

Narrative trajectories of disaster response: ethical preparedness from Katrina to COVID-19

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ABSTRACT

While COVID-19 brings unprecedented challenges to the US healthcare system, understanding narratives of historical disasters illuminates ethical complexities shared with COVID-19. In 2005, Hurricane Katrina revealed a lack of disaster preparation and protocol, not dissimilar to the challenges faced by COVID-19 healthcare workers. A case study of Memorial Hospital during Hurricane Katrina reported by journalist-MD Sheri Fink reveals unique ethical challenges at the forefront of health crises. These challenges include disproportionate suffering in structurally vulnerable populations, as seen in COVID-19 where marginalised groups across the USA experience higher rates of disease and COVID-19-related death. Journalistic accounts of Katrina and COVID-19 offer unique perspectives on the ethical challenges present within medicine and society, and analysis of such stories reveals narrative trajectories anticipated in the aftermath of COVID-19. Through lenses of social suffering and structural violence, these narratives reinforce the need for systemic change, including legal action, ethical preparedness and physician protection to ensure high-quality care during times of crises. Narrative Medicine—as a practice of interrogating stories in medicine and re-centering the patient—offers a means to contextualise individual accounts of suffering during health crises in larger social matrices.

INTRODUCTION

During the COVID-19 pandemic, ethical decision-making practices were questioned as health personnel worked under extreme circumstances, shouldering a heavy burden of patients amidst shortages that ranged from treatment to equipment to reliable information on SARS-CoV-2 (Reid and Reid 2020, 1–5; Wynne *et al* 2020, 1–12; Shechter *et al* 2020, 1–8). While the Health Humanities field of Narrative Medicine traditionally focuses on stories between patients and clinicians, the practice also contextualises individual stories in larger social constructs (Charon *et al.* 2017; Iwai, Khan, and DasGupta 2020). Analysis of ongoing crisis narratives cannot provide the clarity that time and distance offer; however, revisiting historical disasters illuminates challenges that are constructive for navigating COVID-19.

We have examined Hurricane Katrina as a case study to show unique ethical challenges at the forefront of clinical care during disasters. Specifically, we look to Memorial Hospital in New Orleans, where 23 corpses were found with elevated levels of morphine and a benzodiazepine—20 of whom were determined victims of homicide, leading to

second-degree murder charges of one physician and two nurses (State of Louisiana 2006). The brunt of Katrina, like COVID-19, was shouldered by Black communities and people of colour who neither received the immediate care nor adequate support in the aftermath (Doherty 2015). The incident revealed a lack of guidance for providers during disasters, inadequate patient and family involvement in critical decision-making, racialised downstream effects of strained health systems, and the need to equip providers with stronger tools for navigating blurred ethical boundaries. By revisiting narratives from Hurricane Katrina, we reveal similarities with COVID-19 and call for more rigorous ethical guidelines and physician training to better manage and prepare for crises in the future. Analysing past narratives may also help anticipate the stories told in the aftermath of COVID-19, or what we have defined as ‘narrative trajectories’.

KATRINA AND COVID-19: NARRATIVE PARALLELS

Although hurricanes and pandemics pose different challenges, they reveal institutional weaknesses that similarly amplify structural violence and social suffering. ‘Structural violence’ is a way of framing structural forces—including poverty, racism, gender discrimination, political climate and health policy—that precipitate or exacerbate harm on communities who are typically not responsible for the causes of inequity (Farmer *et al* 2006). Healthcare decisions during these crises reflect such themes and have drawn media and scholarly attention in the aftermath. Perhaps most notable is journalist—Medical Doctor (MD) Sheri Fink’s coverage of the lethal decisions made by physician Anna Pou and colleagues during the onslaught of Katrina at Memorial Hospital (Fink 2009). We draw on Fink’s documentation of physician decision-making in crisis, in parallel with COVID-19 first-person caregiver accounts, to discuss narrative trajectories we can expect in the aftermath of COVID-19.

Fink’s coverage sheds light on the need for adequate preparedness and policy guidance for physicians in ethically dubious times. Hurricane Katrina was a single, isolated event brought on by extreme weather, in contrast to COVID-19, which has been a less predictable, ever-evolving long-term global crisis. Instruction for resource allocation, such as the New York State Task Force on Life and the Law and New York State Department of Health 2015 ventilator allocation guidelines, and protocols for palliative and end-of-life care were in use at many US hospitals prior to COVID-19



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(Capron 2019; Inbadas *et al* 2017; Mishra and Mishra 2017; New York State Task Force on Life and the Law and New York State Department of Health 2015). While these standards were built on ethical, legal and clinical consensus, in practice these decisions constitute a dynamic process that still must be made on an individual, that is, patient, basis. Early in the COVID-19 pandemic, many physicians across the country had to confront the full burden of making these decisions in ways that were reminiscent of the questions raised by Fink after Katrina:

Which patients should get a share of limited resources, and who decides? What does it mean to do the greatest good for the greatest number, and does that end justify all means? Where is the line between appropriate comfort care and mercy killing? How, if at all, should doctors and nurses be held accountable for their actions in the most desperate of circumstances, especially when their government fails them? (Fink 2009)

Fink's questions echo bioethics literature grappling with physician duty and ethics over the past decades (Emanuel 1994; Galarneau 2016; Persad *et al* 2009). Clinician accounts from spring and summer of 2020 documented the emotional and physical toll of front-line care compounded by these ethical tensions specifically during a time that was underscored by a systemic lack of capacity and preparedness (Ouyang 2020; Fink 2020). Several important themes emerge from first-person narratives like that of Helen Ouyang, an emergency medicine physician and writer in New York, which detail the next-to-impossible situations providers experience due to shortages ranging from space to equipment to personnel.

Not only do we have to think about patients not getting ventilators, but now we have to worry about sending infected people home, where they will likely worsen and may become critically sick, unable to make it back to the hospital in time (Ouyang 2020).

Ouyang also asks 'how to best distribute risk among health workers. I want to do everything for my patients, as much as they and their families want, just as we have always done. But what do I owe future patients? What do I owe my colleagues?' (Ouyang 2020). The obligations of physicians are challenged, especially as hospitals are depicted as 'frontlines' and clinicians become intensely aware of their own mortality and risk to colleagues and families. How do definitions of 'first, do no harm' change as crises bring havoc to hospitals? The questions posed by physician-writers like Fink and Ouyang are valuable for reflecting on the ethical pillars of caregiving which are complicated during crises.

Race and inequality in crises

Narratives surrounding Katrina and COVID-19 are complex, in part, due to inequalities of race and class. Sociologist Jean Ait Belkhir writes about the social factors of those most impacted by Katrina:

Disasters, whether natural or human-made, and Katrina is both, are revelatory mirrors that expose a society's subterranean fissures, the existing socioeconomic inequalities and political pathologies. Katrina has provided a giant and agonizing mirror for America, in the full view of the world it normally despises, forcing it to look squarely in the face, to its profound shock and shame, all those marginalized people it silences with its strange but seductive myths of equal opportunity and the American dream...The contours of disaster and the difference between who lives and who dies is to a greater or lesser extent a social calculus. (Belkhir and Charlemaine 2007, 120–152)

During Katrina, the 'working-class poor, mostly African Americans' were most profoundly impacted (Belkhir and Charlemaine 2007, 120–152). With Katrina falling at the end of the month, people living paycheck to paycheck could not afford hotels, were less likely to own or have access to cars, and therefore unable to make swift travel accommodations in preparation for the hurricane. These factors not only made evacuation more logistically challenging but made evacuation more costly and dangerous. In addition to individual economic leverage, residential segregation and concentration of federally subsidised housing led to large groups of impoverished communities lacking sufficient shelter in places like the Morial Convention Center which had lasting effects on health and recovery in the aftermath of Katrina (Belkhir and Charlemaine 2007, 120–152).

Like Katrina, COVID-19 quickly became a mirror reflecting pre-existing inequalities, revealing the social calculus of who lives and dies through structurally embedded barriers to care. Early in the COVID-19 pandemic, media discourse was like that of post-Katrina, with some claiming the virus as an equaliser and others highlighting profound disparities across populations (Yong 2020; Fink 2021a; Jean-Jacques, Bauchner, and Bauchner 2021). For COVID-19, the initial delay in releasing racial data resulted in outcries from scholars who highlighted that, without this information, social and structural underpinnings would remain opaque (Kendi 2020). When data were released, they continued to show that COVID-19-associated mortality was higher among Black and Latino populations (Centers for Disease Control and Prevention 2020), and in a study from New York City's comptroller, it was found that 75% of front-line workers—from grocery clerks and transportation workers to nurses, janitors and childcare staff—were people of colour (Stringer 2020).

The Centers for Disease Control and Prevention (CDC) has attributed disproportionate COVID-19 deaths among communities of colour to five core elements: (1) Neighbourhood and physical environment, including crowded living spaces, limited transportation, and lack of affordable or quality housing options; (2) Healthcare access and quality, including lack of health insurance, limited access to testing, personal protective equipment (PPE), and ventilators in public hospitals, fear of immigrants in seeking care, and an increase in untreated chronic conditions that contribute to poorer prognosis; (3) Occupation and work environment, including higher proportions of racial minority essential workers, frequent close contact with other employees like in meatpacking plants, and lack of paid sick leave or other benefits; (4) Income, including debt accumulation during COVID-19, living in food deserts, and difficulty paying medical bills; and (5) Education inequities, which may result in lower literacy, access to community resources and information, and limited job stability due to educational background (Centers for Disease Control and Prevention 2020; Duncan and Horton 2020; Jordan 2020). While deaths have decreased with vaccine roll-outs across the country, Black, indigenous and Latinx populations continue to have higher mortality rates (COVID Tracking Project). These core attributes can also be understood with the framework of racial capitalism, which co-constructs the medical, social, and economic conditions that have produced COVID-19 inequities (Laster Pirtle 2020). The reasons for disparities as defined by the CDC are not dissimilar to those during Katrina.

We want to highlight that these racial disparities are made more urgent and, at times, exacerbated by media narratives. During Katrina, terms like 'looters' were used exclusively for people of colour while white counterparts were 'finding food' (Belkhir and Charlemaine 2007, 120–152). Photograph, video and TV

footage of Katrina were largely of Black people which raised concern that evacuation and federal aid was delayed because of these stark visuals (Belkhir and Charlemaine 2007, 120–152). Fink's Katrina reporting exemplifies this in her coverage of a physician who refers to people outside the hospital as 'animals' who come to the hospital to rape or steal drugs (Fink 2009). Racist language and media framings, while difficult to quantify, may perpetuate structural inequalities and heighten mistrust, especially among marginalised communities, in the aftermath.

Early in the COVID-19 pandemic, similar themes in media narratives emerged. Hesitancy to release data on race and ethnicity, both in research and in lay media, led to criticisms against the CDC and widening of existing inequities (Krieger *et al* 2020; Campos-Castillo and Laestadius 2020). During the 2020 resurgence of movements for Black lives, some minority physicians brought their issues to fore. For instance, Dr Sutton-Ramsey, a Black New York City physician, described his rituals to protect himself from police brutality at the expense of protecting himself and his loved ones from COVID-19: 'I do everything I can to look 'essential.' I do not change out of my scrubs after work—even though it means potentially contaminating my car with the coronavirus, or bringing it into my home, where my partner sleeps. I keep my white coat on, because I know it signals authority and respectability' (Sutton-Ramsey 2020). While Dr Sutton-Ramsey's first-person narrative directly addressed racism in the USA, we also see how placing Black voices at the fore of media, such as in vaccine hesitancy campaigns, is taxing for physicians and eliding the root problem of medical mistrust among some Black communities (Newman and Newman 2021).

Ethical decision-making

While Memorial Hospital had developed a general emergency plan long before Katrina, Fink notes that it did not include instructions for a complete power failure nor a city-wide flood (Fink 2009). Further, triage protocols outlined in this plan were ill-defined, leading to confusion on which categories of patients should be evacuated first. Pou and colleagues, who had little to no triage training at the time, decided that the sickest patients should be evacuated last. Included in this group were those with 'Do Not Resuscitate' (DNR) orders, determined to be indicative of a terminal diagnosis, rather than an end-of-life choice for patients in any number of health states (Fink 2009). Fink reminds us that there are no fully standardised protocols for triage, and this makes these protocols inherently vulnerable to bias.

While healthcare workers are constantly making critical decisions, crisis scenarios highlight the difficulty for upholding high ethical standards. In Fink's Katrina evacuation coverage, she reports on one Honduran male patient in his 60s receiving long-term care and awaiting surgery when Katrina made landfall. The patient's family recounted that he had a 'good sense of humour and a rich family life', and nurses remembered him being 'very aware' and cheerful on the day of evacuations (Fink 2009). However, the patient was classified low on the evacuation triage protocol due to his perceived low quality of life as a paraplegic, and to comorbidities such as his weight. He eventually received a lethal injection of morphine, along with others left at Memorial. The stark difference between interpretations of 'quality of life', as Fink documents, by the patient's family and his physicians is evidence of the ways subjectivity complicates executing triage protocols in crises.

Early in COVID-19, Ouyang reports on a colleague's experience in Italy where a group of bioethicists and intensivists drafted a list of criteria for the allocation of limited resources

such as ventilators and intensive care unit (ICU) beds—a question that ultimately determines who lives and who doesn't:

The first version includes strict criteria. If you are over 80 or one of your organs isn't functioning well or your dementia has advanced past a certain point, you are unlikely to get a breathing tube or a spot in the I.C.U. Soon after, the group decides to delete the specific cutoffs, so that hospitals can adapt their responses to circumstances, which are changing hourly. They want doctors to have flexibility but use these principles to guide and justify their decision-making. The document's fundamental thrust, though, is that those with the highest chances of survival—the young and the healthy—get priority (Ouyang 2020).

Ethical decisions faced by both Pou and COVID-19 physicians highlight the difficulty of conversations surrounding life-altering medical care during times of limited resources, particularly the question of what defines 'quality of life', and who bears the brunt of defining it.

Physician and medical anthropologist Paul Farmer writes about the human nature of suffering, suggesting it is both variable and inherently social. He writes: '...suffering is not effectively conveyed by statistics or graphs. The 'texture' of dire affliction is perhaps best felt in the gritty details of biography' (Farmer 1997). Fink and Ouyang bring these gritty details to life in their reporting while also revealing the need for more inclusive, equitable and ethical triage protocols that would benefit from community input. These might include focusing on structural factors that lead to disproportionate amounts of suffering, as well as emphasising that silence often accompanies those who suffer most. If physicians are to alleviate suffering, they must be given the time and resources to prepare for disasters, understand patients' and their families' perspectives when possible, and execute inclusive ethical guidelines. This requires society at large to claim responsibility for the social suffering that is exacerbated during crises and acknowledge that suffering is a direct consequence of human agency (Farmer 1997).

Aftermath

While issues of structural violence and systemic racism are pertinent in writing about crises, we cannot overlook the toll these outcomes have on caregivers. The events at Memorial were not only tragic for the lives lost, but also for the healthcare workers who were put in a dire situation and prosecuted for their decisions. After Katrina, Pou and two nurses were charged with second-degree murder and conspiracy to commit second-degree murder, although none were ever indicted. There is still debate about whether Pou and her colleagues' actions were meant to kill or comfort. Many attribute their acquittal to community support during the trial, a factor that has also been cited as critical in preventing criminal or civil suits for physicians during COVID-19, and one that emphasises the important role of story-telling (Cohen *et al* 2020, 1901–1902).

Since the court proceedings, Pou has advocated for better preparedness and legal protection for physicians during disasters, such as the option to evacuate the sickest last, including those with DNRs, and waive the requirement for informed consent (Fink 2009). While Fink successfully brings attention to Pou's arguments about disaster preparedness and physician immunity, she does little to highlight the limitations of Pou's work, which does not appear to take a structural violence or social suffering lens. Fink concludes her article by stating that without transparent ethical guidelines seeking interdisciplinary community input, we not only end up losing lives, but losing

trust in those we need to trust the most—our caregivers and medical institutions.

In March 2020, New York governor Andrew Cuomo released an executive order regarding Temporary Suspension and Modification of Laws Relating to the Disaster Emergency, which most notably stated that:

...all physicians [...] shall be immune from civil liability for any injury or death alleged to have been sustained directly as a result of an act or omission by such medical professional in the course of providing medical services in support of the State's response to the COVID-19 outbreak, unless it is established that such injury or death was caused by the gross negligence of such medical professional (Cuomo 2020).

In addition to authorising the deployment of just-graduated medical students, Cuomo's orders allowed foreign medical school graduates with at least 1 year of graduate medical education to practise without a license. Physician assistants and nurse practitioners were permitted to provide care without oversight from a supervising physician. The order also removed working hour restrictions and relieved medical record-keeping requirements 'to the extent necessary for healthcare providers to perform tasks as may be necessary to respond to the COVID-19 outbreak' (Cuomo 2020). While these changes help address Pou's call for physician protection during crises, the long-term implications of these liability reforms that were made without proposed ethical guidance have yet to be determined and may unfold in ways reminiscent of Katrina's far-reaching aftermath.

A NARRATIVE MEDICINE APPROACH

In a canonical narrative medicine paper, physician and founder, Dr Rita Charon, writes: 'The effective practice of medicine requires narrative competence, that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others' (Charon 2001, 1897–1902). At face value, a narrative medicine approach to these crisis narratives means honouring the individual accounts of suffering. However, narrative medicine also reminds us to ask ourselves, 'Who speaks? Who is being spoken for?'. Fink's Katrina coverage reveals vulnerabilities that traditionally powerful bodies have experienced because of the hurricane. But if we take a step back, we see that Fink's coverage elides critical discussions of race and the profound impact on Black communities. To not acknowledge Fink's own positionality—as a highly educated, white writer-MD who does not practise medicine herself—is to fail to acknowledge the reality that even these stories are told and shaped by particular members of society. Despite Fink's detailed coverage of the tragedy at Memorial, we still cannot fully understand the lives of those who experienced Katrina and whose stories were never told. While COVID-19 stories continue to be shared across media platforms, there remains an underrepresentation of narratives centred on, or told by, the communities most vulnerable to COVID-19; we must ask ourselves again and again, 'Who speaks? Who is being spoken for?'.
Narrative medicine also operates with the vision of structural competency. Introduced by Drs Metzl and Hansen, 'structural competency' describes the need for medical education to use a structural focus to enable students to recognise socioeconomic forces that cause illness and health inequities (Metzl *et al* 2014, 126–133). In the context of narrative medicine, structural competency means recognising upstream forces that shape narratives of illness, suffering and health more generally. The stories that have emerged in health crises portray useful perspectives and emotionality, but also point to institutional

shortcomings. Fink's Memorial coverage shows discrepancies in definitions of 'quality of life' which not only reveal individual providers' perceptions, and the choice to act on that perception, but also a broader lack of uniformity for defining something as central to medicine as 'quality of life'. Early in the COVID-19 pandemic, ventilator rationing raised similar questions around terms like 'actions' that determine criminal or civil liability. According to Cohen *et al*, 'action that shortens a life, even if just by hours, can be prosecuted as a homicide' (Cohen *et al* 2020). While many existing guidelines suggest that the re-allocation of scarce resources during a pandemic is not considered an act of homicide, there are no clear recommendations regarding which patients' physicians should 'act' on, either by withholding or withdrawing life-saving measures.

Quality of life remains a question in COVID-19 too. Emanuel *et al* propose that maximising the benefit of critical resources should factor in the number of lives and number of 'quality-adjusted life-years' that can be saved (Emanuel *et al* 2020, 2049–2055). The 'quality' deemed acceptable to a patient should be determined whenever possible, and patients' 'instrumental value' should be taken into account, such as prioritising healthcare workers and clinical trial participants (Emanuel *et al* 2020, 2049–2055). This suggestion again shows the inherent complexity in establishing a standardised criteria for 'quality of life' and whether that criterion can or should shift during states of emergency. The elements that constitute 'quality of life' are structural in and of themselves, signifying US culture's dissonant opinions on what is moral or worthwhile. Scholars, health professionals, community members and society at large must work together to critically think about and make it a priority to define, or redefine, 'quality of life' and by doing so alleviate some decisional burden from front-line caregivers.

Re-centring the patient

As the patients and families of Memorial have made clear, definitions as fundamental as 'quality of life' remain opaque to outsiders, including physicians. In times of disaster, when a clinician's focus is necessarily centred on saving the most lives, this opacity must be considered in all life-saving, and life-sacrificing, decisions. One approach to prepare for such situations is considering who standardised practices are benefiting, and who they may be ignoring. In the words of medical educator Dr Sayantani DasGupta:

Clinicians cannot, of course, ever exactly know how any illness story begins or ends...Narrative humility allows clinicians to recognise that each story we hear holds elements that are unfamiliar—be they cultural, socioeconomic, sexual, religious, or idiosyncratically personal. Assuming that our reading of any patient's story is the definitive interpretation of that story is to risk closing ourselves off to its most valuable nuances and particularities (DasGupta 2008, 980–981).

Regular engagement with this kind of thinking can cultivate moral principles which de-privilege the provider and re-empower the patient. So, even under high stress scenarios, clinicians may adopt broader, self-critical perspectives. Such perspectives may provide necessary pause for clinicians to consider their own bias in quality-of-life determinations and in the development of emergency protocols.

Narrative medicine workshops help clinicians recognise this opacity of the patient in accordance with narrative humility (Tsevat *et al* 2015, 1462–1465). These workshops encourage participants to self-reflect as a way of disengaging with totalising notions of the Other through close reading, discussion, writing

and sharing (Irvine 2005, 8–18). While most medical professionals have received health humanities training at one point, irregular or limited encounters with disciplines that incorporate structural competency reinforce the idea that these issues are not central to practice, or tangential at best. We propose that narrative medicine workshops may be one tool for fostering empathy, reflection, affiliation and justice in future training of providers who could be placed in ethically challenging scenarios during crises.

CONCLUSION

In her book, *Medical Apartheid*, on the history of medical experimentation on African Americans, Harriet A Washington documents deep-rooted racism in the US medical institution (Washington 2006). Washington reminds us of the significant injustice prior to, and after, the infamous Tuskegee Syphilis Study, calling to action the need to understand and more regularly engage with the history of medicine. In analysing stories from Katrina, we place accounts of COVID-19 in a longer lineage of crisis narratives. These narrative inquiries allow us to learn from history and better prepare for scenarios where clinicians may be challenged to uphold high-quality care under extreme circumstances. Further, we show how narrative medicine helps us understand individual stories of suffering in larger contexts. Revisiting narratives of Katrina and COVID-19 illuminate the unique needs of front-line workers, while revealing upstream points of intervention for inciting sustainable change. We believe narrative tools can help us strengthen our muscles for navigating ethically fraught terrain, and enable us to move towards more just, patient-centred, and sustainable healthcare during COVID-19 and in future crises.

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