is designed to use qualitative data to construct a dynamic simulation of HIE usage that can inform the process of incorporating public health-relevant data into HIE systems.

**Analysis:** The project utilizes an iterative approach to data analysis and model verification. Interviews are conducted in two waves to allow re-assessment of model assumptions, together with more frequent interactions with a group of key actors. Interview transcripts are coded independently by two researchers and codes statistically compared for accuracy.

**Principal Findings:** Forthcoming.

**Conclusion:** Effective and sustainable HIE requires overcoming problems of organizational collaboration as well as technological barriers. The bureaucratic organization of the state public health infrastructure has a significant impact on the extent of HIE usage for public health purposes.

**Implications for the Field of PHSSR:** The potential public health benefits of HIE are not as prominently highlighted by policy-makers as the personal benefits for patients of adopting EHRs, but they remain significant. This project aims to contribute to our understanding of how to create sustainable systems of health information exchange that support population health.

## Joshua R. Vest, Ph.D., M.P.H.

### *Sharing Data Between Local Health Departments & State Health Agencies: Needs, Challenges and Workarounds*

**Co-Investigators:** L .Michele Issel, Ph.D., RN; Sean Lee; Julie Beth Heiniger

**Research Objective:** Problematically, public health practitioners work within a system and at local health departments (LHDs) that may impose substantial barriers to the effective the use of information. Through qualitative interviews, we sought clarification on how public health practitioners attempt to make effective use of public health data within this complex arrangement.

**Data Sets and Sources:** We conducted interviews at an urban Texas LHD, a rural Georgia LHD, and a medium-sized city LHD in Illinois. We interviewed a total of 12 public health practitioners working in the key practice areas of communicable disease control (n=4), immunizations (n=4), and vital records (n=4).

**Study Design:** Data were collected through in-person interviews following a semi-structured format with open-ended questions. Interviews covered job descriptions, daily activities, and the use and perceptions of both data and public health information systems (IS) in support of their work.

**Analysis:** Data analysis followed a general inductive approach. Independently, we read the transcripts and employed open coding to identify tentative themes within the data.

**Principal Findings:** Interviews reported inefficient activities like duplicate data entry; manually counting records; searching for individuals in multiple non-interoperable IS; or faxing records even when a supposedly shared IS existed. This took employees away from other activities or slowed data sharing between organizations. To fulfill data needs, practitioners constructed workarounds and "make-work."

**Conclusion:** LHDs face a challenge in both meeting the data needs of practitioners and turning data into information for action. LHDs do need to increase organizational capabilities around data management and rely less on paper records and forms.

**Implications for the Field of PHSSR:** LHDS and SHAs must also work collaboratively to ensure their respective IS are interoperable and that policies are in place to ensure end user accessibility of data in shared IS.

# SESSION 2-WEDNESDAY, APRIL 10, 2013 FROM 9 TO 10:15 AM

## SESSION 2A: Preparedness — Room: Thoroughbred 1

**Moderator: Jennifer Ibrahim, Ph.D., M.P.H.**
**Associate Director**
**Public Health Law Research Program**

### Mary Davis, Dr.P.H., M.S.P.H.

***Creating a Preparedness Index, Easier Said Than Done***

**Co-Investigators:** Christine Bevc, Ph.D., M.A.; Anna Schenck, Ph.D.

**Research Objective:** This presentation will discuss the benefits, limitations and implications associated with the use of preparedness measures indices. Previous composite measures often assume equal variable weighting, discounting relationships among variables. Simple additive indices unduly "penalize" those organizations with fewer capacities, as well as those organizations that reported greater number of capacities.

**Data Sets and Sources:** Using longitudinal data collected by the LHD Preparedness Capacities Survey (P-CAS), this analysis will examine the preparedness capacities of 85 local public health agencies in North Carolina and a matched comparison group of 248 public health agencies.

**Study Design:** Two years of survey data will be used to examine changes in local preparedness capacities over time and examine the relationship among local characteristics and preparedness. Testing various preparedness analysis methodologies will help us understand the impact that performance measurement systems and tools can have on public health strategies.

**Analysis:** Data will be used to examine changes in local preparedness capacities over time and examine the relationship among local characteristics and preparedness. Detailed analysis of preparedness capacities will examine varying index methodologies and calculations to illustrate differences in preparedness levels and, subsequently, varying potential policy decisions.

**Principal Findings:** Results found significant differences among calculations in multiple preparedness domains, including surveillance, communication, workforce, plans/protocols, and legal infrastructure.

**Conclusion:** These findings will advance preparedness measurement for health departments to help track and improve performance. These findings translate more broadly to ongoing efforts to define a Public Health Preparedness Index.

**Implications for the Field of PHSSR:** This presentation will help us to better understand the impact that performance measurement systems and performance management tools can have on public health strategies delivered at local, state, and national levels. The findings serve to advance the measurement and scoring methods and models for public health strategies.

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

***Translating Legal Research to Promote Preparedness Within Public Health Systems***

**Co-Investigators:** None named.

**Research Objective:** Our first objective was to analyze key legal issues that arise relative to mental and behavioral health during and shortly after emergencies. Our second objective was to translate our legal analyses into concise tools for practitioners with the public health system.

*SESSION 2A: Preparedness-Wednesday, April 10, 2013, from 9 to 10:15 am*

**Data Sets and Sources:** Our set of translational tools was created using the findings from legal analyses conducted by our project team. The sources for our legal research included legislation, regulation, judicial opinions, and guidance documents from U.S. federal, state, and local governments.

**Study Design:** In consultation with a Project Advisory Group (PAG) consisting of lawyers, ethicists, and public health practitioners, we identified key legal topics to analyze (e.g., deployment of mental health professionals in emergencies). For each legal topic we researched, we drafted an accompanying translational tool.

**Analysis:** We created a set of eight translational tools. Each tool was vetted by PAG members from multiple disciplines (e.g., mental health, law, preparedness), and revised to incorporate their feedback. The tools are intended to promote emergency preparedness for mental and behavioral health within the public health system.

**Principal Findings:** Law has the potential to both enhance and obstruct emergency response and recovery efforts. Our translational tools address this concern by providing information and recommendations in areas such as prescribing authority; liability for health care professionals; disability rights; and substance abuse treatment.

**Conclusion:** Some aspects of the legal environment relative to mental and behavioral health may pose challenges within the public health system, especially during and after emergencies. Through our legal research, we identified and analyzed several areas of importance to public health practitioners. Our translational tools offer brief analyses and recommendations.

**Implications for the Field of PHSSR:** Within the public health system, many professionals have no legal training. We created a set of translational tools regarding legal preparedness specifically for these individuals. The tools were vetted by a multidisciplinary group, containing several members with no legal training. The tools will be made available during the presentation.

## William Riley, Ph.D.

### *Leadership and its Effects on Team Performance in Public Health Emergency Response*

**Co-Investigators:** Gulzar Shah, Ph.D., M.S.; Paige Bowen, M.P.H.; Mickey Scullard, M.P.H.; Cheryl Petersen-Kroeber, B.S.

**Research Objective:** Research objectives are to: 1) assess effect of controller-led in situ simulation on emergency response capacity of state health department; 2) study effects of training on team function, dynamics, and communications among staff responsible for emergency operations at state health department; and 3) train public health teams for high reliability.

**Data Sets and Sources:** Thirty trials (one-hour functional exercises) conducted in the state department operations center over a 16-month period (May 2010 to September 2011). Data gathered using in situ simulation methodology (recording, live viewing, playback analysis). Behavioral markers data collected using event set observational tool (24 recordings analyzed); decision-making data collected using decision taxonomy tool (22 recordings analyzed).

**Study Design:** This quasi-experimental intervention with time-series analysis and comparison group determined effects of the intervention on participants. The study measured team performance in public health preparedness context; examined impact of intervention to achieve high reliability in emergency operations center; and looked at the relationship among behavioral markers, decision-making, and team performance.

**Analysis:** Using a descriptive, longitudinal analysis, we examined the frequency and distribution of behavioral markers to identify and describe: distinct phases of team formation and reformation during incident response; patterns and distribution of team behaviors across phases; and the relationship among behavioral markers (non-technical skills), leaders, and team effectiveness/performance.

**Principal Findings:** Data indicate that a leader's experience, training, expertise impacts team performance positively (in case of strong leader), as measured by trial scores. Converse is also true – poor leader, negative impact. We infer that team behavior dependent on/associated with leader behavior, and identifiable behaviors of leaders exist based on leadership skills.

**Conclusion:** Our research shows that public health emergency response team performance depends to a certain degree on who the leader is during the response/exercise. To effectively train and prepare response teams, it is essential to understand how non-technical skills, behavioral markers, and leadership interact and impact team performance and high reliability.

**Implications for the Field of PHSSR:** The intervention may be less important in improving response team performance than the leader and his training and experience. No study of leaders at the micro-system level exists with respect to behavioral markers necessary to achieve high reliability in crisis settings. Our data and findings provide insight into that process.

## Elizabeth Ferrell Bjerke, J.D., M.S.

### *Wait! The Public Health System Looks Like That?*

**Co-Investigators:** None named.

**Research Objective:** To determine whether public health agents are directed to function as an interconnected, coordinated and effective planning and response system for emergencies with public health consequences.

**Data Sets and Sources:** State laws and regulations directing emergency preparedness, response and recovery.

**Study Design:** Statutes and regulations in 11 states were identified and screened for relevancy. Numeric representation in nine different categories were assigned to the legal text; "data" were created; and legal networks were presented in a visualized form. Network analysis measured the inclusiveness, degree and strength of 26 discrete public health agents.

**Analysis:** Network analysis identified those agents with frequently directed roles and responsibilities ("inclusiveness"); those central to the public health system ("degree of connection"); those agents that were underutilized; and agents with frequent pairings ("strength"). These analyses allowed for inter-jurisdictional comparisons of how agents are legally directed.

**Principal Findings:** Agents with consistently high strength for all emergency types included administrative agencies and elected officials. Unexpectedly, agents with low strength included doctors, departments of agriculture and transportation, and hospitals. Also surprising was that laws gave little directives to health care providers (community health centers, homes health agencies, etc.).

**Conclusion:** Application of network methods and legal analysis allows planners and policy-makers to see, measure, and make inter-state comparisons of legal directives among public health system agents. Consistency in those centrally important agents suggests a need for redundancy to prevent infrastructure failures. Outreach to underutlized agents should be considered.

**Implications for the Field of PHSSR:** Cross-state differences suggest that legal directives present in some states might be considered to improve/enhance activities in states where they are absent. Planners and policy-makers can use the legal network measures to identify areas for increased attention. More intensive study of the resulting legal implications needs to be made.

*SESSION 2B: Translation I-Wednesday, April 10, 2013, from 9 to 10:15 am*

## SESSION 2B: Translation I — Room: Thoroughbred 2

**Moderator: Paul Erwin, M.D., Dr.P.H.**
**Co-Principal Investigator**
**National Coordinating Center for PHSSR**
**University of Tennessee**

### Lisa VanRaemdonck, M.P.H., M.S.W., B.S.

***Are the Principles of Partnership for Community-Based Participatory Research Useful for Practice-Based Participatory Research?***

**Co-Investigators:** Betty Bekemeier, Ph.D., M.P.A., RN; Anna Hoover, M.A.; Nancy Winterbauer, Ph.D., M.S.

**Research Objective:** This study examined Principles of Partnership for Community-Based Participatory Research (CBPR) in the context of Public Health Practice-Based Research Networks (PH PBRNs). Objectives were to explore the relevance of the nine CBPR principles (Israel et al., 2003) to public health practice-based research partnerships and their potential to strengthen practice-academic partnerships.

**Data Sets and Sources:** An expert panel of PH PBRN leaders from four states was convened. Data sources included Barbara Israel and colleagues' seminal works on CBPR (1998, 2003); historic documents from the National Coordinating Center for PBRNs; and the authors' experiences in CBPR, practice-based participatory research (PBPR), and PH PBRNs.

**Study Design:** The study is grounded in various theories of participation, including theories of power, empowerment, and community participation. The project was designed as an expert panel review and included panelists with substantial knowledge and experience in public health practice, research, multi-stakeholder engagement, and PBPR.

**Analysis:** Analysis was based on iterative discussion and consensus decision-making, common participatory techniques.

**Principal Findings:** The CBPR Principles of Practice are useful to PBPR both in terms of process (reflections on principles and practice) and as strategies for partnership development and strengthening. Principles of equity, co-learning and capacity-building, dissemination, and commitment emerged as particularly significant to partnership development in PH PBRNs.

**Conclusion:** Results indicated that with the flexibility inherent and intended in CBPR, the guidelines are generally useful for partnership building in PH PBRNs. Additionally, the process of examining CBPR Principles of Partnership in the context of PBPR proved enlightening by prompting deep consideration of frequently taken-for-granted aspects of both CPBR and PBPR.

**Implications for the Field of PHSSR:** Existing PH PBRNs wishing to strengthen their practice-academic partnerships, as well as individuals and coalitions interested in developing PH PBRNs, are likely to find CBPR guidelines helpful in building and sustaining their networks. PH PBRN collaborators exploring the comparison as a group may find the exploration itself useful for strengthening their partnerships.

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

***Pracademics as Culture Brokers in Practice-Based Participatory Research***

**Co-Investigators:** Carole Myers, Ph.D., RN

**Research Objective:** Study objectives were to: 1) describe roles and responsibilities *pracademics* (individuals with public health practice and academic experience) are engaged in; and 2) describe the special insight pracademics bring to their roles in practice

and academia, emphasizing tensions between practitioners and researchers, benefits, and opportunities for interdisciplinary bridges.

**Data Sets and Sources:** Data consist of qualitative interviews with individuals identified as pracademics. For the purposes of this study, pracademics were defined as individuals with professional experience in both academic and public health practice roles.

**Study Design:** Recruitment began with six individuals known to the investigators to meet the study definition of a pracademic. At the conclusion of the qualitative interviews, participants identified additional individuals meeting the study definition (chain referral). Purposive sampling ensured a reasonable mix of Public Health Practice-Based Research Network (PH PBRN) and non-PH PBRN respondents.

**Analysis:** We conducted a qualitative descriptive study using content analysis. Our initial coding scheme was informed by the literature and our own experience. Themes were identified based on repeated and close reading of transcripts. Rigor was enhanced by participation of two investigators in qualitative data collection, coding and interpretation.

**Principal Findings:** Major themes included the recognition that public health academic researchers and practitioners inhabit two distinct cultural worlds. Differences are apparent in the language, values, identity, and time-sensitivity of each group. Nonetheless, participants valued these relationships and offered a variety of suggestions for improving relationships between academics and practitioners.

**Conclusion:** Public health practitioners and academics differ in a number of important ways that present challenges to practice-academic research partnerships. However, recognition of these differences, along with a commitment to actively identify opportunities to strengthen collaboration, will benefit academic researchers, practitioners and public health practice.

**Implications for the Field of PHSSR:** A number of tensions exists between public health academic researchers and practitioners. Individuals working in practice-based, public health services and systems research could enhance their work by recognizing and attending to these tensions by identifying opportunities to strengthen academic-practitioner relationships.

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

### *Level of Community Engagement in Academic Health Departments*

**Co-Investigators:** Margaret Knight, Ph.D., M.P.H.; Kathleen Amos, M.S.; Julie Grubaugh, M.P.H.; Charles Hamilton, Dr.P.H.

**Research Objective:** The project objective is to describe the level of *engagement* in academic health departments (AHDs) *as perceived by each partner*. Engagement involves "the mutually beneficial exchange of knowledge and resources in the context of partnership and reciprocity" and the formation of relationships that "influence, shape, and promote success" for both partners (Carnegie Foundation).

**Data Sets and Sources:** Data are being collected from a convenience sample of self-identified partner dyads from the membership of the Academic Health Department (AHD) Learning Community. Each partner dyad consists of a primary representative from the practice and academic organization jointly involved in an AHD.

**Study Design:** The survey tool that will be utilized is derived with permission from the PARTNER© survey tool. The survey has been altered by changing the question language to reflect the focus on dyads. Questions were also added to assess the formalized basis of each dyad and to collect additional demographic information.

**Analysis:** Descriptive statistics will be employed for quantitative responses. Open-ended, qualitative responses will be analyzed using conventional (inductive) content analysis. Conventional, or inductive, content analysis develops categories from the data rather than from the literature and is ideal when there is limited previous research.

**Principal Findings:** Data collection is still in progress.

*SESSION 2B: Translation I-Wednesday, April 10, 2013, from 9 to 10:15 am*

**Conclusion:** Descriptions and analysis of the perceived level of engagement within and across AHD dyads will add new understanding of facilitators and barriers to the development of sustainable, vital, and mutually beneficial AHD partnerships.

**Implications for the Field of PHSSR:** AHDs have the potential to be a community engagement exemplar in which the partners work together to address the plethora of current, emerging, and future challenges and opportunities associated with health, the delivery of public health services, and the development and maintenance of an effective public health workforce and pipeline.

## Betty Bekemeier, Ph.D., M.P.H., RN

### *Engaging Local Public Health Practitioners in Data Analysis and Interpretation: The PHAST Experience*

**Co-Investigators:** Matthew Dunbar, Ph.D.; Michael Morris, Ph.D., M.P.H., CPH; David Grembowski, Ph.D.; Greg Whitman

**Research Objective:** PHSSR is among the research fields most focused on active collaboration between practitioners and academics. An essential element of such collaborations is academics' ability to present information in modes practitioners can use. This study shares findings of the PHAST team in collaborating with public health practitioners across the country.

**Data Sets and Sources:** Data for this study were derived from qualitative interviews and an online survey of public health practitioners who have collaborated with the PHAST team on a variety of PHSSR projects.

**Study Design:** Mixed methods study utilizing cross sectional data from practitioner partners who have collaborated on PHAST projects.

**Analysis:** Bivariate statistics and qualitative thematic analyses were utilized depending on which elements of data are being considered.

**Principal Findings:** Practitioners can be highly engaged in the PHSSR process if consideration is made to optimize data presentations so as to make more efficient use of practitioners' time. Geospatial displays of data are well-liked and understood, but are limited in the number of variables that can be presented at once.

**Conclusion:** Mapping is an effective way to convey information to practitioner research partners, but is limited in the complexity of the variables that can be included. PHSSR as a field needs additional investigation into using different methodologies for presenting data, particularly complex data, in order to optimize the collaboration with practitioners.

**Implications for the Field of PHSSR:** Additional systematic research is needed on data visualization techniques in PHSSR research. The limited time that practitioners can invest in research activities makes it imperative that academic researchers identify best practices for presenting data.

## SESSION 2C: Organization

Room: Thoroughbred 3

**Moderator: Carol Moehrle**
**Director, Idaho North Central Public Health District**
**National Advisory Committee for PHSSR Member**

### Kay Lovelace, Ph.D., M.P.H.

***Predictors of Evidence-Based Decision Making and Population Health Practice in LHDs***

**Co-Investigators:** Robert Aronson, Dr.P.H., M.P.H.; Kelly Rulison, Ph.D.; Gulzar Shah, Ph.D., M.S.; Mark Smith, Ph.D., M.S.

**Research Objective:** To identify the frequency with which LHDs carry out Evidence-Based Decision Making (EBDM) and population health strategies in LHDs and state-, LHD-, and community-levels predictors of LHDs' use of these strategies.

**Data Sets and Sources:** Harmonized PHSSR dataset consisting of 2010 NACCHO Profile of Local Health Departments Survey, Module 2 respondents, 2010 ASTHO Profile of State Health Departments, U.S. Census data, and Area Resource File data.

**Study Design:** The study used multivariate analysis to identify predictors of EBDM and population health. We identified items in the 2010 NACCHO Profile Survey representing EBDM and population health strategies and constructed two composite dependent variables. Based on the PHSSR literature, we identified potential predictors at the state-, LHD-, and community levels.

**Analysis:** Using descriptive analyses, we determined the frequency with which LHDs carry out EBDM strategies and population health strategies. Hierarchical linear modeling (HLM) was used to identify factors that best predict LHDs' use of EBDM and population health strategies.

**Principal Findings:** Fourteen percent of LHDs engaged in six or seven (out of seven) EBDM strategies; and 15% used six or more (out of 10) population health strategies. Hierarchical linear modeling results will identify modifiable state health department, LHD, and community context predictors of LHDs' use of these strategies.

**Conclusion:** Based on data from the NACCHO Profile Survey, LHDs vary greatly in the extent to which they focus on EBDM and population health practice. The paths that lead LHDs to focus on EBDM and population health practice are complex and diverse.

**Implications for the Field of PHSSR:** For PHSSR research, more precise data definitions and questions are needed in national surveys such as the NACCHO and ASTHO surveys. More research is needed to understand how LHDs use EBDM strategies (and which ones they use) as well as how they make decisions about focusing on population health practice.

*SESSION 2C: Organization-Wednesday, April 10, 2013, from 9 to 10:15 am*

## Nathan Hale, Ph.D.

### *Public to Private Transitioning of Early Periodic Screening, Diagnostic, and Treatment (EPSDT) Services: A Successful Venture?*

**Co-Investigators:** None named.

**Research Objective:** To provide historical perspective on the impact of transitioning the provision of EPSDT services for children enrolled in Medicaid from local public health departments to the private sector in South Carolina.

**Data Sets and Sources:** South Carolina birth certificates, Medicaid eligibility and billing files were linked to create a retrospective birth cohort of Medicaid eligible children 0-24 months of age spanning the years 1995-2010.

**Study Design:** Longitudinal study methods were used to examine changes in the level of unmet need over time among a retrospective birth cohort of South Carolina children enrolled in Medicaid. A rolling panel of children 0-24 months enrolled in Medicaid between 1995 and 2010 was created and used for analysis.

**Analysis:** Latent growth curve and multi-level modeling techniques were used to examine changes on the level of unmet need over time while incorporating both fixed and time varying covariates, growth of several constructs simultaneously, and the embedded structure of the data.

**Principal Findings:** The initial transition of EPSDT services from local health departments increased the level of unmet need for a short period; however, the private sector was able to absorb the increased demand over time. The level of unmet need among children residing in rural areas remains higher than expected.

**Conclusion:** The transition of EPSDT services from local health departments to the private sector was ultimately a successful venture. Children have received more comprehensive care over time; however, assuring children in rural areas with minimal medical infrastructure receive these services remains a challenge that warrants consideration.

**Implications for the Field of PHSSR:** Although this study focuses on the provision of EPSDT services in South Carolina, the study findings, research questions, and methodologies could be applied any personal health care service currently provided by public health agencies with the potential to be appropriately shifted to other sources.

## Jill Moore, J.D., M.P.H.

### *Comparing Different Types of Local Public Health Agencies in North Carolina: Law, Perceptions and Data*

**Co-Investigators:** Maureen Berner, Ph.D.; Aimee Wall, J.D., M.P.H.; Milissa Markiewicz, M.P.H.; Johanna Foster, M.P.A.; Gene Matthews, J.D.

**Research Objective:** To compare local public health agency (LPHA) types on legal dimensions and selected financial, workforce, and service delivery measures; and to identify stakeholders' perceptions of the benefits and challenges associated with different types of LPHAs in North Carolina.

**Data Sets and Sources:** Legal: NC General Statutes, NC Administrative Code, reported cases of NC appellate courts. Qualitative: Atlas.ti analysis of transcripts from four focus groups and 31 key stakeholder interviews. Quantitative: NC Local Health Department Revenue Source Books, FY2006 to FY2010; NC Local Health Department Staff Surveys, FY2005 to FY2011.

**Study Design:** We conducted legal, qualitative, and quantitative analyses to compare the different types of LPHAs in North Carolina.

**Analysis:** We analyzed North Carolina laws to identify differences in LPHA structure and governance. Focus groups and key informant interviews identified stakeholders' perceptions of the benefits and challenges of each LPHA type. We performed descriptive statistical analyses on publicly available data to compare LPHA types on finance, workforce, and service delivery measures.

**Principal Findings:** Laws for governing boards, directors, personnel, and budget/finance vary by LPHA type. Stakeholders reported benefits and challenges of all LPHA types. LPHA types differ in sources of funding, especially percentage of funding from county appropriations. Expenditures and FTEs were lower for LPHAs serving larger populations, regardless of agency type.

**Conclusion:** Types of LPHAs in North Carolina are not entirely distinct from one another, and there was wide variation within categories of LPHAs. Nevertheless, we found important differences among our state's LPHA types that are relevant to policy-makers with responsibility for local public health systems.

**Implications for the Field of PHSSR:** Some states are considering restructuring LPHAs in hopes of achieving long-term efficiencies. North Carolina's experience in operating different types of LPHAs (single- and multi-county health departments, public health authorities, consolidated human services agencies) can provide valuable information to policy-makers who are examining how best to organize their local public health systems.

*SESSION 2D: Quality Improvement I-Wednesday, April 10, 2013, from 9 to 10:15 am*

## SESSION 2D: Quality Improvement I

Room: Thoroughbred 5 & 6

**Moderator: Shoshanna Sofaer, Dr.P.H.**
**Professor of Health Care Policy**
**Baruch College**

**Anita McLees, M.A., M.P.H.**

### *Defining and Measuring Quality Improvement in Public Health: Experience From CDC's National Public Health Improvement Initiative*

**Co-Investigators:** Saira Nawaz, Ph.D.; Andrea Young, Ph.D.; Craig Thomas, Ph.D.

**Research Objective:** To develop a standardized approach to categorizing and measuring outcomes of public health quality improvement (QI) initiatives in order to assess gains in efficiency and effectiveness associated with the Centers for Disease Control and Prevention's National Public Health Improvement Initiative (NPHII).

**Data Sets and Sources:** The identification of public health QI outcomes was based on a review of existing literature and an analysis of QI activities and performance measures developed by NPHII awardees during the program's second year. Literature reviewed included peer-reviewed and web-based sources on QI, defining public health quality, and performance measurement.

**Study Design:** Introduce a standardized measurement framework for public health QI outcomes. Outcomes were categorized into two measurement constructs – efficiency and effectiveness. Efficiency outcomes include time saved, money saved, and revenue generated. Effectiveness outcomes include increased customer satisfaction, increased reach, funds leveraged, quality enhancement, increased preventive behaviors, and decreased disease incidence/prevalence.

**Analysis:** Based on the measurement framework, NPHII awardees submitted performance measures for their year three QI projects. CDC staff reviewed these measures to determine the efficacy and utility of the standardized measurement framework; breadth of intended outcomes for awardee QI projects; and the technical accuracy of the measures for each outcome.

**Principal Findings:** Sixty-six NPHII awardees defined 330 performance measures to assess intended outcomes of 177 QI initiatives. Across these initiatives, all categories of outcomes were adopted and measured, with the most frequently reported intended outcomes being quality enhancement (31.82%), increased reach (13.03%), time saved (13.94%), and increased customer satisfaction (11.51%).

**Conclusion:** This approach to categorizing QI outcomes and standardizing the approach to measurement of these outcomes for NPHII has resulted in a robust set of QI projects and associated measures. As data are submitted on the measures, an analysis of successes and challenges and refinements to the approach will be important.

**Implications for the Field of PHSSR:** To understand the impact of QI in public health, it will be necessary to aggregate outcomes from discrete, context-specific projects. This work represents an initial attempt to define outcomes that apply to diverse public health processes, programs, and services along with a framework to standardize measurement of these outcomes.

## Robert Fields, B.S.

### *Examining Agency-Level Conditions and Practices to Improve Decision-Making in Public Health*

**Co-Investigators:** Carson Smith, M.P.A.; Katie Duggan, M.P.H., M.S.; Rodrigo Reis, Ph.D., M.Sc.; Katie Stamatakis, Ph.D., M.P.H.; Paul Erwin, Dr.P.H., M.D.; Carolyn Leep, M.P.H., M.S.; Peg Allen, Ph.D., M.P.H.; Ross Brownson, Ph.D.

**Research Objective:** To describe patterns of administrative evidence-based practices (A-EBPs) among local health departments (LHDs) in the United States. These A-EBPs are agency-level conditions and practices that are likely to improve decision-making in public health practice.

**Data Sets and Sources:** Our survey examined Evidence-Based Decision-Making (EBDM) among LHDs. An online survey was delivered to a national sample of LHD directors, administrators, and practitioners (n=517) (54% response rate). Questions (refined using cognitive and reliability testing) covered five domains of A-EBPs using Likert scale and dichotomous survey items with characteristics of LHDs.

**Study Design:** Cross-sectional

**Analysis:** Descriptive statistics were used to estimate prevalence of A-EBPs among LHDs. In addition, Pearson's chi-square tests were conducted to analyze associations between characteristics of LHDs (e.g., governance structure) and 19 self-reported A-EBPs (e.g., workforce development).

**Principal Findings:** Several A-EBPs were often attained (e.g., 68.3% had partners sharing resources), while others less frequent (e.g., 42.2% had culture supporting EBDM). There were multiple significant associations ($p<.05$) among population size, governance structure, region and A-EBPs (workforce development, leadership, organizational culture, and partnerships). Population size was most consistently associated with A-EBPs.

**Conclusion:** Self-reported A-EBPs varied based on characteristics of LHDs. Specifically, patterns of A-EBPs in the domains of workforce development, leadership, organizational culture, and partnerships seem to differ based on three LHD characteristics: population size served, governance structure, and geographic region.

**Implications for the Field of PHSSR:** Measuring and improving A-EBPs can help build competencies for agency accreditation, enhance efficiency, and strengthen capacity to improve population health. To further elucidate A-EBPs in LHDs, researchers in PHSSR should explore why population size, governance structure, and geographic region influence A-EBPs and how to increase the uptake of these practices.

## Julie Willems Van Dijk, Ph.D., M.S.N., RN

### *Community Health Assessments and Improvement Plans: A Quality Analysis*

**Co-Investigators:** Bridget Catlin, Ph.D., B.A.

**Research Objective:** While expert opinion indicates community health assessment and improvement planning processes (CHIPP) are a positive public health activity, limited research exists to define the elements that would make CHIPP most effective in moving beyond assessment and into action. This study addresses this gap by measuring the quality of Wisconsin's CHIPPs.

**Data Sets and Sources:** Wisconsin statute requires local health departments (LHD) to work with stakeholders to conduct a periodic community health assessment (CHA) and create community health improvement plans (CHIP). The most recent CHA and CHIP were secured from each LHD by searching the departments' websites or making a direct request to the LHD.

*SESSION 2D: Quality Improvement I-Wednesday, April 10, 2013, from 9 to 10:15 am*

**Study Design:** This study is a cross-sectional descriptive study to measure the quality of Wisconsin's local health departments' CHIPPs. Based on Public Health Accreditation Board Standards and literature review, the CHIPP Quality Measurement Tool was created and reviewed by practice-based experts. It was then used to measure the quality of Wisconsin's CHIPPs.

**Analysis:** Univariate descriptive analyses of each measure within the CHIPP Quality Score were conducted. Measures were added to produce a component score, and similar analyses were calculated for each component. All component scores were weighted and added to create a CHIPP Quality Total Score, and similar univariate analyses were conducted.

**Principal Findings:** Forthcoming. The tool's validity has been confirmed by LHD directors' confirmation of the scores. Initial findings indicate the components of evidence-informed strategies and assessment have the highest quality ratings and the components of implementation and evaluation have the lowest quality ratings.

**Conclusion:** Quality improvement begins by defining quality standards. This study advances quality improvement efforts for a core public health function by creating a quality measurement tool and establishing baseline quality measurement scores for Wisconsin's CHIPPs. The tool can be used by practitioners as a self-assessment for real-time measurement of CHIPP quality.

**Implications for the Field of PHSSR:** The next phase of this study will determine if any structural or process factors influence CHIPP quality. Future studies that measure the relationship between CHIPP quality and health outcome improvements will determine the added value of this public health practice. This study provides a baseline for this type of analysis.

## SESSION 2E: Technology & Data II — Room: Thoroughbred 7 & 8

**Moderator: Eduardo Simoes, M.D., M.Sc., M.P.H.**
**Chairman & Health Management and Informatics Alumni Distinguished Professor**
**University of Missouri**
**National Advisory Committee for PHSSR Member**

### Jeffrey "Mac" McCullough, M.P.H.

***Local Health Department Adoption and Discontinuation of Electronic Medical Records***

**Co-Investigators:** None named.

**Research Objective:** Relatively little is known about predictors of adoption and abandonment of health IT by local health departments (LHDs). Thus this study examined factors associated with the use of electronic health records (EHR) by LHDs in 2010, and to examine predictors of EHR adoption or abandonment between 2005 and 2010.

**Data Sets and Sources:** This study uses LHD data from two waves of the National Association of City and County Health Officials (NACCHO) Profile Surveys - 2005 and 2010. There are 105 LHDs with relevant data for both 2005 and 2010 and hundreds more with data from one of the two waves.

**Study Design:** This study uses a repeated cross-sectional design of data from 2005 and 2010 for a set of LHDs that received the NACCHO survey questionnaires in both years. The study's conceptual framework posits that adoption and abandonment are explained by resource-based factors (e.g., clinical services).

**Analysis:** Dichotomous measures of adoption and abandonment were created for each LHD. Control variables were selected through literature review. All data came from NACCHO Profile Surveys. Logistic regression models were used to assess predictors of adoption and abandonment.

**Principal Findings:** LHDs both adopted and abandoned EHR between 2005 and 2010. In logistic regression models predicting adoption or abandonment, very few variables were significant. Where adoption or abandonment occurred, clinical services do not appear to be the only driver of the transition.

**Conclusion:** Factors beyond resource-based considerations (e.g., services offered) appear to be partially responsible for LHD adoption and abandonment of EHRs from 2005 to 2010. There is likely to be an important role for LHD leaders to play in these decisions; leadership should be attuned to these issues at their own departments.

**Implications for the Field of PHSSR:** LHD leadership plays a critical role in the decision to adopt (or not) and abandon (or not) EHR in their departments. These considerations may vary for each department, but there is likely substantial value in the lessons learned that should be disseminated among organizations.

### Ramakanth Kavuluru, Ph.D.

***Computational Code Extraction From Textual Narratives***

**Co-Investigators:** Daniel Harris, Isaac Hands, Anthony Rios

**Research Objective:** Even with advances in multimedia technologies, text written in natural language is still the main medium of communication in the health care domain. The goal is to automate the time-consuming conventional manual process of extracting coded information from textual documents such as discharge summaries, pathology reports, and chat communications.

**Data Sets and Sources:** Three different types of codes are automatically extracted from three different textual document data sets: 1) ICD-9-CM diagnosis codes from textual narratives in EMRs; 2) ICD-O-3 topography codes from pathology reports; 3) ECRF purpose, subject, and response codes from cancer information service LiveHelp chat transcripts.

**Study Design:** Codes were extracted using supervised and unsupervised machine learning methods. To compare the accuracy of computational techniques with trained human coder extraction, our data sets were already coded by humans. In the supervised case, each data set was split into training (used in the learning phase) and testing subsets.

**Analysis:** The evaluation was conducted using the counts of true positives (TP), false positives (FP), and false negatives (FN) computed by comparing codes from automated methods with those extracted by human coders. Precision = TP/(TP+FP), Recall = TP/(TP+FN), and F-score = 2*P*R/(P+R) were used as the measures of quality of automation.

**Principal Findings:** The number of unique codes in each data set: 633 ICD-9-CM codes, 57 ICD-O-3 codes, and 31 CIS ECRF codes. We obtained F-scores (maximum of 1) of 0.47 for ICD-9-CM code extraction, 0.9 for ICD-O-3 code extraction, and 0.7 for ECRF code extraction using completely automated methods.

**Conclusion:** These findings demonstrate a strong potential of automated methods to assist human coders in expediting their work in code extraction in health care, saving time and reducing financial burden. Furthermore, they also offer a near real-time analysis of the patient conditions in a health care facility.

**Implications for the Field of PHSSR:** Syndromic surveillance and rapid case ascertainment are important components of public health services research. As such, automatic code extraction methods have direct impact on building public health systems that automatically report unusual spikes in patient conditions across a region through aggregation of such information from individual care facilities.

## Janet Baseman, Ph.D., M.P.H.

### *Myth or Reality: Does Improved Notifiable Condition Reporting Really Improve Public Health Agency Population Monitoring?*

**Co-Investigators: Debra Revere, M.A., M.S. (presenting)**

**Research Objective:** It is well-known that clinical care processes consistently underreport disease events. The primary objective is to investigate the impact of a technical clinical decision-support innovation that will streamline provider-based notifiable condition reporting on public health's reporting processes and operational outcome metrics.

**Data Sets and Sources:** We are investigating the intended and unintended outcomes of this reporting innovation on burden of disease reporting and case follow-up activities for public health workers; timeliness of reporting; volume and duration of communications between disease investigators and clinicians; and timeliness of assessments of disease burden in the community.

**Study Design:** Our study uses a retrospective study design utilizing randomized, interrupted time-series methodology to capture pre- and post-intervention measurements of work flow, communication, reporting volume and timeliness, and accuracy of community disease burden. We are also investigating whether unintended consequences impact public health activities, processes, operational outcomes and inter-organizational relationships.

**Analysis:** In our presentation we will report on study design, methods and progress.

**Principal Findings:** Rapidly developing electronic health networks, with their capacity to transport unprecedented amounts of clinical data and information between clinical entities and public health, are stimulating structural and business process changes in public health systems and promise to revolutionize the performance of critical activities such as disease surveillance and outbreak investigation.

**Conclusion:** Policy decisions regarding delivery of health care have implications for public health. While technical quality improvement initiatives in clinical care are characterized by more timely access to information, reduced medical errors and increased cost savings, it is unknown whether these clinical care improvements translate into quality improvements for public health.

**Implications for the Field of PHSSR:** Evidence is lacking on whether and how clinical technological interventions and policies regarding delivery of health care support public health quality and process improvements. This study will provide evidence of the impact of health care policy decisions on public health.

## Lisa Lang, M.P.P.

### *NLM Resources for Evidence-Based Public Health*

**Co-Investigators:** None named.

**Research Objective:** Improve visibility and use of NLM resources, encourage involvement in improving utility of resources to PHSSR community.

**Data Sets and Sources:** Would identify NLM and other data sets and tools useful for PHSSR, HSR and comparative effectiveness research.

**Study Design:** N/A

**Analysis:** N/A

**Principal Findings:** N/A

**Conclusion:** NLM and sister agencies have data and tools of use to PHSSR.

**Implications for the Field of PHSSR:** NLM is a key resource and partner for supporting PHSSR, public health informatics, and public health quality improvement.

# SESSION 3-WEDNESDAY, APRIL 10, 2013 FROM 10:45 AM TO 12 PM

## SESSION 3A: Technology & Data III — Room: Thoroughbred 1

**Moderator: Vincent La Fronza, Ed.D., M.S.**
**CEO**
**National Network of Public Health Institutes**

**Carolyn Leep, M.P.H., M.S., B.S.**

### *Local Health Department Jurisdiction Changes: 2005 to 2012*

**Co-Investigators:** Jiali Ye, Ph.D.; Nathalie Robin M.P.H., B.S.; Jan Wilhoit, B.A.

**Research Objective:** To identify and characterize changes in jurisdictions of locally-governed local health departments (LHDs), in terms of types of jurisdiction changes and net changes in number of LHDs from 2005 to 2012.

**Data Sets and Sources:** This study used the study population files for the 2005, 2008, 2010 and 2013 National Profile of Local Health Department studies. State-governed LHDs and LHDs in Texas were excluded from this analysis.

**Study Design:** Lists of LHDs were compared for each state to identify jurisdiction changes between each Profile cycle. Telephone interviews were conducted with state representatives knowledgeable about jurisdiction changes in those states with the largest number of changes to confirm changes and obtain information about reasons for changes.

**Analysis:** Each jurisdiction change was coded as a merger, absorption, de-merger, or separation. The net change (positive or negative) in number of LHDs was determined for each jurisdiction change. Changes were analyzed by state, Profile cycle, and type of jurisdiction change.

**Principal Findings:** LHD absorptions and mergers were common in several states (CO, CT, NJ, OH, WI) between 2005 and 2012, resulting in an overall decrease in the number of LHDs in those states and an increase in the average population served by an LHD in those states.

**Conclusion:** Common drivers for LHD jurisdiction change include financial incentives from state health agencies and local desire to reduce costs of providing public health services. Additional research is needed to assess the extent to which jurisdiction changes resulted in changes in capacity to provide public health services.

**Implications for the Field of PHSSR:** Consolidation of LHD jurisdictions is one way to increase the capacity for LHDs to provide essential public health services. Because most LHDs in the U.S. serve small populations, understanding where and how efforts to decrease the number of small LHD jurisdictions have been successful is important for policy-makers.

*SESSION 3A: Technology & Data III-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

## Jonathon Leider, Ph.D.

### *Understanding the 2012 IOM Finance Report: How Did They Estimate Public Health Spending, and Is That Estimate Accurate?*

**Co-Investigators:** None named.

**Research Objective:** In its landmark 2012 report, the Institute of Medicine (IOM) recommended roughly doubling the federal investment in public health, in part so public health could provide a minimum package of services within the U.S. This presentation examines the IOM's assumptions around how much we spend on public health in the U.S.

**Data Sets and Sources:** Public health financial data from ASTHO, NACCHO, the Census, and the federal government

**Study Design:** Using data comprising federal outlays over the past 50 years as well as financial data from the Census, ASTHO, and NACCHO, we present a history of federal spending on public health as well as the assumptions and implications of the "baseline" the IOM used to estimate public health spending.

**Analysis:** We will present a descriptive analysis of federal outlays on public health, as well as competing estimates of public health spending at the state level. We will also examine the Census data underlying the public health finance estimates used in the National Health Expenditure Accounts and the IOM report.

**Principal Findings:** The estimates of public health spending in the IOM's 2012 report capture many clinical and behavioral health services beyond those typically provided by state and local health departments. Concretely, where the Census reports state-level spending at $60 billion for FY08, ASTHO reports state health agency spending was approximately $24 billion.

**Conclusion:** At present, our best estimates of public health spending dilute population-level spending through inclusion of clinical care and behavioral health spending. If we are to refocus our efforts on population-level programs, policies, and services, we need better financial estimates of spending in those areas.

**Implications for the Field of PHSSR:** Further definitional development is needed before a minimum package of services can be established - namely to clarify the role and importance of behavioral and other clinical care spending in overall public health spending.

## Lois Banks, M.A., B.A.

### *Public Health Workforce Training & Education Data: Improving Access for Researchers through TRAIN*

**Co-Investigators:** Ilya Plotkin M.A., B.A.; **Erin Bougie (presenting)**

**Research Objective:** The objectives were to: 1) formulate a standardized data dictionary for the TRAIN database to improve familiarity with TRAIN's data elements; and 2) to develop three easily-accessible tailored datasets providing researchers with access to high-quality data on the public health workforce.

**Data Sets and Sources:** TRAIN, the premier learning management system for professionals who protect the public's health, is the project's data source. TRAIN has over 650,000 learners, and over 28,000 courses from more than 4,000 training providers. TRAIN provides detailed information on the public health workforce, its skills/competence, how it's trained, and its capacity.

**Study Design:** PHF utilized TRAIN to provide tools aimed at advancing PHSSR. The TRAIN data dictionary outlines the data element definitions. The three tailored datasets are designed to incentivize researchers to conduct PHSSR by exemplifying how TRAIN data can assist in PHSSR research.

**Analysis:** TRAIN provided sufficient data on the public health workforce for the initial extraction of three datasets. While the data are limited to public health professionals using TRAIN and thereby factors heavily on health departments using TRAIN, TRAIN still provides the sole cross-jurisdictional source of data on the public health workforce.

**Principal Findings:** The following tailored datasets were generated from the TRAIN database: demographics on TRAIN users; information on TRAIN courses and competencies; and number of TRAIN courses covering particular competencies; and the number of participants. Additional data are available on TRAIN by researcher request.

**Conclusion:** TRAIN data can be used to respond to specific questions posed by the PHSSR field. The three TRAIN-tailored datasets provide information needed to help shape the National Research Agenda for PHSSR, while additional researcher-requested data can, in the future, help both craft and answer research questions in PHSSR.

**Implications for the Field of PHSSR:** TRAIN provides valuable data for the continued study of the public health workforce. The three tailored TRAIN datasets provide insight on the public health workforce composition, the courses available and the competencies those courses train that workforce in, and the professional roles attaining those competencies.

## Rivka Liss-Levinson, Ph.D.

### *A Snapshot of State Public Health Activities, 2012*

**Co-Investigators:** Katie Sellers, Dr.P.H.; Alison Mendoza M.P.H.; Jim Pearsol, M.Ed.; Paul Jarris, M.D., M.B.A.

**Research Objective:** The goal of the current study was to examine how many state health agencies directly performed a multitude of activities, programs and services in 2012.

**Data Sets and Sources:** The data source for this study was the 2012 ASTHO Profile Survey, the third in ASTHO's series of surveys collecting a variety of information on state, territorial, and freely associated state public health agencies including agency activities; agency structure, governance, and priorities; workforce; finance; planning and quality improvement; and health information management.

**Study Design:** The web-based survey was administered to the 50 states, DC, and the territories/freely associated states from October 2012 to January 2013. For more than 200 public health activities, each state's Senior Deputy indicated whether each activity was performed by the state health agency directly and/or contracted out by the state health agency.

**Analysis:** For each public health activity, responses were coded as "yes" or "no" for "Performed by the state health agency directly" and "Contracted out by the state health agency." The percentage of states performing each activity was calculated.

**Principal Findings:** For each category of public health activity (e.g., treatment for diseases, maternal and child health services, environmental health activities), some activities are performed by many state health agencies directly, while other activities are performed by very few state health agencies directly.

**Conclusion:** State public health agencies vary widely in whether they provide a number of public health activities, services, and programs. Describing the most and least commonly offered activities can provide insight into trends in state public health agency programming.

**Implications for the Field of PHSSR:** This study contributes to the field of PHSSR by utilizing up-to-date data to identify the public health activities, programs and services provided directly by state health agencies. This information can help researchers, state health agencies, and policy-makers recognize areas of success and target areas for improvement.

## SESSION 3B: Workforce II

Room: Thoroughbred 2

**Moderator: Linda Degutis, Dr.P.H., M.S.N.**
**Director**
**National Center for Injury Prevention and Control**
**Centers for Disease Control and Prevention**

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

***The Future of Teaching in Local Health Departments: Implications for Academic Public Health and Workforce Development***

**Co-Investigators:** Dorothy Cilenti, Dr.P.H., M.P.H., M.S.W.; Michelle Menegay, M.P.H., B.A.

**Research Objective:** The purpose of this study is to investigate how much and what kind of teaching is occurring in local health departments (LHD); how that changes with decreases in LHD resources; and how LHD attitudes about academic public health are associated with teaching involvement.

**Data Sets and Sources:** This data set represents an original survey of all LHDs in two geographically distinct states. Participants include 183 health directors and division directors from 90 of 125 LHDs in the state with data collection completed; and from 42 of 85 LHDs in the state where data are still being collected.

**Study Design:** Survey development included qualitative interviews of key academic and LHD leadership. This cross-sectional survey research was conducted among participants in two Public Health Practice-Based Research Networks. Ninety-seven percent believe it is important for MPH students to have teaching experience in LHDs.

**Analysis:** Descriptive analysis of LHDs and their teaching experience was conducted. A scale was developed to assess LHD attitudes about academic public health with a Cronbach's Alpha = 0.86. Associations between LHD characteristics and teaching experience were examined utilizing logistic regression. All analyses were conducted with SPSS v.20.

**Principal Findings:** Substantial decreases in services were noted among 80% of LHDs. Still, LHDs were highly involved with teaching, and 65% of programs are relating to more than five academic institutions. Internships, practicums, and capstones were most valued, while shadowing was the most common teaching mechanism. Highly negative attitudes about academic public health were noted.

**Conclusion:** LHDs are hurting. Diverse demands exist for teaching opportunities. Conflicting forces may reduce some opportunities and open others. Nursing, not Public Health, students are the most frequently instructed students in LHDs. Negative attitudes about academic public health imply need for substantial reconciliation with public health practice.

**Implications for the Field of PHSSR:** Findings have significant implications for academic teaching programs, the future of the public health workforce, and research in public health LHDs. With practicum requirements for all MPH students, a 52% increase from 2000 to 2010 in students in MPH programs, and many new undergraduate public health programs, dialogue with LHDs is essential.

## Julie Darnell, Ph.D.

### *Getting the Right People in the Right Jobs at the Right Time: Recruitment and Retention Strategies in Local Health Departments*

**Co-Investigators:** Joshua Franzel, Ph.D.; Susan Cahn, M.A.

**Research Objective:** Previous research has documented local health departments having problems hiring and retaining staff. This study investigates current recruitment and retention challenges; examines the most effective recruitment and retention strategies; and identifies strategies that health departments would like to use but are not currently using.

**Data Sets and Sources:** Respondents to the National Association of County and City Health Officials' 2010 Profile Study were randomly selected based on jurisdiction size and governance type to be included in the sampling frame for a web-based survey. The final sample contains 229 health departments of 517 surveyed (44% response rate).

**Study Design:** A 44-item web-based questionnaire about recruitment and retention efforts in health departments was developed with input from nearly two dozen current and former health department officials and pilot tested in seven health departments of varying sizes and governance structures. Survey administration occurred in November and December 2012.

**Analysis:** Descriptive statistics were used to examine item responses. Analyses were carried out by jurisdiction size, governance type and level of autonomy over human resource management decisions.

**Principal Findings:** The most effective recruitment strategy reported was web-based advertising. Offering competitive pay and offering retirement benefits were reported as the most effective retention strategies. Health departments would like to be using social media, pooling resources with other agencies, offering traineeships, matching competing salary offers, and offering competitive pay.

**Conclusion:** Health departments continue to be very concerned about finding and retaining well-qualified staff. Health departments appear to be drawing from a fairly limited menu of recruitment and retention strategies and might benefit from expanding the range of options.

**Implications for the Field of PHSSR:** The barriers to adopting a fuller array of recruitment and retention strategies should be identified and addressed in further research.

## Tracy Hilliard, Ph.D., M.P.H., B.A.

### *Using Geographic Information Systems to Investigate the Relationship Between Local Health Departments' Workforce Cuts and Vulnerable Populations*

**Co-Investigators:** None named.

**Research Objective:** The study will: 1) describe nationwide patterns of decline in the LHD workforce by mapping changes in full-time equivalents (FTEs) per capita; and 2) examine the distribution of LHD FTE cuts relative to distributions of vulnerable populations (determined by poverty and racial composition).

**Data Sets and Sources:** Data on workforce cuts from LHDs included in at least two of the National Association of County and City Health Officials (NACCHO) National Profile of Local Health Departments Surveys (Profile) from 2005, 2008, and 2010 was linked. Race/ethnicity and poverty data were obtained from the 2010 U.S. Census.

**Study Design:** Retrospective, secondary data linking population characteristics with LHD data depicting workforce cuts were examined through a panel time series design and through geographic information systems (GIS) visual and analytical portrayal of spatial patterns.

*SESSION 3B: Workforce II-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

**Analysis:** NACCHO Profile Survey data were mapped, identifying regions of the country with high rates of LHD FTE job loss. Bivariate analyses were conducted to determine if there were significant relationships between changes in a jurisdiction's LHD per capita workforce and county-level poverty and race/ethnicity.

**Principal Findings:** Substantial workforce data were missing from NACCHO Profile Surveys. A disproportionate reduction in percent change in FTEs among jurisdictions with high percent Black population, and an increase in percent change in FTEs among jurisdictions with high percent Hispanic population were identified. No statistically significant results were found regarding poverty.

**Conclusion:** Continued consistent data collection on LHD workforce is warranted. Additional practice-based research is also needed to explore the disproportionate impact of LHD workforce cuts among jurisdictions with high percent Black population, and the growth of the LHD workforce among jurisdictions with high percent Hispanic population, contrary to overall decreases nationwide.

**Implications for the Field of PHSSR:** Exploring the relationship between LHD workforce cuts and sociodemographic characteristics across geographic areas is of particular relevance to PHSSR regarding LHD workforce, social determinants of health, and health disparities. This research has the potential to inform critical decision-making and LHD resource allocation during times of economic hardship.

## SESSION 3C: Translation II

Room: Thoroughbred 3

**Moderator: Lisa Simpson, M.B., B.Ch., M.P.H.**
**President and CEO**
**AcademyHealth**

**Kim Gearin, Ph.D.**

***Implementation of a Statewide Health System Reform Initiative: Lessons Learned on Factors That Facilitate and Impede Local Public Health Performance***

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

**Research Objective:** The Minnesota (MN) Public Health Practice-Based Research Network conducted a study of the statewide implementation of an evidence-based health system reform initiative to achieve policy, systems and environmental (PSE) changes. The main objective is to identify and examine local factors that facilitated or impeded the rapid, statewide roll-out of a novel initiative.

**Data Sets and Sources:** Qualitative interviews were conducted with 15 key informants (100% response rate) targeted to represent the full range of Minnesota's geographic regions, LHD sizes and structures, and three levels of grantee performance, in order to help interpret and extend quantitative findings.

**Study Design:** This qualitative study complements a quantitative study of factors related to successful implementation of PSE strategies addressing obesity, tobacco use and physical activity in communities. This abstract is closely linked to two other abstracts presenting the quantitative results, engagement of stakeholders and dissemination of study results.

**Analysis:** Interviews were transcribed verbatim. Two investigators (who were also the study interviewers) independently reviewed transcripts for preliminary themes and used a coding system identified by Hahn. Study investigators then worked collaboratively to identify comprehensive themes from the data.

**Principal Findings:** Swift implementation challenged all LHDs. Organizational factors that aligned with higher performance and sustainability include: willingness to try new approaches; capitalizing on a mix of new and established staff; and granting staff freedom to act, while also providing on-going leadership and connection to largely elected community health boards.

**Conclusion:** Key informants repeatedly praised the regional approach of this initiative. Informants also cautioned against trying to create efficiencies by introducing too many new novel programs at once and identified implications of having to quickly ramp up their organizations to implement a statewide program of unprecedented scale and significant political scrutiny.

**Implications for the Field of PHSSR:** Lessons learned from this statewide rollout of a community-driven, evidence-based initiative relate to several LHD characteristics, including organizational structure, leadership, staffing and sustainability. Findings have influenced the direction of new public health initiatives in Minnesota, and may be relevant to emerging initiatives elsewhere. Findings suggested questions for future research.

*SESSION 3C: Translation II-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

## Elizabeth Gyllstrom, Ph.D., M.P.H., B.A.

### *Factors Associated With Local Public Health Performance on a Statewide Health System Reform Initiative: Does Quality Improvement (QI) Culture Matter?*

**Co-Investigators:** Kimberly Gearin, Ph.D., M.S., B.S.; William Riley, Ph.D.

**Research Objective:** The Minnesota Public Health Practice-Based Research Network (PBRN) examined implementation of a statewide, population-based initiative to achieve evidence-based policy, system and environmental changes. The main study objective was to assess local health department (LHD) characteristics associated with effective implementation of grants from the Minnesota Department of Health (MDH).

**Data Sets and Sources:** In the 2009-2011 budget years, MDH distributed $47 million to Minnesota LHDs serving all 87 counties. Grantees were reviewed and scored to designate performance by MDH evaluation staff. LHDs were classified as having the high, medium or low QI culture based on results from the QI Maturity Tool survey.

**Study Design:** This is a retrospective evaluation study of four evidence-based programs conducted by all (100%) of Minnesota's local health departments over a two-year period. This study includes interventions chosen by at least 20% of grantee organizations in the areas of tobacco, physical activity, nutrition, healthy weight and healthy behaviors.

**Analysis:** Multivariate logistic regression was used to examine the potential relationship between QI maturity and grantee performance. Other variables of interest included: readiness for accreditation, organizational structure (single vs. multi-county, stand-alone health vs. within larger agency), expenditures, and authority of top health official.

**Principal Findings:** Organizational QI maturity was strongly, positively associated with grantee performance (OR=4.29, 95 % CI: 1.90-9.73, p=0.0005). Increasing LHD per capita expenditures was positively associated with higher performance (OR=1.04 for one increment increase, 95% CI: 1.00, 1.08, p=0.07). None of the other variables were significant in multivariate regression analysis.

**Conclusion:** The strong association between QI culture and performance suggests the importance of promoting QI culture. It is unclear whether a more mature culture is a marker for overall capacity or has its own unique contribution. Limitations include the assumptions necessary to create one full data set with a common denominator.

**Implications for the Field of PHSSR:** To our knowledge, this is one of the first studies to examine the relationship between QI maturity and LHD performance. This presentation focuses on quantitative study results, but is closely linked with two abstracts that highlight qualitative findings and successful PBRN approaches that facilitated study participation, dissemination and translation.

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

### *Do Public Health Researchers Actively Disseminate Findings to Practice Settings?*

**Co-Investigators:** Rachel Tabak, Ph.D., M.P.H.; Ross Brownson, Ph.D.

**Research Objective:** Public health research has high potential for translation to practice, given the inherently applied focus of many studies and, commonly, researchers' past experience in practice settings. The purpose of this study was to examine the frequency and correlates of public health researchers' active dissemination of research findings to practice settings.

**Data Sets and Sources:** We administered an online survey to public health researchers working in academic and governmental research settings (n=266). Participants were identified from a list of lead authors in the top 12 PubMed journals (impact factors) in public health (2008-2011). The survey tool was adapted from a similar survey in the U.K.

**Study Design:** We conducted a cross-sectional study to examine self-reported activities and perceptions of public health researchers around dissemination of research findings. Survey items included target audience for dissemination (e.g., state and local health departments), respondent characteristics (e.g., work setting), facilitators (e.g., training in communication), and barriers (e.g., lack of incentives).

**Analysis:** Distributions and univariate statistics were computed to describe the study population. Logistic regression was used to estimate odds ratios and 95% confidence intervals to examine the likelihood of dissemination to practitioners across predictor variables, with and without adjustment for respondent characteristics. Additional analyses were stratified by respondents' research setting.

**Principal Findings:** Survey respondents represented both academic (24% in PRC, 41% in non-PRC), and governmental (13% in CDC, 9% in NIH) settings. The frequency of active dissemination was 46% to local health departments, 49% to state health departments, 64% to federal agencies, and 32% to elected officials.

**Conclusion:** The likelihood of active dissemination to public health practice settings was highest for federal agencies. Facilitators to active dissemination included expectations by funders and employers, as well as self-rated importance. Barriers included lack of relationships with stakeholders and uncertainty about what to disseminate.

**Implications for the Field of PHSSR:** Active dissemination of research findings to practice settings is a core component of many PHSSR studies. These findings increase our understanding of factors related to public health researchers directly and actively disseminating findings, and may be used to support future work to enhance translation of relevant research to practice.

## Kim Gearin, Ph.D.

### *Dissemination and Translation of Public Health Systems and Services Research Through the Lens of Local Public Health: Multi-Faceted Approaches to Reach Diverse Audiences*

**Co-Investigators:** Beth Gyllstrom, Ph.D.; Julie Myhre M.S., RN; **Renee Frauendienst, B.S. (presenting)**; Janelle Schroeder, B.S.

**Research Objective:** The primary objective of this multi-modal study was to examine LHD performance in a statewide initiative. A secondary objective, and the focus of this presentation, was to monitor fidelity to a dissemination and translation plan and on-going communication about the study within Minnesota's Public Health Practice-Based Research Network (PBRN).

**Data Sets and Sources:** Data sets and sources include meeting agendas, materials and summaries of the PBRN steering committee; reports and briefings of PBRN member organizations; email correspondence between PBRN staff and the steering committee; established communication channels within Minnesota's public health system; and informal interviews conducted with PBRN steering committee members.

**Study Design:** A descriptive study designed to assess the diversity and reach of dissemination and translation activities conducted by the PBRN. This abstract is closely linked to two others presenting the quantitative and qualitative results of a PBRN study of local factors associated with performance implementing an evidence-based health reform initiative.

**Analysis:** Documentation was assembled and coded for presence and nature of any references to the study (e.g., funding, participation, findings, translation). The number and types of references were compared to a dissemination and translation plan developed by the PBRN steering committee.

**Principal Findings:** Frequent communication on the study within the PBRN steering committee is clearly evident. There are multiple mentions of study findings in meetings and reports of PBRN member organizations, including manuscripts and legislative reports. There is also evidence that findings influenced design of emerging public health initiatives in Minnesota.

**Conclusion:** Findings suggest that study progress and findings have been disseminated and translated in many ways, yet there are notable gaps and untapped opportunities. Findings from this analysis will be used as the basis for future network QI.

*SESSION 3C: Translation II-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

**Implications for the Field of PHSSR:** The Minnesota PBRN has expanded beyond traditional dissemination techniques to pursue additional vehicles that are available to network partners and relevant to stakeholders. Lessons learned could be timely and useful to other PBRNs monitoring their own operations, and partnering to influence policy and practice in their respective states.

## SESSION 3D: Quality Improvement II

Room: Thoroughbred 5 & 6

**Moderator: William Riley, Ph.D.**
**Associate Dean of the School of Public Health**
**University of Minnesota**

### Thaddeus Miller, Dr.P.H., M.P.H.

***Mortality Hazard and Survival After Tuberculosis Treatment***

**Co-Investigators:** None named.

**Research Objective:** Tuberculosis (TB) prevention may be undervalued, hence underemphasized in policy and practice. Disproportionate mortality risk plausibly persists among some patients, despite cure. Evidence of post-cure mortality risk may promote prevention and offer opportunity for health protections; we analyzed mortality of TB survivors relative to a similar population seeking such evidence.

**Data Sets and Sources:** We identified case and comparison cohorts using health authority records from the states of Texas and Massachusetts and the catchment of the Seattle/King County Public Health Department; strengthened identification and match probability using LexisNexis® Accurint® database; and ascertained vital status using CDC's National Death Index.

**Study Design:** We selected 3,853 individuals who completed treatment for active TB and 7,282 individuals diagnosed with LTBI between 1993 and 2002, and recorded standardized available risk factor and individual characteristics for adjustment and control. We ascertained each subject's vital status as of 12/31/2008 via NDI, then compared mortality and its associations.

**Analysis:** We analyzed mortality among two subject cohorts using Cox regression controlled for identified individual risk factors and characteristics. Observation duration began at treatment completion for TB survivors and at report to health authorities for LTBI subjects; it ended at death or survival to the end of 2008.

**Principal Findings:** TB survivors experienced an average excess 7.6 deaths/1,000 person years (8.8 vs. 1.2 (p-value<.001)). White race, site of disease, HIV +, and U.S. nativity predicted mortality among these. More (20% vs. 3.1%) case subjects were dead at NDI match, averaging 4.1 years survival after cure.

**Conclusion:** Tuberculosis prevention has value not reflected by current policy and practice. Analysis of fully treated TB survivors identified mortality 7.6 times greater than expected; 20% had died just four years after treatment. Tuberculosis "cure" offers insufficient protection against grave mortality risk, but opportunity exists to modify this risk.

**Implications for the Field of PHSSR:** Evidence can guide health care systems toward more effective policy and practice. In TB control, evidence of excess mortality risk persisting after cure may promote prevention and facilitate elimination. Furthermore, understanding the distribution of risk by individual factors allows more efficient targeting of efforts and populations to maximize returns.

### Alison Mendoza, M.P.H., CPH

***The Role of Quality Improvement in Statewide Health Improvement Initiatives: Two Case Studies***

**Co-Investigators:** Dana Carr M.P.H.; Elizabeth Walker, M.S.; Katie Sellers, Dr.P.H., CPH; Paul Jarris, M.D., M.B.A.

**Research Objective:** The purpose of this project is to identify states' systems-level processes that contributed to improved rankings in United Health Foundation's *America's Health Rankings.*

*SESSION 3D: Quality Improvement II-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

**Data Sets and Sources:** Project leads from the Association of State and Territorial Health Officials (ASTHO) identified four states that have improved their rankings in selected measures. ASTHO conducted interviews with four to five key informants from each state. Interviewees included state, local, and community-level public health practitioners.

**Study Design:** Following the Social Ecological Model, ASTHO has adapted a framework used in the education sector to understand how conditions affecting policy and systems change move from the state policy level to the community practice level.

**Analysis:** Qualitative data from interviews with state, local and community level practitioners were analyzed to write a report for each state on the passage of a state health improvement policy and its implementation at the local and community levels.

**Principal Findings:** Quality improvement played a significant role in the health improvement programs of two states. A quality improvement perspective was used to bring stakeholders from different sectors to the table, boost accountability, and streamline organizational processes within the state health agency.

**Conclusion:** Quality improvement can be a useful lens to emphasize collaboration, accountability, and efficiencies for statewide health improvement programs.

**Implications for the Field of PHSSR:** This research helps understand the mechanism for successful statewide health improvement programs, so that best practices can be disseminated across the states. ASTHO will facilitate sharing of lessons learned among public health leaders in order to improve health outcomes.

## William C. Livingood, Ph.D., B.A.

### *Clarifying and Expanding Concepts of Cross-Jurisdictional Sharing: Early Lessons Learned From Conducting QI With Georgia's Health Districts*

**Co-Investigators:** Russ Toal M.P.H.; Angela Peden M.P.H.; Nandi Marshall, Dr.P.H., M.P.H.; Ketty Gonzalez, M.D., M.S.; **Dayna Alexander, M.S.P.H. (presenting)**; **Gulzar Shah, Ph.D., M.S. (presenting)**; Alesha Wright, M.P.H.; DeAnna Keene; Lynn Woodhouse, Ed.D., M.P.H.

**Research Objective:** Assess the legal and organization cultural foundations for Cross-Jurisdictional Sharing (CJS) in support of local public health accreditation and QI in Georgia.

**Data Sets and Sources:** Archival data (primarily state statutes), secondary data from previous qualitative comparative research on Deep South public health organization, secondary data from previous surveys, and oral interviews and written communication.

**Study Design:** Primarily Qualitative design combining ethnographic and participatory research methods.

**Analysis:** Qualitative Content analysis based on predetermined and emergent themes.

**Principal Findings:** Georgia's Health Districts have emerged as major CJS entities that support delivery of essential services and local public health (LPH) QI and LPH accreditation readiness, driven primarily by local organizational leadership and culture that is facilitated through enabling statutes in contrast to more top-down state-mandating statutes, regulations and directives.

**Conclusion:** Georgia's use of districts as multi-county public health entities serves as a primary structure for providing local public health services and has become a critical structure to address the looming demands for QI and accreditation, even though the statutes clearly establish the county as the primary local public health entity.

**Implications for the Field of PHSSR:** This CJS structure to facilitate public health QI and accreditation in Georgia illustrates how agency cultures can emerge from local demands for economies of scale, more than formal policies generated at state level. This is a model that could be very important for advancing CJS in other regions of the country.

## April Richardson-Moore, M.P.H., RN

### *Using PBRNs to Spur Innovation: Measuring Quality in New York's HIV/STD Field Services Program*

**Co-Investigators:** Julie Mazza, B.S.; Joseph Kobilca, B.S.; **Britney Johnson M.P.H. (presenting)**

**Research Objective:** The New York State Public Health Practice-Based Research Network (PH PBRN) conducted a multi-phase evaluation of the recently integrated Bureau of HIV/STD Field Services (BHSFS) to assess quality outcomes related to the effectiveness, efficiency and acceptability of program services. Quality outcomes research revealed a need for program management data and information on day-to-day operations.

**Data Sets and Sources:** Operational quality measures not captured by current surveillance data were added to a pilot data collection system developed by one of the state health department's regional offices. BHSFS, with the AIDS Institute's Information Systems Office and regional program staff, designed an application to support data entry and program monitoring needs.

**Study Design:** The Program Management Application (PMA) was implemented in five integrated regional offices across the state in November 2012. A management dashboard that provided real-time graphics and tables measuring program quality metrics was implemented in early 2013.

**Analysis:** Program outcome data and staff feedback on data entry practices were collected and reviewed by PMA developers and BHSFS program managers.

**Principal Findings:** Paperwork and data entry processes in regional offices have improved. On a local level, supervisors were better able to monitor individual staff workload and assign cases, while the accessibility of real-time data helped guide local disease investigation priorities. Access to timely information on individual and program performance has improved.

**Conclusion:** The PMA has made it easier to identify best practices and monitor the impact of program changes. In combination with public health surveillance data, the PMA provides a comprehensive real-time picture of program quality processes and quality outcomes for workers involved in front-line HIV and STD intervention programs.

**Implications for the Field of PHSSR:** The PMA acts as a "remedy" for the historic lack of infrastructure to support monitoring of program operations. Program management systems like the one implemented in BHSFS are sustainable beyond PH PBRN research projects, providing a way for public health staff to continue quality measurement and improvement in their programs.

*SESSION 3E: Social Network Analysis-Wednesday, April 10, 2013, from 10:45 am to 12 pm*

## SESSION 3E: Social Network Analysis — Room: Thoroughbred 7 & 8

**Moderator: Cyntnra D. Lamberth, M.P.H., CPH**
**Co-Principal Investigator**
**National Coordinating Center for PHSSR**

### Jenine Harris, Ph.D.

***Local Health Department Social Media Networks for Dissemination***

**Co-Investigators: Ryan Bell, M.P.H., Elisia Cohen, Ph.D., M.A., Ross C. Brownson, Ph.D.**

**Research objective:** Effective dissemination of evidence-based strategies among local health departments (LHDs) is a significant barrier to adoption of these strategies. New social media connections have the potential to facilitate dissemination of information about their experiences, lessons learned, and other resources related to evidence-based public health. The goal of this presentation is to assess the current network of social media connections among LHDs nationwide.

**Study design:** Cross-sectional data on the network of Twitter connections among local health departments nationwide was collected through NodeXL in February, 2013. Descriptive and statistical network analysis were used to identify associations between local health department characteristics and social media connections.

**Population studied:** The population included the 218 local health departments nationwide that had adopted Twitter as of July, 2012.

**Principal findings:** Of the 218 LHDs, 186 LHDs (85%) were connected with at least one other LHD through Twitter, although most LHDs only had one or two connections total. LHDs with more constituents and LHDs employing a public information specialist were more likely to be followed by other health departments on Twitter. Per capita funding was negatively associated with being followed; LHDs with higher per capita funding levels were less likely to be followed by other LHDs. LHDs conducting the same programs, in the same state, and sharing a geographic border were more likely to be linked on social media.

**Conclusions:** Most LHDs are connecting to other LHDs through social media. Larger LHDs were more likely to be followed by other LHDs. LHDs also appear to be connected to those that are geographically closest and that are conducting the same types of programs.

**Implications for Policy, Delivery, or Practice:** While the network of connections on social media is relatively dense indicating the LHDs on Twitter are connecting to one another, those LHDs that are connected to most often tend to be large or nearby. Local health departments may benefit from seeking out connections with health departments that are not the "usual suspects."

## Christine Bevc, Ph.D., M.A.

### *PARTNERships in Public Health Collaboratives: Detecting Important Structural Patterns*

**Co-Investigators:** Jessica Retrum, Ph.D., M.S.W.; Danielle Varda, Ph.D., B.A.

**Research Objective:** This study documents the importance of interorganizational coalitions on population health. It is a response to the lack of considerable evidence-based research using inter-organizational networks from public health collaborations (stems from a selection of case studies of only single or small collections of networks).

**Data Sets and Sources:** This study examines data collected by PARTNER, a social network analysis tool designed for practitioners, funded by the Robert Wood Johnson Foundation. An unprecedented number of public health collaborative networks (n=162) are examined to better understand structured relationships and patterns of interaction among "actors" and their partners related to collaborative activities.

**Study Design:** This study is a secondary data analysis using quantitative, multivariate, and social network analysis methods. Data are analyzed on the organizational (N= 3,544 organizations) and network (n=162 public health collaborative networks) levels.

**Analysis:** Addresses the composition of public health collaboratives (i.e. who are more or less likely to be a part of a collaborative), as well as potential partner preferences across these networks. Using Exponential Random Graph (ERG) Models, we examine the propensity to form partnerships among organizations based on their attributes.

**Principal Findings:** This study presents a summary of network descriptive statistics and homophily/heterophily models to describe the observed interorganizational relationships. Evidence of differential and uniform homophily were identified. Results of this study and implications for future practice research directions will also be discussed.

**Conclusion:** In a response to scarce public resources, there has been an increase in interorganizational and multi-sector collaborations to address population needs. However, there is only minimal evidence and research to understand how and why such collaborative efforts are or are not successful.

**Implications for the Field of PHSSR:** The study of interorganizational networks is important and understudied in the realm of social, health, and public health systems research. This study contributes to our understanding of important patterns in interorganizational and multi-sector collaborations. Results can be used to guide future PHSSR efforts.

## Danielle Varda, Ph.D., B.A.

### *Introducing the PARTNER Dataset to the PHSSR Community for Collaborative Research*

**Co-Investigators:** Jessica Retrum, Ph.D., M.S.W.; Carrie Chapman, B.A.; Sara Sprong, M.P.A.

**Research Objective:** Public health departments are working toward strengthening their partnerships through interorganizational networks to better coordinate services and resources. However, data to analyze these efforts is scarce and largely based on case study or data limited ability to analyze the complex, nested features of networks.

**Data Sets and Sources:** With support from the Robert Wood Johnson Foundation, an unprecedented dataset to analyze these networks is now available from PARTNER (www.partnertool.net). PARTNER is an online survey and analysis tool designed to measure and monitor collaboration. These data contain 173 whole network collaboratives, approximately 4,000 organizations, and about 17,000 dyadic ties.

**Study Design:** The purpose of this presentation is to introduce the variable available in the PARTNER dataset to the PHSSR community. The dataset contains variables currently unavailable to PHSSR researchers. By introducing the dataset, the PARTNER team hopes to develop collaborative relationships in analysis, QI applications, and practical learning.

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**Analysis:** Analysis to understand and explain the process of collaboration requires an understanding of the relationships among a number of factors (e.g. in a dynamic system with nested levels of interaction). Completed, ongoing, and potential analysis options of the PARTNER data will be presented/discussed.

**Principal Findings:** "Only by examining the whole network can we understand such issues as how networks evolve, how they are governed, and, ultimately, how collective outcomes might be generated" (Provan et al. 2007). This dataset includes measures on characteristics of organizations as well as relational questions, representing whole networks in public health.

**Conclusion:** While the benefits of collaboration have become widely accepted and the practice of collaboration is growing within the public health system, the ability to measure, document, and strategize to affect practice has been weak. This dataset presents an opportunity to answer important PHSSR questions in new ways.

**Implications for the Field of PHSSR:** In the case of collaboration, it is important to recognize that both the resources (inputs) and activities carried out (processes) must be addressed together to improve public health services. The development and sharing of these data allow researchers and practitioners to gain more insight on collaboration to develop evidence-based practice.

# SESSION 4-WEDNESDAY, APRIL 10, 2013 FROM 2 TO 3:15 PM

## SESSION 4A: Accreditation — Room: Thoroughbred 1

**Moderator: Paul Halverson, M.D.**
**Dean, School of Public Health**
**Indiana University-Purdue University Indianapolis**
**Public Health PBRN National Advisory Committee Member**

**Nikki Rider, Sc.D., M.P.P., B.S.**

***Evaluation of the National Public Health Improvement Initiative: Methods and Findings from the First Two Years***

**Co-Investigators:** Mary Davis, Dr.P.H., M.S.P.H.; Anita McLees, M.A., M.P.H.; Saira Nawaz, Ph.D.; Brittany Bickford, M.P.H.

**Research Objective:** The evaluation of the National Public Health Improvement Initiative (NPHII) is designed to increase understanding of the extent to which NPHII has supported:

- Increased readiness of its awardees for accreditation through the Public Health Accreditation Board (PHAB);
- Increased efficiency/effectiveness through quality improvement (QI); and
- Increased performance management capacity.

**Data Sets and Sources:** Data sources include quantitative and qualitative data collected via the evaluation and program, such as:

- three rounds of the NPHII annual assessment;
- implementation stories;
- awardee interim and annual progress reports; and
- awardee work plans.

**Study Design:** Evaluation activities are grounded in both utilization-focused and strategic evaluation theoretical models and build off previous efforts to measure performance management capacity. The formative evaluation design uses mixed methods data collection.

**Analysis:** Quantitative analysis included descriptive statistics; qualitative data were coded and analyzed to extract relevant themes. When appropriate, comparisons across time and across various descriptive dimensions of awardees (e.g., awardee type, awardee funding level) were conducted.

**Principal Findings:** As of November 2012, awardees reported progress toward accreditation readiness, including completion of PHAB prerequisites (74%). Eighty-nine percent of awardees have established at least one component of a performance management system. Awardees also report improvements in their culture and environment to support QI and performance management activities.

**Conclusion:** NPHII awardees have made progress and have measurable successes in the areas of accreditation readiness, QI, and performance management. Evaluation results have helped increase understanding of the challenges experienced by awardees and have informed programmatic improvements to address these challenges when possible.

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**Implications for the Field of PHSSR:** NPHII is designed to strengthen the nation's public health system by optimizing resource utilization and increasing awardees' performance management capacity and ability to meet national standards. Through NPHII, we are learning how accreditation readiness, performance management systems, and QI strategies impact the effectiveness, efficiency, and outcomes of public health strategies.

## Jessica Kronstadt, M.P.P.

### *Evaluating the National Public Health Accreditation Program*

**Co-Investigators: Margaret Beaudry, M.A. (presenting)**

**Research Objective:** Accreditation presents the opportunity to advance the performance of public health departments. As the national accrediting organization for health departments, the Public Health Accreditation Board (PHAB) is committed to continuous quality improvement of the accreditation program, informed by evaluation activities. This presentation describes PHAB's evaluation plans and shares early findings.

**Data Sets and Sources:** The PHAB evaluation will draw on many data sources, including feedback from applicant health departments, volunteer Site Visitors, PHAB staff, and other stakeholders. In addition, e-PHAB, the online accreditation system, collects extensive programmatic data, including an assessment of how well health departments demonstrate conformity with the Standards and Measures.

**Study Design:** Developed through an iterative process by PHAB committees, contractors, and staff, this mixed-methods evaluation design encompasses both a process evaluation and an initial assessment of short-term outcomes. The presentation will describe the evaluation questions and discuss approaches for collecting new data, leveraging existing data sources, and conducting psychometric analyses.

**Analysis:** While early findings will be primarily descriptive, as additional health departments are accredited analyses will eventually include: longitudinal analyses of accredited health departments, comparisons between accredited health departments and those that are not accredited, psychometric analyses, and sub-group analyses (e.g., comparisons between health departments of different sizes and structures).

**Principal Findings:** The presentation will include preliminary findings from data gathered from Site Visitors and health departments that were among the first health departments to complete the accreditation process. Findings will focus on participants' assessment of the accreditation process and on the Standards and Measures.

**Conclusion:** PHAB's evaluation activities will provide key information to support ongoing improvement of the accreditation system and the Standards and Measures. The evaluation will also provide insights on the experiences of health departments that undergo the process and the types of quality improvement activities they engage in.

**Implications for the Field of PHSSR:** PHAB will collect vital information about applicant health departments and their activities related to quality improvement. This presentation will inform the PHSSR field about the types of analyses they can anticipate that PHAB will perform, as well as about the data that may be available for future research.

## Gulzar Shah, Ph.D., M.S., B.S.

### *Local Health Departments' Plan to Seek Voluntary National Accreditation and Its Association With PHAB Accreditation Prerequisites*

**Co-Investigators:** Kate Beatty, M.P.H.; Carolyn Leep, M.P.H., M.Sc.

**Research Objective:** To examine the nature of the relationship between LHDs' intentions to seek Public Health Accreditation Board (PHAB) accreditation in the future and having completed within five years the three PHAB pre-requisites: community health assessment (CHA), community health improvement plan (CHIP), and the agency-wide strategic plan.

**Data Sets and Sources:** We used data from NACCHO's 2010 National Profile of Local Health Departments (2010 Profile Study) survey, administered to 2,656 LHDs, with a module sent to a nationally representative stratified random sample of 625 LHDs. The module contained questions on LHDs' plans to seek voluntary national accreditation (the dependent variable).

**Study Design:** Our study design is primarily observational and inferential, based on analysis of secondary cross-sectional data from the 2010 Profile Study.

**Analysis:** Our bivariate analyses included Somers-D test for the nominal variables and Kendal's Tau-b for the ordinal variables. For the multivariate analysis of the ordinal dependent variable, we performed multinomial logistic regression (NOMREG command in SPSS 21).

**Principal Findings:** Our multivariate analysis showed that completion of community health assessment or community health improvement plan within the past five years had negative association with LHDs' intention to seek accreditation, and recent completion of a strategic plan had no association with accreditation, after controlling for the potential confounding factors.

**Conclusion:** Contrary to our expectations, our analyses did not show a positive association between completion of the PHAB accreditation prerequisites and local health departments' intentions to seek PHAB accreditation. However, a positive association existed between intent to seek accreditation and plans to complete a strategic plan in the next year.

**Implications for the Field of PHSSR:** As agencies prepare for accreditation, it is important to understand how intentions to seek accreditation are related to the current level of readiness based on the three PHAB prerequisites. Our presentation will include important implications for LHDs, PHAB, and its partners.

## Kate Beatty, M.P.H., B.S.

### *Organizational and Structural Factors Related to Voluntary Accreditation of Local Health Departments in Missouri*

**Co-Investigators:** Kathleen Wojciehowski, J.D.; Jeffrey Mayer, Ph.D.; Michael Elliott, Ph.D.; Ross Brownson, Ph.D.

**Research Objective:** Identify organizational, structural, workforce, and community level factors related to accreditation status of local health departments (LHDs) in the state of Missouri.

**Data Sets and Sources:** We used data from NACCHO's 2010 National Profile of LHDs survey, American Community Survey, and the Missouri Department of Health and Senior Services 2012 Infrastructure Survey of Local Health Departments, which contained accreditation status of LHDs through Missouri's Voluntary Accreditation Program (MOVAP) as well LHD structure, staffing, activities and programs.

**Study Design:** Our study design was observational and cross-sectional employing secondary data from multiple sources, with a sample size of 97 LHDs or 85% of 115 Missouri LHDs.

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**Analysis:** We performed parametric and non-parametric bivariate analysis for predictors, including governance/funding, leadership/workforce, accreditation prerequisites, barriers to accreditation, and community characteristics. For the multivariate analysis of accreditation status, we performed binary logistic regression.

**Principal Findings:** Preliminary analyses show associations between accreditation status and multiple organizational, structural, workforce, and community level predictors, including funding, governance by a local board of health, administrator with at least a master's degree, completion of accreditation prerequisites, utilization of performance management and improvement principles and tools, and multi-jurisdictional partnerships.

**Conclusion:** Accredited LHDs differed on many organizational, structural, workforce, and community level factors; many of these are amenable in nature. Interestingly, LHDs located near accredited LHDs are more likely to also be accredited.

**Implications for the Field of PHSSR:** Understanding the characteristics of non-accredited LHDs that differ from accredited LHDs in terms of leadership, structure, budget, and workforce has important implications for LHDs, local and national voluntary accreditation programs and their partners.

## SESSION 4B: Workforce III — Room: Thoroughbred 2

**Moderator: Kathleen Amos, M.L.I.S.**
**Project Manager, Council on Linkages Between Academia and Public Health Practice**

### Beth Resnick, M.P.H.

***Discerning Workforce Composition With Incomplete Estimates***

**Co-Investigators: J.P. Leider, Ph.D. (presenting)**; Beth Resnick M.P.H.; Patrick Bernet, Ph.D.; Jessica Young, M.S.

**Research Objective:** In the absence of administrative data, self-reported estimates from major public health organizations such as ASTHO and NACCHO are the best means of enumerating the workforce at state and local health departments. However, incomplete data complicate estimation of workforce composition, e.g., part-time/full-time staffing split.

**Data Sets and Sources:** Workforce estimates from ASTHO and NACCHO 2007/2008 and 2010 Profiles.

**Study Design:** Using staffing and FTE estimates, we examined likely FTE allocation scenarios that yield estimates of workforce composition by part-time/full-time staff effort, including how many FTEs are allocated to part-time staff versus full-time, as well as staffing estimates.

**Analysis:** We will report descriptive statistics on estimated part-time vs. full-time allocation split in 2008 vs. 2010, and report correlates of decreasing utilization of part-time positions.

**Principal Findings:** Under a scenario where the average part-time allocation is 0.5 FTEs per staff, data from ASTHO suggest the part-time workforce decreased from 12% in 2007/2008 to 7% of the workforce in 2010. Data from NACCHO suggest a reduction from about 23% of the workforce to 21% during 2008-2010.

**Conclusion:** Though not entirely consistent across all jurisdictions, it appears that a shift occurred between 2008 and 2010 in health departments that saw a moderate decline in part-time staffing in favor of full-time staff.

**Implications for the Field of PHSSR:** Although the beginning of a trend toward an even more full-time workforce may be underway, understanding the motivations and drivers of this trend is critical. The impact of civil service and union requirements should be measured, as well as the impact of state law on workforce decision-making.

*SESSION 4B: Workforce III-Wednesday, April 10, 2013, from 2 to 3:15 pm*

## Angela J. Beck, Ph.D., M.P.H., CHES

### *A Profile of the Public Health Nurse Workforce*

**Co-Investigators:** Matthew L. Boulton, M.D., M.P.H.

**Research Objective:** In 2012, the University of Michigan Center of Excellence in Public Health Workforce Studies convened a national public health nurse (PHN) workforce advisory committee to guide development and administration of two surveys to assess the size, composition, and characteristics of the PHN workforce in state and local health departments.

**Data Sets and Sources:** The PHN Workforce Survey consisted of both an organizational-level survey and an individual-level survey that were used for primary data collection. Existing survey instruments, including HRSA's National Sample Survey of Registered Nurses, CSTE's Epidemiology Capacity Assessment, and APHL's National Laboratory Capacity Assessment, informed the design of the online surveys.

**Study Design:** The 50 state health agencies and a randomly-selected stratified sample of 327 local health departments were selected for study inclusion. Both surveys were distributed to a key informant in the health department, who completed the organizational survey and forwarded the individual survey to all employed or contracted Registered Nurses (RNs).

**Analysis:** The organizational-level survey achieved an 82% response rate overall, with 45 of 50 state health agencies and 265 of 327 local health departments responding, while 3,407 RNs responded to the individual-level survey, exceeding the study target of 2,800 responses. Descriptive analyses were conducted using weighted estimates to determine workforce size and characteristics.

**Principal Findings:** The PHN workforce in local and state health departments is estimated to be 44,404. Approximately 30% are educated at the diploma/associate's degree level; over half of RNs in local health departments hold a bachelor's degree in nursing. Survey respondents reported training opportunities are widely available, although promotion opportunities are limited.

**Conclusion:** A substantial proportion of PHNs do not hold a bachelor's degree in nursing, which may call for more training and continuing education opportunities for these workers. The lack of promotion potential was noted as an area of concern among health department officials and RNs responding to the survey.

**Implications for the Field of PHSSR:** As the largest segment of the public health workforce, the size and composition of the PHN workforce are important to understand. This study provides the first national enumeration and characterization of RNs working in health departments using both organizational-level and individual-level data; the PHN workforce should be more regularly monitored.

## Matthew L. Boulton, M.D., M.P.H.

### *Development of a Classification Schema for the Public Health Workforce*

**Co-Investigators: Angela J. Beck, Ph.D., M.P.H., CHES (presenting)**

**Research Objective:** The purpose of this project was to develop a multi-axial classification system for public health workers. This classification schema provides a standardized format for characterizing workers and delineates minimum data elements that should be collected in public health workforce surveys. The schema could improve comparability among surveys collecting workforce data.

**Data Sets and Sources:** NACCHO and ASTHO Profile surveys, as well as APHL's National Laboratory Capacity Assessment and CSTE's Epidemiology Capacity Assessment, were used as resources when constructing the classification system.

**Study Design:** The University of Michigan Center of Excellence in Public Health Workforce Studies convened a two-day meeting of an Enumeration Working Group composed of federal partners, NACCHO, ASTHO, and workforce researchers to develop the structure of a public health workforce classification schema. The group has met subsequently to refine the schema.

**Analysis:** The Enumeration Working Group reviewed several public health workforce questionnaires and classification systems used by the Bureau of Labor Statistics and state and local health departments. From this review, the group identified several data elements to incorporate into a multi-axial classification schema that would apply to every public health worker.

**Principal Findings:** A set of 10 axes were developed to collect data on the following worker classification categories: job title, employment setting, educational background, licensure/certifications, job tasks, program area within department, public health specialization area/expertise, funding source, conditions of employment, and worker demographics.

**Conclusion:** The classification schema should be vetted by national public health organizations and public health services and systems researchers. Pilot testing of the schema as a mechanism for collecting standardized information on public health workers is still needed. Public health organizations should consider adopting this classification schema into future workforce surveys.

**Implications for the Field of PHSSR:** The public health workforce schema, while not an attempt to develop a new set of standard occupational classifications for public health, serves as a tool for post-coordination of public health worker characteristics. The schema axes provide guidance for describing the size and composition of the public health workforce.

## SESSION 4C: Food Safety — Room: Thoroughbred 3

**Moderator: Glen Mays, Ph.D., M.P.H.**
**Director, Public Health PBRN National Coordinating Center**
**Co-Investigator, National Coordinating Center for PHSSR**

### Justeen Hyde, Ph.D.

***Retail Food Safety Programs: What Factors Are Associated With Best Practices in Massachusetts?***

**Co-Investigators:** Lisa Arsenault, Ph.D.; Nazmim Bhuiya, M.P.H.; Kathleen MacVarish, M.S.; Harold Cox, M.S.W.

**Research Objective:** Retail food inspections are a core function in many local health departments across the nation. There is limited evidence regarding best practices for these services or outcomes they produce. This paper describes a screening tool created to measure food safety standards and factors associated with meeting these standards in Massachusetts.

**Data Sets and Sources:** The Massachusetts Public Health Practice-Based Research Network conducted a structured survey with 249/351 (70%) local boards of health in the state. The survey examined local context, public health infrastructure, capacity to provide essential public health services, and capacity to meet food safety and communicable disease standards.

**Study Design:** This paper reports on findings from an analysis of retail food safety practices among local boards of health. The measure used in the survey was created from the FDA's Voluntary Retail Food Safety Program Standards. We used these standards to create a 25-item screening instrument that included eight domains.

**Analysis:** Total capacity score was divided into quartiles based on the distribution of the analytic sample. Indicators were compared across the four quartiles to determine statistically significantly indicators using two tests and Spearman correlation coefficients. A logistic regression model was then constructed to predict performance scores in the highest quartile.

**Principal Findings:** The strongest predictor of capacity in a multivariate analysis was performance of essential public health services (lowest vs. highest quartile, p=.0008) and elected officials' understanding of board of health responsibilities (p=.06). Capacity to assess inspectional services and provide community education differentiated high vs. low capacity in the state.

**Conclusion:** In this study, we found that capacity to perform essential public health services was strongly associated with quality inspectional food safety services in local health departments. Our findings support other PHSSR studies that highlight the importance of improving the capacity of local health departments to perform essential public health services.

**Implications for the Field of PHSSR:** This study adds to the limited evidence on retail food inspection services. The screening tool is among the first of its kind and may be adapted for future PHSSR studies. The results also highlight an important association between performance of essential public health services and high quality food safety practices.

### Scott Frank, M.D., M.S., B.A.

***Variation in Food Safety Inspections Based on Local Health Department and Food Service Establishment Structural, Social, and Demographic Characteristics***

**Co-Investigators:** Michelle Menegay, M.P.H., B.A.; Emily Blake, B.A.

**Research Objective:** To describe variations in food safety inspections based on Local Health Department (LHD) and Food Service Establishment (FSE) structural, social, and demographic characteristics. LHD characteristics include structure, jurisdictional

demographics, workforce size, and per capita spending. FSE characteristics include area-level poverty, and size and type of establishment.

**Data Sets and Sources:** Original data are collected utilizing an innovative direct observation methodology adapted from primary care Practice-Based Research Networks (PBRN), utilizing trained student observers and a validated observational protocol. Pre- and post-inspection interviews with sanitarians further inform process. Data integration is achieved using annual financial reports, public health performance standards, and U.S. Census data.

**Study Design:** This PBRN project is a comparative case study design utilizing mixed methods, including direct observation, interview, and data integration from existing databases. Participants: A convenience sample of approximately 30 Ohio LHDs and 50 geographically and demographically diverse Ohio Registered Sanitarians (RS) with more than 600 observed inspections.

**Analysis:** Multivariable data integration among original data utilizing qualitative field notes, quantitative direct observation, and interviews; with statewide public health performance standards and LHD Annual Financial reports with variables including workforce size and composition, public health spending, and funding sources. Finally, analysis will integrate Census tract-level demographic data.

**Principal Findings:** Preliminary analysis reveals citations issued in 67% of inspections (2.19/FSE inspection) and verbal corrections given in 80% of inspections (1.93/inspection). In most instances (54%), violations were dealt with during the inspection. Sanitarians offered clear feedback and assessment (98.5%), discussed improvement plan (87%), offered food safety education (69%), and elicited questions (77.5%).

**Conclusion:** Sanitarians discovered frequent food safety violations, while offering consistent information to prevent future foodborne outbreaks. Data integration to establish patterns related to these outcomes will be completed and presented. FSE Employees were cooperative (97.5%) and engaged (88%) and thanked the Sanitarian 91% of the time.

**Implications for the Field of PHSSR:** This study utilizes original data collection and existing data sources to identify patterns of variation on LHD performance, introducing a direct observation methodology intended to reduce research error variation. This method holds potential to significantly enhance the knowledge base of public health practice, as it has done in primary care.

## Fanta Purayidathil, M.P.H., B.S.

### *State Health Department Organization and Foodborne Disease Outbreak Reporting Fidelity: What Role Does Governance Play?*

**Co-Investigators:** Jennifer Ibrahim, Ph.D., M.A., M.P.H.

**Research Objective:** The function and performance, as well as the organizational relationship between state and local health departments, is a key factor in information-sharing and response of foodborne disease outbreaks (FBDO). This study investigated the relationship between governance and reporting of FBDO-related hospitalizations by private and public agencies.

**Data Sets and Sources:** Data on total hospitalizations reported by the Centers for Disease Control and Prevention's (CDC) National Outbreak Reporting System Food Outbreak Online Database were collected and standardized for 31 states between 2006 and 2009. The seven governance classifications of the Association of State and Territorial Health Organizations were condensed into "centralized," "decentralized," "mixed," and "shared."

**Study Design:** The relationship between state health department organization, as measured by governance classification, and reports to the CDC of hospitalization due to foodborne illness were analyzed.

**Analysis:** Descriptive statistics were run; Wilcoxon rank sum tested for associations between governance and reporting of FBDO-related hospitalization.

**Principal Findings:** State health departments operating under different governance classifications reported significantly different totals of hospitalization to the CDC (p=0.033). Specifically, centralized and mixed states had significantly different reports to the CDC (p=0.048), as well as mixed and decentralized (p=0.021), after standardizing for population.

**Conclusion:** Findings from this study suggest that organization and governance are associated with FBDO reporting fidelity.

**Implications for the Field of PHSSR:** Further investigation into governance, as well as other state health department characteristics as they relate to FBDO reporting, will provide insight on how to best utilize limited department resources and improve health outcomes, as well as provide the basis for an accurate system for reporting to federal agencies.

## Scott Frank, M.D., M.S., B.A.

### *Examining the Influence of the Interpersonal Interaction Between Public Health Sanitarians and Food Service Establishment Personnel on the Outcome of Food Safety Inspections*

**Co-Investigators: Michelle Menegay, M.P.H., B.A. (presenting)**

**Research Objective:** To examine the influence of the interpersonal interaction between Registered Sanitarians (RS) and Food Service Establishment (FSE) personnel on the outcome of food safety inspections. This study examines the complexity of public health practice by investigating the manner in which RS and FSE personnel relate and communicate.

**Data Sets and Sources:** Original data are gathered through direct observation of FSE inspections in 30 LHDs by 51 RS conducting over 600 inspections. Data also include RS profiles, detailing attitudes about FSE inspection; and pre- and post-inspection interviews. Data integration utilizes census, financial reports, and public health performance standards.

**Study Design:** This is a comparative case study design utilizing mixed methods, including direct observation, interview, and publicly available data. Protocol: RS are shadowed during the conduct of food service establishment inspections, with a structured and validated direct observation protocol completed by a trained student observer.

**Analysis:** Descriptive analysis of components of the RS interaction with the Person In Charge (PIC) as recorded during direct observation. Logistic regression is used to identify RS and PIC characteristics that influence the interaction, and to examine the impact of the interaction on FSE inspection outcomes, including citations and verbal corrections.

**Principal Findings:** While the perception of the RS/PIC relationship is that of tension, findings demonstrate positive interactions. The RS rarely used unexplained jargon (2.5%), offered feedback negatively (15%), or demonstrated argumentation or conflict (5%). The RS offered positive feedback often (78%). The PIC was cooperative (97.5%) and engaged (88%).

**Conclusion:** RS demonstrate a high level of professionalism and positive interaction during FSE inspection. These positive interactions do not prevent action being taken when necessary, with 80% of inspections resulting in verbal correction and 65% resulting in citations. Positive interactions predict effective checkout at the conclusion of the inspection.

**Implications for the Field of PHSSR:** The value of positive interpersonal interaction in effective conduct of FSE inspection is demonstrated, along with complexity of the FSE inspection process and one source of variation in inspection results. While the interpersonal interactions of other health professionals are often examined, they have received little scrutiny in public health practice.

## SESSION 4D: Reducing Health Disparities — Room: Thoroughbred 5 & 6

**Moderator: Francisco Sy, M.D., Dr.P.H.**
**Director**
**Extramural Activities and Scientific Programs**
**National Center on Minority Health and Health Dispanties**

### Melanie Peterson-Hickey, Ph.D., M.S., B.A.

***Addressing Health Inequities – The Role of Local Health Departments in Minnesota***

**Co-Investigators: Kim Edelman, M.P.H., B.A. (presenting)**

**Research Objective:** Increase understanding of readiness, capacity, and current efforts of Minnesota local health departments (LHDs) to address health disparities through a health inequities lens, focusing on upstream approaches including public policy and systems efforts.

**Data Sets and Sources:** Utilized data from key informant interviews, online survey results from the Minnesota LHD Health Inequity Survey, a literature review of health inequity (HI) activities and concepts, and a review of existing documents including LHD Planning and Performance System, LHD Assessments, program evaluations, reports and local surveys.

**Study Design:** Study methods include use of data from key informant interviews, literature, and existing documents to develop measures to assess health inequity efforts of LHDs. The survey was developed and administered online to LHD directors. Several of our partners assisted in the survey development and follow-up on the return of surveys.

**Analysis:** Vovici software was used to gather online survey results. Results were analyzed in SPSS. Qualitative data were coded and analyzed for common themes and patterns. Project partners assisted in the review and analysis of results. Final results describe HI activities by structure and governance.

**Principal Findings:** The survey response was 73%. Health inequities work varied widely. Some HI efforts were targeted, while others were incorporated into ongoing activities. The majority of HI activities were focused on individuals and less on upstream prevention.

**Conclusion:** There is a need to develop greater understanding of multiple contributing factors to illness and disease. Technical assistance is needed on the impact of HI on public health, program development and data assessment. Support for successful implementation of HI activities at the local level is needed.

**Implications for the Field of PHSSR:** This project will contribute to the PHSSR field by adding knowledge of current HI efforts at LHDs, and how these efforts are shaped by organizational characteristics related to structure, funding and staffing.

*SESSION 4D: Reducing Health Disparities-Wednesday, April 10, 2013, from 2 to 3:15 pm*

## Arlesia Mathis, Ph.D., M.A., CPH

### *Improving Health Disparities Through Public Health Training Centers*

**Co-Investigators:** None named.

**Research Objective:** This study has two objectives: 1) to examine the relationship between Public Health Training Centers (PHTCs) and workforce diversity; and 2) to examine the relationship between workforce diversity and population health outcomes.

**Data Sets and Sources:** The data sources include workforce information collected from the Association of Schools of Public Health, Florida's PHTCs and the Bureau of Labor Statistics. Health Indicators were collected from the Florida Department of Health.

**Study Design:** The study design compares population health indicators in areas with PHTCs to areas without training centers. It is expected that areas with training centers will show greater diversity and lower levels of health disparity than areas that do not have PHTCs.

**Analysis:** This study uses geographic information systems (GIS) analysis to examine the relationship between PHTCs and public health workforce diversity and population health outcomes.

**Principal Findings:** This is a pilot study to examine the relationship between public health training centers and workforce diversity. The study also examines the relationship between workforce diversity and health outcomes. We expect to find greater racial and ethnic diversity among public health workers and lower rates of population health disparity.

**Conclusion:** PHTCs are expected to play a role in mitigating workforce shortages by increasing the diversity of the public health workforce. It is expected that diverse public health workers are more likely to practice in minority communities, creating improvements in population health outcomes.

**Implications for the Field of PHSSR:** As the population grows older, minority groups comprise a larger proportion of the total population. If these demographic changes continue without improvement in health disparities that currently exist, the health status of the overall population will decline. Therefore, PHTCs are vital to mitigating population disparities.

## Sarah Ramirez, Ph.D., M.P.H.

### *California Health Equity Initiative: Promising Practices From the Field*

**Co-Investigators:** None named.

**Research Objective:** The goal of the California Health Equity Initiative was to assess the use of tools that can be applied to advance a Health in All Policies approach by LHDs (e.g., health equity indices, health impact assessments, and local land use policy activities) and their potential impact on health equity.

**Data Sets and Sources:** Semi-structured interviews will be conducted with those LHDs with Latino populations exceeding the state average (n=17) to provide a more detailed examination of disparities-focused activities including: 1) current capacity; 2) current applications; 3) perceived needs; 4) perceived value; and 5) best health equity practices.

**Study Design:** Semi-structured interviews and questionnaires were completed with those local health departments with Latino populations exceeding the state average (n=17) to provide a more detailed examination of disparities and health equity focused activities.

**Analysis:** Qualitative analysis used to analyze the interviews and questionnaires, with a participation rate of 88% with the selected California health departments.

**Principal Findings:** Several important themes emerged to facilitate or inhibit the adoption of health equity activities. Some of these themes included: language choice, constraints of funding streams, data capacity, reorganization, and other workforce development. Additional findings and some best practices will be presented.

**Conclusion:** This project will support, build, and formalize the California Public Health Practice-Based Research Network. Anticipated findings may result in an intervention to improve resources and skills to improve workforce capacity in addressing health equity. Cross-jurisdictional sharing may offer one potential solution to support health equity activities.

**Implications for the Field of PHSSR:** This preliminary study and its findings provide support for rethinking models for cross-jurisdictional sharing. It highlights opportunities for workforce development to better engage with health equity. This workforce development may have additional implications for health department performance.

## SESSION 4E: Technology & Data IV — Room: Thoroughbred 7 & 8

**Moderator: Richard C. Ingram, Dr.P.H., M.Ed.**
**Research Assistant Professor**
**University of Kentucky College of Public Health**

### Brian Dixon, Ph.D., M.P.A., B.A.

***A Framework to Measure and Improve the Content, Quality, and Timeliness of Electronic Health Data***

**Co-Investigators:** Shaun Grannis, M.D., M.S., B.S., FAAFP

**Research Objective:** To develop a framework for characterizing and improving the content, quality, and timeliness of electronic health data, which is increasingly leveraged by public health systems and services to assess and monitor the health of populations.

**Data Sets and Sources:** A review of the existing literature in business, information technology, and government was used to develop a novel framework for examining the quality of electronic health data.

**Study Design:** Health care organizations are increasingly using health information technologies to collect, store, manage, and analyze data. Given increasing availability of electronic health data, many health departments are developing strategies to leverage electronic data for biosurveillance, notifiable disease reporting, chronic disease monitoring, and identification of health disparities.

**Analysis:** An unsupported assumption is that electronic health care data are of sufficient quality to enable the varied uses envisioned by health departments. The reality is that many electronic health data sources are of suboptimal quality and likely unfit for particular uses.

**Principal Findings:** To systematically characterize and improve the content, quality, and timeliness of electronic health data, we propose a novel framework for electronic health data quality. The framework is adapted from prior data quality research but has been reshaped to apply a systems approach to data quality with emphasis on population outcomes.

**Conclusion:** The proposed framework is a beginning, not an end. We invite the public health services and systems research community to use and adapt the framework to improve electronic health data quality and outcomes for populations across the nation as well as globally.

**Implications for the Field of PHSSR:** This work moves PHSS researchers and practitioners toward a consensus-based model for characterizing and improving the content, quality, and timeliness of the data used by surveillance systems and other core functions of public health. This is a key research question in the national PHSSR agenda.

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

***The Use of Audience Response Systems (ARS) to Spark Practitioner Involvement in Practice-Based Research***

**Co-Investigators:** Ruth Wetta, Ph.D., M.P.H., RN; Matthew Shepherd, Ph.D.

**Research Objective:** Audience Response Systems (ARS) are an innovative way to gather community insights and obtain information about applied research projects. To date, ARS have been widely used to augment interactive learning; however, there are no reports of its use to engage practitioners in PHSSR.

**Data Sets and Sources:** As a part of a practice-based research project, 36 representatives from public health departments and hospitals engaged in a Community Health Assessment and Improvement Plan (CHA-CHIP) process in Kansas were invited to participate in an interactive session that included the use of ARS.

**Study Design:** Respondents answered 57 Likert scale items that measured their perceptions of the relative importance of indicators of a successful CHA-CHIP. Participants also used the ARS to explore ways to (1) implement the project; (2) design project surveys; (3) identify focus group participants; (4) recruit participants; and (5) efficiently collect data.

**Analysis:** Items were rank ordered using mean scores by group (public health, hospital, total, previous CHA-CHIP experience). Qualitative analysis was done on information pertaining to the organization of project activities.

**Principal Findings:** Items rated as important by all participants included: CHA-CHIP developed with stakeholder partners; CHA-CHIP has measurable objectives; and timeframes and the process includes elected officials. Participants expressed enthusiasm and appreciation for being involved in study-design activities and provided critical input for the organization of project activities.

**Conclusion:** The use of ARS facilitated the engagement of practitioners' interest, sustaining their motivation and attention during the kick-off meeting and fostering their ownership for the project. At the same time, this strategy allowed the identification of areas important to public health practitioners engaged in CHA-CHIP activities.

**Implications for the Field of PHSSR:** Involvement in PHSSR of public health practitioners is difficult, particularly in rural states. The use of ARS for PHSSR is a relatively low-effort tool that can promote action-oriented participatory research in public health.

## Athena Pantazis, M.Sc.

### *Understanding Local Health Department Service Philosophy: A Latent Class Analysis of NACCHO Profile Data*

**Co-Investigators:** Jerry Herting, Ph.D.; Matthew Dunbar, Ph.D.; **Michael Morris, Ph.D., M.P.H., CPH (presenting)**; Betty Bekemeier, Ph.D., M.P.H., RN

**Research Objective:** Local public health departments (LHDs) hold different philosophies on the role of public health, which leads to variation in the portfolio of services offered by an LHD. This study develops and validates a method for identifying the underlying service philosophy of LHDs based on available national data sets.

**Data Sets and Sources:** Data on the types of services offered by LHDs in Florida, Washington, Minnesota and Ohio were drawn from the NACCHO Profile from 2005, 2008 and 2010. Corresponding LHD financial data were taken from the PHAST database, and interviews were conducted with practitioners from the relevant states to validate results.

**Study Design:** Longitudinal panel data were used to identify clusters of LHD services. These clusters were then incorporated into a latent class analysis to identify classes of LHDs based on their service offerings. These classes were then validated by a two-step process.

**Analysis:** Cluster analysis and latent class analysis techniques. The results of the latent class analysis were used as predictors for expenditure in a GEE regression model. Qualitative analyses were conducted of interviews with practice experts in the four states to determine if the classifications match with their expert knowledge of LHDs.

**Principal Findings:** Cluster analysis revealed four groups of services. Two classes of LHDs were identified using latent class analysis: a core package class and a core package plus additional service groups. In bivariate analyses, the "core services" cluster was associated with lower overall and per capita expenditures than the "expanded services" cluster.

**Conclusion:** Preliminary findings indicate that latent classes can be identified for LHDs with different philosophies of public health services. The results of validation tests are consistent with hypothesized relationships between the classes and expenditures. Practitioner review of the identified classes is currently underway.

**Implications for the Field of PHSSR:** Preliminary results suggest that indicators for LHD philosophical orientation towards service offerings can be developed from existing national level data sources. This would allow the field of PHSSR to introduce control variables into analytical models to account for these organizational vision differences between LHDs.

*SESSION 4E: Technology & Data IV-Wednesday, April 10, 2013, from 2 to 3:15 pm*

## Bridget Catlin, Ph.D.

### *Evidence-Based Strategies: How Do We Know if Something Works and Does It Matter?*

**Co-Investigators:** Julie Willems Van Dijk, Ph.D., M.S.N., RN

**Research Objective:** Everyone talks about implementing evidence-based policies and programs, but what is "evidence," how do we find evidence, and what if there is no evidence to be found? We reviewed sources of evidence, compared different approaches to rating evidence, and considered use of evidence in efforts to improve community health.

**Data Sets and Sources:** We examined the evidence rating strategies used by well-known collections of systematic reviews such as the Community Guide, as well as those of other government and private organizations such as the Promising Practices Network, Healthy Communities Institute, What Works Clearing House, and What Works for Health.

**Study Design:** We conducted a qualitative review of 10 websites that provide ratings of evidence of effectiveness for policies and programs that address the multiple determinants of health to determine how each site defined and assigned different ratings of evidence.

**Analysis:** We examined each site to see whether and how they addressed the many dimensions to consider when assessing the effectiveness of a given policy or program. For example: How many studies were reviewed? How strong is the demonstrated effect? Have results been replicated? Has causality been established?

**Principal Findings:** Among the variety of potential sources of "evidence," the term "evidence-based" is widely used, but with inconsistent definitions. Standards for evidence differ across disciplines. Assessing evidence and assigning ratings requires careful attention to detail and weighing of findings.

**Conclusion:** Concise, reliable summaries of evidence of effectiveness can help inform policy and program selection and funding decisions. Knowledge of ratings of effectiveness should be balanced with local needs, resources, and culture when deciding which policies and programs to implement.

**Implications for the Field of PHSSR:** Continued assessment of effectiveness based on sound principles is of vital importance to public health practice. Researchers, evaluators, and practitioners should continue collaborating to evaluate effectiveness of policies and programs and to disseminate findings in a user-friendly manner with clearly transparent methods and definitions.

# TUESDAY, APRIL 9, 2013
# 5:30 TO 6:30 PM

## Poster Session A — Thoroughbred Prefunction Area

### PRESENTERS

**Board 1: Influences and Barriers to Rural Health Department Accreditation in Missouri**
Kate Beatty, M.P.H.
Co-Investigators: Kathleen Wojciehowski, J.D.; Jeffrey Mayer, Ph.D.; Michael Elliott, Ph.D.; Ross Brownson, Ph.D.

**Board 2: Quality Improvement and Accreditation Strategies in Regional Local Health Departments in Nebraska**
Janelle Jacobson, M.P.H., B.S., CHES
Co-Investigators: Li-Wu Chen, Ph.D.; David Palm, Ph.D.

**Board 3: Integration of HIV and STD Field Services: Findings from Staff and Supervisor Focus Groups**
Kristi McClamroch, Ph.D., M.P.H.
Co-Investigators: Britney Johnson, M.P.H

**Board 4: Leadership and Gender Inequality: Are Local Health Departments an Exception in Gender Equality?**
Gulzar Shah, Ph.D., M.S., B.A.
Co-Investigators: Kimberly McCreary, M.S., B.A.

**Board 5: Toward More Disciplined Translation Practices: Interdisciplinary Lessons for Public Health Practice-Based Research Networks (PBRNs)**
Patricia Atwater, M.P.H., B.A.

**Board 6: Health Care Reform: Colorectal Cancer (CRC) Screening Expansion and Health Disparities**
Michael Preston, M.P.H.

**Board 7: Leadership: Variation in Leader Characteristics of Local Health Departments (LHDs) by Tenure and Financial Performance**
Emmanuel Jadhav, M.Sc., B.S.
Co-Investigators: James Holsinger, M.D.; Glen Mays, Ph.D.

**Board 8: Characterizing the Public Health Workforce: Beyond the Core Competencies for Public Health Professionals**
Kimberley Shoaf, Dr.P.H., M.P.H., B.S.
Co-Investigators: James Vanderslice, Ph.D.; Jesse Bliss, M.P.H

*Poster Session A-Tuesday, April 9, 2013 from 5:30 to 6:30 pm*

**Board 9: Succession Planning in Health Departments: The Road Not Taken**
Julie Darnell, Ph.D.
Co-Investigators: Joshua Franzel, Ph.D.; Susan Cahn, M.A.

**Board 10: Findings from the 2011 National Association of Local Boards of Health Profiles**
Jeff Jones, Ph.D., M.A., B.A.
Co-Investigators: Ginger Fenton, Ph.D.; Stephanie Branco, M.S.

**Board 11: Examining Infant and Neonatal Mortality by Community Health Center Concentration**
Priscilla Barnes, Ph.D., M.P.H., CHES
Co-Investigators: Melody Goodman, Ph.D., M.S.; Arlesia Mathis, Ph.D.; Gulzar Shah, Ph.D., M.S.; Masayoshi Oka, DDes, MES

**Board 12: Local Health Departments Delivery of MCAH Services/Programs and Performance of Essential Services for MCAH Population**
L. Michele Issel, Ph.D., RN
Co-Investigators: Hale Thompson, M.P.H.; Arden Handler, Ph.D.

**Board 13: Evaluating Patient Centered Medical Home and Panel Management Practice Implementation in Primary Care Safety-Net Clinics**
Nicole Cook, Ph.D., M.P.A., B.A.
Co-Investigators: T. Lucas Hollar, Ph.D., B.A.

**Board 14: Is Telephone-Based Partner Notification for STIs Cost-Effective?**
M. Mahmud Khan, Ph.D.
Co-Investigators: Mohammad Rahman, Ph.D.; Lizheng Shi, Ph.D.

**Board 15: Validity and Reliability of the Direct Observation Methodology: A Focus on Ohio Local Public Health**
Michelle Menegay, M.P.H., B.A.
Co-Investigators: Scott Frank, M.D., M.S.

# WEDNESDAY, APRIL 10, 2013
# 5:30 TO 6:30 PM

## Poster Session B — Thoroughbred Prefunction Area

## PRESENTERS

**Board 1: The Relationship Between Engagement in Quality Improvement and Health Information Technology**
Kendra Johnson, B.A.
Co-Investigators: Khuyen Nguyen, B.A.; Robin Pendley, Dr.P.H., M.P.H, B.S., CPH

**Board 2: From Data to Information: Understanding and Clarifying the Health Officials' Influenza Surveillance Requirements and Intended Uses**
Ying Zhang, M.D., B.S.

**Board 4: Messy Test Tubes: Conducting Applied Research for Emergency Preparedness**
Debra Olson, DNP, M.P.H., RN
Co-Investigators: Tai Mendenhall, Ph.D.; Abigail Brinkmeier, M.B.A.; Andrea Hickle, M.P.H; Amy Scheller, M.P.A.; Megan Peck, B.A.

**Board 5: Comparing Public Health Emergency Preparedness Measures Across State and Local Health Agencies**
Maria Landron, Dr.P.H., M.P.H.

**Board 6: Developing Measures to Assess Health Care Coalition Relationships**
Danielle Varda, Ph.D., B.A.
Co-Investigators: Anita Chandra, Dr.P.H.; Joie Acosta, Ph.D.; Lori Uscher-Pines, Ph.D.; Sara Sprong, M.P.A.; Stefanie Stern

**Board 7: State Barriers to the Timely Allocation of Public Health Emergency Response Funds**
Valerie Yeager, Dr.P.H.
Co-Investigators: Charles Katholi, Ph.D.; Nir Menachemi, Ph.D., M.P.H

**Board 8: Increasing Healthcare Providers in Underserved Communities: Enhancing the Effectiveness of Loan Repayment Programs Through Collaborative Partnerships**
Amanda Scarbrough, Ph.D., M.A., B.A.
Co-Investigators: **Regina Knox, M.P.H, B.A., CHES (presenting)**; Rachel Little

**Board 9: Where Are the Shots? An Examination of the Relationship Between Public Health Funding and Immunization Rates**
Van Do-Reynoso, M.P.H.
Co-Investigators: Paul Brown, Ph.D.

*Poster Session B-Wednesday, April 10, 2013 from 5:30 to 6:30 pm*

**Board 10: Academic-Health Department Collaborations Support Public Health's Core Competencies and Essential Functions**
Elizabeth Neri, M.P.H.
Co-Investigators: Marie Ballman, M.P.H; Hua Lu, M.S.

**Board 11: Environmental Policy Through the Lens of Public Health: A Public Health-Environment Agency Partnership in the United Arab Emirates**
Jacqueline MacDonald Gibson, Ph.D., M.S., B.A.

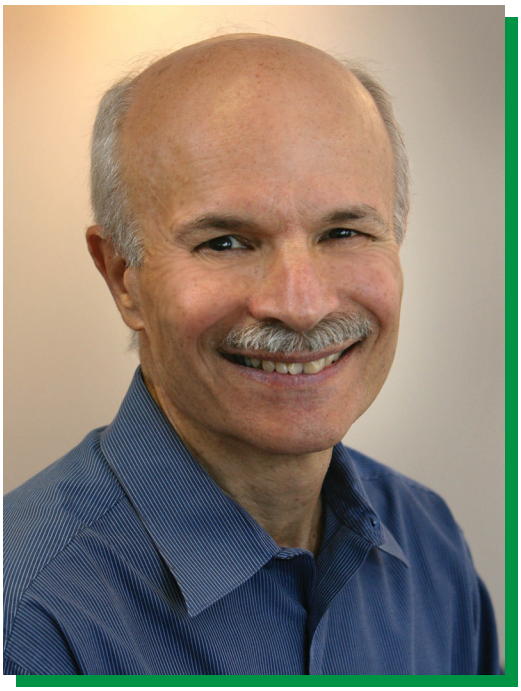
**Board 12: The Dynamics of Maternal and Child Health Partnerships: The Scope of Public Health Systems to Address Unmet Maternal and Infant Health in a Community Setting**
Sharla Smith, M.P.H., B.S.

**Board 13: Partner Services in New York State: Provider Awareness of the Integrated HIV/STD Field Services Program**
Britney Johnson, M.P.H.
Co-Investigators: James Tesoriero, Ph.D.; Mara San Antonio-Gaddy, M.S.N.

**Board 14: Marginalization of School Health in the Public Health Workforce: Assessment of the Relationship Between Ohio's Local Public Health Departments (LHD) and Schools Within Their Geographic Service Area**
Kristina Knight, M.P.H., B.S.
Co-Investigators: Scott Frank, M.D., M.S.

National Coordinating Center for PHSSR

# CONGRATULATIONS TO THE 2013 BROWN SCHOLARS



The National Coordinating Center for Public Health Services and Systems Research (PHSSR) has announced the first three recipients of the Dr. E. Richard "Rick" Brown Keeneland Conference Scholarships.

The scholarships were established to recognize the many lasting contributions of Dr. Brown, distinguished leader, scholar and teacher in public health and the founding director of the UCLA Center for Health Policy Research. He passed away on April 20, 2012.

- **Van Do-Reynoso, M.P.H.**
  *Director*
  Madera County Department of Public Health in California

- **Kimberly M. McCreary, M.S.**
  *Doctoral Student in Public Health Leadership*
  Georgia Southern University

- **Denise D. Payán, M.P.P.**
  *Doctoral Student in Public Policy and Management*
  University of Southern California Sol Price School of Public Policy

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