

NASEM Action Collaborative Webinar Series on Disaster **Research Webinar 1:**

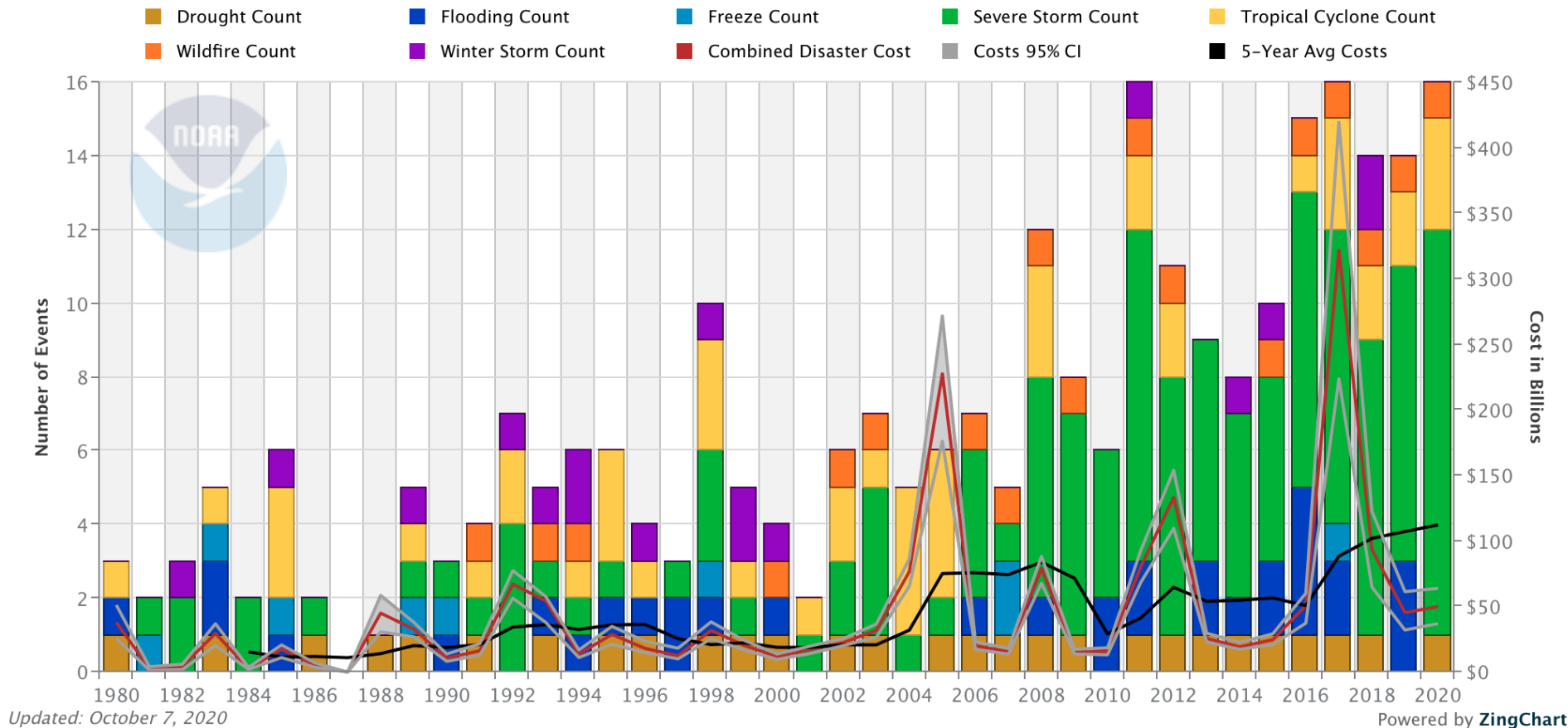
***Back to the Future - Moving the Nation's Health
Emergency and Disaster Research Capacity Forward***

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Urgency Underscored by the Increasing Costs and Frequency of Disasters (health costs not included)

United States Billion-Dollar Disaster Events 1980–2020 (CPI-Adjusted)



NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2020). <https://www.ncdc.noaa.gov/billions/>, DOI: 10.25921/stkw-7w73

“Best Decisions Are Based On the Best Science”

Dr. Bill Foege USA Today 10/7/20



The National Academies of
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**Call to Action:
Include Scientific Investigations as an Integral Component
of Disaster Planning and Response**

A Report from the National Biodefense Science Board

April 2011

“Public health emergencies demand a range of well-planned and coordinated efforts, including the effort to facilitate the conduct of essential research— research ultimately aimed at the development of effective clinical and public health interventions. Such research is likely to be conducted at multiple sites and to engage multiple investigators and populations of potential human subjects”.

SOUNDING BOARD

Research as a Part of Public Health Emergency Response

Nicole Lurie, M.D., M.S.P.H., Teri Manolio, M.D., Ph.D., Amy P. Patterson, M.D.,
Francis Collins, M.D., Ph.D., and Thomas Frieden, M.D., M.P.H.

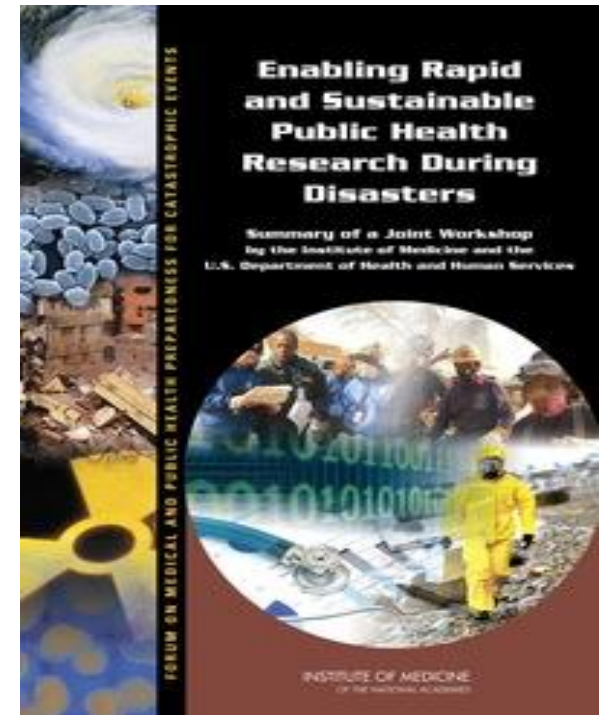
N ENGL J MED 368;13 NEJM.ORG MARCH 28, 2013

“The knowledge that is generated through well-designed, effectively executed research in anticipation of, in the midst of, and after an emergency is critical to our future capacity to better achieve the overarching goals of preparedness and response: preventing injury, illness, disability, and death and supporting recovery.”

Enabling Rapid and Sustainable Public Health Research During Disasters - Workshop (June 2014)

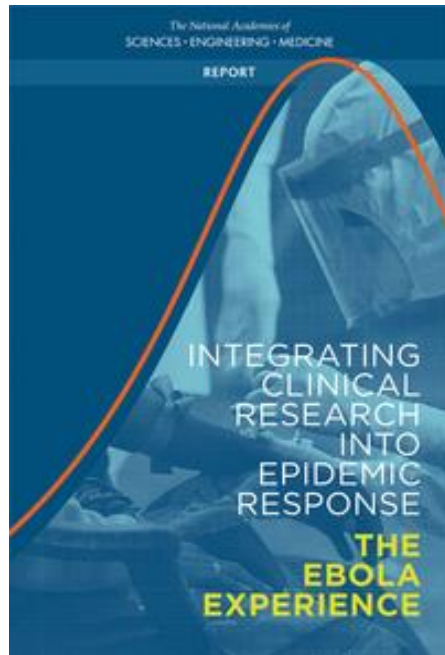
NIH, HHS/ASPR, CDC, IOM

- No formal way to activate & coordinate research
- Difficulty funding research
- Slow reviews of protocols (IRB issues)
- Lack of ready-to-go research tools & protocols
- Lack of trained researchers to gather data
- Lack of inclusion of community stakeholders



Institute of Medicine 2015. Enabling Rapid and Sustainable Public Health Research During Disasters- Summary of Joint Workshop. Wash. DC, Nat. Academies Press

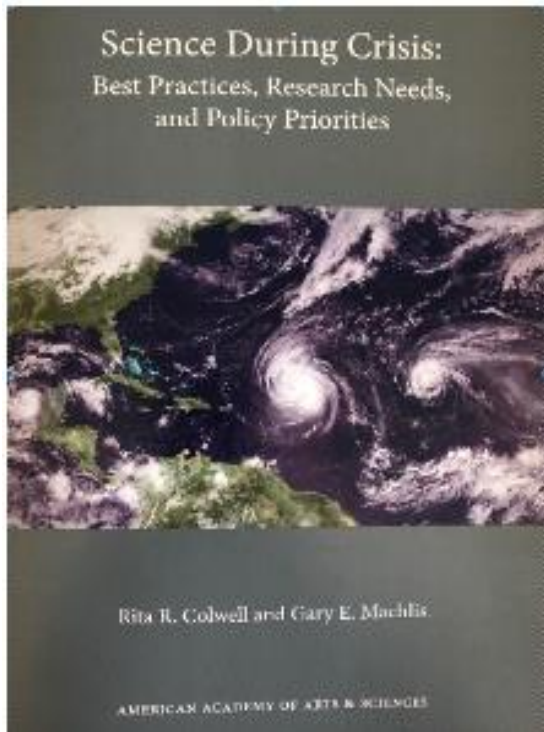
NASEM Report- *Integrating Clinical Research into Epidemic Response: The Ebola Experience* (April 2017)



"we learnedthat strengthening capacity in clinical care, public health, and health research systems is now an urgent and necessary requirement if this sort of epidemic is to be prevented and controlled in the future."

NASEM 2017. Integrating Clinical Research into Epidemic Response: The Ebola Experience. Washington, DC: The National Academies Press.

Transforming Our Infrastructure for Disaster Research



Science During Crisis: Best Practices, Research Needs, & Policy Priorities (AAAS, Mar 2019)

Evidence-Based Practices for Public Health Emergency Preparedness and Response: Assessment of and Recommendations for the Field

Released July 2020

Overall, the committee concluded that the science underlying the nation's response to public health emergencies is seriously deficient, hampering the nation's ability to respond to emergencies most effectively to save lives and preserve well-being.

The committee's recommendations around adequate stable funding, robust design and conduct of research studies, development of the research workforce and programs, and a commitment to collaboration between public health practitioners and experienced researchers all are vital to ongoing support of the knowledge development for and implementation of interventions that will better protect the public's health and minimize the impact of the broad spectrum of emergencies that have and will certainly continue to threaten the security of our nation.

NASEM July 2020

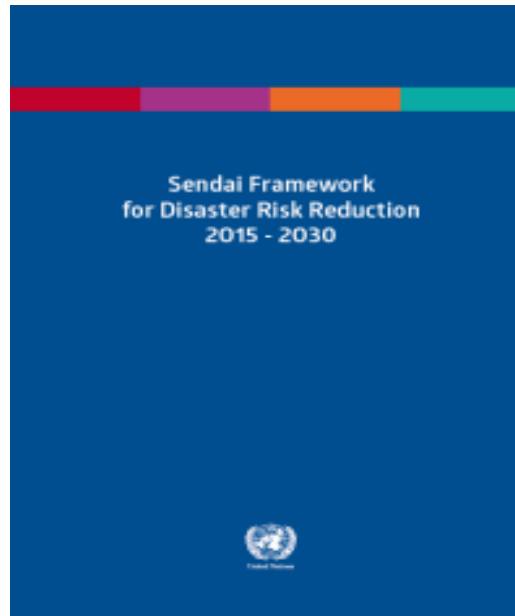
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The Sendai Framework for Disaster Risk Reduction 2015-2030: Four Priorities for Action

Priority 1. Understanding Disaster Risk

“Disaster risk management should be based on an understanding of disaster risk in all its dimensions of **vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment**.

Such knowledge can be used for risk assessment, prevention, mitigation, preparedness and response”



Time Critical Data & Research - Is It Safe?

Going beyond injury & illness tallies to understand key knowledge gaps

- Physical & mental health impacts (acute & chronic)
- Safety & efficacy of medical treatments
- Risks of exposures & contamination
- Efficacy of our methods & efforts
- Risk factors for recovery and resiliency
 - Including vulnerable populations:
 - Pregnancy, children, lactating mothers
 - Elderly & those with pre-existing conditions
 - Communities with higher exposures



NIEHS Health Emergency & Disaster Training Workshops

Participants: federal, state, local agencies, academia, public health, industry, hospitals & health care, community orgs.

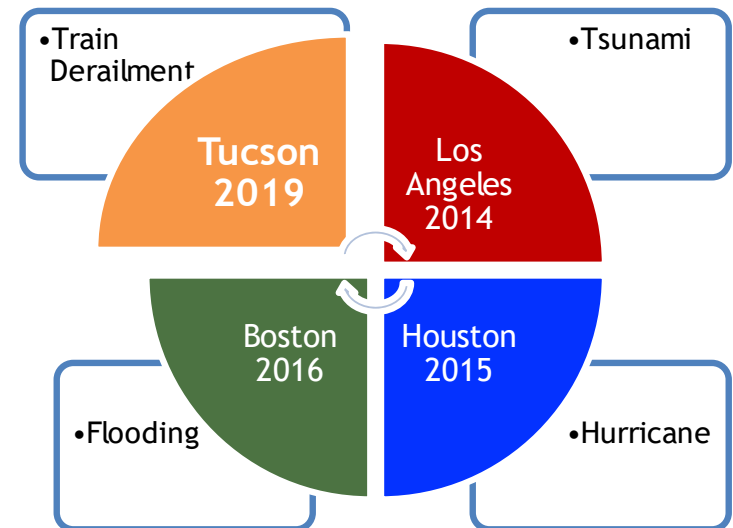
Explore:

- Local capacity for research
- Needed partnerships
- Implementation challenges
- Community engagement

Facilitate

- Engagement between researchers & agencies
- Identification of research needs
- Sharing info – “common operating picture”
- New research collaborations and networking
- Baseline and longitudinal data collection

> 100 participants/workshop



Moving the Nation's Health Emergency & Disaster Research Capacity Forward

- Leveraging the nation's investments, expertise, & skills
- Supporting response needs, long term recovery, & preparedness
- Multi-stakeholder engagement and ownership, including patients, victims, and impacted communities

Skills & Experience

Epidemiologists
Toxicologists
Exposure Scientists
Students & Teachers
Engineers /GeoSciences
Clinicians /Health Care Workers
Socio-Behavioral Scientists
Public Health
Responders / Support Workers
Others.....

THE END

- Tom Kirsch- Discussion