Physicians' Stress and Work-Related Wellbeing During COVID-19:

Qualitative Insights from Four U.S. Cities

Mara Buchbinder PhD
UNC-Chapel Hill
Department of Social Medicine
Center for Bioethics

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Acknowledgments

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- We are grateful to the physicians who took the time to share their experiences with us.

The Team

Nancy Berlinger, The Hastings Center, Co-I

Tania Jenkins, UNC, Co-I

John Staley, UNC, Co-I

Alyssa Browne, UNC, RA

Lily Goldberg, UNC, RA

Liza Buchbinder, UCLA, consultant

Ken Goodman, U of Miami consultant

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Why we did this study

- Physicians are at high risk for occupational stress and burnout (Mata et al. 2015; NAM 2019; Shanafelt et al. 2012; Shanafelt et al. 2014).
- Interventions targeting physicians' individual resilience have consistently fallen short (West et al. 2020; Panagioti et al. 2017).

- **COVID-19 has made things worse:**
  - 76% of US healthcare workers reported burnout in September 2020 (up to 30-54% in 2019) (NIHCM Foundation 2021).
  - Physicians globally have reported increased levels of depression, anxiety, and PTSD (Vilovic et al, 2021; ACEP 2021; Greenberg et al. 2021; many more studies with similar findings).

- Researchers are calling for systems-based approaches—beyond individual "heal thyself" interventions—to prevent or mitigate foreseeable occupational stress (NAM 2019; Goroll 2020; Carayon et al. 2019; Sinsky et al. 2020; Vercio et al. 2021).

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Study To Examine Physicians' Pandemic Stress

- **Aim 1: Describe** the relationships among the societal-, institutional-, professional-, and individual-level factors shaping **physicians' perceptions of moral stress** during the COVID-19 pandemic, including and beyond initial outbreaks.
- **Aim 2:** Assemble a conceptual framework that **maps sources of moral stress** for physicians.
- **Aim 3: Develop and disseminate evidence-based recommendations,** with expert panel input, to respond to moral stress in physicians and safeguard their personal and professional integrity during pandemic response and beyond.

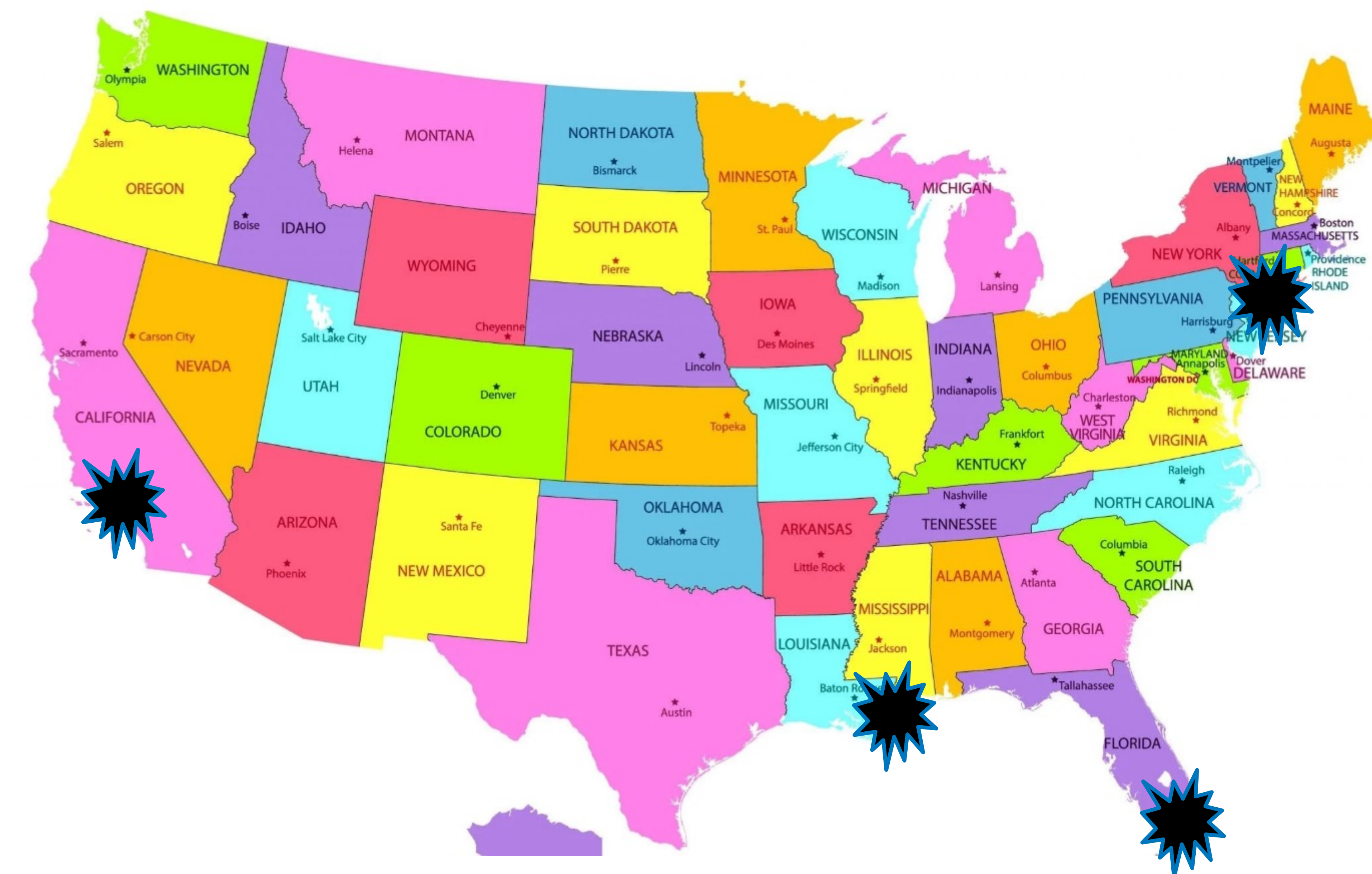
- **Aim 1: Describe** the relationships among the societal-, institutional-, professional-, and individual-level factors shaping workplace conditions during the COVID-19 pandemic and physicians' perceptions of occupational health and wellbeing.
- **Aim 2:** Identify systems, professional, institutional, and individual level characteristics that protect physicians' occupational health and wellbeing during the COVID-19 pandemic.
- **Aim 3: Develop and disseminate evidence-based recommendations** to protect physicians' occupational health and wellbeing during normal and crisis conditions, with expert panel input.

Research design and methods

- Comparative project on physicians caring for hospitalized COVID-19 patients in 4 American cities.

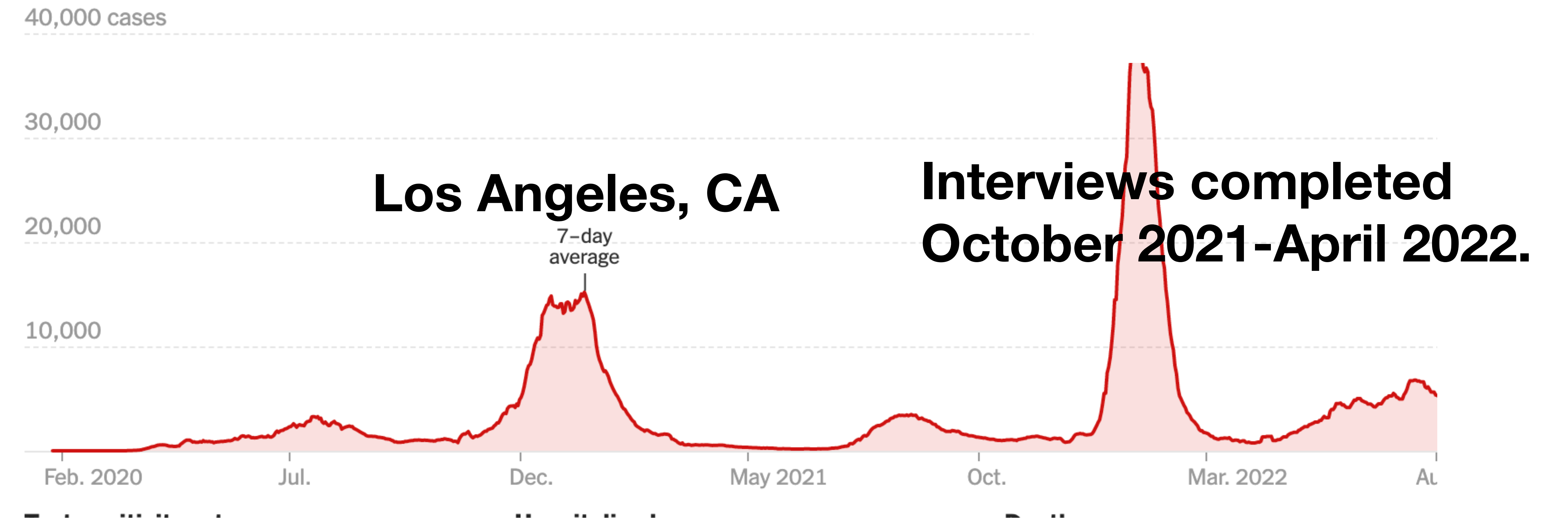
- **<u>Methods:</u>** qualitative, semi-structured interviews conducted over Zoom lasting 60-90 min each.

- **<u>Question domains</u>**:
  - (1) Personal background
    (2) Onset of the COVID-19 crisis
    (3) Institutional practices and policies
    (4) Working during the pandemic
    (5) Personal wellbeing during the pandemic

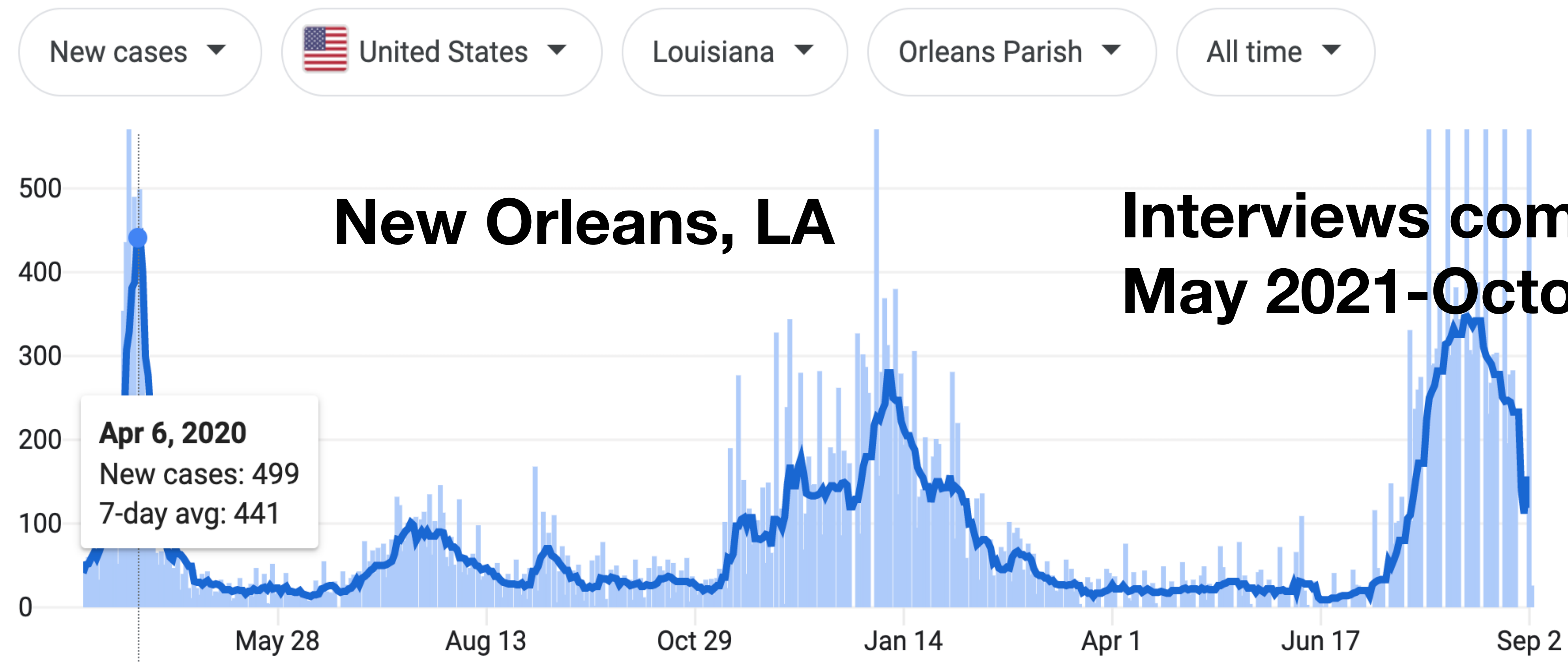


Selection of cities

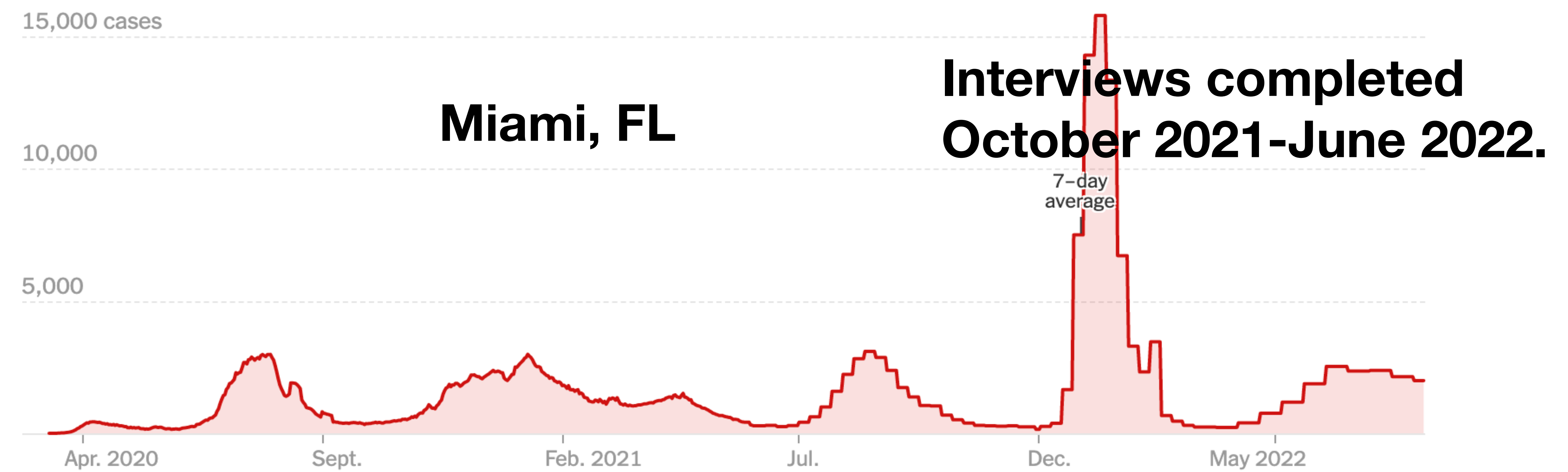
Interviews completed Feb 2021-July 2021.



Interviews completed October 2021-April 2022.



Interviews completed May 2021-October 2021.



Interviews completed October 2021-June 2022.

Sample: Greenwall

Participant characteristics (n = 79)	n (%)
Age	
30-39	34 (43)
40-49	33 (42)
50-64	11 (14)
65+	1 (1)
Gender	
Female	46 (58)
Male	33 (41)
Race	
White	62 (79)
Black or African American	2 (3)
Asian	15 (19)
Ethnicity	
Non-Hispanic	75 (95)
Hispanic	4 (5)
Medical specialty	
Internal medicine/hospital medicine	29 (37)
Emergency medicine	19 (24)
Pulmonary/critical care	18 (23)
Palliative care	5 (6)
Other (redeployed)	8 (10)
Mean years practicing medicine post-residency	9.8

	New York City (n=40)	New Orleans (n=39)	Total
Hospital type			
Academic	18 (45)	23 (59)	41 (52)
Community	7 (18)	10 (26)	17 (22)
Public	15 (38)	6 (15)	21 (27)
Hospital funding structure			
Voluntary nonprofit	25 (63)	19 (49)	44 (56)
Proprietary	0 (0)	13 (33)	13 (17)
Governmental (city, federal)	15 (38)	7 (18)	22 (28)
Safety net status	20 (50)	10 (26)	30 (38)
Hospital bed count			
0-200	2 (5)	12 (31)	14 (18)
201-700	9 (23)	17 (44)	26 (33)
701-1000	23(58)	10 (26)	33 (42)
1001+	6 (15)	0 (0)	6 (8)

- New York City: 14 hospitals total
- New Orleans: 9 hospitals total

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Sample: NIOSH

Participant characteristics (n = 66)	n (%)
Age	
20-29	2 (3)
30-39	35 (53)
40-49	15 (23)
50-64	11 (17)
65+	2 (3)
Not reported	1 (2)
Gender	
Female	34 (52)
Male	32 (48)
Race	
White	40 (61)
Black or African American	2 (3)
Asian	20 (30)
Biracial	3 (5)
Ethnicity	
Non-Hispanic	55 (83)
Hispanic	11 (17)
Medical specialty	
Internal medicine/hospital medicine	24 (36)
Emergency medicine	12 (18)
Pulmonary/critical care	17 (26)
Palliative care	8 (12)
Other	5 (8)

	Los Angeles (n=36)	Miami (n=30)	Total
Hospital type			
Academic	12 (33)	15 (50)	27 (41)
Community	17 (47)	4 (13)	21 (32)
Public	7 (19)	11 (37)	18 (27)
Hospital funding structure			
Voluntary nonprofit	14 (39)	18 (60)	32 (48)
Proprietary	0	1 (3)	1 (2)
Governmental (city, federal)	22 (61)	11 (37)	33 (50)
Safety net status	7 (19)	12 (40)	19 (29)
Hospital bed count			
0-200	4 (11)	3 (10)	7 (11)
201-700	32 (89)	15 (50)	47 (71)
701-1000	0	2 (7)	2 (3)
1001+	0	10 (33)	10 (15)

- Los Angeles: 14 hospitals total
- Miami: 6 hospitals total

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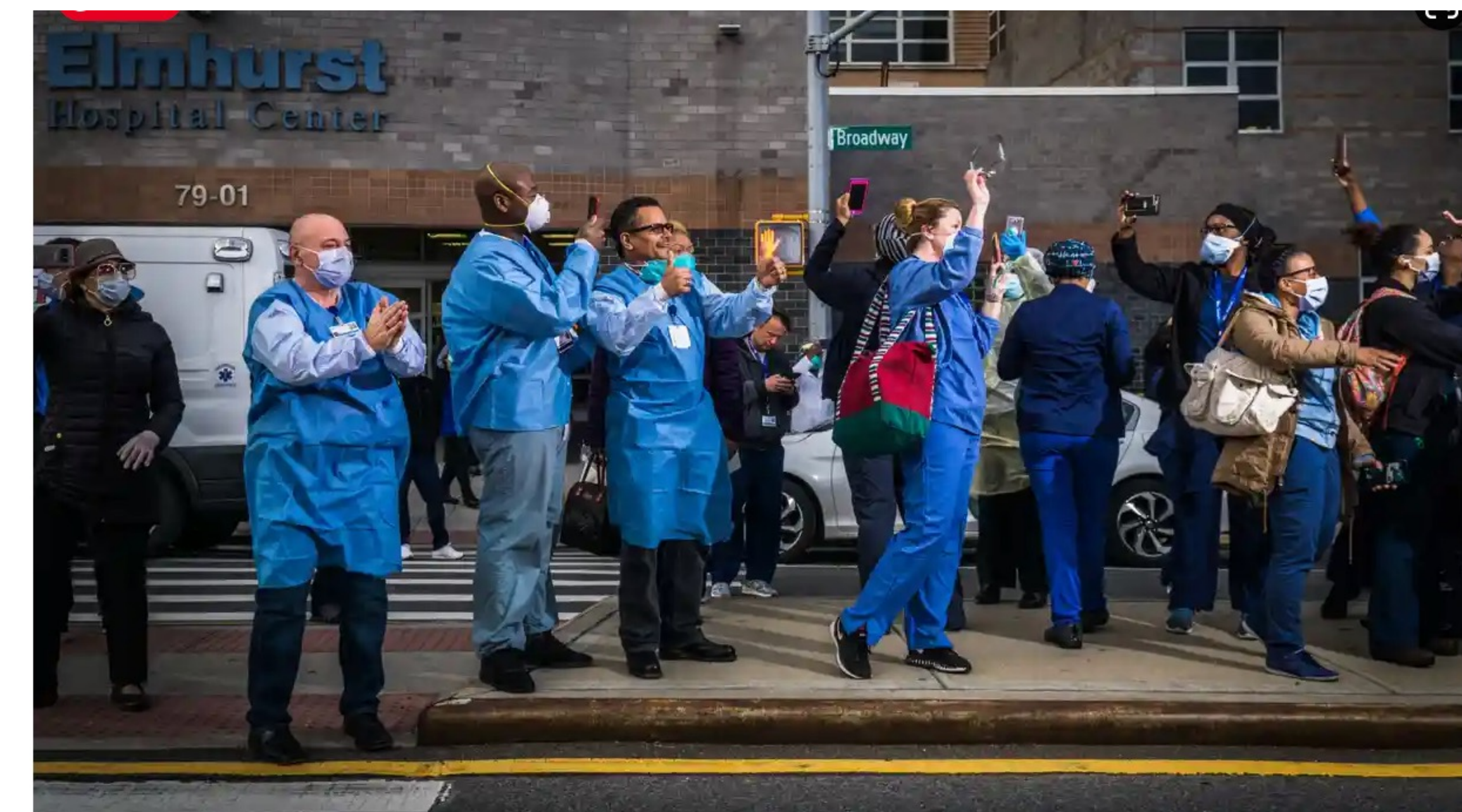
Participants

- **Demographics:** 49% under age 50, 55% women, 70% White

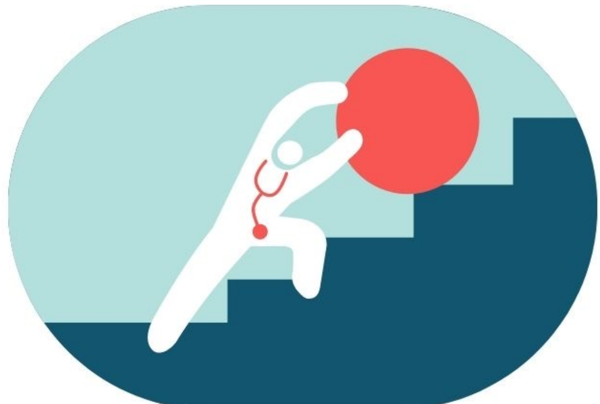
- **Specialties**: internal medicine/hospital medicine (37%), emergency medicine (21%), pulmonary/critical care (24%), palliative care (9%)

- **Mean years of medical experience:** 10

- **Hospitals**
  - 6-14 distinct hospitals per city, 44 hospitals total
  - Academic (47%), public (27%), and community (26%)
  - Safety net (34%)



Conceptual Model



EPPS

A SYSTEMS MODEL OF CLINICIAN BURNOUT AND PROFESSIONAL WELL-BEING

External Environment
Health Care Organization
Frontline Care Delivery

Work System Factors

Individual Mediating Factors

OUTCOMES
Clinician Burnout
Professional Well-Being

CONSEQUENCES for:
Patients
Clinicians
Health Care Organizations
Society

LEARNING AND IMPROVEMENT

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What was most challenging about working during the pandemic?

LEVEL	FREQUENCY	TOP SUBTHEMES
Individual	151	**Concerns about viral exposure/and family safety (n=70)** Social isolation (n=24) Balancing work and family obligations (n=16)
Institutional	87	**Workload/patient volume (n=24)** **Volume of deaths (n=23)** Resource constraints (n=11) Constantly evolving work conditions (n=6) Long hours (n=6)
Professional	77	**Medical uncertainty/suboptimal care (n=36)** Caring for patients without family support (n=19) Concern for healthcare worker colleagues (n=12)
Societal	52	**Mistrust toward physicians/COVID skepticism (n=14)** Uncertainty around the course of pandemic (n=13) Frustration with the public (n=13) Poor federal leadership (n=4)

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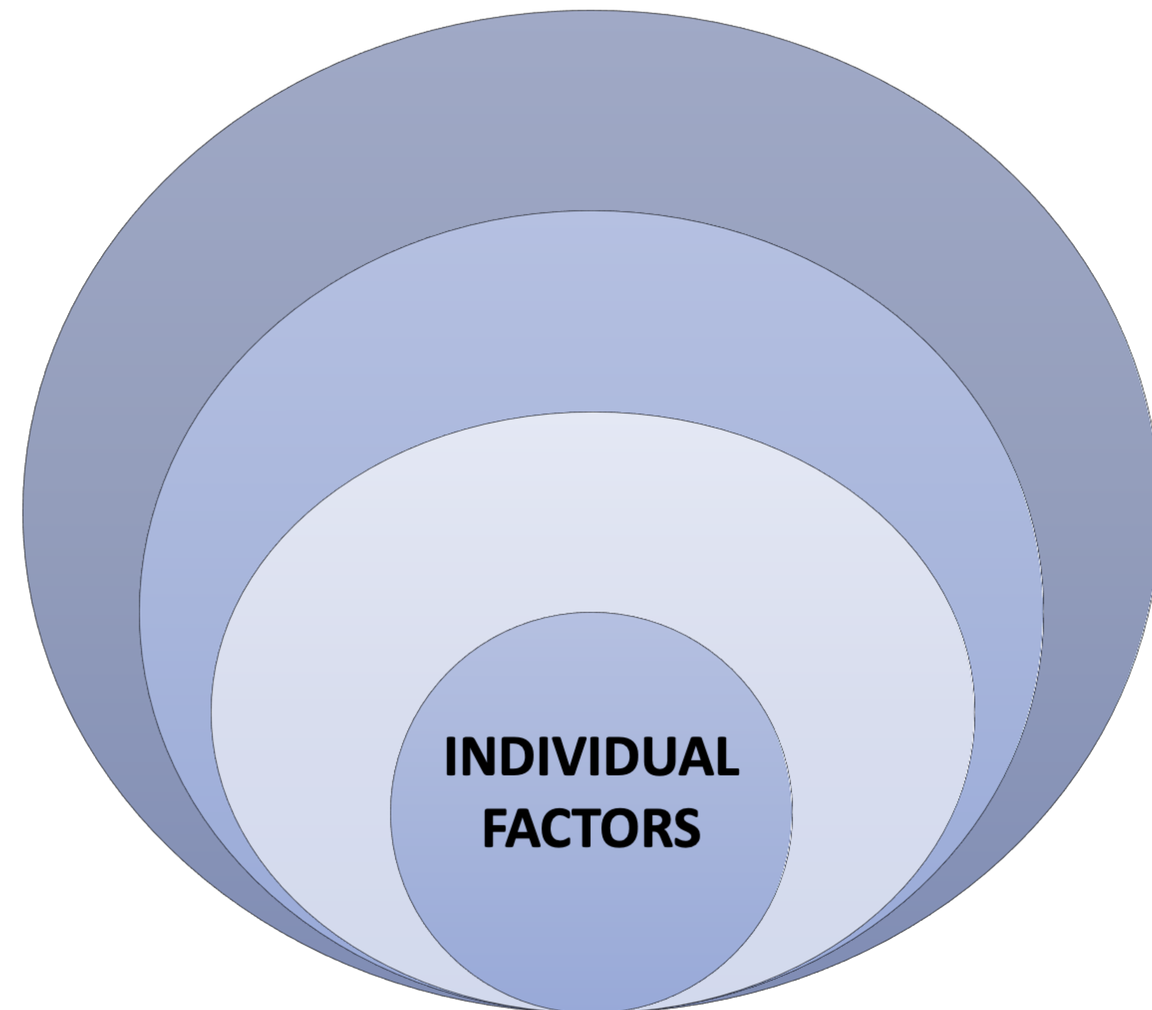
Individual level stressors



"I signed up to be a doctor in the middle of AIDS. I saw a zillion people die in my internship here in Baltimore? I mean, Baltimore is a crazy place, but I saw a lot of people die of AIDS … probably as many I saw has died of COVID. The only thing is that I knew more about it. So, I feel like…a lot of us pretty much thrive in this and I'm used to chaos, right?" (0139, female hospitalist, public hospital, NYC)

"I was here during Katrina. I was loading patients on the Black Hawk helicopters on the roof of the hospital. To me, this was nothing. This was annoying because my kids couldn't go to school in the spring." (0201, male hospitalist, academic hospital, NOLA)

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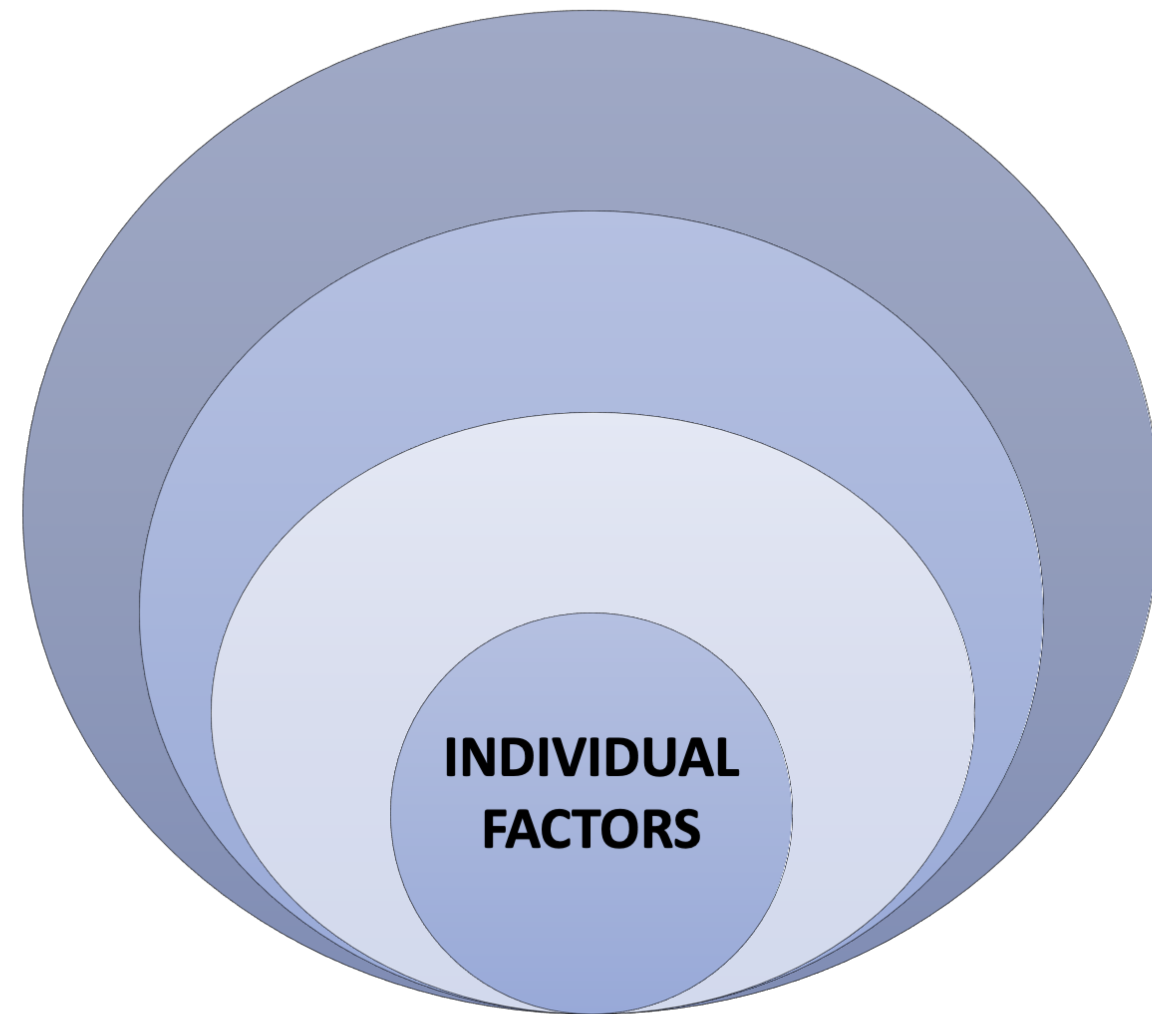
Individual level stressors



"I don't think I realize at the time, but **I was having panic attacks**. That became an issue for me. It was from, I guess, PTSD or whatever was happening. Just the volume of work being too much or more than I was used to and feeling under-supported or unsupported. And part of that was, **I was so quick out of residency. I was so green to being on my own** anyway and then, sort of, being thrust into this situation where we didn't have any data and didn't even know how to take care of these people. And I already was still learning how to do this on my own. That was a challenging part for me, too." (0212C, female hospitalist, community hospital, NOLA)

But the institutional context matters!

- Working night shifts
- Small community hospital
- Only MD overnight
- Covering ICU with no CC backup

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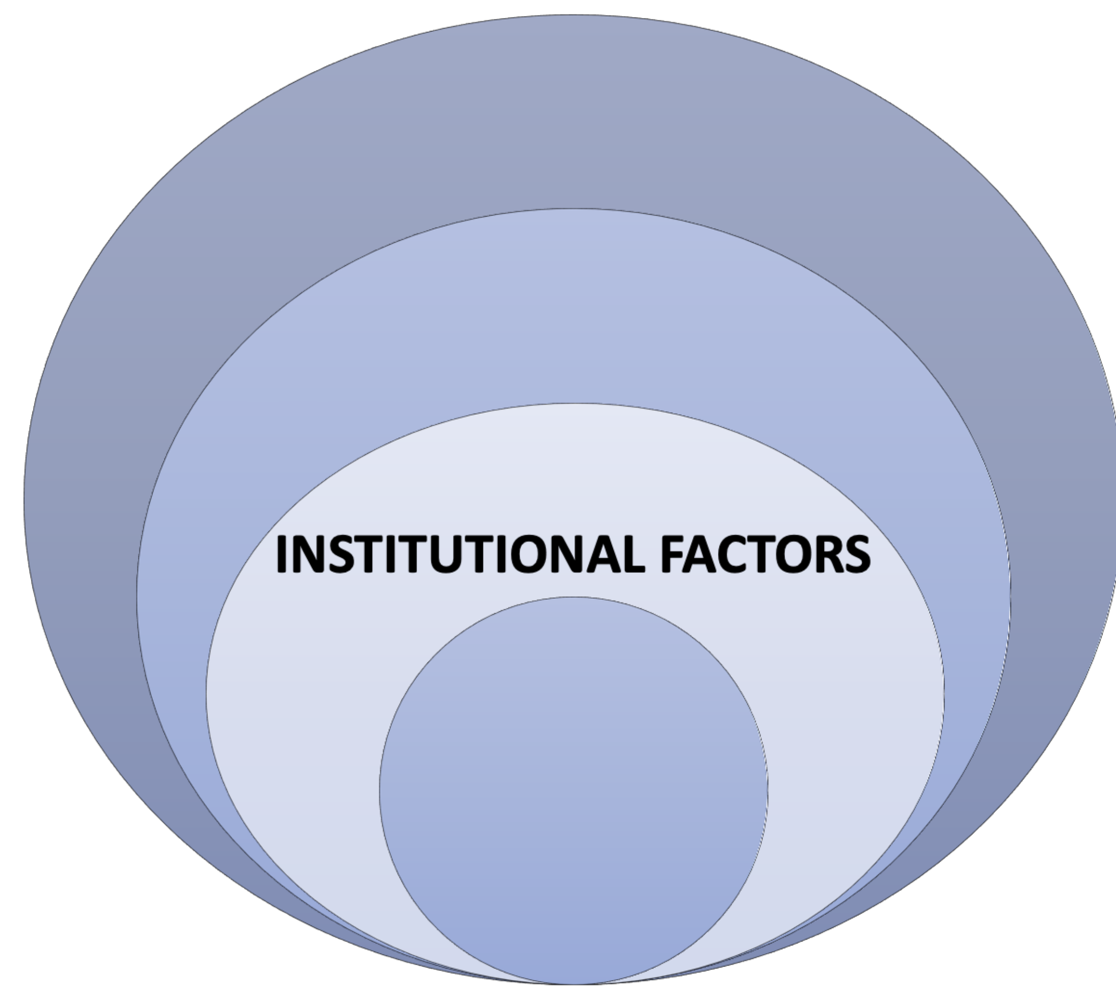
Institutional level stressors



"I would say, there was a dichotomy between private institutions and public institutions. For example, my institution worked with a lot of private institutions to give them ventilators that they weren't using and all of that. They didn't do the same thing for the public hospital. And I think it created that **tale of two cities** that often is the reference to the way that this crisis was managed, and other crises as well. That **if you're poor,** you live in certain neighborhood and all of that, **you're going to receive poor care.**" (0106, male, pulmonary critical care, academic hospital, NYC)

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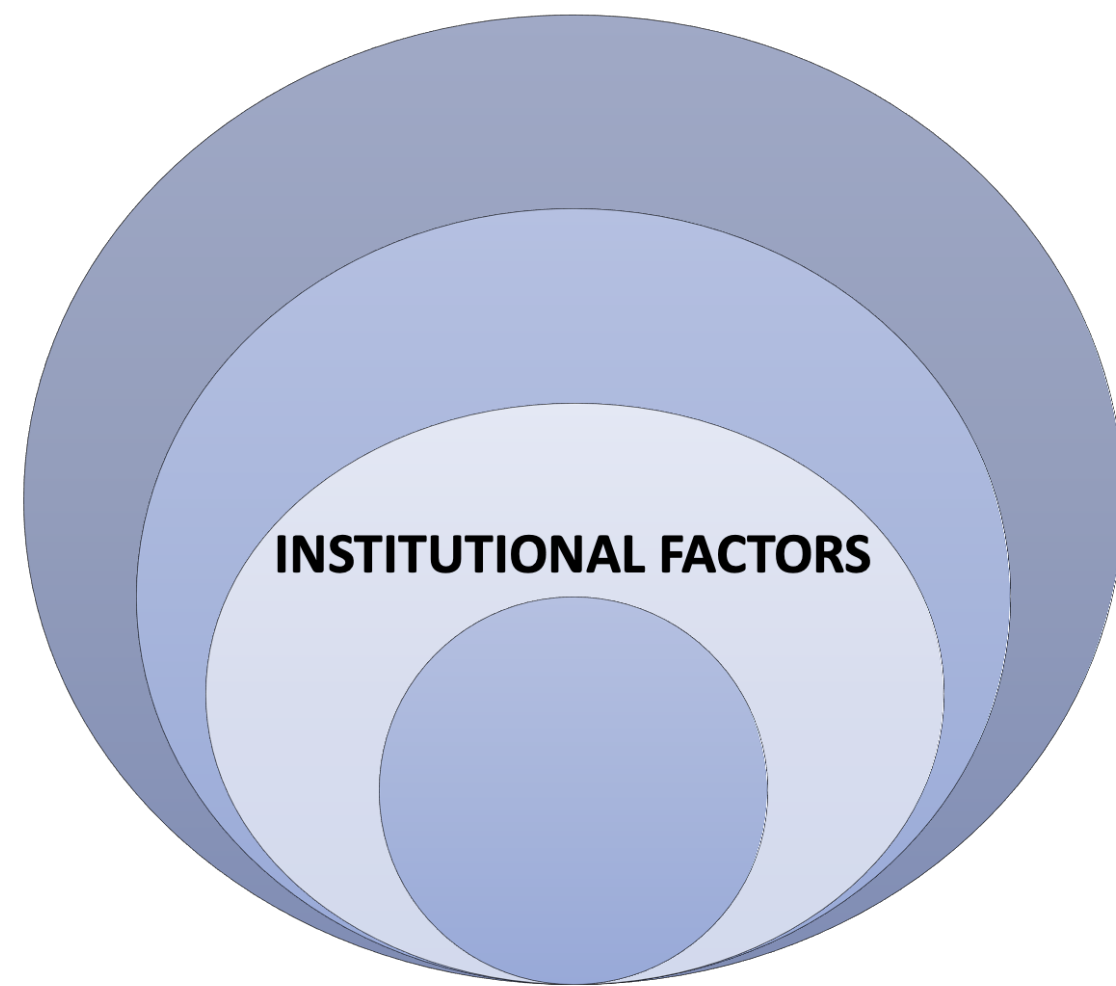
Institutional level stressors



"You know, the grapevine word was that there's another hospital organization in town that had a lot more money than we did, and they scooped up a lot of the resources pretty quickly, and so then it took us longer to find the resources that we needed in terms of the equipment. … So, I mean, issues like that, where, if you've got money and you're first in line, things will be probably going better for your organization than not. We definitely felt some of that, but it also wasn't new." (0225, female hospitalist, academic hospital, NOLA)

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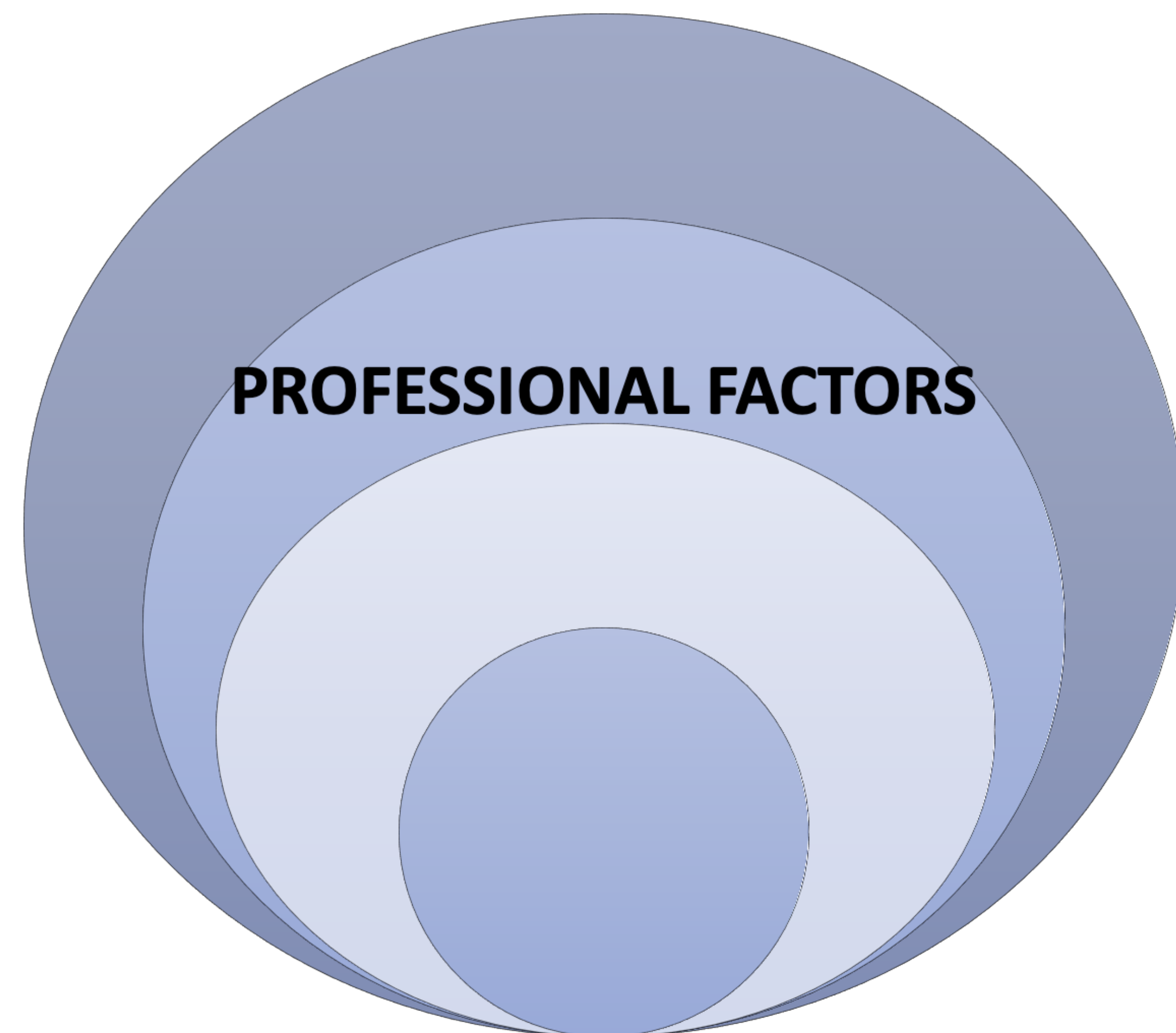
Professional level stressors



"I couldn't look a patient in their eye or talk to their family and give them any sense of whether they were gonna do well or not. And I think that there is a real struggle because I wanted to provide that reassurance and because I couldn't**, I felt like I was not being a good doctor.** If I provided inaccurate sort of reassurance or concern or whatever, I think it was magnified because of the sheer amount of fear I saw on my patients' faces and...the voices or faces of their families when we called or Facetimed them. And **there was this definite erosion in my sense that … I knew what I was doing.**"
(0129, male hospitalist, academic hospital, NYC)

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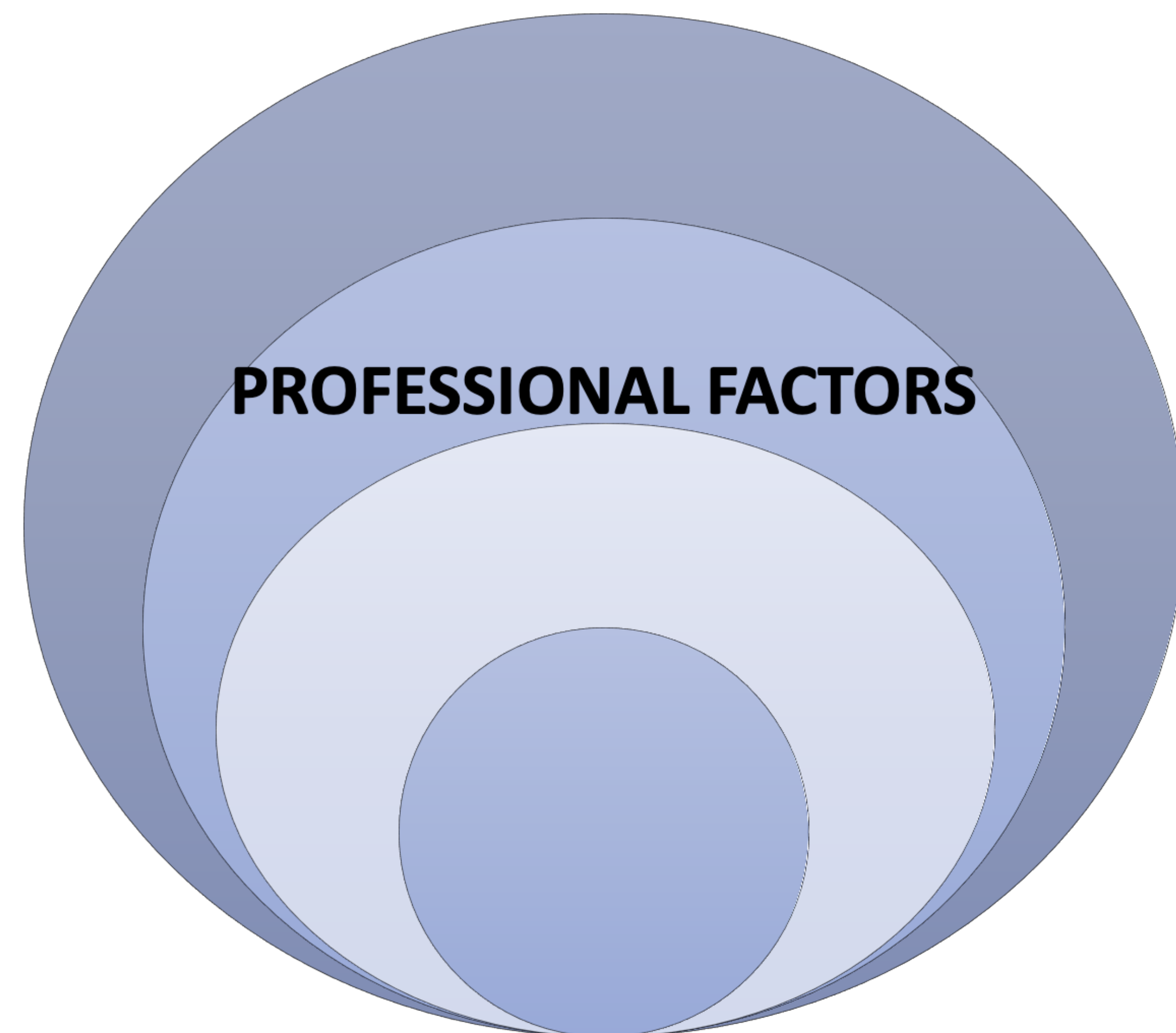
Professional level stressors



"I think that was **pretty distressing**, certainly for me, and probably for other clinicians, where they felt like either they were **implicitly rationing care**, or they weren't providing the usual level of care that they're accustomed to providing." (0115, male hospitalist, public hospital, NYC)

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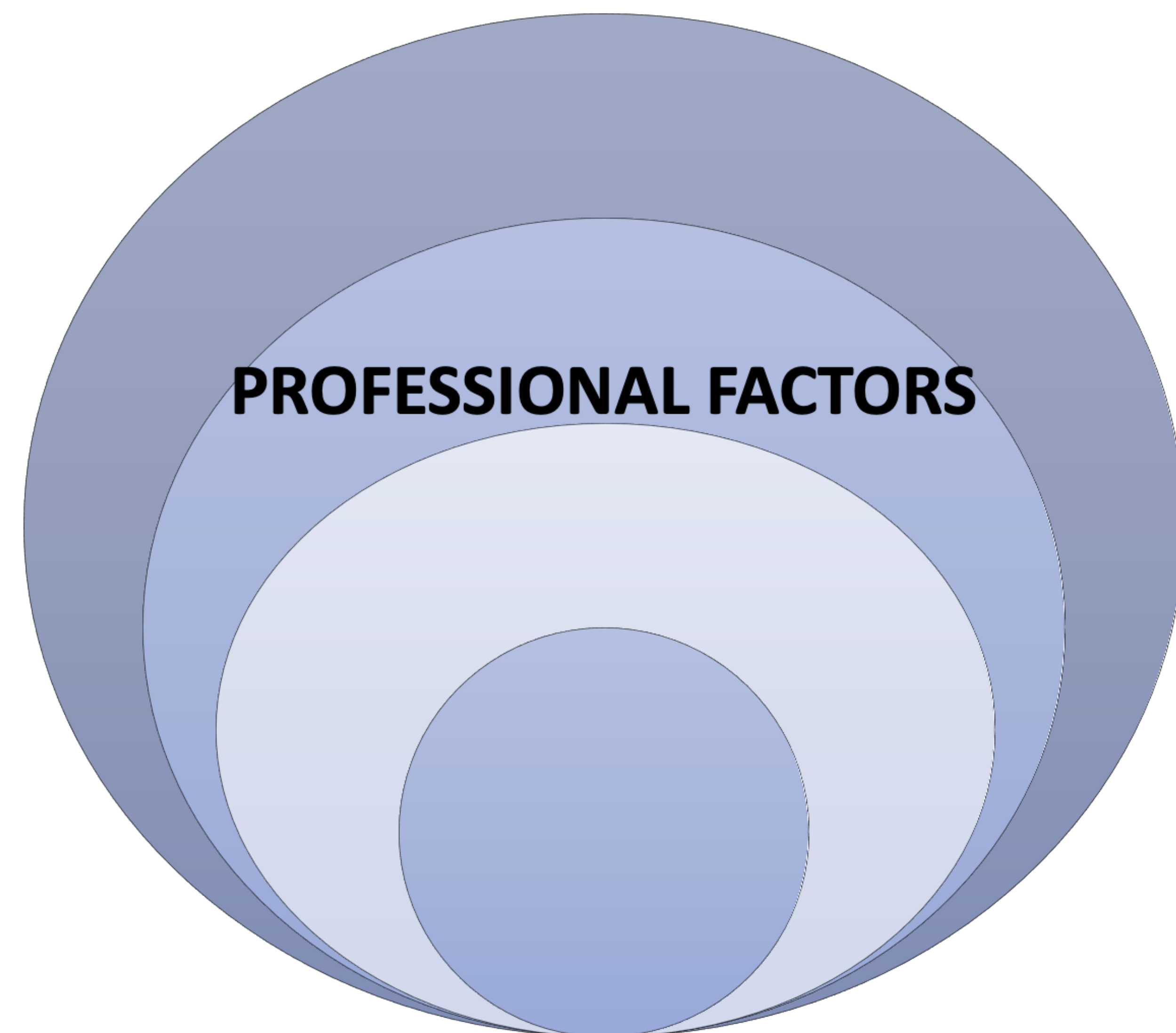
Professional level stressors



"When we had to intubate somebody emergently, after vaccines were available, I would literally announce, I said, "I don't care if you're vaccinated or not. But if you're not, please get out of the room, because I'm not going to be responsible for exposing you for no reason, I got plenty of people I can work with who are." And I would watch people leave. And I was like, "I'm literally trying to protect you. And **I'm annoyed that I have to do this**, but also I rather you not get exposed if you don't have to." (0401, female critical care pulmonologist, Miami)

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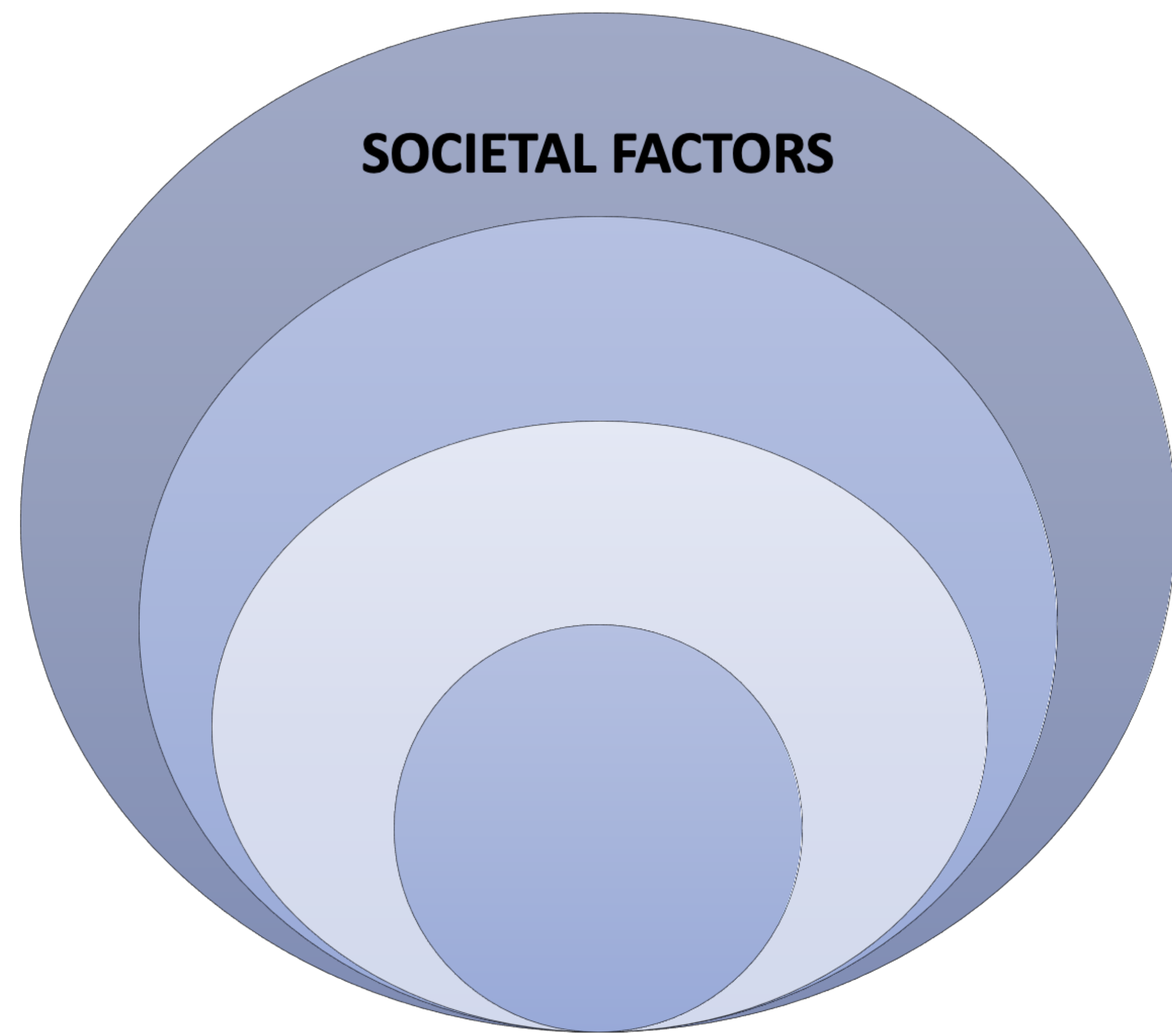
Societal level stressors



"It felt just over and over again as if we were just … **hung out to dry**.... I guess we all had the sense, at the beginning, like, 'We're in America. This is a great country. We have resources. Even if everything isn't perfect in the healthcare system, the state will come through, FEMA will be there. There will be some sort of centralized response to this thing and we'll get help.' And it just didn't happen." (0119, female, emergency medicine, public hospital, NYC)

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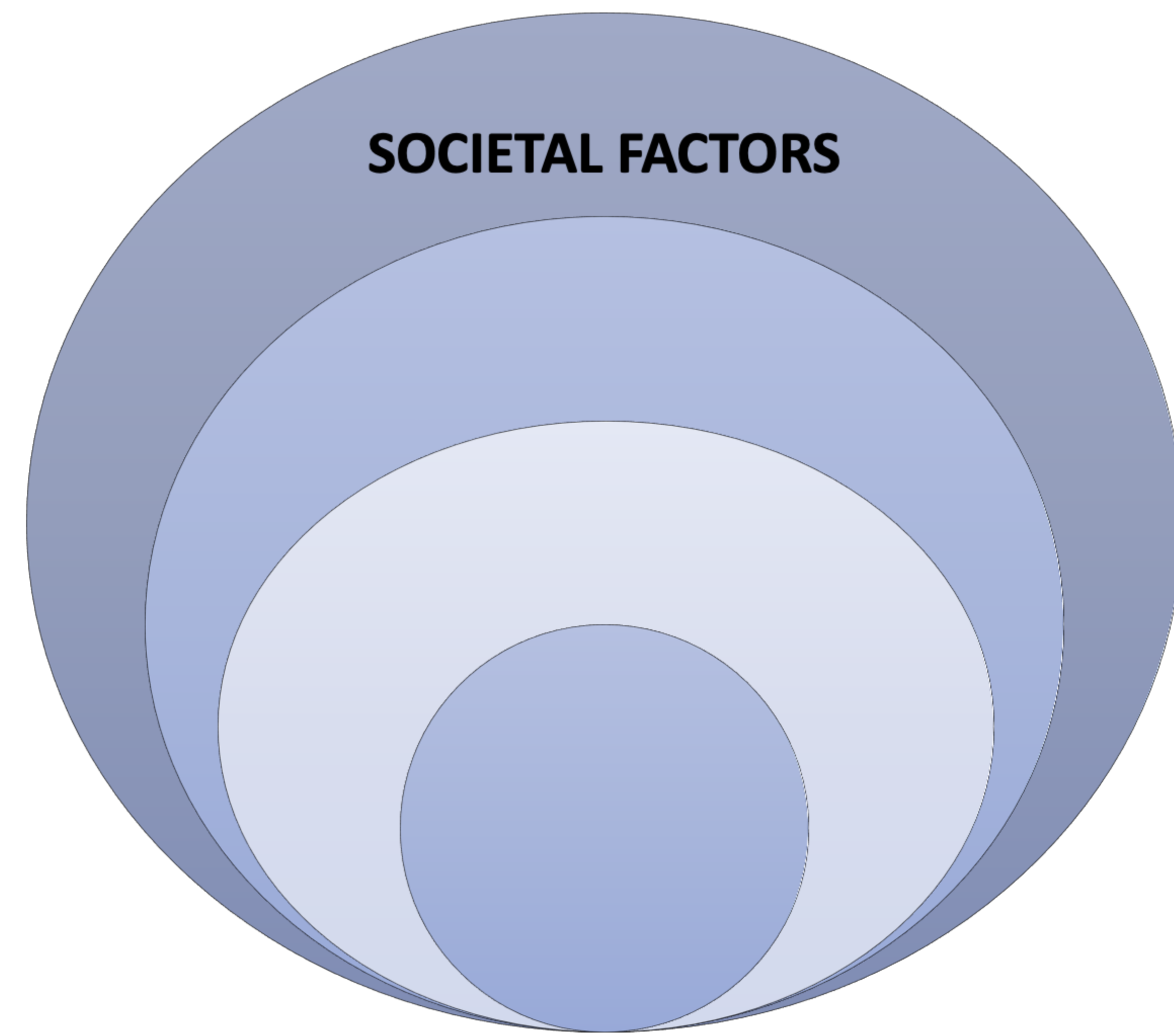
Societal level stressors



"It was willful harming of the citizens of Florida from the very beginning. It was making profits on mask distribution…it was scrubbing race data from the COVID numbers. It was sending a SWAT team to point guns at the six-year-old or eight-year-old child of a public health scientist who refused to fudge the data. … And there's just so much to talk about, but it was willfully mishandled from the very beginning and many, many people died as a result." (0426, male, critical care surgeon, public hospital, Miami)

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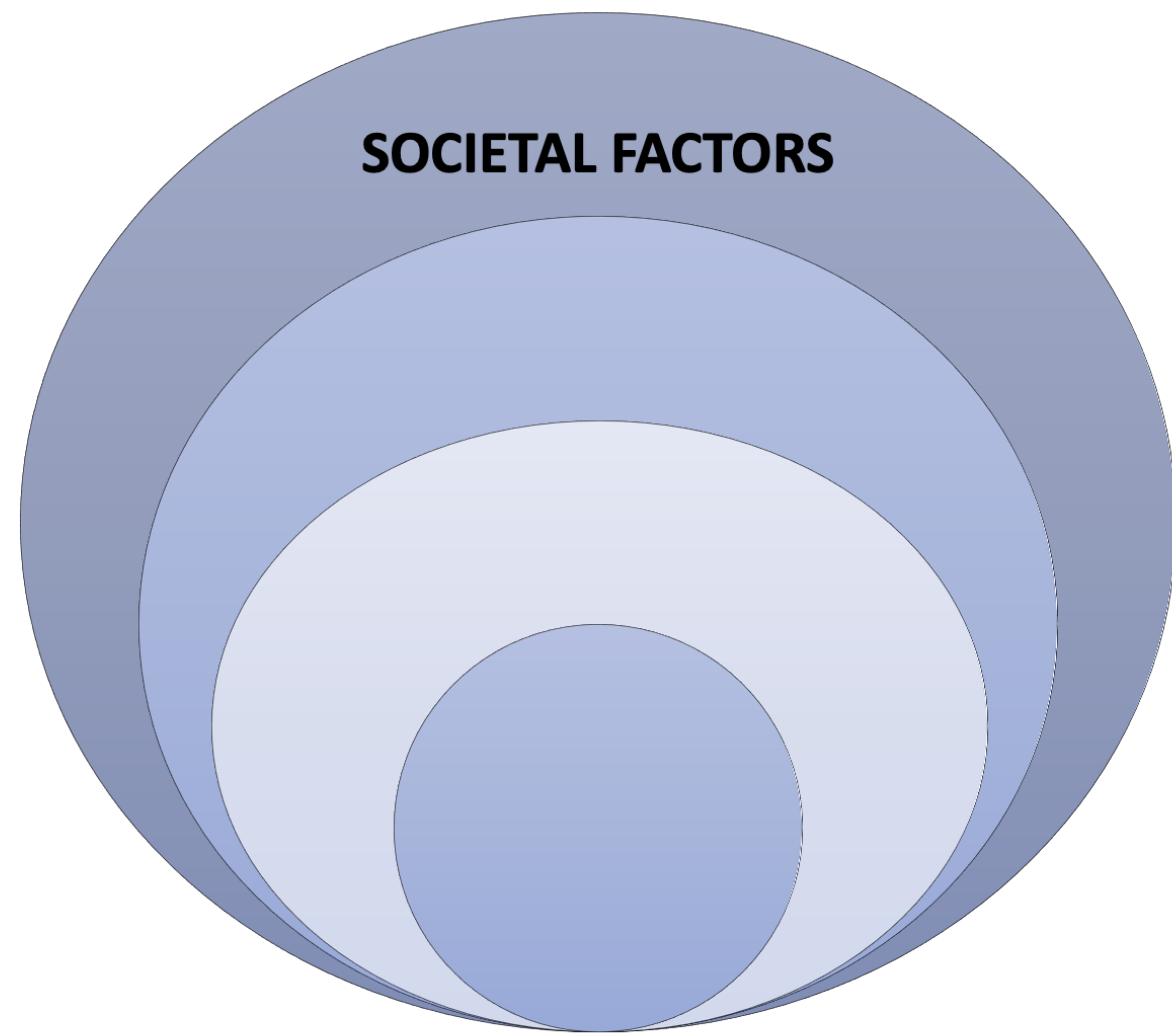
Societal level stressors



“**This is not what I signed up for.** I get disrespected. They’re difficult. They’re obstinate. We get verbally harassed. It’s not fulfilling. It’s discouraging. It’s pretty hard to keep on going when you have to go in and face these kinds of working conditions.” (0318, male, critical care pulmonologist, academic hospital, LA)

“That was one of the reasons why we made the move. … I was getting, again, a little frustrated with the community of the South. **I was just burnt out by people not caring about each other and not believing in science.** And with all of the racial tensions also in the South, and my husband, again, is Hispanic, I think both of us were just like, ‘I think maybe it’s time to leave this area of the country.’” (0213, female, pulmonary critical care, academic hospital, NOLA)

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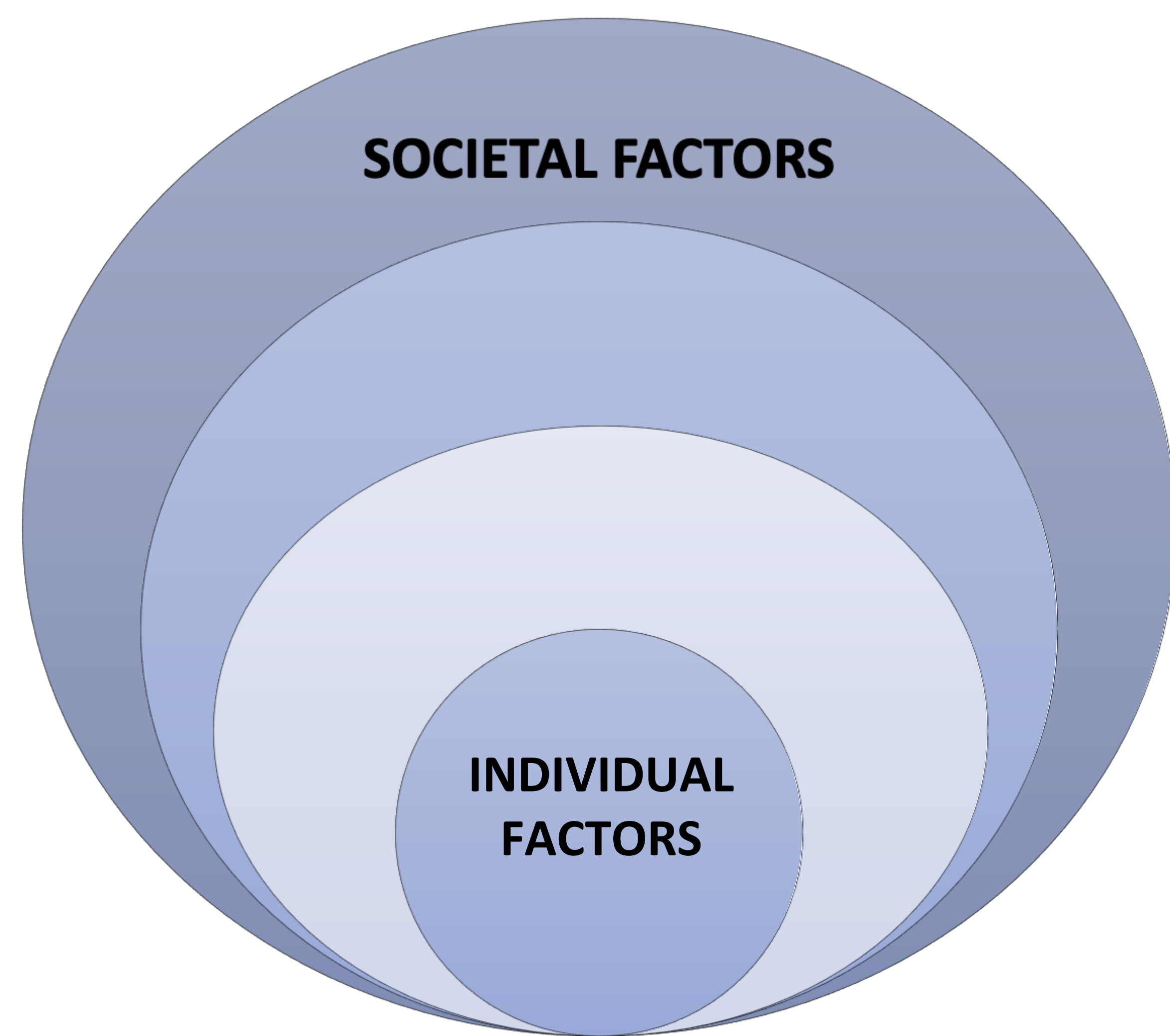
Intersections across levels



"I think all of us…felt the burden of the pandemic because it wasn't being taken seriously on the outside. And so, I think there's a lot of bitterness, is the right word to say it. I'm not a bitter person. I'm very bubbly. But **I did notice that I was almost angry with the system and angry with the patient population that I wanted to come here and work with so badly**, because of the amount of ignorance and misinformation that was being populated by the time, especially by people in positions of power. We would have the governor come and talk to us in our hospital system and say that the pandemic was under control, and that people weren't dying, and the numbers were not right, and meanwhile, we are struggling. So, I think there was a lot of misunderstanding that went around, that contributed to a lot of negative feelings." (0417, female hospitalist, public hospital, Miami)

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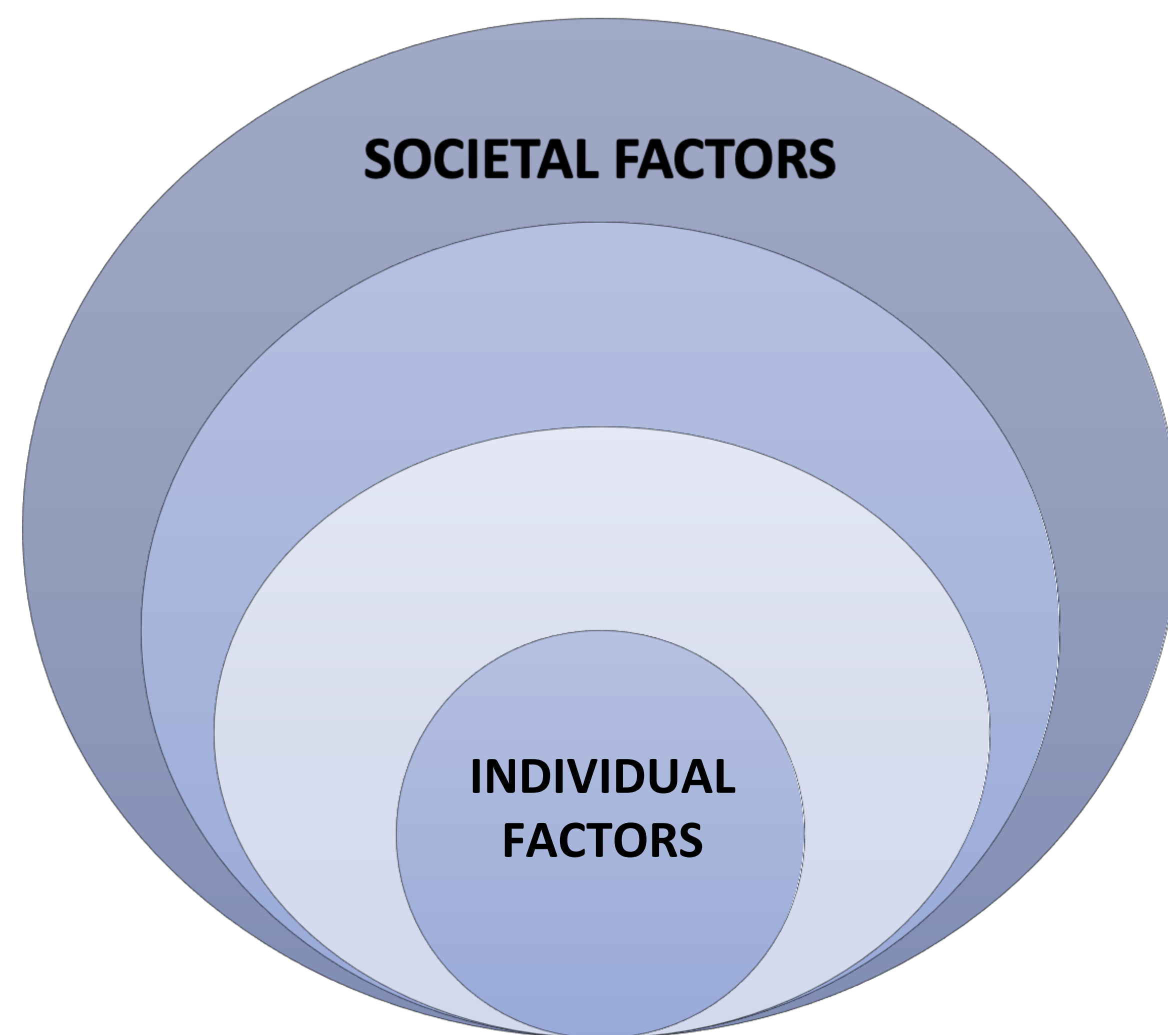
Intersections across levels



Interviewer: Yeah. Has the government response served as a stressor at all for you throughout the pandemic?

Participant: Certainly, at the beginning. It was the sort of ivory tower disregard for the pandemic that was contrasting with our day-to-day lived experience was very hard to reconcile and very hard to not to hate and feel very angry about. I think I feel very fortunate to live in Los Angeles where I feel that in a local level, that if anything, we've erred on the side of being overly strict … I would say from a federal level, that that was really jarring and **I think really contributed to a lot of mental health issues and troubles that a lot of us were experiencing was the rhetoric from the government that this didn't exist** and this was a hoax and this was whatever when we were living in fear for our lives and just wanting to invite a lot of those deniers to spend a day in our lives. And, you know, that was very hard. (0317, female emergency medicine physician, public hospital, Los Angeles)

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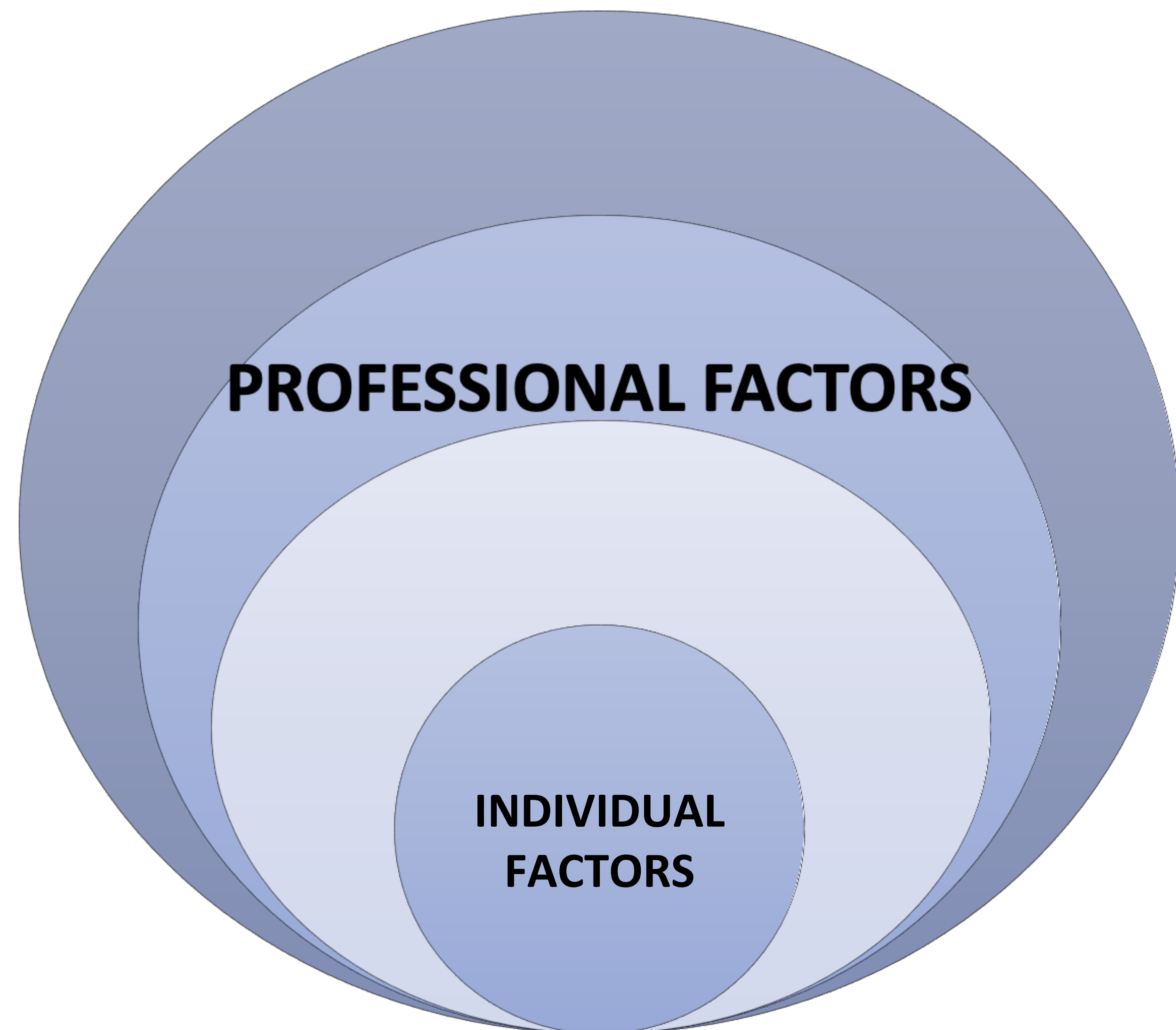
Intersections across levels



Interviewer: Do you feel like those ideals of being a good physician affected your well-being at all during the pandemic?

Participant: Yeah, I do, actually. I think the idea that I was doing what I was trained to do under any circumstance, even under risk for myself, actually made me feel like I'd done something that was important in my life—that **if I would have died the next day, and I've thought of this, that I would have felt like I had accomplished what I needed to do on this earth**. … So, I think that feeling kept me- it sort of really reeled me through the whole pandemic, that I was able to answer that call and to rise up to and didn't run away from it.
(0406, male critical care pulmonologist, academic hospital, Miami)

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Additional examples of intersections across levels

- In NYC, inequalities between neighborhoods **(societal level)** shaped the hospital’s ability to respond to surge conditions **(institutional level).**

- Hospital visitation policies **(institutional level)** unsettled norms of patient care **(professional level)** that enlist family support.

- Communicating with families who distrusted science and thought COVID was a hoax **(societal level)** disrupted physician norms against resenting patients **(professional level).**

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What changes would you recommend to improve physician stress and wellbeing?

Leadership, communication, and planning
Check in on staff wellness and needs (n=29) Regular, consistent, transparent communication around decisions and policies (n=28) Listen to physicians and engage their feedback (n=18) Better leadership planning (proactive, not reactive), including crisis standards (n=12)
Material support
Hire more staff (n=23) Hazard pay (n=13) Provide food and drinks (n=11) Access to testing and adequate PPE (n=9) Childcare support (n=8) Adequate supplies and resources (n=8)
Opportunities to rest
Flexible schedules (n=29) Offer more sick time/destigmatize sick days (n=12) More paid vacation time (n=10)
Mental health support and infrastructure
Destigmatize mental illness (n=17) Institutional initiatives (n=15) Insurance coverage for therapy/improve access to therapy (n=15)

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Recommendations for Chief Wellness Officers

- **Intensified feelings of powerlessness**

  Commit to learning from physicians about institutional factors that impede their ability to provide good care, through regularly scheduled, paid feedback sessions that include leadership.
  Promote quality improvement research on workplace conditions that impede good care.

- **Institutional policies**

  Solicit frontline clinicians' input throughout development and implementation of patient care policies and processes.
  Request feedback from unit leaders regarding impacts of policy changes. Bring conflicts between patient care policies and clinicians' perceptions of good care to leadership attention.

- **Inequities**

  Recognize feelings of complicity in injustice to patients as corrosive to wellbeing.
  Collaborate with Diversity, Equity, and Inclusion (DEI) administrators to incorporate DEI priorities into wellness programming.

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Recommendations for Chief Wellness Officers

STEPPS

- **Misinformation and mistrust**

  Acknowledge mistrust as a societal phenomenon that will continue to affect clinical encounters.
  Contribute to wider institutional efforts to build trust with patient populations and to help frontline clinicians respond to misinformation and mistrust.

- **Workarounds**

  Recognize improvised practices (workarounds) developed to manage new or intensified workflow challenges under pandemic and everyday conditions.
  Study these practices and their outcomes as potential sources of practice innovation.

- **Community**

  Create opportunities for clinicians to explore causes of work-related moral stress and to share promising practices with and between units.
  Create leadership training and mentoring opportunities for unit leaders to cultivate unit-level cultures of inclusion, wellbeing, and advocacy for improvements.

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Takeaways

- Understanding and combatting stress and burnout in contemporary medicine demands a systems perspective.
- Interview findings reflect relationships among health systems, work environments, professional norms, and individual wellbeing. Focusing solely on “heal thyself” interventions does not acknowledge or mitigate system-produced stressors.
- Medical institutions may fail physicians twice: by fostering occupational stress and risk of burnout, and then by failing to respond to these threats to health and wellbeing.

For further information:

https://www.steppsmed.com/summary