

CONVERGE COVID-19 Working Groups for Public Health and Social Sciences Research

Research Agenda-Setting Paper

This paper was written to help advance convergence-oriented research in the hazards and disaster field. It highlights areas where additional research could contribute new knowledge to the response to and recovery from the pandemic and other disasters yet to come. Questions about the research topics and ethical and methodological issues highlighted here should be directed to the authors who contributed to this paper.

Working Group Name:

Evacuation and Sheltering of Vulnerable Populations in a Hurricane-Pandemic

Working Group Description:

This Working Group convened six calls of federal, state, and local government staff; community leaders; academic and research experts; and business and non-profit service providers representing functions and disciplines such as public health, emergency management, logistics, communications, social services, and disaster response. The calls were organized according to six priority research topics with the purpose of identifying knowledge gaps, needs, and concerns related to the upcoming hurricane season under the COVID-19 public health crisis. Through these calls, the Working Group facilitated relationship-building, information and resource sharing, and co-learning to pinpoint data gaps, existing concerns, emerging issues and challenges, and unanswered questions with the goal of determining what research is needed to inform policies, procedures, and planning. The calls, by bringing together practitioners, stakeholders, and researchers, resulted in practice-informed research questions that drive a broad research agenda around evacuation and sheltering during a compound hurricane-pandemic threat.

Priority Research Topics and Specific Research Questions:

Priority Research Topics	Potential Research Questions
Vulnerable Populations and Planning for Hurricane Evacuation and Sheltering during a Pandemic	<ul style="list-style-type: none"> • How does the common definition of “social vulnerability” (e.g., low income, minority populations, etc.) change when considered in the context of a compound hurricane-pandemic threat? • What are the indicators of social vulnerability under this new definition? • How does risk perception and sense of fatalism contribute to vulnerability? • How does vulnerability condition hurricane preparation for and response during a public health crisis like COVID-19? • What are the distributions of social vulnerabilities to a hurricane-pandemic across scales (e.g., individual, household, and community) and geographies?

<p>Health and Infection Control</p>	<ul style="list-style-type: none"> • How does organizational decision-making regarding evacuation and sheltering protocols simultaneously consider different institutional and risk factors such as health risks, hazards risks, employees' perceptions of risk, and past experiences? • How can telehealth technologies be integrated into evacuation and shelter operation during a hurricane-pandemic event? • How do health and infectious disease concerns change the evacuation decisions and behaviors of different vulnerable populations? • How are medications acquired, distributed, and administered to populations within a (congregate and non-congregate) shelter environment? • What are the protocols for initial and periodic screening of staff, volunteers, and evacuees within the shelter environment?
<p>Evacuation Transportation and Shelter Operations</p>	<ul style="list-style-type: none"> • What data and analytical approaches (frameworks, models, simulations, decision trees) are needed to support planning for shelter operations, including transportation, staffing, infectious control, and food distribution under COVID-19? • How has the economic stress stemming from the public health crisis affected residents' evacuations and sheltering behaviors? • How has COVID-19 impacted availability of evacuation transportation assets (such as buses and drivers) and shelter workforce (staff and volunteers)? • How can refuges of last resort be operationalized as shelters during a hurricane-pandemic situation? • What do emergency managers and other stakeholders want to know from experiences with hazards-pandemic events, such as dam breaches, tornadoes, wildfires, etc.? What lessons learned from these hazards-pandemic may be drawn upon for hurricane-pandemic planning?
<p>Public Messaging and Risk Communication</p>	<ul style="list-style-type: none"> • How does trust in authority condition how the public perceives and acts on public messaging regarding evacuation and sheltering during a hurricane-pandemic? • What factors need to be considered in tailoring public messaging regarding risks of a hurricane-pandemic to vulnerable populations? • How can public messaging and risk communication be utilized to mitigate dread and anxiety among vulnerable populations in shelters during a hurricane-pandemic event? • How can risk communication theories and models be applied to reconcile the conflicting messages of COVID-19 (stay at home) and hurricane evacuation?
<p>Workforce and Shelter Staffing</p>	<ul style="list-style-type: none"> • How do shelter staff and volunteers perceive and balance risks in making the decision to work at a shelter? • How can online training for shelter staff and volunteers be developed (cross-training, functional training, infectious disease control, special needs, etc.) and delivered? • What accommodations, resources, and additional staffing may be necessary for sheltered populations with different needs? • What motivates people to staff and volunteer at shelters? How does the pandemic affect this motivation? • What protocols and additional staffing may be necessary to maintain and enforce infection control measures for disease surveillance, safety, and security in general population shelters?
<p>Psychological Health and Well-Being of Response Workers and the Public</p>	<ul style="list-style-type: none"> • What are the critical stressors during the evacuation and sheltering process that may threaten staff, volunteers, and clients' psychological health and well-being? • What stressors (chronic and acute) in the evacuation and sheltering process are introduced or exacerbated due to COVID-19? • How can shelter staff balance the need to protect their and others' psychological health during a compound hurricane-pandemic threat with necessarily limited time and resources?

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| | <ul style="list-style-type: none"> • What are the high-impact, low-cost resources that can be provided to shelter staff, volunteers, and clients to promote psychological health and well-being given the limitations of the shelter environment? • What psychological theories and interventions can be rapidly deployed to minimize threats to psychological health during and/or following a hurricane-pandemic event? |
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Ethical / Methodological Considerations:

(1) Researchers need to recognize the fatigue, exhaustion, and fear that already exist among research informants (especially front line government and nonprofit staff) and research subjects; (2) Participants may be psychologically fragile from the prolonged and acute stressors of COVID-19 and/or previous hurricanes/disasters. Researchers must balance demands placed on participants (time, effort, emotional burden) with the resources provided; (3) Researchers should consider post-positivist approaches, such as constructivist and critical theory lenses; (4) Researchers should apply principles of diversity and inclusion, not just in terms of the communities being studied but also in terms of the researchers involved.

Other Frameworks, Considerations for Collaboration, and/or Resources:

Following each topical call, our Working Group produced After Action Reports (AARs) summarizing key considerations raised during each call and highlighting issues raised by practitioners, volunteers, and researchers working on the frontlines planning and preparing for evacuation and sheltering during a hurricane-pandemic event. These AARs and additional references/resources identified during the calls are available on the website: <https://sites.wp.odu.edu/hurricane-pandemic/>

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