The Political Economy of Preparedness: Geographic Variation in Financing, Capabilities & Costs

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Rising burden of outbreaks, disasters and other health emergencies

- Newly emerging and resurgent infectious diseases: Zika, MERS, Ebola
- Growing antibiotic resistance
- Incomplete vaccination coverage
- Globalization in travel and trade patterns
- Political instability, violence and terrorism risks
- Aging infrastructure: transportation, housing, food, water, energy systems
- Extreme weather events
- Cyber-security vulnerabilities
Health security requires collective actions across many activities and sectors

- Surveillance
- Environmental monitoring
- Laboratory testing
- Communication systems
- Response planning
- Incident management
- Emergency response
- Surge capacity
- Management & distribution of countermeasures
- Continuity of healthcare delivery
- Community engagement
- Workforce protection
- Volunteer management
- Education & training
- Drills & exercises
- Information exchange
- Evacuation & relocation
- Infrastructure resiliency
- Protections for vulnerable populations
Why a Health Security Index?

Track national progress in health security as a shared responsibility across sectors

- Raise public awareness
- Identify strengths and vulnerabilities
- Detect gains and losses
- Encourage coordination & collaboration
- Facilitate planning & policy development
- Support benchmarking & quality improvement
- Stimulate research & innovation
**Uncertain risks & unstable resources**

**PHEP/HPP Preparedness Funding (Appropriated Levels)**

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<tr>
<th>Fiscal Year</th>
<th>HPP</th>
<th>PHEP Cooperative Agreements</th>
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<td>FY 2015</td>
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**State per capita ($2015):**  
- Min: 0.35  
- Median: 2.03  
- Max: 50.0

Source: Trust for America’s Health, 2017
Research questions

- How do health security levels vary across states and change over time?

- Do federal-state financing & policy mechanisms contribute to geographic variation in health security?
  - Federal preparedness financing
  - ACA-related health insurance coverage gains

- Do health security levels contribute to geographic and inter-temporal variation in disaster recovery spending?
Measurement: National Health Security Index

- 139 individual measures
- 19 subdomains
- 6 domains
- State overall values
- National overall values

- Normalized to 0-10 scale using min-max scaling to preserve distributions
- Imputations based on multivariate longitudinal models
- Empirical weights based on Delphi expert panels
- Bootstrapped confidence intervals reflect sampling and measurement error
- Annual estimates for 2013-2016

### Reliability by Domain

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<th>Reliability by Domain</th>
<th>Alpha</th>
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<tbody>
<tr>
<td>Health security surveillance</td>
<td>0.712</td>
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<tr>
<td>Community planning &amp; engagement</td>
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<td>Healthcare delivery</td>
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<tr>
<td>Countermeasure management</td>
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<tr>
<td>Environmental/occupational health</td>
<td>0.749</td>
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Analytic methods

- Index data for each state and year 2013-16
- Federal preparedness and recovery expenditures by state and year (Federal Funding Accountability and Transparency Act Reporting System)
- State health insurance coverage, social, and demographic characteristics by state and year (American Community Survey)
- We estimate GEE panel regression models:
  \[ E(\text{Index}_{i,t}) = B_0 + B_1 \text{Preparedness}_{i,t} + B_2 \text{Coverage}_{i,t} + B_3 \text{Population}_{i,t} + e_i + e_t + e_{i,t} \]
  \[ E(\text{Recovery}_{i,t}) = B_0 + B_1 \text{Index}_{i,t} + B_2 \text{Coverage}_{i,t} + B_3 \text{Population}_{i,t} + e_i + e_t + e_{i,t} \]
Steady but slow progress

*statistically significant change
The U.S. improved in most domains during 2013-16, except healthcare delivery and environmental health.

*statistically significant change
An Equal Opportunity University

Geographic disparities in health security are large and persistent

Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Above average</th>
<th>Within average</th>
<th>Below average</th>
<th>%Increase in year</th>
<th>%Decrease in year</th>
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Legend:
- **Green**: Above average
- **Blue**: Within average
- **Brown**: Below average
- **Yellow circle**: %Increase in year
- **Pink**: %Decrease in year
Improvements occurred across the U.S., but 12 states trailed or lost ground.
Health security tracks closely with social & economic determinants of health

Results

Percent of population below federal poverty threshold

Percent of population without health insurance coverage
Changes in Health Security Associated with Federal Preparedness Spending and Coverage Gains

GEE panel regression estimates also controlling for state population size and density, poverty rate, educational attainment, state public health spending per capita, and time trends.
Changes in Federal Recovery Spending Associated with Gains in Health Security Index

GEE panel regression estimates also controlling for state population size and density, poverty rate, educational attainment, health insurance coverage, state public health spending per capita, and time trends.
Conclusions & Implications

- State health security appears highly sensitive to:
  - Dedicated federal financing
  - Health insurance coverage gains
- Stronger state preparedness levels appear to yield substantially lower federal recovery spending
- Revisions to federal funding formulas could reduce geographic disparities in health security
Caveats and cautions

- Imperfect measures & latent constructs
- Timing and accuracy of underlying data sources
- Unobserved within-state heterogeneity
- Short panel
- Observational, not causal, estimates
Acknowledgements

National Advisory Committee Members | 2016-17

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Visit or join an Index workgroup at http://nhspi.org/get-involved/
For More Information

National Program Office

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To receive updates from the Health Security Index, email listserv@lsv.uky.edu with “Subscribe NHSPIIndex” in the body
How Workforce Policies & Infrastructure Shape Health Security Across the US: Implications for Employers

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Presenter Disclosures

Michael T. Childress

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose
The 2017 Release of the Index
What the Index measures
What the Index measures

- Health Security Surveillance
  - Health Surveillance & Epidemiological Investigation
  - Biological Monitoring & Laboratory Testing
- Community Planning & Engagement
  - Cross-Sector / Community Collaboration
  - Children & Other At-Risk Populations
- Incident & Information Management
  - Incident Management & Multi-Agency Coordination
  - Emergency Public Information & Warning
- Healthcare Delivery
  - Prehospital Care
  - Inpatient Care
  - Long-Term Care
- Countermeasure Management
  - Medical Materiel Management, Distribution, & Dispensing
  - Countermeasure Utilization & Effectiveness
- Environmental & Occupational Health
  - Food & Water Security
  - Environmental Monitoring
- Non-Pharmaceutical Intervention
  - Mental & Behavioral Healthcare
  - Home Care
  - Social Capital & Cohesion
  - Management of Volunteers during Emergencies
Business & Health Security

• Facilitate supply chain contingency planning to mitigate disruptions
• Increase awareness about preparedness
• Foster social cohesion
• Encourage volunteerism within their workforce
• Harness technology to plan, respond, and recover
Direct Impact on Public Health

• Private sector plays a fundamental role in paid time off (PTO) & telecommuting
• These factors enhance compliance with social distancing policies used in infectious disease outbreaks
Selected Underlying Drivers

• Private Sector role
  – Paid Time Off: percent of employed population with some type of paid time off (PTO) benefit
  – Telecommuting: percent of employed population engaging in some work from home by telecommuting

• Infrastructure
  – Broadband: percentage of households with broadband in the home
Paid Time Off (PTO), 2016 5-Year Estimates

(US Average = 56.6 percent)
Telecommuters

Telecommuting Estimates, 2015
(US Average = 22.9 percent)

Quartiles
- 14.4% to 17.8%
- 17.8% to 19.6%
- 19.6% to 22.8%
- 22.8% to 38.0%

DC, 38.0%
SD, 14.4%
Broadband

Percentage of Households with Broadband, 2016
(US Average = 81.4 percent)

Quartiles
- 70 to 79%
- 79 to 81%
- 81 to 84%
- 84 to 88%
Underlying drivers: occupational

Percent of workers with paid time off & telecommuting opportunities

*statistically significant change
## Estimates: Survey & Model-Based

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<td>1st Quartile (lowest)</td>
<td>25% 55%</td>
<td>58% 62%</td>
<td>12% 18%</td>
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<tr>
<td>2nd Quartile</td>
<td>58% 58%</td>
<td>76% 77%</td>
<td>20% 24%</td>
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<tr>
<td>3rd Quartile</td>
<td>71% 69%</td>
<td>88% 86%</td>
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<tr>
<td>4th Quartile (highest)</td>
<td>73% 67%</td>
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<td>33% 44%</td>
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<td>60%</td>
<td>76%</td>
</tr>
<tr>
<td>Metro</td>
<td>58%</td>
<td>61%</td>
<td>81%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 40</td>
<td>58%</td>
<td>58%</td>
<td>81%</td>
</tr>
<tr>
<td>Over 40</td>
<td>65%</td>
<td>64%</td>
<td>81%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>55%</td>
<td>58%</td>
<td>80%</td>
</tr>
<tr>
<td>Male</td>
<td>59%</td>
<td>63%</td>
<td>81%</td>
</tr>
</tbody>
</table>
# Estimates: Survey & Model-Based

## Estimated Gross and Net Percentage of Workers (25 to 54 Years) with Paid Time Off, and Households with Broadband, and Telecommuters

<table>
<thead>
<tr>
<th></th>
<th>Paid Time Off</th>
<th>Household Broadband</th>
<th>Telecommuters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross</td>
<td>Net</td>
<td>Gross</td>
</tr>
<tr>
<td><strong>Wages &amp; Salary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Quartile (lowest)</td>
<td>25%</td>
<td>55%</td>
<td>58%</td>
</tr>
<tr>
<td>2nd Quartile</td>
<td>58%</td>
<td>58%</td>
<td>76%</td>
</tr>
<tr>
<td>3rd Quartile</td>
<td>71%</td>
<td>69%</td>
<td>88%</td>
</tr>
<tr>
<td>4th Quartile (highest)</td>
<td>73%</td>
<td>67%</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than High School</td>
<td>33%</td>
<td>44%</td>
<td>55%</td>
</tr>
<tr>
<td>High School</td>
<td>53%</td>
<td>56%</td>
<td>70%</td>
</tr>
<tr>
<td>Some College</td>
<td>52%</td>
<td>61%</td>
<td>83%</td>
</tr>
<tr>
<td>Bachelors or Higher</td>
<td>70%</td>
<td>69%</td>
<td>93%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (non-Hispanic)</td>
<td>57%</td>
<td>61%</td>
<td>83%</td>
</tr>
<tr>
<td>Non-White (non-Hispanic)</td>
<td>55%</td>
<td>59%</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Metro</td>
<td>54%</td>
<td>60%</td>
<td>76%</td>
</tr>
<tr>
<td>Metro</td>
<td>58%</td>
<td>61%</td>
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<td>63%</td>
<td>81%</td>
</tr>
</tbody>
</table>

**Blue Text** indicates the control variables, and blue shading indicates statistical significance.
Money Matters: Income Effect

Estimated Relationship Between Income and Paid Time Off, Broadband at Home, & Telecommuting
(net effect of income, ages 25 to 54 years)

- PTO
- Broadband
- Telecommute

- Lowest Quartile: PTO = 55%, Broadband = 62%, Telecommute = 18%
- 2nd Quartile: PTO = 58%, Broadband = 77%, Telecommute = 24%
- 3rd Quartile: PTO = 69%, Broadband = 86%, Telecommute = 31%
- Highest Quartile: PTO = 67%, Broadband = 90%, Telecommute = 41%

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School Pays: Education Effect

Estimated Relationship Between Education and Paid Time Off, Broadband at Home, & Telecommuting
(net effect of educational attainment, ages 25 to 54 years)
Conclusions

• Vital role for the private sector
  – Preparedness is multisector

• Equity concerns
  – The less-advantaged are affected differently by disease outbreaks, disasters, and large-scale emergencies

• Solutions
  – Community leaders—from multiple sectors—will need to collaborate to address root causes
For more information

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Examining the Relationship between Preparedness and Planning for Climate Change: Trends in Environmental Health Protections

Anna Goodman Hoover, PhD  
Assistant Professor, Preventive Medicine and Environmental Health  
University of Kentucky College of Public Health  
Deputy Director, National Health Security Preparedness Index Program Office

Pierre Martin Dominique Zephyr, MS  
University of Kentucky  
Statistician, National Health Security Preparedness Index Program Office

American Public Health Association Annual Meeting  
Atlanta, GA  
7 November 2017
The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose.
MEASURING PREPAREDNESS

ENVIRONMENTAL & OCCUPATIONAL HEALTH

WHAT IT MEANS

Actions to maintain the security and safety of water and food supplies, to test for hazards and contaminants in the environment, and to protect workers and emergency responders from health hazards while on the job.
• More than 40% of states have experienced declines in EOH protections since the first Index release in 2013.

• 17% of top-tier states in overall health security are below the national average in EOH protections.

• More than 1/3 of top-tier states in overall health security have experienced declines in EOH protections since the first Index release.

• By 2016, the top EOH state reflected EOH protections 2.4X higher than its lowest-scoring counterpart.
Trends in EOH Protections: Geographic Disparities

2013

2014

2015

2016

KEY
- ABOVE NATIONAL AVERAGE
- MEETS NATIONAL AVERAGE
- BELOW NATIONAL AVERAGE
The sufficiency availability, access, use, and protection of safe and clean food and water resources to support human well-being and health.

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>MEASURE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>m275.dw</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Drinking water)?</td>
</tr>
<tr>
<td>m275.pww</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Private well water)?</td>
</tr>
<tr>
<td>m275.rec</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Recreational water)?</td>
</tr>
<tr>
<td>m275.sur</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Surface water)?</td>
</tr>
<tr>
<td>m275.ust</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Underground storage tanks)?</td>
</tr>
<tr>
<td>m275.wst</td>
<td>Does your laboratory provide or assure testing for the following environmental matrices (Waste water)?</td>
</tr>
<tr>
<td>m276</td>
<td>For which of the following organisms or their toxins does your state public health laboratory provide or assure testing for food and or water samples to assist with foodborne disease outbreak investigations: Bacillus cereus, Brucella sp., Campylobacter sp., Clostridium botulinum, Clostridium perfringens, Cryptosporidium sp., Cyclospora cayetanensis, Listeria monocytogenes, Norovirus, Salmonella, Shigella, Staphylococcus aureus, STEC non-O157, STEC O157, Vibrio sp., Yersinia enterocolitica. The state’s value is equal to the percentage of these tests performed.</td>
</tr>
<tr>
<td>m195</td>
<td>Percent of population in the state whose community water systems meet all applicable health-based standards through approaches that include effective treatment and source water protection</td>
</tr>
</tbody>
</table>
### Environmental & Occupational Health Domain Measures

The systematic collection and continuous or frequent standardized measurement and observation of environmental specimens (air, water, land/soil, and plants) analyzing the presence of an indicator, exposure, or response (warning and control), including monitoring the environment for vectors of disease to give information about the environment to assess past and current status and predict future trends.

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>MEASURE DESCRIPTION</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>m202</td>
<td>Does your state public health laboratory provide or assure testing for air?</td>
<td></td>
</tr>
<tr>
<td>m257_aiha</td>
<td>Does the American Industrial Hygiene Association (AIHA) provide certification or accreditation of your state public health laboratory?</td>
<td></td>
</tr>
<tr>
<td>m257_apa</td>
<td>Does the U.S. Environmental Protection Agency (EPA) provide certification or accreditation of your state public health laboratory?</td>
<td></td>
</tr>
<tr>
<td>m257_nelac</td>
<td>Does the National Environmental Laboratory Accreditation Conference (NELAC) provide certification or accreditation of your state public health laboratory?</td>
<td></td>
</tr>
<tr>
<td>m197</td>
<td>Does your state public health laboratory provide or assure testing for radiologic agents in environmental samples?</td>
<td></td>
</tr>
<tr>
<td>m196</td>
<td>Does your state public health laboratory provide or assure testing for environmental samples in the event of suspected chemical terrorism?</td>
<td></td>
</tr>
<tr>
<td>m272</td>
<td>Does your state public health laboratory test for contaminants in environmental samples: asbestos, explosives, gross alpha and gross beta, inorganic compounds (e.g., nitrates), metals, microcides, lead, persistent organic pollutants, pesticides (including organophosphates), pharmaceuticals, radion, or volatile organic compounds? The state’s value is equal to the percentage of these tests performed.</td>
<td></td>
</tr>
<tr>
<td>m273</td>
<td>Does your state public health laboratory provide or assure testing for hazardous waste?</td>
<td></td>
</tr>
<tr>
<td>m274</td>
<td>State participates in the National Plant Diagnostic Network (NPDCN)</td>
<td></td>
</tr>
<tr>
<td>m904</td>
<td>Number of Environmental Scientists and Specialists, including Health per 100,000 population</td>
<td></td>
</tr>
<tr>
<td>Measure Name</td>
<td>M334</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Measure Source</td>
<td>Center for Climate and Energy Solutions (C2ES), State and Local Climate Adaptation</td>
<td></td>
</tr>
<tr>
<td>Data date(s)</td>
<td>2014 - 2016</td>
<td></td>
</tr>
<tr>
<td>Limitations</td>
<td>The measure is an indicator of state planning for climate change; however, it only indicates if a state has a plan. The quality of the plan is not evaluated. The degree to which the plan is being implemented is also not evaluated.</td>
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</tr>
</tbody>
</table>
Overall Health Security

Coastal States with Adaptation Plans

Index Values

2013 2014 2015 2016
National Average No Climate Plan Climate Plan

All States with Adaptation Plans

Index Values

2013 2014 2015 2016
National Average No Climate Plan Climate Plan

Coastal States with Adaptation Plans

All States with Adaptation Plans

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<table>
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<tr>
<th>Measure Name</th>
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</tr>
</tbody>
</table>
• Timelines
  – Plan finalization dates range from 2008 to 2016
  – 75% of coastal states had finalized plans before the first non-coastal state plan was finalized in 2011
  – Only 1 new plan since the first Index release in 2013

• Length: from 12 pages to >400

• Leadership
  – Most authored by governor-appointed commissions/task forces
  – Some by state environmental agencies
  – One by a state health agency

• Collaborative Roles
  – Less than half of steering committees included public health sector representation
  – Stakeholder-engaged processes often included public health sector representation on workgroups
State Adaptation Goals by Sector

Coastal States
- Infrastructure: 15%
- Public Health: 13%
- Environmental: 57%
- All Others: 11%
- Emergency Preparedness: 4%

Non-Coastal States
- Infrastructure: 17%
- Environmental: 67%
- Emergency Preparedness: 1%
- Public Health: 4%
- All Others: 11%
Common Themes: Adaptation Goals

• Public Health Goals
  – Extreme Heat
  – Other Extreme Weather Health Hazards
  – Surveillance (Food, Water, Air)
  – Water Quantity and Quality
  – Vector Control
  – Smoke Emergencies
  – Vulnerable Populations
  – Preparedness Planning

• Emergency Management Themes
  – Early Warning Systems
  – Information Sharing
  – Emergency Response Planning
• Index findings can:
  – Point to gaps in protections at domain, subdomain, and measure levels
  – Be triangulated with other data to:
    • Prioritize areas for improvement
    • Examine potential drivers and contributors to gaps
    • Seek and learn from benchmarks
    • Identify and convene stakeholders
    • Develop and implement strategies for improvement
  – Track progress over time in target areas

• Including public health representatives and goals in collaborative planning for climate adaptation and similar long-range strategic initiatives can help identify relevant protections to strengthen health security
• Strengthen the Index’s Environmental and Occupational Health Domain through
  – New Subdomains, e.g.
    • Built Environment
    • Hazardous Waste Management
    • Responder Health and Safety
  – New Measures to Populate These Subdomains
• Need more consistent and systematic data collection on environmental and occupational health protections
Acknowledgements

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Convening Partners, Empowering Communities: What the Index Teaches Us about Health Security

November 7, 2017
APHA

Anita Chandra, DrPH*
RAND Corporation

Ana- Marie Jones*
Interpro

* Members of NHSPI National Advisory Committee
There are key stages of response and recovery; community planning key across phases.
Population displacement can break social ties in a community

Particularly difficult for vulnerable populations

Often no comprehensive plan to restore community networks
We know that community planning, volunteers, and partnerships key to resilience

RESILIENT COMMUNITIES

- There are strong relationships between organizations
- Organizations are ready and prepared to respond and recover
- There are enough volunteers to help in a disaster
- People can rely on each other (neighbor to neighbor)
- Individuals/families have the knowledge to prepare for and respond to disaster

See Chandra
www.laresilience.org
• Jurisdictions that engage in partnerships pre-event tend to be in a better position for response

• Volunteers are critical to response and recovery

• Challenges in locating at-risk populations for resource distribution, later recovery

*It’s important to train, respond, and plan with our community partners. Knowing community partners was a big help; we didn’t need to introduce anyone—we all knew each other.*
CPE scale includes actions to:

develop and maintain supportive relationships among government agencies, community organizations, and individual households; and

develop shared plans for responding to disasters and emergencies.
## Key Items in CPE

<table>
<thead>
<tr>
<th>Subdomains</th>
<th>Sample item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross sector community collaboration</td>
<td>Is your state education agency a member of the state emergency planning committee?</td>
</tr>
<tr>
<td>Children and other at-risk populations</td>
<td>Proportion of a state’s children 19 and younger who reside within 50 miles of a pediatric trauma center</td>
</tr>
<tr>
<td>Management of volunteers during emergencies</td>
<td>Percentage of Medical Reserve Corps volunteers who are nurses or advanced practice nurses</td>
</tr>
<tr>
<td>Social capital and cohesion</td>
<td>Voting-eligible population highest office turnout rate</td>
</tr>
</tbody>
</table>

*Key data sources: PHAB, National Longitudinal Survey of Public Health Systems, BLS, ASPR-HPP*
Improvements over four years in community planning and engagement
CPE explains about 40% of variation in state NHSPI

R-squared = .3966753

Community Planning & Engagement Coordination

NHSPI Overall Index
Explains some change in state NHSPI scores over time

Change in NHSPI Overall Index between 2013 and 2015

R-squared = .2762046
CPE explains 55% of health security variation in high poverty states.

R-squared = 0.2194

R-squared = 0.5459
In last 2 years, CPE subdomains improved or steady
Cross sector collaboration does not explain much NHSPI change

R-squared = .208066
But explains modest state change in NHSPI over time

R-squared = .2849666
And does explain 40% of variation for high poverty states
At-risk populations

- Cross sector collaboration
- At risk populations
- Management of volunteers
- Social capital

Comparison between 2015 and 2016.
State examples: Children and at-risk populations
State examples: Volunteer management
Social capital and cohesion

- Cross sector collaboration
- At risk populations
- Management of volunteers
- Social capital

2015 vs 2016
State examples: Social cohesion
Key Findings: Summary

- Community planning and engagement improving, but still work to do in social capital and management of volunteers

- Community planning explains some of the variation we see by states in NHSPI

- Variation is pronounced in higher poverty states, suggesting that partnerships and collaboration may intersect with other social factors critical for health security
• Examining links between other public health data on community health and key CPE subdomains

• Exploring further poverty findings along with other social status (e.g., demographic) variables by state

• Linking research on community partnerships (e.g., strength of networks) with NHSPI findings
For More Information

National Program Office
Supported by The Robert Wood Johnson Foundation

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