PHSSR Research-In-Progress Series:

Bridging Health and Health Care

Wednesday, May 13, 2015 *12:00 - 1:00pm ET*

Examining Local Public Health Investment and Activities in Violence & Injury Prevention

Please Dial Conference Phone: 877-394-0659; Meeting Code: 775 483 8037#.

Please mute your phone and computer speakers during the presentation.

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Agenda

Welcome: Rick Ingram, DrPH, Assistant Professor, Health Management & Policy, University of Kentucky College of Public Health

"Examining Local Public Health Investment and Activities in Violence & Injury Prevention"

Presenters: Laura Hitchcock, JD, Project Manager, King County Partnership Initiative *Laura.Hitchcock@KingCounty.gov*

Tony Gomez, RS, Director, Violence and Injury Prevention Unit *Tony.Gomez@kingcounty.gov*

Public Health – Seattle & King County, and WA Public Health PBRN

Commentary: Betty Bekemeier, PhD, MPH, FAAN, Colleges of Nursing and Public Health, University of Washington *bettybek@uw.edu*

Beth Ebel, MD, MSc, MPH, Pediatrics and Epidemiology & Health Services, University of Washington *bebel@uw.edu*

Questions and Discussion

Presenters

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Tony Gomez, RS
Director, Violence & Injury Prevention Unit
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Public Health–Seattle & King County
WA Public Health PBRN

Local Public Health Department Inputs in Violence and Injury Prevention in Washington State

May 13, 2015

Washington State Public Health Practice-Based Research Network

Laura Hitchcock, JD, PI

Tony Gomez, RS, co-PI

Funded by:

Robert Wood Johnson Foundation Public Health Systems and Services Research National Coordinating Center – QUICK STRIKE

Washington State Department of Health

Disclosures

- We have nothing to disclose

Acknowledgements

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WA Department of Health Injury and Violence Prevention Program

Washington Public Health Practice-based Research (PBRN) Network Executive Committee

Research Study Advisory Committee

- Dr. Betty Bekemeier, University of Washington School of Nursing
- Dr. Tao Kwan-Gett, Northwest Center for Public Health Practice
- Elisabeth Long / Dolly Fernandes, WA Department of Health Injury & Violence Program
- Dr. Marguerite Ro, Public Health – Seattle & King County
- Dr. Gary Goldbaum, Snohomish County Health Department
- Marie Flake, WA Department of Health
- Dr. Anthony Chen, Tacoma-Pierce County Health Department

Qualitative Interviews

- Directors/Health Officers for 9 WA PBRN Local Health Departments
- 37 Community Partners

Research Team/Public Health – Seattle & King County

- Phung Nguyen, Research Assistant
- Susan Kinne, Epidemiologist
- Nancy McGroder/Lin Graybird, Staff Support
- Laura Hitchcock, PI
- Tony Gomez, Co-PI

Represents 5,177,950 people (of 6,968,170 total WA population)

Washington State Public Health Practice-Based Research Network

Snohomish

Chelan

Kitsap

King

Douglas

Spokane

Thurston

Pierce

Franklin

Benton

Clark

Legend

PBRN Members

Non-members

☆ University of Washington
School of Nursing
School of Public Health & Community Medicine's
Northwest Center for Public Health Practice
Health Promotion Research Center

★ Washington State Association of
Local Public Health Officials
Washington State Department of Health

Public Health
Seattle & King County

Prepared by: Public Health, Seattle & King County; Assessment, Policy Development & Evaluation Unit 7/2009

National and WA State Burden of Violence & Injury to Public Health

- Violence and unintentional injury combined in 2013 remained the leading cause of death for Americans 1 to 44 years of age and the third leading cause of death among people of all ages.
- In 2013, more than 130,00 Americans died unintentionally, 16,000 were victims of homicide and more than 41,000 died by suicide.
- Estimated cost to society of injury in the US is $63 billion in medical costs alone.
- Violence and unintentional injuries are also the leading cause of death and disability for WA residents 1 to 44 years of age and third overall leading cause of death.

Project Genesis

- High burden in WA, especially early and late stages of life
- Statewide, only decreased rates since 1990 in some areas; some increased concerns (falls, opiates, gun violence)
- Budget cuts/recession & unstable fund sources for Local Health Departments (LHDs) in Washington [previous PBRN research]
- Public Health Systems and Services Research – National agenda
- Foundational Public Health Services– WA State
  - Public health state financing discussions
  - Limited definition of foundational needs/ information on VIP programming @ Local Health Departments
- PIs interest in the role of Local Health Departments addressing violence/injury prevention

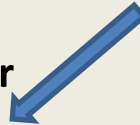
Research Questions / Aims

Quantitative Study

- AIM 1: **Describe variation during recession period** among Local Health Departments in violence & injury programs, **revenue sources, workforce (full-time equivalent), quantity of VIP activities**

- AIM 3: **Describe association between counties with stronger versus weaker (or non-existent) violence & injury programs and three outcomes**: rates of hospitalization and deaths (due to unintentional and intentional injuries), and overall violence/injury system indicators

- AIM 2: **Assess capacity and readiness for local health departments** to conduct evidence-based or promising practices' violence & injury prevention activities



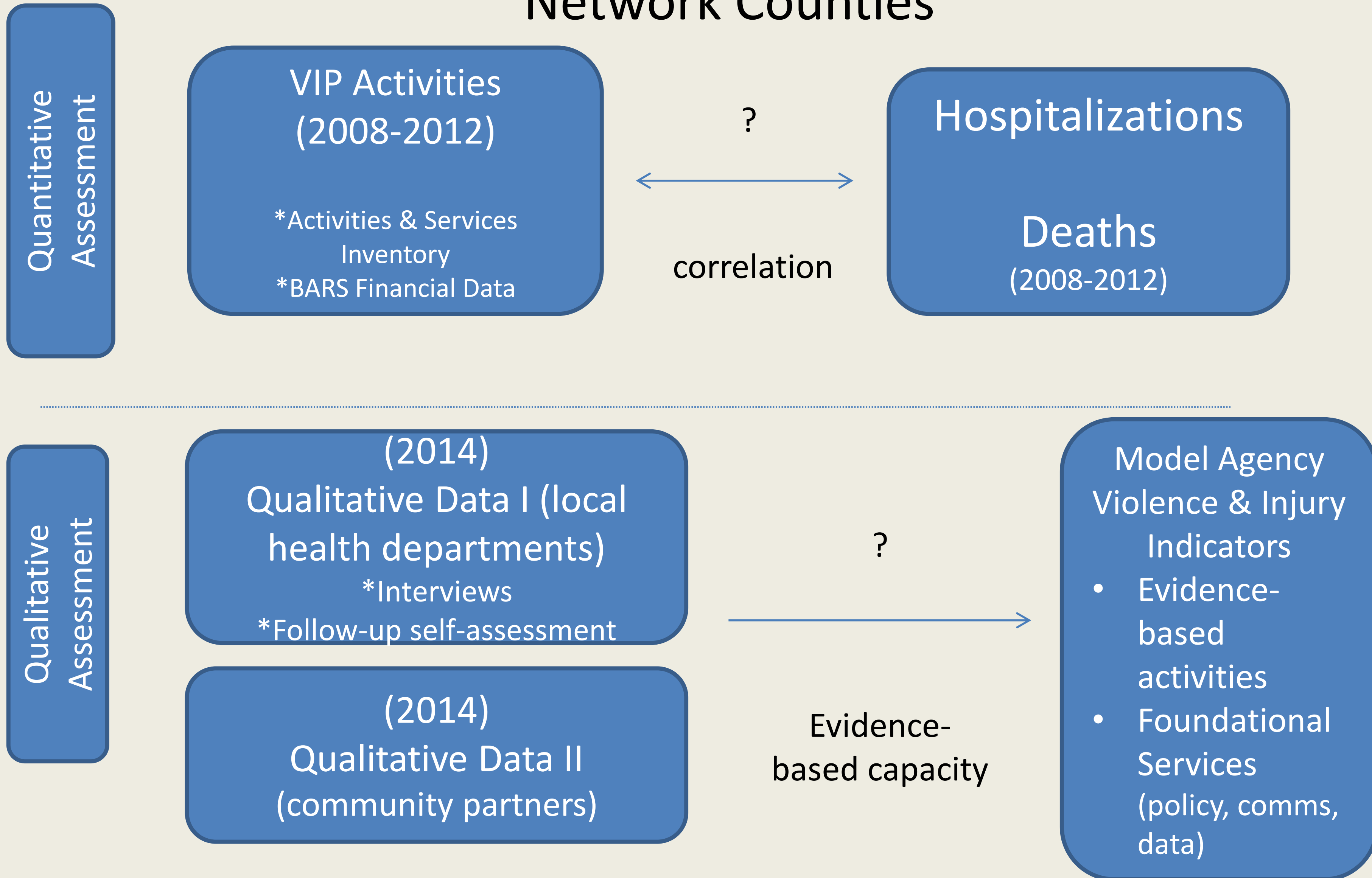
Qualitative Study

Conduct **qualitative interviews** with local health department staff and community partner organizations to:

- Identify **areas** and **degree** of activity in current violence & injury programming, and historical experience
- Inform **self-assessment** for quantitative AIM 2
- Identify and **categorize Local Health Departments as "strong", "weak" or "non-existent" in readiness** to conduct evidence-based or promising practice activities

Study Design

9 WA Public Health Practice-based Research Network Counties



Quantitative Methods

For the period of 2008-2012:

- Identified broad violence & injury thematic areas
- Identified relevant health department violence & injury self-reporting categories in Activities & Services Inventory/Budget Accounting Reporting System)
- Reviewed secondary local health dept. self-report violence & injury prevention activity/$$ data
- Performed data analysis for select violence & injury hospitalization/death indicators for all 9 counties
- Compared departments' self-report data to violence & injury indicator data to determine correlation

Qualitative Methods

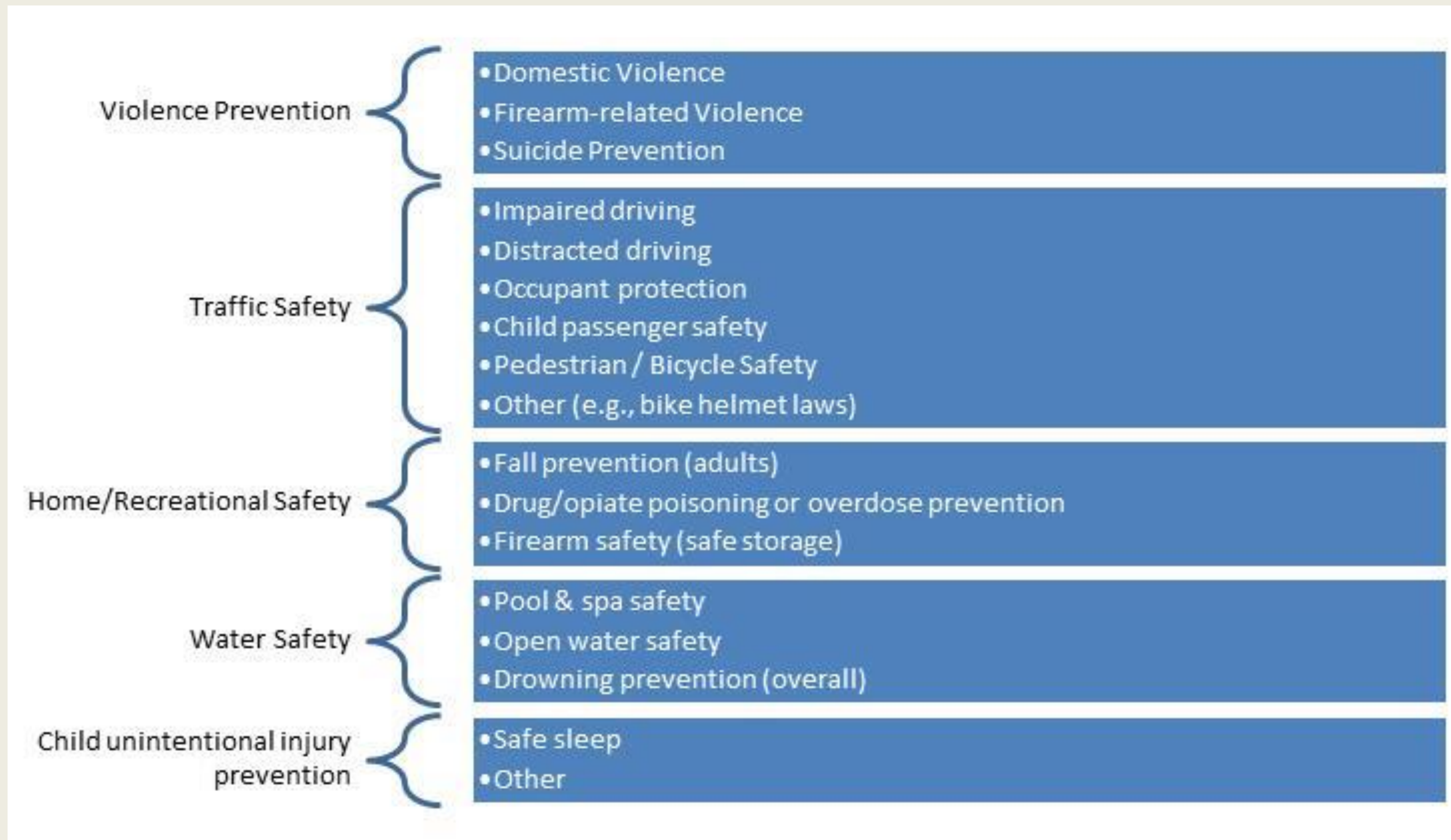
- Qualitative Interviews (modified National Association of City and County Health Officials tool) (9 depts; 37 community partners)
- Follow-up self-assessment (modified NACCHO tool)
- Transcript analysis for major themes
- National 'evidence-base' identified in our 5 major areas[i]
- Created violence & injury agency-level indicators [ii]
- Developed Capacity Scoring Tool (evidence base + foundational activities)

    (Point scores: High = 9-12; Low = 5-8; Non = 0-4)

- Scored departments activity with Capacity Scoring Tool, using results of qualitative interviews, self-assessment

i: US Preventive Services Task Force; Community Guide; Cochrane Summaries; WA State Violence & Injury Prevention (VIP) Guide; National Traffic Safety Administration. ii: Informed by MPROVE; WA VIP Guide; CDC State Injury Indicators; NACCHO Standards & Indicators for local health departments violence and injury prevention

Violence and Injury Activity Areas



Local Health Dept. Violence & Injury Prevention SELF-REPORTING

Public Health Activities and Services

The public health activities and services website is an online data resource listing what public health does and how much of it is done across all 35 local health agencies and the Department of Health in Washington State each year. The website allows a user to view activities of interest by year and by jurisdiction.

The Public Health Improvement Partnership, which governs and guides this effort, was charged by the 2007 legislature to identify and develop a way to count public health activities consistently and over time. The first pilot inventory was conducted in 2008, capturing a sample of public health activities and services provided across the state. The following year the survey tripled in size with many new items added to the list. The Public Health Activities and Services Inventory has been conducted annually since then.

The database is also designed to work in conjunction with Standards for Public Health, Washington's efforts to improve the quality and performance of all 35 local health agencies and the Department of Health, and the Public Health Indicators, a snapshot of health status, health behavior, and public health system performance at the local level. Together, the three measurements of the public health system provide a picture of what

Highlights and Reports
Examples of Use

Overview
Data By Topic
Data By Jurisdiction
Technical Notes
Highlights and Reports

Public Health Activities & Services Inventory
Table Of Contents

Environmental Health
Healthy Family Development
Access To Care
Assessment
Prevention and Wellness
Injury Prevention

Washington State Auditor's Office

About Us | Local Government | State Government | Investigations | Resources | Search Reports

BARS Manuals

Local Government
File Online
BARS Manuals
Local Government Resources
Client Assistance

BARS Alerts

Annual Reports are due by May 30, 2015
For fiscal year ended December 31

Current versions of the BARS manuals are available below.

Cities, Counties and Special Purpose Districts (GAAP)
Cities, Counties and Special Purpose Districts (Cash Basis)
Port Districts (GAAP/Cash Basis)
Transit Districts (GAAP)
Public Utility Districts (GAAP)

Violence & Injury Activity SELF-REPORTS to WA STATE (secondary quantitative data)

	Activities & Services Inventory	**BARS**
FTEs	✓	✓
VIP Activities	Decrease injury rates	
	Develop policy proposals	
	Engage stakeholders	
	Implement change	
	Attend trainings (not collected/scored)	
	Addressed violence	
Revenue		✓
Expenditures	✓	✓

Health Indicator Data (age-adjusted)

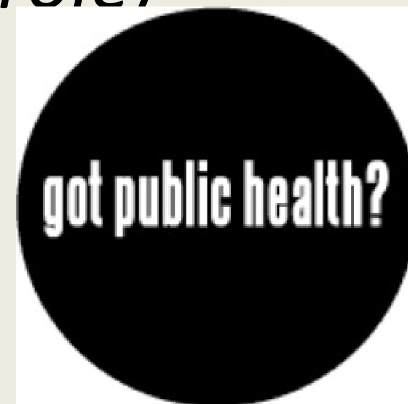
VIP Area	Hospitalizations	Deaths
Violence Prevention	Assault injuries Self-inflicted injuries	Homicide rate Suicide rate
Traffic Safety	Unintentional injuries	Unintentional injuries
Home / Recreational Safety	Unintentional injuries Unintentional poisoning Older adult falls Opioid related poisoning	Falls Opioid related poisoning Unintentional poisoning (non-opioid)
Water Safety	Unintentional injuries	Unintentional injuries
Child Unintentional Injury	Unintentional injuries Unintentional poisoning	Unintentional poisoning (non-opioid) Unintentional injuries

Survey Instrument – 2014 activities

"IVP Grid" Injury Content Area	Do it?	Others do it?	Did it? When?	Partner did it?	Target groups?	Funding history
violence prevention:	Not doing these – used to do nursing visit programs					
domestic violence						
Firearm-related violence	No, no one else doing it. Firearm education by others					
suicide prevention	Had been part of local coalition 2012. Did case review of 2011. Untreated in mental health system => Nothing of recent suicide coalition => unsure on who convenes it.					
Other topics in violence?	Youth violence – not involved with					
traffic safety:	No – some involvement recently					
impaired driving						
distracted driving	Community planning → started to					
occupant protection	have meetings…					
child passenger safety						
pedestrian safety						
Other topics in traffic?	complete streets & health in all policies in X County					
home/recreational safety:						
fall prevention	Not aware in LHD					
Drug/opiate poisoning or overdose prevention	Yes as member of Task Force Started drug take back helping get words out to providers on prescribing practices – quiet last year so unsure if group meeting – with recent federal changes that may change					
firearm safety:	no					
safe firearm storage						
Other firearm topics?						
water safety:	No water safety or other press releases - more responsive to media. Add to water safety: drowning in community in 2012. His pool a few years ago + caused a lot of work & response.					
pool and spa safety						
Open water safety						
drowning prevention						
Child unintentional injury prevention	Child passenger safety – WIC program advises moms to get their car seats. Hospitals + Target Zero are active with car seats. Problem – no $$ + resources to address really good activities underway but would like to work on it.					

Agency Indicators (Model/Proposed)

- Evidence-based activity or promising practice in one or more areas of violence & injury prev.
- Evidence-based activity or promising practice in one or more areas of violence & injury prev. *where no community activity and data trending upwards (assurance role)*
- Policy Development
- Communications
- Assessment



CAPACITY TO CONDUCT EVIDENCE-BASED ACTIVITIES –

SCORING TOOL

LHD Capacity Scoring Tool for Violence & Injury Prevention

Agency Indicator	Description	Points
1. Evidence-based activity or promising-practice activity in one or more areas of VIP	"Like Groupings" of meta-data evidence bases Evidence-based categorized as: 3 ○ Sufficient evidence of effectiveness ○ Significant ○ Effective ○ Effective by several high quality evaluation with consistent results ○ Strong evidence of effectiveness Evidence-based categorized as: 2 ○ Promising ○ Promising/experimental ○ Likely to be effective based on balance of evidence from high quality evaluations or other sources ○ Effective in certain situations (score a 3 if intervention is implemented with fidelity to the effective model) ○ Appear to be effective ○ Can be effective Evidence-based categorized as: 1 ○ Effectiveness still undetermined; different methods of implementing this countermeasure produce different results ○ Lacking evidence ○ Limited or no high-quality evaluation evidence ○ Insufficient evident of effectiveness Evidence-based categorized as: 0 • Activity is determined ineffective-does not work	Score range 0-3 per any VIP activity
2. Evidence-based activity or promising-practice activity in one or more areas of VIP *where no community activity & data trending upwards* (assurance role)	High community activity/high LHD activity – 3 Low community activity/high LHD activity – 3 Low community activity/medium LHD activity – 2 Medium community activity/medium LHD activity - 2 High community/no LHD activity – 1 Medium community / No or low LHD activity – 1 Low community activity/Now or low LHD activity - 0	Score range 0-3
3. Policy development	Scored 1 if performing VIP policy development or easily can do	Score range 0-1
4. Communications	Scored 1 if performing VIP communications or easily can do	Score range 0-1
5. Regular assessment/data dissemination	Score 2 if identified set of indicators regularly published – Score 1 if irregular data collection/dissemination (though some) Score 0 if non-Existent: No assessment/no collection/dissemination	Score range 0 -2

Findings

WA PBRN local health department violence & injury Expenditures/full time equivalents/Revenue 2008-2012

- 6 of 7 reporting decreased expenditures in violence & injury
- 8 of 9 decreased overall budgets during recession
- 3 of 6 decreased FTEs/3 of 6 FTEs stable; 3 did not report FTEs
- 0.8 FTE = mean violence & injury prevention FTE during the recession period
- Revenue diversity decreased during the period, among all sources (Federal, state, local). Only 1/3 had state and 1/3 had local $$ by 2011, and only largest county had all 3 sources.

Findings

Violence & Injury Prevention Activities

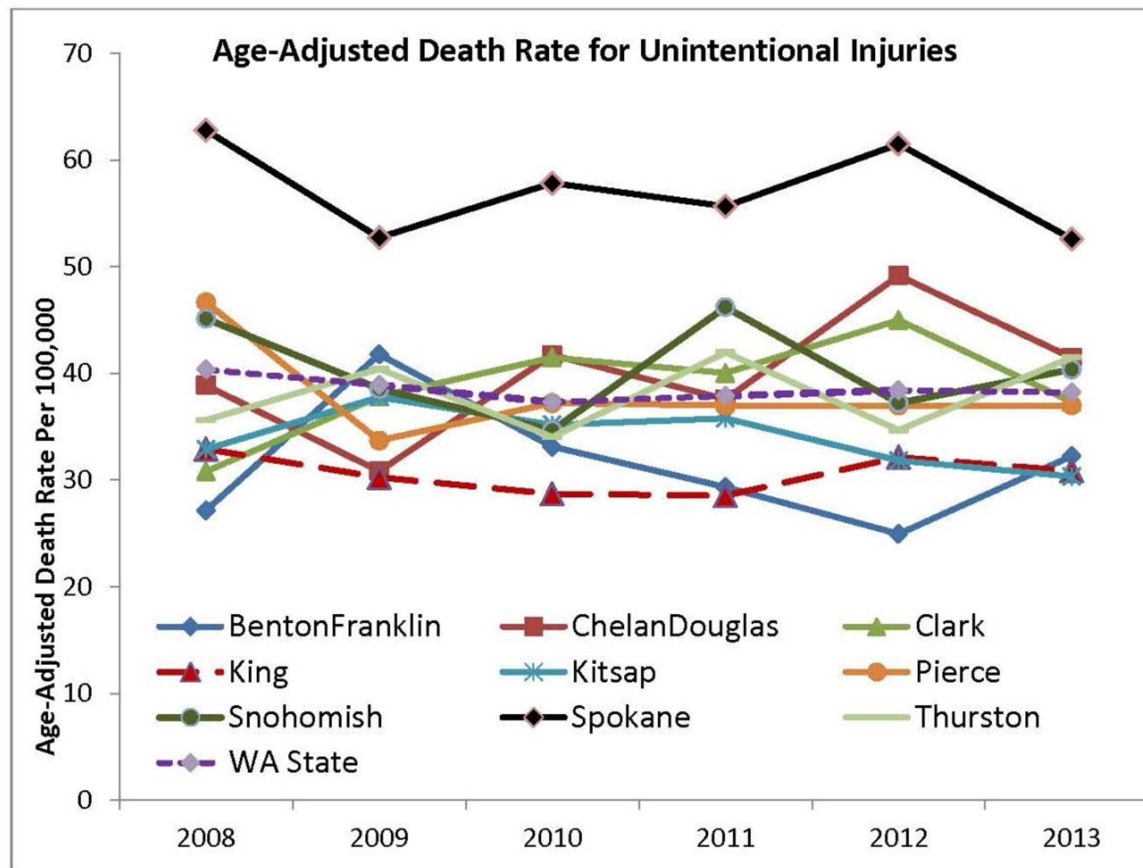
Self-Reported County VIP Expenditure and Activity Trends 2008 – 2012
(Public Health Activities and Services Tracking - PHAST)

	Activities & Services Inventory							BARS (2008-2011)	
County	Decreasing injury rate[i]	Developing policy proposals[i]	Engaging stakeholders[i]	Imple-menting change[i]	Violence Prevention	Injury FTE	Injury Prevention expends	VIP FTE	VIP Expe nds.
Benton Franklin	↔ Yes+	↔ No++	↔ Yes+	↔ No++	↔ Yes+	↓	↑		↑
Kitsap	↔ Yes+	↔ Yes++	↔ Yes+	↔ No++	↓ +	↓ +	↓	↓	
Chelan Douglas	↔ No++	↔ No++	↔ No++	↔ No++	↔ No+				
Seattle-King County	↔ Yes+	↔ Yes++	↔ Yes+	↔ Yes++	↔ Yes+	↑ +			↓
Sno-homish	↑	↔ No++	↔ No++	↔ No++	↔ No+		↓		↓
Clark	↑ +	↑ ++	↑ +	↑ ++	↓ +	↑ +			
Spokane	↔ Yes+	↓ ++	↓ ++	↓ ++	↔ No+	↓ +	↓ +		↓
Tacoma Pierce	↔ No+	↔ No++	↔ No+	↔ No++	↓ +		↓		
Thurston	↑ +	↑ ++	↑ +	↑ +	↑ +	↑ +			↓

\+ Since 2009
++ Since 2010
i Not defined

↔ - signifies no change in activity in measurement period ↑ - signifies increased activity in measurement period ↓ - signifies decreased activity in measurement period	Green – signifies that activity occurred consistently through measurement period Blue – signifies that activity increased over time period Red – signifies that no activity consistently occurred Orange – signifies that activity decreased over time period Blank – no reporting

Health Indicators by County – Deaths from Unintentional Injuries (example)



Findings

Health Indicators by County

TRENDS IN AGE-ADJUSTED UNINTENTIONAL INJURY DEATH RATES, HOMICIDE RATES, SUICIDE RATES, FALLS, POISONINGS, AND INJURY HOSPITALIZATIONS, BY COUNTY, WA PBRN, 2009-2013*

County	Age-Adjusted Death Rate Trends for Unintentional Injuries (Appendix F, Chart A)	Age-Adjusted Homicide Rate Trends (Appendix F, Chart B)	Age-Adjusted Suicide Rate Trends (Appendix F, Chart C)	Age-Adjusted Death Rate Trends for Falls (Appendix F, Chart D)	Age-Adjusted Death Rate Trends for Poisonings (Appendix F, Chart F)	Age-Adjusted Hospitalization Rate Trend for Unintentional Injuries (Appendix F, Chart G)
Benton Franklin	↓	n/a	↓	↓	↔	↑
Kitsap	↓	n/a	↔	↔	↓	↓
Chelan Douglas	↑	n/a	↔	↔	↑	↓
Seattle-King County	↔	↔	↔	↔	↔	↔
Snohomish	↔	↔	↓	↔	↔	↔
Clark	↔	↔	↔	↔	↔	↔
Spokane	↔	↑	↑	↑	↓	↔
Tacoma Pierce	↔	↔	↑	↑	↔	↔
Thurston	↔	n/a	↓	↑	↔	↓

*Trends may not be statistically significant
n/a = insufficient numbers for reporting

Findings

Death Indicators

- Little to no change in injury or violence death rates overall or by type of injury, statewide
- Comparing age-adjusted death rates with both self-reported violence & injury prevention activity and expenditures, there is no clear pattern that emerges. Increases or decreases of reported activity appear to have no consistent effect on this set of indicators
  - However, comparison of the expenditure data alone to injury and violence death rates suggests that further examination may be warranted.
  - In departments where violence prevention work reported in Activities & Services Inventory, potential correlation to trends may exist. (Low *n* in suicide and homicide may make correlation not statistically significant)

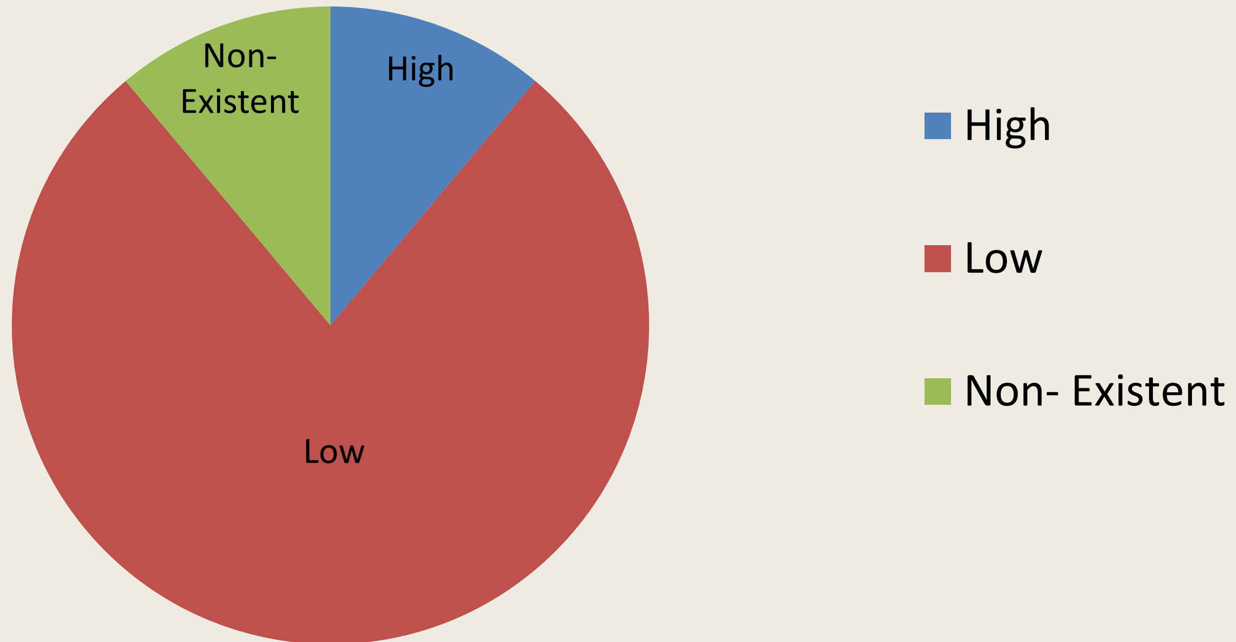
Findings

<u>Hospitalization Indicators</u>

- 2/3 of counties experienced no change or increase in hospitalizations
- Comparing age-adjusted injury hospitalizations with self-reported injury prevention local health department activity and expenditures, there appears to be no effect on decrease or even sustained injury rates in the PBRN cohort
- Violence prevention self-reported activity showed expected correlation in only 3 of 9 departments

Capacity Scoring Results

WA PBRN Local Health Departments' Capacity to Conduct Evidence-based or Promising Practice Violence & Injury Prevention Activities



Inter-rater reliability: 100%

Key Qualitative Themes

Existing services and data

- Most local health departments engaged in some level of activity in 2014; individual programming areas vary widely
- All were working in water safety (state mandate/fee-based for pool inspections)
- Most familiar w/violence & injury trends; some more than others (one has no epi staff)

Reductions during recession years

- Lack of funding to violence & injury prevention mentioned by every department interviewed
- Most note cuts to violence & injury programming / staff in recession years
- Only 4 of 9 PBRN counties fully conducted Child Death Review in 2014 (1 entered data but no reviews)

Foundational service and prioritizing violence & injury prevention

- Most local health departments would like to ‘do more’; funding constraints, not lack of violence/injury need
- Interest in ‘what others are doing’ and ‘evidence-base’ in violence & injury prevention, especially policy
- What is ‘foundational’ violence & injury prevention activity? Interest in defining
- State support needs: better communication, technical assistance, training, understanding of evidence base (esp. policy), funding, advocacy for funding, better knowledge of statewide approaches/strategic priorities

Select Quotes

"Our health department should be the chief health information resource for the community. We should know what is and is not going on in the community – our data suggests that we should know more about some of these areas."

-Eastern WA County Public Health Director

"Violence and injury prevention is the 21st century step-child for [the field of] Public Health. It is the biggest mismatch between public health [dollars] and public health problems in the U.S. We need to recognize the nature of the problem in order to solve it."

-Western WA County Public Health Director

Select Quotes

"There is no constituency to address violence and injury prevention, as there is for preventing other diseases."

"I believe injury prevention is a foundational public health service."

"[This research] will help for foundational services group to better define what injury prevention is."

"[Violence and injury prevention] is important public health work, but we have no resources to address [it]. We do a little around the edges but not as much as we should be doing."

Conclusions

- During the recession, WA local health departments reduced their already limited capacities and resources dedicated to violence & injury prevention.
- No association between local health department reductions on death and hospitalizations were detected. Death and hospitalizations may be too distal to measure the decrease of resources.
- Further research should also be conducted that examines more proximal measures of violence & injury and individual categories of violence & injury prevention work (versus violence & injury prevention in the aggregate).
- Historic achievements in violence & injury suggest that local health departments could play a significant role in prevent violence and injury.

Recommendations

Research

- Examine more proximal measures such as emergency room and outpatient visits, Healthy Youth Survey, BRFSS, that may show more sensitivity to specific LHD inputs
- Additional longitudinal review needed of sub-categories of unintentional injury (discrete categories) vis-à-vis discrete categories of LHD inputs (e.g., MVAs to traffic safety work by LHD)
- Additional review needed of other LHD self-report data (EH, MCH) that addresses VIP

Practice

- Self-report for LHD VIP inputs needs clear definitions/ disaggregation by discrete VIP area
- Improve reporting (years, all LHDs, data validation)
- Foundational Public Health Services – engage field in definition of 'foundational' LHD VIP services (state/national); assurance role
- Improve consistency of evidence-base VIP definitions (national)
- Strengthen state-local relationship (planning, funding, evidence-based practice, esp. policy) – LHDs should be part of VIP system envisioned in state VIP plan
- Additional state leadership in securing diversified funding base for LHD VIP work

Recommendations

Policy

- Funding to support increased local health department activity in violence & injury prevention is needed from all levels, need to invest in evidence-based strategies, then evaluate local health department impact

Limitations

Quantitative

- Inconsistent reporting/ not all reporting budget/FTE data, not all years reported, large-scale errors in some reports
- Lack of data definitions (self-reported activities); not granular – unclear quant. indicators
- Limited # of years for this study - longer time horizon may show more input effect on outcomes
- Other data may have more sensitivity (e.g., emergency room visits; crisis calls, electronic health records, Behavioral Risk Factor Surveillance Survey (BRFSS), WA Healthy Youth Survey)

Qualitative

<u>Scoring Limitations</u>

- Interviewed significant # of community partners, but not all – this could have influenced (negatively) local health department capacity scores
- Potential lack of consistent data on nature of local health department programming (whether fidelity to evidence-base)

Resources

- The Community Guide, Community Preventive Services Task Force http://www.thecommunityguide.org/index.html

- NACCHO Injury & Violence Prevention Resources http://www.naccho.org/topics/HPDP/injuryprevention/resources2.cfm

  Injury and Violence Prevention: *A Local Health Department Perspective*

  Examination of Local Health Department Capacity and Infrastructure for Injury and Violence Prevention

  (available on NACCHO website)

- Standards and Indicators for Local Health Department Injury & Violence Prevention Programs http://www.safestates.org/?page=LocalHealthIVP&hhSearchTerms=%22standards+and+indicators%22

Commentary

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Questions and Discussion

Archives of all Webinars available at:

http://www.publichealthsystems.org/phssr-research-progress-webinars

Upcoming Events and Webinars

Thursday, May 21 (1-2pm ET)

EXPLORING COST AND DELIVERY OF STI SERVICES BY HEALTH DEPARTMENTS IN GEORGIA

Gulzar H. Shah, PhD, MStat, MS, Georgia Southern University

GA PBRN *(PBRN Quick Strike Award)*

Wednesday, June 3 (12-1pm ET)

OPTIMIZING EXPENDITURES ACROSS HIV CARE CONTINUUM: *BRIDGING PUBLIC HEALTH & CARE SYSTEMS*

Gregg Gonsalves, Yale University *(PPS-PHD Award)*

Upcoming Webinars – June to July 2015

Wednesday, June 10 (12-1pm ET)

Examining Public Health System Roles in Mental Health Service Delivery

Jonathan Purtle, DrPH, MPH, MSc, Drexel University School of Public Health *(PPS-PHD Award)*

Thursday, June 18 (1-2pm ET)

Injury Prevention Partnerships to Reduce Infant Mortality among Vulnerable Populations

Sharla Smith, MPH, PhD, University of Kansas School of Medicine - Wichita *(PPS-PHD Award)*

Wednesday, July 1 (12-1pm ET)

The Affordable Care Act and Childhood Immunization Delivery in Rural Communities

Van Do-Reynoso, University of California - Merced *(PPS-PHD Award)*

Thank you for participating in today's webinar!

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