12-2-2014

Opportunities and Future Directions for the National Health Security Preparedness Index™

Glen P. Mays
University of Kentucky, glen.mays@cuanschutz.edu

Follow this and additional works at: https://uknowledge.uky.edu/hsm_present

Part of the Health and Medical Administration Commons, Health Policy Commons, and the Public Health Commons

Repository Citation
https://uknowledge.uky.edu/hsm_present/88

This Presentation is brought to you for free and open access by the Health Management and Policy at UKnowledge. It has been accepted for inclusion in Health Management and Policy Presentations by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.
Opportunities and Future Directions for the National Health Security Preparedness Index™

Glen Mays, PhD, MPH
University of Kentucky
glen.mays@uky.edu
Creating health security and community resiliency is a collective action problem that must be solved by aligning and coordinating the actions of government, private institutions, and individuals in ways that prevent, protect against, prepare for, respond to, and recover from all types of possible adverse health threats.

An Index theory of action

Information → Decisions → Actions

Feedback/Learning
An Index theory of action

Should we do something?

What should be done?

Measurements

Comparisons

Public reporting

Is it working?

What’s my role?
A brief history

**Collaborative Development**: Partnership led by ASTHO, CDC, and >25 collaborating organizations

**December 2013**: Initial model structure and Index
- 5 domains and 14 subdomains
- 128 measures

**December 2014**: Revised model and Index
- 6 domains and 18 active subdomains
- 119 retained + 75 new = 194 measures
- 75% of retained measures have updated data

**Future Development**: Transition to RWJF, program management office at University of Kentucky
2015 Program Management Structure

Homefront Communications

National Coordinating Center for Public Health Services & Systems Research

PBRNs

PHSSR Stakeholders

National Advisory Committee

NHSPNI Program Management Office (UK)

RWJF

Model Design Workgroup

Frameworks, Domains, Constructs, Indicators

Stakeholder Communications Workgroup

Messages, Uses, Tools, Applications

Methodology & Analysis Workgroup

Scaling, Weighting, Validation, Comparisons, Trends, Visualizations

Consultants

UK Center for Business and Economic Research

UK Division of Risk Sciences

RAND

Communications

Stakeholders
Directions for Expansion and Refinement

- **Consolidation**: reduce correlated, redundant & noisy measures
- **Composition**: expand social, environmental economic indicators of preparedness & resiliency
- **Alignment**: with established national frameworks
- **Grouping & weighting**: use empirical methods for internal consistency, discriminant power
- **Scaling**: reflect distributional properties
- **Comparisons**: address accuracy and uncertainty
- **Trending**: track changes via backward compatibility
Planned validation studies with 2014 Index

- **Internal Consistency Reliability (ICR):** testing at domain and subdomain levels

- **Multi-Trait Scaling Analysis (MTS):** item to scale comparisons for convergence and discrimination

- **Sensitivity analyses:** testing alternative scaling, weighting, imputation algorithms

- **Comparison and trend tests:** use Bayesian latent variable methods to address uncertainty
Preliminary 2015 Timeline

- 2014 Release
  - Call for new measures
  - Validation studies
  - Refine framework, constructs
  - Secure data sources
  - Refine measure set & specifications
  - Test new scaling, weighting, imputation
  - Test comparisons & trending
  - Sensitivity analysis/simulation

- 2015

- 2016 Release
  - Finalize index calcs
  - Update website
  - Messaging
Stakeholder engagement

- NAC provides overall scientific & strategic guidance
- Workgroups contain representatives from key scientific, policy, and operational sectors
- Solicit online comments and feedback from much larger groups of stakeholders
- Use iterative online Delphi ratings to inform key decisions on measures & methodology updates
- In-person workgroup meetings to make final decisions
- Monitor and evaluate utilization and utility
For More Information

Supported by The Robert Wood Johnson Foundation

Glen P. Mays, Ph.D., M.P.H.
glen.mays@uky.edu

Email: publichealthPBRN@uky.edu
Web: www.publichealthsystems.org
Journal: www.FrontiersinPHSSR.org
Archive: works.bepress.com/glen_mays
Blog: publichealtheconomics.org