PHSSR Research-In-Progress Series:

Bridging Health and Health Care
Thursday, June 18, 2015  1-2 pm ET/ 12noon-1pm CT

Injury-Related Infant Mortality among Vulnerable Populations: The Role of Public Health, Primary Care & Policy

To download today’s presentation & speaker bios, see the ‘Resources’ box in the top right corner of the screen.

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

Welcome: Angie Carman, DrPH, Assistant Professor, Health Management & Policy, University of Kentucky College of Public Health

“Injury-Related Infant Mortality among Vulnerable Populations: The Role of Public Health, Primary Care & Policy”

Presenter: Sharla Smith, MPH, PhD, Dep’t. of Preventive Medicine and Public Health, University of Kansas School of Medicine-Wichita

Commentary: Mary E. Aitken, MD, MPH, Dep’t. of Pediatrics, UAMS College of Medicine and Director, Injury Prevention Center, Arkansas Children’s Hospital
Xi Zhu, MS, PhD, Dep’t. of Health Management and Policy University of Iowa College of Public Health
Zenobia Harris, BSN, MPH, DNP, Central Region Director, Arkansas Dep’t. of Health

Questions and Discussion
Sharla Smith, MPH, PhD
Assistant Professor
Preventive Medicine and Public Health Department
University of Kansas School of Medicine–Wichita

Post-doctoral Scholar in Public Health Delivery, 2014 PHSSR Award
Injury-Related Infant Mortality among Vulnerable Populations: The role of public health, primary care, & policy

Sharla Smith, PhD, MPH
Preventive Medicine and Public Health
University of Kansas School of Medicine-Wichita
Outline

- Significance
- Public health delivery systems
- The role of primary care and policy
- Frameworks
- Social network analysis
- Methods
- Preliminary findings
- Conclusions
- Next steps
Significance

- Unintentional injury - 5th leading cause of infant mortality

- In 2010, the US unintentional injuries mortality rate for infants was 3.1 per 1,000 live births

- The most common cause of injury-related infant mortality include:
  - suffocation
  - motor vehicle crashes
  - drowning
  - fire/burns
  - poisoning
Public Health – Primary Care Delivery Systems

- local health department
- physician practices
- hospitals
- community health centers

The public health system: government and some of its potential partners

SOURCE: The Future of the Public’s Health (IOM, 2002)
The role of primary care and policy

- The integration of public health and primary care increases public health awareness.

- Injury prevention efforts work best when supported by well-informed policy solutions.

- Policy makers benefit from public health research and the support of primary care providers.
Fundamental empirical questions

- Which programs, intervention, and policies (mechanisms)
- Work best (outcomes)
- In which community settings (contexts)
- And Why (causal pathways, interactions)?

Pawson and Tilley, 1997
Social Network Analysis

- Social network analysis:
  - *nodes* (represent organizations)
  - *ties* (represent relationships between organizations)

- Two key measures of SNA:
  - Density
  - Centralization
The integration of primary care and public health may:

- enhance the capacity of both sectors to carry out their respective missions
- create links with other stakeholders, policy makers and organizations

Rowan, 2007
Injury Related Infant Mortality in the United States and Arkansas
2013 Sudden Unexpected Infant Death

- Accidental Suffocation and Strangulation, 24%
- Unknown Causes, 31%
- Sudden Infant Death Syndrome (SIDS), 45%

CDC/NCHS, National Vital Statistics System, Compressed Mortality File
Sudden Unexpected Infant Death, 2008-2012

CDC/NCHS, National Vital Statistics System, Period Linked Birth/Infant
Racial Disparities in Infant Mortality in Arkansas

- NH Black: 12.9
- Latino: 5.9
- NH White: 6.9

*Rates are per 1,000 live births
Source: Arkansas Department of Health
Leading Causes of Infant Mortality in Arkansas

<table>
<thead>
<tr>
<th>Cause</th>
<th>NH Black</th>
<th>Hispanic</th>
<th>NH White</th>
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<tr>
<td>SIDS</td>
<td>12.8%</td>
<td>5%</td>
<td></td>
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<tr>
<td>A/UI</td>
<td></td>
<td>3%</td>
<td>4%</td>
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SIDS=Sudden Infant Death Syndrome  
A/UI=Accidents/Unintentional  
2001-2010
Goals

• To provide a more in-depth understanding of public health, primary care, and policy partnerships.

• To provide an understanding of how such partnerships are associated with injury-related infant mortality among vulnerable populations.
Data


• Interview data from the 2014 Arkansas Injury Prevention Partnerships study.
Findings from the NLSPHA
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<tbody>
<tr>
<td>Community Health Clinics</td>
<td>0.29</td>
<td>-2</td>
<td>0.27</td>
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<tr>
<td>Hospital</td>
<td>0.41</td>
<td>-2</td>
<td>0.39</td>
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<tr>
<td>Physician Agency</td>
<td>0.24</td>
<td>-5</td>
<td>0.19</td>
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Public Health and Primary Care

2006

Density: 0.22
Centralization: 0.16

2012

Density: 0.16
Centralization: 0.13
Public Health and Primary Care Activities Performed

- Assurance: 64%
- Assessment: 64%
- Policy: 74%
Preventive Services for Injuries

- Injury Prevention Provided: 42%
- Injury Prevention Contracted: 4%
- Violence Provided: 22%
- Violence Contracted: 2%
- Tobacco Provided: 72%
- Tobacco Contracted: 8%
- Prenatal Care Provided: 31%
- Prenatal Care Contracted: 7%
The study population includes 12 organizations.

Participating organizations indicated whether or not they work with organizations such as:
- community health clinics
- policy organizations
- public health agencies

Partnership is defined in this study as an informal long or short-term relationship between two organizations.
Methods

• A cross sectional survey was administered to identify policy makers’ awareness of injury-related infant deaths and their collaborative efforts with public health and primary care agencies to address injury related infant mortality.

• Interview data were coded to identify themes and assess patterns of variation between clusters.

• Network analysis is conducted to discover the relationships between a set of policy, public health, and primary care.
Findings from the Interview
Characterizing the Populations Represented

- African-Americans: 46%
- Non-White Hispanic: 23%
- Hispanic: 16%
- Asian: 15%
- Other: 15%
Advocacy and Policy Network

blue line = reciprocal relationship
Frequency of Interactions

Arkansas Advocates for Children and Family

Frequency of Interaction
Pink= < once a year
Green= one a year
Black= every few months
Blue= every few weeks
Policy Organizations: Additional Findings

- Activities for injury related infant mortality are:
  - reporting and monitoring data
  - lobbying for legislation
  - providing resources to community health clinics

- Advocate for increasing access to health coverage and care and health behavior work for pregnant women.

- The most effective services are those provided to immigrant families.

- The populations at greater risk for are African Americans and single parent households.

- The most effective preventive strategies are increased education and awareness.
Conclusions

- LHDs provide a limit number of injury prevention services highlighting the importance of collaborative efforts.

- Policy organizations are very instrumental in supporting legislation to improve maternal and infant health.

- Policy organizations distribute and share resources with many organizations to strengthen efforts to improve population health.
Limitations

- Many participating organizations have experienced a change in leadership
- New Initiatives are underway
- All interviews have not been completed
- Additional data analysis are required
Policy and Practice Implications

Policy Implications

- More effort may also be needed to maximize the collaborative potential for the partnerships.
- Establish mechanism to overcome challenges faced in sustaining effective partnerships.

Practice Implications

- It is critical to establish a shared understanding of the nature, scope, and context of injury related infant mortality within each community.
- It is vital to develop partnerships with primary care agencies and policy organizations to address injury related infant mortality.
Next Steps

- Complete Interviews (in progress) and Include data from all interviews
- Expand on quantitative visualization of public health, primary care, and policy networks.
- Examine the association of public health, primary care, and policy and injury-related infant mortality.
Commentary

Mary E. Aitken, MD, MPH
Professor, Pediatrics, UAMS College of Medicine
Director, Injury Prevention Center at the Arkansas Children’s Hospital

Xi Zhu, MS, PhD
Assistant Professor, Health Management & Policy
University of Iowa College of Public Health

Zenobia Harris, BSN, MPH, DNP
Central Region Director, Arkansas Department of Health
Arkansas State Coordinator, Birthing Project USA

Questions and Discussion
Future Webinars & Archives available at: http://www.publichealthsystems.org/phssr-research-progress-webinars

## Upcoming Webinars – July 2015

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<th>Date</th>
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<th>Title</th>
<th>Presenter</th>
<th>Institution and Award</th>
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<tbody>
<tr>
<td>Wednesday, July 1</td>
<td>12-1pm ET</td>
<td><strong>THE AFFORDABLE CARE ACT AND CHILDHOOD IMMUNIZATION DELIVERY IN RURAL COMMUNITIES</strong></td>
<td>Van Do-Reynoso, MPH, PhD Candidate, U. California-Merced</td>
<td><em>PPS-PHD Award</em></td>
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<tr>
<td>Wednesday, July 8</td>
<td>12-1pm ET</td>
<td><strong>NATIONAL EVALUATION OF LEADERSHIP STYLES AND OUTCOMES IN LOCAL HEALTH DEPARTMENTS</strong></td>
<td>Laura Cassidy, MS, PhD, Medical College of Wisconsin</td>
<td><em>RWJF PHS3 award</em></td>
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<td>Wednesday, August 5</td>
<td>12-1pm ET</td>
<td><strong>Applying failure Modes &amp; Effects Analysis to Public Health:</strong> Breathe Easy at Home Programs</td>
<td>Megan Sandel, MD, MPH, FAAP, Boston Medical Center, Margaret Reid, RN, MPA, Director, Healthy Homes and Community Supports, Boston Public Health Commission</td>
<td>(RWJF PHS3 award)</td>
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<tr>
<td>Wednesday, August 12</td>
<td>12-1pm ET</td>
<td><strong>Building Access &amp; Understanding of Law in Public Health Practice in Nebraska</strong></td>
<td>Jennifer K. Ibrahim, PhD, MPH, Associate Dean for Academic Affairs, College of Public Health, Temple University</td>
<td>(RWJF PHS3 award)</td>
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<td>Thursday, August 20</td>
<td>1-2pm ET</td>
<td><strong>Public Health and Primary Care Integration through Enhanced Public Health Information Technology (PHIT) Maturity: A Case for Behavioral Health</strong></td>
<td>Ritu Agarwal, PhD, and Kenyon Crowley, MBA, MSIS, Ctr. for Health Information &amp; Decision Systems, School of Business, U. of Maryland</td>
<td>(RWJF PHS3 award)</td>
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Thank you for participating in today’s webinar!

For more information:

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