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Supporting the well-being of health care providers during the COVID-19 pandemic: The CopeColumbia response

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ABSTRACT

Objective: COVID-19 is an international public health crisis, putting substantial burden on medical centers and increasing the psychological toll on health care workers (HCW).

Methods: This paper describes CopeColumbia, a peer support program developed by faculty in a large urban medical center's Department of Psychiatry to support emotional well-being and enhance the professional resilience of HCW.

Results: Grounded in evidence-based clinical practice and research, peer support was offered in three formats: groups, individual sessions, and town halls. Also, psychoeducational resources were centralized on a website. A Facilitator's Guide informed group and individual work by including: (1) emotional themes likely to arise (e.g., stress, anxiety, trauma, grief, and anger) and (2) suggested facilitator responses and interventions, drawing upon evidence-based principles from peer support, stress and coping models, and problem-solving, cognitive behavioral, and acceptance and commitment therapies. Feedback from group sessions was overwhelmingly positive. Approximately 1/3 of individual sessions led to treatment referrals.

Conclusions: Lessons learned include: (1) there is likely an ongoing need for both well-being programs and linkages to mental health services for HCW, (2) the workforce with proper support, will emerge emotionally resilient, and (3) organizational support for programs like CopeColumbia is critical for sustainability.

1. Introduction

Coronavirus Disease 2019 (COVID-19) is a global pandemic and public health emergency with over 14.2 million cases and 600,000 deaths worldwide and rising as of July 19, 2020 [1]. The United States represents 26% of global cases, with New York City (NYC) the initial epicenter of the US COVID-19 pandemic [2]. At its peak in mid-to-late April 2020, > 150,000 cases had been reported in NYC, representing 17% of total cases in the US at the time [2–4]. As of July 19, NYC

confirmed over 218,000 cases and nearly 19,000 deaths [3]. Lessons learned may be critical for other settings experiencing similar surges.

NYC medical centers experienced substantial burden at the height of the pandemic as the number of individuals infected, and those requiring hospitalization and treatment in intensive care units (ICUs), threatened to overwhelm medical system capacity. With neither known treatments nor a viable vaccine, there were increasing concerns about scarcity of personal protective equipment (PPE) and limited quantities of critical medical equipment, including ventilators. Columbia University Irving

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Medical Center (CUIMC) is a large, urban, academic, tertiary care medical center located in Northern Manhattan. Patients come from throughout the tri-state area; the largest percentage inhabit the densely populated Washington Heights/Inwood and South Bronx communities with some of the highest COVID-19 prevalence rates in NYC [3]. CUIMC patients represent diverse ethnic-minority groups, who prior to the pandemic experienced high rates of racial, social, and healthcare disparities, including chronic health conditions that increase the risk of morbidity and mortality from COVID-19 [5]. In March 2020, CUIMC's health care workforce rapidly mobilized to address increasing demands and related health care challenges of COVID-19. At the peak of the NYC epidemic in mid-April, the total CUIMC inpatient COVID-19 cases was over 600, with over 225 on ventilators and as of June 3, there had been over 2200 admissions with over 450 deaths. Increased admissions necessitated the redeployment of staff to engage in patient care outside of their areas of expertise.

Compounding resource challenges was the potential emotional toll on health care workers (HCW), particularly those on the frontline [6–10]. Studies of first responders to previous disasters and pandemics (e.g., 9/11, SARS, MERS) suggest high rates of anxiety, depression, acute and post-traumatic stress reactions, and moral injury [11–16]. These responses have occurred both immediately after an event and, for some, after the acute crisis dissipated [12,13]. Importantly, these studies have also found that the majority will demonstrate resilience, highlighting the significance of preventive attention to emotional well-being [16–18].

Developing and disseminating strategies for enhancing resilience and well-being for HCW during the COVID-19 pandemic is critical [19]. At CUIMC, the Department of Psychiatry in collaboration with CUIMC leadership rapidly developed a multipronged, evidence-based approach to support the well-being of HCW; CopeColumbia interfaced with a broad range of providers and staff including physician faculty, residents and fellows, registered nurses, nurse practitioners, physicians' assistants, and non-clinical staff, whether working on the frontlines or remotely. CopeColumbia services aimed to provide peer support and enhance resilience as well as identify those in need of more formal mental health treatment.

We present the development, rationale, and description of the program including the CopeColumbia Facilitator's Guide [CopeColumbia Guide, unpublished]. Explored are common themes that emerged as the pandemic evolved, strategies offered to address them, and anticipated challenges to provider and staff well-being as CUIMC enters a reintegration and recovery phase. Finally, preliminary data are presented on the perceived benefits of the program, the ramifications of this work for prevention, and future directions.

2. Methods

2.1. CopeColumbia: program development and rationale

Recognizing the impending emotional needs of HCW working with COVID-19 patients, the Department of Psychiatry with support from CUIMC administration in partnership with ColumbiaDoctors, created CopeColumbia, a comprehensive program focused on providing peer psychological support, mitigating emotional fatigue, and enhancing resilience. Volunteer faculty members, including psychiatrists and psychologists, facilitated the program, bringing clinical and research expertise in cognitive behavioral therapy (CBT), acceptance and commitment therapy (ACT), group therapy, anxiety disorders, physician mental health, and trauma, as well as organizational psychology and leadership in crisis.

The CopeColumbia team considered services that would be acceptable to HCW physically and emotionally taxed by the pandemic. HCW tend to place their own self-care secondary to the needs of their patients and may be sensitive to the stigma of mental health care [20,21]. The goal was not to provide psychiatric treatment per se, but to promote

well-being and focus on prevention of burnout, acute stress disorder, and depression. Identification and referral of those in need of mental health treatment became a secondary outcome.

Three categories of service were developed. 1) Peer Support Groups are brief (30 min), department/division-specific structured sessions, delivered virtually. Although initially focused on attending physicians and residents, they quickly expanded to include all CUIMC clinical and non-clinical staff. A subset of groups were designed to target leaders in recognition of their unique stressors and their impact on the well-being of their teams. All groups offered a safe space in which to discuss challenges, promote team support, and present resilience-enhancing strategies from evidence-based treatments, particularly CBT and group problem-solving interventions. 2) One-to-One Peer Support Sessions (20 min) were also conducted. The goal and format of these sessions was similar to the groups with a brief discussion of challenges, followed by brainstorming around coping strategies and resilience. The individual format allowed more personalized discussion; facilitators could conduct brief screenings if significant distress was revealed, with referrals and linkage to formal mental health treatment. 3) To accommodate larger audiences and departmental needs, a series of Grand Rounds and Town Halls were also developed (for the purpose of this paper, we will refer to these collectively as "Town Halls"). Town Halls were 30–60 min virtually-presented talks, followed by Q&A, focusing on topics such as managing stress and anxiety, trauma, loss and grief, and strategies for supporting self-care and emotional well-being. For 24/7 access to support and resources, a CopeColumbia website (<https://www.cuimc.columbia.edu/copecolumbia>), served as a central address for information on CopeColumbia offerings, with a curated list of internal and external resources for HCW. The website included guidance on managing stress and anxiety, provided links to mindfulness, meditation, and exercise apps, and localized information on trauma and grief, parenting and caregiving in the context of COVID-19, maintaining resilience, accessing mental health services, and other support resources.

Announcements were sent via email to: 1) department chairs, who were encouraged to share the information with their faculty and staff; 2) the Graduate Medical Education (GME) office, who disseminated the information to program directors and trainees; and 3) faculty invested in promoting wellness. Contact information and the weekly schedule with the hours for the One-to-One Peer Support Calls were also available on the website. As the Peer Support Groups were the most highly utilized CopeColumbia service, we herein describe their evolution and the accompanying Facilitator's Guide in greater detail.

2.2. Peer support groups

2.2.1. Facilitators

Groups were initially led by 11 CUIMC Department of Psychiatry faculty: 5 psychiatrists and 6 psychologists. Additional facilitators were added with increasing group requests.

2.2.2. Group structure

Each group had a similar structure. Facilitators framed the session (5 min), encouraged participants to describe recent challenges (10 min), then transitioned to identifying ways to cultivate resilience, harnessing the power of the group to foster teamwork and community coping and support (10 min), and concluded with appreciative inquiry (e.g., what went well this week, expressions of gratitude), a key component of resilience programs (5 min).

2.3. CopeColumbia guide: facilitator road map

The facilitator guide drew upon evidence-based principles from peer support interventions [22], stress and coping models [23], problem solving therapy [24], cognitive behavioral therapy (CBT) [25,26], and acceptance and commitment therapy (ACT) [27]. Facilitators were

Table 1
Stages of the pandemic, themes raised and facilitators' interventions in CopeColumbia peer support groups.

Themes	Interventions	Primary sources for concepts and strategies
<p>Stage 1: NYC Pandemic onset (March)</p> <p>Anxiety and uncertainty:</p> <ol style="list-style-type: none"> 1) <u>Fear of the virus</u> predominated early group sessions given little to no information on pathogenesis, course, modes of transmission, and clinical presentations of COVID-19, nor knowledge, development, or availability of effective treatments and vaccine. 2) <u>Concerns for safety</u>. Personal concerns about contracting the virus, but more so concerns about transmitting virus to family (spouse, children, elderly parents), concerns about limited PPE and hospital resources (isolation rooms, ICU beds, ventilators). 3) <u>Concerns about competency, and novel work conditions</u> included anxiety about redeployment and adaptation to telehealth for service delivery of non-COVID19 patients. For those on quarantine or working remotely, there was guilt about “not doing enough” or being present on medical units. 4) <u>Increased work and emotional burden due to scope of cases</u>: Unprecedented and swelling rates of patient admissions, severity of illness and frequency of deaths. 	<ol style="list-style-type: none"> 1) <u>Labeling and validating emotions</u>. Normalizing and validating the human experience of a range of emotions including fear, anxiety, frustration, guilt, and anger that may occur during unprecedented times. Reminder that each individual responds in their own way, and that there are no ‘right’ or ‘wrong’ reactions. 2) <u>Control</u>. Identify what we can and cannot control, focusing on the former (a key component of ACT philosophy). 3) <u>Contribution</u>. Identifying and recommitting to professional values, also respecting the diversity of what we each contribute; recognizing not everyone can serve on the front-lines. 4) <u>Support</u>: Critical to coping is social support and reminding HCWs that they are not alone; use of others in the peer groups allowed a focus on this strategy. 5) <u>Self-care</u>. Like oxygen masks on an airplane, HCWs must prioritize their own self-care in order to care for their patients. This is not selfish, but essential. Facilitators respected the diversity of needs of HCWs, also recommend limiting news exposure and stressing the importance of sleep and nutrition. 6) <u>Resilience</u>. Facilitators remind participants about their own resilience, defined as positive adaptation in the face of stress or disruptive change. 	<ol style="list-style-type: none"> 1) Barlow, D., Farchione, T., Sauer-Zavala, S., Murray Latin, H., Ellard, K., Bullis, J., Bentley, K., Boettcher, H., & Cassiello-Robbins, C. (2017). Unified Protocol for Transdiagnostic Treatment of Emotional Disorders: Therapist Guide. New York, NY: Oxford University Press. 2) Haley J. The Jossey-Bass social and behavioral science series. Problem-solving therapy. 2nd ed. San Francisco: Jossey-Bass; 1987. 3) Hayes SC, Strosahl KD, Wilson KG. Acceptance and commitment therapy: an experiential approach to behavioral change (2nd Ed). New York: The Guilford Press; 2016. 4) Zinbarg, R., Craske, M., & Barlow, D. (2006-03). Mastery of Your Anxiety and Worry: Therapist Guide. New York, NY: Oxford University Press. Retrieved 19 Jul. 2020,
<p>Stage 2: The NYC Surge (April–May)</p> <p>Trauma, loss and grief</p> <ol style="list-style-type: none"> 1) <u>Managing trauma-related emotional reactions</u>. This included numbing, distancing, anger, sadness; increased guilt and helplessness. 2) <u>Grief</u>. Unprecedented number of patient deaths compounded by personal losses; overwhelming sadness when facilitating (via phone or video) patients' last contact with family members. 4) <u>Guilt</u>. Guilt was expressed by personnel not working on the front-lines or who felt unable to do their jobs adequately given lack of treatments, limited PPE, etc. 5) <u>Stress and managing work/life responsibilities</u>. Volume of DNI/DNR orders; redeployment adjustment; increased burden due to loss of support resources for child care and other home-based help; stress of managing health care delivery and schooling of children; increased isolation and loneliness for those living alone and/or having prolonged quarantine. 6) <u>Hope and support</u> as PPE resources were delivered or adapted. 	<p>In addition to prior strategies, facilitators offered novel strategies to address the following:</p> <ol style="list-style-type: none"> 1) <u>Expected responses to grief and trauma</u>. Education about the grief response or the trauma response—normalizing the breath of emotions and range of responses that could be experienced. 2) <u>Safely riding out waves of emotions</u>. Giving permission to “dose grief” and choose when to pause and acknowledge waves of feelings and when to stay the course with a task. 3) Recommitting to self-care. 4) <u>Knowing and owning professional values</u>. In the context of so much illness and death, identifying aspects of the job that are particularly meaningful and remembering why one chose medicine as a career. 5) <u>Building community</u>. Countering COVID-19 induced isolation by actively connecting to others and using the groups to demonstrate how team sharing can promote individual and group emotional strength and wellness. 6) <u>Resilience</u>. It became important to remind participants that resilience does not mean “snapping back” to how you were, but learning to integrate the experiences into who you are and growing with it, as well as recognizing individual strengths/assets. 7) <u>Reframing what providing “help” to the medical center means</u>. Not everyone can or should be on the front lines. There are many tasks that medical centers need completed to stay afloat and rotations are needed on the front lines as well as behind or away from the medical units. Those with medical conditions for whom the risk of illness outweighed the benefit needed to serve in different but still important capacities. Validating everyone's role and naturally occurring peer support became an important task of the facilitators. 	<ol style="list-style-type: none"> 1) Bonanno, G. (2010). The other side of sadness: What the new science of bereavement tells us about life after loss. New York: Basic Books. 2) Foa, E., Hembree, E., Rothbaum, B., & Rauch, S. (2019). Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Experiences - Therapist Guide. New York, NY: Oxford University Press. 3) Lloyd, J. Bond FW & Flaxman PE (2013) The value of psychological flexibility: Examining psychological mechanisms underpinning a cognitive behavioral therapy intervention for burnout, Work & Stress, 27:2, 181–199 4) Shear MK, Reynolds, CF, 3rd Simon N M, Zisook S, Wang Y, Mauro C, et al. Optimizing treatment of complicated grief: a randomized clinical trial. JAMA Psychiatry. 2016; 73(7), 685–694. 5) Smits, J., & Otto, M. (2009–06). Exercise for Mood and Anxiety Disorders: Therapist Guide. New York, NY: Oxford University Press.

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Table 1 (continued)

Themes	Interventions	Primary sources for concepts and strategies
<p>Stage 3: Reintegration and recovery (June and July) Delayed trauma and grief responses; anxiety and uncertainty, revisited</p> <p><u>1) Ongoing adaptation and change at work.</u> Living with ever evolving new realities and routines at work and home; anticipatory anxiety concerning challenges as the hospital reopens elective services and office-based care; mismatch between message of hope about reopening and acknowledgment of reality of persisting inpatient volume of COVID cases; uncertainty regarding the expected “second surge” and having to do this again.</p> <p><u>2) Frustration and fear related to social and public health issues in the country.</u> This included the politicizing of the virus; lack of national consistency in implementing recommended containment strategies for the public; delayed trauma and grief reactions; fear and anxiety related to civil unrest and racism.</p>	<p>Facilitators continued to focus on coping as new routines, information, and guidelines were/still are being presented by hospital administration and the government.</p> <p>1) <u>Review of coping strategies.</u> Recognizing what is in one's control; valuing one's contribution; maintaining self-care and social support; finding meaning in one's work and values, building resilience.</p> <p>2) <u>Advocacy.</u> Facilitators recognized the importance of addressing issues raised about systemic problems, identified in the workplace or community. Validation of HCWs' concerns and brainstorming potential solutions while facilitating ways to communicate to supervisors and administrators; focusing on what providers could do to address and change problems on a local (i.e., in a division or unit) and systemic level (department or center-wide) became important.</p> <p>3) <u>Giving voice to stress-related racial and social injustice issues.</u> Facilitators framed groups as safe spaces to discuss not just COVID, but also experiences of racial and social injustice, and related coping strategies</p> <p>3) <u>Referrals.</u> Provided resources as requested related to grief, trauma, loss, and a range of mental health problems that may have existed prior to COVID, but were exacerbated by the significant trauma. Referrals for mental health treatment were made as needed.</p>	<p>1) Hayes, S.C. (2019). A liberated mind: How to pivot toward what matters. New York: Avery Press.</p> <p>2) Sue, D. W. (2015). Race talk and the conspiracy of silence. Hoboken: Wiley.</p>
<p>Stage X: the unexpected <u>Suicide of a HCW.</u> Grief, sadness, shock, guilt, and anger.</p>	<p>In response to loss of a colleague, facilitators worked to distill psychoeducation to HCW and implement evidence-based strategies</p> <p>1) <u>Psychoeducation</u>, including information about suicide risk, difficulty with prediction and prevention, and specific data regarding HCW/physicians being at increased risk of suicide.</p> <p>2) <u>Stress-diathesis model of suicide</u>, including biological vulnerability.</p> <p>3) Management of grief and bereavement reactions</p> <p>4) <u>Acknowledging and reframing guilt</u> (“What did I miss”) and <u>anger</u> (“Why wasn't this person helped by the system?”)</p> <p>5) <u>Addressed Stigma</u> related to help seeking of medical professionals, particularly physicians; emphasized the availability and importance of asking for help and seeking treatment; reinforced confidentiality in help-seeking and resources for accessing support.</p>	<p>1) Joiner, T. (2007). Why people die by suicide. Harvard University Press.</p> <p>2) Turecki G, Brent DA, Gunnell D, et al. Suicide and suicide risk. <i>Nat Rev Dis Primers</i>. 2019;5(1):74. Published 2019 Oct 24. doi: 10.1038/s41572-019-0121-0</p> <p>3) Oquendo MA, Sullivan GM, Sudol K, et al. Toward a biosignature for suicide. <i>Am J Psychiatry</i>. 2014; 171(12): 1259–1277. doi: 10.1176/appi.ajp.2014.14020194</p> <p>4) Duteil F, Aubert C, Pereira B, et al. Suicide among physicians and health-care workers: A systematic review and meta-analysis. <i>PLoS One</i>. 2019;14(12):e0226361. doi: 10.1371/journal.pone.0226361</p>

encouraged to not pathologize group members' experiences, but rather to acknowledge the exceptional circumstances of COVID-19, normalize and accept a range of feelings, provide opportunities to process those feelings, and identify coping strategies and examples of resilience. Support groups for leadership also provided space for discussing the challenges of supporting the well-being and performance of faculty and staff. Specific examples of techniques used in relationship to identified stressors/challenges are presented in Table 1.

2.4. Group supervision

In weekly peer supervision, facilitators had the opportunity to share experiences and seek guidance about navigating complex issues (e.g., managing anger). These sessions also provided support for facilitators and modeled some of the peer support functions of CopeColumbia. Finally, the supervision sessions allowed expert consultations from CUIMC faculty on topics such as trauma, loss, and grief.

2.5. Data collection

Two mechanisms were established to collect group data on themes raised by participants, facilitator interventions, and the perceived impact of the program: 1) weekly peer supervision discussions provided

qualitative information and clinical expert consensus, and 2) an anonymous, confidential and voluntary post-group brief Qualtrics survey (≤ 2 min) link was emailed to participants who volunteered their contact information. No personal identifying information was collected in the survey and no chart notes were taken on the groups. The Institutional Review Board did not consider this work in need of Human Subjects Review.

3. Results

Between March 23 and June 26th, 2020, 186 groups, consisting of 1–30 participants and representing 40 CUIMC departments were conducted (in addition to 43 Town Halls, with over 1500 participants in total, and 141 One-to-One calls). Although initially presented as single sessions, group participants and facilitators determined the need/desire for additional meetings, which ultimately ranged from 1 to 13; 30 groups met once, 22 groups met 2–4 times and 9 groups met ≥ 5 times. Among physician groups, faculty and residents mostly met separately.

Across CopeColumbia services, thematic similarities emerged, with suggested strategies for coping evolving with the pandemic. Between March and June, increasing case rates, CUIMC caseloads and deaths during the height of the pandemic, and post surge experiences demarcated different phases of experience. For ease of presentation, we

present key issues/themes and facilitator responses in the text and in Table 1, organized by three phases: (1) the pandemic begins, (2) the surge, and (3) reintegration and recovery.

3.1. Stage 1: the pandemic begins

3.1.1. Themes/challenges: anxiety and uncertainty

CUIMC began caring for its first known COVID-19 patient in early March with CopeColumbia launched March 16, 2020, shortly after the New York Governor mandated all non-essential workers to shelter in place, and all outpatient visits and elective procedures were canceled. In these early weeks, the primary emotion expressed by HCW was anxiety. Themes related to uncertainty included: a) virus novelty and lack of knowledge about the spectrum of symptoms; b) absence of effective treatments or vaccines; c) high level of contagion, with changing views on transmission mechanisms; d) fears about contracting the virus; and e) anxiety about transmitting the virus to family, with significant conflict between professional and personal responsibilities. Some HCW segregated themselves from family members, increasing isolation and decreasing social support. As “the surge” approached and talk increased of redeployment to the “front lines”, so too did anticipatory anxiety and fear about: a) competence to serve in new roles with limited training; b) rapid increases in patient volume and associated demands; c) insufficient PPE; and d) possible rationing of care with resulting ethical dilemmas [21].

3.1.2. Facilitators' interventions

The CopeColumbia Facilitator Guide that emerged during this phase was a collaborative effort by the CopeColumbia team, experienced in clinical research and service delivery. Recognizing the need for relatively brief approaches, the team identified concepts grounded in evidence-based research and practice, distilling techniques and strategies of high utility that were pragmatic, flexible and easily adaptable for a range of needs and clinical issues. Topics included: anxiety [28,29], trauma [30], stress [31], and coping during extraordinary events (pandemics, natural disasters, and man-made events) [32–34]. The Facilitator's Guide also required a specific focus on supporting and preventing burnout in HCW and first-responders [33,35–37]. Group facilitators employed evidence-based strategies for coping including labeling and validating emotions to normalize and make space for a range of reactions including fear, anxiety, frustration, guilt, and anger. Principles from CBT for anxiety were reinforced with emphasis on controllability [25,26]. Key components of ACT including accepting the human condition and identifying and recommitting to professional values [27], reinforcing peer or social support, and reminding HCW that they were not alone were also critical during these sessions. Practical information supporting self-care including managing sleep, exercise, nutrition, and maintaining routines and recreation was provided. Facilitators explicitly identified participants' expressions of their own resilience (Table 1).

3.2. Stage 2: the surge

3.2.1. Themes/challenges: trauma, grief, and loss

With the surge, many HCW were exposed to or infected by COVID-19, requiring quarantine and self-isolation. Others worked remotely due to personal risk or being considered “non-essential” HCW. Feelings of guilt and helplessness related to not being on the frontlines emerged. The daily 7 PM cheering for HCW that quickly established itself as a hallmark of NYC's gratitude, while meaningful for some, became a source of guilt for others struggling to live up to professional ideals. For some, there was also a loss of professional role, purpose, and value. In the Emergency Department (ED) and ICUs, the volume, frequency, and intensity of death was overwhelming. Themes of grief, loss, and trauma loomed large due to the severity of illness and volume of patient deaths and compounded by personal losses of family members and friends.

Some HCW expressed anger, feelings of moral distress as healers without known treatments or ways to prevent so many deaths, or feeling numb. HCW became liaisons to patients' families, holding communication devices that enabled loved ones to talk to patients, establish healthcare directives, and sometimes say goodbye. Pre-COVID-19, HCW provided families with privacy for these conversations. During COVID-19, HCW often provided the only link between families and patients. HCW described these moments as excruciatingly sad, but also deeply meaningful.

During the NYC pandemic's peak, HCW expressed thoughts related to the power of the team and glimmers of hope. Volunteer HCW arrived from other states to assist. ICU beds within the hospital were doubled, field hospitals were rapidly constructed, and PPE and ventilators became available. For many, the anticipatory anxiety prior to redeployment proved worse than actual assignments. For example, psychiatry residents sent to the ICU served as liaisons between the clinical team and patients' family, and some radiologists became x-ray technicians. For others, re-deployment was more stressful than anticipated. Pediatric HCW, largely spared from treating children with COVID-19, were redeployed to care for severely ill, adult COVID-19 ICU patients. Yet, HCW expressed how these challenging experiences were also deeply meaningful; feelings of pride emerged through the collaborations and sense of staff unity.

Lastly were challenges for staff who also had young children, or children at home due to school closures. There was stress around balancing work, home schooling or childcare, new technology (on-line classes and meetings), and the lack of boundaries and structures that normally exist.

3.2.2. Facilitators' interventions

Guided by research on the treatment of complicated grief [38], HCW were taught to normalize the range of emerging emotions and consider “dosing their grief,” choosing when to pause and acknowledge waves of feelings and when to stay the course with a task before returning to self-care. In addition, recommitting to professional values including the decision to enter the healthcare field, discussing meaningful aspects of work, and countering COVID-19-induced isolation by actively connecting to others were reinforced as ways to enhance resilience. The concept of resilience was presented not as “snapping back” to how you were before the pandemic, but rather, learning to integrate the experiences into an evolving self-identity and grow with the changes [39].

Finally, validating everyone's role and contributions to CUIMC's efforts became an important facilitator role as we reframed the meaning of providing “help” to the medical center. Though not everyone can or should be on the front lines, all team members bring value to the effort.

3.3. Stage 3: reintegration and recovery

3.3.1. Themes/challenges

CUIMC is currently in this stage. As the surge has ebbed, the institution, like the community, is reorienting toward re-opening and the future. But for those still on the front lines, the pandemic remains present. Themes of confusion have emerged (e.g., how can elective surgeries start up again when some ORs are still ICUs, or when so many COVID-19 patients continue to be in the hospital?). Anxieties about next waves and future surges are being expressed and acceptance of a “new normal” of ongoing uncertainty is taking hold. New workflows, including vastly increased use of telemedicine and ongoing social distancing plans are being implemented with concerns about work-life balance. Fears about contagion and its ongoing impact remain, including the difficulty of socially distancing on mass transit and in small spaces like elevators. For HCW who have been at the front lines, there is also a profound sense of exhaustion.

Along with the relief of surviving the NYC pandemic peak, previously suppressed emotions of grief, loss, and trauma have emerged.

Disillusionment is described, as the strong sense of teamwork experienced during the surge gave way to longstanding departmental rivalries. A high level of anger has been noted, particularly directed toward systems that were seen as inadequate in the protection of patients and providers. Finally, as described by others [40], increased distress accompanied the recognition that COVID-19 infection and mortality rates were highest in racial and ethnic minorities, reflecting pre-existing racial and social disparities in healthcare. Relatedly, in the wake of the protests and social unrest related to societal racism, there was much discussion about the destructive effects and the emotional toll of structural racism on providers, particularly providers of color.

3.3.2. Facilitators' interventions

All of the strategies employed in previous stages are also used in this phase. Additionally, facilitators are emphasizing self- and team-based advocacy in acknowledging systemic problems and brainstorming/facilitating communication about those aspects providers can effectively change moving forward. Groups for leaders/managers encourage participants to think about how they can improve team cohesion (e.g., building connections, asking check-in questions, creating space to express gratitude for colleagues, highlighting team accomplishments), given that this dynamic reduces stress by fostering interpersonal warmth, empathetic understanding, feelings of belonging, and mutual support among team members. Screening for burnout, anxiety, depression, and trauma reactions and connecting HCW to mental health care continue to be a focus.

3.4. Stage X: unexpected events and issues

“Stage X” can occur at any time. For CUIMC, a critical event occurred shortly after the pandemic peak—the death by suicide of a beloved colleague known to many on the front lines. The loss was felt broadly across the medical center. With CopeColumbia already activated and engaged in work with the relevant department, we were quickly able to respond to the department's need for support during the acute grief period, through a Town Hall, as well as individual and group sessions. In many ways, the emotional response represented an amplification and focusing of the distressing emotions expressed by HCW up to that point. Deep sadness, anger, and confusion about how this could happen were compounded by grief and guilt focused on how this death may have been prevented, as well as acknowledgement of everyone's exhaustion and fears about each other's mental health.

3.4.1. Facilitators' responses

Psychoeducation about physician suicide became a critical component of this phase including the multiple pathways of causality, managing difficult and often unanswerable questions, as well as the range of emotional responses in those left behind. Colleagues with expertise in suicide provided guidance in delivering information and support to HCW as well as on how to mitigate the risk of contagion and future suicides [41,42]. Opt-out one-to-one sessions became critical confidential spaces for HCW to express a range of emotions, including grief, and for destigmatizing mental health treatment.

3.5. Preliminary CopeColumbia survey data

During the group, facilitators asked participants who were willing to take a post-group survey to enter their email address in the chat function of the Zoom or WebEx platform. Survey links were sent to those who volunteered their email addresses. In some cases, a team leader/manager sent the link to participants. Across all weeks up through June 26, 124 participants completed the survey. Due to the anonymity of the survey, we cannot identify how many unique participants this represents. The average emotional distress rating during the initial phase of the pandemic (3/23–04/03, N = 25) was 2.6 ± 0.9 (range 0–4) with 68% of participants rating their emotional distress as “quite a bit”

Table 2

Comparison of COVID-19 related concerns (yes/no) from beginning of Stage 1 (first 25 responses) to end of Stage 3 (last 25 responses).

Concern	% Endorsing Early in the Pandemic (N = 25)	% Endorsing Late in the Pandemic (N = 25)
Personal Health	92%	76%
Health of Family and/or Close Friends	100%	88%
Work environment/Safety of Work environment	96%	76%
Job Responsibilities	96%	80%
Financial Stability	60%	70%
Impact on non-work activities	80%	76%

or “extremely.” Perceived helpfulness of the group was high 2.9 ± 1.0 (range 1–4) with 76% rating helpfulness as “quite a bit” or “extremely.” During the last weeks (05/26–06/26, N = 25), average emotional distress had significantly decreased ($2.0 + 0.8$, $p = 0.03$), but helpfulness of the group remained unchanged ($2.5 + 1.1$, $p = 0.29$). All respondents with the exception of two reported that they would recommend the group to a colleague.

Among the entire sample (N = 124), 72% of respondents acknowledged exposure to COVID-19, 36% said they had been tested and 11% reported testing positive. While individuals were concerned about their own health, their primary concern was the health of family members (Table 2).

4. Discussion

Cities significantly impacted by COVID-19 witnessed enormous strain on medical systems and providers, with an increasing awareness of the importance of supporting the emotional well-being, health, and capacity of HCW. CopeColumbia is one program developed to address the mental health challenges of the COVID-19 pandemic for a major medical center at the epicenter of the early US epidemic. As the pandemic evolved, so too did emotional experiences. CopeColumbia services focused on enhancing resilience and being alert to mental health effects. This was accomplished by providing a safe opportunity for participants to describe their feelings, while simultaneously offering coping strategies grounded in evidence-based approaches, harnessing the power of the group to foster a sense of community and reduce feelings of social isolation. This work, reflected in the CopeColumbia Facilitators' Guide is grounded on the premise that HCW are psychologically strong, and with proper support, most will emerge resilient and intact, although changed. In fact, this has been a critical lesson learned from CopeColumbia.

Also recognized is the continued need for mental health screening and treatment; studies in other areas have identified the post-acute crisis period as a time for heightened risk for depression, anxiety, and post-traumatic stress disorder [12,13]. Currently, an increase in mental health services utilization is anticipated as the crisis in NYC dissipates leaving time to experience emotions and the full impact of the pandemic's effects or new challenges. For example, as of this writing, the country is struggling with the devastating effects of racism and bias, as well as an understanding of its impact on systems, including health care [5,43]. CopeColumbia groups have been positioned to offer a safe, supportive space for individuals to give voice to their concerns. Importantly, a key lesson of CopeColumbia has been that by having mental health providers as facilitators, there exists the capacity to recognize and respond when a participant might need a higher level of mental health care. In turn, it is hoped that experiencing mental health providers as peers contributes to the de-stigmatization of mental health treatment.

This paper describes the development and work of CopeColumbia with some pilot survey data on perceived helpfulness. Given that

CopeColumbia was developed during a rapidly evolving situation, we prioritized addressing clinical needs over research methods. Thus, our program evaluation has several limitations. Because of our choice to prioritize anonymity of participants, we only have data on those who voluntarily provided email addresses. Participants in recurring groups may have completed the survey multiple times. Therefore, we don't know the universe of potential respondents and cannot calculate the response rate.

We believe there are several future directions for this work. First, it would be valuable to more rigorously evaluate the impact of the CopeColumbia program on HCW outcomes, and to advance our understanding of the most helpful services and mechanisms. Preliminary survey data were encouraging, suggesting that our intervention was perceived as “helpful.” However, we did not objectively or systematically assess changes in psychological well-being pre and post intervention, thus cannot definitively comment on the impact of CopeColumbia. In assembling our peer support group model, we drew from multiple evidenced-based treatments. While grounded in data-driven principles, we cannot identify which components may have been the most helpful, for example, the cognitive reframing approach drawn from CBT, or the acceptance of focusing on what one can control from ACT. Psychological first aid (PFA) principles are consistent with many of our recommended interventions, but whether our program offers distinct benefit compared to PFA is unknown. Future studies on the efficacy, cost effectiveness and mechanisms of action of programs such as CopeColumbia are critical to the field given the current limited evidence base.

Second, there is a need to address known barriers and promoters of HCW seeking mental health treatment, including time constraints, costs, stigma and career concerns [44,45]. We aimed to address these barriers by offering brief services, available at no cost, administered virtually, prioritizing anonymity and voluntariness. To decrease the stigma related to help-seeking, we emphasized that the virus novelty and significant unknowns (e.g., treatment, spectrum of symptom presentation, etc.) made asking for help necessary, and not a sign of weakness. Despite these efforts, there were likely many in need who did not participate.

Third, dissemination of information about CopeColumbia could be enhanced. Some departments utilized CopeColumbia more than others, typically because someone in a leadership role advocated for well-being efforts and included CopeColumbia programming among their teams. We did not extensively advertise beyond our initial outreach efforts. Studies of factors that result in greater promotion of services and greater acceptability are needed.

Fourth, there are likely differences between virtual and in-person sessions that we need to understand. Pre-COVID-19, telehealth platforms were slowly being adopted, with moderate pockets of resistance from the behavioral health community. However, with the onset of COVID-19 and sheltering-in-place policies, rapid implementation occurred. It is likely that there are important clinical observations (e.g., body language) or interventions that might have occurred if our groups had been in-person yet were missed because participants were not in full view or did not use video. We cannot know whether these missed opportunities contributed to a changed outcome. Although we were not presented with an acutely distraught or suicidal participant and we did have safety plans in place for addressing suicidality/self-harm, it gives us pause to think about how issues of safety can be effectively addressed virtually. Studies of telehealth platforms, including telepsychiatry are emerging [34,46,47] and needed to inform future initiatives.

Nonetheless, the outpouring of peer support, team-work and gratitude that has helped HCW not just to survive but thrive has been humbling for the CopeColumbia team. With the increased focus on HCW mental health [48,49], the team believes this pandemic has highlighted an ongoing need. To this point, the issues of sustainability are critical to address. The CopeColumbia program was developed and supported through extensive and persistent efforts by faculty who

volunteered their time during the shutdown of the pandemic. But with the re-opening of the medical center, time for these volunteer activities will be greatly reduced. Yet the need for HCW wellness activities and mental health support will persist and even increase, requiring an organizational investment to sustain these efforts. Moreover, other barriers remain related to mental health stigma and reluctance to seek help specifically among HCW and physicians, such as schedules that limit time for self-care, and cultures that may not focus on the role of emotions, asking for help, or the importance of compassion for each other. We have an opportunity and responsibility to prevent the “parallel pandemic of emotional harm” (Dzau and colleagues, 2020) and promote the well-being of our health care providers [48].

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