# Barriers and Facilitators to Achieving Well-being in Pediatric Providers

Whitney Marvin<sup>1\*</sup>, MD, Jillian Harvey<sup>2</sup>, MPH, PhD, Natasha Ruth<sup>1</sup>, MD

#### **ABSTRACT**

**Introduction:** Physician well-being has become increasingly important for health systems across the country due to the strong ties between quality, safety, and overall patient outcomes. Burnout has increased steadily and has been exacerbated by the COVID-19 pandemic. This study seeks to successfully identify factors that both enhance and detract from well-being in a cohort of pediatric faculty and advanced practice providers (APPs).

**Methods:** This study utilized a multimethod approach including surveys and a total of 8 semi-structured, virtual focus groups of pediatricians and advanced practice providers (orchestrated through Microsoft Teams) to understand perspectives on burnout and well-being. Each group session was scheduled 2-3 months in advance to allow for maximum participation.

Results: A total of 83 physicians and APPs participated in the focus groups. The majority of respondents were female, white, aged 31-50 years, and married with children living at home. When asked about current level of burnout, the most frequent response was 8 out of 10 (10 as highest, mean 5.5, std 2.5). Factors associated with higher burnout: outpatient providers (compared to inpatient) (p = 0.0361), female gender (p = 0.0127), and those without a mentor (p = 0.0021). Multiple factors were identified that improved and detracted from well-being. Well-being was positively impacted by the shift to telework practices and increased autonomy in scheduling and focus on self-care. Well-being was reduced by a perceived disconnect from leadership, lack of control, and societal influences and expectations.

**Conclusion:** This study provides insight into modifiable factors that affect well-being at an academic institution that can support interventions and systemic modifications to promote physician well-being.

https://doi.org/10.55504/2578-9333.1171

Received Date: Sep 6, 2022 Revised Date: Dec 14, 2022 Accepted Date: Apr 19, 2023 Publication Date: June 21, 2023

Website: <a href="https://ir.library.louis-ville.edu/jwellness/">https://ir.library.louis-ville.edu/jwellness/</a>

Recommended Citation: Marvin, Whitney; Harvey, Jillian; and Ruth, Natasha (2023) "Barriers and Facilitators to Achieving Well-Being in Pediatric Providers," Journal of Wellness: Vol. 5: Iss. 1. Article 6

Affiliations: ¹Department of Pediatrics, Medical University of South Carolina, Charleston, SC, USA, ² Department of Healthcare Leadership & Management, Medical University of South Carolina, Charleston, SC, USA



# **INTRODUCTION**

The pendulum between provider burnout and engagement is driven by a multitude of factors. These elements have evolved with the shift to physical distancing during the COVID pandemic. Half of practicing physicians report experiencing burnout during their career [1]. Pediatricians were previously thought to have lower rates of burnout. However, a study examining self-reported burnout of early to mid-career pediatricians and pediatric subspecialists from 2012 to 2016 found a 75% relative increase in burnout [2]. Recent reports suggest an increase in stress disorders, anxiety, and depression among healthcare workers since COVID began. Many specialties are noting significantly increased rates of burnout [3-5].

Tait Shanafelt and his colleagues at the Mayo Clinic are leaders in research on physician well-being. They were one of the first to describe the "strong business case" for organizations to invest in efforts to decrease physician burnout and promote engagement [6]. Their work described the shared responsibility between individual physicians and health system leaders. Physician burnout influences quality of care, patient safety, and

physician turnover. Shanafelt et al. report that the many factors contributing to burnout and engagement can be grouped into 7 dimensions:

- (1) workload and job demands,
- (2) efficiency and resources,
- (3) meaning in work,
- (4) culture and values,
- (5) control and flexibility,
- (6) social support and community, and
- (7) work-life integration [6].

Each of these entities is then influenced by personal and organizational factors that can impact well-being. To develop targeted interventions, we held a series of well-being focus groups of academic pediatricians and advanced practice providers (APP) to understand the main drivers and roadblocks to well-being at our institution. The goal was to improve physician engagement by making modifiable changes to support the development of a thriving workforce.

Copyright: © 2023 The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

#### **METHODS**

#### **Study Design**

We designed a multi-methods study of attending physicians and APP's at a tertiary care academic center located in the Southeastern United States at the Medical University of South Carolina. Eight virtual semi-structured focus groups were held via Microsoft Teams. Focus group topics included the key drivers and barriers to well-being (**Appendix A**). Seven focus groups included providers from 2-3 similar service lines and lasted an average of 2.5 hours (range 2:13-2:44). Due to scheduling constraints, one focus group included one service line division and lasted one hour. This project was deemed quality improvement and program evaluation by the institutional review board (IRB). Focus groups were facilitated by two physicians and a PhD trained qualitative researcher.

#### Participants and Setting

This study occurred in a mid-sized pediatric department from October 2020 through April of 2021. The division directors scheduled each group 2-3 months in advance to allow for maximum participation. All physicians and APPs within the department were invited to attend. Specialties were grouped by similar resource needs (for example, inpatient groups together) as shown in **Table 1**. Providers were offered to attend a later date if needed. First, a single 1-hour session was held for each service line. Participants could email topics for discussion in advance for anonymity and all were encouraged to keep their video on for the duration of the meeting. The division directors joined after the first hour to allow for open discussion in their absence.

Table 1: Total Respondents per Focus Group Session

Pediatric Divisions	Number of Participants
Critical Care and Hospitalists	15
Developmental Pediatrics and General Pediatrics	8
Gastroenterology and Emergency Medicine	17
Cardiology	14
Pulmonary, Endocrinology and Allergy & Immunology	6
Palliative, NICU, Child Abuse, Rheumatology	8
Infectious Diseases, Nephrology, Neurology	4
Hematology, Oncology	11
Total	83

# Measures

A pre-survey was administered prior to each focus group to collect demographic data. In addition, participants were asked to rate their level of burnout (on a scale from 0-10) and for contributing factors to the burnout. A total of 83 providers participated in the pre-survey. A 2-question survey was completed by 68 (82%) participants at the end of the focus group. This assessed if the session was helpful and included an open-ended text box for suggestions for improvement of future sessions. Both surveys were administered via REDCap [7].

Each focus group was recorded and auto transcribed in Microsoft Teams, which was edited for accuracy by a qualitative researcher who listened to the recordings and ensured the transcript was verbatim.

#### **Data Analysis**

We used a directed content analysis approach (as prior theory and research existed, yet this study topic was determined to benefit from additional exploration) [8]. The authors developed an initial codebook based on the framework to promote engagement and reduce burnout; the codebook included codes for factors that increased or reduced burnout [6, 8, 9]. The initial 10 codes were independently tested on transcripts by the three researchers through an iterative process, coming together to compare coding. New codes that emerged from this process were added to the codebook and this process continued until no new codes emerged. Final codes were applied line by line independently to each transcript by three researchers, one with qualitative expertise and two with expertise in physician well-being.

Agreement on final coding was reached through team discussion. Nvivo 1.6.2 for Mac was used to manage and query the data. Coded data were categorized into factors that reduced or contributed to burnout and recurring themes were identified. Thematic saturation was reached after four focus group sessions, but due to the quality improvement nature of this project, focus groups were held with all divisions to allow each employee to participate. Final codes and definitions are in **Appendix B**. The team conducted a sub-group analysis of burnout ratings using non-parametric tests of hypothesis (Wilxcoxon Rank Sum and Kruskal-Wallis) as appropriate. Stata MP 17.0 was used for quantitative analysis.

#### **RESULTS**

A total of 83 physicians and APPs participated in the focus groups. Participant characteristics are found in **Tables 2-3 (next page)**. The majority of respondents were female, white, age 31-50, and married with children living at home.

When asked about their current level of burnout, the most frequent response was 8 out of 10 (mean 5.5, std 2.5) (Figure 1 next-page). In the subgroup analysis, we found several provider characteristics associated with higher self-reported burnout rates. Providers in the outpatient setting reported a mean burn-

out score of 6.14, compared to 4.98 for inpatient (p = 0.0361). Female providers reported a mean burnout score of 6.07, compared to 4.23 for males, and 4 for other (p = 0.0127). Finally, providers with a mentor had significantly lower burnout scores compared to those without, 6.31 vs. 4.69 respectively (p = 0.0021). 73.5% of respondents attributed their burnout level to a combination of work and non-work-related factors. While 22.9% stated the score was work related, 3.5% stated burnout was not work related.

Within the key driver dimensions, we found themes that resulted in feelings of engagement and well-being as well as topics that contributed towards feelings of burnout (**Table 4**). The work-life integration dimension had individual factors that promote well-being, as well societal affects that detract from it.





Table 2: Participant Demographics (N=83)

Provider Type	N (%)
Inpatient	48 (57.8%)
Outpatient	35 (42.2%)
Age	
20-30	3 (3.6%)
31-40	33 (39.8%)
41-50	30 (36.1%)
51-60	13 (15.7%)
>60	4 (4.8%)
Gender	
Female	56 (67.5%)
Male	26 (31.3%)
Other	1 (1.2%)
Race	
Asian	9 (10.8%)
Black	5 (6%)
White	64 (77.1%)
Other/2 or More	5 (6%)
Number of Years at	
Academic Center	
<1	6 (7.2%)
1-5	25 (30.1%)
6-10	17 (20.5%)
11-15	16 (19.2%)
16-20	9 (10.8%)
>20	10 (20.5%)
Status	
Full-Time	79 (95.2%)
Part-Time	4 (4.8%)

Table 3: Participant Work-Home Characteristics (N=83)

Marital Status	N (%)	
Divorced	6 (7.2%)	
Married/Domestic Partnership	67 (80.7%)	
Separated	1 (1.2%)	
Single, never married	7 (8.4%)	
Widowed	2 (2.4%)	
Spouse Employment		
Employed	58 (69.9%)	
Not Employed	25 (30.1%)	
Spouse Work Status		
Full-Time	54 (93.1%)	
Part-Time	4 (6.9%)	
Children		
Yes	66 (79.5%)	
No	17 (20.5%)	
Number of Children		
One	12 (18.2%)	
Two	34 (51.5%)	
Three	13 (19.7%)	
Four	5 (7.6%)	
>5	2 (3.0%)	
Child Ages (check all that apply total >100%)		
Babies/Toddlers	22 (26.51%)	
Elementary School Age	31 (37.4%)	
Middle School Age	19 (22.9%)	
High School Age	16 (19.3%)	
College Age	10 (12.1%)	
Post College	13 (15.7%)	
Childcare		
Daycare	15 (22.7%)	
Family/Friend	22 (33.3%)	
Child does not require	22 (33.3%)	
Nanny	7 (10.6%)	

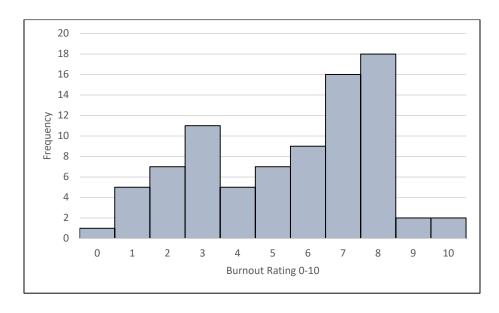


Figure 1: Number of Participants Self-Reported Burn Out Level





Table 4: Dimensions, Themes, and Quotations around Drivers and Barriers to Well-being

Dimension	Theme	Quote
Social Support and Community at Work	Strong Peer Support & Teamwork	I think one of the things that adds to my well-being is a sense of camaraderie with people you work with. We all have a difficult job and being able to talk about it really helps me personally. Because no one, outside of our group, really understands the intensity. [When] I think of what we do, it can be kind of overwhelming.
	Mentorship	The biggest reasons I stayed at [organization name] was the collegiality of our group. In addition to the mentorship, I knew I was going to get, a big part of seeing how well people work together and promoting the culture of psychological safety. Everybody's always got each other's back and that just makes it easy and fun even when times are difficult in the hospital.
Meaning in Work	Teaching and mentorship	We have the opportunity to work with trainees and I think that's a really unique thing to be able to bring up people in this great culture. And when you see them incorporate into the great culture and in change the way they behave or flourish in it. I think that's really rewarding as well, so we're all really great. We have a cool opportunity to add people and impact their lives importantly.
Control and Flexibility	Systems in place to set boundaries and expectations	I think being able to stand up for yourself and draw boundaries and say, OK, I'm not going to be able to take too much on my plate. And just say, OK, this is this is what I can do and [what] I cannot.
Work Life Integration	Compartmentalize	I love my work but, family comes first, in every sense of my life. Being happy at home, and making sure that my kids are happy, my husband is happy. We are happy as a family; we do things to promote their wellness. You spend more time at work than at home. So, I think that it's when you come home, you want to make sure that that's also a good thing.
	Social Media and Inability to Step Away	I think the way the medicine is evolving, it's to us as primary care physicians or specialists, and I just think it puts us in a very unprivileged position. If one of my kids wants to do medicine, I would definitely like try to change their minds because I don't think what we sign up for is what we're getting nowadays. I think it's the world of social media and somebody writes something behind their keyboard about us and it puts us in a situation that other people are reading. And you know, that's not what you are. That's what makes me sad about medicine nowadays.
Workload and Job Demands	Increasing patient behavioral health needs	We [providers] want to fix things. Um, there's just no easy fix and patient after patient has a mental illness and limited resources. It is absolutely emotionally draining, and it takes a toll. I'm leaving [after] my shift and my heart strings are torn over and over again.
	Burden from the business side of healthcare	We all got into medicine because we want to help kids. And over time, every time they add on another layer of 'caring about RVUs', 'caring about compensation plans', 'caring about funds flow', it seems to really kind of take away from that true purpose. And I feel like your purpose and feeling like you're doing what you're supposed to do is such an important component of wellness.
Efficiency and Resources	Equipment and IT	I feel like there's an app for everything now, and every week there's some new app we're supposed to get and put in our phone and some code you have to do toI don't know, maybe 'cause I'm old school I just feel like I'm kinda over that part of things.
Organizational Culture and Values	Disconnect between culture, and provider goals	I think right now, a lot of the goal setting is very oriented from the top down rather than flowing from down up, and I think the people on the ground understand what's meaningful to their groups and their patient populations and the resources they need to accomplish those.
	Incentives and compensation	I think messaging that comes from the top of the organization seemed sort of punitive is the word you use. It doesn't sound encouraging to me. It doesn't sound like it recognizes what we're doing on a regular basis

The themes where the provider had some control, such as individual factors and work-unit components, were perceived more positively. In contrast, themes related to the organization or to changes in healthcare on a national level, often were described as being more frustrating or leaving the providers with a sense of helplessness.

#### Social Support and Community at Work

The most common dimension that facilitated provider engagement and well-being was related to workplace social support, teamwork, and mentorship. The importance of this was multifactorial, as participants recognized that they were working in difficult jobs and found value in having coworkers they could confide in and who understood the job demands.

Several factors were described as facilitating social support and teamwork: mentorship, social connectedness, and having a culture that was accepting of giving and receiving. Asking for and receiving help was frequently described as difficult within the medical profession. One participant noted: "We need help sometimes, it's hard for me to do. We kind of have a mantra that 'we don't walk with a limp in the ICU'. It's hard for us to ask for help, not because of unwillingness of your colleagues. 'cause that's definitely not the issue. I don't want to burden my colleagues."

While mentorship improved social support at work, results showed conflicting opinions on the format of mentorship programs. Several participants expressed concern with structured mentorship roles. They felt that forced interactions can become task-oriented and lose the benefits. According to one respondent, "assigning somebody to be a mentor is like finding somebody to be a friend. And relationships just don't work that way."

Social interaction through common workspaces and multidisciplinary meetings promoted connectedness and social support. This was noted to be more important in the new, more virtual post-covid workplace. One respondent stated: "I think the hardest thing about COVID is, we don't have a shared experience because we don't see people, right?...But if there was just a place to feel like you were just seeing somebody. Like I see [name] on Mondays in the cafeteria for 2 minutes while we're warming up our food. And it makes me feel happy because I saw somebody today."

#### Meaning in Work

The second most common dimension perceived to enhance well-being was finding meaning in work. Meaningful work was heavily linked to provider engagement, according to one respondent, "There's a couple of things that, at least for me, will contribute to my wellness and one is just finding joy in your work. That helps out a lot." Two areas stood out as supporting meaningful work. First, the providers discussed the importance of helping children as a driver. Second, they emphasized that the ability to mentor and teach students and trainees contributes to their well-being.





#### Control and Flexibility

There was a lot of discussion around the relationship of individual control to burnout and the importance of setting boundaries to maintain balance. Providers found that working from home, telework, and control over scheduling significantly added to their well-being. However, providers expressed extreme frustration when those boundaries are crossed. One respondent gave the example of losing control over their individual schedule, "One of the biggest factors for burnout, is the people that schedule these seven o'clock meetings in the morning.... That just pisses me off because that was supposed to be my time. We work long hours but having the ability to have some control over the hours you work, you obviously can't always do that, but to me that's a huge factor in wellness."

#### **Work-Life Integration**

Work-Life integration was a domain that had a clear split of themes between individual factors that promote well-being and changes that have occurred in healthcare on the national level. Providers highlighted the ability to compartmentalize their work and life as a way to facilitate wellness. Respondents discussed a variety of hobbies to step away from the stresses of work. Most respondents felt that being fully present with their family was a major contributor towards overall wellness.

On the national stage, the increasing use of social media was described as a major factor contributing to burnout. Participants felt that it was difficult to disengage from social media at home; and in some cases, negative emails and online posts from patients and families were seen as toxic. In addition, the extensive spread of misinformation interfered with their ability to do their job. One participant stated: "I think one of the big detriments to wellness is that it, from a physician standpoint, we have to deal with that [negative and misinformation] in our jobs, we have to deal with that from boots on the ground standpoint with patients. But then we come home, or we want to scroll through our Facebook to decompress and it's thrown back in our face again. So, we can't really walk away from those things that drive us crazy as readily as we used to be able to pre-COVID."

#### Workload and Job Demands

In this domain, all themes stemmed from the organization and/or changes to healthcare nationally as drivers of burnout. As healthcare grows as a business and entities consolidate, providers reported feeling the burden from the business side of healthcare. Respondents stated that the focus on patient numbers and Relative Value Units (RVUs) as well as increased administrative burdens took away from their original reason to pursue healthcare. The tension between what provides value as meaningful work and the administrative requirements of provider practice is seen as a major cause of burnout.

Beyond the increasing administrative burden, the national shortage of behavioral and mental healthcare professionals is causing a considerable change in provider workload. Respondents often described feelings of helplessness as they did not feel they had the expertise or resources to help the patients and families. In several cases, the respondents expressed significant concerns for the safety and well-being of the staff. One person

explained: "My group [was] taught active shooter in-hospital response. And every single time at the end of the educational experience, people would start almost like vomiting out these stories of angst that they had about working. So that's just like a global thing...That's a big thing, just the idea of being able to go to work and feeling protected, valued and safe."

# **Efficiency and Resources**

The most common discussion about efficiency and resources focused on the utilization and frequency of change with health information technology and care delivery. Multiple participants expressed frustration with the amount of time required to learn new systems, or problem-solving IT issues. Respondents felt that the amount of time wasted on such issues takes away from the time that should be spent providing reimbursable care to patients; this also goes against the best practice of having people work at the top of their license. One respondent stated bluntly, "I think the electronic medical record has done more to hurt physician wellness than anything."

#### Organizational Culture and Values

The most common factor leading to burnout was related to organizational culture and values. Respondents reported close connections and felt supported by their immediate levels of leadership. However, the layers of hierarchy and organizational growth were a source of tension. First the increasing layers between the decision makers and those who fulfill the mission led to a sense of disconnect between the organizational mission and the day-to-day operational goals of the care team. This was often seen as leading to communication issues and competing demands. In addition, the communication and culture of incentives and compensation were perceived as detracting from well-being. Nearly all stakeholders felt that the format of the incentive plan and metrics felt punitive, which results in providers feeling undervalued. It was suggested that a simple change of wording to a positive "carrot" rather than a "stick" would promote a sense of engagement and well-being, even if the underlying payment structure remained the same.

#### DISCUSSION

This study adds to the growing literature about specific drivers that influence well-being at an academic institution and the impact of a global pandemic on well-being. This study also outlines the importance of qualitative research techniques (focus groups) in achieving detailed information necessary to make substantial changes to improve the overall wellness of health care providers. We employed an easily reproducible tool of virtual focus groups to assess the above factors.

Healthcare workers have been under significant physical and mental health stress since the start of the pandemic. Multiple studies have shown that over 40% of health care workers have anxiety and or depression and nearly 70% claimed they felt high levels of stress [10, 11]. A recent meta-analysis showed that health care workers also had more issues with sleep and somatization than the general population during past pandemics [12]. The negative impacts of the COVID-19 pandemic are well known. Through the focus group sessions, we were able





to elucidate positive outcomes from the pandemic that were found to promote well-being including: a new focus on self-care, the ability to work from home and autonomy around scheduling and meeting attendance. Providers described feeling even more grateful for their ability to take care of children. They felt as though they achieved social connectedness through mentorship, increased collegial interaction at work, and the perceived improvement in quality of care through multidisciplinary conferences.

Opportunities for improvement of well-being aligned with the organizational strategies to promote engagement and reduce burnout outlined by Shanafelt et al [6]. Main drivers of burnout included: significant administrative burden, heavy clinic workloads, lack of autonomy, increasing obligations at home, lack of social functions/support, feeling undervalued, and a mismatch of organizational goals and day to day provision of care. The increased volume and burden of psychiatric patients negatively impacting both individual providers' mental health as well as stress on the current healthcare system.

Our research led to many short- and long-term opportunities to improve well-being. The leadership is supportive of autonomy and the ability to work from home when one is not required in person for clinical duties. A multifaceted approach to improve administrative support has been instituted, including clear points of contact at both the departmental and institutional levels. There is a new focus on improving social connectedness through social gatherings and multidisciplinary conferences to encourage building a supportive community. Other longer-term opportunities include a more incentivized compensation plan, a physician to communicate with difficult families and increased face time with upper-level leadership.

In alignment with our continued ability to telework when able as well as our institution's recommendation for physical distancing during the pandemic, our focus groups were held virtually. Focus groups are an established form of qualitative research that encourage interaction among group members to allow for an exchange of ideas and experiences [13]. We provided a platform for our participants where they could feel safe sharing ideas and experiences. There is always a possibility of dominant respondent bias, but this did not seem apparent across our transcript reviews. Our ability to hold virtual focus group sessions allowed for a diverse set of viewpoints.

The findings of this study align with others about drivers and barriers to well-being at an academic institution. In addition, it includes the impact of a global pandemic on the well-being of our health care providers. Since it was only at a single academic institution there may be some limitations to generalizability. Some academic pediatricians and subspecialties had less representation due to scheduling conflicts. It is possible that some physicians even avoided the sessions altogether which may have resulted in bias. However, prior studies have shown that the interventions to reduce burnout need to be adapted to meet specific organizational and care team needs [1]. Therefore, while the specific examples may not be generalizable, other organizations can use this approach to obtain data required to assess causes of burnout and areas that promote well-being within their own organizations. To remain parsimonious, our survey included one burnout item. Future work will include larger burnout questionaires, such as the Maslach Burnout Inventory, to allow for more nuance in reporting [14]. Finally, due to the small number of APPs within each division, asking respondents to state their role as faculty or APP, could be identifiable. Therefore, we cannot analyze burnout results by APP. Future research should examine the differences and needs of APPs.

It is also important to acknowledge that there are indeed differences between burnout and underlying mental illness in physicians. This study demonstrates the importance of working with organizational leadership to better align goals and to come up with ways to support overall wellness that includes both access to mental health care a treatment as well as organizational strategies that can relieve some of the systemic pressures that inihibit well-being at academic institutions. This study was supported by institutional leadership.

## **CONCLUSION**

This study provides insight into modifiable factors that promote and inhibit well-being at an academic institution during a pandemic. Well-being has been positively impacted by the shift to telework and increased autonomy in scheduling and focus on self-care. We found multiple opportunities to improve well-being of our providers, and our focus groups have led to actionable change. The virtual focus group model was successful in encouraging group discussions and developing themes for qualitative research. We present a reproducible tool for assessing drivers of well-being at other organizations.

**Funding Source:** This publication [or project] was supported, in part, by the National Center for Advancing Translational Sciences of the National Institutes of Health under Grant Number UL1 TR001450. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health." This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Conflicts of Interest:** The author(s) have no conflict of interest to declare for this work

#### REFERENCES

- Shanafelt TD, Hasan O, Dyrbye LN, Sinsky C, Satele D, Sloan J, et al. Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014 [Erratum in: Mayo Clin Proc. 2016 Feb;91] [2] [:276. PMID: 26653297]. Mayo Clin Proc. 2015 Dec;90(12):1600–13. https://doi. org/10.1016/j.mayocp.2015.08.023 PMID:26653297
- 2. Cull WL, Frintner MP, Starmer AJ, Leslie LK. Longitudinal Analyses of Pediatrician Burnout. Acad Pediatr. 2019 Apr;19(3):256–62. https://doi.org/10.1016/j.acap.2018.11.006 PMID:30412766
- Moll V, Meissen H, Pappas S, Xu K, Rimawi R, Buchman TG, et al. The Coronavirus Disease 2019 Pandemic Impacts Burnout Syndrome Differently Among Multiprofessional Critical Care Clinicians-A Longitudinal Survey Study. Crit





- Care Med. 2022 Mar;50(3):440–8. https://doi.org/10.1097/ CCM.0000000000005265 PMID:34637424
- Restauri N, Sheridan AD. Burnout and Posttraumatic Stress Disorder in the Coronavirus Disease 2019 (COVID-19) Pandemic: Intersection, Impact, and Interventions. J Am Coll Radiol. 2020 Jul;17(7):921–6. https://doi.org/10.1016/j. jacr.2020.05.021 PMID:32479798
- Shreffler J, Petrey J, Huecker M. The Impact of COVID-19 on Healthcare Worker Wellness: A Scoping Review. West J Emerg Med. 2020 Aug;21(5):1059–66. https://doi. org/10.5811/westjem.2020.7.48684 PMID:32970555
- Shanafelt TD, Noseworthy JH. Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout. Mayo Clin Proc. 2017 Jan;92(1):129–46. https://doi.org/10.1016/j. mayocp.2016.10.004 PMID:27871627
- Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 2009 Apr;42(2):377–81. https://doi. org/10.1016/j.jbi.2008.08.010 PMID:18929686
- Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005 Nov;15(9):1277– 88. https://doi.org/10.1177/1049732305276687 PMID:16204405
- 9. Stewart MT, Reed S, Reese J, Galligan MM, Mahan JD. Conceptual models for understanding physician burnout,

- professional fulfillment, and well-being. Curr Probl Pediatr Adolesc Health Care. 2019 Nov;49(11):100658. https://doi.org/10.1016/j.cppeds.2019.100658 PMID:31629639
- Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. JAMA Netw Open. 2020 Mar;3(3):e203976. https://doi. org/10.1001/jamanetworkopen.2020.3976 PMID:32202646
- 11. Marvaldi M, Mallet J, Dubertret C, Moro MR, Guessoum SB. Anxiety, depression, trauma-related, and sleep disorders among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. Neurosci Biobehav Rev. 2021 Jul;126:252–64. https://doi.org/10.1016/j.neubiorev.2021.03.024 PMID:33774085
- 12. Salazar de Pablo G, Vaquerizo-Serrano J, Catalan A, Arango C, Moreno C, Ferre F, et al. Impact of coronavirus syndromes on physical and mental health of health care workers: systematic review and meta-analysis. J Affect Disord. 2020 Oct;275:48–57. https://doi.org/10.1016/j.jad.2020.06.022 PMID:32658823
- 13. Wong LP. Focus group discussion: a tool for health and medical research. Singapore Med J. 2008 Mar;49(3):256–60. PMID:18363011
- 14. Maslach, C.; Jackson, S.E.; Leiter, M.P. (1996–2016). Maslach Burnout Inventory Manual (Fourth ed.). Menlo Park, CA: Mind Garden, Inc.

### Appendix A

- 1. How would you define well-being?
- 2. Are you encouraged to talk about your own well-being?
  - a. Probes: To your colleagues, professionals, family? Or is it taboo?
- 3. What would you consider to be main contributors to well-being at work?
  - a. Probes: Positive and Negative contributors
- 4. Do you have a way to minimize the impact of these issues have on your well-being?
  - a. Probes: Personal methods?
  - b. Probes: As a practice and a work?
- 5. Would you say that burnout is a worry generally among doctors?
- 6. Do you do anything to try to prevent burnout from occurring?
- 7. Are you aware of any services or coping mechanisms that could help prevent burnout?
- 8. Do you think that burnout and/or poor well-being is increasing among doctors?
  - a. Probes: Why? What has changed?
- 9. What, in your opinion, would be the best way to improve the well-being of physicians and prevent burnout?
  - a. Probes: Feasible ideas? The sky is the limit?
  - b. Probes: What Individual and practice-level strategies would you suggest





# Appendix B

Category Codes to be Applied Indicating the Relationship to Burnout

Category	Short	Operational Definition
Name	Name	
Burnout Contributions	Negative	Statements related to factors that increase physician burnout. Including contributing factors which add stress and that drain physician energy and well-being.
Burnout Reduction	Positive	Statements related to the reduction of burnout. Including contributing factors that increase physician physical, emotional and spiritual well-being.

# Codes

Code Name	Short	Operational Definition
	Name	
Workload and	Workload	Statements related to the physician's workload, expectations,
job demands		and payment. Include statements referring to: job duties,
		work hours, expectations and incentives, productivity,
		compensation, payment, and reimbursement.
Control &	Control	Statements related to the amount of control or flexibility
Flexibility		within the physician's job. Include statements related to
		scheduling, work hours, vacation, call and rotations,
		guidelines, licensure/credentialing, regulations, and policies.
Work-life	Work life	Statements related to the personal priorities and value of the
Integration		physicians for non-work time. Include statements related to
		family, illness, night/weekend coverage, work/life balance,
		vacation, and the ability to step away from work.
Social support	SS	Statements related to work relationships and social support in
and		the workplace. Include statements related to teams and
community at		collaboration, collegiality, social gatherings, physical space
work		configurations, professional societies, mentorship.
Organizational	Culture	Statements related to the physician, leadership, and
culture and		organizations, culture, values, and work priorities. Include
values		statements related to professional values, ethics,
		commitment, work norms and culture, equity, organizational
		mission, vision, and values, leadership behavior, and
		communication/messaging.
Efficiency and	Efficiency	Statements related to the efficiency of systems and
resources		processes, and the availability of resources. Include
		statements about the efficiency of workflows, technologies,
		and use of resources. Also, include statements about the
		availability of resources and staff. Can also include statements
		related to delegation and organizational skills.
Meaning in	Meaningful	Include statements related to what the physicians find
work		meaningful in work. Include statements of opportunities for
		professional development and growth. Can include
		opportunities in teaching, research, leadership.
Definition of	Definition	Statements related to the theory or definition of well-being.
Well-being		Include abstract statements or perceived
		contributors/detractors.

# Transcript-level Codes

Code Name	Operational Definition
Department	Department(s) participating in discussion



