



July 21, 2021

To whom it may concern:

The Puerto Rico Public and Applied Social Sciences Workshop is a 501(c)3 non-profit organization founded in 2018 to advance generation and use of social science research in Puerto Rico. In response to the Federal Emergency Management Authority (FEMA) call for public comment on climate change and underserved populations, we provide below key recommendations that are informed by the work of Dr. Alison Chopel, Dr. Antonio Fernós and Dr. Laura Gorbea, social scientists to whom we have provided support while addressing the impact of Hurricane María and the process of recovery across Puerto Rico. These recommendations are informed specifically by mixed-method, quantitative and qualitative research into the economic and public health impacts of federal emergency aid distribution that was presented to the Natural Hazards Center of the University of Colorado, Boulder and supported by the National Science Foundation (NSF Award #1635593) and the Centers for Disease Control and Prevention (CDC).

The current study led by Chopel, Fernós and Gorbea shows that the requirements and procedures governing disaster aid distribution contributed to deepening poverty and exacerbating economic inequality in Puerto Rico. These findings align with findings of other researchers who found similar relationships in other parts of the United States. Recognizing it is essential to reduce such unintended impacts, below we provide nine specific recommendations that could contribute to an improved aid distribution strategy.

Recommendations for FEMA to improve equity and better serve vulnerable populations

1. **Revise the FEMA aid application process to make it more accessible to lower-income homeowners, budget for application assistance for the lowest-income homeowners and expand eligible ownership documentation options.** Data from field interviews revealed participants related to the process of requesting consideration for aid as a battle, where applicants were repeatedly asked by different points of contact to present the same or additional documents. This reiterative experience of providing proof and being evaluated reinforced feelings of being ignored and discounted in their time of need.
 - Having the same case worker assisting an applicant for aid would reduce the experience of alienation.

- Using locally hired case workers would better inform and recognize the challenges of providing evidence and documentations after an emergency.
 - In the cases where applicants are ineligible for aid cannot, informed referrals to local non-profit organizations could help to minimize the impact of denial of economic assistance.
2. **Adjust hazard damage assessment procedures to ensure that funds provided enable complete repairs in both urban and rural communities.** Participants in rural communities reported being unable to complete basic repairs because they were not awarded the necessary amount of aid. In the qualitative sample studied by Chopel, Fernos and Gorbea (78 interviews), not a single participant who needed a roof repair received the full amount of financial assistance needed to complete the full repair and achieve an intact, leak-free roof.
 3. Plan distribution of **emergency aid using impact metrics other than monetary property damages.** Chopel, Fernos and Gorbea examined the correlation of aid distribution, hazard damages and poverty with a variety of factors and found that property damages and fatalities tell two different stories about vulnerabilities to hurricane destruction. Their research demonstrated that municipalities that experienced higher hurricane fatalities (hurricane damage measured in human lives) also had greater increases in poverty, which connects to findings by other researchers that municipalities with greater poverty had increased excess fatalities. . Both findings suggest that direct aid disbursement strategies must be intentionally guided by human costs, such as measurement of mortalities and morbidities, in order to most effectively protect people and communities over property and essentially reduce further future costs in terms of both health and poverty.
 - Fatalities and human costs reveal where the greater need for assistance lies.
 4. **Review and revise assumptions underlying the use of Small Business Administration (SBA) loans as an alternative to emergency financial aid for rural households.** Qualitative research revealed that loans were given in lieu of aid to people who had minimal assets to rely on for survival, even counting the ownership of multiple chickens or sewing machines as a “small business.” In fact, repeatedly participants explained how an SBA loan denial was a prerequisite to receiving emergency aid. The described “ease” to extend debt instruments is in stark contrast to the denial of aid based on not having legal documentation or the means to fight unjust denials. These practices outline a system that excludes from aid and extends debt, paving the way for deeper poverty for victims of natural disasters.
 5. Intentionally increase **awareness and ability to appropriately respond to trauma in FEMA employees and contractors, through training in psychological first aid and capacity building around trauma-informed practices.** Partner with public health experts to develop aligned strategies to improve prevention and response to both public health and natural disaster emergencies. Individuals in Puerto Rico who were eligible for financial aid that only funded a partial roof repair, will still face the loss of their furnishings and have to go into debt to finish repairs or to build back safer. All the research participants identified as survivors and exhibited symptoms not only of personal trauma but of shared community trauma. This has resulted in

individual and population impacts to mental and physical health, continuing for years after the initial emergency. Psychological first aid can be preventive by addressing trauma before it becomes chronic or causes additional negative health outcomes. More specifically, there are lessons to be learned from the case studies about pandemic preparedness. Participants described the durability of social networks, and efficiency in their mobilization both post-hurricanes and in the early days of the pandemic, highlighting their strength, trustedness, and potential utility in effectively reaching community members. This, together with our finding that some post-hurricane response networks were still active or easily re-activated at the start of the pandemic, highlights the importance of continuous engagement with the population in coordination for public benefit.

- Health readiness could be improved by actively maintaining and regularly testing citizen networks.
 - Community mapping can enable identification of disaster vulnerabilities, through annual vaccine campaigns, or other activities that serve a dual purpose: sustaining the strength of social bonds while improving disaster preparedness.
6. **Current aid distribution contributes both to inequality within municipalities and between them, as well as between larger geographies like PR and nearby states.** Case studies of neighboring municipalities performed by Chopel, Fernos and Gorbea revealed that in areas with concentrated poverty, higher amounts of damage (as measured in fatalities and in housing stock damages) were not associated with higher amounts of financial aid. Similarly, other researchers and journalists have identified clear disparities between the amount of need and damages incurred in Puerto Rico and the need and damages incurred in Florida and Texas during the same year, revealing that many areas with much lower damage received more financial assistance and other resources including personnel on the ground.
- It is imperative that FEMA remain vigilant about its stated commitment to serve those most vulnerable, and continue to work with researchers and other experts to determine how best to distribute resources according to real, immediate need, and not simply continue to rely on metrics which have been demonstrated to lead to strategies that actively increase equity.
7. **Monitor diversity impact for public assistance and use data to make regular, iterative adjustments.** As identified in number 6 above, for FEMA to reverse the measured and demonstrated negative impact on economic equality and health equity, it is essential that it change its strategy and its activities. However, it is unknown which changes will result in the intended improvements in health and economic outcomes.
- Closely monitor outputs and outcomes, and evaluate impacts, throughout all emergency management processes.
8. **Engage researchers who are skilled in participatory, community-partnered, and applied qualitative research.** Disempowerment was a recurring theme in the qualitative findings. The only way to ensure that research does not compound or contribute to disempowerment is through participatory methods that partner with impacted community members in co-creating knowledge. While this is challenging to do in an emergency environment, it can be done. It can also be done in mitigation, readiness, and recovery periods. Furthermore, for rapid response

research, qualitative methods enable researchers to investigate questions that go beyond simply “how much?” to elevate the voices of those FEMA intends to serve.

- In addition to monitoring and evaluation research, needs assessment can be conducted with rigorous methods that would potentially surface many of the issues mentioned above and lead to recommendations similar or parallel to those outlined here.

9. Engage local partners in recovery. While surge staff during the initial response period are absolutely necessary, it might be possible to phase out imported staff and begin hiring from among local communities more quickly than was done in Puerto Rico.

- Increase the quality of response and recovery work, as local staff will have more contextual cultural and geographic knowledge, as well as a better ability to leverage local connections with large and especially small, community-based and grassroots organizations.
- Measure the local economic and social impact of emergency and recovery funds. How much of every dollar allocated stays on the Island?

Taking into account the increased likelihood for cascading and compound disasters, it is our hope that FEMA will plan their way forward working closely with community members and local leaders in prevention, surveillance, information and treatment efforts to improve emergency preparedness and mitigate public health risks. To this end we extend the willingness to collaborate of Chopel, Fernós and Gorbea, as well as Puerto Rico PASS Workshop.

Sincerely,



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