

CMA NATIONAL PHYSICIAN HEALTH SURVEY

A National Snapshot

October 2018

ASSOCIATION
MÉDICALE
CANADIENNE



CANADIAN
MEDICAL
ASSOCIATION





“This national snapshot presents prevalence and demographic breakdowns for psychological variables.”

EXECUTIVE SUMMARY

The Canadian Medical Association (CMA) has recognized physician health and wellness as an important priority. Physician health and wellness is an important issue and a growing concern within the medical profession. Despite an abundance of international data, recent national Canadian data on key indicators of physician health is limited – a critical gap in knowledge. It is important to acknowledge and assess specific issues, to properly refine, select and evaluate future initiatives. Indeed, the recently released CMA Policy on Physician Health recommends that national data for major health and wellness indicators be assessed at regular intervals to establish and compare norms and to better target and assess initiatives.

In line with this recommendation, we launched the **CMA National Physician Health Survey (NPHS)** to gain a deeper understanding of how physicians are being affected by a multitude of factors impacting their health and wellness. Our goals were to generate an up-to-date and relevant baseline dataset for use by other organizations, researchers, educators and stakeholders and to use this dataset to inform and advance physician health initiatives.

To ensure that the survey reflected the most relevant issues associated with physician health today, the CMA established an Expert Working Group to guide the process and content development. The survey received ethics approval and nearly 3,000 CMA members (residents and physicians) completed it online in 2017. Demographic questions pertaining to practice status, gender, primary province or territory of practice/residency, years of practice/years of residency, area of practice/residency, population served and primary work/residency setting allowed us to generate insightful descriptive statistics.



Overall results

A variety of psychological variables were explored. Nearly 60% of total respondents said their overall mental health was flourishing. Eighty-seven per cent said their emotional well-being was high, 81% said their psychological well-being was high and 65% said their social well-being was high. Moreover, 82% of participating residents and physicians said their resilience was high. The survey also revealed areas of concern, such as burnout, depression and lifetime suicidal ideation, with rates being higher among residents than physicians and higher among women than men.

“87% said their emotional well-being was high, 81% said their psychological well-being was high and 65% said their social well-being was high.”

Other results highlighted that physicians with five or fewer years in practice were more likely to experience burnout and have low resilience than all other physicians. Physicians whose main practice setting was a hospital had increased odds of lower emotional well-being, lower social well-being and lower psychological well-being, compared with those working in other settings.

More than 80% of respondents said they are aware of physician health program available to them; however, 15% reported having accessed one. The main reasons for not accessing physician health programs were that they believed the situation is not

severe enough, being ashamed to seek help and not being aware of the services available.

Looking ahead, the CMA will be releasing data on behavioural and occupational measures, as well as comparisons with other physician health datasets and with data on the general population.

Physicians and other stakeholders are encouraged to reflect on the results of the NPHS and refer to the new CMA Policy on Physician Health, which provides several recommendations related to individual- and

system-level actions that should be pursued by stakeholders at all levels of the health system to promote a healthy, vibrant and engaged profession. We believe that strengthening the health and wellness of the physician workforce is a shared respon-

sibility. Individual physicians must take steps to maintain their personal health and wellness, while system-level initiatives involving numerous institutions, organizations and communities are also necessary.

Poor physician health both affects physicians themselves and significantly influences the delivery of high-quality patient care. Indeed, the prevalence and impact of poor physician health render it not only an individual problem but also a public health concern. While our survey results identified many physician strengths, the health care community must engage in collaborative discussions and solutions to help enhance the health of Canada's physician workforce.

THE BURNING PLATFORM

Physician health and wellness is an important issue across medical training and practice, and it is a growing concern within the medical profession. Attributed to a myriad of personal, occupational and system-level factors, physicians continue to experience adverse outcomes such as burnout, and they are increasingly voicing distress and calling for resources and support. In recent decades there has been growing recognition of the impact of physician health on both individual and systemic outcomes, as well as on the quality of care provided to patients (Canadian Medical Association 2010; de Oliveira et al. 2013; Montgomery 2016; Shanafelt et al. 2016; West et al. 2016).

As defined by the CMA Policy on Physician Health (Canadian Medical Association 2017), physician health encompasses: the prevention and treatment of acute or chronic issues of individual physicians; the optimization of interconnected physical, mental and social factors to support health and wellness (World Medical Association 2015); as well as a set of risk-management practices aimed at shifting perceptions of health from being an individual matter to more of a shared resource (Albuquerque and Deshauer 2014).

Indeed, in Canada the profession has seen increasing use of strategies adapted from organizational psychology and occupational medicine to change physician behaviour, as well as intensified oversight by professional bodies and the inclusion of maintaining personal health as a core competency for physicians (Frank et al. 2015). Despite concerted efforts to promote and protect the health and wellness of physicians, the collective state of physician health remains a significant threat to the viability of Canada's health system (Canadian Medical Association 2010). Physician distress is emerging as an important quality

indicator in medical practice (Albuquerque and Deshauer 2014; Wallace et al. 2009), and both individual- and system-level factors are well-established contributors to compromised physician health (Montgomery 2016; Shanafelt and Noseworthy 2017).

Decades of international research have demonstrated that adverse health outcomes among physicians are linked to a range of contributing factors, including intrinsic ones (e.g., personal characteristics) and extrinsic ones (e.g., heavy workloads, duty hours, lack of autonomy, disruptive behaviour, poor work-life integration, increasing demands with diminishing resources, financial issues, and the practice and training environment) (Lemaire et al. 2017; Montgomery 2016; Roman and Prévost 2015).



However, an overreliance on international data has led to a dearth of recent and relevant information on the health status of physicians in Canada on a national scale, which has created a critical gap in knowledge. The most recent national data available were reported from the CMA in 2008. In response to this, a key recommendation of the CMA Policy on Physician Health (CMA 2017) is that national and regional data for major health and wellness indicators be assessed at regular intervals to establish and compare norms and to develop, assess and refine initiatives.

As an important priority for the CMA, and in lock-step with the recent policy recommendations, the CMA developed and conducted a new National Physician Health Survey (NPHS), the primary objectives of which is to generate an up-to-date baseline dataset on a range of relevant intrinsic and extrinsic health and wellness indicators, for organizations (including the CMA), researchers, educators and other stakeholders to access — to help inform, target and enhance initiatives.



“Despite concerted efforts to promote and protect the health and wellness of physicians, the collective state of physician health remains a significant threat to the viability of Canada’s health system.”

METHODS

Survey design

A critical priority for the CMA in conducting the NPHS was to develop a survey that assessed a balance of the most relevant, contemporary and actionable factors for the profession. To achieve this, the CMA established an Expert Working Group to help guide the identification and prioritization of the survey. Members included representatives with physician health expertise from; the Forum of

Canadian Physician Health Programs, the Royal College of Physicians and Surgeons of Canada, the College of Family Physicians of Canada, Resident Doctors of Canada and the Association of Faculties of Medicine of Canada. The group was led and supported by internal expertise from the CMA (content, survey design, and statistics).

THE FOLLOWING PROCESS WAS EMPLOYED IN DEVELOPING THE SURVEY:

1. **Comprehensive list of relevant and emerging demographic, individual, behavioural, occupational and system factors that could be assessed was developed (including those previously measured by the 2007-2008 CMA Canadian Physician Health Study).**
2. **Proposed factors were independently, and then collectively, rated for relevance and relative impact.**
3. **A list of preferred factors was developed.**
4. **Options for measuring each factor were identified (where relevant).**
5. **Prospective measures were independently, and then collectively, rated according to several criterion, including relevance and precedence for use with physician populations (e.g., "gold standard"), potential for comparatives, length (e.g., number of questions), validity and reliability.**
6. **Draft survey was developed, balancing the above criterion with logistical considerations (e.g., length).**
7. **Survey was finalized by refining and sequencing content.**

Participants and procedure

Ethics approval was obtained from the University of Ottawa Research Ethics Board. Eligible participants included medical residents and practicing physicians who are CMA members. Medical students and retired physicians were not eligible to participate. A random sample of CMA members from all provinces and territories was contacted via email and invited to respond to an online survey (N = 34,517). While the sample was representative of CMA membership, a low membership rate in Quebec resulted in Quebec physicians and residents being underrepresented relative to the Canadian physician population. The survey was open for four weeks, including two reminders, and was administered by the CMA using the

secure online platform SurveyGizmo. A total of (n = 2,947) members completed the survey (400 residents and 2,547 physicians), for an 8.5% response rate. This is a typical response rate for online surveys, including those administered to medical professionals (e.g., Hughes et al. 2017), and on-par with previous CMA surveys of similar scope and scale. The respondent sample was generally representative of the CMA membership, but certain demographics were underrepresented relative to the Canadian physician population (e.g., males, Quebec physicians and residents). The sample was sufficient to achieve statistical power.



MEASURES

Refer to Appendix A for a complete version of the NPHS and Appendix B for in-depth descriptions of the scales used to assess the psychological variables presented in this report.

Demographics



Participants were asked demographic questions pertaining to their practice status, gender, primary province or territory of practice or residency, years of practice or residency,

area of practice or residency, population served, and primary work or residency setting.

Seeking help



Participants were asked questions pertaining to their awareness of available physician health services, use of such services and barriers to access.

Psychological variables



Valid and reliable scales were used to assess a variety of psychological variables, including: mental health (social, psychological and emotional well-being), resilience, burnout,

depression and suicidal ideation (lifetime and in the last 12 months). These scales have been used frequently in large-scale surveys administered to medical professionals.

Analyses



Descriptive statistics, divided according to demographics (e.g., practice status, gender, specialty), were generated. Significant between-group differences were assessed

using chi-square tests of independence. When significant differences were found with more than two groups, post-hoc tests using Bonferroni correction were used to further define where these occurred, and odds ratios were generated to indicate the increased risk associated with the outcomes.

RESULTS

Prevalence of psychological variables

OVERALL MENTAL HEALTH (N = 2693):



WELL-BEING (N = 2693):

Emotional:



Social:



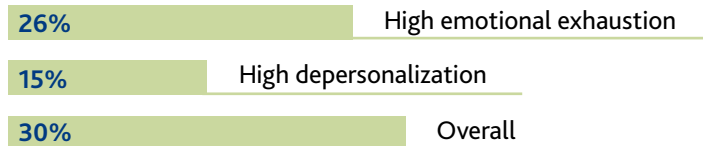
Psychological:



Resilience (n = 2693):



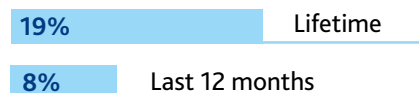
BURNOUT (HIGH) (N = 2744):



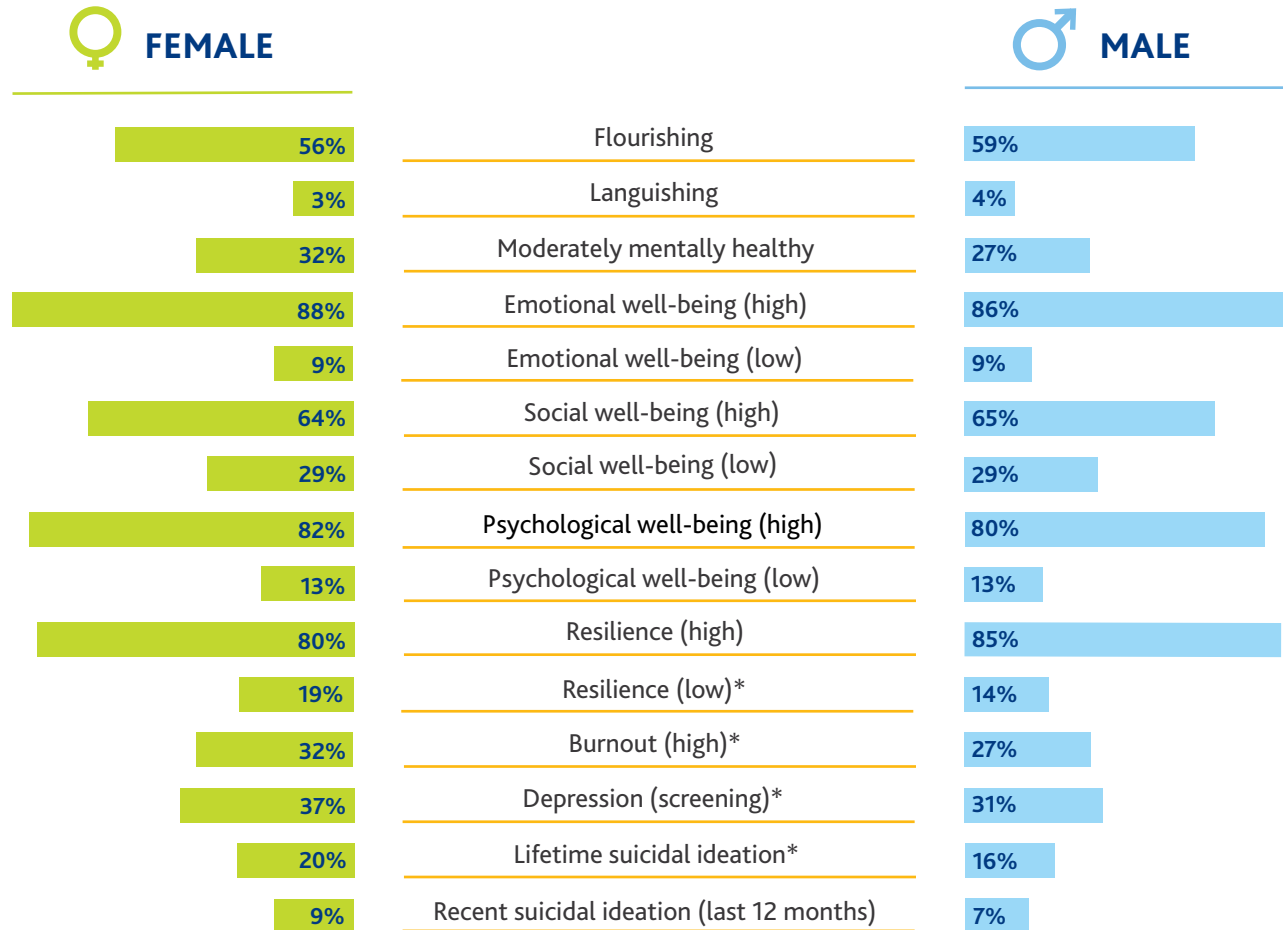
DEPRESSION (SCREENING) (N = 2740):



SUICIDAL IDEATION (N = 2735):



Breakdowns of psychological variables by gender and practice status

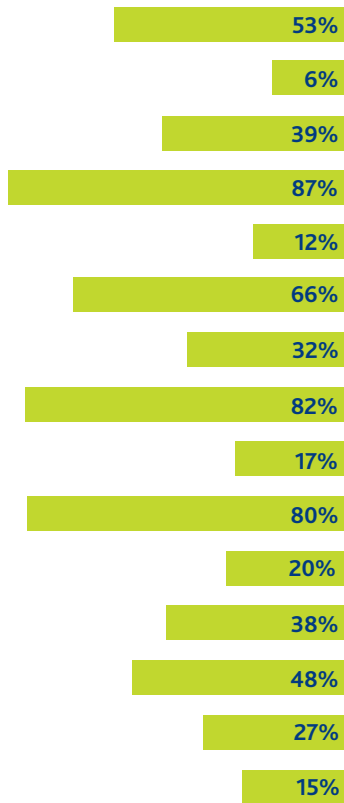


Women had 1.43 higher odds (or 43% increase in odds) of having low resilience than men. Significantly more women reported burnout, depression and lifetime suicidal ideation than men. Women also had 1.23 higher odds (or 23% increase in odds) of experiencing burnout, 1.32 higher odds (or 32% increase in odds) of experiencing depression and 1.31 higher odds

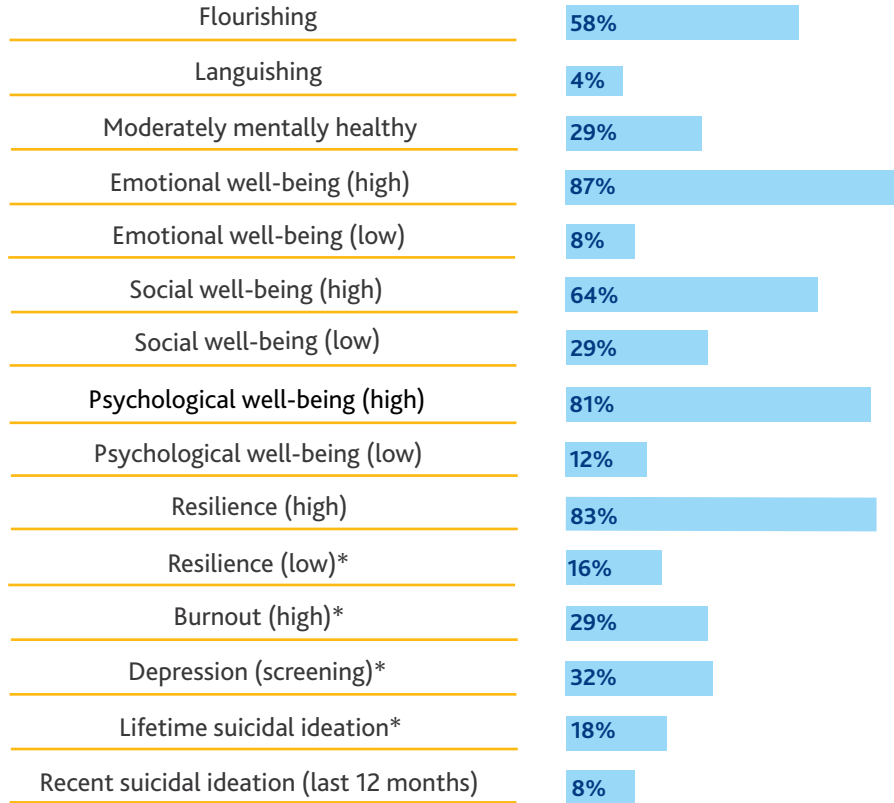
(or 31% increase in odds) of engaging in suicidal ideation at some point during their life than men.

"Significantly more women reported low resilience than men."

R RESIDENT



P PHYSICIAN



“Significantly more residents reported burnout, depression and lifetime suicidal ideation than physicians.”

Significantly more residents reported burnout, depression and lifetime suicidal ideation than physicians. Residents had 1.48 higher odds (or 48% increase in odds) of experiencing burnout, 1.95 higher odds (or 95% increase in odds) of experiencing depression and 1.72 higher odds (or 72% increase in odds) of engaging in suicidal ideation at some point during their life.

Note. Those who did not respond to the demographic questions were excluded from the sample for chi-square tests.

Note. *Significant difference at $\alpha = 0.05$.

Note. Results of chi-square tests of independence. Practice status and burnout: $\chi^2(1) = 10.13, p < 0.01$. Practice status and depression: $\chi^2(1) = 32.43, p < 0.001$. Practice status and lifetime suicidal ideation: $\chi^2(1) = 16.42, p < 0.001$. Gender and burnout: $\chi^2(1) = 6.13, p < 0.05$. Gender and depression: $\chi^2(1) = 11.32, p < 0.01$. Gender and lifetime suicidal ideation: $\chi^2(1) = 7.14, p < 0.01$. Gender and resilience: $\chi^2(1) = 11.41, p < 0.01$

Breakdown of psychological variables by years in practice

PSYCHOLOGICAL VARIABLES (%)	≤5	6 to 10	11 to 20	21 to 30	≥ 30
Overall mental health:					
Flourishing	56	57	57	58	62
Languishing	4	4	5	4	3
Moderately mentally healthy	35	36	31	28	20
Emotional well-being					
High	89	92	87	84	88*
Low	9	6	9	11	5
Social well-being					
High	64	65	64	61	68*
Low	32	32	31	30	22
Psychological well-being					
High	82	83	79	82	81*
Low	15	14	16	11	8
Resilience					
High	77	83	82	85	86
Low	22*	17	17	14	12*
Burnout					
High emotional exhaustion	29	27	30	26	16
High depersonalization	20	18	16	12	5
Overall	35*	32	32	30	18*
Depression					
Screened positive	35	33	36	31	28
Suicidal ideation					
Lifetime	21	16	16	18	16
Recent (<i>last 12 months</i>)	12	6	8	8	4*

Note. *Significant difference at $\alpha = 0.005$

Note. Results of chi-square test of independence: $\chi^2(4) = 23.37, p < 0.001$. Post-hoc tests indicated physicians in practice for five or fewer years had significantly lower resilience than physicians in practice for 31 or more years.

Note. Results of chi-square test of independence. Years in practice and emotional well-being: $\chi^2(4) = 15.09, p < 0.01$, post-hoc tests indicated a significant difference for physicians in practice for 31 or more years. Years in practice and social well-being: $\chi^2(4) = 12.71, p < 0.05$, post-hoc tests indicated a significant difference for physicians in practice for 31 or more years. Years in practice and psychological well-being: $\chi^2(4) = 15.65, p < 0.01$, post-hoc tests indicated a significant difference for physicians in practice for 31 or more years. Years in practice and suicidal ideation (last 12 months): $\chi^2(4) = 15.50, p < .01$, post-hoc tests indicated a significant difference for physicians in practice for 31 or more years.

Emotional, social and psychological well-being was significantly higher among physicians in practice for 31 or more years. Physicians in practice for 31 or more years had 1.85 higher odds (or 85% increase in odds) of having high emotional well-being, 1.51 higher odds (or 51% increase in odds) of having high social well-being and 1.73 higher odds (or 73% increase in odds) of having high psychological well-being than all other physicians.

There were significant differences in resilience according to years in practice, with physicians in their first five years of practice reporting lower resilience than physicians working for 31 or more years.

Conversely, physicians in practice for 31 or more years had 1.62 higher odds (or 62% increase in odds) of having high resilience than all other physicians. However, there were no significant differences in resilience between physicians in the first five years of practice and the other groups; resilience is generally stable from ≤ 5 to 30 years in practice.

There were significant differences in burnout according to years in practice, with physicians in their first five years of practice reporting greater burnout than physicians working for 31 or more years.

Physicians in practice for 31 or more years had 2.20 higher odds (120% increase in odds) of not experiencing burnout than all other physicians.

There were significant differences in suicidal ideation (last 12 months) according to years in practice, with physicians working for 31 or more years engaging in less suicidal ideation than all other physicians. Physicians in their first five years of practice had 1.74 higher odds (or 74% increase in odds) than all other physicians to have engaged in suicidal ideation during the past 12 months. Conversely, physicians working for 31 or more years had 2.36 higher odds (or 136% increase in odds) than all other physicians to have not engaged in suicidal ideation during this time. Recent suicidal ideation (last 12 months) is generally stable from ≤ 5 to 30 years in practice.

- **There were no significant differences for any of the psychological variables according to residency years.**
- **Physicians in practice for five or fewer years had 1.68 higher odds (or 68% increase in odds) of having low resilience than all other physicians.**
- **Physicians in practice for five or fewer years had 1.45 higher odds (45% increase in odds) of experiencing burnout than all other physicians.**
- **However, there were no significant differences in burnout between physicians in the first five years of practice and the other groups; burnout rates were similar from the first year to 30 years in practice.**

Breakdown of psychological variables by area of practice/residency

BY AREA OF PRACTICE	Family medicine/ general practice	Internal medicine	Medical specialty	Surgical specialty	Laboratory specialty	Admin position
Overall mental health:						
Flourishing	58	60	57	56	47	74
Languishing	4	3	4	5	9	2
Moderately mentally healthy	30	29	31	32	38	12
Emotional well-being						
High	88	90	87	82	84	95
Low	8	6	9	13*	16	3
Social well-being						
High	66	67	64	60	54	76
Low	28	27	30	34	41	17
Psychological well-being						
High	83	83	81	79	71	86
Low	12	11	13	17	27*	5
Resilience						
High	82	82	83	84	77	93
Low	17	17	16	15	22	5
Burnout						
High emotional exhaustion	28	27	25	24	25	19
High depersonalization	15	17	12	18	19	10
Overall	32	31	29	29	28	19
Depression						
Screened positive	35	33	32	29	40	19
Suicidal ideation						
Lifetime	20	15	18	16	22	19
Recent (<i>last 12 months</i>)	9	7	8	7	10	3

“There were no significant differences in overall mental health, resilience, burnout, depression and suicidal ideation according to area of practice/residency.”

Results revealed that surgical specialists had 1.74 higher odds (or 74% increase in odds) to have low emotional well-being, compared to all other areas of practice/residency, and laboratory specialists had 2.44 higher odds (or 144% increased odds) to low psychological well-being than respondents in all other areas of practice/residency.

Note. Those who did not respond to the demographic questions were excluded from the sample for chi-square tests.

Note. *Significant difference at $\alpha = 0.004$, adjusted for multiple comparisons.

Breakdown of psychological variables by practice/residency setting

BY PRACTICE SETTING (%)	Hospital	Private office/ clinic	Academic	Admin/ corporate office
Overall mental health:				
Flourishing	57	60	55	75
Languishing	4	4	4	2
Moderately mentally healthy	33	29	34	14
Emotional well-being				
High	86	89	89	91
Low	11*	8	8	4
Social well-being				
High	62	66	69	74
Low	33*	28	28	21
Psychological well-being				
High	81	84	81	90
Low	16*	11	14	4
Resilience				
High	82	81	84	91
Low	17	18	14	9
Burnout				
High emotional exhaustion	25	28	23	25
High depersonalization	16	15	14	11
Overall	29	31	28	25
Depression				
Screened positive	36	34	31	33
Suicidal ideation				
Lifetime	21	16	16	18
Recent (<i>last 12 months</i>)	8	8	9	2

Physicians whose main setting was a hospital had 1.48 higher odds (or 48% increase in odds) of having low emotional well-being, 1.30 higher odds (or 30% increase in odds) of having low social well-being and 1.39 higher odds (or 39% increase in odds) of having low psychological well-being than all other practice settings. However, there

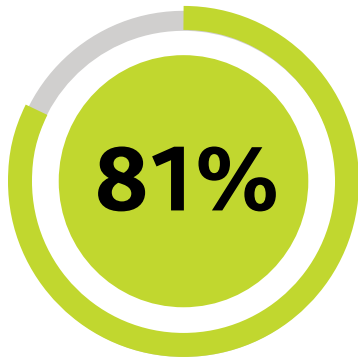
were no significant differences in overall mental health, resilience, burnout, depression and suicidal ideation, according to practice/residency setting. Moreover, there were no significant differences in any of the psychological variables according to population served (i.e., Urban/suburban and rural/isolated)

Note. Those who did not respond to the demographic questions were excluded from the sample for chi-square tests.

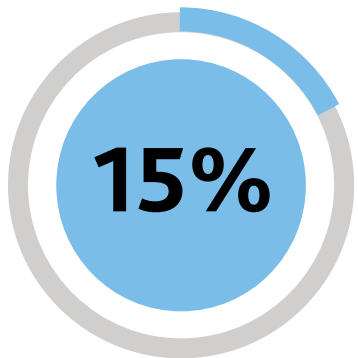
Note. *Significant difference at $\alpha = 0.006$, adjusted for multiple comparisons.

Note. Results of chi-square tests of independence. Practice area and emotional well-being: $\chi^2(3) = 8.76$, $p < 0.05$, post-hoc tests indicated significant differences for physicians whose main setting was a hospital. Practice area and social well-being: $\chi^2(3) = 9.71$, $p < 0.05$, post-hoc tests indicated significant differences for physicians whose main setting was a hospital. Practice area and psychological well-being: $\chi^2(3) = 11.74$, $p < 0.01$, post-hoc tests indicated significant differences for physicians whose main setting was a hospital.

Seeking help



Reported being either aware or somewhat aware of what Physician Health Program services are available to them.



Reported accessing a Physician Health Program in the last 5 years

TOP REPORTED REASONS FOR SEEKING HELP:

- ① Mental health and related issues (e.g., depression, burnout)
- ② Personal stressors (e.g., relationships and family support)
- ③ Addictions and related disorders

TOP REPORTED BARRIERS TO SEEKING HELP:

- ① Believing situation is not severe enough
- ② Ashamed to seek help
- ③ Not aware of the range of services available

SURVEY LIMITATIONS

As with any research, there were a few limitations that should be taken into consideration. First, while the scales used to assess the psychological variables were carefully selected on the basis of a variety of criteria (e.g., validity, reliability, use with physician populations, potential for comparatives, etc.) these scales are not without limitations. Second, although the respondent sample was

generally representative of the CMA membership, certain demographics were underrepresented relative to the Canadian physician population (e.g., men, Quebec physicians and residents). Moreover, there were no resident respondents from PEI, Northwest Territories, Yukon or Nunavut and relatively few physician respondents from these areas, which may limit generalizability.

CONCLUSIONS AND IMPLICATIONS

Although physician health and wellness has gained prominence within the medical profession, there is a lack of recent, national data in Canada to define specific areas of concern. It is important to acknowledge and assess specific issues to develop and evaluate initiatives. The CMA NPHS sought to generate such an up-to-date and relevant baseline data set. This national snapshot is the first output in a series of releases, which provides prevalence data and demographic breakdowns of psychological measures as well as data on physician health programs.

Similar concerns regarding the prevalence of these mental health issues have been reported in learners (e.g., Maser & Houlton 2017; Mata et al. 2015; Rotenstein et al. 2016) and other international physician datasets (e.g., Dyrbye et al. 2014; Peckham 2018; Shanafelt et al. 2012). For instance, using the same scales as the NPHS, Shanafelt et al. (2012) surveyed 7,288 US physicians and found that 35.2% were burned out, 37.8% screened positive for depression and 6.4% had thoughts of taking their own lives in the last 12 months. At a glance, this suggests that physicians in Canada and the US have a

“Findings from this survey highlighted burnout, positive screening for depression and suicidal ideation as important areas of concern among residents and physicians, among others, with rates being relatively higher among residents than physicians, higher among women than men and higher among physicians in the first five years of practice than among all other physicians.”

comparable prevalence of mental health issues, though more in depth statistical comparisons are required to further explore this.

Also in line with these findings, a recent study which included over 15,000 US physicians across various specialties, showed higher rates of burnout in women (48%) than men (38%) (Peckham 2018).

Indeed, previous research has shown that women are at an increased risk of burnout (Dyrbye et al. 2011) and depression (Kumar 2016). In addition to being female, younger age has also been identified as a risk factor for burnout (Amofo et al. 2014; Shanafelt et al. 2009; Soler et al. 2008). While this report reveals that residents, women and physicians in their first five years of practice are at an increased risk of poor physician health, we do not know specifically why.

Future analyses will identify individual and systemic predictors of these negative outcomes, including those specific to residents, women and physicians in their first five years of practice, which will highlight actionable factors to target and aim to improve.

Except for practice status, gender and years in practice, there were relatively few differences across the other demographics. Indeed, there were no significant differences in the prevalence of burnout, depression and suicidal ideation according to area of practice/residency, practice/residency setting, population served. This suggests that health and wellness issues occur across all segments of the medical profession.

The findings revealed that respondents were generally aware of physician health program services (e.g., provincial programs). However, while physician health programs have been demonstrated to produce positive outcomes (Brewster et al. 2008; Dupont and Skipper 2012), many physicians remain reluctant to access them. Among the highest rated reasons in the NPHS dataset, “believing the situation is not severe enough” and “not aware of the services available” suggest that perhaps physicians are not aware of

the range of services offered by physician health programs. Finally, “ashamed to seek help” indicates that the stigma associated with mental health issues remains a relevant issue within the profession. Indeed, stigma has been consistently identified as a barrier

“Building on the foundation from this national snapshot, future analyses will focus on behavioural and occupational predictors of the psychological measures presented in this report, as well as deeper analyses into the relationships between these factors.”

to help-seeking behaviours (Canadian Medical Association 2010; Kay et al. 2008; Knaak et al. 2017). The background document to the CMA Policy on Physician Health has a section outlining the landscape of physician health services in Canada, the Policy offers several related recommendations around the provision and enhancement of access to, and support for, physician health services.

Future analyses will compare the present data with existing physician datasets as well as data from the general population. The data across all three series will be taken into consideration in a discussion of overall interpretations, implications and future directions. In line with recommendations put forth in the CMA Policy on Physician Health, the CMA encourages collaboration among relevant stakeholders to identify priorities and coordinate efforts to promote physician health. Looking ahead, major indicators (personal, behavioral, and occupational) of physician health and wellness should be assessed at regular intervals to identify relevant changes, grow our understanding, and help inform and refine actions in promoting a healthy, vibrant, and engaged profession.

REFERENCES

- Albuquerque J, Deshauer D. Physician health: beyond work-life balance. *CMAJ* 2014;186:E502–3.
- Amofo E, Hanbali N, Patel A, Singh P. What are the significant factors associated with burnout in doctors? *Occup Med* 2014;65(2):117–21.
- Brewster JM, Kaufmann IM, Hutchison S, MacWilliam C. Characteristics and outcomes of doctors in a substance dependence monitoring programme in Canada: prospective descriptive study. *BMJ* 2008;337:a2098.
- Canadian Medical Association. *Physician health matters: a mental health strategy for physicians in Canada*. Ottawa: The Association; 2010.
- Canadian Medical Association. *CMA policy on physician health*. Ottawa: The Association; 2017.
- de Oliveira GS, Chang R, Fitzgerald PC, Almeida MD, Castro-Alves LS, Ahmad S, et al. The prevalence of burnout and depression and their association with adherence to safety and practice standards: a survey of United States anesthesiology trainees. *Anesth Analg* 2013;117:182–93.
- DuPont RL, Skipper GE. Six lessons from state physician health programs to promote long-term recovery. *J Psychoactive Drugs* 2012;44(1):72–8.
- Dyrbye LN, Shanafelt TD, Balch CM, Satele D, Sloan J, Freischlag J. Relationship between work-home conflicts and burnout among American surgeons: a comparison by sex. *Arch Surg* 2011;146(2):211–7.
- Dyrbye LN, West CP, Satele D, Boone S, Tan L, Sloan J, et al. Burnout among US medical students, residents, and early career physicians relative to the general US population. *Acad Med* 2014;89(3):443–51.
- Frank JR, Snell L, Sherbino J. *CanMEDS 2015 physician competency framework*. Ottawa: Royal College of Physicians and Surgeons of Canada; 2015.
- Kay M, Mitchell G, Clavarino A, Doust J. Doctors as patients: a systematic review of doctors' health access and the barriers they experience. *Br J Gen Pract* 2008;58(552):501-8.
- Keyes CL. The mental health continuum: from languishing to flourishing in life. *J Health Soc Behav* 2002;43(2):207–22.
- Knaak S, Mantler E, Szeto A. Mental illness-related stigma in healthcare: barriers to access and care and evidence-based solutions. *Healthc Manage Forum* 2017;30(2):111–6).
- Kumar S. Burnout and doctors: prevalence, prevention and intervention. *Healthcare (Basel)* 2016;4(3):37.
- Leiter MP, Maslach C. Latent burnout profiles: a new approach to understanding the burnout experience. *Burn Res* 2016;3(4):89–100.
- Lemaire JB, Wallace JE, Sargious PM, Bacchus M, Zarnke K, Ward DR, et al. How attending physician preceptors negotiate their complex work environment: a collective ethnography. *Acad Med* 2017;92(12):1765–73.
- Maser B, Houlton R. *CFMS-FMEQ national health and wellbeing survey: Prevalence and predictors of mental health in Canadian medical students*. Canadian Conference on Physician Health; 2017; Ottawa. Ottawa: CFMS; 2017.
- Mata DA, Ramos MA, Bansal N, Khan R, Guille C, Di Angelantonio E, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *JAMA* 2015;314(22):2373–83.

- Matthew Hughes JD, Azzi E, Rose GW, Ramnanan CJ, Khamisa K. A survey of senior medical students' attitudes and awareness toward teaching and participation in a formal clinical teaching elective: a Canadian perspective. *Med Educ Online* 2017;22(1):1270022.
- Montgomery AJ. The relationship between leadership and physician well-being; a scoping review. *J Healthc Leadersh* 2016;55:71- 80.
- Peckham C. *Medscape national physician burnout & depression report*. 2018. Available: <https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235?faf=1#5>
- Roman S, Prévost C. *Physician health: state of knowledge and preventive approaches*. Montréal: Programme d'aide aux médecins du Québec (PAMQ); 2015.
- Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. *JAMA* 2016;316(21):2214–36.
- Shanafelt TD, Balch CM, Bechamps GJ, Russell T, Dyrbye L, Satele D, et al. Burnout and career satisfaction among American surgeons. *Ann Surg* 2009;250(3):463–71.
- Shanafelt TD, Boone S, Tan L, Dyrbye LN, Sotile W, Satele D, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med* 2012;172(18):1377–85.
- Shanafelt TD, Mungo M, Schmitgen J, Storz KA, Reeves D, Hayes SN, et al. Longitudinal study evaluating the association between physician burnout and changes in professional work effort. *Mayo Clin Proc* 2016;91:422–31.
- Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. *Mayo Clin Proc* 2017;92:129–6.
- Soler JK, Yaman H, Esteva M, Dobbs F, Asenova RS, Katić M, et al. Burnout in European family doctors: the EGPRN study. *Fam Pract* 2008;25(4):245–65.
- Tamburrino MB, Lynch DJ, Nagel RW, Smith MK. Primary care evaluation of mental disorders (PRIME-MD) screening for minor depressive disorder in primary care. *Prim Care Companion J Clin Psychiatry* 2009;11(6):339–43.
- Vaishnavi S, Connor K, Davidson JR. An abbreviated version of the Connor-Davidson Resilience Scale (CD-RISC), the CD-RISC2: psychometric properties and applications in psychopharmacological trials. *Psychiatry Res* 2007;152(2):293–7.
- Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. *Lancet* 2009;374:1714–21.
- West CP, Dyrbye LN, Sloan JA, Shanafelt TD. Single item measures of emotional exhaustion and depersonalization are useful for assessing burnout in medical professionals. *J Gen Intern Med* 2009;24(12):1318–21.
- West CP, Dyrbye LN, Satele DV, Sloan JA, Shanafelt TD. Concurrent validity of single-item measures of emotional exhaustion and depersonalization in burnout assessment. *J Gen Intern Med* 2012;27(11):1445–52.
- West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *Lancet* 2016;388:2272–81.
- Whooley MA, Avins AL, Miranda J, Browner WS. Case-finding instruments for depression. Two questions are as good as many. *J Gen Intern Med* 1997;12:439–45.
- World Medical Association. *WMA statement on physicians well-being*. France: The Association; 2015 Oct.

APPENDICES

Appendix A: CMA National Physician Health Survey

Demographics

- 1) **What is your status?**
 - Student (not eligible)
 - Medical resident
 - Practicing physician (including if an administrative position only)
 - Retired
- 2) **Are you...?**
 - Male
 - Female
 - Neither applies to me. I identify as (please specify if you wish):
- 3) **Are you currently working on a full or part-time basis?**
 - Full Time
 - Part-Time
- 4) **Please indicate your primary province or territory of practice/work/residency rotation:**
 - British Columbia
 - Alberta
 - Saskatchewan
 - Manitoba
 - Ontario
 - Quebec
 - New Brunswick
 - Nova Scotia
 - Prince Edward Island
 - Newfoundland & Labrador
 - Northwest Territories
 - Yukon
 - Nunavut
- 5) **Which option best describes the main area in which you currently practice/work/are doing your residency?**
 - Family medicine, general practice
 - Internal medicine specialty
 - Medical specialty
 - Surgical specialty
 - Laboratory specialty
 - Administrative position
- 6) **Do you provide patient/clinical care (either direct or indirect)?**
 - Yes
 - No
- 7) **For how many years have you been practicing medicine or working in a medically-related administrative field?**
 - 5 or less years
 - 6 to 10 years
 - 11 to 15 years
 - 16 to 20 years
 - 21 to 25 years
 - 26 to 30 years
 - 31 years or more
- 8) **Please indicate your current status:**
 - I am a 1st year medical resident
 - I am a 2nd year medical resident
 - I am a 3rd year medical resident
 - I am a 4th year medical resident
 - I am a 5th year medical resident
 - Other (please specify):

9) Are you in your final year of your residency?

- Yes
- No
- Don't know/Haven't decided

10) With respect to your main patient care/ practice setting, describe the population PRIMARILY served by you in your practice

- Urban/Suburban
- Small town
- Rural
- Geographically isolated/remote
- Cannot identify a primary geographic population

11) Which best describe(s) your primary work/ residency setting?

- Hospital
- Private office/Clinic
- Academic (e.g., university, research unit)
- Administrative office/Corporate office
- Other (please specify):

Work Hours

12) Excluding on-call activities, how many hours do you usually spend working in an average week (including direct patient care, indirect patient care, teaching/education, committee work, administration, research, managing your practice, continuing medical education/ professional development): _____

hours/week

13) Do you provide on-call services?

- Yes
- No

14) Estimate your average number of on-call work hours per month: _____hours/month

15) Estimate how many of your on-call hours each month are spent in direct patient care (e.g., phone, email, face-to-face): _____ hours/month

Professional satisfaction and workplace collegiality

16) Please rate your degree of satisfaction with each of the following workplace dimensions.

	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Workload and job demands					
Control and flexibility					
Work-life integration (meeting personal and professional obligations)					
Efficiency and resources					

17) To what extent do you agree with the following statements?

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Overall, I am satisfied with my career in medicine					
In general, I find my colleagues to be supportive					
People treat each other with respect in my work group					
A spirit of cooperation and teamwork exists in my work group Disputes or conflicts are resolved fairly in my work group					

Personal health

18) Do you believe it is important for physicians to have their own primary care physician?

- Yes
 No

19) Do you have a regular primary care physician?

- Yes
 No

20) What are your reasons for not having a primary care physician? (Check all that apply.)

- Worried illness might be trivial
 Worried about imposing on another busy colleague
 Concerns about confidentiality
 Can't find a neutral physician
 No time to see one
 No need for one, I can monitor and diagnose my own condition
 Other (please specify):

21) Who is this physician? (Check all that apply.)

- Close colleague
 Friend
 Family member
 Independent physician (e.g., not a friend or close colleague)
 Yourself

22) When did you last see this physician?

- Within the last year
 Over a year ago, less than 3 years ago
 Over 3 years ago, less than 5 years ago
 Over 5 years ago

Physical Activity

23) During a typical 7-day period (a week), how many times on average do you do the following kinds of exercise for more than 15 minutes? (Write the appropriate number on each line.)

- a. STRENUOUS EXERCISE (heart beats rapidly) (e.g. running, hockey, football, soccer):

b. MODERATE EXERCISE (not exhausting)
(e.g. fast walking, baseball, tennis, volleyball):

c. MILD EXERCISE (minimal effort)
(e.g. easy walking, yoga, bowling, golf) :

24) What are the barriers preventing you from being more physically active? (Check all that apply.)

- None, I am getting enough physical activity
- Lack of access to facilities
- Lack of time
- Lack of energy
- Fear of injury
- Physical condition, injury or disability
- Being active is not important to me
- Other reason (please specify):

Diet

25) How often do you believe you eat healthily?

- Never
- Rarely
- Sometimes
- Often
- Always

26) What are the barriers preventing you from eating healthily more often? (Check all that apply.)

- Lack of access to healthy food choices
- Fast food options are more convenient
- Lack of time to grocery shop, cook, meal prep, etc.
- Other priorities (e.g. sleep, young children)
- I don't know how to cook
- Stressful work environment
- I have a dietary restriction that restricts my options
- Healthy eating is not a priority for me
- Other (please specify):

Fatigue

27) How many hours do you usually spend sleeping each night?

Scale: 0 – 11+

28) Which of the following barriers contribute to your lack of sleep?

- No barriers. I generally get sufficient sleep.
- Shiftwork (e.g., inadequate recovery periods between shifts, frequent sleep interruptions)
- Scheduling (e.g., long work hours)
- Heavy workload (e.g., patient care and administrative duties)
- No post-call day
- Psychological distress
- Personal commitments (e.g., children)
- Other (please specify):

29) How often do you feel your level of fatigue (physical, mental, etc.) negatively impacts your capacity to function at a desired level, due to incomplete recovery from occupational demands and other activities?

- Never
- Rarely
- Neutral
- Sometimes
- Always

Presenteeism

30) In the last 12 months, how frequently did you come to work when you were physically ill or distressed to a degree that you would recommend a patient or colleague under similar circumstances stay home?

- Never
- 1 time
- 2 times
- 3 times
- 4 times
- 5 or more times

Burnout

31) Please indicate how often you have the following feelings about your work:

	Everyday	A few times a week	Once a week	A few times a month	Once a month or less	A few times a year	Never
"I feel burned out from my work"							
"I have become more callous towards people since I took this job"							

Depression (Screening)

32) During the past 12 months:

Was there ever a time lasting 2 weeks or more when you lost interest or pleasure in most things like hobbies, and/or work activities that usually give you pleasure?

- Yes
- No

Was there ever a time when you felt down, depressed, or hopeless for 2 weeks or more in a row?

- Yes
- No

Suicidal Ideation

33) Have you ever thought about taking your own life?

- Yes
- No

34) Have you had these thoughts in the last 12 months?

- Yes
- No

Substance Use

35) During the past month, on about how many days did you drink alcoholic beverages?

Scale: 0 – 31

36) On the days when you drank, how many drinks did you drink, on average?

(A drink is 1 can/bottle of beer or wine cooler, 1 glass of wine, 1 cocktail, or 1 shot of liquor).
Scale: 0 – 9+

37) How often in the past month did you have 5 or more drinks on one occasion?

Scale: 0 – 9+

38) How often have you used the following substances to meet daily demands?

	Never used	Used, but not in the past 12 months	Used, but not in the past 30 days	Used in the past 30 days
Stimulants: (e.g., Ritalin, Dexedrine, Adderall, Vyvanse)				
Tobacco				
Marijuana (recreational)				

Patient care

39) To what degree do you feel your health and wellness (physical, psychological) affects the quality of care provided to your patients?

- Not at all
- Little
- Somewhat
- A fair amount
- A great deal

Physician health services

40) Are you aware of what Physician Health Program (PHP) services are available to you?

- Yes
- Somewhat
- No

41) In the past 5 years, have you accessed a PHP?

- Yes
- No

42) For what reasons do you think physicians should contact Physician Health Programs? (Check all that apply.)

- Mental health and related issues (e.g., depression, burnout)
- Physical illness
- Non-practice-related workplace issues (e.g., Disruptive colleagues, workplace discord)
- Practice related issues (e.g. difficult medical cases, working with the health system)
- Personal stressors (e.g., relationships and family support)
- Financial strain
- Addictions and related disorders
- Health promotion and primary prevention
- Crisis in my workplace (e.g., suicide of a colleague)
- Other (please specify)

43) What are the main reasons you believe that physicians have for NOT consulting a Physician Health Program?

- Not aware of the services available
- Professional supports already in place
- Confidentiality
- No time
- Ashamed to seek help
- Concerns about quality of care
- Service not required
- Believing situation is not severe enough to warrant a PHP consultation
- Other (please specify)

44) If you believed a colleague was in distress, what would you do? (Check all that apply.)

- Suggest they consult a PHP
- Suggest an issue-specific consultant (e.g., counsellor, financial advisor)
- Nothing, my colleagues are able to make appropriate decisions themselves
- Other (please specify)

Resilience

45) For each item, please indicate how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer to how you think you would have felt.

	Not true at all	Rarely true	Sometimes true	Often true	True nearly all of the time
I am able to adapt when changes occur					
I tend to bounce back after illness, injury or other hardships					

Mental health

46) How often in the past month did you feel:

	Everyday	Almost every day	About 2 or 3 times a week	About once a week	Once or twice	Never
Happy?						
Interested in life?						
Satisfied with your life?						
That you had something important to contribute to society?						
That you belonged to a community (like a social group, your neighbourhood, your city, your school)?						
That our society is becoming a better place for people like you?						
That people are basically good?						
That the way our society works makes sense to you?						
That you liked most part of your personality?						
Good at managing the responsibilities of your daily life?						
That you had warm and trusting relationships with others?						
That you had experiences that challenged you to grow and become a better person?						
Confident to think or express your own ideas and opinions?						
That your life has a sense of direction or meaning to it?						

Appendix B: Descriptions of psychological measures

Mental health

The Mental Health Continuum Short Form (MHC-SF; Keyes 2002) was used to measure mental health. The MHC-SF is a valid and reliable scale consisting of 14 items that correspond to three facets of well-being: emotional well-being (three hedonic items), social well-being (five eudaimonic items) and psychological well-being (six eudaimonic items). Responses are measured on a scale ranging from 0 ("never") to 5 ("every day"). Continuous scoring was used for each facet of well-being, for a maximum score of 15 for emotional well-being, 25 for social well-being and 30 for psychological well-being. Overall scores of mental health were also calculated and scored according to three categories: flourishing, languishing and moderately mentally healthy. An individual is classified as flourishing if they felt one of the three hedonic items "every day" or "almost every day" and felt six of the 11 eudaimonic items "every day" or "almost every day" in the past month. An individual is classified as languishing if they felt one of the three hedonic items "never" or "once or twice" and six of the 11 eudaimonic items "never" or "once or twice" in the past month. Individuals who are not categorized as flourishing or languishing are categorized as moderately mentally healthy.

Resilience

The two-item Connor-Davidson Resilience Scale (CD-RISC 2; Vaishnavi et al. 2007) was used to measure resilience. The CD-RISC 2 includes two questions pertaining to adaptability and the ability to bounce back from hardships. Responses are measured on a scale ranging from 0 ("not true at all") to 4 ("true nearly all of the time"), for a maximum score of 8. The mean resilience score in the general population is 6.91 (Vaishnavi et al.

2007). Given this positive skew, scores were coded into two categories: low resilience (score 0–5) and high resilience (score 6–8).

Burnout

The two-item Maslach Burnout Inventory (MBI 2; Dyrbye et al. 2014; West et al. 2009) was used to measure burnout. This scale has been deemed reliable and valid in physician populations (West et al. 2012). The MBI 2 is recommended as an appropriate alternative to the full MBI-22 for large-scale and multifaceted national surveys where space is an important consideration (West et al. 2012). The two questions assess emotional exhaustion ("I feel burned out from my work") and depersonalization ("I have become more callous towards people since I took this job"), which are indicators of burnout. Responses are measured on a scale ranging from 0 ("never") to 6 ("everyday"). To be classified as burned out, an individual must experience high levels of emotional exhaustion and/or depersonalization. High levels on these subscales are defined as occurring at least weekly.

Depression

The two-item Primary Care Evaluation of Mental Disorders (PRIME-MD 2; Whooley et al. 1997) was used to screen for depression. This scale screens for minor depressive disorder using DSM-IV-TR criteria (Tamburrino et al. 2009). Participants were asked, "During the past 12 months: was there ever a time lasting 2 weeks or more when you lost interest or pleasure in most things like hobbies, and/or work activities that usually give you pleasure?" and "During the past 12 months: was there ever a time when you felt down, depressed, or hopeless for 2 weeks or more in a row?" To screen positive for depression, an individual must answer "yes" to at least one of these questions.

Suicidal ideation

Participants were asked, "Have you ever thought about taking your own life?" If they answered "yes," a follow-up question asked, "Have you had these thoughts in the last 12 months?" These two questions have been used to assess suicidal ideation in several national surveys (e.g., Canadian Community Health Survey 2011; CFMS-FMEQ National Medical Student Health and Well-Being Survey 2016).

ASSOCIATION
MÉDICALE
CANADIENNE



CANADIAN
MEDICAL
ASSOCIATION

cma.ca

