

# “Watching the tsunami come”: A case study of female healthcare provider experiences during the COVID-19 pandemic

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## Abstract

As health systems rapidly respond to COVID-19, it is unclear how these changes influence the experiences and well-being of female healthcare providers (FHCPs), including the potential for FHCPs to develop compassion fatigue and secondary traumatic stress. We conducted qualitative interviews ( $n = 15$ ) with FHCPs at three locations (Washington, California, and New York). Interviews explored FHCP's perspectives on how care delivery changed, processes of information delivery and decision-making, gender inclusion, and approaches to managing stress and well-being. An inductive coding process was used to generate themes. FHCPs described significant changes to the way they delivered care, and their work environments, during the COVID-19 pandemic. Five themes emerged that characterized the experiences of FHCPs during COVID-19, including *conflicting feelings while providing care*, *managing information and decisions*, *balancing roles*, *coping and well-being*, and *considerations for moving forward*. FHCPs experienced many impacts to their professional and personal lives during COVID-19 that further complicated their ability to manage stress and well-being. The themes identified through this work offer important lessons about how to support the well-being of FHCPs and signify the widespread potential for compassion fatigue among FHCPs as a result of COVID-19.

**KEYWORDS**

care delivery experiences, COVID-19, gender roles, healthcare professionals, stress

**INTRODUCTION**

COVID-19, the disease caused by the SARS-CoV-2 virus, has greatly impacted our healthcare system and lives during the 2020 pandemic. With its high rate of transmission and increasingly growing effects on the body, COVID-19 has led to a myriad of ever-changing practice guidelines for healthcare professionals. The disease itself can range from having little effect on an individual's health to causing death. This complexity of disease severity and symptomology makes COVID-19 not only frightening, but also challenging to control from the perspective of healthcare delivery organisations.

As cases of COVID-19 continue to rise in the United States, its complexity continues to burden not only the healthcare system itself, but also the mental well-being of healthcare providers (HCPs). Research from Wuhan, China, the initial epicenter of the COVID-19 pandemic, describes the mental toll the virus has taken on HCPs, in which authors note high levels of reported stress in those surveyed (Kang et al., 2020). Participants also expressed utilizing available mental health resources, yet the authors highlight the limitation of those resources, expressing a need for systematic approaches to address a growing mental health crisis (Kang et al., 2020). Additionally, a qualitative study assessing the experiences of HCPs in Wuhan found that providers were both physically and emotionally exhausted, both indicators of burnout (Liu et al., 2020). Furthermore, recent cross-sectional and systematic reviews assessing psychological well-being among HCPs treating patients with COVID-19 in both the United States and elsewhere describe high levels of distress and need for individualized resources to address mental health (Shechter et al., 2020; Spoorthy et al., 2020). These articles highlight the number of ways in which the COVID-19 pandemic influences the well-being of providers including the uncertainty of the disease, fear of infection and exposure to family, distress due to lack of key resources such as testing kits and personal protective equipment (PPE), and experiencing burnout and trying to cope with stress while remaining resilient for patients.

In the United States, recent research notes how the pandemic is also exacerbating gender disparities (Brubaker, 2020). Existing data highlight that women are more likely to carry more of the household work, including childcare and household duties, and that the imbalance of responsibilities has only increased during COVID-19 (Alon et al., 2020; Brubaker, 2020). In health care, these trends are consistent and sometimes worsened by experiences of microaggressions and sexual harassment. Past research has indicated that female healthcare providers (FHCPs) are more likely to modify work schedules to fit family needs, and experience higher rates of burnout, suicidal ideation, and harassment than their male counterparts (Fassiotto et al., 2016; Frank et al., 2019; Hu et al., 2019; Linzer et al., 2002; Schernhammer & Colditz, 2004). In addition, Kang et al. (2020) found that the incidence of stress, anxiety, and post-traumatic stress disorder was higher in FHCPs who were treating patients during the COVID-19 pandemic. A 2021 study by Young et al., which evaluated the mental well-being of HCPs during COVID-19, also found that while all HCPs experience heightened anxiety and depression symptoms, FHCPs reported significantly higher PHQ-9 scores as compared to male HCPs. These early data from the COVID-19 pandemic signify the need to further explore the experiences of FHCPs so as to understand the mechanisms that are leading FHCPs to experience these disparities in well-being, while still facing the same stressors at work as male HCPs. Characterizing the lived experiences of FHCPs, not just the gender-based narratives around the roles women often play, will work to center the margin of narratives produced around HCP experiences during the pandemic (Lorello et al., 2021).

Despite its complexity, the COVID-19 pandemic offers an opportunity to learn from prior large-scale crises. Research from other crises, such as the severe acute respiratory syndrome (SARS) outbreak or the 9/11 terrorist attacks in New York City, has highlighted that the psychological effects of working as a HCP during a crisis continue long after the immediate threat diminishes (Maunder et al., 2006; Wu et al., 2009). Specifically, prior literature confirms that healthcare workers are particularly vulnerable to compassion fatigue and subsequent secondary traumatic stress, as a result of their work during times of high stress or crisis (Alharbi et al., 2020; Peters, 2018; Pulido, 2007). Based on learnings from these prior crises, we can expect to see a pattern whereby HCPs prioritize the intense care needs of their patients, only to delay coping with feelings of emotional exhaustion and traumatic stress for months or even years. Yet, in many ways, the COVID-19 pandemic is also unique in that it impacts almost every facet of daily life for FHCPs, regardless of whether they are frontline providers or not. As the COVID-19 pandemic continues to unfold, it is imperative to better understand its psychological impacts on FHCPs and how the pandemic might be increasing the potential for a pandemic of secondary traumatic stress among FHCPs in later years.

As we consider the experiences of FHCPs during COVID-19, it is important to recognize that healthcare organisations function like complex adaptive systems, exhibiting certain characteristics such as self-organisation, containing interrelationships and responding to crises with emergent practices and novel responses, and causing change to occur rapidly (Barasa et al., 2017; Rouse, 2008). Utilizing a complexity lens, we can consider FHCPs' experiences within the healthcare organisation's response to the COVID-19 pandemic and explore any unintended consequences this response has had for FHCPs in their daily work, interactions with colleagues, and ability to integrate work and life responsibilities. In the United States, limited research exists exploring the impact of the COVID-19 pandemic on the well-being of FHCPs including the potential signs of compassion fatigue and secondary traumatic stress. Additionally, research is needed to explore the lived experience of FHCPs in three COVID-19 hot spots who were some of the first locations to experience surges in the pandemic: Seattle, New York City, and the San Francisco Bay Area.

The aim therefore of this qualitative study was to understand potential challenges and areas of needed research related to healthcare organisations' responses to the COVID-19 pandemic from the perspective of FHCPs. Thus, the phenomenon to be explored is the experience of being a FHCP providing care during the pandemic. In alignment with the conceptual model of compassion fatigue posited by Peters (2018) and known antecedents for compassion fatigue, we explored FHCPs' experiences with stress, perspectives on self-care measures, role boundaries, and perspectives on the role of the healthcare system in fostering well-being. This preliminary work involves a collaboration of researchers across three sites: University of Washington Medicine, Stanford Medicine, and Columbia University Irving Medical Center.

## METHODS

We used a qualitative case study design to explore the phenomenon of FHCPs' experiences during the COVID-19 pandemic. A qualitative case study approach allows for the description of experiences that have complex elements, and where contextual differences may matter or influence a participant's understanding of reality, experience, or actions (Baxter & Jack, 2008; Creswell & Poth, 2018; Crowe et al., 2011). The use of a case study approach has a long history in clinical practice, as a means to explore the nuanced characteristics and context that can inform both targeted insights and broader lessons for practice (2011).

For this study, we engaged in a multiple, collective case study design, with the goal of exploring within and across cases that represent different contexts (Baxter & Jack, 2008). Our unit of analysis was FHCPs, and each case was bounded by healthcare setting (University of Washington Medicine, Stanford Medicine, and Columbia University Irving Medical Center) and the early response time frame for the COVID-19 pandemic (March–July 2020).

To understand the experiences of female providers within these three healthcare organisations, we conducted in-depth interviews with FHCPs ( $n = 15$ ) who had provided clinical care during the COVID-19 pandemic from March to July 2020. We used a purposive sampling approach, identifying subjects through local networks and existing communication mediums. Aiming for maximal variation of provider characteristics and perspectives, we recruited FHCPs with diverse training background (e.g. MD, NP, RN, PA, and LCSW), clinical delivery setting (e.g. inpatient and outpatient), and clinical specialty (e.g. critical care, surgery, and psychiatry) to increase the breadth of experiences reflected in our data (Palinkas et al., 2015). Eligible and interested participants were asked to confirm their area of practice and provision of care during COVID-19 before being invited to join the study and participating in an informed consent process. All activities were reviewed by the respective institutional review boards of each of the three healthcare settings.

Subjects participated in a semi-structured interview that explored their experiences as a FHCP during the COVID-19 pandemic. On average, interviews lasted between 30 and 50 minutes. We utilized an interview guide to structure discussion with participants about how COVID-19 impacted their work and role on teams, and perspectives on information management, gender inclusion, stress and burnout, and use of wellness resources (Table 1). All interviews took place over the phone and were audio-recorded using the Zoom software and transcribed using the Otter.ai software (Otter.ai, 2020; Zoom, 2020). Participants were assigned pseudonyms to protect their confidentiality, and all transcripts were de-identified and password-protected.

All three authors were involved in qualitative coding and analysis. We began analysis by triple coding one interview from each of the three sites, with one coder representing that site and the two

**TABLE 1** Key interview domains and sample probes

Interview domains	Sample probe(s)
Experience providing care during COVID-19	<ul style="list-style-type: none"> <li>Describe what it has been like to provide care during COVID-19? What has remained the same? What has been different?</li> <li>Can you provide an example of how your work has changed?</li> </ul>
Information management experience	<ul style="list-style-type: none"> <li>Can you describe what communication was like during the COVID-19 response?</li> <li>What communication strategies were helpful? What strategies were not helpful?</li> </ul>
Perceptions of gender inclusion and team role	<ul style="list-style-type: none"> <li>As a female provider, can you reflect on your experience with leadership and decision-making during COVID-19?</li> <li>Can you describe how female leaders and/or stakeholders were involved in the decision-making process?</li> </ul>
Feelings of burnout	<ul style="list-style-type: none"> <li>What can you tell me about your current approach to work–life balance?</li> <li>What was your approach to work–life balance like during COVID-19?</li> </ul>
Experiences with wellness or coping resources	<ul style="list-style-type: none"> <li>Can you tell me about the types of wellness resources you used?</li> <li>What made some resources helpful? What made some resources not helpful?</li> </ul>

other coders representing a different site. This process helped coders familiarize themselves with data across sites and develop a preliminary coding schema. Once a coding schema was developed, coders analyzed the remaining interviews from their respective sites, meeting regularly to ensure coding alignment and discuss potential themes. All coding was reviewed by the full team to reach consensus and make iterative revisions to the codebook as analysis continued. We first produced a descriptive summary of the data from each individual site, creating the foundation of the three cases (Creswell & Poth, 2018). Next, we conducted cross-case analysis to identify themes across cases (2018; Crowe et al., 2011). In order to assess saturation of data collection, we routinely reviewed the characteristics of our sample, goals for maximal variation of sampling cases, and frequency of new codes that emerged from analysis (Saunders et al., 2018). When our sample included the desired diversity of theoretical characteristics and analysis produced only repetition of existing learnings, the team agreed that saturation had been reached. Lastly, we engaged in synthesized member checking by distributing a summarized description of themes to each participant and providing an opportunity to confirm, comment, or request changes based on how well the findings reflected their experiences (Birt et al., 2016). Feedback and agreement from participants confirmed the trustworthiness of the findings.

## RESULTS

Five participants were recruited at each site (University of Washington Medicine, Columbia University Irving Medical Center, and Stanford Medicine) constituting a total of 15 participants. All three sites are academic medical centers in urban settings providing inpatient and outpatient services. No significant differences were noted between sites; thus, themes represent cross-site findings. Participants spanned a wide variety of clinical specialties including internal medicine, occupational health, surgery, cardiology, psychiatry, and critical care (Table 2). Prior to the pandemic, the majority (66.7%) of study participants provided care through an outpatient practice setting, while 33.3 per cent of participants provided care in an inpatient setting. Sixty per cent of respondents described providing frontline care to patients with COVID-19. Additionally, 73 per cent of participants experienced a major shift in clinical practice setting (i.e. from outpatient to inpatient care; or from in-person to telehealth-based care) as a result of the pandemic, and 53.3 per cent of interviewees described providing telehealth services during the pandemic. Finally, 53 per cent of participants described formal caregiving responsibilities (e.g. parenting and elder care) at home. Table 2 provides additional details regarding the characteristics of study participants. Below, we present a general description of the impact of COVID-19 on FHCPs across the three sites.

The pandemic caused a significant number of changes in the way FHCPs provided clinical care, from the process by which care was delivered to the content of the care itself, with one FHCP noting, “I think the world has changed dramatically. We're all trying to modify our ability to continue to be healthcare providers in this weird setting where we're also mindful of our own health issues” [Participant 3], while another FHCP noted their role during the pandemic as “kind of just riding the wave of the emotional experience of being a provider” [Participant 11].

With regard to the delivery of care, FHCPs noted major transitions in the process of care delivery from traditional methods of in-person care to virtual telehealth consults. Not only did FHCPs recognize the benefits to providing virtual care with a FHCP describing that “patients were being triaged through telemedicine to determine whether or not they were able to be managed as an outpatient so that they would decrease the exposure or risk to acquiring COVID” [Participant 10], but also many recognized its limitations:

TABLE 2 Characteristics of interviewees

Characteristics	N (%)
Primary practice setting	
Inpatient setting	5 (33.3)
Outpatient setting	10 (66.7)
Clinical specialty of participants	
Cardiology	2 (13.3)
Critical care	3 (20.0)
Internal and family medicine	3 (20.0)
Occupational health	1 (6.67)
Psychiatry and behavioral health	3 (20.0)
Surgery (e.g. cardiac, transplant)	3 (20.0)
COVID-19 impacts to care delivery <sup>a</sup>	
Described providing telehealth services	8 (53.3)
Described major shift in clinical delivery during COVID-19	11 (73.3)
Provided frontline care for patients with COVID-19	9 (60.0)

<sup>a</sup>Participants may have experienced multiple impacts.

That was the learning curve too, learning how to do telehealth, because that's very different when you're not physically there with the person. You can't do a physical exam, you kind of have to look at them and ask questions very differently than you would maybe if you were in person.

[Participant 4]

Simultaneously, as the process of care delivery was altered during the pandemic, FHCPs were also faced with changes in the content of the care delivered. Due to the serious risks associated with COVID-19, FHCPs more frequently addressed issues such as advance directives and end-of-life care:

The nature of our conversations changed drastically during the course of the pandemic. [...] I often would reach out to family members more often. I made sure every single note had a documented health care proxy and wishes [...] I don't tend to have that conversation every visit with patients, but every single visit during the pandemic, I brought it up.

[Participant 8]

Below, we present the five themes that emerged from analysis and characterize the experiences of FHCPs during COVID-19.

### Theme 1: Conflicting feelings while providing COVID care

In general, providers expressed four primary feelings related to their experiences providing care during the pandemic: uncertainty, stress, anxiety, and guilt. Feelings of uncertainty were heightened at the pandemic's inception as there was limited guidance around the use of personal protective equipment (PPE), clinical management of patients, and testing for COVID-19 infection:

Particularly in the beginning it was quite a big learning curve. You know, the uncertainty in the beginning was very hard. Not knowing what the right PPE recommendations were, constantly shifting guidelines, trying to figure out how to be more efficient and conserve PPE, making sure that the PPE we were using was effective. So, I would say overall it was just thoroughly anxiety-provoking for most people, myself included.

[Participant 15]

These feelings of uncertainty caused markedly increased levels of stress and anxiety for FHCPs. Additionally, FHCPs reported anxiety and stress with significant transitions in clinical settings, such as redeployment from an outpatient service to a hospitalist role. There were also anxiety and stress around personal risk of acquiring COVID-19 with some FHCPs noting that they revised their own wills and advance directives. FHCPs discussed their stress and anxiety as a result of knowledge that coworkers had fallen ill:

But in terms of my job description in the role...I had a lot of anxiety going into it because...it was completely different in terms of skill set just completely different sort of managing inpatient things versus outpatient things. I asked a lot of questions and I found that a lot of people were in the same position as me.

[Participant 9]

Seeing your peers be sick and worry about whether or not they're going to be okay is incredibly distressing and unnerving. It makes it too real.

[Participant 8]

Finally, feelings of guilt arose on both sides of the spectrum. First, FHCPs who were delivering care via telemedicine discussed feelings of guilt for not providing direct in-person clinical care to COVID-19 patients like their colleagues were. For those providers who were working hands-on with COVID-19 patients, they felt guilt for endangering themselves and their family.

I had a lot of conflicting feelings. One being you feel like, you've taken an oath and you even want to help. But then you also feel an enormous sense of guilt because you know that you're endangering yourself and putting your family at risk.

[Participant 4]

## Theme 2: Managing information and decisions

FHCPs shared many examples of how information was delivered during COVID-19 and experiences with managing that information. In general, participants described that information was changing constantly during COVID-19. As one participant described, "you'd be gone for a few days and then come back and then it would be completely different" [Participant 9]. As a result of the continual changes, participants expressed that managing information was not easy and often overwhelming: "It seemed like it was changing every day you go to work [...] it's like- 'okay, what are we doing now?' So, it certainly could get very overwhelming" [Participant 4].

At each site, participants described that they received information from multiple sources (e.g. internal health system sources, external agencies, and governmental) and in multiple formats, including email, video, verbal, and via a variety of informal and formal meeting structures. Participants

sometimes felt overwhelmed by the amount of information they received and struggled to understand what information was relevant for them:

I think that having emails coming from so many different people, that it's not necessarily clear to the frontline providers what the differences between a system email, a [hospital campus] email, or a local email, and I think that's kind of a challenge for people to manage all that.

[Participant 15]

Participants expressed preferences for information that was comprehensive and curated for their specific roles. They described examples of communication that was more helpful when it was presented in a “digestible” format that provided key details with links to additional information, or examples of when information was clearly summarized verbally by team leaders or colleagues. Perhaps more importantly, FHCPs emphasized the importance of providing information that was data-driven and evidence-based.

I think, [organisation] did a good job of filtering and providing evidence-based information for us to...make decisions based on evidence-based research.

[Participant 4]

We had daily emails on what the number of cases were, like how many cases we had in [organisation], how many cases were ICU, how many cases were acute care, how many cases were outside of the [location] campus; so I felt comforted in seeing- and it was a bar graph that showed how we'd been doing, day by day. So, seeing the hard numbers and the pictures was really helpful to sort of know how stressed the system was.

[Participant 14]

FHCPs highlighted that receiving evidence-based information from their health system not only eased their anxiety about COVID-19, but also increased their trust in the actions their health system was taking, in particular, to manage the safety of frontline providers. This was particularly important around topics related to the safety of FHCPs. One participant discussed an example of communication from the health system around COVID-19 staff infection rates that failed to acknowledge that “the threshold for testing a healthcare worker is not the same as for testing the general public”; as a result, staff felt that the health system was “trying to hide something about the positivity rate in the healthcare workers.” [Participant 15].

Information from media or social media sources also contributed to FHCPs' experience during COVID. Several participants described efforts to “stay away from social media and all the hysteria that other non-verified news sources were providing” [Participant 14], as it only furthered their feelings of stress. FHCPs felt frustrated about the amount of misinformation available, how information was politicized, and the way that misinformation impacted the spread of COVID-19. As providers with clinical knowledge, FHCPs often felt an added burden to correct misinformation during their interactions with patients, as well as with friends and family:

When I get in my car it takes me at least 10 minutes to start my car. Because I have to process everything that I've gone through and then realize that once I start my car I'm entering into this world where people are coming up with these hoaxes. Like, this is not the first pandemic. This is not going to be the last. Right? Viruses and bacteria are real, there's not a conspiracy and these conspiracy theories are making our fight on the front lines harder.

[Participant 5]



Participants emphasized that “truth and transparency is really important” [Participant 8] in how information was shared and decisions were made, especially considering that many decisions had a direct impact on the safety of patients and staff:

I think it's that sense of transparency that is just absolutely important for managing this kind of crisis, because they're asking people to change so many things so rapidly and if they can't trust you in that decision making, it makes management of the crisis just impossible.

[Participant 15]

Participants described, though, that achieving transparency was a challenge given the accelerated nature of the decision-making process during COVID-19. Frequently, decision-makers did not have the time or the venue to solicit input from stakeholders before a decision needed to be made:

There's a lot of things that probably in pre-COVID you would have spent a lot of time hemming and hawing and talking to a lot of people about and getting approval for. And a lot of that gets cut out in COVID because you just need to get it done.

[Participant 12]

In such scenarios, participants clarified that transparency includes communicating when decisions are uncertain or difficult. Participants stressed the importance of maintaining an honest tone in how decisions are messaged to those who are expected to execute those changes, and the value of “emotionally processing things with us.” [Participant 11].

### **Theme 3: The challenge of balancing roles**

In general, participants described that their experience of gender inclusion within the workplace was unchanged during COVID-19 and at times noted an increased presence of female leadership within their healthcare organisations. However, participants acknowledged significant challenges during COVID-19 in their ability to manage the multiple roles (e.g. provider, wife, mother, partner, sister, and daughter) they held as women. FHCP experiences highlighted that these roles became much more blurred during the pandemic. Clinical care was brought into the home, creating a blended work and home environment. The responsibilities within the home also did not change and in some cases increased. FHCPs had to perform a balancing act that was immensely challenging, with many of the traditional female duties still falling on their shoulders. One individual noted, “there was very much an imbalance in making sure the kids were fed and we had food in the fridge and the house was clean [...] During COVID...the kind of traditional gender roles fell on me” [Participant 8]. Furthermore, the “traditional gender role” responsibilities became exponentially more challenging. One participant, speaking about her experience working from home with her husband and children, noted:

There was a period of time where we had zero childcare, but yet still trying to both work full time from home and it's just a total mess. And, you need someone to supervise these kids all day and help them with their school stuff. And, most of that fell to me unless my husband happened to be off for a day or something like that.

[Participant 12]

It is important to acknowledge that the individuals interviewed held a variety of roles within their healthcare organisations. Some continued to go into work, whereas others shifted to providing telemedicine from home. Therefore, it appeared that the burden of household duties disproportionately affected those within the telemedicine-able clinical specialties. This became especially clear in dual-physician households.

This imbalanced role dynamic also rang true when participants discussed a push from their organisations to be academically productive during this time and when they considered going up for promotion. One participant elucidated how the pandemic was disproportionately affecting FHCPs, who had taken on the burden of household duties at the expense of their professional advancements:

There was also an academic push, you have to publish, you have to get the data [...] there's a discrepancy as to who was doing that...like I didn't write anything. You know why? Because I was cooking dinner and taking care of kids and trying to teach my daughter how to read. I didn't have time to do that and keep up my clinical responsibilities [...] Meanwhile, my husband has...over 30 publications during this time...so there's a huge discrepancy.

[Participant 8]

Entangled in delineating these roles was a pull to manage emotional and physical well-being. Many participants detailed the traumatic toll the virus took, noting feelings of physical and emotional exhaustion. This was evident in the way that FHCPs described the distressing and chaotic scenes they experienced in the hospitals. With one participant sharing, “there was an increase in the level of work [which] lead to an increase in stress because you're trying to manage the [COVID] patients as best as you could...” [Participant 10], and another describing that, “...nurses would walk into the rooms and their patients would be dead [...] no one knew how to cope with that” [Participant 9].

There is also the unique burden of being a FHCP during the pandemic, especially felt by mothers. Not only is there concern that they will abandon their children, but also there is the emotional connection FHCPs felt to other mothers during the pandemic. When the mother of one of the participant's patients called to check-in on her daughter, the provider shared:

When I told her how she was doing she just started bawling in a way that I felt in my soul, and [her mother] just said, “it is so hard to not be able to be there.” And I thought, what if my daughter was in that bed and I couldn't be there? How helpless would you feel as a mom? And I was crying silently on my end of the phone hearing this mother's grief.

[Participant 5]

For FHCPs, the work of balancing roles became even more challenging and stressful as the intensity of the pandemic heightened.

## **Theme 4: Coping and well-being across roles**

Participants shared several strategies for maintaining well-being during the pandemic with the two most popular mechanisms being time with family and leaning into familiar social networks. Participants described difficulties managing stress with their family members and noted that the relationship between their well-being and their family was heightened, especially at the onset of the pandemic. Some found it beneficial to create boundaries between work and home by not discussing

COVID at home, even though some family members may have wanted to. This, in turn, helped to create a sense of normalcy and brought much needed peace to these FHCPs:

I think that's the one thing that kind of helped to keep me sane through that whole crazy, crazy time was the fact that my kids were so separated from it, and that I'd come home and it was kind of like just as usual.

[Participant 15]

Additionally, FHCP well-being seemed to be deeply intertwined with the role of being a team member. The participants' teams provided a sense of peer support, which proved to be an important coping mechanism during this extremely stressful time. Even though COVID-19 reduced the ability for teams to interact in their typical fashion, a higher sense of collaboration was felt as they worked through challenges together:

We got closer as a division, because, we actually had more time to sort of help each other out in the operating room so in a way that was a good thing that came out of it is you just collaborated more with your partners clinically.

[Participant 14]

Lastly, considering the resources provided by each healthcare organisation throughout the pandemic, the types of well-being support varied. Some individuals described social need support from their organisation that included meal vouchers, free lodging options, debriefing sessions, and support for childcare, while others expressed that this is an area that would need to be further supported by their organisation. For instance, due to the traumatic toll of the pandemic, continuous support around mental health will be imperative. A number of participants provided recommendations for their healthcare system to offer more practical resources for providers such as actual childcare and mental well-being support groups, on a continuous basis. Participants clarified, though, that while wellness resources are important, healthcare organisations should consider how their approach to managing large-scale crises such as the pandemic can work to minimize stress in the first place:

That gets back to preserving the wellness of your workforce, because you are not giving them yoga classes to help with the stress of their feedback not being heard in the first place, but you're helping them to feel more empowered in a stressful situation.

[Participant 11]

## Theme 5: Considerations for the slow move forward

In reflecting on their experiences during COVID-19, participants highlighted several key considerations that may influence how health systems begin to move forward from COVID-19. To start, FHCPs talked about the importance of early preparedness. Participants appreciated the steps their organisations took to act early, but through this experience recognized that perhaps much more could be done to help health systems, teams, and individual providers feel prepared for a future pandemic:

It would have been better to have been more prepared. I guess with a plan, like a disaster preparedness plan for stuff like this. But I can't fault anybody because I don't think any of us really knew it was going to be this way.

[Participant 9]

Participants cited frustration that they “did not have a pandemic response team ready to go for this” [Participant 5] in the way that other large-scale crises, such as mass casualty events, often have.

Participants also emphasized that while the immediacy of COVID-19 may have past, providers and care teams will continue to feel the long-standing impacts of their COVID-19 response. Participants talked about the need to recognize and support individual recovery for providers, in particular as providers start to get reintegrated into normal operations post-COVID:

I think you need to realize that this is a marathon and so it's going to need prolonged support.

[Participant 13]

It went from, you know, 300 vented COVID dying patients squished into any corner that we could find, that could facilitate it in our hospital, to- How are we going to reopen? How are we going to recover the money that we lost? We need to recover that money that was lost. We need to see more patients. You need to get back into the clinic. You need to go, go, go. There was no demanded, take a deep breath and take time away, turn off your phone, turn off your computer, like step away. There was always this push.

[Participant 7]

FHCPs also discussed the long-standing impacts COVID-19 will have on care teams. Since care teams often provide a critical source of peer support to individual providers, part of helping providers recover from COVID-19 will be ensuring their peer support mechanisms are in place. Yet, this will be especially challenging given the social distancing policies in place and other ways that COVID-19 has changed the work environment for providers:

How do you maintain a sense of team when all of those normal social outlets for your team members are gone? I mean, people used to go down and eat lunch together and it's different when there can only be two of you at a table because you have to be six feet apart. [...] The loss of cohesion that can happen when you're trying to set up workspaces that are socially distant... people are used to working in a small area and they see each other and they talk through cases, they talk about what's going on with their life and that just doesn't happen in the same way anymore.

[Participant 15]

Overall, FHCPs emphasized the importance of considering the toll the pandemic has had on provider well-being and the intensive support the healthcare workforce may need to recover.

## DISCUSSION

In this work, we sought to describe the experiences of FHCPs at three sites during the COVID-19 pandemic. Through in-depth interviews and cross-case analysis, we identified multiple themes that characterize the nuances of how FHCPs navigated changes to care delivery, information and decision-making, and the balance of work, life, and well-being. Each of the themes presented in our results offers important learnings that can help healthcare organisations better respond to and address the needs of FHCPs impacted by the COVID-19 pandemic. For example, participants highlighted the role of

information accuracy and transparency in building provider trust in healthcare decision-making. This example, as well as several others, demonstrates the role that healthcare organisations have in actively working to minimize FHCP anxiety related to the risks and added burden they face during large-scale crises such as COVID-19.

Learnings from this work confirm that FHCPs are experiencing antecedents of compassion fatigue as a result of the COVID-19 pandemic, which may in turn result in secondary traumatic stress (Alharbi et al., 2020; Peters, 2018). Specifically, our participants described having chronic exposure to high stress and suffering, decreased use of self-care, and an inability to manage boundaries in their professional roles, which all reflect factors that contribute to compassion fatigue. Participants also expressed feelings of helplessness and emotional exhaustion, two other essential attributes to the development of compassion fatigue, as described by the Peters (2018) conceptual model. Interestingly, though, a recent cross-sectional survey by Bettinsoli et al. (2020) found that FHCPs were more likely to experience increased separation distress and decreased resilience as a result of COVID-19 and that the emotional and stress impacts of COVID-19 were not different for those providers at greater risk for COVID-19 (e.g. frontline workers) versus providers who were less at risk. Our learnings build on these findings by illuminating that FHCPs felt conflicting feelings of stress, anxiety, and guilt regardless of whether they were providing frontline care to patients with COVID-19, or care completely removed from COVID-19 risks (e.g. via telehealth). This suggests that all FHCPs, not just those providing frontline care, are at risk for compassion fatigue as a result of the pandemic, in part due to the pervasive way in which COVID-19 has changed how FHCPs interact with their internal supports (e.g. peers and colleagues), external supports (e.g. friends and family), and self-care strategies.

These results also echo the complex adaptive nature of how health care is delivered and the importance of viewing the experiences of FHCPs through a complexity lens that acknowledges the impact of the broader environment on their individual experiences (Rouse, 2008). One poignant example of this was the frequent entanglement of individual FHCP experience with the experience of their teams. As has been paralleled in past healthcare crises, COVID-19 necessitated greater multidisciplinary across healthcare teams (Hargreaves et al., 2020). Participants reflected on how COVID-19 influenced who was on their team, how their team functioned, and how their interactions with team members (often impacted by COVID-19-related restrictions) influenced individual feelings of uncertainty and well-being in different ways. It is well known that teams play a central role in the structure of how health care is delivered and the organic nature of how teams adapt and respond to changes in complex systems, particularly in times of chaos (Manser, 2009; Pype et al., 2018; Rouse, 2008). However, the learnings from this study also highlight how critical it is to understand the role of team functioning not only in the ability to manage rapid changes, but also as a factor in supporting the well-being of individual team members and potentially reducing compassion fatigue. Teams may be able to provide this unique form of support due to experiencing a shared trauma, in that FHCPs, their teams, and patients are experiencing the same traumatic event in unison (Tosone et al., 2012; Young et al., 2021). Yet, our findings suggest that the social distancing measures enacted as a result of COVID-19 limited the ability of FHCPs to develop shared resilience. For some FHCPs, this developed as a result of policies that disabled informal team interactions, such as sharing lunch together; for other FHCPs, this was more starkly apparent as their practice moved entirely to telehealth, eliminating the opportunities for interpersonal interactions. Future research exploring experiences of shared trauma may shed light on how team members can facilitate shared resilience in response to the multiple layers of trauma associated with the COVID-19 pandemic, and should explore new models of fostering shared resilience to be considerate of the limitations COVID-19 has placed on team interactions.

As FHCPs described their experiences during COVID-19, they did not limit their reflection to just their experience as a provider. Instead, participants discussed experiences across multiple roles

and identities, including as providers, colleagues, leaders, friends, partners, daughters, and mothers. Women often manage multiple identities that each carry their own set of rules and boundaries (Gaither, 2018). During COVID-19, though, it seemed that each of those roles was intensified for FHCPs, leading to increased burden and emotional labor for participants. Participants also felt greater blurring of the boundaries between roles, which complicated their experience, perceptions of risk, and decision-making. For example, FHCP considerations around PPE and safety impacted not only their individual risk of acquiring COVID-19, but also the risk to their colleagues, spouses or partners, and children. Similarly, participants described the added burden they felt to correct misinformation about COVID-19 among their patients, friends, and family, and that this was motivated by the desire for people not only to have accurate clinical information (e.g. stemming from their role as a provider), but also to reduce the risk to themselves, their clinical colleagues, and their families (e.g. stemming from their roles as a colleague and family member). This experience compounded the uncertainty and anxiety that FHCPs felt, such that every decision and experience was felt across all facets of their life, and their roles could no longer be compartmentalized between work and home. These findings align with research on boundary theory, which refers to how people draw boundaries around the different areas of their lives, “to simplify and classify the world” (Ashforth et al., 2000; Dekel et al., 2016). Finding ways to either segment or integrate these boundaries allows clinicians to cope with traumatic events (2016). Prior to COVID-19, FHCPs may have found a healthy way to either segment or integrate work and home, but now that has become near impossible. The combination of limited self-care and blurring of professional boundaries are known antecedents of compassion fatigue (Peters, 2018). Future research should therefore explore how boundary theory and burnout are intertwined for FHCPs during COVID-19.

Lastly, these results illuminate a potential gap in how FHCPs and healthcare organisations conceptualize wellness resources. The majority of participants described wellness resources in terms of tools to support mindfulness (e.g. meditation apps and yoga classes). While participants appreciated the mindfulness tools their organisations promoted, they also cited a need for more practical resources to help them address the significant challenges that were contributing to their stress and burnout, as a result of COVID-19. Riethof et al. (2020) illuminate the broader implications of stress and the nuanced relationship between burnout and alexithymia among FHCPs, which further indicate the need for healthcare organisations to deepen their understanding and resources designed to foster individual and team resilience and well-being. Beyond mindfulness, participants were looking for resources to facilitate social and emotional support, especially through peer-to-peer interactions, and pragmatic resources to support challenges with work–life balance, childcare, and other pressures FHCPs felt from their home life. Participants described that while providing tangible resources (e.g. apps and classes) is helpful, part of wellness should also focus on creating a culture of support that enables FHCPs to develop that support organically as best suits their individual needs.

While this case study offers important insights, there are some limitations to acknowledge. First, our sample was limited to 15 participants, and while they reflected a diversity of backgrounds (demographic, geographic, and clinical), this sample cannot be considered representative of FHCPs broadly. It is also important to acknowledge that our three sites were all academic medical centers in urban locations, so the experiences of FHCPs in our sites may differ from those in other practice sites (e.g. community practices or rural locations). In addition, this study did not explore the known association between telehealth and burnout. More work is needed to support the learnings related to the relationship between telehealth and burnout, as FHCPs may be experiencing added stress due to the dual challenge of addressing needs of patients during the pandemic while learning a new mechanism for health service delivery. These limitations may impact the transferability of our findings to other contexts or settings where FHCPs practice. However, these learnings offer a foundation to build upon and

complement. For example, future research could investigate the experiences of FHCPs providing care in regions that are more recently experiencing a COVID-19 surge. Additionally, it may be beneficial to understand the experiences of male HCPs and particularly HCPs of any gender who are in two-provider households, as this work illuminated some of the added complexity this experience entails.

In summary, FHCPs experienced many impacts to their professional and home lives during COVID-19 that were further complicated by the complex nature of their roles and work environments. Their experiences offer important lessons about how to support the well-being of FHCPs currently and in future pandemics.

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## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest with this work.

## ETHICAL APPROVAL

Eligible and interested participants were asked to confirm their area of practice and provision of care during COVID-19 before being invited to join the study and participating in an informed consent process. All activities were reviewed by the respective institutional review boards of each of the three healthcare settings.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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