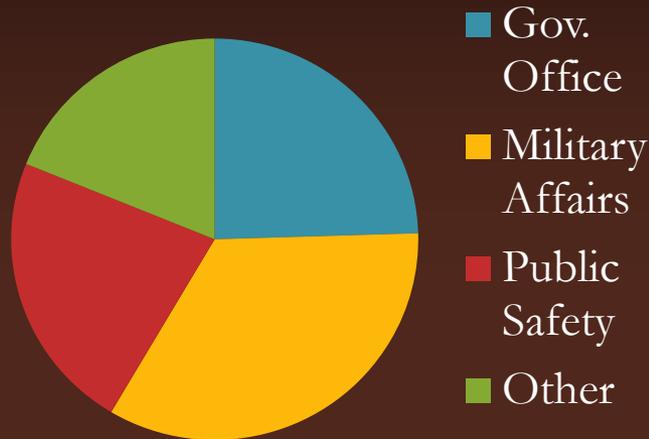


# Resilience

- ✓ Resistance
- ✓ Absorption
- ✓ Restoration

## Location



## Trigger Disaster Expenditures

State Statute or Administrative Code: 23 states

Federal Disaster Declaration: 24 states

## Disaster Funding

- Specific Appropriation: 21 states
- Separate Disaster Fund: 29 states
- Disaster Trust Fund: 3 states
- Multiple methods: 9 states

**Loosely Coupled Systems**

**The Complexity of Joint Action**

**The role of the Incident Management Teams**

# The Challenge of a Federal, Decentralized System

Keys to achieving resilience:

- ✓ Robustness
- ✓ Threat and Hazard Limitation
- ✓ Consequence Mitigation
- ✓ Adaptability
- ✓ Risk-informed planning and readiness
- ✓ Risk-informed investment
- ✓ Harmonization of purpose
- ✓ Comprehensiveness of scope





## The Highway 31 Fire (April/May 2009)

*... more than 700 individuals from more than 20 different agencies ... \$50 million in damage*

**The Power of Practice**  
*Annual exercises should be conducted...*

*Interoperable communication with other responding agencies is crucial ...*

## The Highway 31 Fire (April/May 2009)

### The Power of Priorities...

*Some tractor plow operators were on mandatory furlough (unpaid leave) as a result of severe agency budget cuts and were not immediately available for dispatch, and others were on regular days off.*

Like most public managers nowadays, local emergency managers operate within complex, uncertain environments. Rapid changes in the scope and severity of the issues increase the extent of intergovernmental collaboration necessary to address such challenges. ... {Their} results demonstrate that public managers who perceive problems as severe, possess specific managerial skills, lead high-capacity organizations, and operate in less complex agency structures collaborate more often and more effectively across governmental boundaries.

McGuire, Silvia [2010]





Displaced 5,400 people and killed nine...

"... lessons largely related to the need to extend safety and evacuation practices to the most remote parts of extensive systems"

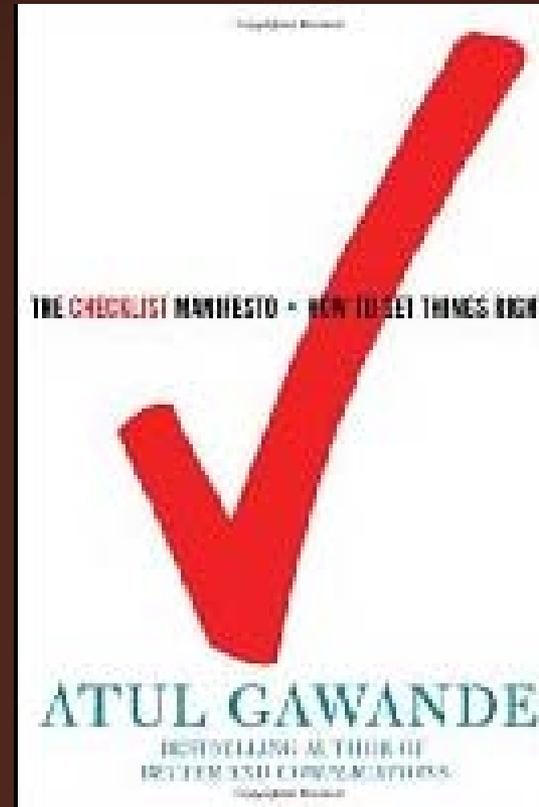
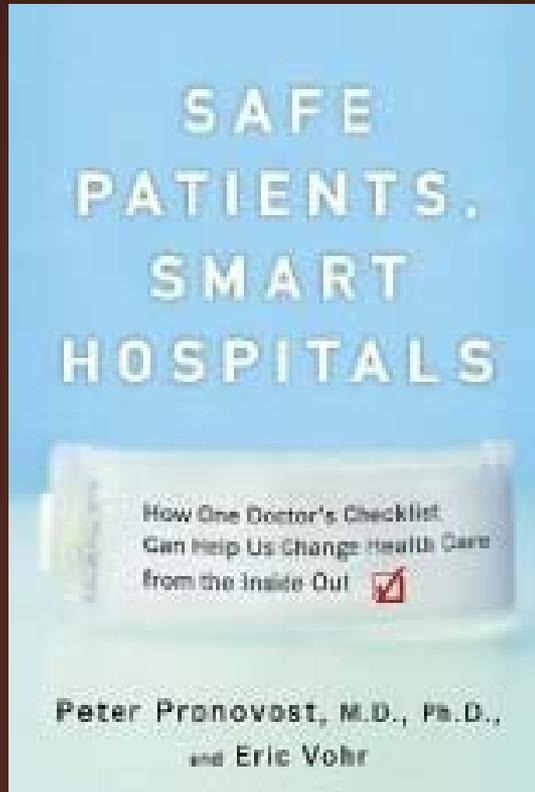
Dunning, Oswalt, [2007]

From Moynihan [2009]

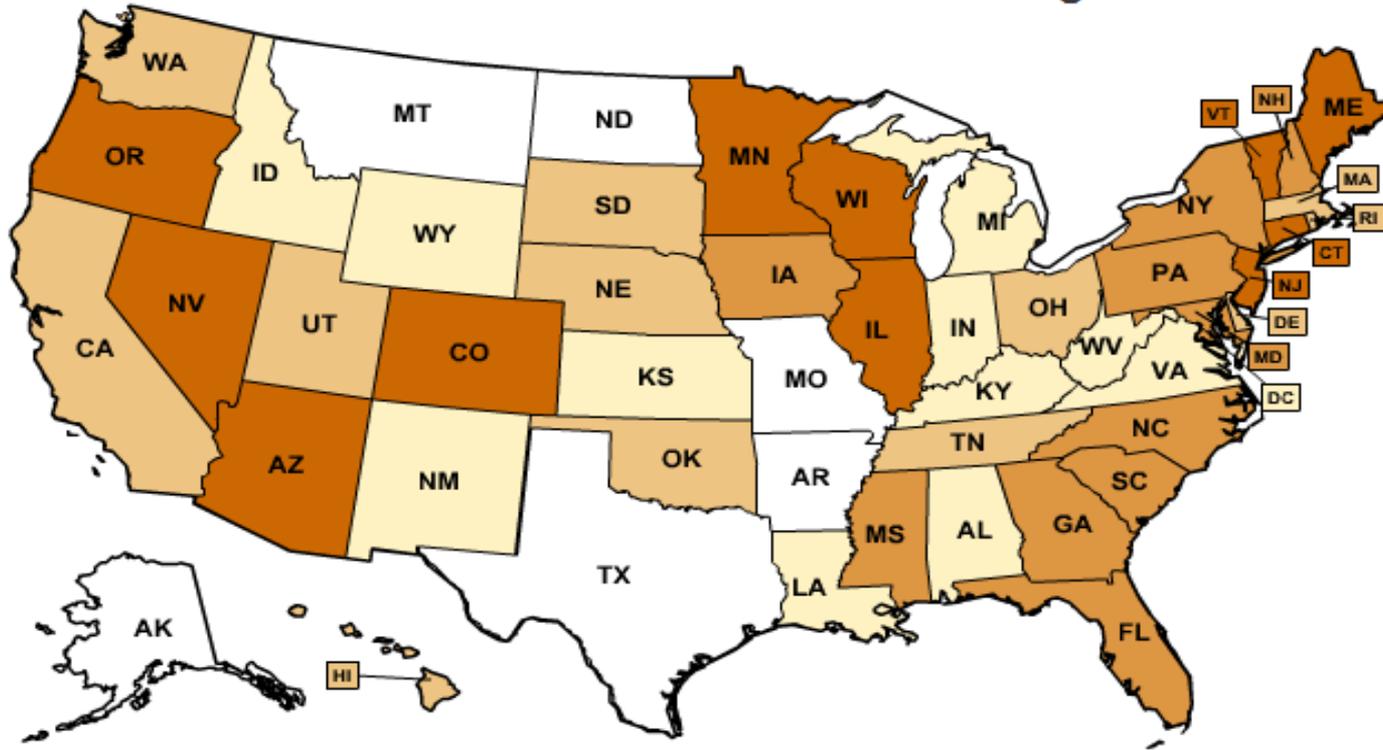
- ✓ Proposition 1: Even with centralized network governance {the Incident Command System}, network diversity makes crisis response coordination more difficult.
- ✓ Proposition 2: Even with centralized network governance, authority is shared among members and subject to contention, weakening crisis response coordination.
- ✓ Proposition 3: Even with centralized network governance, positive working relationships and trust is a critical factor in fostering crisis response coordination.

The Power of Practice... and ...

# The Power of Protocols



### Total Shortfall as % of FY10 Budget

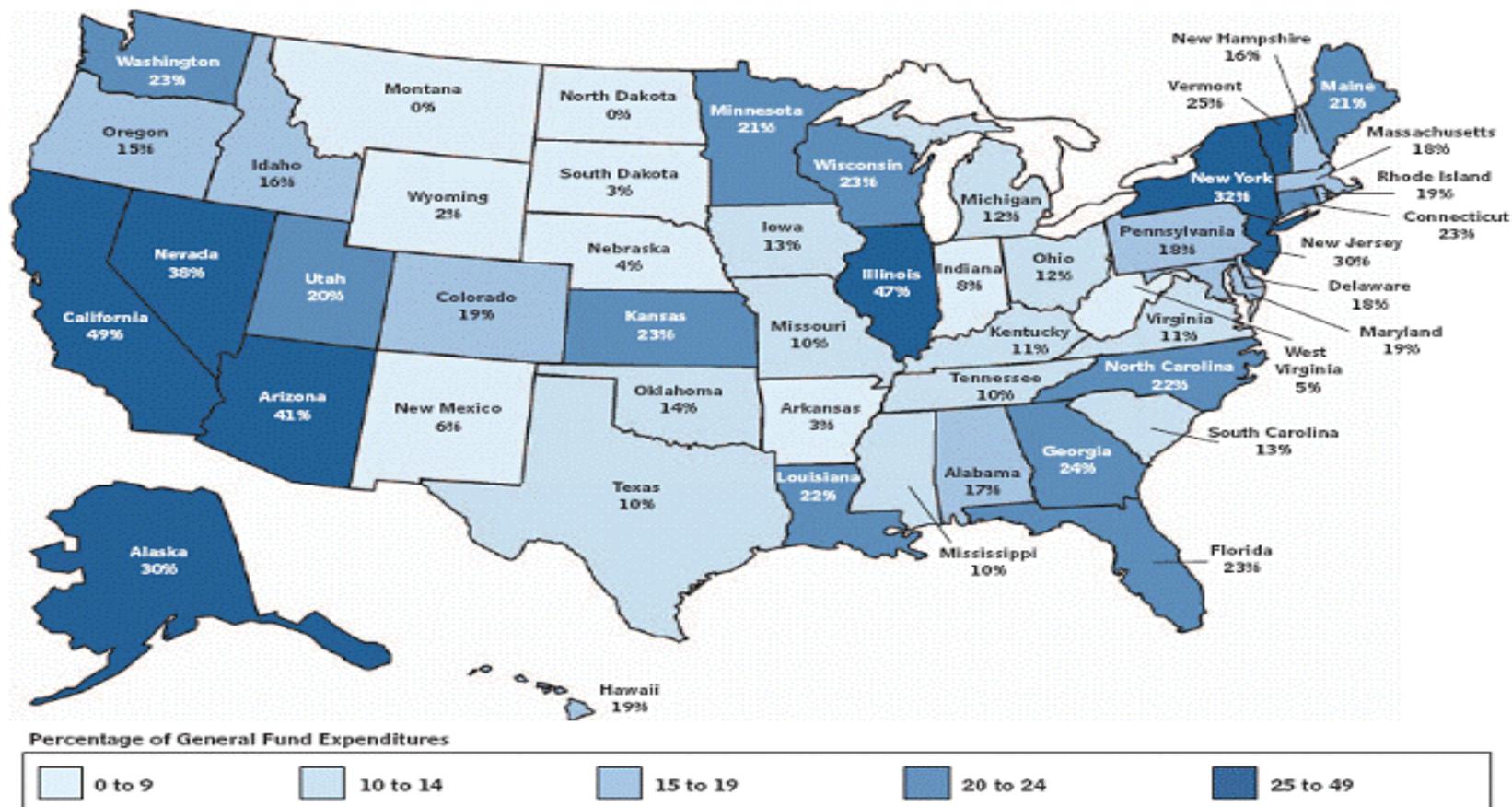


0.0% - 8.8%

9.0% - 13.9%

14.4% - 23.2%

24.1% - 59.8%

**Figure 4.****State Budget Gaps, Fiscal Year 2010**

Source: Congressional Budget Office based on data from Pew Center for the States, *Beyond California: States in Fiscal Peril* (Washington, D.C.: Pew Charitable Trusts, November 2009).

Note: A state's budget gap is the difference between its expenditures and revenues expressed as a percentage of the general fund expenditures for that state.

## The Power of Priorities... but...

"Results indicate that preparedness funds from the Centers for Disease Control and Prevention (CDC) have

- ✓ an indirect positive impact on preparedness activities,
- ✓ a positive direct impact on local epidemiology programs, and
- ✓ no significant relationship to other measures of public health activity, casting doubt on the existence of broad improvements to the public health system."

Avery and Wright [2010]