

Healing the Healers: System-Level Solutions to Physician Burnout

**Recommendations of the Ontario Medical
Association Burnout Task Force**

Aug. 18, 2021



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Executive Summary

Burnout among physicians has been described as an “epidemic”¹ and a “public health crisis.”² It is a work-related syndrome characterized by emotional exhaustion, depersonalization or feelings of detachment and cynicism toward people and work, and a reduced sense of personal accomplishment.^{1,3} At the individual level, burnout is associated with increased symptoms of fatigue and depression, suicidal ideation, substance use, and motor vehicle crashes.¹ Terms other than “burnout” have been suggested such as workplace exhaustion, physician burden, moral injury, or (to adopt a more positive focus) promoting physician wellness or resilience. This paper will use the term burnout, given its general usage and recognition within the physician community.

In 2019, the Ontario Medical Association (OMA) established a Burnout Task Force. Beyond documenting the rates of burnout, a key objective of the task force was to determine the causes of, and potential for, solutions for physician burnout. In March 2020 and March 2021, the task force surveyed Ontario physicians, residents and medical students about their levels of burnout and ranked the most significant contributors as well as the highest-priority solutions to address it. According to the surveys, just prior to the pandemic, 29 per cent of Ontario physicians had high levels of burnout with two-thirds experiencing some level of burnout. By March 2021, these rates had increased, with 34.6 per cent of Ontario physicians reporting high levels

of burnout and almost three-quarters reporting some level of burnout.

Burnout occurs at the interface of the individual and system levels. While its impact is experienced at the level of the individual health-care professional - and physicians are well-trained to manage high variability and stress – the system itself causes most of the issues. No single intervention can fully address the problem. Solutions must be found to address the many complex and multi-faceted system-level issues. Priority action is required on the five evidence-based solutions ranked highest in our member surveys. To implement each solution, we present evidence-based recommendations that build on the fourth objective of the Quadruple Aim:¹ improving providers’ work lives.

Beyond the longstanding burnout experiences of many Ontario physicians, the COVID-19 pandemic has also exacerbated burnout for many. As we begin to focus on post-pandemic recovery as a system, we need to prevent further burnout of our physicians and health care workers. This is important not only for their personal health and well-being, but to ensure there are sufficient health human resources available to address the system issues that the pandemic has created and compounded, including the backlog of surgical/procedural and diagnostic services, the preventive care and screening backlog, and the exacerbation of existing and new conditions, such as mental

¹The Quadruple Aim is a framework to guide the development of an effective and sustainable health care system, focused on: “Improving the patient and caregiver experience; improving the health of populations; reducing the per capita cost of health care; and, improving the work life of providers”. (Premier’s Council on Improving Healthcare and Ending Hallway Medicine, “A Healthy Ontario: Building a Sustainable Health Care System”, 2019, <https://www.ontario.ca/document/healthy-ontario-building-sustainable-health-care-system/chapter-2-vision-health-care-ontario>)

health and addiction conditions. From a health workforce perspective, failure to address burnout will push an already stressed system into crisis. Physicians retiring prematurely, reducing their workloads, changing their scope of practice, or leaving medicine entirely in response to burnout will exacerbate the situation for remaining physicians, resulting in a potential domino effect. Therefore, this paper speaks to needed long-term structural shifts that can begin as the system changes in the post-pandemic era and also discusses shorter-term actions that can help to address urgent needs.

To accomplish these solutions as a system, key stakeholders - including government, medical regulatory bodies, medical schools and residency training programs, health care organizations, digital health partners, and physicians, residents, and medical students themselves – must partner and co-ordinate. The OMA also recognizes that it has an important role to play, including engaging in meaningful collaboration with system partners.

Further, burnout in the health-care system is not exclusive to physicians. By working toward system-level change to improve burnout, our aim is for these impacts to benefit health-care workers throughout the system, recognizing different workers' unique experiences. Five solutions to burnout and specific recommendations to achieve them are presented in the infographic on the next page.

OMA Burnout Task Force Top 5 System-Level Solutions to Physician Burnout

1



Streamline and reduce required documentation and administrative work.

- Assess laws, regulations, policies, standards and documentation requirements collaboratively, regularly and systematically to evaluate the burden, complexity, redundancy and value to patient care of administrative requirements.
- Use medical scribes, particularly in relation to electronic documentation requirements.
- Explore technological innovations to reduce and simplify administrative demands, including billing administration.

2



Ensure fair and equitable compensation for all work done.

- Fairly compensate documentation and administrative work where it cannot be streamlined and reduced.
- Make remuneration equitable, particularly in light of the identified gender pay gap in medicine in Ontario.

3



Increase work-life balance by making organizational policy changes.

- Normalize flexible work arrangements for physicians who seek them, including options for part-time work, job-sharing, float pools and modified schedules.
- Enhance supports for medical student and resident work-life balance.
- Explore innovative strategies to enable work-life balance, such as time banking.

4



Promote the seamless integration of digital health tools into physicians' workflows.

- Implement interoperability standards so physicians can access patient records seamlessly and share patient health information among care providers.
- Involve physicians as key partners from the start in the procurement, design, implementation and ongoing optimization of digital health tools to ensure usability.
- Provide physicians with comprehensive and ongoing training on using digital health tools, beginning in medical school.
- Provide physicians with easily accessible and ongoing technical support.

5



Provide institutional supports for physician wellness.

- Support and promote a workplace culture that prioritizes and promotes physician wellness.
- Regularly evaluate levels of physician burnout within organizations using validated tools to understand burnout levels and implement necessary changes.
- Co-ordinate and implement proven individual-level interventions for physicians.

Introduction

Burnout is a major system-level issue that was affecting physicians, residents and medical studentsⁱⁱ even before the onset of the COVID-19 pandemic. In the 2018 National Physician Health Survey conducted by the Canadian Medical Association, nearly one-third of physicians and residents reported high levels of burnout.⁴ The 2021 Medscape National Physician Burnout & Suicide Report found that for 79 per cent of U.S. physician respondents, burnout began before the start of the COVID-19 pandemic.⁵ There has been a dearth of Ontario-specific data on physician burnout; however, specialty-specific research has demonstrated high levels of burnout amongst physicians.^{6,7} This is reflected in the personal experiences shared by the Ontario Medical Association (OMA) membership over the years.

Burnout is primarily defined as a work-related syndrome characterized by three dimensions: emotional exhaustion; depersonalization, or feelings of detachment and cynicism toward people and work; and a reduced sense of personal accomplishment.^{1,3} It has been conceptualized as a “continuous variable,” with different individuals experiencing varying degrees of burnout severity in the three dimensions.⁸ The World Health Organization (WHO) has added burnout to the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon. The WHO definition specifically states that burnout results from “chronic workplace stress that has not been successfully managed” and emphasizes that “burnout refers specifically to phenomena in the occupational context and

should not be applied to describe experiences in other areas of life.”⁹ This definition highlights that burnout is caused primarily by workplaces, and not individuals. Workplace stressors include inefficient work processes and environments, clerical burden, excessive workloads, work-home conflicts, lack of control, lack of autonomy, lack of meaning at work, poor organizational support structures, and leadership culture.¹

Burnout has been referred to as both an “epidemic”¹ and a “public health crisis.”¹⁰ The magnitude of burnout as a problem is evident in its impact on physicians, patients, and the health-care system. At the personal level, physician burnout has been associated with increased depression, suicidal ideation, substance use and motor vehicle crashes.¹ At the patient level, it has been associated with poor patient outcomes, including lower quality of care and increased medical errors.¹ However, researchers have stated that “these associations do not prove that burnout affects patient care”¹ and that further prospective studies are needed to determine if there is causality.¹¹ At the health-care system level, burnout has been associated with reduced physician productivity, increased physician turnover (and potentially diminished patient access to care as a result) and increased costs for the system.^{1,12} As one seminal paper on physician burnout states: “one can’t have a high performing health-care system if physicians working within it are not well.”¹⁰

In recent years, there has been increasing recognition that the root causes of burnout extend beyond deficits in individual resilience to

ⁱⁱ From here on, this paper refers to “physician burnout” and “Ontario’s doctors” for ease of reference. These terms encompass residents and medical students for the purposes of this paper, unless otherwise specified. However, it is acknowledged that medical students may not identify themselves with the term “physician”.

include system-level problems. This recognition has brought a shift in potential solutions. The system-level refers to factors and influences at the health-care system level. In the context of burnout this includes - but is not limited to - legislative and regulatory requirements, policies and processes, culture, education and training programs, practice environments, clinical workflows, and the various actors that comprise the system, such as government, accrediting and regulatory/licensing bodies, healthcare institutions and organizations, medical schools and residency training programs, organizational leadership, technology vendors, health-care professionals and teams, and patients.

While some burnout literature refers to the dichotomy between individual-level and organizational-level interventions, for the purpose of this paper, the system-level encompasses the organizational-level as well. Calls to action have recommended that the system “need[s] to stop blaming individuals and treat physician burnout as a system issue.”¹³ There has been further recognition that “burnout is a system issue” and there is a “need for a system-level strategy.”¹⁴ While it has been suggested that both individual- and system-level solutions are needed to combat burnout – “a shared responsibility of both health-care systems and individual physicians”¹¹ – the root causes of burnout have been identified at the system-level.^{10,15} Organizational-level interventions have been found to be more effective at reducing burnout than individual-level approaches,¹⁵ a finding that supports the premise that burnout is a system-level problem. As such, while individual-level solutions may help alleviate certain symptoms of burnout, meaningful, long-term change has to occur at the system-level.

In 2019, in an effort to address the growing prevalence of physician burnout, the OMA identified it is a top priority for the profession and struck a Burnout Task Force. The task force

is composed of five physicians with expertise and interest in physician burnout and well-being along with representatives from the OMA’s Physician Health Program and OntarioMD. Its mandate was to make recommendations that would inform systemic changes to help prevent burnout, and encourage the development of a system to promote physician wellness. To help inform its system-level recommendations, the Burnout Task Force issued two identical surveys to the OMA membership: one in March 2020—just before the COVID-19 pandemic was declared in Ontario--and another in March 2021.

This paper presents the results of those surveys. It also makes recommendations related to the top five solutions to burnout based on the literature and identified by Ontario physicians through the surveys. These solutions are:

- 1. Streamline and reduce required documentation and administrative work.**
- 2. Ensure fair and equitable compensation for all work done.**
- 3. Increase work-life balance by making organizational policy changes.**
- 4. Promote the seamless integration of digital health tools into physicians’ workflows.**
- 5. Provide institutional supports for physician wellness.**

This paper has three key goals:

- 1. Make recommendations related to the top five priorities identified by Ontario physicians where the system needs to start to address burnout.**

It is time to move beyond measuring and documenting burnout rates to addressing and preventing burnout. System-level solutions will take time to implement, but the system must begin to make meaningful the changes that are needed to prevent burnout and uphold the fourth objective of the Quadruple Aim: to

improve health-care providers' work lives. In the aftermath of the pandemic, the system is being overhauled. Therefore, now is the time to think about how we can improve our health-care system and not go back to the pre-pandemic ways that contributed to burnout. This paper serves as that starting point.

2. Contribute Ontario-specific data and research on physician burnout.

As a member-facing organization, the OMA represents medical students, residents, practising physicians and retired physicians across Ontario and is in a unique position to contribute data on burnout in the medical profession and to amplify the experiences of members facing burnout within the system.

3. Recognize burnout as a system-level problem in Ontario that requires system-level co-ordination among key health stakeholders to implement solutions.

Although this paper focuses on burnout in the context of physicians, we recognize that burnout is not unique to physicians: it affects all health-care workers. The solutions in this paper represent larger system changes that could address and prevent burnout for other health-care workers too, recognizing their unique circumstances.

Our survey findings revealed that the COVID-19 pandemic has exacerbated burnout for many physicians. As we begin to focus on post-pandemic recovery as a system, we need to prevent further burnout of our physicians and health-care workers, not only to preserve health-care workers' personal health and well-being, but to ensure there are sufficient health human resources available to address the system issues that have been compounded by the pandemic. These issues include backlogs in surgical/procedural and diagnostic services, backlogs in preventive care and screening, and the exacerbation of existing and new conditions,

such as mental health and addiction conditions. From a health workforce perspective, failure to address burnout will push an already stressed system into crisis. Physicians retiring prematurely, reducing their workloads, changing their scope of practice, or leaving medicine entirely in response to burnout will exacerbate the situation for remaining physicians, resulting in a potential domino effect. Therefore, this paper speaks to needed long-term structural shifts that can begin as the system changes in the post-pandemic era and also suggests shorter-term actions that can help to address urgent needs.

Survey Design and Methodology

On behalf of its Burnout Task Force, the OMA launched its first burnout survey in March 2020 and sent it out again in March 2021. The OMA sent these surveys to its entire membership – including medical students, residents, practising physicians and retired physicians – by email. It was received by 37,335 members in March 2020 and by 40,052 members in March 2021, representing the total number of members who had not opted out of receiving the standard communication.

Because the same survey was sent out in both March 2020 and March 2021, the task force was able to compare data on the impact of burnout from pre-pandemic to pandemic.

The purpose of the survey was to hear directly from Ontario physicians about the factors they believe contribute most to physician burnout and potential solutions, in order to inform system-level recommendations. The survey asked respondents to:

- 1) Rate their level of burnout, using a single-item, non-proprietary, self-defined burnout measure.¹⁶
- 2) Rank a provided list of the top 10 contributors to burnout from 1 (those they believe contribute most to physician burnout) to 10 (those they believe contribute least to physician burnout).
- 3) Rank a provided list of the top 10 solutions to burnout from 1 (those they would most like to see implemented) to 10 (those they would least like to see implemented).
- 4) Answer an open-ended question about other contributors or solutions to physician burnout that, in their opinion, the previous questions did not capture.

The top 10 contributors and solutions to burnout provided in the survey were based on those most commonly suggested and cited in the literature. Examples were provided for each (for illustrative purposes). The solutions complemented the contributors and were framed to ensure they could be implementable actions as informed by the research.

These four questions were followed by demographic questions about gender, age, years of practice, career stage, primary practice setting and location, and degree of rurality.

Results and analysis from both surveys are highlighted below.

Survey Results and Analysis

Survey response

In total, 1,407 members (3.8 per cent) responded to the March 2020 survey, and 2,649 members (6.6 per cent) responded to the March 2021 survey. The timing of the March 2020 survey launch (March 9 to 22, 2020) coincided with the declaration of the COVID-19 pandemic; survey participation was lower than anticipated, likely due to the events unfolding at that time. However, a large number of respondents still participated.

Overall level of burnout

As shown in Figure 1, the proportion of respondents who reported either persistent burnout symptoms or feeling completely burned out (i.e., levels 4 or 5) increased to 34.6 per cent in 2021 from 29 per cent in 2020. This range aligns with the Canadian Medical Association National Physician Health Survey (2018), that found 30 per cent of respondents reported high levels of overall burnout.⁴ The proportion of respondents experiencing at least some level of burnout (i.e., levels 3, 4 and 5) increased to 72.9 per cent in 2021 from 66 per cent in 2020. We can conclude that physicians faced significant burnout issues pre-pandemic, and that the pandemic exacerbated them.

Burnout Level	March 2020 Response Rate (%)	March 2021 Response Rate (%)
1. I enjoy my work. I have no symptoms of burnout.	4.6	5.0
2. Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out.	29.4	22.0
3. I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.	37.0	38.0
4. The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot.	18.4	21.0
5. I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help.	10.6	14.0

Figure 1: Overall levels of burnout reported by survey participants.

A demographic analysis of the responses pointed to some important differences in how physicians experience burnout. As illustrated in Figure 2, certain physician groups such as female physicians reported experiencing a higher level of burnout on average in both 2020 and 2021. Many of these findings are consistent with other studies that have found that physicians who are female, younger, and work in private practice are at increased risk of burnout.⁸ However, it is worth noting however that results on the impact of demographic factors, such as gender and age have been inconsistent. There is a need to clarify “the roles these variables play in physician burnout and response to interventions.”¹

As further discussed in this paper, the differing experience of burnout amongst physicians underscores the need to assess the effectiveness of interventions for different physician groups. A “one-size-fits-all” approach may not succeed at combating burnout if certain groups are at heightened risk.

Demographic Measure	Mean Results – March 2020 (Reported higher level of burnout on average)	Mean Results – March 2021 (Reported higher level of burnout on average)
Gender	Female	Female
Age	45 to 54 years of age	35 to 44 years of age
Years of Practice	11 to 19 years of experience	6 to 10 years of experience
Career Stage	Established physician	Resident/fellow <i>(Note: this could have resulted from a smaller number of resident/fellow respondents)</i>
Specialty	Resident/fellow <i>(Note: this could have resulted from a smaller number of resident/fellow respondents)</i>	Fairly uniform across all specialties, with marginally higher result for general practice
Primary Practice Setting	Community-based interprofessional practice and community-based solo practice primary practice settings	Community-based group practice and academic hospital
Primary Practice Location	Northern Ontario	Northern Ontario and Greater Toronto Area
Degree of Rurality	Semi-rural areas	Suburban areas

Figure 2: Demographic analysis of higher average burnout levels.

Top 10 ranked burnout contributors

Figure 3 presents the research-based contributors to burnout as ranked from 1 (contributes most) to 10 (contributes least) by respondents in March 2020. The rankings of burnout factors remained almost exactly the same in 2021; the only difference is that the rankings for “practice environment for practising physicians” and “health system sustainability” were reversed in 2021 versus 2020.

The high ranking of reporting and administrative obligations in this survey is consistent with the findings of other surveys that have reported on the top contributors to burnout. For example, both the 2020 and 2021 Medscape National Physician Burnout & Suicide Reports found that physician respondents consistently reported “too many bureaucratic tasks” as contributing most to their burnout.^{5,17}

Rank March 2020	Contributor
1	Patient expectations/patient accountability , including managing patient expectations, patients wishing for flexible modern solutions, threat of patient complaints or litigation, etc.
2	Reporting and administrative obligations , including documentation, charting, forms, etc.
3	Health-system sustainability , including increased clinical complexities, high patient loads, managing ‘more with less’, dealing with an aging population, compassion fatigue, and “moral injury” (i.e. feeling in a double-bind of wanting to put patient needs first, yet being unable to provide patients the care they need due to other constraints and demands beyond your control, etc.)
4	Practice environment for practising physicians , including work environment/conditions, programs/services/policies regarding physician health available in the workplace, psychological safety, lack of organizational support, civility, and small business management requirements (such as office space, staff hiring/training, supplies) etc.
5	Culture of medicine , including lack of leadership; stigma or discrimination regarding physician health, help-seeking and failure; lack of civility (i.e. physician-to-physician conflict and interprofessional conflict), etc.
6	Compensation and financial pressures , including current income, medical school/residency debt, etc.
7	Regulatory requirements , including College of Physicians and Surgeons of Ontario policies and processes, licensing requirements etc.
8	Technology , including electronic medical records/electronic health record and digital health tools, etc.
9	Lack of supports to promote wellbeing , including management of long work hours with family/leisure time; inadequate sleep, exercise and nutrition; time for self-care and attending to personal medical needs; lack of benefits and paid sick/vacation time, etc.
10	Practice and training environment for students/residents , including work environment/conditions, medical school education and training, residency training programs, psychological safety, civility, etc.

Figure 3: Top 10 ranked contributors to burnout as reported by participants.

Top 10 ranked solutions to burnout

Figure 4 presents the research-based solutions to burnout from 1 (would most like to see implemented) to 10 (would least like to see implemented) as ranked by respondents in March 2020. The rankings of burnout solutions remained almost exactly the same in 2021 as in 2020; the only difference is that the rankings for “institutional supports” and “public awareness campaign” were reversed in 2021 versus 2020. However, this difference was inconsequential. This suggests that the COVID-19 pandemic has not affected the solutions members would like to see implemented to address the long-standing issue of burnout.

The high ranking of compensation and increased work-life balance aligns with the findings of other surveys that have reported on prioritized solutions to burnout. For example, in the 2021 Medscape National Physician Burnout & Suicide Report, physician respondents also reported that “increased compensation to avoid financial stress” and a “more manageable work and schedule” would most help reduce their burnout.⁵ The top-ranked solution was also consistent across all genders, years in practice (other than those in training), primary practice setting and location, and degree of rurality. The top five solutions and recommendations to implement them are explored in detail through the paper below.

Rank March 2020	Solution
1	Streamline and reduce required documentation and administrative work. This would include, but not limited to, regularly reviewing required documentation and forms with the goal of streamlining/minimizing them where possible, and researching the effect of administrative tasks on our health-care system in terms of quality, time, and cost.
2	Ensure fair and equitable compensation for all work done. This would include, but not limited to, benchmarking compensation methods against similar successful organizations to ensure they are fair and competitive, and ensuring reasonable compensation for leadership roles and time spent on administrative duties, such as forms and paperwork.
3	Increase work-life balance by making organizational policy changes. This would include, but not limited to, on-call policies, protected time to pursue personally meaningful aspects of work, benefits and paid vacation/sick days, locum support, etc.
4	Promote the seamless integration of digital health tools into physicians’ workflows. This would include, but not limited to, interoperability between different systems, change management supports for physicians, and physician representation and/or involvement in digital health advancements and design.
5	Provide institutional supports for physician wellness. This would include, but not limited to, promoting compassionate leadership, instituting executive wellness officers, and promoting civility in the workplace.
6	Launch a public awareness campaign around the role of physicians to help manage patient expectations. This would include, but not limited to, highlighting the role the patient plays in managing their own care, and creating a set of principles and expectations for the physician/patient relationship.

Rank March 2020	Solution
7	Position the profession to implement new regulatory processes and policies. This would include, but not limited to, disseminating easily consumable, physician-friendly information on new processes and policies, consulting physicians on new processes and policies before implementation, and evaluating new processes and policies after implementation to ensure they are working in practice.
8	Develop and promote resources for members on burnout prevention strategies. This would include, but not limited to, training programs such as stress management training and communication skills training, and developing a toolkit for members with resources.
9	Promote more dialogue and discussion within the workplace on burnout and physician wellness. This would include, but not limited to, promoting the Quadruple Aim, normalizing help-seeking behaviour and promoting psychological safety.
10	Reform medical school training. This would include, but not limited to, promoting wellbeing, offering wellness and mental health supports, and more hands-on training earlier to help transition with expectations of being a practising physician.

Figure 4: Top 10 ranked solutions to burnout as reported by participants.

Differences between top ranked contributors and solutions

A comparison of the results in figures 3 and 4 highlights an interesting difference between the top contributors and solutions as ranked by physicians: the top 10 rankings do not align. In other words, there is a difference between what physicians say is causing their burnout and the solutions they most want implemented.

Some notable differences include:

- Physicians ranked patient expectations/accountability as the number 1 contributor to burnout, but they ranked the corresponding solution (launching a public awareness campaign around the role of physicians to help manage patient expectations) as number 6. They ranked streamlining and reducing documentation and administrative work as the top solution.
- Respondents also ranked compensation, technology and lack of supports to promote well-being lower as contributors to burnout, but higher as solutions to it.

That said, there were also a few notable similarities:

- Respondents ranked administrative burden high as both a contributor (number 2) and a solution (number 1).
- They ranked regulatory requirements as number 7 for both contributor and solution.
- They ranked training environments for students and residents ranked as both the lowest contributor and least important solution.

A comparison of the findings reported in the Medscape National Physician Burnout & Suicide Report 2021 also showed differences: respondents said that “too many bureaucratic tasks” contributed most to their burnout, but that “increased compensation to avoid financial stress” would most help reduce it.⁵ This suggests that the observed discrepancy between what physicians say is causing their burnout and the solutions they want implemented is not unique to our survey, and warrants further exploration.

Other themes

A thematic analysis of the open-text responses further illuminated many of the contributors and solutions captured in the survey questions. Common themes discussed in the open-text responses of both surveys related to:

- Physicians' expectations, including expectations around increased working hours and types of services provided; patients' expectations that their physician be more available, and government's expectations of physicians to treat more complex patients with fewer resources.
- Workplace environment and general conditions of work, such as hours of work and call, inability to take holidays or breaks, issues with referrals, incivility of colleagues, failings of models of care, and general workplace culture, especially with respect to hospital administration and expectations.
- Compensation, including pension, sick leave payments, maternity leave payments, and compensation for non-billable work.
- Physician reputation and role, including negative portrayal of physicians by government and media, physician rating tools, and role confusion stemming from increased use of non-physicians for medical advice (e.g., "Dr. Google").

Several themes emerged as contributors to burnout that were not captured in the survey questions, including:

- The challenges involved in rural medicine, including social isolation, difficulty finding replacement physicians (and subsequent overwork), lack of support and increased workload.
- Gender disparity, including work-life balance, family planning challenges, and compensation.

- The emotional impact of work, including long-term difficulty coping with emotionally draining work.
- The pressures and impacts of living and working through the pandemic.

Overall, the findings of the surveys contribute to the current dearth of Ontario-specific data on physician burnout. While other Ontario-based studies have largely focused on burnout within a specialty subset, these surveys provide representative data from the OMA membership across the province.

Top 5 Solutions to Physician Burnout

Solutions

The realities of burnout for physicians have been well-studied and -described in the literature. This paper builds on that literature and the experiences of Ontario physicians and focuses forward on system-level solutions. We present the following five solutions:

- 1. Streamline and reduce required documentation and administrative work.**
- 2. Ensure fair and equitable compensation for all work done.**
- 3. Increase work-life balance by making organizational policy changes.**
- 4. Promote the seamless integration of digital health tools into physicians' workflows.**
- 5. Provide institutional supports for physician wellness.**

We focus on these five solutions because they stem from the evidence base on burnout and because Ontario's doctors identified them as the highest priority solutions in the March 2020 and March 2021 burnout surveys.

However, some survey respondents prioritized a number of other important potential solutions that have also been identified in the literature. Their exclusion from this paper does not mean that they would not be meaningful for Ontario physicians. Rather, burnout is such a complex and multi-faceted issue that as a system, it can be difficult to begin this needed work when faced with so many starting points and necessary changes. We propose priority action on the top five solutions that our member surveys identified because the results demonstrate that this is where Ontario's doctors need the system-level work to begin. However, this does not preclude the important work needed on other system actions.

Given the complexity of burnout as a system-level problem, we need to take a multi-faceted approach (as outlined below). While each solution may contribute to alleviating and preventing burnout, none should be viewed as standalone.⁵

Accountable System Stakeholders

Similarly, there is no standalone actor to solve physician burnout. As a system-level issue, burnout necessitates a system-wide response that includes government, accrediting and regulatory/licensing bodies, health-care institutions and organizations, medical schools and residency training programs, organizational leadership, digital health partners, health-care professionals and teams, and patients. Certain solutions may require work from a specific actor, but many require collaboration among multiple stakeholders across the system, including work from the OMA. At a minimum, the Ministry of Health and/or Ontario Health must lead task forces with key stakeholders to implement system-level changes to address provider well-being as the fourth pillar of the Quadruple Aim. Below, we outline the specific system stakeholders responsible for solution implementation where applicable.

Implementing Solutions

We have developed specific recommendations for each solution based on available research. While the solutions are listed in priority order (based on the burnout survey results), the recommendations are not presented in any particular order. As well, given the interconnectedness of the system, many recommendations exist at the intersections of overarching solutions, both those identified in the top five and others. However, there is limited robust research on – or evaluations of – burnout interventions, particularly the effectiveness

of specific organizational interventions, longitudinal research on the impact of interventions, the interventions that are most effective in different groups of physicians, and the combination of individual and organizational interventions.^{1,18,19} Our recommendations represent the interventions identified in the existing literature, but may not be exhaustive. Although the magnitude of the impact of any individual recommendation is uncertain, every recommendation would have some impact. There can be no further delay in addressing burnout.

As well, certain recommendations may require significant long-term effort to effectively reduce and prevent physician burnout. Therefore, we have included both recommendations to address the root systemic issues as well as necessary supports for the short-term so that physicians do not need to continue experiencing the same levels of burnout while long-term changes are implemented. This underscores the importance of a multi-faceted approach to adopting solutions and recommendations. Long-term changes should not be avoided because they require investments of time and resources, nor should short-term supports be discounted, given the help they can provide in the interim.

Some recommendations will be most readily implemented at the level of institutions that staff physicians; however, many physicians work in their own practices or in group practices. The size of an organization will influence what can be achieved internally. These recommendations are not intended to exclude such physicians or to impose the burden of implementation on them. For smaller groups or solo practices, collaborative system supports (for example, supports from professional organizations) should make it easier to benefit from these or adapted recommendations. Further, as Ontario Health Teams continue to develop, they should prioritize such physician supports while they build partnerships to support their work

toward the Quadruple Aim. At a minimum, they should be measuring levels of burnout in their workforce before any major changes to the system and at regular intervals thereafter.

Equitable Implementation & Evaluation

In implementing the recommendations, it will be paramount to evaluate their impacts to understand their effectiveness, and particularly if it varies among different groups of physicians. Physicians' experiences with burnout can vary: they are informed by professional differences, such as specialty and practice type, as well as by factors like racialization, ethnicity, religion, gender identity and expression, sexual orientation, ability and the intersection of those identities. A "one-size-fits-all" approach will not succeed at combating burnout if certain physician groups are at heightened risk and if interventions do not address the various and specific sources of burnout. In particular, discrimination in the workplace can affect physician wellness and lead to burnout,^{20–22} so it is important that initiatives to address burnout do not, in themselves, contribute to discriminatory experiences and further exacerbate burnout. Therefore, it will be important to evaluate the impact of recommendations while remaining mindful that they may be differentially effective. The implementation should be iterative to ensure recommendations reach all physicians, especially those most at risk.

Fostering the Quadruple Aim

All of our recommendations are underscored by the fourth objective of the Quadruple Aim: improving providers' work lives. We centre our recommendations around this aim not only because physicians' work lives must be improved by protecting against burnout, but also to acknowledge that, as stated in the literature, "[m]aintaining the critical importance of patient safety and optimizing patient outcomes, whilst protecting the most meaningful work roles

for physicians, must become complementary goals.”¹ The Quadruple Aim serves as a reminder that supports for physicians need not be seen as being at odds with improvements in other components of the health-care system, like reducing the cost of care, improving the health of populations, and improving the patient and caregiver experience (i.e., the remaining three aims). Rather, all of these elements are complementary to moving the health-care system forward, and must be viewed as enabling each other. As such, improving physicians’ work lives by implementing these recommendations will ultimately benefit the health-care system at large.



Streamline and reduce required documentation and administrative work.

In our surveys, Ontario's doctors identified streamlining and reducing required documentation and administrative work as the top solution to burnout, and they identified the related burden of administrative work as the second highest contributor. The literature also consistently identifies administrative burden as a key facet of physician burnout in other jurisdictions. This burden includes work related to items like medical forms, doctors' notes, business operations, billing, licensing, privileging and documenting in point-of-care systems, such as electronic medical records and hospital information systems.²³

A 2020 survey of Nova Scotia physicians found that, on average, physicians spend 10.6 hours per week on administrative tasks.²³ This survey also found that physicians believed that 38 per cent of this time was spent on unnecessary administrative tasks, 24 per cent was spent on work that did not need to be completed by a physician, and 14 per cent was spent on work that could be eliminated.²³ It is imperative to improve this significant contributor to burnout first and foremost by reducing the amount of unnecessary required work, and then simplifying and providing supports for the remaining work.

Recommendation: Assess laws, regulations, policies, standards and documentation requirements collaboratively, regularly and systematically to evaluate the burden, complexity, redundancy and value to patient care of administrative requirements.

A key barrier to reducing and streamlining physicians' administrative burden is the multitude of health-system actors that contribute to it. These include government departments and agencies, medical regulatory bodies, organizations that staff physicians, and actors outside of the health system (e.g., employers and schools requiring doctors' notes). There are also numerous laws, regulations, policies, standards and organizational processes that require documentation and administrative work. These all result in requirements for administrative work that is not always helpful or valuable to patient care, is unnecessarily complex, does not need to be completed by a physician, and/or overlaps other requirements.

Therefore, all requirements should be systematically assessed to determine which ones actually have value for patients and physicians, and which can be streamlined, better aligned with other related requirements, or eliminated altogether.⁸ Because of the multi-stakeholder source of these requirements, this assessment must be undertaken collaboratively across system actors – including the Ministry of Health, provincial health agencies, organizations that staff physicians, and medical regulatory bodies – and should involve physicians so they can provide their first-hand experiences with the requirements and their utility. These

stakeholders should undertake this assessment regularly, to ensure that new requirements do not undermine positive changes. Any changes made should be evaluated to understand their effectiveness and identify any further needed changes.

The U.S. National Academy of Sciences recommends that existing and potential future requirements be assessed according to “human-centred design and human factors and systems engineering approaches”⁸ to ensure these complex processes take into account the individuals who must actually carry them out and centre both the value to patients and the burden to physicians.

This work is complex and long-term. As a result there is a lack of literature evaluating the impacts of such systematic projects. However, implementation of this recommendation should leverage and build on the on-going work and successes of the OMA Forms Committee and the Joint OMA/Ministry of Health Forms Committee. The OMA Forms Committee reviews forms that must be filled out by physicians with the aim of encouraging fewer and simpler forms to reduce physicians’ administrative burden.²⁴ The experiences of these committees should inform a systematic assessment of other elements of administrative burden.

As detailed below, Nova Scotia provides an additional example of implementation, given that the province recently began a pilot systematic review of administrative requirements.

Recommendation in practice: In January 2020, the Nova Scotia government, through its Office of Regulatory Affairs (ORA) and Department of Health and Wellness, established a partnership with Doctors Nova Scotia to review Nova Scotia physicians’ administrative work requirements and identify changes that could be made to reduce their

administrative burden by the end of the year.²⁵ (The Nova Scotia ORA had previously reduced administrative burden for businesses, resulting in cumulative savings of \$34 million annually.) While the review was delayed by the onset of the COVID-19 pandemic, as of November 2020, Doctors Nova Scotia and the ORA had surveyed physicians to explore the issue and identify requirements that should be changed or removed,²³ and had begun working with relevant stakeholders to address the issues.²³ To date, completed items include banning employers from requesting doctors’ notes and privileging relevant physicians in all regions of the province to lessen administrative approvals requirements. Other actions are now underway, including improving and reducing the forms required by government programs (e.g., to prove a patient’s need for income assistance or accessible transportation assistance). The ORA plans to evaluate the impacts of these changes to understand their effectiveness. The Ontario system should look to these evaluations (once available) to identify beneficial actions to adopt in Ontario.

Recommendation: Use medical scribes, particularly in relation to electronic documentation requirements.

A specific component of administrative work physicians across specialties cite consistently as contributing to administrative burden and burnout is electronic documentation in point-of-care systems, such as electronic medical records (EMRs) and hospital information systems (HISs). Studies that have aimed to quantify this burden have found that overall, physicians spend two hours on electronic documentation

for every one hour of direct patient interaction,²⁶ with one to two hours spent in the evenings catching up on point-of-care documentation.^{26–28} Primary care physicians have been estimated to spend approximately six hours each day specifically using their point-of-care systems, both during and after clinic hours.²⁷

It is essential for the previous recommendation to be undertaken to identify and remove the documentation requirements, including those within point-of-care systems that are not valuable to patients and physicians and reduce the burden of documentation as much as possible. However, for the required point-of-care documentation that remains, clerical support staff in the form of medical scribes have been employed, evaluated in multiple settings and consistently recommended within the literature. Scribes are defined as “non-licensed team members trained to document patient encounters in real time under the direct supervision of a physician.”²⁶

In systematic reviews of burnout interventions, introducing scribes has been found to improve efficiency, reduce administrative burden, and improve burnout.^{29,30} In fact, this practice was among the most effective interventions for burnout identified within the reviews.^{29,30} Scribes can increase productivity and efficiency,³⁰ decrease time spent on documentation during and after hours,³⁰ complete patient encounters many days sooner (8.9 days on average),³¹ reduce documentation time by 50 per cent, and free up more time for patient interactions.³⁰ The use of scribes has been studied for specific specialties and found to be effective for physicians in internal medicine,³² family medicine,²⁶ emergency medicine,^{33,34} urology,³¹ and dermatology.³⁵ It should be explored and evaluated for other specialties and practice settings as well, given their evidence of significant benefit where studied so far.³¹ As well, in terms of patient satisfaction, studies that have examined the impact of scribes to date

have found either no impact (i.e. scribes did not negatively affect patients’ visit experiences with their provider)^{26,31} or a positive impact.³³

One key consideration for this very promising intervention is the cost of scribes and who should bear it. As indicated throughout this paper, individual physicians should not bear the burden of addressing burnout. For organizations where physicians work, if utilized the cost should be covered by the organization; however, physicians who do not work within institutions should also have access to the benefit of this intervention. Evaluations of the use of medical scribes and their impact on revenue have found that, due to their significant benefits for productivity and efficiency, scribes actually had a net positive financial impact despite their upfront cost.³¹ However, these financial benefits were identified in two American study settings; the financial impact requires further study in the Ontario context to determine how to help physicians make use of medical scribes in all practice settings and with all payment models. We recognize that, while cost-effective, the introduction of scribes would require a substantial investment. Therefore, we propose some alternative approaches (below) to reduce administrative burden.

Digital health tools also require important modifications to improve their impact on physician burnout. These are discussed in Solution 4: Promote the seamless integration of digital health tools into physicians’ workflows.

Recommendation: Explore technological innovations for their potential to reduce and simplify administrative demands, including billing administration.

In addition to health human resource supports to ease physicians’ administrative burden, innovative technological supports are becoming available. As with in-person medical scribes

described above, these supports must not be seen as solutions in and of themselves; administrative requirements must still be streamlined and reduced, but these supports can provide support in the interim and for those administrative tasks that remain.

The first of these is a technological expansion of the previous recommendation: the use of “virtual scribes” who listen to a patient encounter virtually. These can give patients a greater sense of privacy without another individual in the room, and are accessible to physicians who are located where there may not be many or any available to hire locally.³⁶ Virtual scribes also proved to be a valuable and necessary transition from in-person scribes for some physicians during the pandemic.³⁷ However, there are additional privacy and security considerations when the technology is used in the context of a virtual encounter.³⁶ Given that the task being undertaken is similar to what in-person scribes do, one would expect similarly positive impacts for reducing administrative burden and burnout. However, the use of virtual scribes has not been studied to the same extent.

A second emerging technology involves artificial intelligence scribes. These document patient encounters automatically in place of an individual scribe or the physician.^{28,38} These technologies are not widely available yet, but merit further exploration as they continue to develop. Their potential impact on administrative burden and burnout should be evaluated as they are implemented.

Beyond scribes, voice dictation technological supports (which involve the physician entering information into point-of-care systems by speaking rather than typing) are available.³⁹ Such tools have demonstrated mixed results, primarily due to the time required to correct errors.^{39–44} However, the technology continues to evolve, so dictation programs should continue to be explored and evaluated as they

become more accurate, particularly in terms of their overall impact on administrative burden.

Finally, technology solutions as simple as streamlined log-in software can potentially reduce the burden of needing to log in to various required systems to complete required documentation.⁴⁵ For example, the Yale School of Medicine implemented a new log-in system in which physicians tap a badge or key card to log in and out of systems. This saves physicians 20 to 140 logins (six to 20 minutes) per day.^{46,47} Integrating standalone digital health tools with existing systems can further reduce administrative burden as discussed in Solution 4.

As with the previous recommendation, while these interventions can benefit individual physicians, the burden to procure and pay for them should not be on individual physicians, particularly given that the work they are facilitating is required by the health system, not by physicians. Organizations that employ physicians should explore these interventions, and system stakeholders should determine how they can be made available to physicians in solo or group practices.

2



Ensure fair and equitable compensation for all work done.

This solution is focused on the goal to compensate physicians fairly and equitably for all work that they do, including all required administrative work. It is not focused on higher pay as a standalone concept; that is not supported by the literature for its impacts on burnout,⁴⁸ nor was it identified within the OMA's burnout survey results. However, we recognize that, as described in the literature, when discussing issues of pay for physicians in relation to their well-being, "discussions of compensation can carry even more of a stigma because of the inherent tension between the altruistic associations of patient care and the financial realities of medical practice."⁴⁹ As with any profession, work that is done in service of that profession should be compensated, and compensated fairly among all those doing it. This is especially true given that physicians have repeatedly stated in surveys in Ontario and elsewhere that they believe these changes would be beneficial for their experiences of burnout. Accordingly, our specific recommendations for this solution are: 1) where documentation and administrative work cannot be streamlined and reduced, it should be fairly compensated; and 2) remuneration should be made equitable, particularly in light of the identified gender pay gap in medicine in Ontario.

As noted in the preamble above, no recommendations herein should be pursued in isolation. This solution is important for addressing the role that compensation issues play in physicians' burnout, but the other solutions must also be pursued to ameliorate the other contributors – in particular, administrative work should not simply be compensated without also being reduced and streamlined, where possible. It should be

noted that outside the scope of this solution, and beyond fairly compensating all physicians equitably for all work that they are required to perform, compensation models themselves are a related theme in the burnout literature. Based on this literature, further research exploring compensation models that do not focus compensation on piece-work – and the relationship between piece-work and burnout – may be valuable.

Recommendation: Fairly compensate documentation and administrative work where it cannot be streamlined and reduced.

As described in the previous section, physicians' administrative burden should be streamlined and reduced. However, a certain amount of administrative work will remain – and this necessary and valuable work must be appropriately compensated.

While we stated earlier that there is limited research on how to reduce burnout and on how effective certain strategies are in doing so, this is particularly the case when it comes to solutions to compensation-related impacts on burnout. This may be a result of differing compensation models in different areas (and even within areas, as in Ontario), and/or the result of the initial work needed to streamline administrative tasks to determine those that need to remain (and consequently be compensated); and/or it may be a result of the concern that this real recommendation becomes conflated with and oversimplified as a request for higher pay. This latter consideration ignores the research that not being fairly remunerated

for all work done can affect feelings of value and accomplishment in the workplace, given that compensation is a primary mechanism to indicate that one's work has value.^{50,51}

The high ranking of compensation for all work done for physicians as a solution for burnout is not specific to Ontario. In British Columbia, Doctors of BC has similarly found this in its exploration of what it terms “physician burden,” with its physicians asking for solutions to “[a]ddress the volume of tasks that are unpaid, inefficient or repetitive.”⁵² Accordingly, Doctors of BC is recommending action to, “[a]ddress compensation structures to ensure that where demands are necessary and contribute to quality health care, physicians are compensated appropriately.”⁵³ Likewise, Doctors Nova Scotia has identified this as an impact on the stability of the physician workforce in its province – related to its previously described work to reduce administrative burden – and that physicians must be “paid for the work that they do” where administrative burden cannot be removed.^{54,55} The Medscape National Physician Burnout & Suicide Report 2021 identified compensation as the second-highest workplace issue that concerned its U.S. respondents, and was also the strategy that respondents ranked highest to help reduce burnout.⁵⁶

Unpaid work can take the form of leadership roles that entail additional work without compensation; services with assigned fee codes that do not match the demands of the administrative work entailed, including required reporting through multiple channels; and a high volume of administrative tasks that are often completed after-hours (for physicians that receive compensation according to established

hours of work). For example, in a 2020 member survey, Doctors Nova Scotia found that “[o]ver the past 12-24 months the majority of physicians felt that their overall time spent on administrative tasks had increased,” but that “most physicians are not compensated for this administrative work that is often completed outside of clinic hours – during evenings or weekends.”²³ Unpaid work also required work with no remuneration through the Ontario Health Insurance Plan (OHIP) and offers no option to bill patients, such as the forms that concern accessible parking permits, transit applications, and the Children’s Aid Society, as well as Ministry of Health forms, such as Request for an Unlisted Drug Product forms and Assistive Devices Program forms.

Reducing physicians’ administrative burden will also reduce potentially uncompensated tasks and/or the volume of work, such that fewer tasks need be uncompensated due to their completion after-hours (for relevant physicians). Further, by carrying out the recommendation to assess the value of administrative tasks, those tasks deemed necessary must also be assessed to determine which, if any, physicians are being compensated for, whether that compensation matches the demands of the work, and how to rectify any lack of payment specific to each relevant payment model.

Recommendation: Make remuneration equitable, particularly in light of the identified gender pay gap in medicine in Ontario.

The gender pay gap has been explored in many industries,⁵⁷ identified in medicine in Canada,⁵⁸ and found by the OMA to exist among

ⁱⁱⁱ Note that these results were compared between physicians identified as male or female; data are not currently available on the difference for those physicians who may identify as a different gender identity. However, it is important to understand pay differences for these populations as well.

Ontario physicians.⁵⁹ In July 2020, the OMA released analysis of Ontario billings data that yielded a significant unexplainable difference between male and female physicians in the daily amounts billed.^{1,59} Female physicians would have to increase their billings by 15.6 per cent, on average, in order to match the average daily billings of male physicians. While no literature has yet explored the specific impact of the gender pay gap on burnout, research has found that it contributes directly to higher rates of depression and anxiety in women,^{60,61} “particularly if women are internalizing discriminatory acts as a reflection of their low worth rather than that of biased institutional practices.”⁶¹ The open text responses to the OMA burnout surveys also yielded a theme of gender disparity as a contributor to burnout, and this finding aligns with developing research demonstrating that discrimination can affect physician wellness and burnout.^{20–22}

The OMA’s work on the gender pay gap has identified key actions to reduce the gender pay gap and gender-based disparities in medicine in Ontario.⁵⁹ These include the need to reform the Schedule of Benefits to better reflect the work required to perform each service; expanded leadership and mentorship opportunities for female physicians and medical students, including within the OMA itself; addressing relativity issues to ensure that differences in income per specialty only reflect differences in workload, training, skill required, and practice overhead costs; ensuring that medical teaching does not inadvertently contain a hidden curriculum of inherent bias that has been suggested to contribute to the current situation of disproportionately more men in higher-paying specialties;⁵⁸ conducting research to understand the impact of physician gender on referrals made to specialists; and improving parental leave benefits for all physicians, particularly given that research has found parental status to be the most important factor in explaining observed differences in time worked.⁶²

Issues of inequitable pay should also be explored intersectionally to include racialized physicians, especially given the proven existence of a racial wage gap in Canada.⁶³ Data on the prevalence of such a wage gap among Ontario physicians should be sought to illuminate the extent of this issue for physicians of all genders and identify similar first steps to ameliorate this issue.

3



Increase work-life balance by making organizational policy changes.

The impact of work hours on burnout has been well-documented in the literature, with an increase in time spent working found to independently increase the risk of burnout. In particular, the risk of burnout has been found to increase by 3 per cent for each additional hour physicians spend working per week, by 3-9 per cent for each additional night or weekend physicians spend on call, and by 2 per cent for each additional hour per week physicians spend working at home.¹ Work-home conflicts have been found to more than double the risk of burnout,¹ and are more likely to be experienced by women and early career physicians⁸ – the groups who are generally at heightened risk of burnout.

Organizational policy changes can enable better work-life balance. These changes include normalizing flexible work arrangements, enhancing supports for resident work-life balance, and exploring innovative strategies, such as time banking.

Recommendation: Normalize flexible work arrangements for physicians who seek them, including options for part-time work, job-sharing, float pools and modified schedules.

Providing flexible work arrangements to improve work-life balance can reduce the risk of burnout.^{14,18,64} To achieve this, organizations can provide options for part-time work,^{1,64} job-sharing (i.e. two part-time physicians sharing a full-time position),^{64–66} “float pools” (coverage for life events),^{64,65} and modified schedules (i.e. non-traditional work hours and/or variation of hours per day).^{14,65} A reduction in work hours

due to part-time work or job-sharing can mean a decrease in income. However, this option should be provided for physicians who seek it, and - as previously discussed - the work done should be fairly and equitably compensated.

These flexible work arrangements can foster control and autonomy for physicians^{1,65} and give them time to pursue meaningful aspects of work,⁶⁶ the lack of which has been associated with burnout.¹ Making these flexible options available can further reduce other associated consequences of burnout, including early retirement and physician turnover.^{14,64}

As previously discussed, female physicians have been found to be at increased risk of burnout. Options for flexible work arrangements can help improve their work-life balance and reduce gender differences in burnout, such as by allowing time for personal needs (e.g. pregnancy and maternity leave).^{18,64}

Normalizing these options can also help to shift the culture of medicine from one where working long hours is the expected and idealized norm, to one where work-life balance is appreciated.

Recommendation: Enhance supports for medical student and resident work-life balance.

The rigorous pressures faced by medical students and residents have been widely reported. From the start of their career, students and residents face a multitude of stressors - including long hours without adequate rest breaks, competing time demands, financial stress, exam pressures, career uncertainty, personal issues, and lack of time or incentive

to care for their own health and well-being - that ultimately contribute to burnout.^{67,68} While this recommendation focuses largely on what organizations can do to support resident and student work-life balance, other system stakeholders also have a role to play in preventing burnout in students and residents. A few examples are highlighted below.

Resident work-life often involves working maximum 26-hour continuous shifts without adequate rest breaks. While establishing system-wide maximum resident duty hour restrictions is largely within the purview of accrediting bodies, there is still much that organizations can do to support work-life balance for residents. For example, organizations can set duty-hour maximums that are lower than the regulated duty hour maximum, explore new scheduling arrangements (such as having more residents on-call during overnight shifts to ensure protected sleep periods during these shifts),⁶⁹ schedule residents on shorter shifts, and provide more exposure to the administrative burden involved before residents choose a specialty. We recognize that changes to resident duty-hours and scheduling within an organization may require trade-offs with other important considerations such as the availability of health human resources and resident education. However, it is important to balance this trade-off with residents' well-being. As previously mentioned, any interventions implemented should be evaluated for impact, and in this case, closely monitored for their potential impacts on residents' well-being and education as well as on patient care.

Further, every year, a number of medical students go unmatched in the Canadian Residency Matching Service. These unmatched students report experiencing isolation, stigma, grief, and uncertainty.⁷⁰ Addressing the implications for unmatched students and providing them with support will

require the collective efforts of government and organizations such as the Association of Faculties of Medicine of Canada, the Canadian Federation of Medical Students, and the Ontario Medical Students Association. This includes making efforts to reduce the number of unmatched students every year,⁷¹ providing supports for students to navigate the unmatched process, and offering mental health support.⁷⁰ Reducing the stigma associated with being unmatched will also require a culture shift led by learners, educators, and administrators to normalize the process via "education, role modeling, and healthy conversations."⁷⁰ Preventing burnout in trainees from the outset of their careers will ultimately help support their growth as healthy future physicians.

Finally, organizations should provide students and residents access to institutional wellness supports as detailed in Solution 5 of this paper.

Recommendation: Explore innovative strategies to enable work-life balance, such as time banking.

In addition to normalizing flexible work arrangements and enhancing supports for resident work-life balance, organizations should explore innovative strategies to enable work-life balance, such as time banking. An evaluation of the time banking intervention at Stanford University School of Medicine detailed below found an increase in job satisfaction amongst faculty participants, including increased perceptions of a culture of flexibility, wellness, and institutional satisfaction.⁷²

Recommendation in practice: In the Stanford University School of Medicine time banking pilot program, faculty participants were given credits for time they spent on unpaid or underrecognized responsibilities - such as providing clinical coverage on short notice,

mentoring, or serving on a committee - and could redeem for support services at home or work, including housecleaning, meal delivery, grant writing, and lab management services.⁷² The ability to buy back time spent allowed faculty to dedicate more time to their individual work and life priorities. The program was customizable within individual teams, which determined the activities that would earn credits, and individual participants were able to choose when and how they redeemed their credits. The customizable nature of this program makes it easily adaptable to other medical workplaces.

4



Promote the seamless integration of digital health tools into physicians' workflows.

The use of technology in health care has been associated with both contributing to and reducing burnout. On the one hand, as discussed in Solution 1 of this paper, technological supports can be implemented to reduce some administrative demands and associated burnout. On the other hand, stress induced from the use of technology – coined “technostress” – has also been associated with burnout.⁷³ This is not only due to the documentation burdens imposed by point-of-care systems (as detailed in Solution 1), but to technology being not usable or poorly integrated with clinical workflow.^{8,30} The seamless integration of digital health tools into physicians' workflows is essential to reduce burnout associated with technostress. Digital health tools are a core part of physicians' workflows, including the use of virtual care platforms and point-of-care systems (such as EMRs and HISs). As health care continues to be digitized, seamless integration will become increasingly important.

Digital health tools can be seamlessly integrated into physician workflows by implementing interoperability standards, involving physicians as key partners in tool development and decision-making, equipping them with comprehensive and ongoing training beginning in medical school, and providing easily accessible and ongoing technical support. While the research on technology and burnout has been largely focused on physicians' use of point-of-care systems, the recommendations below can be extended to apply to other digital health tools.

Recommendation: Implement interoperability standards to ensure physicians can seamlessly access patient records and share patient health information among care providers.

A lack of interoperability is one of the most common digital health factors associated with burnout.⁸ Providers who use different point-of-care systems that are not interoperable cannot seamlessly access integrated patient records and exchange patient information with each other. This increases their administrative burden and it is worth noting that siloed health information can affect patient care.^{8,30} As such, there is a need to implement interoperability standards for digital health tools. A seamless flow and exchange of information across the continuum of patient care will reduce the administrative burden on providers in obtaining patient information, and in turn, reduce burnout. Interoperability standards can further ensure that physicians can continue using the digital health systems that work best for their workflows,³⁰ and not require multiple providers to switch to a single system.

Further, as our health-care system becomes increasingly digitized, new technologies and tools will continue to emerge. When physicians must use multiple standalone digital health tools requiring multiple logins and clicks to access information throughout the day, it can greatly disrupt their workflow, increasing their administrative burden and associated burnout, as discussed in Solution 1. As such, as new technologies emerge (such as virtual care platforms or provincial digital health tools), they should be meaningfully integrated with existing point-of-care system functions and workflows.

We recognize that the provincial government has taken steps to advance interoperability in the system by mandating health information custodians to comply with applicable interoperability specifications to be established by Ontario Health⁷⁴ and developing verification standards for virtual visit solutions.⁷⁵ However, successful implementation will be key to achieving interoperability in our health-care system, and will require co-ordinated efforts between government, implementation partners such as OntarioMD and Ontario Health, technology vendors, health-care organizations, and providers. Any interoperability policy should be designed to support and achieve the objectives of the Quadruple Aim and “there should be a balancing of responsibility among the involved stakeholders so that clinicians do not bear the burden of being solely responsible for any adverse outcomes or other unanticipated negative consequences associated with the use of technology.”⁸ Imposing additional burdens on physicians who lack control over the technology will only exacerbate their burnout. A key component of effective implementation will be equipping physicians with change management supports to incorporate new technologies into their workflow and ensuring the available technologies meet the needs of their practices. Government and policy-makers should also consider how to enforce vendor compliance with the need to implement necessary changes to tools to achieve interoperability. In addition, as discussed in the next recommendation, involving physicians as key partners in decision-making processes around digital health is critical.

Recommendation: Involve physicians as key partners from the start in the procurement, design, implementation, and ongoing optimization of digital health tools to ensure usability.

Poor usability is another of the most common digital health factors associated with burnout.^{8,30} For digital health tools to be seamlessly integrated into physician workflows, they have to be usable. Issues with usability often occur when organizations procure and implement new point-of-care systems without physician input, particularly one-size-fits-all systems that are not tailored to unique clinical workflows.⁸ This can result in physicians having to make extra clicks and spend more time working through the system.⁸

To ensure successful usability, organizations need to involve physicians who are key end users from the start in the procurement, design, implementation, and ongoing optimization (i.e., refinement and improvement) of digital health tools.^{10, 76} Successful usability means the technology meets physicians’ needs and desired workflows.⁷⁶ Any new technology should also support the fourth objective of the Quadruple Aim (improving the work lives of providers); involving physicians in key decision-making processes from the outset can help. Organizations can involve physicians throughout the process by including them on multidisciplinary clinical teams so they can provide feedback during purchasing and implementation decisions as well as ongoing input on system optimization.^{8, 10, 76} Physicians can provide input on the minimum requirements that are common to most users. This can ensure the core product remains usable, without becoming overly-complex. In addition, organizations should give physicians options to customize user interfaces according to their specific clinical workflows, including streamlining access to the most relevant data.⁷⁷ This can reduce the number of clicks/keystrokes

per day and, by extension, the amount of time physicians spend on the system.^{30, 77} Such interventions to optimize technology have been found to be effective at reducing burnout.³⁰

For ongoing optimization, organizations should evaluate any new technology after extensive pilot testing with many users in clinical practice to ensure it is as usable as initial testing suggested.

Physicians also need effective change management support to optimize the usability of digital health tools. This includes organizations publishing workflow improvements and suggestions when the technology is released so physicians can incorporate them into their workflows and mitigate potential stress points from the outset.

Feedback from physicians is also essential to ensure the safety of new technologies^{8, 76} given that input “on specific design-related safety issues can also prevent adverse patient safety events from occurring at other organizations.”⁷⁸ An example is incorrect default settings that increase the risk of ordering the wrong medication or dosage.⁸

Ensuring the usability of digital health tools ultimately requires collaboration from technology vendors to implement the desired measures.¹⁰ Organizations should relay the feedback they receive from providers to vendors so they can improve their systems. They should also consider opportunities for vendors to directly observe the clinical workflows and use of technology by staff⁷⁸ to inform the development of the most usable systems. As previously mentioned, government and policy-makers should also consider how to enforce vendor compliance with the need to implement necessary changes to tools. Without a legislative or regulatory framework for vendors, additional obligations are often transferred to health-care providers, who end up bearing the associated burden and cost which exacerbates their burnout.

Recommendation in practice: In 2017, Hawaii Pacific Health launched a program called “Getting Rid of Stupid Stuff” that involved asking their staff, including physicians and nurses, to “nominate anything in the EHR [electronic health record] that they thought was poorly designed, unnecessary, or just plain stupid.”⁷⁹ While the program was originally meant to reduce the unintended documentation requirements imposed by the organization’s EHR, engaging clinicians through this program led to additional changes that optimized the EHR, including removing 10 out of 12 of the most frequent alerts physicians receive, reviewing and removing order sets that were unused, and identifying the need to better educate staff on the documentation tools that were available to them. Although the impact of the program on physician burnout was not specifically measured, the changes highlight the potential role of such a program in enabling solutions to burnout.

Recommendation: Equip physicians with comprehensive and ongoing training on digital health tools, beginning in medical school.

Providing physicians with comprehensive training can increase their comfort and satisfaction with digital health tools and, in turn, reduce their technostress and “offset anxiety that exacerbates burnout.”³⁰ For physicians who work in organizations, the organizations can facilitate training; for those in community-based practices, training and mentorship can be provided by, for example, OntarioMD Peer Leaders and OntarioMD staff across the province. Training should be provided on an ongoing basis, not limited to onboarding, to maintain and improve competency.^{76, 80}

Training should also begin in medical school. With the shift to competency-based medical education, sufficient training for medical students and residents on digital health system competencies during formal education should be provided. Researchers have noted that critical gaps in training still exist because “learners receive limited exposure to EHR training during their formal education.”⁸¹

In 2018, the American Medical Association (AMA) adopted a policy to promote training for medical students on using EHRs, so they could learn and gain experience “well before they enter practice.”⁸² The AMA’s policy “encourages medical schools and residency programs to design clinical documentation and EHR training that provides evaluative feedback regarding the value and effectiveness of the training, and that can be evaluated and demonstrated as useful in clinical practice.”⁸²

Medical schools in Ontario should ensure that sufficient training on point-of-care systems (EMRs/HISs) and other digital health tools is incorporated into both undergraduate and postgraduate medical education. Training medical students and residents early on can provide them with a more seamless experience in using digital health tools as future physicians,⁷⁷ and ultimately reduce their risk of burnout from technostress.

Technology training should be provided on an ongoing basis throughout physicians’ careers, particularly as technology evolves and new standards of practice regarding the use of digital health tools emerge. This can be achieved by incorporating digital health training into all continuing medical education conferences to some extent.

Recommendation: Provide physicians with easily accessible and ongoing technical support.

To support usability of digital health tools, physicians should be provided with easily accessible and ongoing technical support^{76,83} that responds to the needs of their practice. The availability of technical support for point-of-care systems can improve physicians’ attitudes toward the use of the technology and free up time for more meaningful tasks, such as providing direct patient care.⁸³ As previously discussed, poor usability of technology and a lack of meaning in work have each been associated with increased risk of burnout. In turn, the availability of technical support can help mitigate against these risks of burnout, and continue to foster the seamless integration of digital health tools into physician workflow by resolving technical issues as they arise. For physicians working in large organizations, technical support can most likely be provided on-site; for those in community-based practices, vendors or OntarioMD technical advisors can provide support.



Institutional supports for physician wellness.

Finally, given that burnout is by definition a workplace issue, an important solution to it is making positive workplace changes to supports for physician wellness. While such supports are accessible to physicians who work within institutions, those who do not should nonetheless have access to co-ordinated and resourced supports, as previously outlined.

Many of these supports and tools are described in more detail in the OMA's Burnout Toolkit for physicians and physician leaders.

Institutional supports can begin with organizations explicitly establishing a positive workplace culture that prioritizes wellness, and can be aided by regular but non-burdening assessments of burnout and organizational-led interventions for physicians.

Recommendation: Encourage and support a workplace culture that prioritizes and promotes physician wellness.

Organizational culture is defined as “a summary of the shared values, beliefs, or perceptions held by employees within an organization or organizational unit, and it can influence the attitudes and behavior of the staff.”⁸⁴ It has been shown to influence levels of burnout,^{84,85} with a need to foster a culture of wellness to ensure this influence improves burnout rather than contributing to it. Culture can seem a nebulous and intangible factor to try to understand and influence, but there are concrete actions that can be (and have been) taken to contribute to a culture of wellness in health-care organizations.

Wellness principles

To begin with, organizations should signal the importance of wellness to their physicians, establish parameters for accountability, and guide the implementation of further initiatives by adopting explicit principles for a workplace culture that prioritizes and promotes wellness. More research is required to evaluate the impact of wellness principles on physician burnout; however it is recommended that alignment with such principles would bolster and maintain proven initiatives as described in the subsequent recommendations.

Recommendation in practice: Toronto's University Health Network (UHN) has established Wellness Guiding Principles as part of its UHN Wellness mission “to promote, enhance and support behavioural changes in UHN staff to improve health and well-being at both an individual and at an organizational level.”⁸⁶

Wellness guiding principles

- Leadership for wellness exists at all levels of the organization
- People are our most important resource at UHN
- Wellness is a common goal, but individual approaches vary
- Wellness at work interacts with wellness at home
- We are all responsible for our own health and well-being
- Wellness@UHN is about continuous improvement
- UHN supports healthy living strategies

A key component of a culture of wellness that can help to protect against burnout is a sense of psychological safety – that is, “the absence of harm and/or threat of harm to mental well-being that a worker might experience.”^{88,87} As with an overall culture of wellness, psychological safety can be achieved by beginning with established principles to guide cultural changes and provide a source of accountability.

Recommendation in practice: The Mental Health Commission of Canada, HealthCareCAN and the By Health for Health Collaborative of Canada have jointly established a Declaration of Commitment to Psychological Health and Safety in Healthcare.^{88,89} This declaration commits its signatories to “advancing the protection and promotion of mental health in the workplace and in alignment with the principles of the National Standard for Psychological Health and Safety in the Workplace,” which is “a set of voluntary guidelines, tools and resources intended to guide organizations in promoting mental health and preventing psychological harm at work.”⁸⁸

Numerous health-care organizations across Canada have signed on to the commitment, including the London Health Sciences Centre, Michael Garron Hospital, Ontario Shores Centre for Mental Health Sciences, Peterborough Regional Health Centre, Ross Memorial Hospital, Sinai Health System, St. Joseph’s Health Care London and the Hospital for Sick Children.⁸⁸

Finally, in encouraging and supporting a culture of wellness, it is essential to recognize and account for diverse identities and experiences among physicians as well as the impacts that workplace discrimination can have on wellness and burnout.^{20–22} A culture of wellness should

prioritize principles of cultural safety and cultural competence such that all physicians feel safe and supported.

Leadership

In each of these sets of principles, leadership is included as a key component because leaders heavily influence the experiences of those they lead.⁹⁰ This influence, unsurprisingly, extends to burnout. A study conducted by the Mayo Clinic demonstrated this, finding that a one-point increase in a leader’s “score” (based on 12 components of leadership) was associated with a 3.3 per cent decrease in the likelihood of those they lead experiencing burnout.⁹¹ A recent study conducted at the Stanford University School of Medicine further found that leadership scores were associated with leaders’ own levels of burnout.⁹² Leaders also model and normalize behaviours within their workplaces, including those related to well-being. This same study found that “each one-point increase in leaders’ sleep-related impairment was associated with a 0.15-point increment in sleep-related impairment among those they supervised.”⁹² The study authors noted the consistency of this finding with research outside of medicine that has found a negative impact on team members’ sleep “when leaders publicly devalue sleep (such as boasting that they are productive because of how little they sleep).”⁹² Therefore, it is important for organizations to support physician and non-physician leaders for the sake of those they lead as well as their own wellness. This can be done by fostering compassionate leadership and creating psychological safety in the workplace at all levels (organization, institution, department, unit).⁹⁰ Leaders can contribute to psychological safety by:

- Recognizing their responsibility to contribute to and encourage a positive culture of wellness.
- Making space for those they lead to experience and share vulnerabilities, and sharing vulnerabilities themselves.

- Modelling and encouraging safe-care.
- Admitting they do not have all the answers and enabling safe idea-sharing.
- Identifying and advocating for needed supports.
- Supporting leadership development and opportunities for those they lead.⁹³

Chief wellness officer

Leadership that fosters a culture of wellness should extend to the executive level, and can be enabled by establishing of a chief wellness officer. The U.S. National Academy of Sciences recommends that at the executive level, there should be “a leadership role and function responsible for improving and sustaining professional well-being across the organization. This leader and [their] team should strengthen co-ordination across all organizational programs, especially those that deal with patient care quality and safety and with occupational safety.”⁸

A chief wellness officer should be trained, compensated as a full-time role (i.e., the role should not be an additional duty for an existing full-time staff member, executive or physician), involved in leadership meetings, and accountable for improvements in wellness within the organization as measured using validated tools (per the following recommendation).

Physical workspace

Finally, culture can even be influenced by the physical workspace, for example by creating social spaces for physicians.

Recommendation in practice: The University of California at San Francisco found a decrease in burnout rates after it established a doctors’ lounge and stocked it regularly with small amenities such as electronic chargers and food items. This space enabled physicians to organically share professional and

personal experiences and initiate informal instances of peer support and mentorship.⁹⁴

The design of the physical workspace can also be engineered to improve burnout. For example, access to views of nature, other exterior views, and daylight, indoor plants and other internal design aspects that link to nature have demonstrated positive impacts on physicians’ feelings of stress.⁹⁵

The following recommendations can further contribute to a culture of wellness, by measuring physician burnout (to understand the experiences of those within organizations), and implementing initiatives within organizations to directly target burnout.

Recommendation: Regularly evaluate levels of physician burnout within organizations using validated tools to understand burnout levels and implement necessary changes.

While much research has indicated high levels of burnout among physicians – including in Canada and now through our surveys in Ontario – it has also indicated different experiences of burnout among different physicians, such as across specialties, practice settings, and demographics. Therefore, it is essential that organizations working to address burnout begin by evaluating burnout levels specifically within their institution and by collecting qualitative information related to the specific factors in their workplace that could contribute to or could ameliorate burnout.

Organizations should utilize validated tools, such as the Maslach Burnout Inventory, to collect high quality data and data that can be compared across different settings.^{8,94,96} Research suggests that even one- and two-item questionnaires can provide reasonable

estimates of the prevalence of burnout.^{16,97–99} Other valuable tools include the Copenhagen Assessment Tool, the Stanford Professional Fulfillment Index, the Mayo Well Being Index and the Warwick-Edinburgh Mental Wellbeing Scales. The literature suggests that organizations should make the anonymous aggregate results of these tools available transparently to provide a shared understanding of the state of burnout, to contribute to accountability by leadership and give physicians confidence that their voices are being heard.^{8,90} Literature also suggests that these results be made available publicly for those looking for employment within the institution to further encourage accountability. These results should also be shared “so that [physicians] might acknowledge feelings that have been suppressed due to cultural norms”¹⁰⁰ that may imply to some that they are alone in their experiences and/or that they should not have feelings of burnout. Organizations should also use these tools regularly (at least annually)⁸ to understand changes in collective burnout levels, both positive and negative.^{8,94} A regular commitment to measuring burnout within the institution could be set out in principles adopted to inform the workplace wellness culture.

Beyond the quantitative measure of burnout, institutions should also regularly engage physicians to determine what specifically within their organization is contributing to burnout and what needs there are from physicians to address it.^{8,90} As described above, wellness principles should include a commitment to a culture that welcomes such feedback and allows physicians to feel safe and comfortable providing it.⁹⁰

Recommendation in practice: The Mayo Clinic in Rochester, Minnesota uses a model called “Listen-Act-Develop.” The first element, “listen,” is meant to encourage physicians to provide feedback. It strives to create a “safe

haven” “for physicians to be able to voice their concerns” and “allows physicians to feel valued.”⁹⁴

By understanding how much and why their physicians experience burnout, organizations can understand their needs and work toward relevant solutions. However, in so doing, “it is essential to identify data capture strategies that minimize burden and protect clinicians’ privacy and address any stigma or pressure that clinicians may perceive related to measurement or reporting.”⁸

Recommendation: Organizations should coordinate and implement proven individual-level interventions for physicians.

As we have mentioned consistently throughout this paper, as a system-level issue, burnout is the responsibility of system actors to address; it is not up to individual physicians to solve burnout brought on by issues beyond their control. However, that is not to say that initiatives targeting physicians at the individual level cannot still contribute to improvements in burnout and broader well-being. The key is that these initiatives should be designed, organized and resourced by the organization so that their benefits are available for physicians without the physicians having to put in more work to identify, learn and/or organize initiatives for themselves. Indeed, research indicates that “lack of time” is a significant barrier for physicians who are in need of emotional support.¹⁰¹ Further, research has found that initiatives organized by an institution are more effective than those that individual physicians must undertake on their own, and requiring physicians to enact such initiatives themselves can even be harmful: “Physicians who were expected to deal with their burnout individually and remotely from their institution felt less ‘resilient’ and took more personal ownership of

the fact that they were burned out, as opposed to those physicians who received support from their institution to cope with it.”¹⁸

There is significant research on the benefits of individual-level interventions (e.g., the effectiveness of practicing mindfulness). However, given that the key here is the application of interventions for physicians as organized and resourced by institutions, we have included only evidence related to individual-level interventions that are implemented and organized for physicians.

Initiatives

Organizations can implement numerous individual-level interventions for physicians. Examples include mindfulness initiatives, stress reduction programs, facilitated discussion groups, peer support programs and Balint groups.

Mindfulness initiatives have demonstrated success in improving indicators of burnout among physicians in multiple studies. These studied initiatives vary in structure, but can include multi-week mindfulness training courses,¹⁸ short-term mindfulness training¹⁰² and mindful communication programs.¹⁰³ A resiliency program that included mindfulness meditation along with access to exercise equipment and nutritious foods was also found to be effective among family medicine residents (the trial population).¹⁰⁴

Further, small group discussions (both facilitated and unfacilitated) have led to demonstrated improvements in burnout symptoms. Facilitated small discussion groups that include elements such as mindfulness, shared experiences and reflection have proven effective,¹⁰⁵ as have unfacilitated discussion groups that simply provide protected time and a venue for physicians to congregate and share experiences.⁸⁵ However, facilitated discussion groups specifically for residents may require facilitation by someone viewed

as a peer rather than by a professional or a practising physician.¹⁰⁶ Balint groups are a type of facilitated discussion group focused on “enhancing communication skills among physicians, but also putting emphasis on the doctor–patient relationship.”¹⁰⁷ They have been found to be effective at improving factors related to burnout,^{107,108} including specifically for residents.^{109,110}

Professional coaching has also been demonstrated to relieve emotional exhaustion and burnout symptoms overall,¹¹¹ and can “support clinicians in managing stress and adapting to change”.⁸

Finally, peer support programs are commonly discussed as a means to help address physician burnout.^{101,112} However, they are not yet well-studied in the literature for their impacts on burnout. Early research does indicate that peer support programs may be promising for residents¹¹³ and should be further explored for their potential benefit. Any implementation should include evaluation to understand if they do indeed help physicians experiencing burnout.

Implementation considerations

In implementing such interventions, organizations should consider certain factors. First, a study of the implementation of a corporate wellness initiative that had proven successful with other health-care workers showed no success for emergency medicine residents (and led to a worsening of burnout for some).¹¹⁴ This finding demonstrates the importance of tailoring even proven interventions for physicians and their experiences.

Second, when implementing interventions, it is important to evaluate their impacts to understand if they are helpful and should be continued and/or expanded, or if, as above, they may even cause harm. However, as noted in the previous recommendation, evaluations

and assessments of burnout level should not contribute to burnout themselves by imposing arduous requirements (such as a lengthy survey) on physicians to be able to participate in potentially helpful initiatives.⁸ In particular, evaluations of programs should look at professional and demographic information to determine if program impacts are varied or isolated to certain sub-groups of physicians, for example in terms of specialty, payment model, gender identity and expression, or racialization.

Third, it is important for organizationally-led interventions to be provided during paid time for physicians³⁰ given that, as previously stated, physicians should not bear burdens to participate in programs that aim to address burnout that has largely been brought on by the health system including physicians' workplaces.

Finally and importantly, evidence from the above-cited mindful communication program for primary care physicians found that, while the intervention succeeded, "participants struggled to give themselves permission to attend to their own personal growth."¹⁰³ This finding illustrates how important it is for organizations to implement these recommendations in tandem with facilitating a culture of wellness that encourages and empowers physicians to "attend to their own personal growth"¹⁰³ so they can derive maximum benefits from such interventions.

Next Steps

These five solutions are a starting point for addressing the complex, multi-faceted problem of physician burnout in Ontario, based on priorities identified by Ontario's doctors and evidence-based recommendations. Addressing burnout is a long-term, system-wide endeavour, but it is crucial that the Ontario health-care system begin making meaningful changes to support the physicians who are vital within it.

Beyond this work, the OMA and its Burnout Task Force will continue on-going initiatives to study, mitigate and prevent physician burnout. The task force has launched a Burnout Toolkit containing resources that individual physicians and physician leaders can use or implement in their organizations. The OMA will also continue to monitor and explore burnout in the context of the pandemic.

To accomplish the solutions proposed in this paper, as a system we need to establish meaningful partnerships and coordination among key stakeholders so we can further explore and implement recommendations to address and prevent burnout. Through these partnerships, solutions can also be adapted and implemented for other health-care workers to contribute to greater health-care worker well-being and the sustainability of Ontario's health-care system.

Given the dearth of comprehensive literature evaluating system-level solutions to physician burnout, particularly in Ontario, any solutions that are implemented should be evaluated to understand their benefits, adapt them as needed and contribute to the evidence base. Future research should focus on gaps identified in this paper, including the impacts of burnout interventions on different groups of physicians, particularly in terms of gender identity and racialization, recognizing that

different physicians experience burnout differently, certain physicians are at heightened risk of burnout, and some experience unique contributors to burnout, such as discrimination, that universally-focused interventions may not ameliorate.

Further, many physicians do not work within institutions that can implement certain initiatives to address burnout; therefore, future research should explore how to support physicians who work outside of institutions. As well, given that compensation models are a common theme in the burnout literature, further research exploring the potential relationships between Ontario's compensation models and burnout may be valuable. Finally, future research would be useful to explain the described discrepancy between the top contributors and top solutions to burnout identified in the OMA surveys, particularly to better understand if work should prioritize themes within the top contributors or those within the top solutions.

In the meantime, work must begin on these recommendations across the system to improve the dire situation that has long affected Ontario's doctors. We must commit to building a sustainable and healthy health-care system.

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