

## **Fitness, Parks, and Active Transportation Organizations Support Community Recovery and Physical Activity After Disasters**

**Claire Pendergrast, Scott Miles, Youngjun Choe, & Nicole Errett**

Disasters present a serious and growing threat to public health,<sup>1</sup> increasing the risk of mental health impacts and chronic disease for disaster-impacted communities. Given the importance of physical activity for health and wellbeing,<sup>2</sup> fitness, parks, and active transportation organizations may be especially well-positioned to provide social support for impacted communities during the disaster recovery period, potentially contributing to community resilience and public health. Given the increasing number of communities that have experienced or are at risk of experiencing a disaster, understanding physical activity in the disaster recovery period is increasingly relevant to achieving public health goals related to chronic disease prevention and physical activity promotion. Disasters may present both challenges and opportunities for physical activity and fitness, parks, and active transportation organizations in impacted communities.

### **KEY FINDINGS**

- Physical activity disruption during disaster recovery reflects an individual's disaster-related losses and the extent of disaster impact to social, built, and natural environments.
- Fitness, parks, and active transportation organizations are involved in a range of activities related to disaster recovery.
- These organizations are well-equipped to support disaster-impacted communities during the recovery period due to their trusted community relationships, access to resources through large organizational networks, and experience supporting community health.

This brief summarizes the results from a study published in the *International Journal of Mass Emergencies and Disasters*. We interviewed representatives of fitness, parks, and active transportation organizations in Houston, Texas and Santa Rosa, California. These representatives were interviewed from March to April 2019, during the recovery periods from Hurricane Harvey and the Tubbs wildfires, respectively. Participants were asked about personal and community experiences related to physical activity during the disaster recovery period. They also described organizational involvement with disaster response and recovery activities.

Our findings suggest that individual, built environment, natural environment, and social and organizational factors influence residents' physical activity after disasters. Fitness, parks, and active transportation organizations support activities that promote social and physical wellbeing during the disaster recovery process and would benefit from tailored resources and technical assistance to support their activities during disaster recovery.

### **Individual Disaster Impacts Limited Physical Activity**

For severely impacted individuals, efforts to arrange basic necessities such as food, shelter, and clothing felt all-consuming, leaving little interest and capacity for physical activity. Respondents also identified disaster-related physical and mental health impacts as reasons for reduced physical activity in disaster-impacted communities. Physical health problems caused by the disaster—such as muscle strains that occurred while packing supplies for

evacuation or respiratory problems from flood-related mold exposure—presented barriers to resuming physical activity. Participants described recognizing the importance of physical activity but feeling that the stress and exhaustion of the post-event period kept them from returning to a regular fitness routine. Several participants also discussed a heightened sensitivity to severe weather in the post-event period and a much lower tolerance for exercising in adverse conditions. Few participants felt that the period of reduced physical activity was responsible for negative health outcomes.

## **Built and Natural Environment Influences on Physical Activity Following Disasters**

Many Houston parks that experienced considerable flooding had footpaths and spaces for physical activities at multiple elevations, and higher-elevation trails and greenspaces were minimally impacted post-event, allowing some park use and physical activity to resume almost immediately. In both Houston and Santa Rosa, communities were enthusiastic about reopening of parks post-event and park usage returned to or exceeded pre-event levels. One Houston participant felt that parks provided a sense of normalcy during the period of disaster-related disruption.

Houston participants discussed damage to roads and vehicles during Hurricane Harvey flooding as evidence for the importance of active transportation, because running and cycling were often more feasible options for navigating flooding and traffic post-event and because many lost their vehicles due to flooding and had few options for alternative transportation. One participant felt that the storm raised awareness of the consequences

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of failing to plan for and support active transportation, especially for low-income communities, saying, “You kind of lost a little bit to gain a little bit. And it gave us a boost that said, ‘Hey, what we have, it didn’t hold up, but let’s build it better, but let’s also build more. Let’s build where we weren’t before. Let’s address some needs and kind of get out beyond just what we had, rather [than] just replacing what was lost. Let’s replace, build, and do more.”

The degree to which poor air quality caused by wildfire smoke limited physical activity for Santa Rosa participants varied between individuals. Some described a complete inability to continue outdoor activity during periods of poor air quality, while others were aware of the health risks of exercising in smoke but still felt comfortable being active. A participant in Santa Rosa noted that those who relied on active transportation continued cycling and wore a mask to reduce particulate exposure.

Natural environmental hazards such as erosion, disruption to plant and ecosystem health, and heavy rain and flooding were also discussed as concerns for participants. In Houston, silt on trails and in parks post-flood and damage to plant root systems increased erosion of trails and prolonged recovery times. In both Houston and Santa Rosa, severe weather conditions such as extreme rainfall triggered community anxiety post-event and presented further barriers to physical activity.

## **Organizational Approaches to Disaster Recovery**

Fitness organizations, parks, and active transportation organizations supported physical activity post-event in several ways. Coaches addressed logistical challenges by planning alternate routes for running and cycling when popular trails were unusable. Fitness groups also provided a community of support and accountability, which was mobilized post-event to share information about safe conditions for activity, share progress on returning to activity, or provide access to fitness supplies for those who experienced disaster-related losses. A participant

from a Santa Rosa gym described an increase in facility use by running teams to allow continued training in a space with better air quality than outdoors. Parks organizations coordinated trail repairs and provided up-to-date information to the public about access to safe locations of outdoor recreation.

Fitness organizations also provided financial support to impacted communities and individuals during the recovery period. Several participants described their organizations offering scholarships or waiving registration fees for those whose financial situation was changed by the event. A fitness store donated to the local credit union and offered an employee discount for all customers immediately post-event to support first responders and community members in need of supplies.

Several non-profit organizations expressed frustration that disaster recovery funding prioritized large infrastructure projects and were not available for their organizations during the recovery period, despite their organization's role in providing social support and improving physical health for disaster-impacted communities. A few participants described receiving financial support for disaster recovery from donors across the country or across the world who were interested in specifically supporting recovery for fitness organizations or parks and outdoor recreation facilities.

Many participants discussed their organization's holistic approach and mission as highly relevant to their involvement in disaster recovery. They discussed a focus on holistic wellness and the mind-body connection as part of both regularly scheduled programming and post-event support. Participants described leveraging existing relationships with community members and local organizations to distribute supplies or programming to support social and emotional wellbeing during the recovery period. A fitness organization for children emphasized the value of their program's structured activities aimed at building resilience and supporting both physical and emotional wellbeing, saying, "I think the nature of our program itself really supports the girls.... I just think in general kids need a safe space to go. And especially when the community is having this kind of crisis and stress, it's even more important that youth programming has that funding and support because parents, teachers, all the grown-ups are too stressed out... to give the kids that support."

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Fitness and active transportation organizations also supported a range of disaster recovery-related activities outside of the scope of traditional fitness and physical-activity programming. For example, a Houston running club leader reached out to members to offer support for those whose homes were damaged by flooding and organized volunteers to commit to a longer-term recovery project. A bike-share organization distributed over 500 bikes to individuals in need of a transportation alternative because of flooding-related vehicle losses, specifically targeting support to heavily impacted low-income communities. A gym provided access to showering facilities for individuals who had evacuated their homes or whose homes were without power or hot water. A Santa Rosa fitness store collected donations from stores in other northern California communities and provided donations to local relief organizations. They also converted part of their store space, which was normally used for community fitness programming, into a space where people staying in shelters could spend time in a more relaxed environment. Several participants emphasized the importance of recognizing and addressing unmet community needs post-event (which may take precedence over physical activity) and mobilizing their organizational resources to provide appropriate support.

## **How Can Policymakers and Fitness, Parks, and Active Transportations Organizations Better Support Recovery?**

Our interviews indicate that fitness, parks, and active transportation organizations are involved in a range of activities related to disaster recovery, both in supporting communities' physical and mental health through physical activity and in responding to community needs for supplies, shelter, services, and social support during the recovery period. Given the diverse stresses faced by highly impacted individuals during the recovery period, our findings underscore the importance of accompanying health promotion messaging with financial and social support to address unmet needs in disaster-impacted communities. Health promotion efforts could emphasize the mental health and social wellbeing benefits of physical activity and should stress low-cost and convenient strategies for remaining active during the recovery period.

Rebuilding after a disaster presents an opportunity to use the influx of financial resources to support recovery. It also presents an opportunity for coordination between stakeholders to move forward on health promotion and community wellbeing goals, including increasing physical activity and reducing chronic disease risks.<sup>3</sup>

However, disaster recovery efforts focusing on physical activity have the potential to perpetuate existing health and resource inequities in impacted communities, as wealthier and whiter communities are more likely to have access to physical activity settings such as parks and bike paths.<sup>4</sup> Policymakers must identify and implement strategies to ensure that all socio-economic, racial/ethnic, and age groups are engaged in physical activity-focused disaster recovery programming. Our findings highlight opportunities to improve health equity, for example, by prioritizing policy and funding support for fitness organizations and active transportation infrastructure in low-income neighborhoods during disaster recovery.

Governments and funders should consider developing funding opportunities appropriate for local fitness, parks, and active transportation organizations, as well as technical guidance to provide support for recovery-related health promotion activities and connect efforts to broader community-wide recovery activities. Given the involvement of active transportation organizations in identifying and supporting communities' transportation needs post-event, we recommend that these organizations be included in local disaster recovery planning efforts. These organizations should be able to offer insight on strategies to leverage recovery activities to promote physical activity and active transportation.

Parks, fitness, and active transportation organizations are well-equipped to support disaster-impacted communities during the recovery period due to their trusted community relationships, access to resources through large organizational networks, and experience supporting community health through communications, infrastructure, and services. Our findings also suggest opportunities to leverage physical activity organizations proactively to support local disaster preparedness and planning activities. Physical activity organizations also may be well-positioned to mobilize resources for disaster response and recovery in impacted communities by drawing on their regional and national networks.

### **Data and Methods**

The data used in this brief come from a University of Washington study conducted in Spring 2019. Semi-structured interviews were conducted with representatives of fitness, parks, and active transportation organizations in Houston, TX and Santa Rosa, CA during the recovery period from Hurricane Harvey and the Tubbs Wildfires, respectively. Sixteen interviews were audio-recorded and professionally transcribed. Transcripts were analyzed using thematic analysis. For a more detailed discussion of our study's methods and findings, please see: <http://ijmed.org/articles/810/>

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