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Social Work Involvement In Hurricane Harvey Relief Efforts

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SOCIAL WORK INVOLVEMENT IN HURRICANE HARVEY RELIEF EFFORTS

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DEDICATION

To the city of Houston and all affected by Hurricane Harvey.

SOCIAL WORK INVOLVEMENT IN HURRICANE HARVEY RELIEF EFFORTS

by

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PREFACE

This dissertation began as a class assignment in a qualitative design course during the fall of 2017. As Houston and all of Texas reeled after Hurricane Harvey that fall, course professors McCurdy and Cuccaro assigned us to interview three people about a Harvey-related public health issue. I chose a topic that was both meaningful and accessible to me: social workers who became involved in Hurricane Harvey relief efforts. I easily identified three social workers on Facebook who previously attended school with me at the University of Houston and had posted about volunteering at local shelters after Harvey. The interviewees were eager to tell their stories of difficulty and inspiration, and they immediately recommended other social workers for me to interview. Despite a lack of incentives to offer for this unfunded project, three interviews became eleven with even more names of potential participants. By the time the semester was over, I felt an increasing conviction and responsibility to further analyze and explore these and more social workers' stories. I feel privileged to have been subsequently entrusted with 39 rich interviews from the passionate social workers who served Houston after this devastating disaster.

ACKNOWLEDGEMENTS

Many people have made this work possible. First, I acknowledge and thank the 39 participants who so generously shared their time and insights for the development of this research. They shared their stories without reservation in hopes of providing the best possible services to those affected by the inevitable disasters to come in the future. They truly embody the National Association of Social Workers ethical principle of service: “Social workers' primary goal is to help people in need and to address social problems.” I thank them for their service to the Houston community and for contributing to this research.

The idea for this work originated from Dr. McCurdy and Dr. Cuccaro’s qualitative design course, for which I will always be grateful. Their encouragement, insights, and belief in the value of qualitative inquiry have been my guiding light. I look forward to applying the many qualitative skills they have taught to my research for many years to come. I appreciate Dr. Vernon’s and Dr. Linder’s invaluable expertise and support as my professors and committee members.

I am proud to say that I worked (both part-time and full-time) as a social worker for the duration of my doctoral program. Perhaps, then, no one deserves more thanks than my many coworkers, who were patient and supportive as I rushed to work from courses, arrived at work tired after weekends of writing non-stop followed by weekdays of draining work. I am endlessly grateful for my leaders, particularly Joy Hesselgrave and Tammy Kang, who trusted me enough to hire me full-time as I was writing my dissertation and have always supported my long-term goals. Thank you for enabling me to simultaneously do what I love and develop professionally.

My family has been relentlessly supportive and loving throughout my doctoral program, as I always knew they would be. My father's approach has always been to clear the path for me to do whatever it is that makes my heart fullest with endless support, compassion, and humor. Daddy, you have made it possible for me to do what I love. Thank you to my husband, Michael, who has never complained about the sacrifices we have had to make in our marriage as I have pursued this degree. Thank you for your unwavering confidence in me and for all you have had to learn about this topic. At least my dissertation was way more fun to read than yours. And thanks to our cats, Frida and Holly, who have offered their version of help by giving endless snuggles, inadvertently writing and deleting pieces of my work by walking on my laptop, and providing a sweetly comforting presence.

Finally, a wholehearted thanks to my best friend, my mother, Leigh Jensen Crawford. A social worker of more than 35 years, a lifetime achievement award winner for social work in the state of Mississippi, a first-generation PhD graduate, an exemplary professor, leader, counselor, and problem solver: these accolades barely scratch the surface of why I aspire to be more like you every day. I remember when you told me when I was about six years old that I, too, could get my PhD someday; as always, I took you seriously and never forgot. You are an integral part of every single educational, professional, and personal step that has led me to where I am today, and I am eternally grateful for that and so much more. You acknowledged me in your dissertation more than 25 years ago; now I acknowledge you in mine with hope that my career will ignite change and amplify the voices of others, just as yours continues to do.

SOCIAL WORK INVOLVEMENT IN HURRICANE HARVEY RELIEF EFFORTS

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Hurricane Harvey brought 33 trillion gallons of rainfall to Texas and Louisiana and damaged more than 100,000 homes in August 2017. Social workers worked during and after the storm to provide services to those affected. The primary research question guiding this dissertation was: What were social workers' experiences as they were involved in relief efforts during and immediately after Hurricane Harvey?

The study group comprised 39 participants (35 female, 4 male); of these, 19 were masters-level social workers who volunteered at shelters in Houston following Hurricane Harvey, 14 were masters-level social workers who worked at a pediatric children's hospital on "ride-out" staff during Hurricane Harvey, and five were members of the pediatric hospital's leadership guiding social work staff during ride-out. A narrative oral history framework was used to elicit all participants' lived experiences of volunteering at public shelters and working at the pediatric hospital.

Semi-structured qualitative interviews were conducted, transcribed, and added to NVivo for analysis. Using thematic analysis, the 19 shelter volunteer transcripts were coded into major themes. The 20 hospital transcripts informed a bounded-time case study resulting in a chronology of events and lessons learned from the ride-out experience. Resulting themes from

analysis of the shelter papers included 1) social workers' desire to serve, 2) the role of news and social media in social work volunteerism; 3) recognition and utilization of social workers as professionals; 4) identifying groups perceived to be in the most need of social work services; 5) listening and the need for connection; 6) assessing needs and problem-solving; and 7) respecting the dignity and worth of shelter guests. Results of the case study indicated a need for flexibility, the need for support for hospital staff (including participants) whose personal lives were affected, and dissatisfaction among full-time ride-out staff due to miscommunication about emergency pay.

In conclusion, this study emphasizes the need for more public education about social workers' skills to better utilize them as volunteers and the need for flexibility in social work roles in a disaster setting as environments and needs change. In terms of shelter volunteers, specific recommendations include providing more services for older adults, using social media to recruit social work volunteers who are familiar with local resources, and consolidating resource lists. In hospitals, recommendations include clarifying expectations for social workers prior to disaster events, maintaining open communication between social workers and their leaders throughout and after the disaster, and utilizing social workers as support for one another and other hospital staff.

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BACKGROUND

Literature Review

Hurricane Harvey made landfall as a category 4 hurricane on the Texas gulf coast on August 25, 2017. Over the next five days, it moved slowly through southeast Texas, causing unprecedented flooding with a record-breaking rainfall of 33 trillion gallons (Shultz & Galea, 2017). The flooding in Houston, Texas, has been called one of the most catastrophic weather disasters in U.S. history (Channel, 2017) and directly affected 13 million people throughout Texas and Louisiana (Shultz & Galea, 2017). Though few deaths occurred, more than 70% of Harris County, Houston's largest county, was covered with at least 1.5 feet of water (Channel, 2017). Flood damage rendered many homes uninhabitable, causing more than 32,000 people to temporarily relocate to local shelters (Shultz & Galea, 2017). Additionally, flooding prohibited typical forms of transportation via cars, busses, metro rails, or flights, stranding many families without access to basic necessities until floodwaters decreased (Channel, 2017).

A survey conducted in Harris Country following Hurricane Harvey found that almost half of respondents were affected by Hurricane Harvey at varying levels of severity; 30% reported that their homes were affected and 34% reported that their cars were damaged (Institute for Health Policy, 2018). Serious damage to homes and vehicles occurred more frequently among Hispanic (33%) and non-Hispanic (26%) respondents than white (16%), Asian (12%), or other ethnic groups. However, serious home or vehicle damage was relatively similar across income levels. Income decreased for 32% of respondents. Approximately 10% of respondents needed to be rescued, though only 6% were actually rescued. Nearly one third (28%) of respondents evacuated their homes, and 3% of all respondents evacuated to shelters. In terms of health, 22%

of respondents reported either the worsening of an already existing chronic disease or a new illness or physical injury due to Hurricane Harvey (Institute for Health Policy, 2018). Residents of all income levels, ethnicities, and health statuses were affected, leaving many Houstonians in the vulnerable position of depending on others for assistance. Many respondents (41%) volunteered their time to assist those in need through an organization or on their own.

Thirty years ago, (Zakour, 1997) described the role of social workers in disaster relief as vital to rebuilding communities with resilience using a strengths-based approach. (Zakour, 1997) notes that social workers' response to disasters embodies the core mission of the social work profession as they seek to serve the needs of the most vulnerable in a time of crisis. In the first days of disaster relief, social workers contribute to public health through promoting healthy coping mechanisms, providing resources and education to prevent and mitigate physical and mental consequences of the disaster, and influencing macro and micro policy systems (Zakour, 1997). If, as Zakour suggests, social workers are prominently involved in mitigating significant resource and mental health needs of people affected by natural disasters, then research should explore those social workers' experiences and needs as responders. Once their broad experiences are better understood, perhaps measures can be instituted to prepare social workers for their roles in disaster relief, streamline efforts for social workers to offer services to vulnerable groups in communities served, protect social workers' mental health during and after disaster to build their resiliency.

Additionally, a note is offered regarding terminology in this dissertation. The Federal Emergency Management Agency (FEMA) defines a disaster broadly "natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage,

deaths, and/or multiple injuries" (p. 2). Though "natural disaster" is commonly used to describe events such as hurricanes, wildfires, tsunamis, floods, earthquakes, or volcanic eruptions, this term is misleading for two reasons. First, many disasters are instigated, increased, or enhanced by human contributions (Squires & Hartman, 2013). Second, severe weather events that occur where no people are present are not disastrous but rather hazardous as they do not affect human life (Squires & Hartman, 2013). Therefore in this dissertation, the term disaster refers to disasters triggered by natural hazards.

Public Health Significance

Disaster response and preparedness are public health issues: they pertain to the safety and well-being of large populations when affected by hazardous events, whether man-made or of environmental origins (Powell et al., 2012). If, as the literature suggests, social work roles in disaster relief have not been widely researched or discussed, then it is likely that social workers are not being appropriately or frequently utilized following such events. This study describes not only the wide variety of roles social workers played in disaster relief after a major hurricane, but also demonstrates some of the effects social workers have had on the larger population suffering losses after the disaster. Elucidation of such social work roles and services following Hurricane Harvey may encourage organizations to request the services of licensed social workers immediately following any type of disaster, leading to better public health outcomes for disaster survivors as they are provided with appropriate mental and physical health resources and services. The current research contributes to filling the current research gap by providing an oral history through the unique perspectives, stories, and experiences of social workers following a devastating disaster in the U.S.

Research Question

The broad research question for this study is: What were social workers' experiences as they were involved in relief efforts during and immediately after Hurricane Harvey?

Specific Aims

Paper 1: Mobilization and utilization of social work volunteers in emergency shelters following Hurricane Harvey

Aims:

1. Explore social workers' reasons for volunteering at shelters after Hurricane Harvey and how they learned about volunteer opportunities.
2. Identify strategies for optimizing social work volunteer engagement and utility in disaster shelters.

Paper 2: Identifying vulnerable groups and opportunities to provide social work assistance in disaster shelters

Aims:

1. Identify underserved and vulnerable groups in public disaster shelter settings from the social work perspective.
2. Explore the experiences and roles of social workers who volunteered at disaster relief shelters following Hurricane Harvey.

Paper 3: A case study: The social work department's ride-out experience at a large pediatric hospital during Hurricane Harvey

Aims:

1. Explore the experiences of social work practitioners and leaders participating in the ride-out phase of Hurricane Harvey at a large pediatric children's hospital.
2. Identify lessons learned and recommendations for improving hospital-wide disaster policy and practice.

JOURNAL ARTICLE

Mobilization and Utilization of Social Work Volunteers in Emergency Shelters Following Hurricane Harvey

Disaster Medicine and Public Health Preparedness

Abstract

Objective: To understand why social workers volunteered at public shelters after Hurricane Harvey and how they were utilized as volunteers.

Methods: A narrative oral history framework was used to elicit participants' lived experiences of volunteering at public shelters. Semi-structured qualitative interviews were conducted and transcribed verbatim. Using thematic analysis with NVivo software, all transcripts were coded and organized into three major themes.

Results: Nineteen social work volunteers (eighteen females and one male) participated. Resulting themes of analysis included 1) social workers' desire to serve, 2) the role of news and social media in social work volunteerism; and 3) recognition and utilization of social workers as professionals.

Conclusions: Specific recommendations for better mobilizing and utilizing social workers after disasters include promoting social media as a way to recruit and disseminate information about volunteer efforts, appointing social workers as leaders of social work volunteers, and promoting local social work expertise in place of national organizations with less contextual familiarity. More education about the social work profession may result in better utilization of social worker skill sets in future disaster settings.

Keywords: Disaster preparedness; disaster social work; public health; public shelters

Introduction

Tan and Yuen (2013) argue that social workers are vital to rebuilding a community following a disaster due to their strengths-based perspectives and ability to empower community members. However, the social work role in disaster relief immediately following a disaster is limited and tends instead to focus on long-term recovery efforts (Findley et al., 2017). As Shultz and Galea (2017) report, medical and mental health interventions in immediate relief are effective only insofar as they safely return shelter guests to the environment from which they came. Longer-term recovery efforts at the policy level are instrumental in mitigating poor health outcomes for vulnerable communities in future disasters through the built environment with a focus on safer housing (Shultz & Galea, 2017). However, social workers may play a lesser-known role as part of the group of professional spontaneous volunteers such as doctors and nurses who spend their personal time serving at shelters after major disasters.

Research regarding the experiences of medical professionals, particularly doctors and nurses (Laditka et al., 2009; Rami et al., 2008), is more robust. The basic roles of medical professionals are clear as they usually establish make-shift clinics in the shelter with more limited resources than they would have in their typical healthcare setting (Shipman, Stanton, Tomlinson, & Speck, 2016). Many medical trainees often contribute their time to disaster relief, including a group who volunteered at shelters after Hurricane Harvey. According to survey results, the trainees who volunteered their time after Harvey self-reported higher rates of personal achievement than non-volunteers (Yeo et al., 2018). Medical professionals have widely requested more training in emergency preparedness in anticipation of future disasters (Baack &

Alfred, 2013; Hansoti et al., 2016; Nilsson et al., 2016; Sallie J. Shipman, Marietta P. Stanton, Stephen Tomlinson, Patricia M. Speck, 2016; SteelFisher et al., 2015; Xu & Zeng, 2016).

Nurses' experiences following major hurricanes in the U.S. such as Hurricane Sandy (Baumann, 2014; VanDevanter et al., 2014, 2017) and Hurricane Katrina (Laditka et al., 2009; Rami et al., 2008) have been studied extensively, illustrating their specific roles and stories in serving in the immediate aftermath of disasters. These studies not only detail the nurses' roles but also provide qualitative illustrations of their lived experiences and stories. Additionally, some of these studies have used the nurses' narratives to suggest improvements for training and implementation of nurses in terms of disaster relief (Baumann, 2014; Laditka et al., 2009; VanDevanter et al., 2014, 2017). A qualitative inquiry of nurses volunteering at shelters for the first time found that while the nurses interviewed relied heavily on their past experiences as nurses during their volunteerism, they perceived that they had inadequate training to specifically prepare them for the unique skills required in a disaster setting (Shipman et al., 2016). Though nurses primarily offer medical care during such disasters, social workers provide a distinct non-medical helping role that aids in strengthening social capital in communities and individuals as they recover from vulnerable circumstances following a disaster.

Additionally, efforts have been made to understand the organization of spontaneous volunteers, or citizens in the local community, who volunteer their time at local agencies and shelters after disasters (Palinkas, 2015; Pulido, 2012; Raj & Sekar, 2014). For example, many local citizens engage in search and rescue, volunteer at food banks and local shelters, and gather donations after disasters as a way to contribute to their communities, but efforts are often duplicated without consolidated information and tasks for volunteers (Twigg and Mosel 2017).

Organization of such volunteers will likely prove meaningful in future disasters that rely heavily on non-professional volunteer presence.

Disasters such as Hurricanes Harvey in Houston, Irma in Florida, Maria in Puerto Rico, fires along the West Coast of the United States (FEMA, 2018b), monsoons in India, Nepal, and Bangladesh (Benaim, 2017), and earthquakes in Mexico (Villegas et al., 2017) disrupted thousands of lives in 2017 alone. As disasters continue to occur, more emphasis is being placed on eliciting the assistance of community members and leveraging their skills to assist their fellow residents (Inglesby, 2011). FEMA's whole-community approach relies on private, public, and civil sectors to mobilize relatively unaffected entities that are eager to help those impacted by the disaster (Inglesby, 2011). One increasingly popular method of spreading information about disasters is social media, which some public health organizations are using to spread information about emergency warnings and medical needs (Muniz-Rodriguez et al., 2020).

Some research focuses on the long-term impact of social workers after a disaster in the community's recovery phase. For example, Mathbor (2007) and Hawkins and Maurer (2010) discuss the role of social workers in building social capital among disaster survivors over an extended period of time following a storm. Hawkins and Maurer (2010) use qualitative narrative research to contribute strong illustrations of social workers' experiences in building social capital, but the research is focused on long-term rather than immediate needs. While building social capacity and community resilience are integral to long-term outcomes, social workers are trained in crisis response and can provide immediate mental health needs following potential trauma caused by a disaster (Pyles, 2007). Though Pyles (2007) argues that social work interventions following disasters have been extensively discussed and are well-known, she fails

to cite evidence of such research. This dearth of evidence suggests a need for more thorough investigation and descriptions of the social work role following a disaster such as a hurricane.

Other research focuses on social workers' roles in schools after a disaster. Two studies have made suggestions for developing resilience materials for children affected by the disaster (Findley et al., 2017; Liang & Zhang, 2016). These materials could also be adapted to serve children in other settings after a disaster.

Social workers are in a unique position to impact the lives affected in these disasters, but few studies have explored the experiences of social workers who have volunteered in disaster relief. Many studies have described the roles of medical staff in disasters and some have described the impact of disaster relief on volunteers and mental health workers. Other studies have made recommendations for building resiliency among social workers after they have participated in disaster relief. However, social workers' stories have yet to be heard. Listening to and understanding these stories will illuminate the needs of social workers in the future as they volunteer their time in the inevitable disasters to come.

Methods

A narrative form of qualitative research known as oral history was used to explore the research question. Oral history collects the reflections of individuals following an event and may be guided by contextual factors (Creswell & Poth, 2017). In this study, the participants shared a social work role and were asked to reflect upon their perceptions of the effects of a major disaster in a series of open-ended questions (Table 1). Additionally, the researcher participated as a social work volunteer at NRG Stadium following Hurricane Harvey for one eight-hour shift.

Table 1. Semi-structured interview questions for shelter volunteers

1. Tell me a little bit about your experience as a social work volunteer. (Probes: Which shelter(s) did you volunteer with? How many times/for how many hours did you volunteer?)
2. What influenced your decision to volunteer? (Probes: Did you hear of a need for social workers? Where did you find out about opportunities? Did you have any survivors' guilt?)
3. What kinds of roles did you play as a volunteer? (Probes: Did you do informal counseling? Put together resources? Conduct intake? What did you do that you thought made the biggest difference? What are you most proud of?) How did your social work skillset add value to what you were able to contribute as a volunteer?
4. Tell me about some of the most impactful stories you heard while volunteering. (Probe: Were there any stories you heard that have really stuck with you?) Tell me about an experience that you had as a social work volunteer that really impacted you?
5. How do you think social workers could have been used more effectively at the shelter(s)? (Probes: How could the shelter(s) improve in terms of organizing social work volunteers? What other roles could social work volunteers have played to benefit shelter residents?)
6. Looking back, was there anything you would have done differently as a social work volunteer? (Probes: Would you have created a different role for yourself? Would you have volunteered more/less?)
7. Did you engage in any self-care once you were relieved from the storm? If so, what kind? (Probes: Did you take days off from work? Did you talk to others about what you experienced?)
8. Are you currently employed? Does your current employment include social work practice?
9. Is there anything I didn't ask about that you would like to add?

Sample and Recruitment

Potential participants were not eligible for participation in the study if they had not graduated from an MSW program. The target population was social workers holding a Master of Social Work (MSW) degree who provided social work services as volunteers at disaster relief

shelters following Hurricane Harvey. The shelters could be any size and could be either public or private. The social workers may have volunteered for a variety of hours or shifts and may have acted in various social work roles while volunteering. Additionally, participants could have graduated from their MSW programs at any time in the past. The inclusion criteria for the first and second research questions were: 1) provided social work services as a volunteer at a hurricane shelter of any size following Hurricane Harvey, and 2) spoke fluent English.

Snowball sampling was a natural recruitment choice for this study. Despite the lack of incentive for participation, each participant was eager to provide names of other social workers who volunteered at shelters. Typically, participants knew of these other volunteers' efforts because of social media posts and/or volunteering alongside them in a shelter. The researcher recruited the first two participants via social media as the participants had previously posted about their involvement at shelters after Hurricane Harvey. Subsequent participants were recruited via text message and email after the first interviewees provided names of other social workers who had volunteered at shelters after Harvey.

Data Collection

The researcher participated as a social work volunteer for one shift at the NRG stadium. As a participant, she was fully engaged as a volunteer and interacted with other social workers throughout an eight-hour shift and did not record field notes onsite (Creswell & Poth, 2017); however, she did not interact with any interviewees during this shift. The researcher reflected on the volunteer experience and recorded field notes off-site following her volunteer shift.

Participants were consented prior to the interview process. Since some participants chose to remain anonymous while others agreed to share their names, all participants have been

assigned random pseudonyms in this article. Participants were interviewed from October 2017 to May 2018. The length of interview time ranged from 30 to 90 minutes. Each interview was recorded on two audio devices. The interviewer also recorded field notes during each interview, including notes regarding content, interview environment, and nonverbal expressions. Interviews were conducted at times and places that were convenient to the participants. Most interviews were held either at the participant's office or a nearby coffee shop. Interviews were transcribed verbatim and proofread for major errors.

Data Analysis

Analysis followed Creswell and Poth's (2017) guidelines for narrative research. The researcher's field notes, first-hand volunteer experience, and participant observations were used to frame the context of the analysis and provide additional details to the narrative. NVivo qualitative research software was used to organize data files by interviewee. Next, the researcher listened to and read each interview to gain clarity of the interviews' separate and collective meanings. Next, the researcher created initial codes through reading each interview line by line and assigning a code (for example, "survivor's guilt" or "time spent volunteering") for each line or paragraph. Once each interview was coded, similar codes were condensed, and the researcher identified common codes among each interview. Similar codes were grouped into emerging themes to represent the most prevalent broad patterns that arose among shared experiences (Creswell & Poth, 2017). Finally, themes were clarified and refined through further analysis of codes within each theme and synthesized to present a comprehensive story of participants' experiences as volunteers.

Results

Nineteen social workers agreed to participate in this study. Eighteen participants were female. Three participants requested to be interviewed via phone while the remaining 16 agreed to conduct their interviews in person, primarily at their offices or coffee shops. Eighteen participants lived in the greater Houston area while the remaining participant lived in another city in Texas. All but one participant was employed at the time of the interview. The majority of participants were employed in direct practice with clients, including private practice, social services, and medical social work. Five participants were employed in macro practice, including administration and policy work, while the remaining three employed participants currently worked in academia as either students or professors. Participants were divided almost equally in terms of their prior disaster experience as 10 had worked or volunteered in disaster relief or recovery at least once in the past while the remaining nine had not. No participants reported flooding or other damage to their homes following Hurricane Harvey.

Three major themes emerged during the analysis (Table 2). The social workers' desire to serve explores the intrinsic reasons social workers decided to volunteer following Hurricane Harvey. The second theme, the role of news and social media in social work volunteerism, details the pervasive influence of these media in mobilizing social workers across Houston and Texas. The third theme, recognition and utilization of social workers as professionals, highlights the pervasive misunderstanding of the social work role and strategies for promoting and utilizing social workers' skill sets in shelters.

Table 2: Three major themes with example quotes

Theme	*Quote*
Desire to serve	"My first job out of grad school was mental health crisis intervention. And I really love that work, so any chance I have to participate in that kind of work as a volunteer, I will do it." – Isabella "I don't get to practice directly with clients in my job and I've never done disaster relief, so I wanted to have the experience." – Dora
Role of news and social media	"I will say social media was a huge thing in this. Like I would post something like, 'Social work friends! Please help me find a list of currently running shelters!' or whatever. And then people would start messaging me, whatever information they had, which was incredible." – Ashley "That's another thing I did while I was stuck at home too, and like the storm's raging outside, was try to share on social media." – Sofia
Recognition and utilization of social workers as professionals	So I think that, that like overall societal whatever, perception of what our misunderstanding about what social workers do…definitely played a role and most people didn't know who we were…The way that you could tell, that's a police officer, that's a nurse, that's a physician kind of deal. So we just very easily kind of blended in. People already don't really know what social workers do, so there was no one coming to us. – Amy "How will people know who we are, what we're doing? So we then created name tags that said, 'Wanna talk?' and other messages like that. So we put those on and, [we] went out together, kind of, a few people went out in pairs and a few people went out on their own." – Jordan "Maybe if there were a way to like communicate to others about what we could do, what we're capable, how we can be most helpful. I think I had to educate people." – Justin

Social Workers' Desire to Serve

Participants verbalized many reasons for volunteering as social workers after Hurricane Harvey. Broadly, most participants volunteered due to a combination of their desire to serve and their identity as social workers. Many participants shared their innate sense of service as a primary driver for volunteering. As Sofia noted, "I'm just service-oriented anyway...I think we have the responsibility if we're ok to help others." Similarly, Jordan described feeling an urge to help, saying, "You just feel such a strong call, and a strong push...you can't just sit at home, you've gotta go do something." Some participants perceived the emotional impact the hurricane was likely to have on those whose homes were affected and wanted to respond in a way that would be helpful. Rebecca said that based on her work experience, "I know how much trauma an event like this can cause and wanted to be able to give back." Lily described her desire to be helpful using her social work skills, saying "I wanted to do something that felt effective and was an immediate response." Participants felt compelled to serve others and searched for ways to do so effectively.

For some participants, this desire to serve was described as an innate component of their identity as social workers. Justin described his social work identity as "this idea of just a social worker and doing what we can, you know what I mean? They're just, it seemed to kick in and it seemed natural." Similarly, Amanda said of volunteering, "It's, you know, part of being a social worker," and Ashley felt that "most social workers have that drive to want to help." Sarah reported volunteering in part as a way to sharpen her social work skills, but she found that her experience as a volunteer reminded her why social workers can and should be active in disaster response events:

> I think for me it was very empowering to you know, to dive into the role again. And it reminded me of this skillset I have that I don't use on a daily basis. And it reminded me of why I became a social worker. And, if you will, it helped recommit myself to what the profession really stands for. Because I think, in my everyday work in the research, it's very abstract and it's very removed, and it's so easy to lose sight of the bigger picture and why I came to do the work that I'm doing now. So Harvey was a really great reminder of where I came from and what I have to bring to the table.

Recognizing service as part of the social work profession was frequently cited among participants' reasons for volunteering.

However, participants were also motivated to serve due their perceived survivors' guilt, or the feelings associated with not experiencing significant damage or loss compared to others, was a pervasive topic throughout the interviews. While not initially included as a specific question in the interview guide, the question, "Would you say you experienced any survivors' guilt?" was added as a probing question after the first four participants cited survivors' guilt as a reason they decided to volunteer. Thirteen participants named survivors' guilt as part of their motivation for volunteering.

Participants experienced survivors' guilt both as a reflection of their own escape from damage and as witnesses of others' suffering. As one participant described, "I also didn't like just sitting at home. You kind of have survivors' guilt when nothing bad really happened to you" (Louise). Participants described frequent exposure to the damage incurred in their communities through both the news and social media, as Sofia articulates:

> Living in a digital world and being cut off from everybody for a week while the storm was going on but seeing on Facebook and Instagram and on everything else what people were going through, and not being able to do anything immediately was really hard. So as soon as I was able to I wanted to make sure I got out there and did what I could.

Since roads were flooded for several days following Hurricane Harvey, participants like Sofia were limited in their ability to get out of their homes and subsequently spent days watching Harvey coverage with a growing sense of desperation and desire to help. One participant felt she needed to volunteer as an act of self-care in response to her survivors' guilt:

> I think it was just really, I don't know traumatic in a way to see the news coverage and I had a little bit of survivors' guilt you know? Like we're fine, we have food, our streets aren't flooded. And so for me it was a matter of kind of taking care of my own mental health and my own stuff to where if I was active, then I felt like I was contributing and I was helping. (Sarah)

In addition to survivors' guilt initiating participants' desire to volunteer, some participants felt that the sense of seeing others affected in the shelters contributed to their continuing volunteerism, as Lily describes:

> Then being in the shelters...being surrounded by people who were in pretty desperate situations and hearing sort of the trauma and the horror of their stories and everything that they lost...to kind of go home to a house that hadn't been affected at all was probably a helpful...drive in continuing to try to do something.

Survivors' guilt acted as both an impetus for beginning to volunteer and a reason to return to shelters after seeing the great needs of the shelter guests.

The Role of News and Social Media in Social Work Volunteerism

Participants discovered volunteering opportunities from several organizations or people and through various modes of communication. Participants consumed information about volunteer opportunities through the news (TV and radio), personal communication (texts and email), and social media (Facebook and Twitter). Participants discussed the pervasiveness of Hurricane Harvey news on TV as they waited for flood waters to recede and saw calls for volunteers:

> I turn on the news, like the news is pretty much on 24/7 in the house and you'd see like at the bottom of the screen, nurses, social workers, this person, med students, whatever, please report to George R. Brown. And you're like, it's like they're talking directly to me. Like I have to go. (Ashley)

Many participants found that in addition to news channels, they relied on social media to receive and distribute information about Hurricane Harvey volunteerism. As Jordan describes, "We started seeing on email and Facebook calls or requests for social workers to go down to either George R Brown or [NRG]." Similarly, Sarah stated that in terms of hearing about volunteer opportunities, "for me it was Facebook, a lot of friends that were posting, 'Social workers are needed, this is the number, this is where to go,' and you know I'd go." Jodi, who had no prior disaster experience but wanted to be helpful, found the CEO of the organization directing the NRG shelter on social media and contacted her: "I sent her a friend request and maybe that's how she saw my post and then reached out to me. So yeah, but I didn't know, I didn't know her before." As a result of this communication, Jodi became the leader and organizer of all social work volunteers at NRG, developing a team called the Sanctuary Squad that

included many participants of this article and was perceived to be a very effective social work program throughout NRG's disaster relief efforts.

Participants also took an active role in eliciting and distributing information about volunteering via social media. While Sofia was unable to leave her house for days after Harvey, she described using social media as a way to mobilize others who could help with relief efforts:

> I have a fairly large social media following, and so I utilized that to push out resources. "Here's where shelters are, here's where you can donate, here's a good list of people you can donate to." You know, anything…"Here's the number for FEMA," you know anything you could think of that would be useful to people, just really trying to be an information hub and push that out. And you know it was successful, it was shared and you know people were following it, and it was just, yeah, it was a good way to do it too.

Once participants received information about where and how to volunteer, they often used social media to provide this information to others: *"*I immediately started posting, I'm in two professional communities, and I immediately started posting and saying, you know, this is where you can go, this is what you can do" (Ana). Jodi shared an urgent message to her friends via social media encouraging social work colleagues to help:

> I think I posted something on Facebook and I was just like, "Everyone needs to just like, this is the time to take your, your licenses out from behind the glass and show up. If you can do it, go do it.

Participants felt that social media facilitated information gathering about volunteer opportunities specific to social work volunteers with more details about where and how they could be helpful while enabling them to mobilize other social workers.

As participants determined that they wanted to find ways to serve, they relied on specific people and groups who recruited social work volunteers and released information about volunteering, typically through news and social media. These information sources included officials from the City of Houston, the University of Houston Graduate College of Social Work (GCSW), friends and colleagues, and professional organizations like NASW Houston. Many participants worked at or attended classes at the GCSW and heard about volunteer opportunities through its communication channels. As Brittany stated, "the Graduate College of Social Work, right at U of H...did a really good job of putting it on Facebook or Twitter." Additionally, participants including Rebecca, Sofia, and Dora recalled the GCSW dean actively participating in volunteer recruitment on social media to reach his large network. Amanda added that the GCSW is frequently involved in community efforts and utilizes its large network to recruit social workers.

Some participants discussed hearing about a need for social workers through Brené Brown, a social worker, researcher, author, and speaker who serves as a social work professor at the GCSW and lives in Houston. Many social workers admire Professor Brown's notoriously accessible and approachable work on shame, resilience, and vulnerability. The scope of Professor Brown's international following is represented on her social media pages, where she has more than 1.6 million Facebook followers and more than 2.2 million Instagram followers. Sarah shared that hearing about this need from a respected public figure provided an impetus for herself and others to be active in the Houston community following Harvey:

> Having somebody like Brené Brown who is a known figure and was very vocal and very much, very active during Harvey, I really appreciated that. I felt like she really gave a call

> to action to social workers in Houston that wouldn't have otherwise known that you're needed...I think because she's so connected to the social work community and she has a lot of followers and it was just a way for social workers who are connected with her and following her in some sense to get that information. That's very specific to the profession, as opposed to a general call for volunteers.

Participants also noted that City of Houston officials, including Mayor Sylvester Turner and Director of Housing and Community Development, Tom McCasland, actively recruited social work volunteers on Twitter and Facebook, where their calls for assistance were widely shared. Many participants belong to local organizations such as the Houston chapter of NASW and specific social work groups that helped distribute information. Ana suggested the creation of a larger group in the community for future efforts that might include NASW, city officials, the GCSW, and social work organizations to consolidate organizational and mobilization efforts, saying:

> If those organizations would put out [a call for volunteers] and maybe even take a role in organizing. Okay, let's find out who has needs, who is already organizing something. Let's coordinate. Let's communicate. But to have some kind of authority figurehead we can turn to and say, "Hey, what's, where can I go? What do I do?" That would be helpful.

Jordan agreed with coordinating efforts to consolidate social work mobilization. She added that the GCSW is effective for recruiting graduates but is limited in reaching the many other social workers in Houston, saying, "It's not all social workers in the city of Houston. Whereas NASW Houston could possibly be, but...not all social workers are NASW members. So, it seems like, yeah there's a gap there." She also inquired about the availability of a list of all licensed social

workers in the state of Texas to whom a disaster alert could go out for faster volunteer recruitment.

Recognition and Utilization of Social Workers as Professionals

The third major theme, misunderstanding of the social work profession, explores participants' perceptions of shelters recognizing social work skills and utilizing social workers as volunteers. Participants shared their positive and negative experiences of leadership and clear communication as volunteers.

Participants perceived leadership to play an important role in the overall use and organization of social work volunteers, particularly in terms of sharing the shelter's vision, using inclusive language, and establishing local social workers as leaders of social work volunteers. Many participants at NRG cited the CEO of the shelter's community partner, Baker Ripley, as an integral part of the NRG's social work organization. Participants reported that when the CEO shared her vision of how the shelter would be organized, how it was meant to assist guests, and how each person could support guests while furthering this mission, they felt joined by a common goal. Elizabeth shared the experience of meeting with the CEO as a group and feeling well-oriented to the shelter atmosphere:

> We had a meeting with the head of the Baker Ripley. She just kind of told us all about what disaster relief usually looks like, kind of the atmosphere, the milieu of the shelter, what they want the people who had to come to the shelter to feel...giving us just a background on disaster relief and how we should address the people who were there.

Jordan agreed that the CEO's discussion was useful for framing their role as volunteers, saying,

> She gave her philosophy behind this shelter and behind disaster relief. A lot of it had to do with what I would say is really a social work perspective in terms of understanding where these guests were coming from holistically...about value and dignity of them as individuals.

This description of a common mission among all shelter volunteers helped participants gain a better understanding of their role as social workers in a new setting.

According to participants, the CEO included a strong social work presence as part of her vision for the shelter and exhibited a strong understanding of the role of social workers based on how she hoped they would assist at NRG. Jodi shared that the CEO said, "I want basically social workers around the clock [at NRG].” Participants who volunteered at NRG felt that this urgent request for social workers coming from leadership was an important reason that they were well-utilized while at the shelter.

Additionally, participants shared that social workers local to Houston were stronger leaders of other social workers than external entities that were not familiar with social work roles or community resources. Ashley noted that while she appreciated volunteers arriving from other areas of the US, external entities who tried to organize social workers at GRB “[had] no idea about our resources, about who to contact about our public transportation. They had no clue,” adding, “You don't know anything about the city to try and organize people from the city to help the people that live in the city.” Alternatively, Jordan praised the Baker Ripley CEO’s choice to charge a local social worker (Jodi) with organizing NRG’s social work volunteers, saying that Jodi “has amazing insight and experience” in the Houston community. In addition to utilizing locals in volunteer efforts, participants who were not at NRG verbalized a need for social

workers to lead them for more effective social work utilization. As Louise suggested based on her negative experience of being led by a non-social worker, “Have a social worker or mental health professional kind of leading the team.” Ana added that when social workers are not led by other social workers, their role was misunderstood: “People would go up there and wander around and not having anything to do and felt ineffective.”

Participants valued clear communication as an integral part of the shelter’s overall organization. This communication included clarity in terms of verbalizing the role of social workers in the shelter setting, detailing the specific tasks that social workers could complete, and identifying social workers through good signage.

Skills

Many participants felt that organizers and leaders did not understand their social work skillsets, which limited their usefulness as volunteers. Some participants were unsurprised by this misunderstanding, as expressed by Amy:

> In general, people don’t know what social workers do. They don’t associate us with being a helper and being like a mental health professional. So I think that overall [there’s a] societal misunderstanding about what social workers do.

Justin distinguished the difference between utilizing social work and other professions in disaster relief, saying that it is important to understand the “broadness of what we can provide...it's easy to know that the doctor is going to be what it is. But a social worker, there is this kind of like we can do all kinds of different things.” Ana shared her frustration when she tried to volunteer and was turned away due to a lack of understanding about the social work role: “We even went to the

front of the line and said, ‘We are professionals, we are social workers. Is there any use for us here?’ And they said no. So we didn't even get in.”

Alternatively, participants felt useful and supported when their skills as social workers were valued. Sandra noted that her time in the shelter was improved because the leaders “know what social workers are capable of and the skill set that they can bring.” Sandra she added that she saw a need for more ethnically diverse social workers at the shelters and suggested connecting with more professional organizations to mobilize these volunteers:

> [We need to] work on being connected...to recognize that there are multiple professional groups that agencies can reach out to. There's the Latino Social Workers of Greater Houston. There's the Black Social Workers Association, there's Asian and Pacific Islanders.

She theorized that recruiting from these groups would increase the diversity of the social workers recruited and therefore better serve the diverse populations of shelter guests. While most participants agreed that shelters were staffed with an adequate number of social work volunteers, some participants also felt that future mobilization could be better facilitated through more organized efforts between larger organizations in the Houston community.

Tasks

In addition to understanding social work skills, participants desired clear tasks and instructions upon arriving to volunteer. Instead, some participants received nebulous directions that left them feeling confused and underutilized. Ana articulated her perceptions of the social work volunteers who did not have clear instructions:

> I'm just thinking of how some people would come in to volunteer and they would sit at the table and I knew they wanted to do something and they were there because they cared, but they didn't really have any direction. So their energy was kind of wasted. And so if we had, I mean, everyone who comes in needs something to do. You need to capture them, you need to give them something to do. You make sure there are tasks that are defined.

Ana's observations were reflected in Louise's experience in which she left her shift early when she was not assigned tasks: *"*So I stayed about three hours and then it just kind of became kind of disheartening and so I didn't stay for the whole shift." Similarly, Sarah decided to act as a general volunteer after she could not find any social-work specific tasks to perform:

> And that's the day I ended up going to the distribution center. I'd ask everybody that seemed like they knew what was going on, you know, "Do you guys need social workers?" or "Where can I help?" And [they said], "Yeah, I don't know, go to that tent.

In response to this lack of direction, Louise suggested,

> ...have just a basic structure, because when people show up they want to know what their niche is. You know, "What are we allowed to do? What am I not allowed to do?" We want to know our boundaries so we don't exceed them, we don't offer too much, but we're not just sitting here not doing anything.

Jordan agreed that not providing direction "seemed like a missed opportunity to say, you know, 'Social workers, we need you in these four places in NRG you know, kind of and we'll get you plugged into to one of 'em.'" Overall, participants perceived a more positive experience with

volunteering and were more likely to return for future volunteering when they were provided with specific, social-work related tasks as volunteers.

Signage

Participants often cited the presence of clear and visible signage as an important factor in whether social work services were utilized. While sometimes guests were unable to find social work support through lack of signage, other times signs were unclear about the type of services offered. In both circumstances, social workers were rarely utilized. As noted above, misunderstanding about social workers is prevalent; participants worried that guests might be confused or misled by signs labeled as social work. Some signage on a table or name tag was particularly important to orient guests toward the services social workers provided since they were otherwise indistinguishable from other volunteers. As Amy said, "You could tell, "That's a police officer, that's a nurse, that's a physician" kind of deal. So we just very easily kind of blended in. People already don't really know what social workers do."

Instead, Jodi described the approach the Sanctuary Squad used: "Our sign, it didn't say like psychological first aid or like mental health...all our sign said was, 'Need to talk? We'll listen.' That's all it said." Similarly, Louise advocated for an action-oriented sign like, "Need to talk?" rather than a profession-oriented one, saying:

> Cause you know people can't access care if they don't know it exists. And they sometimes don't even know what they want or need in a time of crisis. You don't even know you need to talk until you're like, "Oh, that person's over there," and they're smiling at you, and, "Maybe I can go over and see them."

Participants generally expressed that clear signs identifying social work volunteers as some form of support were most useful for assisting guests.

Discussion

Participants volunteered as a way to contribute to the community while upholding their social work values. As Amy noted, service is one of the six core values of social workers according to the NASW (NASW Delegate Assembly, 2017), which describes the ethical principle of service: “Social workers' primary goal is to help people in need and to address social problems.” The NASW Code of Ethics adds that “social workers are encouraged to volunteer some portion of their professional skills with no expectation of significant financial return (pro bono service).” Like the medical trainees surveyed in Yeo et al. (2018), participants in this study reported a sense of purposefulness as a component of personal achievement as a result of their volunteerism. Similarly, Twigg and Mosel (2017) argue that volunteers gain significant intrinsic benefit from their service, which likely accounts for the large number of spontaneous volunteers who arise to provide both professional and nonprofessional assistance. The current study expands on these reasons for volunteering to suggest that social workers are driven by at least two distinct motives, which are their intrinsic desire to serve as part of their social work identity and their sense of survivors’ guilt if not personally affected by the disaster.

This current adds to Muniz-Rodriguez et al.’s (2020) research on social media in disaster response, suggesting that social media is an effective method used among social workers to distribute information about where to volunteer, how and where to donate supplies, and to identify community needs. Most participants utilized social media as at least one avenue for hearing about opportunities to volunteer. Participants’ reports about who provided them with

information about volunteering underscores the importance of major community leaders, such as public figures and college of social work leadership, being actively involved in recruitment. Therefore, leaders and prominent public health organizations should focus on expanding their social media reach in anticipation of, during, and after disasters (Muniz-Rodriguez et al., 2020), which might consequently assist in further mobilizing social work volunteers.

Social work participation in shelter leadership was integral to appropriate social work utilization. Leaders who were clear and inclusive in their vision for social work volunteers inspired participants and provided a structure for their volunteerism. Enlisting social workers as leaders of their volunteer colleagues provided a solution to misunderstandings about social workers' skill sets. Additionally, participants perceived that local social workers should be leaders or liaisons in shelters due to their comprehensive knowledge of the area's resources.

Similar to the nurses who participated in Shipman et al.'s (Sallie J. Shipman, Marietta P. Stanton, Stephen Tomlinson, Patricia M. Speck, 2016) study, the participants in this study shared that having a plan with clear tasks was helpful; additionally, they felt that greater preparation would be helpful before future disasters take place. Unlike nurses in the Shipman et al. ((Sallie J. Shipman, Marietta P. Stanton, Stephen Tomlinson, Patricia M. Speck, 2016) study who agreed that volunteering at a shelter was like setting up a clinic, the social workers in this study struggled more to collectively define the role of social work in a shelter, particularly since their roles changed over time. Of the four participants who volunteered for one day or shift, two did not return to volunteer because they were not assigned specific tasks, leaving them feeling ineffective and unneeded. The other two participants who volunteered for one day or shift ended their volunteerism due to time restrictions. Another participant volunteered as a social worker

twice but improvised the tasks she performed since she was unable to find anyone to provide guidance. When she returned to volunteer a third time, she was asked to instead act as a general volunteer since the shelter registrants did not know where to send a social work volunteer. One participant did not understand her role at the first shelter she went to left after one 4-hour shift. Instead she spent the next four days at a shelter where her role was more clearly defined. Participants who volunteered for more than one day were typically part of an organized group like the Sanctuary Squad (n = 10) or a medical team (n = 1) or were themselves responsible for defining social work tasks and roles (n = 2). Participants were overall more likely to volunteer for longer when they had the time to do so and when social work volunteer efforts were more organized.

Strengths and limitations

To the best of our knowledge, this is the first qualitative study to explore the experiences of social workers volunteering after a major disaster. The diverse sample offers perspectives from volunteers in both urban and rural areas and in many different roles. This study contributes to our understanding of why social workers volunteer, how they can be better utilized in a disaster setting, and how we can more effectively promote resilience among volunteers after their work in a crisis setting. This information is critical to enhancing public health efforts in disaster preparedness through increasing our knowledge of how to mobilize, train, and prepare social workers prior to major disasters.

However, this study had limitations. This sample was drawn from social workers who volunteered in one city and after one disaster; therefore findings may not generalize to other communities or disasters. Since some participants were interviewed two months after the disaster

and others were interviewed 10 months after Hurricane Harvey, participants likely differed in their ability to accurately recall specific events regarding their time as volunteers. Additionally, due to the snowball sampling method used for recruitment, the sample was skewed toward the social work team at one shelter. This high concentration of Sanctuary Squad participants at NRG Stadium resulted in more input regarding this shelter and group than others, which may bias these results to focus primarily on the methods and lessons learned at one site more than others. Finally, as Shultz and Galea (2017) argue, the effects of short-term medical and mental health interventions immediately after the storm are small compared to long-term community recovery, which should include robust measures to restore social and economic vitality. While the current study offers some insight for short-term efforts, research should continue to explore the ways social workers can expand community capacity following major disasters.

Conclusion

Social work volunteers who participated in this study felt driven to serve the most vulnerable people in their community after a devastating hurricane. As many participants noted, environmental and man-made disasters will continue to occur in Houston and throughout the world, necessitating a clear plan for social work utilization in the aftermath. This study provides novel insight for social work involvement in disaster shelters based on lived experiences with recommendations for subsequent disasters. Specifically, findings from this study suggest that 1) social media serves as an efficient method for disseminating information about volunteer needs, 2) social work volunteers are better utilized when led by other social workers or leaders with strong knowledge of the social work profession, and 3) shelter leaders should elicit local social work expertise when possible to better connect guests with services and resources.

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JOURNAL ARTICLE

Identifying Vulnerable Groups and Opportunities to Provide Social Work Assistance in Disaster Shelters

Social Work in Public Health

Abstract

Hurricane Harvey displaced more than 100,000 Houston residents of diverse socioeconomic backgrounds in 2017. Social workers volunteered in the resulting shelters to provide their expertise. This study used a qualitative narrative approach to answer the questions: 1) who are the most vulnerable groups in shelter settings? 2) what specific needs do these groups demonstrate? and 3) how do social workers assist in meeting those needs? Nineteen social workers participated in semi-structured interviews. Thematic content analysis revealed four primary themes: 1) identifying groups perceived to be in the most need of social work services; 2) listening and the need for connection; 3) assessing needs and problem-solving; and 4) respecting the dignity and worth of shelter guests[1]. Public health implications include the need for more services for older adults and consolidating lists of disaster resources for easier distribution.

Keywords (3-5): disaster shelters; social workers interventions; vulnerable populations

[1] A note on language: participants in this study reflected upon the importance of labeling as an indicator of respecting dignity. According to participants, Angela Blanchard, the Baker Ripley CEO who provided leadership at the NRG shelter, all volunteers were advised to use the term "guests" rather than "residents" or "evacuees" in order to preserve the dignity of the people who stayed at shelters, thus we will use the term guests throughout this paper.

Background

Disasters are nondiscriminatory; they occur in every part of the globe, among people of all ethnicities, economic classes, and belief systems (Guha-Sapir, D., Vos, Femke, & Below, R. with S. Ponserre, 2012), but often have a more detrimental effect on those with lower socioeconomic status. The mental and physical effects of disasters have been well-documented and include physical injury, mental health diagnoses, trauma, death, and other negative outcomes (Guha-Sapir, D., Vos, Femke, & Below, R. with S. Ponserre, 2012). Though medical needs are often quickly recognized, mental health needs can be difficult to identify in an acute setting such as temporary housing shelters where evacuees seek lodging (North & Pfefferbaum, 2013). However, left untreated, mental health needs can be as detrimental as untreated physical conditions (North & Pfefferbaum, 2013).

A survey distributed to 500 Harris County residents following Hurricane Harvey discovered that mental health consequences were more severe among residents than expected (Institute for Health Policy, 2018). The report's authors used Serious Psychological Distress (SPD), a tool regularly used by the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) as a measure of mental-emotional stress following Hurricane Harvey. Among respondents, 18% experienced SPD after Hurricane Harvey compared to 8% of the Harris County population sample in 2010. Among all respondents, women (23%) and Hispanic (25%) respondents experienced the highest rates of SPD. Those who experienced serious damage to their home or vehicle were six times as likely to experience SPD compared to all respondents affected. The survey demonstrates high levels of mental and emotional stress among minority populations, including those who are low-income, have seriously damaged

homes, women, and people of color, which aligns with Travis's (2010) assertion that minority groups are at greatest risk for severe consequences in disasters. In surveillance of disaster shelters following Hurricanes Maria and Irma less than one month after Hurricane Harvey, nearly 10% of medical visits at the shelter clinics were for mental health care, while nearly 15% were for exacerbation of chronic illnesses (Schnall et al., 2019).

The Federal Emergency Management Agency (FEMA) has adopted a whole community approach that considers the specific needs of at-risk groups in disaster preparedness and planning (FEMA, 2018a). Researchers have identified groups in addition to those found in the Institute of Health Policy Survey that are particularly vulnerable to the effects of disasters in terms of access-based needs and/or function-based needs (FEMA, 2018a). Access-based needs are defined as the accessibility of basic resources, including social services, lodging, reliable information, medication, and transportation. Function-based needs are the limitations individuals have that may require assistance before, during, or after a storm (FEMA, 2018a).

Health and Human Services has identified "at-risk" groups that exhibit access- or function-based needs, including children, older adults, and pregnant women (FEMA, 2018b). However, in terms of disaster preparedness and planning, HHS has expanded this definition to include people: 1) with disabilities; 2) living in institutionalized settings; 3) from diverse cultures; 4) with limited English proficiency; 5) with limited transportation access; 6) diagnosed with chronic disease; and/or 7) with pharmacological dependency (FEMA, 2018a). These groups can be broadly conceptualized as individuals who depend on others for basic needs. It is important to remember that an individual may identify with more than one of these groups. One group identified in the research as particularly vulnerable from a medical and mental health

perspective is older adults. In a study of older adults with mental illnesses in shelters, nurses were well-equipped to treat the older adults' physical illnesses; however, the authors call for greater services for attention to older adults' delirium, depression, and dementia (Holle et al., 2019). Similarly, (McCann, 2011) argues that older are at high risk for significant physical and mental consequences during disasters, and their needs have not been met in past events such as Hurricane Katrina in 2005.

Another group that has received more attention recently is pets. Following the devastation in the southern United States after Hurricane Katrina made landfall in 2005, the federal government resolved to reassess pet evacuation policies (The White House, 2006). The resulting federal Pets Evacuation and Transportation Standards Act of 2006 (PETS Act) required that state and local jurisdictions plan for pet evacuation as part of their emergency preparedness planning (Pets Evacuation and Transportation Act of 2006, 2006). In 2007, Texas enacted Simba's Law to amend the state's government code on emergency management, requiring political subdivisions to assist in improving pet evacuation processes (Simba's Law, 2007). As evidenced by the Institute for Health Policy survey (Institute for Health Policy, 2018), Harris County residents benefitted from these new policies: six of every ten evacuees owned pets, and 90% of pet owners evacuated with their pets. Although only half of evacuees who went to hotels took their pets, evacuees found they could bring pets with them to friends' homes or shelters at equally high proportions (Institute for Health Policy, 2018). Thus, pets are considered in this paper as another vulnerable group that is dependent on the actions of others for safety.

As disasters continue to have devastating consequences on the environments, public entities are recognizing the necessity of incorporating public health and medical professionals

into preparedness, relief, and recovery efforts (Inglesby, 2011). As professionals become more involved in these disaster processes, researchers have called for an increased understanding of whom needs assistance most (FEMA, 2018a), which interventions are most helpful, and how to prepare professionals to offer meaningful services (Rock & Corbin, 2007).

Crowdsourcing, or using public platforms to collectively contribute to an online database of information, has become a prevalent way for spontaneous volunteers (citizens compelled to serve in a time of crisis) to spread geospatial information about who needs what kind of help during disasters (Gao et al. 2011). During disasters, crowdsourcing from social media can be particularly useful when organizations are decentralized to develop a common source of information. However, crowdsourcing is a relatively new tool with challenges, including low reliability, duplication of efforts, and a low ability to coordinate among various groups (Gao et al. 2011).

Social workers are particularly well equipped to identify vulnerable groups, their needs, and resources to connect them. The Institute for Health Policy (2018) identified eight of the most prevalent needs among respondents affected by Harvey. The needs, in order from most cited need to least, were: 1) repairing home damage, 2) applying for disaster assistance, 3) getting transportation, 4) finding permanent housing, 5) finding a job, 6) getting mental health care, 7) finding temporary housing, and 8) getting needed medical care.

The current study relies on social workers who volunteered at shelters after Hurricane Harvey to explore the experiences and needs of vulnerable groups and the ways that social work volunteers attempted to meet those needs. The primary research questions for this study are: 1)

who are the most vulnerable groups in shelter settings?; 2) what specific needs do these groups demonstrate?; and 3) how do social workers assist in meeting those needs?

Methods

Due to the exploratory nature of this study, a narrative, qualitative design was appropriate for understanding the lived experiences of social workers volunteering in shelters during Hurricane Harvey (Creswell & Poth, 2017). Specifically, the oral history method was chosen to facilitate reflections from participants following a single event in a specific context (Creswell & Poth, 2017). Participants consented to participate in a semi-structured interview (Table 1) with the researcher, who engaged as a volunteer in one eight-hour shift at a shelter following Hurricane Harvey but did not interact with any participants during the shift.

Table 1. Semi-structured interview questions for shelter volunteers

1. Tell me a little bit about your experience as a social work volunteer. (Probes: Which shelter(s) did you volunteer with? How many times/for how many hours did you volunteer?)
2. What influenced your decision to volunteer? (Probes: Did you hear of a need for social workers? Where did you find out about opportunities? Did you have any survivors' guilt?)
3. What kinds of roles did you play as a volunteer? (Probes: Did you do informal counseling? Put together resources? Conduct intake? What did you do that you thought made the biggest difference? What are you most proud of?) How did your social work skillset add value to what you were able to contribute as a volunteer?
4. Tell me about some of the most impactful stories you heard while volunteering. (Probe: Were there any stories you heard that have really stuck with you?) Tell me about an experience that you had as a social work volunteer that really impacted you?
5. How do you think social workers could have been used more effectively at the shelter(s)? (Probes: How could the shelter(s) improve in terms of organizing social work volunteers? What other roles could social work volunteers have played to benefit shelter residents?)
6. Looking back, was there anything you would have done differently as a social work volunteer? (Probes: Would you have created a different role for yourself? Would you have volunteered more/less?)
7. Did you engage in any self-care once you were relieved from the storm? If so, what kind? (Probes: Did you take days off from work? Did you talk to others about what you experienced?)
8. Are you currently employed? Does your current employment include social work practice?
9. Is there anything I didn't ask about that you would like to add?

Sample and Recruitment

To be eligible for participation in the study, participants must have volunteered as a social worker for at least one shift of any length at any public or private shelter near Houston after Hurricane Harvey. Participants were ineligible if they did not hold at least a Master of

Social Work (MSW) degree. The recruiter used snowball sampling to recruit the participants, beginning with two participants who posted about their shelter involvement on Facebook after Hurricane Harvey. These participants provided names of additional volunteers, who were contacted via email, text message, and social media.

Data Collection

Consenting participants were interviewed between October 2017 and May 2018. They have been assigned random pseudonyms in this article. Interviews were between 30 and 90 minutes and were conducted at locations convenient for participants, including shops and offices. Interviews were recorded on two audio devices and transcribed verbatim. The interviewer recorded field notes during these interviews to provide context and additional details such as non-verbal cues.

Data Analysis

The researcher added all transcripts to NVivo by interviewee alongside documentation of field notes. These materials were analyzed using Creswell and Poth's (2017) narrative approach with thematic content analysis to answer the primary research questions. The researcher first listened to and read each interview to better understand the interviews' separate and collective meanings. Then, the researcher reviewed each transcript to identify contents pertaining to the specific research questions, including: 1) quotes in which participants discuss populations in shelters who were particularly vulnerable, in need of additional resources or services, or were in some way underserved; and 2) quotes pertaining to social work roles and utilization in the shelters. The resulting quotes were coded line-by-line into codes such as "needs for the elderly" or "types of signage used." Similar codes were merged for consolidation. These final codes were

grouped into emergent themes with quotes demonstrating thematic content. These broad themes were determined based on the most pervasive concepts and ideas identified during coding. Finally, themes were combined with field notes and supplementary quotes to provide a cohesive story of social workers' experiences as they relate to the research questions.

Results

Nineteen social workers (18 female and one male) participated in this study. Seven participants were Licensed Clinical Social Workers (LCSWs), eleven were Licensed Master Social Workers (LMSWs), and one was a Master of Social Work. Of the 18 licensed social workers, the average number of years licensed was 9.4. At the time of the interview, 10 reported practicing in a direct practice job, five were in macro positions, three were students or professors in a graduate academic setting, and one was unemployed. Participants primarily volunteered at the two largest shelters in Houston, NRG Stadium and George R. Brown Convention Center (GRB). However, two participants volunteered at Lakewood Church and one volunteered at rural shelters surrounding Houston. The average length of time participants spent volunteering was 4.4 days (each day comprised four- to eight-hour shifts during the day or overnight).

The four primary themes that emerged from these research questions were 1) identifying groups that were perceived to be in most need of social work services; 2) listening and the need for connection; 3) assessing needs and problem solving; and 4) respecting the dignity and worth of shelter guests (Table 3).

Table 3: Four major themes with example quotes

Theme	*Quote*
Identification of vulnerable groups	"So I mean this one lady had her four-day-old baby in a cardboard box, like from four days old to like a hundred years old. Just everyone coming in together. No one had meds. No one had glasses. One lady forgot her dentures. Like it was like walkers, wheelchairs, all that stuff. No one had anything. It was like pure crisis." - Ashley
Listening and the need for connection	"There was one lady who was, she was sitting there and it was like, she's sitting on her cot with her legs, hanging on one side and she looks just like so melancholy and she, you could tell she was quietly weeping to herself and I went up and I said, 'Are you ok?' And she looks up and she goes, 'Can you give me a hug?' I'm like, 'Of course I can give you a hug.' And I give her a hug. And she's like, 'Can you hold my hand?' And I'm like, 'Of course I can hold your hand.' So I held her hand, we didn't talk. I just sat there and held her hand and then you know, 10, 15 minutes go by and she just says, 'That's all I needed, was just a little connection.'" – Ashley
Assessing needs and problem-solving	"We had a table set up that had all kinds of like, stress reducing activities like coloring, coloring sheets and art supplies and, um, you know, like little stress balls and things like that that both children and adults could come to." – Cassandra
Respecting dignity	"I think one of the most powerful things was just looking the people in the face and them seeing humanity in us." – Ana "The, it was so well organized and I really appreciated the way that they wanted the, the guests to be treated. Versus you know, like being very disparaging. I really appreciated that and that kind of surprised me cause I know it is not always the case." – Elizabeth

Identification of Vulnerable Groups

Participants theorized that shelters attract vulnerable groups because Houston residents with higher socioeconomic status are more likely to be able to find temporary residence if their homes were flooded. As one participant stated,

> People were not only talking about the current trauma and what they were dealing with…[they] already had all of this stuff going on in their lives. And this felt like just one more thing piled on the top. Like they were already dealing with maybe depression or homelessness or addiction...I think this was a population of people that were already struggling. I mean, I guess that's probably obvious because people that were already struggling might not have had resources to go somewhere besides a shelter. (Cassandra)

Participants regularly acknowledged the inherent vulnerability of groups whose only housing option was a public shelter, but one resident noted the distinction between shelter guests who were able to leave the shelter quickly and those who stayed for prolonged period. As she stated,

> Every socioeconomic group is affected...the population changed within a few days from people who just needed a shelter from the storm to people who didn't have resources. (Ana)

As time passed at the shelters, the makeup of shelter guests changed as did their needs. Participants identified populations within the shelter setting that needed higher levels of assistance than others. These populations included people with chronic illnesses, the homeless, children, people with low literacy, and pets.

Participants discussed multiple groups of people with chronic illnesses who required additional assistance and attention from social workers during their shelter stays. The primary chronic illness groups included older adults, people with physical illnesses, and people with psychiatric needs. Many shelter guests had comorbid chronic illnesses. Though each shelter had a strong medical provider presence, social workers were often the volunteers who identified guests as having needs related to their chronic illnesses: “So I feel like the biggest need I think beginning with identifying the chronically ill and their needs, including psychiatric needs. Identifying that and communicating that immediately to the medical staff” (Ashley). As the same participant added, social work volunteers were often inundated with incoming shelter guests and felt the responsibility to identify which guests needed which services. Ashley gave an example, saying, “There was a group of about 13 people who had been brought in from a personal care home in Dickinson maybe, I don't know. And every single one of them was disabled, either physically or mentally or both.” As Ashley noted, chronic illness often included physical conditions, mental conditions, and older adult needs.

Many participants identified older adults as high-risk and high-need residents. Often alone, disoriented, confused, and dependent on others for basic needs, participants noted a profound lack of support for this group. Additionally, participants remarked upon the high number of older adults at the shelter, which may be partially a result of nursing homes and assisted living facilities bussing their residents to public shelters when the facilities were flooded. Isabella felt that older adults comprised the group with the least shelter support, saying, “One group of guests that I thought needed a lot of support and there was no one specifically to support this group were [older adults]...they had a lot of very specific needs.” For example, she

shared that older adults required additional physical and directional assistance when navigating the large shelter, supplies such as adult diapers and denture cleaner, and many diagnosis-specific medication refills.

Brittany works in an adult hospice, which she perceived to be helpful as she identified older adult needs. She described a circumstance in which she realized that an older woman needed assistance, which the woman's husband had not recognized:

> To her husband, I said, you know, "I think that this might be urine." And he's like, "No. Oh no, it's water." And she said, "No, it's urine." And so I, we got that cleaned up and I said, you know, "Does your wife wear incontinence supplies? Does she wear diapers or pull-ups or anything?" And he's like, "No." And she's like, "Yes I do."...But nobody was really looking out for those types of things. And if I hadn't, if I didn't do what I do for a living, I wouldn't have known what to do either.

Throughout this interaction, Brittany noticed clear discordance between the couple, likely resulting from the woman's shame and lack of communication with her husband about her incontinence.

In addition to needs related to chronic illness, participants described knowledge gaps among older adults at the shelters that left them more vulnerable than other groups. Elizabeth described the desperation of one older woman, saying, "A 78-year-old woman who's completely alone having to navigate this, just seeing the despair, you know, on her face." She added that the woman did not have a cell phone and was unable to access resources on her own.

Many participants noted the absence of Adult Protective Services (APS) at the shelters despite significant on-site Child Protective Services (CPS) involvement. The participants

identified a need for APS presence in future disaster relief efforts to address abuse and neglect that these guests experienced both prior to and at the shelter. Ashley noted her frustration with the lack of APS involvement, saying that during her six days at the shelter, "I did not see or talk to anyone from APS, which was [surprising] because we had an entire area roped off for only elderly." She added that while children typically arrived at the shelters with caregivers, many older adults arrived alone. Several participants had stories similar to Amanda, who encountered an older woman who seemed to be neglected by her family and had few resources:

> She was in kind of a precarious kind of situation where she didn't have anyone that was going to help her leave the shelter and a family member seemed to have kind of taken over her home. And so it just seemed like she needed some kind of case management, somebody who could help her assess the damage, get her to her home. And there was, so there was no adult protective services. They had a desk for CPS but no APS.

Lack of support for older adults in terms of resources, APS, and expertise in identifying needs was a common observation among participants.

Physical illnesses included conditions such as heart disease, diabetes, incontinence, and reliance on durable medical equipment or other technology. Guests in this category typically received care from the shelter's medical team but also demonstrated other social work needs. For example, Justin described helping guests with limited ability to complete activities of daily living, saying that the guests were

> ...just not able to do independent living kind of things. They were in wheelchairs or some were not very mobile, but they were brought in from a nursing home or group home. And so we ended up helping kind of this one part of the shelter, just turn it in to kind of wall it

off and keep these people safe and you know, not wandering off. And just getting their needs met.

Similarly, other volunteers were tasked with helping guests in wheelchairs or needing medications. Sarah shared, “I got called to help with this gentleman who was in a wheelchair and he needed help setting up his cot and everything and he was wet so needed new clothes.” Participants also helped guests who arrived at the shelter without any or enough medical equipment to meet their physical health needs. Ashley listed some of the equipment and limitations at the shelter: “Hearing aid batteries. Blood pressure machines, the insulin readers, glucose readers. I mean we had one glucose reader for the entire convention center.” Other participants reported a high number of guests who did not have other essential needs such as insulin, dialysis treatments, and prescription medications. Participants acknowledged the limits of their skills as non-medical personnel; after identifying which guests had medical needs, they escorted guests to the medical area of the respective shelter to connect them with further interventions.

Participants identified guests with psychiatric diagnoses such as bipolar disorder, depression, and schizophrenia as being at risk for episodic and potentially harmful events, particularly in the common event that they did not have their medications. Participants often identified acute mental health crises, as Ashley experienced: “One lady came in here and she was so psychotic. She had been off her meds for days. She was hallucinating, she was throwing things. She needed to go to a psych hospital.” As was the case when guests had physical needs, guests with psychiatric needs often received treatment from shelters’ medical providers in

addition to social work services, and many arrived at the shelter without their prescriptions. Jodi described the progression of mental health needs as days passed in the shelter:

> After a few days, things start to unravel...they don't have access to their psych medication or they're afraid to ask to get on psych medication because they've had experiences in the past where they have maybe gotten kicked out of a shelter before because they've had mental health issues.

Similar to some older adults being unwilling to ask for supplies that embarrassed them, guests with mental illness sometimes appeared afraid that asking for medications would result in negative treatment from others.

According to one participant, the shelter environment exacerbated some guests' existing mental health diagnoses. She described an interaction with one shelter guest:

> She was suffering from anxiety because she had been raped in June. And being in a large shelter full of men that she didn't know, not knowing what her home situation was, because she was just told she couldn't go back to her apartment, she wasn't told if all of her stuff was lost, she didn't know anything outside of being discharged from the hospital and taken to a shelter. She was suffering pretty severe panic attacks. (Isabella)

Similarly, Amy described encountering a homeless schizophrenic woman who had isolated herself, saying "She was not very oriented to the time. It took a second to get her to talk to me and her speech was very sporadic. And she couldn't follow like a linear train of thought." Once guests with acute mental health needs were identified, participants addressed immediate needs and sought support from the psychiatric or medical areas.

Participants commonly worked with guests who were chronically homeless prior to arriving at the shelter. They reported that shelters sometimes accepted homeless guests but other times turned them away. Participants such as Amanda noted that as the days passed in the shelter, the remaining guests were predominantly homeless while those who had homes prior to Harvey typically left the shelter within a few days. Ana further explained:

> Towards like the third and fourth week and it was, it was kind of down to the chronically homeless...these people were homeless before the storm and they're harder to place cause if they won't go back or they can't go back to where they were before, you know that they're harder to place.

Shelter volunteers, including participants, faced challenges as they were tasked with determining where homeless guests could safely go as the shelters approached their closing dates. Sandra added that she tried to respect chronically homeless guests while promoting their self-determination because "depending on their lifestyle choice, if they chose to live homeless, then they would go back to their own...we weren't there to tell people how to live, but we're there to connect people to the resources if needed." Some participants reported feeling stressed and powerless when they had no control over what happened to homeless guests or where they went after leaving the shelter.

A participant whose primary social work practice is with the chronically homeless commented that the shelter setting offered many advantages over the resources she is typically able to offer the homeless population she serves. She stated,

> Look at all the resources that are right here. Like they can eat. Like there's all this stuff versus where I'm working. And what they were going to be provided was shelter and

> three meals a day with the intention that this is a short term thing and we were working on getting people housed or getting people moved onto their next place. (Camilla)

Camilla noted that she observed that working with the chronically homeless "made a lot of the mental health people uncomfortable" due to their lack of exposure to this group in regular practice. She felt she was able to contribute unique insight and expertise to the shelter setting given her work experience. However, unlike Camilla, some participants did not have experience with the chronically homeless and felt unprepared and uncomfortable providing services to this group.

Many participants noted the specific needs and vulnerabilities of children at the shelters. Participants specifically identified children at the shelter who exhibited mental health and safety needs. Participants discussed children's varying responses to the hurricane, often observing significant anxiety. As Brittany was playing with one child, "she started talking about being afraid to die. Yeah. And so we just kind of talked through why and safety and all of that." In response to such encounters with children, Jodi recommended "having like a kid's counseling area...that's one thing I would've done differently actually." Louise shared her perceived importance of recognizing and addressing mental health needs when possible since "just because a kid is physically fine and they have clothes and are going back to school, doesn't mean that they're not still feeling the effects of that trauma and internalizing it." Elizabeth correlated the importance of parents' and children's responses to the shelter and the hurricane, saying "If parents were really stressed out and worried, the children were really stressed out."

In fewer circumstances, participants identified children's safety needs. These included reuniting lost children with their families and ensuring that children were in a safe environment.

Ashley shared her unexpected experience of encountering members of a group home for recovering pedophiles and determining ways to separate these guests from children:

> They're in a shelter full of children left and right. Everywhere you are there are children...he's still human, he still lost his house. He's got a really big psychological issue, he's trying really hard to control it. He's like, "I've been laying here with my hands laying on my hands the last two nights and it's really hard."

Ashley acknowledged that her surprise at encountering this previously obscure population likely meant there were many other groups in the shelter who had specific needs about which she and others were also unaware.

Participants noted that some shelter guests exhibited limited writing, reading, computer, and financial skills, creating barriers to gaining and accessing vital resources in the shelter setting. They also found a low rate of health literacy in that many guests could not easily ask for the supplies they needed, including important prescriptions. Sandra explained that the literacy barriers she has observed in the community were reflected at the shelter:

> One thing that we've seen at the community center level is a decrease in literacy capacity, meaning that we're having a higher volume of people who can't read. And if they can't read, they can't write...so they're not able to use technology.

Isabella shared a story of a man whose inability to use a computer impaired his access to resources while increasing his anxiety:

> I walked over and he was sobbing uncontrollably. And he, once he caught his breath and could speak, he said, "I'm completely lost, I have no computer skills and everything, every resource that's available to us in here requires some sort of computer skills. I can't

> help my family, my wife and baby are over there, we're not safe here." He was having a full-blown panic attack right there.

Additionally, participants were surprised when guests with chronic illness could not name the prescriptions or medical treatments they were dependent on, severely limited the assistance medical teams could offer.

Allowing pets to accompany shelter residents was perceived as an important reason that people were willing to seek help at shelters. Bringing pets caused some additional chaos as some guests were afraid of animals, animals would keep residents awake at night, and additional volunteers were needed to meet the animals' physical needs. As Elizabeth noted, "You need to have your pets there, you know? But I also know that it did create a decent amount of chaos for people and nights trying to sleep...or if you're afraid of animals." However, participants perceived that the allowance of pets at shelters meant that more people were willing to seek temporary help there without needing to leave their animals. Additionally, participants perceived that pets helped calm anxiety, provided companionship, and in some cases de-escalated tensions:

> It seemed to make such a difference in the guests who were staying there to have their pets with them and to have care for their pets and to have access to, there were [veterinarians] there, there was food and supplies. And to have that as a part of um, the intervention and the services I think really provided those guests with a lot of comfort beyond what could be, you know, explained...they also seemed to de-escalate things. (Jordan)

Sofia shared her experience working directly with animals and their owners as part of her social work volunteerism. She described her perceptions of the pets in the shelter:

> You know, animals are so expressive, and you could just see on their faces what they're going through. And a lot of the animals were feral...they're not used to being in cages or confined. So you could see that on their faces.

Sofia reported that many animals arrived due to forced owner surrender from flooded houses and voluntary surrender when owners chose to part with their pets with hopes to be reunited at a later time, leaving many shelter animals alone. In a third category, many participants brought their animals with them when they left their homes so that the pet and owner could reside at the same shelter.

Listening and the Need for Connection

Every participant in the study cited listening as a skill they used and role they played during their time as volunteers. Participants described listening as a simple yet important act of service to guests, providing an opportunity for guests to feel heard and validated. As Justin described his role, "I was able to just sit with people and hear their stories. And that in itself was I think pretty important." Other participants shared similar stories, such as Amy: "Some people didn't have an immediate need, they were just very distressed. And so they just wanted to talk to someone about it." Sofia described the act of listening as an expedient but impactful way to serve others, saying that her most important task was,

> Asking the question, "How are you doing?" And being genuine about it and wanting an answer and being there to listen to the answer...it's such a small thing, but our time together was very quick, so it needed to be genuine and impactful.

Other participants agreed that providing an open and nonjudgmental presence was instrumental in their social work role.

Moreover, participants distinguished between listening and giving advice, emphasizing the importance of allowing guests' stories to be told for therapeutic purposes. Camilla shared, "You don't have to fix anybody's problem. Right? But it helps when people are upset to sit with them." Along with other participants, Louise perceived that listening without problem solving is a strength of the social work profession: "I think social workers have a unique ability to listen and not offer advice all of the time. 'Cause there really was no advice to give." According to these participants, listening without advising provided guests with the freedom to express sadness, anger, guilt, trauma, or any other feelings they experienced.

In some circumstances, listening involved simply sitting with others in supportive silence to foster connection. Ashley described her experience with silence: "I just said, 'Do you want to talk?' And she shook her head. We just sat there and she squeezed my hand and when she was done she said, 'Thank you, I just needed to connect with somebody.'" Additionally, some guests wished to share parts of their lives unrelated to the storm. Jodi said that a woman wanted to talk to her about a recent breakup, saying, "And even in the midst of all of that, [the breakup is] still something that's so important to people and so valuable to people...all of that other stuff was happening before Harvey hit, you know?" Jodi added that she validated this guest's need to be grounded in her life as it existed both prior to and during Hurricane Harvey.

Participants also noted that many guests did not know who to talk to or readily recognize their own need to talk. Isabella shared that when people asked for resources, "We would also ask them, 'Are you ok? We're here to listen. Do you have any, would you like to talk about anything?' And often just giving them that permission just opened up the flood gate." Ana described equipping guests who might not realize they needed to talk with tools, saying,

> Sometimes we have to let the people know or we kind of know what they need...we would kind of teach them: it may really help you just to sit down and talk about what you're feeling and what you went through.

Louise added that guests might not have thought to ask a social worker for help, but their openness to listening facilitated strong support: “Not everyone wants to talk to a social worker, but if you’re there and you say, ‘Hello, I’m here to help,’ they don’t care who you are if you’re listening and you’re kind and you’re responding empathetically.”

The importance of this role changed from the beginning of the shelters opening to their closing. Listening was particularly important immediately after the storm; as time passed, guests began engaging in more logistical and planning tasks in preparation for returning home. Ana offered a summary of the social work role transitioning from listening to directing throughout the guests’ tenure at the shelter:

> Initially, all we were was this holding environment to let them calm down. And then a few days later we became more directive: “Well, it may be time for you to start thinking about where are you going to be working and where are you going to stay?” Helping them do the life planning stuff.

Many participants found that after or while they were engaging in supportive listening, they began to adopt some of the roles below to further assist guests.

Assessing needs and problem solving

Participants regularly cited assessing needs as one of the first roles they embodied in the shelter setting. This role, which many participants use daily in direct practice with clients, enabled them to determine which additional skills they may need to use with guests. Participants

noted that their social work training provided the knowledge and skills for complete needs assessments, empowering them to ask important questions in a way that would identify and inform participants' subsequent services. Amanda shared her assessment technique, including her attempt to understand the full scope of guests' needs:

> It's very comfortable for me to walk around a large space and talk to people and approach them and ask the right questions to get the full scope of different areas of need that they may have. We're just trained to think [about] systems that are affecting our clients. And that way we can form an assessment that's not just a mental health focus, but the whole, assess for social service needs and everything else.

When conducting assessments, participants used their skills to elicit a broader understanding of the services or items that guests required in addition to directly asking about guests' needs. Amy shared that instead of asking what guests needed, her questions included, "Have you gotten enough sleep? Have you gotten enough to eat? Did you have anyone else in town? Where's the rest of your family?" Given the limited interactions participants had with guests, some adapted their assessments to be brief but comprehensive. As Jordan described, "I'm thinking of what the [social work] practice skills are. They're engagement, assessment, intervention, and evaluation, right? So you could do that over 6 months or you could do that in one minute, right?"

Participants also shared their efforts to conduct needs assessments compassionately while respecting guests' personal space. Like many participants, Jodi walked throughout the shelter to meet guests in their respective areas. She described her method for respecting these guest spaces: "We would walk around through all of the living areas very respectfully because that was their

home, you know, treating that as their home, that space" (Jodi). This type of assessment relates to another theme below, respecting the dignity and worth of the individual in a shelter setting. However, not all participants were as comfortable with this communication approach as Amanda and Jodi. Louise, Dora, and Amy felt that without clear social work expectations, tasks, or boundaries in place, approaching guests in their new living quarters could be invasive rather than helpful. Louise suggested that she would have felt more comfortable if she were in the medical area, where roles were clearly defined and she could perform assessments in a way that reflected her day-to-day job. Without clear direction, these participants struggled to be useful and did not return to the shelter for subsequent shifts.

Another task that participants regularly conduct as part of their careers is problem solving and case management. Once needs were assessed, many participants engaged in practical problem solving to assist guests in taking steps to navigate the shelter, resolve difficulties, or facilitate logistics. Multiple participants attributed social workers' problem-solving skills to their dynamism as they embody multiple roles throughout the day. As Ana stated,

> I think we are way more ready to, to be case managers and not just therapists. You know, we can do both. Whereas I think a lot of mental health professionals, they can sit down and do supportive therapy, but they don't know the first thing about what do you do if you are homeless or if you're trying to get a job or you know, if your children are trying to get into school.

Similarly, Sarah described the social work role as a "catchall" in the shelter setting, noting that social workers are uniquely equipped to help with many types of needs and problems:

> [The shelter leaders] said, "If there's a need, try to get to the 'yes.'" So basically try to find the solution and help them. And because you know people are highly traumatized, because of what they've gone through, we think that social workers would be ideal for doing that.

Ashley added that social workers are able to consider multiple types of problems or needs at one time, saying, "I think we have a very incredible ability to do a hundred things at once and do them all relatively well." According to participants, this comprehensive problem-solving ability was one of the clearest reasons that social workers should be utilized as shelter volunteers in addition to other helping professionals.

According to participants, an important part of problem solving after assessing needs was determining appropriate resources for guests and providing referrals as needed. However, most participants encountered some difficulty in this role. Some participants commented that as local social workers, they were familiar with relevant resources but were unsure which resources were functional after the storm. As Louise shared, "We also do know a lot about the community resources. So if you identify a need you can say, 'I don't know if they're running this yet or if they can help you but look into this.'" Additionally, many participants practice in social work contexts in which they would not typically need or encounter the types of resources guests required. Justin voiced his frustration with being unfamiliar with disaster resources, saying, "So that was a bit frustrating for me because I was like, I want [to] help. I wanna help you with FEMA and these things. But I have no idea how these systems work." Amy said that in addition to being unfamiliar with the available resources, she was frustrated that there was no consolidated list of resources that were functional and may be helpful to guests. She described

her own solution to this problem, saying: “I started like Googling and writing stuff on a piece of paper, like, ‘Catholic Charities, here’s the phone number, here’s the address.’ Kind of making my own resource list ‘cause there wasn’t one.” Rebecca discussed similar confusion regarding available resources at another shelter and recommended that in the future, social workers should set up a resource desk where guests could find all current information about various resources available.

Participants acknowledged that the shelter was often a high-stress environment due to a high concentration of traumatized individuals following a major disaster. Therefore, many participants engaged in de-escalation to reduce crises and stress in the shelter setting. Rebecca stated that social workers “can think objectively, and have a strong sense of empathy that’s very helpful when working with people in traumatic situations,” and Jordan added that social workers can be helpful because they have “the skill of staying calm, and then being able to hopefully be a good and an objective thinker through a situation.” Participants typically discussed this calmness and de-escalation in the context of mental health needs.

One type of de-escalation included triaging and managing suicidal ideation, which occurred during several participants’ shifts. Amy said that when medical team members or other volunteers identified suicidal ideation, “social workers did a quick intake, filled out a quick intake form and then handed them over to the psychiatrists for medication.” Other participants added that remaining calm throughout crises is an important component of social work training.

Though most de-escalation occurred during mental health crises, some participants shared that they de-escalated more minor situations, such as domestic disputes (Justin and

Ashley), an angry guest who did not receive the items she wanted at the donation center (Dora), and tense encounters between guests and police (Ashley).

De-stressing interventions were typically more therapeutic than crisis-oriented and included mindful activities, distraction, and facilitating positive coping skills. Cassandra shared that both children and adults needed these calming activities, and she described the self-care table her group of social workers used: “We had a table set up that had all kinds of like stress-reducing activities like coloring, coloring sheets, and art supplies, and little stress balls, and things like that that both children and adults could come to” (Cassandra). Jordan noted that since all people cope differently, the social workers offered a variety of activities to effectively reduce stress. Jordan shared,

> People brought some activities for the kids to do, some self-care um tools, like little cards that had information for people on how to implement their own self-care. Stress balls, pieces of candy, just a number of small tools to use to engage with people and ultimately be a, someone who could facilitate and process with individuals who were struggling.

According to Cassandra, self-care practices helped guests to feel more “grounded” and oriented to their new environment.

Jodi shared that she was surprised by guests’ receptiveness to journaling, a coping skill that she personally finds very helpful. She said, **“**I'm telling you, journals...I get chills just thinking about it. Journals were the thing that people connected to the most and were the most grateful for” (Jodi). She explained that guests appreciated the opportunity to write their fears, frustrations, and thoughts privately to express their feelings.

Respecting Dignity

One of the more abstract roles participants played during an experience that participants estimated to be generally vulnerable, traumatic, and disorienting for guests was that of recognizing and respecting the dignity of each guest. For example, the intentional use of the word "guest" when referring to those seeking shelter was important to many volunteers. Jordan shared her experience of observing other shelter social workers exhibit clear respect for guests saying that one of the most impactful parts of her volunteer experience was observing,

> Respect and dignity shown to people, and the awareness of it...working from a place of valuing people and being genuine and authentic. I hope I practice it, but I also saw it in other social workers in terms of being really respectful of them in that particular setting.

Participants described specific, concrete practices for respecting dignity among guests, including empowering guests, discouraging the media from taking pictures and videos of guests, and providing ethnically appropriate supplies such as hair products for black and Latina women.

Participants felt that empowerment was an important way of recognizing and emphasizing guests' strengths rather than completing tasks on their behalf. Jodi spoke about the need to promote "empowerment and autonomy" while reminding them that whatever they had lost during Hurricane Harvey was a result of their circumstances, not personal failure. Elizabeth said she would encourage guests by telling them, "'Different people can step in and help along this way, but you're really the one that can do this.' So I think that added a lot of value when people are feeling so helpless."

Sandra had experience with other disasters and serving in shelter settings, which informed her observations and practices after Hurricane Harvey. For example, she remarked that in her experience, respecting privacy was a way to promote dignity, particularly in terms of

limiting the media's involvement at the shelter. She said that at the shelter where she volunteered,

> The media were not allowed where the families were and then volunteers were discouraged from taking any pictures, et cetera. I went as far as to actually stop somebody from taking pictures and interrupt that because it really is a breach of privacy and dignity for the people who we were working with. (Sandra)

The same participant observed a dearth of hygiene supplies for people of color at the shelters and advocated for supplies that would serve a more ethnically diverse population. Sandra argued that providing appropriate supplies is a way to promote dignity and shared the story of an encounter with a guest:

> And so this was an African American lady. She goes, 'Well, I need Black people things.' And I said, 'Oh, you need like shampoo, you need combs, you need the different brushes.' And she's like, 'Yes'...because most people donate what they're familiar with. And if we know that Latino and Black, African American are traditionally underrepresented, underserved and underpaid, they may not always be the ones donating what they need.

Sandra posited that recognition of guests' specific needs was a way to demonstrate respect and kindness, particularly among those whose needs are often forgotten.

Discussion

Participants noted that the shelters acted as microcosms of the typical vulnerable client groups that social workers would serve in daily practice settings. They generally perceived that they were able to meet the needs of each group with the exception of older adults, whom they

felt were particularly underserved in the shelter setting. Additionally, the presence of pets created a new dynamic following Hurricane Harvey as they were not previously allowed in shelters. While the pets were at times disruptive for other guests, participants also perceived that more guests were willing to come to the shelter and felt more supported because their pets were allowed to reside in the shelter as well.

Participants identified many of the same groups that FEMA (2018b) defines as most vulnerable during disasters, including people with function-based needs, children, older adults, minorities, people dependent on medications, diagnosed with chronic illnesses, living with disabilities, living in institutional settings, and with limited English proficiency. The only groups FEMA (2018b) included in the at-risk group that participants did not identify in this study are pregnant women and people with limited transportation. Participants added to the FEMA (2018b) list by identifying the homeless, people with low health, reading, and technological literacy, and pets.

The single most important role that participants felt they played was that of supportive listening. They distinguished social work from other professions with this task, noting that they had the insight to recognize when someone simply needed to be heard while other professions often seek to fix problems rather than validating them. In addition to listening, they highlighted the more abstract but important task of respecting guests' dignity. This emphasis on respect likely arises from an National Association of Social Workers (NASW) ethical principle, which states, "Social workers respect the inherent dignity and worth of the person" (NASW Delegate Assembly, 2017). The principle further explains,

> Social workers treat each person in a caring and respectful fashion, mindful of individual differences and cultural and ethnic diversity. Social workers promote clients' socially responsible self-determination. Social workers seek to enhance clients' capacity and opportunity to change and to address their own needs. Social workers are cognizant of their dual responsibility to clients and to the broader society. (NASW Delegate Assembly, 2017)

Participants detailed their efforts to empower the guests they encountered, to provide ethnically appropriate supplies (particularly hair products specific to black and Latina women), and their desire to volunteer as a service to individuals and the city as a whole.

Participants identified two significant gaps in terms of meeting guests' needs. First, many participants expressed frustration regarding the dearth of provisions for older adults, particularly the absence of APS. This study's findings regarding a severe lack of services for older adults reflects the conclusions found in Holle et al. (2019). While social workers in this study felt equipped to identify practical needs for older adults, including diapers and medications, their conclusion that increased medical services and an APS presence would be helpful align with assertions from Holle et al. (2019). Many participants were alarmed to realize that older adults frequently arrived at the shelter alone without their medical or hygienic supplies or the ability to communicate their needs effectively. Participants who practice in adult hospice or nursing homes felt more comfortable caring for these guests but also voiced great frustration with the lack of attention and accommodations given to older adults. Eliciting volunteers with geriatric expertise from medical and mental health fields may be helpful in future disasters to coordinate specific relief efforts for older adults in shelters. These participants' conclusions also agree with the

argument from (McCann, 2011) to make policy changes at local, state, and federal levels to protect older adults during disasters.

Second, participants felt that one of their primary roles was resource referral but were concerned about their inability to effectively provide such resources. While many participants refer to resources on a daily basis in their jobs, they found themselves 1) unfamiliar with disaster-related resources, 2) unsure about which community resources were functional or offering support, and 3) frustrated when there was no consolidated list of available resources. Based on these concerns and a participant recommendation, assigning responsibility to a group of social workers to determine helpful resources prior to a disaster event would streamline resource distribution. Currently, crowdsourcing acts as a strong conduit of information; as such, this tool may be a helpful way for social workers to add any known available resources to one online database. Due to thus far relatively poor coordination (Gao et al. 2011), however, crowdsourcing may better used to compile resources than to coordinate the volunteer efforts of many volunteers. During an event, a predetermined list of volunteer social workers could commit to distributing crowdsourced resources as the disaster unfolds.

Conclusion

Social workers were actively involved in identifying vulnerable groups in shelters following Hurricane Harvey and assessing their needs. Social workers are uniquely trained to assess needs from a systems perspective, identifying which groups are in need of which types of assistance and developing ways to meet those needs. While problem-solving and needs assessment were important roles that social workers played at emergency shelters, they also recognized empathic listening as a critically important supportive role that the social work

profession is uniquely positioned to provide. As time passed in the shelters, social workers recognized the need for more tangible assistance such as connecting residents with resources and preparing them to leave the shelter safely. When able to perform in a social work role, participants felt their skills added effective interventions and unique contributions as members of the shelter volunteer team. Public health recommendations include providing additional accommodations for older adults in shelters and eliciting and consolidating available resources prior to disasters, and broad public education regarding social workers' roles and skills in various settings.

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JOURNAL ARTICLE

A Case Study: The Social Work Department's Ride-out Experience at a Large Pediatric Hospital During Hurricane Harvey

Prehospital and Disaster Medicine

Abstract

Introduction: Hurricane Harvey brought 33 trillion gallons of rainfall to Texas and Louisiana and damaged more than 100,000 homes in August 2017. A large children's hospital remained fully operational throughout the hurricane and instituted an emergency "ride-out" event, requiring essential staff to remain onsite throughout the duration of the storm. As members of the ride-out team, social work practitioners served staff and families at the hospital throughout the week-long ride-out event with support from their leadership.

Study Objective: To explore the experiences of social work practitioners and leaders who served on the three ride-out shifts at the hospital and from home during Hurricane Harvey.

Methods: A qualitative case study approach framed analysis of social work practitioners' and leaders' experiences. Semi-structured interviews with all social work practitioners and their leadership were conducted between October 2017 and June 2018 and transcribed verbatim. In addition to analysis of these transcripts and institution policies, participant observation and field notes were used to provide case details in the resulting chronology of events.

Results: The twenty study participants included members of the first, second, and third ride-out staff, including practitioners and leaders working at the hospital or remotely from home. Though their roles were often consistent with their typical hospital practices, practitioners and leaders emphasized the importance of flexibility as they endured a longer ride-out event than expected

and as families' needs changed each day. Social workers and staff required significant support as their personal lives were affected while being confined to the hospital. A miscommunication regarding pay practices led to significant dissatisfaction among practitioners, who expected to receive emergency pay during ride-out.

Conclusion: The present study fills in a gap in the literature by illuminating the experiences, skills, and tasks of social workers working during natural disasters. Recommendations for future disaster events include providing emergency pay to social work practitioners during any ride-out event, clarifying expectations for practitioners early and often, insuring at least one social work manager is on-site at all times during ride-out events, using internet-based group messaging as the primary form of communication, designating at least one practitioner to provide regular staff support throughout the hospital and to staff stuck at home, and holding a standard debrief after the event.

Introduction

Due to their duty to heal and care for patients, hospitals are both safe and vulnerable during natural disasters. To be accredited by the Joint Commission (JCO), the primary accrediting body among hospitals in the United States, hospitals must have an Emergency Operations Plan (EOP) and annual evaluation (The Joint Commission, 2017); however, implementation of these plans varies widely by hospital (Inglesby, 2011). Operations plans provide a description of roles and responsibilities, tasks, integration, and actions required of a jurisdiction or its departments and agencies during emergencies. Jurisdictions use plans to provide the goals, roles, and responsibilities that a jurisdiction's departments and agencies are

assigned, and to focus on coordinating and integrating the activities of the many response and support organizations within a jurisdiction (Hospital Preparedness Program, 2012).

A children's hospital can be particularly vulnerable during a disaster because its patients are physiologically, psychologically, anatomically, and developmentally different from adults, requiring cautious planning for their care (Emergency Medical Services for Children Program, 2014). Researchers have suggested that while medical professionals are increasingly relied upon to assist with identifying and treating children affected by disasters (Inglesby, 2011), pediatric hospitals must continue to improve their disaster plans to adequately meet children's and families' needs (Gausche-Hill, 2009).

Hospitals are often considered a safe place for people to go during disasters and continue to operate at varying levels during disasters. Federal funding from FEMA has helped equip many hospital systems to better prepare for storms and mitigate future damage. FEMA contributed millions of dollars to mitigation assistance in the Texas Medical Center (TMC) in Houston, TX, following Tropical Storm Allison in 2001, which caused many critical healthcare facilities to lose power (FEMA, 2003). Perhaps due in part to this financial assistance, the hospital and the majority of the 40 medical buildings in the TMC maintained power throughout Hurricane Harvey (Bentsen, 2017).

Hospitals continue providing the highest possible level of care for patients during disasters, though the personnel required to deliver these services may vary by institution (Hospital Preparedness Program, 2012). These so-called "ride-out" staff who stay to work at hospitals during disaster events are typically prepared to remain at work for two to three days, an expectation that is being re-examined because of Hurricane Harvey's nearly week-long duration

(George, 2018). Ride-out staff may experience tension between personal and professional responsibilities as disasters devastate and endanger a city's entire population (French et al., 2002; Turrentine et al. 2018). Such role conflict can lead to high levels of distress among providers working at the hospital at the time of disaster (Turrentine et al., 2018).

While social workers are part of the staff necessary for ensuring the continuing function of hospitals during a disaster, little is known about their specific roles or leadership structure in any particular hospital setting. Alternatively, experiences, needs, and training of nurses (Baumann, 2014; French et al., 2002; Labrague et al., 2018; McHugh, 2010; Nilsson et al., 2016; Rami et al., 2008; VanDevanter et al., 2017; Xu & Zeng, 2016) and physicians (Hansoti et al., 2016; Scott et al., 2010; SteelFisher et al., 2015; Turrentine et al., 2018) in hospital disaster preparedness is well documented. A large survey of nurses in a rural Texas hospital found that most nurses did not feel adequately prepared to respond to a major disaster event, citing the need for better training and preparation (Baack & Alfred, 2013).

Leadership is an important component of a hospital's overall performance and resilience during a major disaster event (Ybarra, 2019). A nursing article performed a strengths, weaknesses, opportunities, and threats (SWOT) analysis on a hospital's organizational resilience during Hurricane Harvey with a focus on crisis leadership. According to the article, the leadership skills of adaptability, empowerment, and social justice promotion are integral to maintaining organizational resilience during disasters, and the degree to which each of these skills is implemented by multiple levels of leadership directly impacts employees and families (Ybarra, 2019).

The objective of this paper is to add to knowledge of the experiences and roles of a social work team, from the perspectives of both practitioners and leadership, at a children's hospital during a major disaster.

Methods

This research uses qualitative methods to understand the role of social workers within Texas Children's Hospital during Hurricane Harvey. Understanding processes within health organizations is an inherently complex task that involves many dynamic components, including the organization's culture, policies and practices, patients' voices, professional practices, and societal belief systems (Caronna, 2010). Qualitative research is particularly suited for exploring these intersectional complexities through eliciting diverse and often contradictory perspectives at multiple levels (Caronna, 2010). In this research, levels of interest include patient care, frontline staff, direct and indirect leadership, and policy and practice.

This paper utilizes the case study method for conceptualization of a single case. A case is described as an event occurring within a real-life context or setting (Creswell & Poth, 2017). For this research, the within-site case study is an exploration of social work involvement at the hospital at a single event in time, i.e. Hurricane Harvey. The study is bound by the time period in which ride-out was initiated and ended (August 25 - September 2, 2017) at a single site (the children's hospital) and within a limited population (social work practitioners and leadership). The research represents an intrinsic case study, or an event that is chosen for its uniqueness (Creswell & Poth, 2017). Though many disaster events occur in and around the Houston, TX area, the event being studied is unusual due to the hurricane's longevity and resultantly extended ride-out.

When using the case study method, the researcher gathers pragmatic descriptive data such as institutional relationships, timelines, and professional identities along with narratives of past experiences to synthesize a comprehensive understanding of the event being analyzed (Giacomini, 2010). Narratives in the current study include individuals' lived and told experiences as part of the ride-out team at the hospital during Hurricane Harvey as elicited via semi-structured, open-ended interviews. Additionally, the first author participated as a social worker in a ride-out shift, and her experiences will help frame the interviewees' stories.

Study Setting & Recruitment

Located in Houston, Texas, the hospital in this study provides care to mothers, children, and infants. At the time Hurricane Harvey landed, the hospital employed 93 licensed social work practitioners. These practitioners were managed by two managers who split management evenly among the practitioners, the service's assistant director and director, and their assistant vice president.

The researcher acquired a list of all social workers present during ride-out and all leaders responsible for this ride-out team from a social work manager. The first author directly emailed each practitioner and leader to request an interview. This sample includes all 15 practitioners serving at the hospital during the emergency protocol ("ride-out") event along with the five leaders directly responsible for social work practitioners during the hurricane. Inclusion criteria for the second sample were: 1) provided social work services for at least one ride-out shift at the hospital during Hurricane Harvey; or 2) provided direct leadership oversight to social work practitioners present at the hospital during Hurricane Harvey. There were no exclusion criteria for this sample.

Data Collection

The first author gained access to the site and interviewees due to her employment as a social worker at the hospital. She participated in the ride-out process during the first ride-out shift along with some interviewees. This role as an engaged participant allowed insider views of subjective data, high levels of rapport, and full integration into the ride-out process without distracting participants with recording field notes (Creswell & Poth, 2017). The researcher instead recorded notes following the ride-out experience.

Participants were interviewed between October 2017 and June 2018. All interviews took place on the hospital's main campus, either in participants' offices or in open areas, at a time convenient for the participants. The interviewer followed a semi-structured interview guide (Table 4) with primarily open-ended questions. The interviews were recorded using two audio devices; the interviewer took field notes throughout each interview, recording interview content, environmental surroundings, and nonverbal gestures. The interviews were transcribed verbatim and proofread for major errors.

Table 4. Semi-structured interview questions for hospital participants

1. Tell me a little bit about your experience at the hospital during Hurricane Harvey. (Probes: Were you in the first or second wave of rid- out? What were storm conditions like when you arrived?)
2. How did the work you did during Harvey differ from your normal role at the hospital? (Probes: was your work more crisis oriented? Did you work with more staff from other service lines? What was the communication like among your team?)
3. What were some of the families' responses to the storm? (Probes: were families scared? Did they want to discuss what was happening?)
4. Can you think of any experiences during the storm that were particularly impactful to you or have really stuck with you?
5. If applicable, how did you balance concerns about your own home and family with your responsibilities at the hospital? (Probe: Did anxiety about your family and/or home affect your ability to provide services or emotional support to patients and families?)
6. Did you engage in any self-care once you were relieved from the storm? If so, what kind? (Probes: Did you take additional days off? Did you talk to others about what you experienced?)
7. Have you ever been involved in disaster relief prior to this experience? If so, what was the situation? (Probe: How was this ride-out different? How was it similar?)
8. Did you volunteer at any shelters or other organizations following the storm? Why or why not?
9. How long have you had your social work license? When did you start working at TCH?
10. Is there anything I didn't ask about that you'd like to add?

In addition to interviews, other data were collected for analysis, including hospital documents, protocols, policies, and procedures as they pertain to disaster response at the hospital. These data were collected from internal email correspondence, the "Policy Tech" homepage on the internal hospital website for employees, and the internal social work team site.

Data Analysis

The study's analysis was performed as direct interpretation, which Creswell and Poth (2017) describe as the researcher gathering information from multiple sources about a single occurrence, carefully extracting pieces of the data following collection, and piecing the data back together in a meaningful way. Analysis began with organization of data files into levels by source (email correspondence, practitioner interview, leadership interview, field notes, and policy) using NVivo software. The researcher then listened to and read each interview to gain a comprehensive understanding of their contents. Next, non-interview and interview files were coded. Specifically, the researcher assigned codes to all non-interview files (for example, an email sent to all staff containing a specific disaster protocol update related to pay might be coded as "emergency pay protocol"). Interviews were coded line-by-line, assigning codes such as "communication between practitioner and leader" to each line or paragraph. Once all interviews and non-interview files were coded, similar codes were merged for consolidation. The researcher determined the most commonly referenced codes at the practitioner and leader levels. The content of these codes was organized in chronological order, then written into narrative form. Finally, direct interpretation of these codes was used to describe the collective meaning or learnings of the case (Creswell & Poth, 2017).

Results

Participants

Participants included members of the first, second, and third ride-out staff, including practitioners and leaders working at the hospital or remotely from home during Hurricane Harvey. All members of the practitioner ride-out staff (n = 15) and leadership who supervised

social workers during ride-out (n = 5) were interviewed. Figure 1 shows a hierarchy of all participants while Table 5 provides demographic information. Though all practitioners had prior training in general crisis relief, only 20% (n = 5) had received formal education or training specific to disaster relief. Eight (53%) practitioners had previous disaster experience, some as social workers and some as general disaster relief volunteers. After their time as ride-out staff at the hospital, 53% (n = 8) of participants volunteered in the community to assist with disaster relief, but none did so in a social work capacity. None of the participants' homes flooded, though many were stranded in their homes due to flooding in the immediate vicinity.

Figure 1. Participant hierarchy

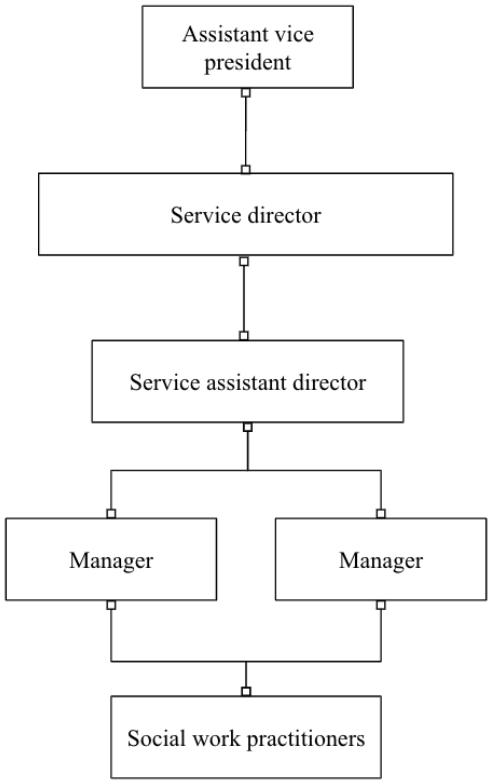

Table 5. Descriptive characteristics of hospital participants

Characteristic	*Social Workers*	*Leaders*
Gender		
Female	12	5
Male	3	0
Number of years licensed	4.4	20.8
Number of years at hospital	1.7	17.8

Chronology and Description

On Friday, August 25, 2017, all appeared well at the hospital, where rays of sun shone through the windows. While staff heard murmurs of a forthcoming storm to make landfall in the area, most were unimpressed; their region frequently encountered sensationalized catastrophes resulting in a few fallen branches. Nevertheless, the hospital exercised caution in such weather events and was expected to call a "ride-out" alert to be enacted on Saturday in anticipation of the storm arising from the Gulf Coast, Hurricane Harvey.

Six social workers decided to take the chance that a ride-out event would be called, which they understood would initiate the emergency system. One member of leadership had announced that ride-out workers would be given emergency pay for their time worked. A rare occurrence, emergency pay would offer double pay for 12 hours worked and regular pay for 12-hour off periods. Along with other hospital staff, these social workers set up their cots in hopes of a temporary stay with higher pay.

On Saturday morning, hospital leadership officially announced a ride-out alert. The hospital asks its essential staff, including social workers, to sign up for one of two teams during

their orientation to the hospital: 1) prep and relief or 2) ride-out. Prep is responsible for preparing the hospital for imminent severe weather or response to a prolonged emergency incident, while relief is expected to return to the hospital as soon as safely possible and must report back at the start of their next regularly scheduled start time. This combination of working before and after the storm is generally viewed more favorable than the ride-out service as it allows workers to remain home at the time of the emergency event. Alternatively, the ride-out team is responsible for maintaining the hospital during the emergency or disaster in 12-hour shifts and is expected to remain at the hospital for 24 hours per day until the Hospital Command Center releases them. In 2017, 52 social workers signed up for the prep and relief team while 19 social workers signed up for ride-out.

On Saturday morning, social work leaders requested that the four weekend social work staff members resume their typical shift to offer additional assistance to the volunteers who stayed overnight despite the weekend staff's elections to participate on the prep and relief team. One weekend worker reported as sick while the additional three arrived at the hospital for their shift. Mid-morning, the social workers gathered for a conference call with social work leaders, who were offsite while the leader of another department led the social workers. Given the still-clear skies and apparent calmness at the hospital, they granted permission for three social workers to return home. The three who elected to leave were among the previous night's volunteers. Additionally, hospital volunteers and cafeteria staff were released due to the anticipated minimal impact of the storm.

The only social work leader present at the hospital, the service's director held a meeting for all staff under her supervision. In the meeting, she clarified that exempt (full-time) staff

would not be receiving emergency pay, while non-exempt (part-time staff, including the three weekend social workers and all hospital nurses) would receive emergency pay. Frustrated discussions arose, which the director attempted to quell. She also announced that due to the ride-out alert, no staff members could leave the hospital until given express permission. At this time, she could not provide insight regarding when the alert would end and the social workers could return home.

Pay would become a frequent topic of conversation in the coming week, particularly among the full-time social workers who would not receive emergency pay. Because full-time staff were salaried (as opposed to the part-time staff, who were hourly) and did not receive emergency pay, they received only their anticipated pay for 40 hours per week of work. For example, first wave of full-time ride-out workers worked 12 hours per day on Saturday and Sunday, slept overnight at the hospital, and worked approximately 6 hours on Monday before being released to return home. They subsequently were required to take paid time off (PTO) work Tuesday through Friday while the hospital remained on a ride-out schedule. Staff receive a set number of PTO hours per year, so some social workers who were asked to take PTO after working extra time without pay reported feeling resentful and under-valued. Meanwhile, part-time social workers were paid emergency pay and did not need to take any PTO and were grateful for the additional pay.

The social workers were reminded of their duties during emergency events per hospital policy: 1) maintaining daily social work operations for the Emergency Center (EC), inpatient, and critical care areas; 2) assessing potential patient and family stressors related to the event and address within the patient's medical plan of care; 3) providing normalization support to patients,

families, and staff; and 4) communicating with patients and families about emergency updates.

The six social workers initially focused on responding to consults from medical providers found in the patients' electronic health records (EHR). One social worker, who had worked exclusively in outpatient clinics during her 2.5-year tenure at the hospital, elicited logistical assistance from the inpatient social workers with more expertise in responding to inpatient consults. Another social worker was assigned to manage the on-site Ronald McDonald House (RMH), a free lodging program within the hospital for adult family members with children receiving treatment in one of the hospital's intensive care units. Since RMH is typically a volunteer-led effort, the social worker received training so the volunteers could return home. In addition to consults, the social workers received calls and pages to assist throughout the hospital with families' needs.

The social workers continued receiving and completing consults as usual until 7 pm, when their 12-hour shift ended. They set up cots provided by the hospital with their own sleeping supplies from home, ate dinner together, discussed their theories about how severe the storm may be and when they could return home, and attempted to get rest on their makeshift beds.

On Sunday when the six social workers awoke for their 7 am shift, August 26th, they found that the bright sun from the day before had been replaced by ominous storm clouds, heavy rainfall, and early signs of flooding. As they passed the skybridge over a normally busy road, they saw no pavement but only a half-submerged car, abandoned and surrounded by water. Though the ride-out team would typically be called to work at this time, social workers and social work leaders were unable to travel to the hospital due to flooded roads and severe weather. Therefore, the six social workers remained to ride out the storm.

They were invited to shower as needed in the designated shower areas provided by the hospital, ate breakfast as a group, and received a report from another department's manager on duty at the hospital. Consults transitioned from typical requests regarding lodging and parking to storm-related concerns such as questions about when families could leave the hospital, anxiety about their homes, and requests from parents outside the hospital who could not reach their children. Social workers checked in with pregnant mothers who had camped in the attached women's hospital overnight in anticipation of potential delivery and continued staffing the RMH. They texted with one another throughout the day to coordinate efforts to respond to each consult and phone call.

When their shift was over, the six social workers ate hamburgers together from the cafeteria's limited menu and discussed the events of the day. The one social worker who was assigned to overnights resumed her official shift after working throughout much of the day to assist with consults as needed. A respiratory therapist and child life specialist in the bone marrow transplant unit invited the unit's former social worker to watch the season finale of Game of Thrones with them in the floor's small game room. The social worker subsequently invited other ride-out social work colleagues to join her, introducing them to her bone marrow transplant colleagues. They brought in extra chairs to watch the streamed season finale on a TV screen over a basketball net for a precious hour of escapism and drama without discussing the storm, the hospital, or their homes.

On Sunday evening, many hospital staff relied on social media via their cell phones for significant weather updates. One social worker logged onto her Facebook to find a mandatory evacuation announcement for her neighborhood. She called her husband and instructed him on

what items to gather for himself, their three young children, and her mother-in-law as they prepared to evacuate without the support of their mother. She tried to remain calm for her family but felt isolated at the hospital, where she was able to help other families but not her own. Other social workers faced similar situations; they remained in constant communication via text, phone calls, and social media with their families in the evening to ensure that their homes and family members were safe. Social workers with spouses, children, pets, and/or family members in the Houston area also reported feeling distracted and overwhelmed during the day when they received texts and calls from family and friends requesting support or advice. Some shared that they felt helpless when their families needed them and guilty for knowing that they, as social workers, were safe in the hospital while their family members were vulnerable.

A social work manager worked remotely on Sunday to call as many social workers as possible to ensure their safety and assess whether they would be available the next day to relieve the current social workers from their ride-out duties. The typical hospital emergency plan in which social workers who sign up for ride-out come to the hospital for the duration of the ride-out event was abandoned as many social workers who had signed up for ride-out were bound to their homes or neighborhoods. Instead, social workers who had signed up for the prep and relief teams (preparing the hospital prior to the storm and helping return the hospital to its normal operations after the storm) were recruited for ride-out if they were able to travel, even if they were pregnant or had small children to care for at home.

At 11:00 on Monday morning, August 28th, the second wave of ride-out social workers began to arrive at the hospital for one-to-one handoffs for the six social workers. One first-wave social worker attempted to return home but was forced to turn around halfway when she found

the roads too flooded to pass. She stayed until Wednesday, continuing to coordinate the RMH. The social worker whose family had evacuated attempted to drive to her family's evacuation destination in Louisiana but found herself stranded, alone, and tearful on the interstate when her car was trapped on a median as the sun began to set. Desperate for a safe place to reside as the waters receded, she called a fellow hospital social worker, who used online flood maps to safely direct her to the home of a friend to spend the night before she departed for Louisiana the following morning.

Meanwhile, the second wave of ride-out social workers were joined at the hospital by their manager for the first time during the emergency event. They met together to develop a strategy built upon the first wave's successes. Two second wave social workers tried to get rest as they were assigned the overnight shift, two were assigned to the women's hospital, and the remaining social workers continued to cover inpatient consults, pages, and calls. This group of social workers continued eating together for at least one meal a day, and onsite the social work manager joined them whenever possible. The social workers highly valued this time together as a way to build community as they debriefed and shared stories about their days. Since the offsite social work manager's home was still surrounded by water, she continued to call social workers at home to assess their safety while completing administrative tasks.

By Tuesday, August 29th, the second wave's priority had largely shifted to discharge as hospital leadership faced pressure to send children home and make room for necessary hospital admissions. Though the rain was nearly gone, standing water remained in many streets. On Tuesday, a major water reservoir in Houston, Addicks Dam, overflowed to release additional water into many already flooded neighborhoods, and on Thursday, the Barker Reservoir in

Houston spilled over as well. These water releases compounded transportation problems in Houston neighborhoods but did not directly affect the hospital or surrounding areas.

By Wednesday, August 30th, at noon, the third and final wave of the ride-out team was able to report to the hospital to relieve the second wave in one-to-one handoffs. Social workers struggled throughout Tuesday and Wednesday to find means to get families home because cab companies and public transport services were not yet functioning, leaving many at the hospital without transportation.

On Thursday, August 31st, the on-site social work manager was relieved by the off-site social work manager, who was finally able to leave her home. The third wave of ride-out staff worked to return the families and staff to normalcy. They were particularly supportive of nurses, who had operated with a single ride-out cohort since the previous Saturday.

On Friday, September 1st, the social work department resumed normal operations. Ride-out was officially called off for the entire hospital on Saturday, September 2nd, a week after it began. The hospital's CEO announced that all staff members would receive three "Harvey days" for extra days off (24 hours for full-time employees and 12 hours for part-time) to be taken by the end of 2017 for rest and recovery. Figure 2 details a brief chronology of ride-out events.

Figure 2: Hurricane Harvey timeline at hospital

Friday Aug 25	Saturday Aug 26	Sunday Aug 27	Monday Aug 28	Tuesday Aug 29	Wednesday Aug 30	Thurs-Sat Aug 31 - Sep 2
- Ride-out determined to begin Saturday - 6 SW volunteer to stay overnight - Heavy rain begins in the evening	- 7 am: first wave of ride-out begins - Weekend SW staff arrive to join ride-out team - Child life manager leads SW	- Severe flooding - Hospital on lockdown - 7 SW on site - SW manager unable to get to hospital	- 12 noon: Second wave of ride-out staff arrive - 1:1 handoffs - Flooding continues, but hospital no longer on lockdown	- 11 SW on site - 2 cover nights - Pressure to discharge patients	- Noon: third wave of ride-out SW arrive for 1:1 handoffs	- Co-manager relieves SW manager on-site - Friday: hospital returns to normal operations - Saturday: ride-out called off

The social work department held a debrief two weeks later for anyone interested to discuss lessons learned during ride-out. Many ride-out team members attended with the exception of the weekend staff to share what they felt did and did not go well and how to improve the ride-out process in the future. The two managers and the service's assistant director were in attendance and felt the debrief was a useful way to understand major concerns while providing a platform to express why policies and procedures such as compensation were in place.

Discussion

Both practitioners and leaders discussed some of their lessons learned following the first major ride-out event at the hospital in several years. They felt these suggested improvements will

enhance the efficiency and experience of the next ride-out event for practitioners, hospital staff, leaders, and families.

Setting expectations

During interviews, practitioners regularly requested more preparation and expectation-setting for the roles they were to play during ride-out. Since most practitioners had not previously participated in a ride-out event at this or any hospital in a social work role, they often felt confused about aspects of ride-out, including pay practices, flexibility of social work roles, and fluidity of prep/relief teams. Like the surveyed nurses in other studies (Baack & Alfred, 2013; VanDevanter et al., 2017), the participants in this study did not feel they received much specific disaster training. Unlike the nurses in these studies, however, they did not feel they needed additional formal training because they felt they could use their core problem-solving skills to respond adequately. Instead, their larger concern was for clearer expectations regarding their pay, role, and the timing of the event. Ybarra (2019) argues that when leaders empower their staff to adapt and be flexible in their new roles, organizations build resilience. The participants in this study appeared to feel empowered by their ability to adapt to an ever-changing environment during ride-out, though they felt significantly more comfortable when a social work leader was present to set parameters for this flexibility.

Pay was the largest source of dissatisfaction for some practitioners, which the leaders understood and acknowledged with humility during their interviews. While several participants felt very strongly about pay practices, the majority of participants did not discuss pay at all during their interviews. Ybarra (2019) categorizes pay practices among staff as an issue of social justice in building organizational resilience. The participants in this study seemed to view their

lack of extra pay as an injustice, because: 1) they felt under-valued for the time and services they provided, including extra hours and weekend time, while they were paid the same as their colleagues who were at home during the storm; 2) their colleagues, including nurses and part-time social workers, were given emergency pay for the same work; and 3) they were initially told they would receive the emergency pay, leading to unmet expectations. Similar to the nurses in French et al.'s (2002) study, some participants felt that they should be compensated more not only because they worked additional hours, but also because they were making the sacrifice to be away from their own families to care for others. Practitioners shared that they would like to understand very clearly prior to a ride-out event what they would be compensated as full-time employees and when compensation methods may change. The leaders who initially informed practitioners that they would receive emergency pay apologized for the miscommunication and committed to make substantial efforts to be clear in future events. Despite this effort, many practitioners said they would not sign up for ride-out again, and managers reported needing many more ride-out volunteers during the 2018 hurricane season since few practitioners signed up for the role after Harvey. Two practitioners were so disturbed by the emergency pay practices that they considered quitting their job to work elsewhere, although they ultimately decided to remain in their current job. Additionally, many participants explicitly voiced their gratitude for the three additional days of PTO provided following Hurricane Harvey, saying the PTO days provided a much-needed break.

Though all practitioners were informed during orientation that a ride-out event may occur during their time at the hospital, most said they either did not think that an event would actually occur, forgot about the possibility of a ride-out event, and/or did not understand what their role

would be if they were at the hospital during such an event. They requested more thorough training, lectures, and preparation to adopt this role prior to future events.

Finally, many practitioners who served in each wave of ride-out were signed up for the prep/relief team and did not expect to be called in for a ride-out shift. They requested clearer expectations in the future to indicate that despite their prep/relief selection, anyone can be called in for ride-out at any time. Additionally, several practitioners requested exemptions for the ride-out team, saying that pregnant women and practitioners who have yet to complete their orientation should not be required to serve during ride-out.

Onsite Social Work Managers

Leaders and practitioners discussed the importance of having a social work manager available at all times during a ride-out event to facilitate better organization and expectation-setting among practitioners. Like nurses (VanDeventer et al., 2017, social workers' resilience depended heavily on leadership support. Practitioners valued the relationships they had built with social work managers, and those on the first wave of ride-out felt they lacked the emotional support and guidance they would expect from their own manager. Similarly, second- and third-wave practitioners observed the benefits of having an on-site social work manager available to help define their roles, provide support, and negotiate with other teams regarding the social workers' workload capacity. Ybarra (2019) posits that staff members feel more empowered during crisis when their leaders forgo hierarchical roles and instead share some work tasks and ensure the same logistical limitations (i.e. sleeping and showering arrangements, limited food availability) with their staff. The participants in this study repeatedly commended the onsite social work manager for her displays of equality, humility, and perseverance, saying that she

adopted an equal or greater workload compared to the social workers while providing a steadying presence.

Technology-supported Communication

All waves of ride-out primarily used group texting to relay important information about updates, upcoming events, division of labor, and gathering times. However, texting was often problematic due to incompatible mobile servers, which frequently delayed important communication. Some practitioners and leaders recommended the web-based apps WhatsApp or GroupMe for more reliable communication, though SMS messaging should remain available in the event of internet outages.

Staff Support

Like hospital staff in other studies (VanDevanter et al., 2017; Ybarra, 2019), practitioners relied on another for support through regular communication, shared meals, and playing board games. However, participants noted that practitioners and leaders alike were often tasked with supporting other hospital staff, particularly nurses, in addition to responding to family consults. Leaders felt that while very important, this task increased practitioners' emotional burden during already stressful circumstances. One leader recommended designating one ride-out practitioner specifically for task support to better distribute the emotional labor of providing support to other staff members. Ybarra (2019) recommends utilizing psychological first-aid in times of crisis, which includes physical and mental safety, hope, empowerment, calming, and connectedness. Ybarra (2019) additionally calls for on-site presence from an employee assistance program (EAP) to provide immediate support during disasters. Since social workers were part of the

EAP's efforts following Harvey, the two entities could collaborate to provide psychological first aid during disasters as well.

In addition to providing staff support, however, social workers were in need of their own support as they attempted to balance personal and professional obligations. As Turrentine et al. (2018) argue is the case among doctors in a similar situations, social work participants whose families were under evacuation, at significant flood risk, or were experiencing acute anxiety felt high levels of personal stress while trying to provide for other families who were in similar circumstances.

Debriefing

Finally, practitioners and leaders agreed that a debrief following the event would be helpful standard practice, allowing all persons involved in ride-out in any capacity to voice what did and did not go well from their perspective. Some practitioners felt validated and heard after the debrief while others described feeling placated and dismissed. Though some practitioners found the debrief more helpful than others, all who attended the debrief explained that having an opportunity to share was vital. Similarly, leaders appreciated the forum to hear candid opinions and experiences from their staff.

Strengths and limitations

This study offers a comprehensive view of a children's hospital's response to a devastating hurricane, adding to our knowledge of social workers' roles during disasters in medical settings. This case study includes multi-level analysis of self-reported data in interviews, documentation of correspondence between leaders and practitioners, policies and protocols for disaster response, and the organization's written reflections on the hurricane's impact. The

analysis provides important information regarding the successes of this organization as well as opportunities for improvement, which may be useful for disaster preparedness among other health care organizations.

As in any case study, this study cannot be generalized to another population or setting. Due to the first author's role as a participant-observer, the study is at risk for some bias. Additionally, this data is limited to social workers who represent only one group of providers within one hospital.

Public health implications

Several public health implications arose from this case study for consideration in future hospital disaster events. First, full-time social workers were not paid more than their usual pay for their ride-out efforts. Lack of compensation led to feelings of resentment, anger, and distrust of leadership. Longer-term implications of this practice include fewer practitioners signing up for the ride-out team the following year and practitioners considering quitting their social work position at the hospital. Second, this study highlighted the need for self-care and intentional burnout prevention among hospital staff during the ride-out event to promote positive mental health and coping. Third, leaders and social workers view social workers as a valuable source of support for hospital staff both present at the hospital and stuck at home during disasters. Their expertise in crisis management and de-escalation make them ideal candidates for offering staff support to facilitate positive coping.

Conclusion

Participants used many words to describe their overall ride-out experience, including

positive, rewarding, stressful, chaotic, exciting, emotionally draining, challenging, difficult, a growth experience, and exhausting. Some said they would happily sign up for the next ride-out, while others hope to not repeat their ride-out experience. Based on interviews and participant observation, the ride-out experience among social workers at this hospital was challenging but succeeded in providing necessary services to both families and other staff members. Specific recommendations for future disaster events include paying social work practitioners additional emergency pay during any ride-out event, regardless of their employment status, clarifying early and often, insuring at least one on-site social work manager at all times during ride-out events, using internet-based group messaging to communicate, designating at least one social worker to provide regular support to staff throughout the hospital and staff at home, and holding a standard debrief after the event.

This study has several strengths and limitations. One limitation is the range in time during which participants were interviewed, as some were interviewed soon after Hurricane Harvey (October 2017) and others were interviewed as late as June 2018. This range could contribute to differences in interview content as participants likely did not remember their experiences as clearly in June as they might have in October. Another limitation is that this work focuses on one city and one disaster; while results cannot be generalized, they do provide insights into issues that may be universal in disaster settings. Strengths include a large group of participants from the community and a hospital to provide diverse perspectives on social workers' involvement in disaster relief. Shelter participants volunteered at both large urban shelters and small rural shelters for a wide range of days, though the majority of participants focused on their work at large public shelters. Some participants acted as leaders of small

factions within the shelters while others were minimally involved in providing services while volunteering, which provides insight into the various ways social workers' skills were and were not utilized. At the hospitals, both social workers and their leaders were interviewed, providing a more holistic view of the social work response. Additionally, the integration of information from many sources (interviews, field notes, researcher participation, hospital policies and procedures, disaster policies) provides important context for each individual study.

Conclusion

Hurricane Harvey affected thousands of lives across the city of Houston in 2017, displacing people and their pets, destroying homes, leaving many without resources or support, and causing psychological distress as much remained uncertain. Social workers were involved in key Harvey relief efforts in public entities such as hospitals and shelters. While more research is needed to explore how social workers should prepare for such disasters, get trained in disaster relief, and care for themselves as first responders, this study has illuminated some important conclusions about social workers' disaster involvement.

First, more intentional efforts should be made to recruit and mobilize social workers. Since social workers are compelled by their code of ethics to be of service, many will likely desire to serve during disasters. Organizations should maintain lists of potential social work volunteers in order to more easily mobilize social workers when disasters approach. Due to the success of social media in disseminating volunteer information to social workers during Hurricane Harvey, organizations would be wise to capitalize on this method for future recruitment.

Second, the social work profession is largely misunderstood, which can easily lead to misuse of social workers' skills when they volunteer to serve after a disaster. To ameliorate some of this confusion, local social workers familiar with the area's resources should lead groups of social work volunteers and work to consolidate the resources available to people staying at shelters. This study found that the role of social work volunteers changed throughout the weeks the shelter was open. Training regarding the roles social workers may be expected to fill and the populations they may serve would be beneficial as future disasters are imminent.

Finally, as social workers are considered essential staff in an emergency ride-out at hospitals, they should be given clear expectations for their role as ride-out social workers and given emergency pay commensurate to the additional time they spend at the hospital. As disasters affect ride-out staff as well as the people being served, clear sources of emotional support should be offered throughout and following the event.

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APPENDICES

Appendix A: Committee for the Protection of Human Subjects Approval Letter - HSC-SPH-17-0818

Committee for the Protection of Human Subjects
6410 Fannin Street, Suite 1100
Houston, Texas 77030

Dr. Sheryl McCurdy
UT-H - SPH - Health Promotion & Behavioral Sciences

September 26, 2017

HSC-SPH-17-0818 - *Hurricane Harvey Oral History Project*

The above named project is determined to qualify for exempt status according to 45 CFR 46.101(b)

CATEGORY #2 *: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:*

a. information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; AND ,

b. any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(NOTE: The exemption under Category 2 DOES NOT APPLY to research involving survey or interview procedures or observation of public behavior when individuals under the age of 18 are subjects of the activity except for research involving observations of public behavior when the investigator(s) do not participate in the activities being observed.)

CHANGES: Should you choose to make any changes to the protocol that would involve the inclusion of human subjects or identified data from humans, please submit the change via iRIS to the Committee for the Protection of Human Subjects for review.

INFORMED CONSENT DETERMINATION:
Signed Informed Consent Required

INFORMED CONSENT: When Informed consent is required, it must be obtained by the PI or designee(s), using the format and procedures approved by the CPHS. The PI is responsible to instruct the designee in the methods approved by the CPHS for the consent process. The individual obtaining informed consent must also sign the consent document. Please note that only copies of the stamped approved informed consent form can be used when obtaining consent.

HEALTH INSURANCE PORTABILITY and ACCOUNTABILITY ACT (HIPAA):
Exempt from HIPAA

STUDY CLOSURES: Upon completion of your project, submission of a study closure report is required. The study closure report should be submitted once all data has been collected and analyzed.

Should you have any questions, please contact the Office of Research Support Committees at 713-500-7943.

Appendix B: Committee for the Protection of Human Subjects Notice of Approval to Implement Requested Changes - HSC-SPH-17-0818

UTHealth
The University of Texas
Health Science Center at Houston

Committee for the Protection of Human Subjects
6410 Fannin Street, Suite 1100
Houston, Texas 77030

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NOTICE OF APPROVAL TO IMPLEMENT REQUESTED CHANGES

HSC-SPH-17-0818 - Hurricane Harvey Oral History Project
PI: Sheryl Mccurdy, PhD

Reference Number: 171427

PROVISIONS: Unless otherwise noted, this approval relates to the research to be conducted under the above referenced title and/or to any associated materials considered at this meeting, e.g. study documents, informed consent, etc.

APPROVED: By Expedited Review and Approval

CHANGE APPROVED: Addition of Omar Jaber and Claire Crawford

APPROVAL DATE: 06/07/2018

CHAIRPERSON: Rebecca Lunstroth, JD

Upon receipt of this letter, and subject to any provisions noted above, you may now implement the changes approved at this meeting.

CHANGES: The principal investigator (PI) must receive approval from the CPHS before initiating any changes, including those required by the sponsor, which would affect human subjects, e.g. changes in methods or procedures, numbers or kinds of human subjects, or revisions to the informed consent document or procedures. The addition of co-investigators must also receive approval from the CPHS. ALL PROTOCOL REVISIONS MUST BE SUBMITTED TO THE SPONSOR OF THE RESEARCH.

INFORMED CONSENT: Informed consent must be obtained by the PI or designee(s), using the format and procedures approved by the CPHS. The PI is responsible to instruct the designee in the methods approved by the CPHS for the consent process. The individual obtaining informed consent must also sign the consent document. **Please note that if revisions to the informed consent form were made and approved, then old blank copies of the ICF MUST be destroyed. Only copies of the appropriately dated, stamped approved informed consent form can be used when obtaining consent.**

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