

Burnout and Distress among Physicians in the Peter Munk Cardiac Centre

Barry Rubin MD PhD, Rebecca Goldfarb PhD, Daniel Satele MSc and Leanna Graham BScPT MHSc

Background: Physician burnout has a negative impact on patient care and provider experience. This study documents burnout and distress levels in physicians that manage patients with cardiovascular disease at a quaternary referral hospital.

Methods: Physicians were invited to complete the nine-question WellBeing Index (WBI) survey, which measures fatigue, depression, burnout, anxiety/stress, and mental/physical quality of life. Demographics, work culture items and survey responses were compared between and within physician groups. Multivariable logistic regression identified independent associations between demographics, workplace characteristics and high WBI scores.

Results: 127/151 (85%) of physicians completed the survey. Of these physicians, 66% reported burnout and 54% reported emotional problems. Physicians noting insufficient staffing levels were more likely to report burnout (77%, $p = 0.0019$). The mean WBI score was 2.4 ± 2.6 (mean \pm SD). A WBI score of ≥ 3 , indicative of high distress, or ≥ 5 , indicative of severe distress was endorsed by 55% and 26% of physicians, respectively. Physicians were more likely to endorse a high WBI score if they perceived insufficient staffing levels ($p=0.017$), unfair treatment ($p=0.026$), or were anesthesiologists (74% vs. 47% for other physicians, $p=0.0054$). Physicians who perceived fair treatment were less likely to endorse a high WBI score (odds ratio 0.40, 95% confidence interval 0.16–0.99, $p=0.05$).

Interpretation: Physicians in this study have high levels of burnout and distress that are driven by the perception of inadequate staffing levels and being treated unfairly in the workplace. Addressing these institutional factors could decrease clinician burnout and improve provider experience and patient outcomes.

Introduction

Clinician burnout is a work-related syndrome characterized by emotional exhaustion, a sense of reduced personal accomplishment and depersonalization that may manifest as negativity, cynicism and the inability to express empathy or grief.(1, 2) Burnout in physicians is associated with decreased quality of life, high fatigue, increased job turnover and suicidal ideation. Consequently, burnout adversely affects the quality of care that physicians provide, and correlates with an increased risk of medical errors, serious safety events and malpractice proceedings, as well as reduced patient satisfaction and worse patient outcomes, including health care–associated infections.(3-7) In addition, burnout has a significant negative economic impact on health care systems, due to reduced clinical hours and the costs associated with physician turnover.(8) Nearly half of all physicians experience burnout in some form, a rate more than twice that among professionals in other fields.(2, 9) For these reasons, clinician burnout is a public health crisis.(2, 10, 11)

Multiple validated survey instruments, including the Maslach Burnout Index(1, 12) and the Well Being Index (WBI) survey(13, 14) can measure burnout and other dimensions of distress in physicians. A WBI score ≥ 3 has been used to identify physicians with high levels of overall distress.(13) The WBI survey can also identify physicians at risk for adverse professional consequences, such as making a medical error, low career satisfaction, and intent to leave their current position.(14) We used the WBI survey to assess the prevalence of burnout and overall distress in physicians in the Peter Munk Cardiac Center (PMCC) at Toronto General Hospital and Toronto Western Hospital. The relationship between responses to individual WBI survey questions and physician’s gender, years in practice, type of specialty, satisfaction with the hospitals electronic medical record, perception of the adequacy of staffing levels, being treated fairly in the workplace, work-life integration and meaning in work were evaluated, and the demographic and environmental factors that predicted high physician WBI scores were assessed. Then, we compared responses to the WBI survey endorsed by physicians in the PMCC with physicians in practice at academic health science centers in the United States that have completed this survey.

Methods

After placing posters in multiple areas across the PMCC describing the WBI survey (Appendix 1), an independent third party (Canadian Viewpoint) sent e-mail invitations (Appendix 2) to complete the WBI survey to the 151 physicians that practice in the PMCC. Neither the hospitals or the study authors had access to individual responses to the WBI survey, which were collected by CWS, 3014 Allegro Park LN SW, Rochester, MN 55902
<https://www.mededwebs.com/well-being-index>.

WBI Survey questions. The WBI survey(13) includes 7 questions that are answered “yes/no”: 1) have you felt burned out from your work, 2) have you worried that your work is hardening you emotionally, 3) have you often been bothered by feeling down, depressed, or hopeless, 4) have

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3 you fallen asleep while sitting inactive in a public place, 5) have you felt that all the things you
4 had to do were piling up so high that you could not overcome them, 6) have you been bothered
5 by emotional problems (such as feeling anxious, depressed, or irritable), and 7) has your
6 physical health interfered with your ability to do your daily work at home and/or away from
7 home.
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10 Two additional items in the WBI survey assessed meaning in work and satisfaction with work
11 life integration. Participants were asked to rate the statement: “The work I do is meaningful to
12 me” using the 7-point Empowerment at Work Scale, with “very strongly disagree” at the 1 end
13 of the scale, and “very strongly agree” at the 7 end of the scale.(15) Individuals who indicated a
14 low level of meaning in work, i.e. responded 1 or 2 on the 7-point Likert scale, had 1 point
15 added to their WBI score while those who answered favorably, i.e. recorded a score of 6 or 7
16 had 1 point subtracted from their score.
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20 A 5-point Likert scale enabled participant to rate the statement “my work schedule leaves me
21 enough time for my personal/family life”, where a response of “strongly disagree or disagree”
22 indicated lower satisfaction with work life integration, and resulted in the addition of 1 point to
23 their WBI score, while those who indicated higher satisfaction by responding “agree or strongly
24 agree” had 1 point subtracted from their score. Accordingly, possible WBI scores ranged from -2
25 to +9. In samples of physicians (and medical students), every one point increase in the WBI
26 score results in a step-wise increased probability of distress and risk for adverse personal or
27 professional consequences.(14) The ability of the WBI survey to measure dimensions of
28 distress, including fatigue, depression, burnout, anxiety/stress, and mental/physical quality of
29 life has been validated in a sample of 6,880 physicians.(13)
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34 Work environment items. In addition to the WBI survey questions, study participants were also
35 asked to rate how satisfied they are with the electronic health record using a 5-point Likert
36 scale, with “very unsatisfied” yielding a score of -2, and “very satisfied” a score of + 2, and to
37 rate the statements “staffing levels in this work setting are sufficient to handle the number of
38 patients” and “I am treated fairly in the workplace” using a 5-point Likert scale, with “strongly
39 disagree” yielding a score of -2, and “strongly agree” a score of + 2.
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42 Participant feedback. Upon completion of the nine questions in the WBI survey, respondents
43 received instantaneous feedback via e-mail in the form of a dashboard that identified
44 dimensions of distress, including quality of life, meaning in work, work-life integration and
45 likelihood of burnout, as well as severe fatigue and suicidal ideation, in comparison with all
46 other physicians that have completed the WBI survey. If a high WBI score indicative of distress
47 was identified, i.e. ≥ 3 (13) the e-mail response to individual study participants included contact
48 information for local, regional and provincial resources that provide assistance managing each
49 element of distress.
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53 Statistical analysis. We used standard univariate statistical comparisons using Chi-square or
54 Kruskal-Wallis tests, as appropriate, to describe this sample of physicians in the PMCC. We then
55 compared selected demographics, work environment items and elements of the WBI survey
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3 both between and within groups. Multivariable logistic regression was used to identify
4 independent associations between demographic and workplace characteristics and a high WBI
5 survey score, and odds ratios and confidence intervals were calculated for the association of
6 each independent predictor of a high WBI score. Finally, we compared univariate associations
7 among WBI data from US physician responders in practice at academic health science centers
8 (AHSCs) with the PMCC responders. For this analysis, we defined AHSCs as academic/learning
9 hospitals that deliver basic and clinical research, education to health professionals and clinical
10 care to patients.(16) All analyses were conducted using SAS Version 9.
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14 Ethics. This study was approved by the University Health Network research ethics board as a
15 quality improvement study.
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18 **Results**

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20 WBI survey response rate and demographics. One hundred twenty seven of the 151 physicians
21 in the PMCC who received a request to complete the WBI survey responded (84.1%). We report
22 physician's gender, years since graduation from medical school, years working at UHN and
23 medical specialty in Table 1.
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26 Distribution of physician WBI scores. Physicians in this survey endorsed a WBI score of 2.4 ± 2.6
27 (mean \pm SD). A WBI score of ≥ 3 or ≥ 5 was endorsed by 55% and 26% of physicians, respectively
28 (Figure 1).
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31 Response to individual questions in the WBI survey. Eighty-three of 127 physicians (66%)
32 responded yes to the question "have you felt burned out from your work", 68/127 (54%)
33 responded that they have "been bothered by emotional problems", 26/127 (21%) agreed or
34 strongly agreed with the statement "work schedule leaves enough time for personal life", and
35 99/127 (78.0%) strongly or very strongly agree with the statement "the work I do is meaningful
36 to me". Responses to the remaining WBI survey questions appear in Table 2.
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40 Next, we assessed the relationship between physician's views of their work environment
41 (sufficiency of staffing levels, being treated fairly, and satisfaction with the electronic medical
42 record) and their responses to individual WBI survey questions (Table 2). Physicians who were
43 neutral or somewhat or strongly disagreed that staffing levels in the work setting are sufficient
44 were more likely to have felt burned out from their work (77%, $p = 0.0019$), felt that things
45 were piling up so high they could not overcome them (61%, $p = 0.0006$), and have you worried
46 that work is hardening them emotionally (60%, $p = 0.0026$), and were more likely to somewhat
47 or strongly disagree that their work schedule leaves enough time for personal life (67%, $p =$
48 0.0025).
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52 Physicians who were neutral or somewhat or strongly disagreed that they were treated fairly in
53 the workplace were more likely to have identified emotional problems (67%, $p = 0.0026$), report
54 being hardened emotionally by work (65%, $p = 0.016$), or feeling down, depressed, or hopeless
55 (48%, $p = 0.0017$). Physicians who agreed or strongly agreed that they were treated fairly in the
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workplace were more likely to somewhat or strongly agree that the work they do is meaningful to them (84%, $p = 0.03$).

Anesthesiologists somewhat or strongly agreeing that the work they do is meaningful to them less often than the other specialty groups (60% vs 75% – 100%, $p = 0.02$), and were more likely to have worried that work is hardening them emotionally than the other specialty groups (71% vs. 26% - 60%, $p = 0.007$). The number of times physicians accessed contact information for local, regional or provincial resources that help manage each element of distress is presented in Figure 2.

Predictors of high physician WBI scores. Physicians were more likely to endorse a WBI score of ≥ 3 if they were neutral or somewhat or strongly disagreed that staffing levels were sufficient (55/69, 80%, $p = 0.017$), or if they were neutral or somewhat or strongly disagreed that they were treated fairly in the workplace (31/69, 45%, $p = 0.026$). Anesthesiologists endorsed a WBI score ≥ 3 more than physicians in the other specialty groups (74% vs 47%, $p = 0.005$). We did not identify a relationship between the percentage of physicians endorsing a WBI score of ≥ 3 and physician gender, years since graduation from medical school, years working at PMCC or satisfaction with the electronic medical record (Table 3).

Multivariable analysis showed that physicians who agreed they were treated fairly in the workplace (vs. not) were less likely to endorse a WBI score ≥ 3 (odds ratio 0.40, 95% confidence interval 0.16–0.99, $p=0.05$, Table 4). Physicians who agreed that staffing levels are adequate in the workplace (vs. not) were also less likely to endorse a WBI score ≥ 3 , but this difference failed to reach statistical significance (odds ratio 0.44, 95% confidence interval 0.17–1.19, $p=0.10$, Table 4).

Comparison of WBI scores between physicians in practice in the PMCC and at AHSCs in the United States. The 127 PMCC physicians endorsed higher average WBI scores (2.4 ± 2.6 vs. 1.8 ± 2.7 , $p=0.004$), reported more burnout (65% vs. 57%, $p=0.048$), were less likely to agree that work leaves enough time for their personal life (21%. Vs 38%, $p < 0.0001$) and were more likely to be male (71% vs 59%, $p = 0.20$) than the 21,594 physicians in practice at AHSCs in the United States that have completed the WBI survey. In addition, PMCC physicians endorsed WBI scores ≥ 3 , indicative of high distress (54% vs. 40%, $p=0.001$) or ≥ 5 , indicative of severe distress (26% vs. 18%, $p=0.028$) in comparison with the responding AHSC physicians in the United States (Table 5). Conversely, PMCC physicians were more likely agree or strongly agree that their work is meaningful than physicians in the US cohort (7-point Likert scale, 6.2 ± 1.1 vs. 5.9 ± 1.2 , $p=0.002$).

Interpretation

The Institute for Health Improvement identifies provider experience, improved patient experiences, better outcomes and lower per capita costs as core requirements for quality patient care.(17) Burnout negatively affects the provider experience and the care that physicians provide.(3-7) Drivers of physician burnout include excessive workloads, inefficient

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3 work processes, clerical burden, work-home conflicts and lack of input or control with respect
4 to issues affecting their work lives, organizational support structures and leadership culture.
5 Individual physician-level factors also play a role, with higher rates of burnout commonly
6 reported in female and younger physicians.(18) In this study we used the validated WBI
7 survey(13) to identify levels of burnout and distress among physicians in practice in the PMCC,
8 which operates in a single-payer universal health-care system environment.
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12 A WBI score ≥ 3 was used to screen for physicians with high levels of overall distress because, in
13 a sample of 6,880 physicians this threshold was associated with a 1.9-fold higher likelihood of
14 burnout and a 1.4-fold higher likelihood of severe fatigue and poor overall quality of life.(13)
15 Physicians with a WBI score ≥ 5 were considered to have severe distress, because such scores
16 are associated with a higher likelihood of burnout (6.6-fold), poor overall quality of life (3.6-
17 fold), severe fatigue (2.9-fold) and suicidal ideation (2.8-fold).(13) In this survey, 55% of PMCC
18 physicians endorsed a WBI score ≥ 3 , and 26% endorsed a WBI score ≥ 5 . The main drivers for
19 high physician distress were the perception of inadequate staffing levels, being treated unfairly
20 in the workplace, and suboptimal work-life balance.
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24 Dissatisfaction with the electronic health record did not correlate with elevated physician WBI
25 scores, in contrast to other reports.(19, 20) Our findings are consistent with the recent
26 observation that other factors, including a chaotic work atmosphere, lack of control of
27 workload, time for personal and family life, value alignment with leaders, professional and
28 personal life balance, and hours worked per week appear to play a more important role in
29 physician burnout than issues related to the electronic health record.(21) The finding that time
30 on staff or since graduation from medical school did not impact PMCC physician WBI scores was
31 at odds with the results of the recent Canadian National Physician Health Survey,(22) which
32 found that physicians with five or fewer years in practice were 45% more likely to experience
33 burnout than all other physicians.
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37 We noted that anesthesiologists had significantly higher WBI scores than other groups of
38 cardiovascular physicians, were more likely to state they were worried that their work is
39 hardening them emotionally and found their work to be less meaningful than other physicians.
40 Conversely, the Canadian National Physician Health Survey failed to identify significant
41 differences in physician burnout according to area of practice.(22) Only 29% of
42 anesthesiologists in this survey agreed that their work schedule leaves enough time for their
43 personal life, which appears to be lower than the 53% of Canadian critical care physicians that
44 felt that their work schedule left enough time for personal and family life.(23) The reasons for a
45 worse provider experience for anesthesiologists than other groups of physicians in the PMCC is
46 not clear, but may relate to working in a high stress environment, long working hours,
47 insufficient sleep and time pressures.(24)
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52 Policy-level system factors may play a role in physician burnout. Our interest in understanding
53 similarities and differences in burnout across the US-Canada border stems in part from the fact
54 that the two countries have very different health care systems, and led us to compare distress
55 scores endorsed by physicians in the PMCC with their counterparts in US AHSCs. We postulated
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3 that similarities in burnout and overall distress in these groups of physicians would suggest risks
4 inherent in health care work across different settings.
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7 We found that PMCC physicians had higher overall WBI scores and a greater percentage of WBI
8 scores indicative of high or severe distress than physicians in practice at US AHSCs (Table 5).
9 The reasons for this dichotomy are not clear but could be due to higher physician burnout and
10 distress rates at the PMCC than at other AHSCs in our regional environment. This conclusion is
11 not supported by the results of the Voice of the Faculty survey conducted by the Department of
12 Medicine at the University of Toronto in 2019, which included the 10 AHSCs in the greater
13 Toronto area.¹ Of the physicians at the University of Toronto survey that responded to the
14 question “Thinking about the past 12 months, how often did you feel burned out?” 17.9%
15 (54/301) at Toronto General and Toronto Western Hospitals and 17.1% (192/1,121) at the
16 other 8 AHSCs in Toronto responded “almost always/daily” or “almost always”.² Therefore,
17 burnout does not appear to be more prevalent among physicians at Toronto General and
18 Toronto Western Hospitals than among physicians in practice at other AHSCs in Toronto.
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23 Another possible explanation for the higher burnout and distress scores endorsed by PMCC in
24 comparison with US physicians in practice at AHSCs could relate to intrinsic differences in the
25 Canadian and US health care systems. For example, while the number of physicians per 1,000
26 population (2.48 vs. 2.55) and hospital beds per 10,000 population (27 vs. 28) in the Canadian
27 and US health care systems are similar, significantly more physicians in the US than in Canada
28 are specialists (88.2% vs. 52.8%), and average specialist physician income (\$230,292 vs.
29 \$265,000) is lower in Canada than the US.(25)
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33 Challenges related to differences in the volume of patients requiring management could also
34 partially explain the observed differences in burnout and distress between PMCC and US
35 physicians, because the proportion of patients reporting difficulty accessing after-hours care
36 (64% vs. 51%), reporting wait >2 months for specialist appointment (30% vs. 6%) and reporting
37 a wait > 4 months for elective surgery (18% vs. 4%) are all higher in Canada than the US.(25) In
38 addition, the percent occupancy of acute care beds is consistently higher in Canada than in the
39 US (91.2% vs. 63.9% in 2000, 91.6% vs. 62.8% in 2015).(26) Longer wait times due to limitations
40 of resources, less availability of specialist physicians, differences in the volume of clinical
41 activity and workload, more crowded hospital environments and greater personal financial
42 pressures might have contributed to the differences in burnout and distress scores between
43 PMCC and US physicians that we observed.
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48 Despite endorsing higher overall burnout and distress scores, physicians in the PMCC were
49 more likely to endorse a positive response to the statement “the work the work I do is
50 meaningful to me” than their counterparts in AHSCs in the United States. Additional studies are
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53 ¹ Michael Garron Hospital, Sinai Health System, Princess Margaret Hospital, St. Joseph’s Hospital, St. Michael’s
54 Hospital, Sunnybrook Health Science Centre, Toronto Western Hospital, Women’s College Hospital.

55 ² Personal Communication, Lynn Wilson, Vice Dean Partnerships, University of Toronto
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3 required to determine if differences in burnout, distress and meaning in work exist between
4 physicians in practice in Canada and United States, and to identify the drivers of those
5 differences.
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8 This study has multiple significant limitations. Despite the high response rate (85%), the
9 relatively modest number of physician respondents (127) could limit study validity, makes type
10 2 statistical errors more likely, and decreases the potential for the multivariable logistic
11 regression analysis to yield statistically significant results. The fact that this is a two-institution
12 study could limit the ability to generalize our results. Comparison of physician WBI scores
13 between the PMCC and AHSCs in the United States may have a gender bias, because the
14 percentage of male respondents was relatively higher in the PMCC than the US sample.
15 Importantly, survey participants in this study only included physicians that practice in the area
16 of cardiovascular medicine and surgery, which limits the ability to directly compare burnout and
17 distress scores with physicians that practice across the full spectrum of specialties in US AHSCs
18 that have responded to the WBI survey.
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23 The observation that high physician distress scores correlated with inadequate staffing levels,
24 being treated unfairly in the workplace and suboptimal work-life balance suggests that
25 strategies to decrease distress among physicians should be directed at these institutional
26 factors. The high prevalence of distress scores above the threshold at which physicians are at
27 risk for significant mental health issues and for providing suboptimal patient care emphasizes
28 the need to direct efforts and resources towards intervention strategies that have been shown
29 to decrease clinician burnout.(18, 27-29) Our baseline data can be used to plan and assess the
30 impact of these interventions at regular intervals.
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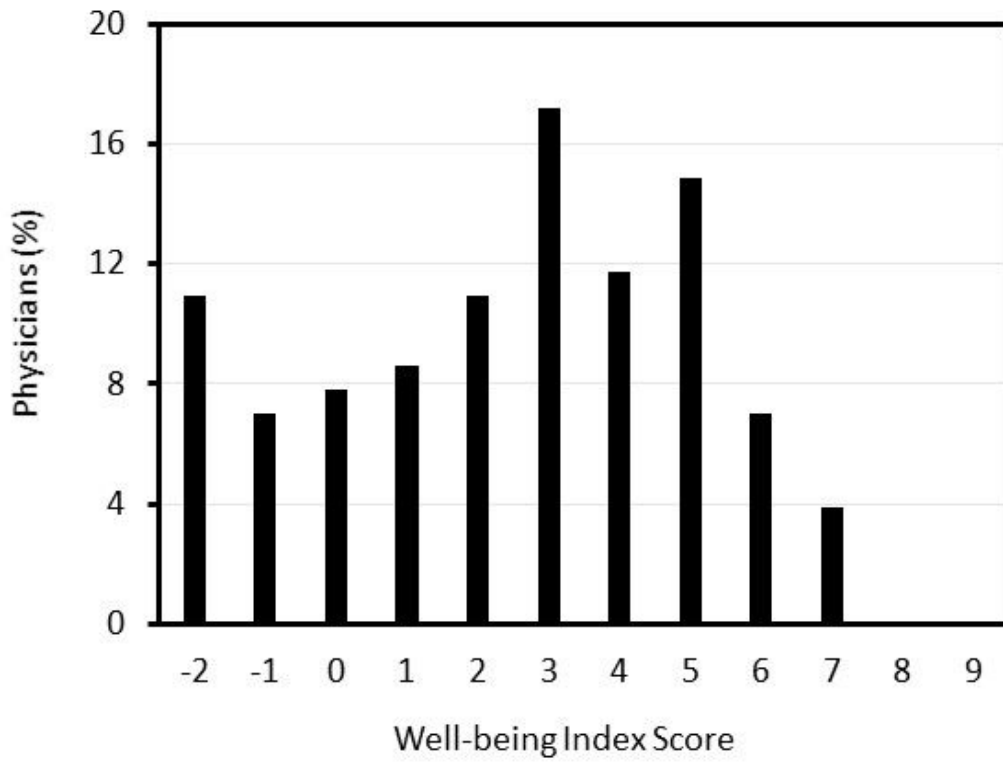
35 Affiliations: Division of Vascular Surgery, Peter Munk Cardiac Centre (Rubin) and Office of
36 Professional Practice & Policy (Graham), Toronto General Hospital, University Health
37 Network; Goldfarb Intelligence Marketing (Goldfarb); Mayo Foundation for Medical Education
38 and Research, Division of Biomedical Statistics and Informatics (Satele).
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41 Contributors: Barry Rubin, Rebecca Goldfarb and Leanna Graham designed the study. Barry
42 Rubin drafted the manuscript. Daniel Satele carried out the statistical analysis. All authors
43 analyzed and interpreted the data, contributed to the study conception, critically revised the
44 manuscript for important intellectual content, approved the version to be published and agreed
45 to be accountable for all aspects of the work.
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5 study or manuscript. The authors have no conflict of interest to declare.
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40 Figure 1. Distribution of well-being Index scores among 127 PMCC physicians.
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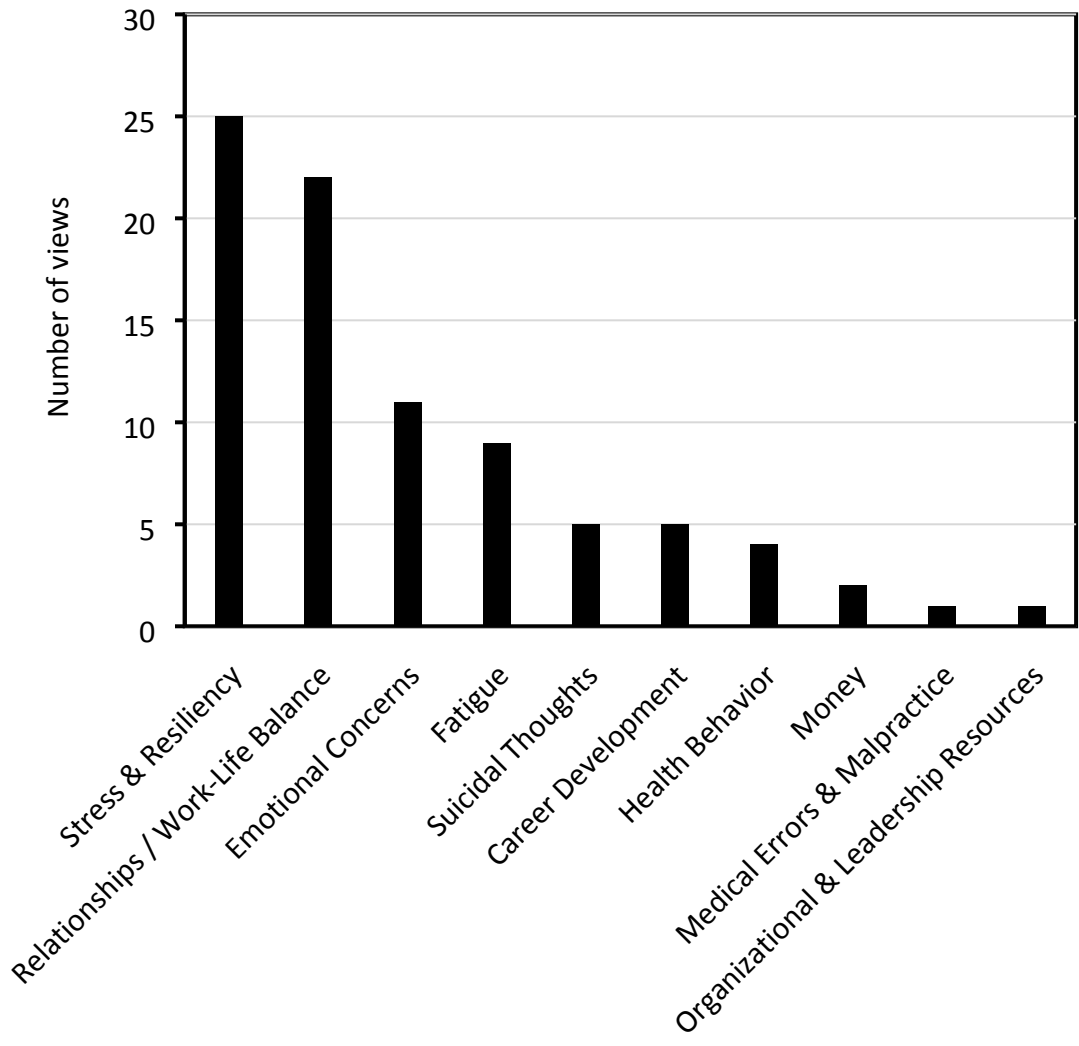


Figure 2. Access to online resources by 127 PMCC physicians. Number of views, by category.

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3 **Appendix 1.** Poster describing the WBI survey.
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8  **Well-Being Index**
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13 Why?
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- 15  To assess the well-being of clinicians (nurses, allied health,
16 pharmacists, physicians) at PMCC.
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20 What?
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- 22  The Well-Being Index is a web-based tool that evaluates multiple
23 dimensions of your well-being.
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25  You will receive your own individual results. Your responses and
26 your dashboard of results are **completely anonymous and**
27 **confidential.**
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31  PMCC will only receive aggregate anonymous data. This data will
32 help us focus on caring for our caregivers.
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38 When?
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- 40  You will receive an email invitation from Canadian Viewpoint with
41 the subject line “Invitation to use the Well-Being Index”.
42
43  The email invitation will have information and instructions that
44 explain how to complete the Well-Being Index.
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48 Thank you for participating in this important survey.
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Appendix 2. E-mail invitation to participate in the Well-Being Index survey.

Email Subject line: [Well-Being Index Survey](#)



Your well-being is vital to patients' outcomes. Assess your well-being and compare your results.

We are sending this note as an invitation to participate in our very important survey on physician well-being. We are undertaking this survey because we are committed to supporting the well-being of all our clinicians.

Setting up an account is easy and completing the index takes just a few minutes.

Assess Your Well-Being Online:

<https://www.mywellbeingindex.org/signup>

Invitation Code: **UHN PHYSICIAN**

Download the Well-Being Index Mobile App



What is the Well-Being Index?

The Well-Being Index is a **100 percent anonymous**, web-based tool that evaluates multiple dimensions of your well-being. This tool allows users to compare their scores to clinicians at other hospitals, and to track their own well-being over time. After completing the on-line survey, which takes about 3 minutes, you will immediately receive your **confidential** results in the form of a dashboard. The survey also provides important contact information and resources, should you require further assistance. PMCC will receive aggregate, anonymous data that will help us focus on caring for our caregivers, including developing new ways to improve clinician well-being and decrease clinician burnout.

Confidentiality of Results

It is important to emphasize that your individual responses and your dashboard of results are **completely anonymous and confidential**. It will not be possible for the PMCC, UHN or Canadian Viewpoint, the independent company that is sending you this link to complete the Well-Being

Index survey, to see or obtain this information. UHN Human Resources and the UHN Digital and Privacy Office have vetted and approved this approach to ensure that your results remain private.

Confidential

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Table 1. Physician Demographics

Gender	n (%)	Years since graduation	n (%)	Years working at PMCC	n (%)	Specialty	n (%)
Male	90 (71.4%)	< 2	0 (0.0%)	< 2	18 (14.2%)	Anaesthesia	35 (27.6%)
Female	36 (28.6%)	2 - 5	3 (2.4%)	2 - 5	21 (16.5%)	Cardiac Rehabilitation	4 (3.1%)
Gender Diverse	0 (0.0%)	6 - 10	14 (11.0%)	6 - 10	23 (18.1%)	Cardiac Surgery	10 (7.9%)
Missing	1	11 - 15	19 (15.0%)	11 - 15	24 (18.9%)	Cardiology	54 (42.5%)
		> 15	91 (71.7%)	> 15	41 (32.3%)	Medical Imaging	14 (11.0%)
						Vascular Surgery	8 (6.3%)
						Other	2 (1.6%)

Table 2. Physician response to individual WBI survey questions	Have you felt burned out from your work			Have you worried that work is hardening you emotionally			Have you often felt bothered by feeling down, depressed, or hopeless			Have you fallen asleep while sitting inactive in a public place			Have you felt that things were piling up so high you could not overcome them			Have you been bothered by emotional problems			Has physical health interfered with your ability to do daily work			Work I do is meaningful to me (categorized)				Work schedule leaves enough time for personal life (categorized)				
	Yes (N=83)	No (N=44)	P-value	Yes (N=61)	No (N=66)	P-value	Yes (N=37)	No (N=90)	P-value	Yes (N=25)	No (N=102)	P-value	Yes (N=64)	No (N=63)	P-value	Yes (N=68)	No (N=59)	P-value	Yes (N=22)	No (N=105)	P-value	1-2 (N=2)	3-5 (N=26)	6-7 (N=99)	P-value	1-2 (N=72)	3 (N=29)	4-5 (N=26)	P-value	
Gender, n (%)	0.52			0.65			0.76			0.67			0.69			0.96			0.16			0.78				0.63				
Male	57 (63.3%)	33 (36.7%)		44 (48.9%)	46 (51.1%)		25 (27.8%)	65 (72.2%)		17 (18.9%)	73 (81.1%)		44 (48.9%)	46 (51.1%)		48 (53.3%)	42 (46.7%)		13 (14.4%)	77 (85.6%)		1 (1.1%)	19 (21.1%)	70 (77.8%)		53 (58.9%)	20 (22.2%)	17 (18.9%)		
Female	25 (69.4%)	11 (30.6%)		16 (44.4%)	20 (55.6%)		11 (30.6%)	25 (69.4%)		8 (22.2%)	28 (77.8%)		19 (52.8%)	17 (47.2%)		19 (52.8%)	17 (47.2%)		9 (25.0%)	27 (75.0%)		1 (2.8%)	7 (19.4%)	28 (77.8%)		18 (50.0%)	9 (25.0%)	9 (25.0%)		
Gender Diverse																														
Missing	1	0		1	0		1	0		0	1		1	0		1	0		0	1		0	0	1		1	0	0		
When did you graduate medical school, n (%)	0.23			0.075			0.18			0.17			0.046			0.42			0.50			0.27				0.66				
<2 years																														
2-5 years	3 (100.0%)	0 (0.0%)		3 (100.0%)	0 (0.0%)		2 (66.7%)	1 (33.3%)		0 (0.0%)	3 (100.0%)		2 (66.7%)	1 (33.3%)		3 (100.0%)	0 (0.0%)		1 (33.3%)	2 (66.7%)		0 (0.0%)	2 (66.7%)	1 (33.3%)		2 (66.7%)	0 (0.0%)	1 (33.3%)		
6-10 years	10 (71.4%)	4 (28.6%)		9 (64.3%)	5 (35.7%)		6 (42.9%)	8 (57.1%)		0 (0.0%)	14 (100.0%)		7 (50.0%)	7 (50.0%)		8 (57.1%)	6 (42.9%)		3 (21.4%)	11 (78.6%)		1 (7.1%)	3 (21.4%)	10 (71.4%)		7 (50.0%)	5 (35.7%)	2 (14.3%)		
11-15 years	15 (78.9%)	4 (21.1%)		11 (57.9%)	8 (42.1%)		7 (36.8%)	12 (63.2%)		5 (26.3%)	14 (73.7%)		15 (78.9%)	4 (21.1%)		10 (52.6%)	9 (47.4%)		5 (26.3%)	14 (73.7%)		0 (0.0%)	3 (15.8%)	16 (84.2%)		13 (68.4%)	4 (21.1%)	2 (10.5%)		
16+ years	55 (60.4%)	36 (39.6%)		38 (41.8%)	53 (58.2%)		22 (24.2%)	69 (75.8%)		20 (22.0%)	71 (78.0%)		40 (44.0%)	51 (56.0%)		47 (51.6%)	44 (48.4%)		13 (14.3%)	78 (85.7%)		1 (1.1%)	18 (19.8%)	72 (79.1%)		50 (54.9%)	20 (22.0%)	21 (23.1%)		
When did you begin working at UHN, n (%)	0.14			0.16			0.29			0.43			0.10			0.085			0.93			0.88				0.079				
<2 years	13 (72.2%)	5 (27.8%)		9 (50.0%)	9 (50.0%)		7 (38.9%)	11 (61.1%)		1 (5.6%)	17 (94.4%)		6 (33.3%)	12 (66.7%)		9 (50.0%)	9 (50.0%)		3 (16.7%)	15 (83.3%)		0 (0.0%)	5 (27.8%)	13 (72.2%)		7 (38.9%)	7 (38.9%)	4 (22.2%)		
2-5 years	16 (76.2%)	5 (23.8%)		13 (61.9%)	8 (38.1%)		7 (33.3%)	14 (66.7%)		3 (14.3%)	18 (85.7%)		15 (71.4%)	6 (28.6%)		16 (76.2%)	5 (23.8%)		5 (23.8%)	16 (76.2%)		1 (4.8%)	5 (23.8%)	15 (71.4%)		15 (71.4%)	5 (23.8%)	1 (4.8%)		
6-10 years	18 (78.3%)	5 (21.7%)		9 (39.1%)	14 (60.9%)		9 (39.1%)	14 (60.9%)		6 (26.1%)	17 (73.9%)		13 (56.5%)	10 (43.5%)		13 (56.5%)	10 (43.5%)		4 (17.4%)	19 (82.6%)		0 (0.0%)	4 (17.4%)	19 (82.6%)		16 (69.6%)	3 (13.0%)	4 (17.4%)		
11-15 years	15 (62.5%)	9 (37.5%)		15 (62.5%)	9 (37.5%)		7 (29.2%)	17 (70.8%)		5 (20.8%)	19 (79.2%)		9 (37.5%)	15 (62.5%)		14 (58.3%)	10 (41.7%)		4 (16.7%)	20 (83.3%)		0 (0.0%)	5 (20.8%)	19 (79.2%)		14 (58.3%)	7 (29.2%)	3 (12.5%)		
16+ years	21 (51.2%)	20 (48.8%)		15 (36.6%)	26 (63.4%)		7 (17.1%)	34 (82.9%)		10 (24.4%)	31 (75.6%)		21 (51.2%)	20 (48.8%)		16 (39.0%)	25 (61.0%)		6 (14.6%)	35 (85.4%)		1 (2.4%)	7 (17.1%)	33 (80.5%)		20 (48.8%)	7 (17.1%)	14 (34.1%)		
Specialty, n (%)	0.33			0.0074			0.35			0.10			0.88			0.16			0.33			0.022				0.064				
Anaesthesia	25 (71.4%)	10 (28.6%)		25 (71.4%)	10 (28.6%)		12 (34.3%)	23 (65.7%)		8 (22.9%)	27 (77.1%)		20 (57.1%)	15 (42.9%)		23 (65.7%)	12 (34.3%)		7 (20.0%)	28 (80.0%)		2 (5.7%)	12 (34.3%)	21 (60.0%)		25 (71.4%)	8 (22.9%)	2 (5.7%)		
Cardiac Rehabilitation	1 (25.0%)	3 (75.0%)		1 (25.0%)	3 (75.0%)		1 (25.0%)	3 (75.0%)		0 (0.0%)	4 (100.0%)		1 (25.0%)	3 (75.0%)		3 (75.0%)	1 (25.0%)		1 (25.0%)	3 (75.0%)		0 (0.0%)	0 (0.0%)	4 (100.0%)		0 (0.0%)	2 (50.0%)	2 (50.0%)		
Cardiac Surgery	8 (80.0%)	2 (20.0%)		6 (60.0%)	4 (40.0%)		3 (30.0%)	7 (70.0%)		4 (40.0%)	6 (60.0%)		6 (60.0%)	4 (40.0%)		4 (40.0%)	6 (60.0%)		4 (40.0%)	6 (60.0%)		0 (0.0%)	0 (0.0%)	10 (100.0%)		6 (60.0%)	1 (10.0%)	3 (30.0%)		
Cardiology	33 (61.1%)	21 (38.9%)		17 (31.5%)	37 (68.5%)		14 (25.9%)	40 (74.1%)		7 (13.0%)	47 (87.0%)		25 (46.3%)	29 (53.7%)		24 (44.4%)	30 (55.6%)		7 (13.0%)	47 (87.0%)		0 (0.0%)	9 (16.7%)	45 (83.3%)		30 (55.6%)	12 (22.2%)	12 (22.2%)		
Medical Imaging	10 (71.4%)	4 (28.6%)		7 (50.0%)	7 (50.0%)		4 (28.6%)	10 (71.4%)		2 (14.3%)	12 (85.7%)		7 (50.0%)	7 (50.0%)		6 (42.9%)	8 (57.1%)		3 (21.4%)	11 (78.6%)		0 (0.0%)	1 (7.1%)	13 (92.9%)		4 (28.6%)	6 (42.9%)	4 (28.6%)		
Vascular Surgery	4 (50.0%)	4 (50.0%)		3 (37.5%)	5 (62.5%)		1 (12.5%)	7 (87.5%)		4 (50.0%)	4 (50.0%)		4 (50.0%)	4 (50.0%)		6 (75.0%)	2 (25.0%)		0 (0.0%)	8 (100.0%)		0 (0.0%)	2 (25.0%)	6 (75.0%)		6 (75.0%)	0 (0.0%)	2 (25.0%)		
Other	2 (100.0%)	0 (0.0%)		2 (100.0%)	0 (0.0%)		2 (100.0%)	0 (0.0%)		0 (0.0%)	2 (100.0%)		1 (50.0%)	1 (50.0%)		2 (100.0%)	0 (0.0%)		0 (0.0%)	2 (100.0%)		0 (0.0%)	2 (100.0%)	0 (0.0%)		1 (50.0%)	0 (0.0%)	1 (50.0%)		
Rate satisfaction with the EMR, n (%)	0.30			0.047			0.27			0.57			0.77			0.87			0.89			0.31				0.060				
Very unsatisfied	18 (85.7%)	3 (14.3%)		14 (66.7%)	7 (33.3%)		9 (42.9%)	12 (57.1%)		3 (14.3%)	18 (85.7%)		13 (61.9%)	8 (38.1%)		12 (57.1%)	9 (42.9%)		3 (14.3%)	18 (85.7%)		1 (4.8%)	8 (38.1%)	12 (57.1%)		17 (81.0%)	2 (9.5%)	2 (9.5%)		
Somewhat unsatisfied	14 (63.6%)	8 (36.4%)		10 (45.5%)	12 (54.5%)		6 (27.3%)	16 (72.7%)		3 (13.6%)	19 (86.4%)		11 (50.0%)	11 (50.0%)		12 (54.5%)	10 (45.5%)		3 (13.6%)	19 (86.4%)		0 (0.0%)	4 (18.2%)	18 (81.8%)		13 (59.1%)	4 (18.2%)	5 (22.7%)		
Neutral	14 (63.6%)	8 (36.4%)		6 (27.3%)	16 (72.7%)		3 (13.6%)	19 (86.4%)		7 (31.8%)	15 (68.2%)		12 (54.5%)	10 (45.5%)		10 (45.5%)	12 (54.5%)		4 (18.2%)	18 (81.8%)		0 (0.0%)	2 (9.1%)	20 (90.9%)		11 (50.0%)	8 (36.4%)	3 (13.6%)		
Somewhat satisfied	30 (68.2%)	14 (31.8%)		27 (61.4%)	17 (38.6%)		16 (36.4%)	28 (63.6%)		10 (22.7%)	34 (77.3%)		21 (47.7%)	23 (52.3%)		26 (59.1%)	18 (40.9%)		10 (22.7%)	34 (77.3%)		1 (2.3%)	11 (25.0%)	32 (72.7%)		26 (59.1%)	12 (27.3%)	6 (13.6%)		
Very satisfied	5 (50.0%)	5 (50.0%)		4 (40.0%)	6 (60.0%)		3 (30.0%)	7 (70.0%)		2 (20.0%)	8 (80.0%)		4 (40.0%)	6 (60.0%)		5 (50.0%)	5 (50.0%)		2 (20.0%)	8 (80.0%)		0 (0.0%)	1 (10.0%)	9 (90.0%)		4 (40.0%)	1 (10.0%)	5 (50.0%)		
Missing	2	6		0	8		0	8		0	8		3	5		3	5		0	8		0	0	8		1	2	5		
Somewhat / very satisfied with EMR (vs. neutral / unsatisfied), n(%)	0.49			0.22			0.38			0.77			0.32			0.58			0.34			0.99				0.68				
Yes	35 (64.8%)	19 (35.2%)		31 (57.4%)	23 (42.6%)		19 (35.2%)	35 (64.8%)		12 (22.2%)	42 (77.8%)		25 (46.3%)	29 (53.7%)		31 (57.4%)	23 (42.6%)		12 (22.2%)	42 (77.8%)		1 (1.9%)	12 (22.2%)	41 (75.9%)		30 (55.6%)	13 (24.1%)	11 (20.4%)		
No	46 (70.8%)	19 (29.2%)		30 (46.2%)	35 (53.8%)		18 (27.7%)	47 (72.3%)		13 (20.0%)	52 (80.0%)		36 (55.4%)	29 (44.6%)		34 (52.3%)	31 (47.7%)		10 (15.4%)	55 (84.6%)		1 (1.5%)	14 (21.5%)	50 (76.9%)		41 (63.1%)	14 (21.5%)	10 (15.4%)		
Missing	2	6		0	8		0	8		0	8		3	5		3	5		0	8		0	0	8		1	2	5		
Staffing levels in this work setting are sufficient, n (%)	0.0092			0.029			0.42			0.42			0.0022			0.10			0.21			0.34				0.046				

1	Disagree strongly	29 (80.6%)	7 (19.4%)	24 (66.7%)	12 (33.3%)	15 (41.7%)	21 (58.3%)	7 (19.4%)	29 (80.6%)	27 (75.0%)	9 (25.0%)	26 (72.2%)	10 (27.8%)	9 (25.0%)	27 (75.0%)	1 (2.8%)	12 (33.3%)	23 (63.9%)	26 (72.2%)	6 (16.7%)	4 (11.1%)
2	Disagree somewhat	32 (76.2%)	10 (23.8%)	24 (57.1%)	18 (42.9%)	11 (26.2%)	31 (73.8%)	10 (23.8%)	32 (76.2%)	22 (52.4%)	20 (47.6%)	19 (45.2%)	23 (54.8%)	10 (23.8%)	32 (76.2%)	1 (2.4%)	8 (19.0%)	33 (78.6%)	28 (66.7%)	8 (19.0%)	6 (14.3%)
3	Neutral	4 (57.1%)	3 (42.9%)	3 (42.9%)	4 (57.1%)	3 (42.9%)	4 (57.1%)	0 (0.0%)	7 (100.0%)	3 (42.9%)	4 (57.1%)	3 (42.9%)	4 (57.1%)	0 (0.0%)	7 (100.0%)	0 (0.0%)	1 (14.3%)	6 (85.7%)	3 (42.9%)	3 (42.9%)	1 (14.3%)
4	Agree somewhat	11 (57.9%)	8 (42.1%)	6 (31.6%)	13 (68.4%)	5 (26.3%)	14 (73.7%)	6 (31.6%)	13 (68.4%)	5 (26.3%)	14 (73.7%)	8 (42.1%)	11 (57.9%)	1 (5.3%)	18 (94.7%)	0 (0.0%)	5 (26.3%)	14 (73.7%)	10 (52.6%)	6 (31.6%)	3 (15.8%)
5	Agree strongly	5 (33.3%)	10 (66.7%)	4 (26.7%)	11 (73.3%)	3 (20.0%)	12 (80.0%)	2 (13.3%)	13 (86.7%)	4 (26.7%)	11 (73.3%)	9 (60.0%)	6 (40.0%)	2 (13.3%)	13 (86.7%)	0 (0.0%)	0 (0.0%)	15 (100.0%)	4 (26.7%)	4 (26.7%)	7 (46.7%)
6	Missing	2	6	0	8	0	8	0	8	3	5	3	5	0	8	0	0	8	1	2	5
7	Somewhat / strongly agree staffing levels in work setting are adequate (vs. neutral / somewhat or strongly disagree), n(%)		0.0019		0.0026		0.26		0.67		0.0006		0.52		0.086		0.30		0.025		
8	Yes	16 (47.1%)	18 (52.9%)	10 (29.4%)	24 (70.6%)	8 (23.5%)	26 (76.5%)	8 (23.5%)	26 (76.5%)	9 (26.5%)	25 (73.5%)	17 (50.0%)	17 (50.0%)	3 (8.8%)	31 (91.2%)	0 (0.0%)	5 (14.7%)	29 (85.3%)	14 (41.2%)	10 (29.4%)	10 (29.4%)
9	No	65 (76.5%)	20 (23.5%)	51 (60.0%)	34 (40.0%)	29 (34.1%)	56 (65.9%)	17 (20.0%)	68 (80.0%)	52 (61.2%)	33 (38.8%)	48 (56.5%)	37 (43.5%)	19 (22.4%)	66 (77.6%)	2 (2.4%)	21 (24.7%)	62 (72.9%)	57 (67.1%)	17 (20.0%)	11 (12.9%)
10	Missing	2	6	0	8	0	8	0	8	3	5	3	5	0	8	0	0	8	1	2	5
11	I am treated fairly in the workplace, n (%)		0.010		0.016		0.0026		0.62		0.63		0.076		0.059		0.0038		0.0038		
12	Disagree strongly	10 (100.0%)	0 (0.0%)	7 (70.0%)	3 (30.0%)	8 (80.0%)	2 (20.0%)	1 (10.0%)	9 (90.0%)	6 (60.0%)	4 (40.0%)	9 (90.0%)	1 (10.0%)	5 (50.0%)	5 (50.0%)	1 (10.0%)	3 (30.0%)	6 (60.0%)	9 (90.0%)	0 (0.0%)	1 (10.0%)
13	Disagree somewhat	17 (81.0%)	4 (19.0%)	16 (76.2%)	5 (23.8%)	9 (42.9%)	12 (57.1%)	4 (19.0%)	17 (81.0%)	12 (57.1%)	9 (42.9%)	13 (61.9%)	8 (38.1%)	3 (14.3%)	18 (85.7%)	0 (0.0%)	10 (47.6%)	11 (52.4%)	15 (71.4%)	3 (14.3%)	3 (14.3%)
14	Neutral	9 (60.0%)	6 (40.0%)	7 (46.7%)	8 (53.3%)	5 (33.3%)	10 (66.7%)	5 (33.3%)	10 (66.7%)	9 (60.0%)	6 (40.0%)	9 (60.0%)	6 (40.0%)	4 (26.7%)	11 (73.3%)	1 (6.7%)	1 (6.7%)	13 (86.7%)	9 (60.0%)	5 (33.3%)	1 (6.7%)
15	Agree somewhat	31 (72.1%)	12 (27.9%)	22 (51.2%)	21 (48.8%)	9 (20.9%)	34 (79.1%)	10 (23.3%)	33 (76.7%)	22 (51.2%)	21 (48.8%)	22 (51.2%)	21 (48.8%)	7 (16.3%)	36 (83.7%)	0 (0.0%)	10 (23.3%)	33 (76.7%)	30 (69.8%)	7 (16.3%)	6 (14.0%)
16	Agree strongly	14 (46.7%)	16 (53.3%)	9 (30.0%)	21 (70.0%)	6 (20.0%)	24 (80.0%)	5 (16.7%)	25 (83.3%)	12 (40.0%)	18 (60.0%)	12 (40.0%)	18 (60.0%)	3 (10.0%)	27 (90.0%)	0 (0.0%)	2 (6.7%)	28 (93.3%)	8 (26.7%)	12 (40.0%)	10 (33.3%)
17	Missing	2	6	0	8	0	8	0	8	3	5	3	5	0	8	0	0	8	1	2	5
18	Somewhat / strongly agree I am treated fairly (vs. neutral / disagree), n (%)		0.058		0.016		0.0017		0.88		0.20		0.026		0.090		0.031		0.09		
19	Yes	45 (61.6%)	28 (38.4%)	31 (42.5%)	42 (57.5%)	15 (20.5%)	58 (79.5%)	15 (20.5%)	58 (79.5%)	34 (46.6%)	39 (53.4%)	34 (46.6%)	39 (53.4%)	10 (13.7%)	63 (86.3%)	0 (0.0%)	12 (16.4%)	61 (83.6%)	38 (52.1%)	19 (26.0%)	16 (21.9%)
20	No	36 (78.3%)	10 (21.7%)	30 (65.2%)	16 (34.8%)	22 (47.8%)	24 (52.2%)	10 (21.7%)	36 (78.3%)	27 (58.7%)	19 (41.3%)	31 (67.4%)	15 (32.6%)	12 (26.1%)	34 (73.9%)	2 (4.3%)	14 (30.4%)	30 (65.2%)	33 (71.7%)	8 (17.4%)	5 (10.9%)
21	Missing	2	6	0	8	0	8	0	8	3	5	3	5	0	8	0	0	8	1	2	5

Table 3. Predictors of high physician WBI scores

	WBI Score ≥ 3		
	Yes (N=69)	No (N=58)	P-value
Gender, n (%)			0.82
Male	48 (53.3%)	42 (46.7%)	
Female	20 (55.6%)	16 (44.4%)	
Gender Diverse	0 (0.0%)	0 (0.0%)	
Missing	1 (1.5%)	0 (0.0%)	
When did you graduate from medical school, n (%)			0.21
<2 years	0 (0.0%)	0 (0.0%)	
2-5 years	3 (100.0%)	0 (0.0%)	
6-10 years	9 (64.3%)	5 (35.7%)	
11-15 years	12 (63.2%)	7 (36.8%)	
16+ years	45 (49.5%)	46 (50.5%)	
When did you begin working at UHN, n (%)			0.33
<2 years	10 (55.6%)	8 (44.4%)	
2-5 years	15 (71.4%)	6 (28.6%)	
6-10 years	14 (60.9%)	9 (39.1%)	
11-15 years	11 (45.8%)	13 (54.2%)	
16+ years	19 (46.3%)	22 (53.7%)	
Specialty, n (%)			0.013
Anaesthesia	26 (74.3%)	9 (25.7%)	
Cardiac Rehabilitation	1 (25.0%)	3 (75.0%)	
Cardiac Surgery	6 (60.0%)	4 (40.0%)	
Cardiology	24 (44.4%)	30 (55.6%)	
Medical Imaging	4 (28.6%)	10 (71.4%)	
Vascular Surgery	6 (75.0%)	2 (25.0%)	
Other	2 (100.0%)	0 (0.0%)	
Specialty, n (%)			0.0054
Anaesthesia	26 (74.3%)	9 (25.7%)	
Others	43 (46.7%)	49 (53.3%)	
Rate satisfaction with EMR, n (%)			0.28
Very unsatisfied	16 (76.2%)	5 (23.8%)	
Somewhat unsatisfied	10 (45.5%)	12 (54.5%)	
Neutral	11 (50.0%)	11 (50.0%)	
Somewhat satisfied	26 (59.1%)	18 (40.9%)	
Very satisfied	5 (50.0%)	5 (50.0%)	
Missing	1 (1.5%)	7 (10.1%)	
Staffing levels in this work setting are sufficient, n (%)			0.017
Disagree strongly	28 (77.8%)	8 (22.2%)	
Disagree somewhat	24 (57.1%)	18 (42.9%)	
Neutral	3 (42.9%)	4 (57.1%)	
Agree somewhat	8 (42.1%)	11 (57.9%)	
Agree strongly	5 (33.3%)	10 (66.7%)	
Missing	1 (1.5%)	7 (10.1%)	

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I am treated fairly in the			0.026
workplace, n (%)			
Disagree strongly	8 (80.0%)	2 (20.0%)	
Disagree somewhat	15 (71.4%)	6 (28.6%)	
Neutral	9 (60.0%)	6 (40.0%)	
Agree somewhat	26 (60.5%)	17 (39.5%)	
Agree strongly	10 (33.3%)	20 (66.7%)	
Missing	1 (1.5%)	7 (10.1%)	

Confidential

Table 4. Multivariable model for factors associated with a WBI score for physicians ≥ 3

Effect (reference)	Odds Ratio	95% Wald		P-value
		Confidence Limits		
Male (vs. female)	1.00	0.40	2.52	1.00
0-15 years since grad (vs. 16+)	1.17	0.31	4.48	0.82
Years at PMCC (vs. 16+)				0.32
< 2 years	2.11	0.39	11.53	0.39
2-5 years	2.94	0.63	13.79	0.17
6-10 years	2.45	0.72	8.38	0.15
11-15 years	0.70	0.22	2.25	0.55
Specialty (vs. other)				0.12
Anaesthesia	1.94	0.62	6.06	0.26
Cardiology	0.63	0.24	1.64	0.34
Satisfied with EMR (vs. not)	0.99	0.42	2.35	0.99
Staffing levels are adequate (vs. not)	0.44	0.17	1.19	0.10
Treated fairly (vs. not)	0.40	0.16	0.99	0.05

Confidential

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Table 5. Comparison of WBI scores between nurses in practice at the PMCC and at Academic Health Science Centres in the United States

	PMCC Nurses (N=242)	US Nurses (N=3,627)	P-value
Gender, n (%)			0.0043
Male	31 (13.0%)	281 (7.8%)	
Female	206 (86.6%)	3,340 (92.2%)	
Gender Diverse	1 (0.4%)	3 (0.1%)	
Missing	4	3	
Have you felt burned out from your work, n (%)			<.0001
Yes	188 (77.7%)	2,196 (60.5%)	
No	54 (22.3%)	1,431 (39.5%)	
Have you worried that work is hardening you emotionally, n (%)			<.0001
Yes	179 (74.0%)	1,689 (46.6%)	
No	63 (26.0%)	1,938 (53.4%)	
Have you often felt bothered by feeling down, depressed, or hopeless, n (%)			<.0001
Yes	135 (55.8%)	1,497 (41.3%)	
No	107 (44.2%)	2,130 (58.7%)	
Have you fallen asleep while sitting inactive in a public place, n (%)			<.0001
Yes	93 (38.4%)	438 (12.1%)	
No	149 (61.6%)	3,189 (87.9%)	

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4	Have you felt that things were			0.047
5	piling up so high you could not			
6	overcome them, n (%)			
7				
8	Yes	115 (47.5%)	1,488 (41.0%)	
9	No	127 (52.5%)	2,139 (59.0%)	
10				
11				
12	Have you been bothered by			<.0001
13	emotional problems, n (%)			
14				
15	Yes	191 (78.9%)	2,326 (64.1%)	
16	No	51 (21.1%)	1,301 (35.9%)	
17				
18				
19	Has physical health interfered			<.0001
20	with ability to do daily work, n (%)			
21				
22	Yes	108 (44.6%)	894 (24.6%)	
23	No	134 (55.4%)	2,733 (75.4%)	
24				
25	The work I do is meaningful to me			0.0672
26	(1-7, higher = better)			
27				
28	N	242	3627	
29	Mean (SD)	5.9 (1.14)	5.7 (1.31)	
30	Median	6	6	
31	Range	1.0, 7.0	1.0, 7.0	
32				
33				
34	Work I do is meaningful to me			0.097
35	(categorized), n (%)			
36				
37	1-2	3 (1.2%)	115 (3.2%)	
38	3-5	67 (27.7%)	1,130 (31.2%)	
39	6-7	172 (71.1%)	2,382 (65.7%)	
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Work schedule leaves enough time for personal life (1-5, higher = better)				<.0001
N	242	3627		
Mean (SD)	2.9 (1.23)	3.3 (1.16)		
Median	3	3		
Range	1.0, 5.0	1.0, 5.0		
Work schedule leaves enough time for personal life (categorized), n (%)				<.0001
1-2	110 (45.5%)	1,055 (29.1%)		
3	45 (18.6%)	908 (25.0%)		
4-5	87 (36.0%)	1,664 (45.9%)		
WBI Score				<.0001
N	242	3,627		
Mean (SD)	3.6 (2.61)	2.1 (2.58)		
Median	4	2		
Range	-2.0, 9.0	-2.0, 9.0		
High WBI Score (≥ 2), n(%)				<.0001
Yes	189 (78.1%)	2,069 (57.0%)		
No	53 (21.9%)	1,558 (43.0%)		
Severe WBI Score (≥ 4), n (%)				<.0001
Yes	132 (54.5%)	1,160 (32.0%)		
No	110 (45.5%)	2,467 (68.0%)		